REPORTS

EXCAVATIONS AT TUBNEY WOOD QUARRY, OXFORDSHIRE, 2001–9

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SUMMARY

Between 2001 and 2009 Oxford Archaeology (OA) carried out a programme of archaeological investigations on behalf of Hills Aggregates Ltd in advance of an extension to their existing sand quarry at Tubney Wood Quarry. The investigations uncovered a wide range of archaeological remains and provide particularly significant new information about the Mesolithic period and the centuries following the end of Roman rule in Britain. Flint scatters provided further indications of the presence of early Mesolithic 'base camps' on the Corallian Ridge, while a small post-Roman cemetery adds to the evidence for communities in the region that maintained Romano-British burial practices well into the fifth or sixth century. Bronze-Age, Iron-Age and Roman activity was also uncovered, along with a ditch probably belonging to the deserted medieval village of Tubney.

INTRODUCTION

Between 2001 and 2009 Oxford Archaeology (OA) carried out a programme of archaeological investigations on behalf of Hills Aggregates Ltd in advance of an extension to their existing sand quarry at Tubney Wood Quarry, Tubney, Oxfordshire (SP 4480 9980; Fig. 1). The extension adjoined the north-western side of the existing quarry and comprised three former arable fields, designated Extension Areas 1–3, with a total area of 6.75 ha (Fig. 2). The site was known to contain potential archaeological remains since previous archaeological investigations on the site of the existing quarry, formerly New Plantation, had identified two dense concentrations of Mesolithic flint.[1] The investigations in each area comprised an evaluation followed by a watching brief and strip, map and sample excavation, in addition to which a test pit survey was carried out in Extension Area 1 to investigate one of the concentrations of Mesolithic flint. All phases of the work were carried out in accordance with briefs prepared by Hugh Coddington, Planning Archaeologist for Oxfordshire County Council.

LOCATION, TOPOGRAPHY, AND GEOLOGY

Tubney Wood Quarry lies on the Corallian Ridge, a ridge of low hills that extends south-west from Oxford between the Thames and the Vale of the White Horse. It is located *c.*7 km from Oxford

[1] P. Bradley and G. Hey, 'A Mesolithic Site at New Plantation, Fyfield and Tubney, Oxfordshire', *Oxoniensia,* 58 (1993), pp. 1–26.

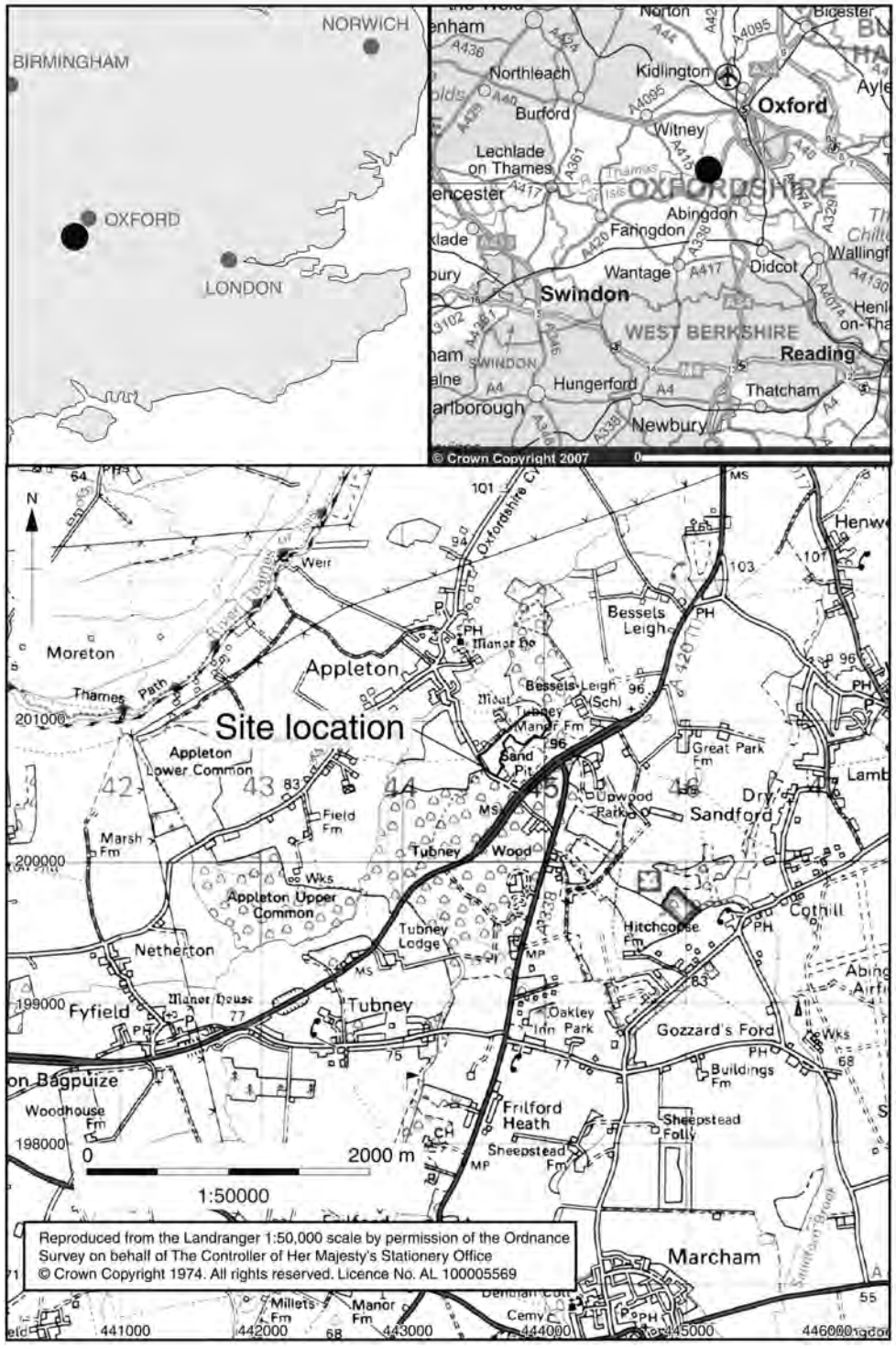

Fig. 1. Site location plan.

alongside the A420 Oxford–Swindon road, within the junction formed with Oakmere, a road that branches off the north-western side of the A420 and leads to the village of Appleton. The quarry is bounded to the south-west and south-east by these roads and to the north by Tubney Manor Farm. It lies at the top of the north-western slope of the ridge, overlooking the Thames valley, with the Thames lying 2 km to the north-west. The north-western boundary of the site follows the 90 m contour line, from which the ground rises to a maximum height of 95 m OD in the south-eastern part of Extension Area 3. The Corallian Ridge is composed of deep deposits of sand overlying limestone.[2]

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Mesolithic, Neolithic and Bronze-Age flintwork has been recorded along the length of the Corallian Ridge.[3] This material was mainly recovered by fieldwalking and as stray finds, but a spread of Mesolithic flint was revealed during excavations in advance of the existing quarry between the current site and the A420.[4] These investigations recovered in excess of 6,600 flints, the majority of which dated from the early Mesolithic period (9,800–8500 BP). Although this material was recovered from disturbed contexts, primarily topsoil and subsoil, two distinct concentrations of flint were identified within 200 m of the present site (A and B on Fig. 2).[5] These have been interpreted as representing 'repeated or extended habitation', possibly indicative of a winter base camp.[6]

The *VCH* records the existence in the vicinity of the site of two round barrows of presumed Bronze-Age date, one of which may have been levelled *c.*1872.[7] However, historic maps of the area show only one mound, situated within the area of the existing quarry, though there is some inconsistency between them regarding its precise location.[8] Excavations in 1991 found only a possible rabbit warren or quarry upcast at the supposed location of the barrow.[9]

There is extensive evidence for Iron-Age activity in the wider area, but little has been found in the immediate vicinity apart from twenty-two sherds of pottery found at New Plantation.[10]

The upper Thames gravels were widely settled during the Roman period, but less is known of occupation on the Corallian Ridge. The most obvious indication of Roman activity near Tubney Wood Quarry is the road from the roadside settlement at Wantage to the crossing of the Thames at Oxford, which ran along the north-eastern part of the ridge on the line of the modern A338/A420, passing within *c.*200 m of the site.[11] Roman pottery has been found at Tubney, including 'two vases of late Roman manufacture' and 'a grey vase containing ashes', presumably cremation urns, although the precise findspots were not recorded.[12] The nearest substantial settlement was

2 Geological Survey Map of England and Wales, 1:50,000 (solid and drift), sheet 236 (1982 edn).
3 H. Case, 'Mesolithic Finds in the Oxford Area', *Oxoniensia*, 12/13 (1952/3), pp. 1–13.
4 Bradley and Hey, 'A Mesolithic Site at New Plantation'.
5 Ibid. fig. 5.
6 Ibid. p. 25.
7 *VCH Berks.* 4 (1924), p. 379.
8 Magdalen College Archive, estate maps of Tubney (1767, 1841, and 1887); J. Rocque, *Berks. Map* (1761); OS Map, 1:2500, Oxon. 38 (1876).
9 Bradley and Hey, 'A Mesolithic Site at New Plantation', p. 8.
10 Ibid. p. 23.
11 I.D. Margary, *Roman Roads in Britain* (London, 1967); G.M. Lambrick, 'Some Old Roads of North Berkshire', *Oxoniensia*, 34 (1969), pp. 78–93.
12 *Archaeological Journal*, 3 (1846), p. 69.

at Frilford, *c.*3 km south of the site,[13] and there is evidence for pottery kilns *c.*3 km to the east at Old Boars Hill.[14]

The medieval village of Tubney was originally centred around Tubney Manor Farm, adjacent to the north-western boundary of the site.[15] The village was deserted by the early sixteenth century, and the medieval church had vanished by 1731.[16] The graveyard survived into the early twentieth century, and its location is recorded on the 1841 tithe map as an irregular quadrilateral enclosure that borders the north-western side of the site.[17]

PHASES OF INVESTIGATION

An initial field evaluation was undertaken within Extension Area 1 in 2001 before submission of a planning application for the proposed quarry extension. It revealed an extensive scatter of Mesolithic flint in the topsoil and subsoil and more limited evidence of surviving below-ground archaeological features.[18] This work was followed by a test pit survey in this area in order to recover a sample of the flint scatter (see pp. 123–4, below). A second phase of evaluation took place in Extension Areas 2 and 3 in 2003 and revealed a lower density of Mesolithic flint, as well as Roman and undated ditches.[19] In 2003 and 2004 a watching brief was carried out during stripping of topsoil within Extension Area 1, and in 2005–7 a watching brief and strip, map and sample excavation took place within Extension Area 2, followed by a further strip, map and sample excavation in Extension Area 3 in 2008–9.

DISCUSSION

Mesolithic

The investigations identified two early Mesolithic flint concentrations comparable with the two scatters that had been investigated previously within the existing quarry (Fig. 2).[20] These four scatters are of broadly similar dimensions and, although disturbed by the plough, form discrete clusters. The densities of flint from the scatters are also broadly comparable and of substantial proportions. Only 1 per cent of the total areas of Scatters 1 and 2 were sieved, but extrapolating from this sample indicates that the scatters would have contained *c.*45,000 and *c.*50,000 flints respectively. Assemblages of this scale result from prolonged periods of activity, but as the scatters have been disturbed it is difficult to consider the temporal patterns of occupation. The scatters may have resulted from continuous occupation, although periodic occupation in seasonal or broader cycles is more probable.

The compositions of the flint assemblages from Scatters 1 and 2 are broadly comparable to those of the two scatters that were previously investigated at New Plantation. Scatter 1 produced comparatively few retouched tools, but the artefacts recovered included both microliths and scrapers. Scatter 2 produced a larger retouched assemblage, including microliths, scrapers, piercers,

13 J.P.S. Bradford and R.G. Goodchild, 'Excavations at Frilford, Berks. 1937–8', *Oxoniensia*, 4 (1939), pp. 1–70; D.W. Harding, *Excavations in Oxfordshire, 1964–66*, University of Edinburgh Occasional Paper, 5 (1987); Z. Kamash et al., 'Contiuity and Religious Pracices in Roman Britain: The Case of the Rural Religious Complex at Marcham/Frilford, Oxfordshire', *Britannia*, 41 (2010), pp. 95–125.

14 E. Harris and C.J. Young, 'The "Overdale" Kiln Site at Boar's Hill, near Oxford, *Oxoniensia*, 39 (1974), pp. 12–25.

15 J. Brooks, 'Tubney, Oxfordshire: Medieval and Later Settlement', *Oxoniensia*, 49 (1984), p. 121.

16 Ibid. p. 129.

17 *VCH Berks.* 4, p. 379.

18 'Tubney Wood Quarry Extension: Archaeological Evaluation Report', Oxford Archaeology, unpublished report (2001).

19 'Extension Areas 2 and 3, Tubney Wood Quarry: Archaeological Evaluation Report', Oxford Archaeology, unpublished report (2003).

20 Bradley and Hey, 'A Mesolithic Site at New Plantation'.

and serrated flakes. Scrapers represented 38.9 per cent of the tools in Scatter 2, compared to 4.1 per cent and 18.4 per cent in Scatters A and B, respectively.[21] Serrated flakes were also a prominent tool type in Scatter 2 at 22.2 per cent, as was previously noted for Scatters A and B, where they represented 33.3 per cent and 23.7 per cent of the total of essential tools respectively.

The tools recovered from Scatters 1 and 2 represent a broad range of activities. The scrapers and piercers may have been used for the preparation of hides or for woodworking. The microliths may have been employed in a variety of composite tools, perhaps including projectile points. The micro-burins also indicate that microliths were produced at the site. The high proportion of serrated flakes indicates the working of silica-rich plants, such as nettles, for fibres that may have been manufactured into cord or textiles.[22] In the absence of direct evidence from plant or animal remains, which rarely survive on Mesolithic sites, this range of tool types provides some indication of the variety of natural resources that were exploited by the community that used this site. The presence of hearths and fires may also be inferred from the high proportion of burning noted among the worked flints, assuming that the burning occurred during the Mesolithic period. Approximately 20 per cent of the flint in Scatters 1 and 2 was burnt, indicating significant association between activities involving flint and fire; this may be within the use-life of the artefacts or associated with disposal and depositional practices.

Scatters 1 and 2, like the previous scatters from Tubney Wood, fall within Mellars' Type B 'balanced' assemblages.[23] These are considered to represent base-camps, rather than task-specific sites, and were possibly occupied in winter months. These sites are most commonly found in low-lying river valley locations, for example, at Slade Farm, Bicester and Thatcham IIIA, but on occasion, as at Tubney, they are located on elevated ground.[24] In the case of the scatters at Tubney Wood this somewhat elevated site is, of course, only a short walk from valley floor. The intensive activity evidenced at Tubney Wood, along with smaller scatters elsewhere on the Corallian Ridge at Shotover, Wootton and Cumnor, suggests that the ridge may represent a favoured elevated location.[25] This would fit with the observed pattern for early Mesolithic occupation in the Thames valley for activity 'hot spots' surrounded by areas of more occasional use.[26] Certainly, the site at Tubney Wood, sited on the low scarp overlooking the Thames valley, would have provided easy access to a wide range of resources associated with the river and with the Corallian Ridge itself. It may be relevant in this respect that evidence for burning during the early Mesolithic period has been recorded in a pollen sequence from Cothill Fen, *c.*1.5 km south-east of Tubney Wood, and has been interpreted as deliberate management of the environment by Mesolithic communities, intended to create or maintain woodland clearings.[27]

The temporal relationship of the four scatters at Tubney Wood also requires consideration. Their close proximity suggests that they are related. The scatters may have formed either

21 Ibid. p. 25.

22 Micro-wear analysis was not carried out on this assemblage, but see H.J. Jensen, *Flint Tools and Plant Working: Hidden Traces of Stone Age Technology* (Aarhus, 1994); L. Hurcombe, 'Plant Processing for Cordage and Textiles using Serrated Flint Edges: New Chaînes Operatoires Suggested by Ethnographic, Archaeological and Experimental Evidence for Bast Fibre Processing', in V. Beugnier and P. Crombé (eds.), *Plant Processing from a Prehistoric and Ethnographic Perspective: Proceedings of a Workshop at Ghent University (Belgium) November 28, 2006*, BAR IS, 1718 (2007), pp. 41–66.

23 P. Mellors, 'Settlement Patterns and Industrial Variability in the British Mesolithic', in G. de G. Sieveking et al. (eds.), *Problems in Economic and Social Archaeology* (London, 1976), pp. 375–99.

24 P. Ellis et al., 'An Iron Age Boundary and Settlement Features at Slade Farm, Bicester, Oxfordshire: a Report on Excavations, 1996', *Oxoniensia*, 65 (2000), pp. 211–65; J. Wymer, 'Excavations at the Maglemosian Sites at Thatcham, Berkshire, England', *Proceedings of the Prehistoric Society*, 28 (1962), pp. 329–54.

25 H.J. Case, 'Mesolithic Finds in the Oxford Area', *Oxoniensia*, 17–18 (1952–3), pp. 1–13.

26 G. Hey and M. Robinson, 'Mesolithic Communities in the Thames Valley: Living in the Natural Landscape', in A. Morigi et al., *The Thames through Time. The Archaeology of the Gravel Terraces of the Upper and Middle Thames. Early Prehistory to 1500 BC*, Thames Valley Landscapes Monograph, 32 (2011), p. 205.

27 S.P. Day, 'Post-Glacial Vegetational History of the Oxford Region', *New Phytologist*, 119 (1991), pp. 445–70.

contemporaneously or sequentially, and these two scenarios present quite different social situations. If the scatters are contemporary, then they may reflect the gathering of several groups (or communities), who retained some spatial distinction in their activity areas. Alternatively these scatters may have formed sequentially, with a population returning to the general area, but periodically shifting the central activity area.

Bronze Age

Two cremation burials of probable Bronze-Age date were excavated (5119, 5353; Fig. 3). The two features were located close together in an area of disturbance, the cause of which is not fully understood, but which appears to have post-dated the burials. Some of the cremated bone from burial 5353 had been re-deposited within the disturbed area, and a sample from this redeposited bone returned a radiocarbon determination of 1870–1840 BC or 1780–1620 BC (NZA-34865; 3409 ± 30 BP), dating the burial to the early Bronze Age. The proximity of the two burials and their similar form suggest that burial 5119 should be of similar date. These cremation burials therefore date from a period when cremation was replacing inhumation as the primary form of burial, as has been recorded at the barrow cemetery at Barrow Hills, Radley, *c.*7 km east of Tubney Wood Quarry.[28] As is usual for such burials, there is no evidence that the act of cremation took place at the site of burial.[29] Rather, the pyre was located elsewhere, either a short distance from the burial pit or at an entirely different location, and the cremated bone was collected and transported to the place of burial. Each burial contained the remains of a single adult individual, although neither deposit was substantial enough to represent the remains of a complete skeleton (see Boyle et al., below), and this may indicate that the burial of only a portion of the cremated remains was considered sufficient.

The only artefact that was recovered from either of these burials was a small piece of sheet gold (Plate 8), which was recovered from a soil sample taken from burial 5353. The item measured only 12 x 9 mm and had been partially crushed, but is likely to be a 'sun-disc', a type of decorative item that dates from the Chalcolithic period (*c.*2450/2400–2200/2150 BC), when metalworking was first introduced into Britain.[30] The disc is a little smaller than most other examples but the decorative scheme of a cruciform pattern set within a band is characteristic of the type.[31] Most of the 'sun-discs' that are presently known from Britain have been discovered in Ireland, which has produced twenty-one of the corpus of thirty-four examples, and only five had previously been found in England.[32] Both their rarity and the use of gold in their manufacture indicate that 'sun-discs' were objects of great value and indicative of the high status of the wearer. Objects of precious metal are found in only a small number of burials, the most notable nearby examples being at Barrow Hills, where objects of similar manufacture accompanied two burials: two gold foil cones that accompanied a cremation deposit under Barrow 2 (which have been interpreted as the outer covering for a composite biconical bead), and a pair of ear- or hair-rings of the type known as 'basket earrings' that were buried with an inhumation under Barrow 4A.[33] 'Sun-discs' are

[28] 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), p. 323.

[29] P. Garwood, 'Early Bronze Age Burials, Monuments and Landscape, 1900–1500 Cal BC', in Morigi et al., *Thames through Time*, p. 425.

[30] Stuart Needham, personal communication.

[31] G. Eogan, *The Accomplished Art: Gold and Gold-Working in Britain and Ireland during the Bronze Age (c.2300–650 BC)* (Oxford, 1994), pp. 15–16.

[32] S. Timberlake et al., 'A Copper Age/Early Bronze Age Gold Disc from Banc Tynddol (Penguelan, Cwmystwyth Mines, Ceredigion)', *Antiquity*, 78/302 (2004).

[33] A. Williams, 'Excavations in Barrow Hills Field, Radley, Berkshire, 1944', *Oxoniensia*, 13 (1948), p. 5 and plate iid, and Barclay and Halpin, *Excavations at Barrow Hills, Radley*, pp. 149–52 and fig. 5.3 for Barrow 2; R.J.C. Atkinson, 'Excavations in Barrow Hills Field, Radley, Berks., 1944–45', *Oxoniensia*, 17–18 (1952–3), pp. 20–1 and fig. 12, and Barclay and Halpin, *Excavations at Barrow Hills, Radley*, pp. 149–52 and fig. 5.3 for Barrow 4A.

linked stylistically with 'basket earrings' through their shared use of repoussé techniques and their common decorative motifs. The radiocarbon determination obtained for the burial at Tubney Wood is rather later than the date range usually attributed to such objects and may indicate that it was an heirloom that had been in circulation for a considerable period of time prior to deposition.

The discovery of the two cremation burials goes some way to verifying the historical and cartographic evidence for one or more barrows at Tubney Wood. The discovery of two cremation burials, although not associated with a mound or ring ditch, provides unequivocal evidence for early Bronze-Age funerary activity in the vicinity and thus increases the likelihood that barrows formerly existed here. Ring ditch 3031 is also a possible candidate for identification as the levelled mound referred to by the *VCH*, although it could be an additional, previously unrecorded barrow. The evidence from the excavation thus confirms that high-status burial, and possibly barrows, formed part of the early Bronze-Age landscape of this part of the Corallian Ridge.

Middle Iron Age

The middle Iron Age is the first period when settlement evidence in the upper Thames valley becomes prolific, with the landscape apparently filling up with farming communities.[34] The cluster of thirty-seven pits of this date located near the western edge of the excavation (Fig. 4) are likely to represent evidence for one such settlement, since pits such as these are a typical feature of settlements of this period.[35] The presence of globular bowls and of a sherd of saucepan pot are characteristic of the later part of the middle Iron Age and suggest a date for this settlement in the second to first centuries BC.

The pits varied substantially in size, with depths of 0.2–1.05 m, and although they formed something of a continuum rather than falling into clearly defined size categories this variety suggests that they may have served a range of functions. This is typical for the region.[36] The principal function of the largest pits in Iron-Age settlements is believed to have been as storage silos for grain.[37] Experimental and ethnographic evidence has amply demonstrated the efficacy of this method for keeping the grain alive but ungerminated and safe from rodent and insect pests.[38] Although these experiments have only taken place with pits cut into chalk bedrock, there is no *a priori* reason to believe that this form of storage would not work equally well with pits dug into other substrates, such as sand or gravel. The large number of such features recorded on sites in the Thames valley would certainly seem to indicate that this practice was widespread in this region, at least in sites where the water table was at a suitable depth.[39] It has been suggested that in order to attain the temperature, humidity, and atmospheric conditions required for the preservation of the grain it was necessary for the pit to be at least 1 m deep or have a volume of at least a cubic metre, and the larger pits at Tubney would satisfy this requirement, as well as some of the medium-sized pits.[40]

It is probable, then, that the larger pits at Tubney Wood Quarry were being used for grain storage. Most likely they were used to keep seed grain over winter; opening the pit to access the grain would disrupt the temperature, humidity, and atmospheric conditions within it necessary

[34] R. Hingley and D. Miles, 'Aspects of Iron Age Settlement in the Upper Thames Valley', in B. Cunliffe and D. Miles (eds.), *Aspects of the Iron Age in Central Southern Britain* (Oxford, 1984), p. 65; G. Lambrick with M. Robinson, *The Thames through Time. The Archaeology of the Gravel Terraces of the Upper and Middle Thames. Late Prehistory: 1500 BC–AD 50*, Thames Valley Landscapes Monograph, 29 (2009).

[35] Ibid. p. 62.

[36] Ibid. pp. 274–8.

[37] B. Cunliffe, *Iron Age Communities in Britain*, 3rd edn (London, 1999), pp. 375–6.

[38] P.J. Reynolds, 'Experimental Iron Age Storage Pits: an Interim Report', *Proceedings of the Prehistoric Society*, 40 (1974), pp. 118–31.

[39] *Contra* C.J. Stevens, 'An Investigation of Agricultural Consumption and Production Models for Prehistoric and Roman Britain', *Environmental Archaeology*, 8.1 (2003), pp. 61–76.

[40] P.J. Reynolds, cited in Lambrick with Robinson, *Thames through Time*, p. 275.

to the preservation of the grain, rendering this form of storage unsuitable for grain intended for day-to-day consumption. Some of the smaller pits may have had different functions, but no evidence for the nature of these was apparent.

At many sites disused pits were utilised for disposal of refuse or for the placing of 'special deposits' interpreted as offerings to the deities responsible for the preservation of the grain.[41] The small assemblages of pottery and animal bone recovered from the pits at Tubney Wood Quarry provide no evidence for this practice, although it should be borne in mind that the preservation of bone has been severely hampered by the acidic soil conditions.

Other than their suggested function as grain silos, the pits produced little evidence to elucidate the economic basis of the site, though soil samples from pits 1023 and 1107 contained moderate quantities of barley and spelt grain and spelt chaff and associated weeds. Poor preservation of bone means that little can be said regarding any animal husbandry carried out at the settlement. The small pottery assemblage does, however, hint at the range of social and economic contacts of this community. The fabrics indicate that the pottery is all likely to be of local origin, but the forms in which the vessels were made include both plain globular bowls of a type found throughout the upper Thames valley, and a single sherd from a saucepan pot, a type more common in southern England.

Some limited inferences can be made regarding the character of the settlement. The absence of evidence for an enclosure ditch suggests that it was an open settlement, similar to those investigated elsewhere on the Corallian Ridge at Coxwell Road, Faringdon and at Hatford Quarry.[42] These settlements, and similar ones on the gravel terraces of the Thames valley, are likely to have practiced mixed farming and contrast with lower-lying open and enclosed settlements on the Thames floodplain, such as Farmoor, Port Meadow, Mingies Ditch, and Watkins Farm, which had a more pastoral focus.[43] Most of the pits at Tubney Wood Quarry were distributed in a swathe that was less than 10 m wide and extended for at least 30 m, and this linear distribution may indicate that they were located along a boundary, which seems to be typical of settlements of this period.[44] The group of three outlying pits (1107, 1110, and 1113) lay on an alignment at right angles to that of the main distribution, and may have been associated with a subsidiary boundary. This suggests that the settlement was clearly structured, and that pit digging was restricted to boundary locations and the intervening spaces kept clear for buildings or other activity areas, in a manner similar to that revealed more fully at Gravelly Guy.[45] This interpretation may also be reinforced by the possibility that, as at Gravelly Guy, the linearity of the pit cluster at Tubney Wood was reflected in the alignment of subsequent Roman boundaries.

The full extent of the settlement was not established, and the distribution of pits seems certain to continue beyond the western edge of the excavation area. It is therefore possible that these features represent only the periphery of a more extensive settlement. Just such a circumstance was encountered at Ashville Trading Estate, Abingdon, where initial excavations recorded only a

41 For example, L. Cook et al., 'Excavations of an Iron Age Site at Coxwell Road, Faringdon', *Oxoniensia*, 69 (2004), pp. 278–80; G.H. Lambrick and T.G. Allen, *Gravelly Guy, Stanton Harcourt, Oxfordshire: The Development of a Prehistoric and Romano-British Community*, Thames Valley Landscapes Monograph, 21 (2004), pp. 489–90.

42 Cook et al., 'Coxwell Road, Faringdon', pp. 278–80; R. Bourn, 'Manorhouse Farm, Hatford, Oxfordshire: an Iron Age and Early Romano-British Settlement', in R.J. Zeepvat (ed.), *Three Iron Age and Romano-British Settlements on English Gravels*, BAR BS, 312 (2000), pp. 5–74; P.M. Booth and A. Simmonds, 'An Iron Age and Early Romano-British Site at Hatford Quarry, Sandy Lane, Hatford, Oxfordshire', *Oxoniensia*, 69 (2004), pp. 319–54.

43 G.H. Lambrick and M.A. Robinson, *Iron Age and Roman Riverside Settlement at Farmoor, Oxfordshire*, CBA Research Report, 32 (1979); R.J.C. Atkinson, 'Archaeological Sites in Port Meadow, Oxford', *Oxoniensia*, 7 (1942), pp. 24–35; T.G. Allen and M.A. Robinson, *The Prehistoric Landscape and Iron Age Settlement at Mingies Ditch, Hardwick-with-Yelford, Oxon.*, Thames Valley Landscapes Monograph, 2 (1993); T.G. Allen, *An Iron Age and Romano-British Enclosed Settlement at Watkins Farm, Northmoor, Oxon.*, Thames Valley Landscapes Monograph, 1 (1990).

44 Lambrick with Robinson, *Thames through Time*, pp. 105–11, 384–5.

45 Lambrick and Allen, *Gravelly Guy*.

modest total of twenty-six pits but subsequent investigations in an adjacent area revealed a more extensive settlement including roundhouses and other structures.[46] The total number of pits at the settlement may therefore be significantly greater than the thirty-seven within the excavation area, although even this number is not insubstantial: a more typical number of pits at a contemporary settlement of one to three roundhouses is likely to have been in single figures.[47] This certainly appears to have been the case at a number of middle Iron-Age settlements in Oxfordshire.[48]

The greater number of pits at Tubney Wood may place it within a category of sites descibed as 'pit cluster settlements' that is typified by the density of such features, and which is characteristic of the Corallian Ridge and the higher gravel terraces of the Thames valley.[49] The settlement at Coxwell Road, Faringdon was of this type, and a group of similar sites has been identified at Stanton Harcourt, on the opposite side of the river from Tubney Wood.[50]

Pit cluster settlements were typically occupied throughout the Iron Age, but at Tubney Wood Quarry no evidence was found for occupation during either the early or late Iron Age. The settlement may simply have been unusually short-lived, but it is also possible that the main area of occupation shifted over time and that occupation of those periods lies beyond the areas that have been investigated. The latter phenomenon has been recorded at the settlement at Coxwell Road, Faringdon,[51] and a similar gradual shift in settlement location between the early and middle Iron-Age phases has been observed at the settlement at Yarnton.[52]

Roman Period

First to early second century AD. The early Roman period provides the clearest evidence for large-scale division of the landscape at Tubney Wood. It is possible, however, that this represents a continuation of a tradition of land division that was initiated during the middle Iron Age, as the orientation of the early Roman boundaries in the south-western part of the site is consistent with the general alignment of the middle Iron-Age pit cluster. Although no evidence was recovered for activity during the intervening late Iron Age, this could be explained by a shift in the settlement focus away from the excavated area.

A large trapezoidal ditched enclosure and a smaller penannular enclosure were constructed in the north-eastern area of the excavation, and the edge of a complex of rectilinear fields was exposed at the south-western end (Figs. 6–8). The boundary ditches in these two areas lay on different orientations, suggesting that they were created as two discrete complexes, presumably with open ground or woodland between them. The ceramic assemblage from these features was dominated by Savernake wares and grog-tempered E wares, and is consistent with a date shortly after the Roman conquest for the establishment of these complexes. They appear to have been in use throughout the second half of the first century, and the presence of Oxford white mortaria and black-burnished ware indicates that some features did not fill up until at least the early second century.

46 M. Parrington, *The Excavation of an Iron Age Settlement, Bronze Age Ring Ditches and Roman Features at Ashville Trading Estate, Abingdon, Oxfordshire, 1974–76*, CBA Research Report, 28 (1978); J. Muir and M.R. Roberts, *Excavations at Wyndyke Furlong, Abingdon, Oxfordshire, 1994*, Thames Valley Landscapes Monograph, 12 (1999).

47 S.D.G. Weaver and S. Ford, 'An Early Iron Age Occupation Site, a Roman Shrine and Other Prehistoric Activity at Coxwell Road, Faringdon', *Oxoniensia*, 69 (2004), p. 177.

48 R.N. Everett and R.M.G. Eeles, 'Thrupp House Farm, Radley, Nr. Abingdon', *Oxoniensia*, 64 (1999), pp. 117–53; G. Walker, 'A Middle Iron Age Settlement at Deer Park Road, Witney: Excavations in 1992', *Oxoniensia*, 60 (1995), pp. 67–93; A. Mudd, 'The Excavation of a Late Bronze Age/Early Iron Age Site at Eight Acre Field, Radley', ibid. pp. 21–66.

49 Lambrick and Allen, *Gravelly Guy*.

50 Weaver and Ford, 'Coxwell Road, Faringdon'; Cook et al., 'Coxwell Road, Faringdon', pp. 181–285; G. Lambrick with T. Allen, 'Settlements and Settlement Patterns', in Lambrick and Robinson, *Thames through Time*, p. 105.

51 Weaver and Ford, 'Coxwell Road, Faringdon'; Cook et al., 'Coxwell Road, Faringdon'.

52 G. Hey et al., *Yarnton: Iron Age and Roman Settlement and Landscape*, Oxford Archaeology Thames Valley Monograph, forthcoming.

The layout of the north-eastern complex would be consistent with a pastoral function. The irregular trapezoidal enclosure measured *c.*75 m by 50 m, substantially larger than arable fields of this period (such as the field complexes that survive as earthworks on the Berkshire Downs), and its shape suggests a stock enclosure.[53] The design of the entrance, the southern side of which projected outward for some seven metres from the entrance itself, may have been intended to facilitate the management of livestock being herded into the enclosure. The penannular enclosure measured *c.*14 m by 10 m and may have functioned as a smaller corral. The rather wide entrance on its north-eastern side may have been closed using hurdles or a hedge, which has left no archaeologically detectable evidence.

The south-western complex comprised parts of three large rectilinear fields, which probably formed part of a more extensive complex that extended beyond the limits of the investigation. There is evidence that the complex had been set out with some care; there was a clear symmetry to the arrangement of the fields, with both outer fields projecting north-east for *c.*40 m beyond the middle field. The fields were not conjoined, but lay a few metres apart, perhaps in order to facilitate the movement of stock.

The only burial dating from this phase was that of a child aged 6–12 years, of uncertain sex, who had been buried within the fill of the ditch defining the middle field. The placing of burials within boundary ditches was a common practice, with origins that can be traced back to the Bronze Age.[54]

The establishment of ditched boundaries and field systems appears to have been a widespread phenomenon during the middle part of the first century AD, and features similar to those at Tubney Wood have been recorded elsewhere on the Corallian Ridge at Hatford Quarry and Watchfield.[55] This appears to represent a rationalisation and intensification of farming practices, perhaps associated with a growing population or with changes to the social and political system that necessitated the maximisation of returns from agricultural production.[56] This overall trend almost certainly had its origins in later prehistory, but became archaeologically more recognisable as greater use was made of ditches to demarcate land boundaries.[57] Unfortunately the extremely poor survival of bone and an absence of useful botanical remains precludes any detailed analysis of the farming regime with which these developments were associated at Tubney Wood.

Second century AD. At some time during the first half of the second century, the existing field complexes were swept away and the agricultural landscape at Tubney Wood was completely re-organised. The south-western complex was replaced by a single linear boundary ditch, which cut across the former enclosures on a north-west to south-east alignment, but in the north-eastern part of the excavation area a new complex of enclosures was established. This event was contemporary with a more widespread pattern of settlement dislocation that involved the abandonment of many rural settlements and the wholesale reorganisation of others.[58] On the Corallian Ridge the settlements at both Hatford Quarry and Watchfield fell victim to this phenomenon of abandonment.[59]

53 M. Bowden et al., 'The Date of the Ancient Fields on the Berkshire Downs', *Berkshire Archaeological Journal*, 74 (1993), pp. 109–33.

54 Lambrick with Robinson, *Thames through Time*, pp. 309–10.

55 Bourn, 'Manorhouse Farm, Hatford, Oxfordshire'; Booth and Simmonds, 'Hatford Quarry'; V. Birbeck, 'Excavations at Watchfield, Shrivenham, Oxfordshire, 1998', *Oxoniensia*, 66 (2001), pp. 221–88.

56 For this and what follows cf. Booth, 'Romano-British Trackways', above, this volume.

57 Lambrick with Robinson, *Thames through Time*, pp. 384–6, 393.

58 M. Henig and P. Booth, *Roman Oxfordshire* (Stroud, 2000), pp. 106–8; P. Booth et al., *The Thames Through Time. The Archaeology of the Gravel Terraces of the Upper and Middle Thames. The Early Historical Period: AD 1–1000*, Thames Valley Landscapes Monograph, 27 (2007), pp. 43–52.

59 Bourn, 'Manorhouse Farm, Hatford', pp. 67–8; Birbeck, 'Excavations at Watchfield, Shrivenham, Oxfordshire, 1998', p. 287.

The reorganisation at Tubney Wood was focused on the creation of a complex of enclosures and other features associated with a newly constructed trackway in the north-eastern part of the excavation. The trackway extended across the area of the excavation on a north-west to south-east alignment that clearly suggests that it branched off the Wantage–Oxford road, which was located to the south-east of the site.[60] The destination of the north-western end of the trackway is unknown. The second-century complex was characterised by a series of relatively small rectilinear enclosures that adjoined the north-eastern side of the trackway, with larger, more irregular fields to the rear and on the south-western side. This association of enclosures around a trackway is a recurrent feature of Roman settlement in the region, and while some, such as the example at Hatford Quarry, have been interpreted as droveways used to move stock between areas of pasture, it is likely that the majority served as the main communication routes that linked the many small rural settlements that predominated in the Roman landscape.[61]

The layout of the settlement exhibits a regularity that suggests that it was deliberately planned and set out in a single act, and contrasts with many contemporary sites from the surrounding area; the farmsteads at Yarnton and Old Shifford, for example, comprised agglomerations of irregular enclosures typical of organic development of settlements with pre-Roman origins.[62] The closest parallels in the local area are at Farmoor and a cropmark site at Northfield Farm, Long Wittenham.[63] The trackway that extended through the eastern part of the settlement at Gill Mill was similarly lined on its northern side by conjoined rectilinear enclosures, although there is no suggestion that Tubney Wood was the site of a nucleated settlement of that type.[64] A very similar site exists at Horcott (Glos.), where stock enclosures were similarly replaced at about the same time by rectilinear paddocks and enclosures adjoining a trackway.[65]

The complex produced the vast majority of the pottery from the excavation, amounting to more than 25 kg, most of which was recovered from the ditches defining the trackway and the immediately adjoining enclosures. Such a volume of pottery is far too great to represent an incidental accumulation and must derive from the deliberate disposal of domestic refuse within these boundary ditches. It is possible that this material derives from occupation within the enclosures. No definite evidence for domestic buildings was identified, but this is not unusual for such rural settlements, and presumably reflects a building tradition that did not rely on substantial earth-fast posts or foundations.[66] A number of possible postholes were recorded within enclosure 5386, but they were few in number and could not be resolved into a coherent structure.

Domestic occupation was undoubtedly present, whether it was situated within the enclosures or perhaps in the area beyond the north-western edge of the excavation. The composition of the ceramic assemblage, which is dominated by jar forms and exhibits an almost total dependence on locally produced pottery, is characteristic of a low-status rural site and indicates only very limited access to the wider trade networks that were commonplace at more high-status sites. The low status of the settlement is also reflected in the general paucity of the material culture of the site, not least the complete absence of coins. No evidence was found for crop processing within this complex, in the form of either botanical remains or quern stones, which could indicate that the

60 Margary, *Roman Roads in Britain*; Lambrick, 'Old Roads of North Berkshire'.

61 Bourn, 'Manorhouse Farm, Hatford', p. 65; Henig and Booth, *Roman Oxfordshire*, pp. 95–9.

62 Hey et al., *Yarnton: Iron Age and Roman Settlement and Landscape*, Thames Valley Landscapes Monograph, forthcoming; G. Hey, 'Iron Age and Roman Settlement at Old Shifford Farm, Standlake', *Oxoniensia*, 60 (1995), fig. 4.

63 Lambrick and Robinson, *Iron Age and Roman Riverside Settlement at Farmoor, Oxfordshire*; Henig and Booth, *Roman Oxfordshire*, fig. 4.11.

64 P. Booth and A. Simmonds, 'Gill Mill, Ducklington and South Leigh, Oxfordshire, Post-Excavation Assessment and Project Design', unpublished Oxford Archaeology report (2011).

65 J. Pine and S. Preston, *Iron Age and Roman Settlement and Landscape at Totterdown Lane, Horcott, near Fairford, Gloucestershire*, Thames Valley Archaeological Services Monograph, 6 (2004), p. 92.

66 Henig and Booth, *Roman Oxfordshire*, pp. 94–5.

economy of the settlement was largely pastoral, or may simply mean that such tasks were carried out elsewhere.

Two cremation burials dating from the late second century were excavated (20010 and 20011), and a possible third plough-damaged burial was also recorded, as well as additional smears of burnt bone on the surface of the natural sand that were too ephemeral to be recovered but are likely to indicate the former presence of further burials. Both excavated burials were urned, with the cremated remains in each instance interred within a fine grey ware 'cooking-pot' type jar from the Oxford industry. One was accompanied by a bag-shaped beaker in the same fabric and the other by two small 'jar' beakers in fine grey ware. The lattice decorating the urn in burial 20011 (Fig. 22, no. 30) suggested a date no earlier than the late second century for this burial, and the vessels in burial 20010 (Fig. 22, no. 28) may well be of similar date. The evidence from Tubney Wood, including the discovery of three possible cremation urns in the nineteenth century, suggests the possible former presence of a relatively substantial cremation cemetery. This is significant because rural burials dating from the early part of the Roman period are quite rare in this part of Britain. It is likely that much of the population still practiced Iron-Age funerary traditions, which left no archaeologically detectable trace.[67]

Third to fourth century AD. The ditches forming the north-eastern complex had silted up by the early part of the third century, and deposition of artefacts appears to have ceased. This suggests that the area was no longer occupied, although it is possible that boundaries defined by hedgerows may have continued in use. Positive evidence for late third- and fourth-century activity was restricted to the south-western part of the site, and comprises ditches that defined two sides of a large, rectilinear field, and a small inhumation cemetery located within the angle thus formed (Figs. 8 and 9). The ditches are dated by the recovery of a near-complete narrow-mouthed jar, but the rest of the pottery from these features consists of no more than a handful of very small, residual sherds of early Roman wares, and this paucity of ceramic evidence indicates that the settlement from which the area was now being farmed was relatively distant from the excavation area.

The inhumation cemetery comprised a group of eight graves. Its location, in close proximity to and partially enclosed by boundary ditches and apparently in a peripheral situation beyond the area of domestic occupation, is typical for the period.[68] It is clear from the small number of burials and the absence of children that this does not represent the burial ground for the entire community, although both males and females are represented. The cemetery was quite typical for a late Roman site in this part of Britain,[69] and there was no evidence for any formal organisation. Five graves were clustered closely together and intersected slightly; two lay a few metres south of this group; and one was something of an outlier, some 13 m to the west. The orientations of the graves were slightly irregular but appeared to be derived primarily from those of the adjacent ditches. Three graves (1660, 1661, and 1663) were orientated west-south-west to east-north-east and the remainder roughly north–south or north-north-west to south-south-east. Graves 1661 and 1663 had been provided with stone linings, more complete in grave 1661, in which flat slabs of limestone had been set vertically against all four sides of the grave pit (Fig. 10). The lining in grave 1663 comprised only a row of stones placed along the southern edge of the grave pit and three stones against the northern edge, although it is possible that some evidence had been removed by the digging of grave 1664, which cut the southern side of this burial. Such stone linings are an

[67] Booth et al., *Thames Through Time. The Archaeology of the Gravel Terraces of the Upper and Middle Thames. The Early Historical Period: AD 1–1000*, p. 224.

[68] S.E. Cleary, 'Putting the Dead in their Place: Burial Location in Roman Britain', in J. Pearce et al. (eds.), *Burial, Society and Context in the Roman World* (Oxford, 2000), pp. 127–42; J. Pearce, 'The Dispersed Dead: Preliminary Observations on Burial and Settlement Space in Rural Roman Britain', in P. Barker et al. (eds.), *TRAC 98: Proceedings of the Eight Annual Theoretical Roman Archaeology Conference, Leicester 1998* (Oxford, 1999), pp. 151–62.

[69] P. Booth, 'Late Roman Cemeteries in Oxfordshire: a Review', *Oxoniensia*, 66 (2001), pp. 13–42.

occasional occurrence in the region, with a single possible instance recorded nearby at Frilford.[70] Grave 1660 was the only burial that was definitely interred within a coffin, represented by eleven fragments of nail and three possible coffin fittings, although if coffins in other burials were held together by means other than nails, such as jointing or wooden pegs, they would have left no trace. If the iron items in grave 1660 are indeed coffin fittings, then this coffin was rather unusual, as only one other instance of such embellishment has been recorded in Oxfordshire, in a grave at Queenford Farm, Dorchester-on-Thames.[71]

The grave pits were relatively insubstantial, with none measuring more than 0.4 m deep and the shallowest only 0.05 m. Skeletons survived, albeit in poor condition, in seven of the eight burials, although one had been somewhat disturbed by ploughing. The individuals interred in the remaining six graves all lay in extended, supine postures with their heads at the northern or western end of the grave. In addition to being buried within a stone-lined grave, the individual buried in grave 1661 was also the only burial that had been provided with grave goods, in the form of a composite bone or antler comb and a coin of the House of Valentinian (AD 364–78), and was the only individual buried with hobnailed footwear. This individual was tentatively identified as a young adult male, but this should be treated with some caution as no post-cranial sexually diagnostic elements survived, and the skull was fragmented and rather eroded, resulting in some ambiguity in the attribution of sex. Composite combs are usually associated with female burials, although in a few recorded instances they accompanied male burials.[72] Combs of this sort are one of the more frequent grave good types from late Roman burials in Oxfordshire, although they are still only an occasional find.[73] A sample from the left femur of this individual yielded a radiocarbon determination of cal AD 255–390 (NZA-34888; 1716 ± 20 BP), which, along with the coin, provides the dating evidence for the cemetery.

It is possible that there was some chronological significance to the distinction between the three graves that were orientated west-south-west to east-north-east and were provided with a stone lining or nailed coffin (and in one case with grave goods), and the graves that were orientated north–south and possessed none of these attributes. Grave 1663 was cut by one of the unaccompanied graves, and this may indicate that the three 'fancy' burials represent the initial phase of the cemetery, with the unaccompanied burials interred later, on a differing orientation. If this was the case, then the use of this cemetery dated entirely from the very end of the Roman period, since the coin in Grave 1661 places the possibly earlier phase of burials no earlier than the Valentinian period. If later, the unaccompanied burials would therefore have to date from the final quarter of the fourth century or the early fifth century.

Post-Roman Cemetery (Fifth to Early Sixth Centuries)

A small cemetery of six burials located near the western end of the site (Figs. 11–13) was dated to the immediate post-Roman period by two radiocarbon determinations of cal. AD 420–540 (NZA-34887) and cal. AD 425–545 (NZA-348850). This cemetery was distinct from the late Roman cemetery both spatially, being located *c.*20 m further west, and in terms of the range of burial practices observed. Two burials (1321 and 1389) were situated within a pair of conjoined rectilinear enclosures (1677 and 1678) defined by a shallow ditch (Plate 9), and a third (1388) lay within a similar but discrete enclosure (1679). The remaining three graves (1408, 1409, and 1413) were located a few metres west of the latter enclosure. The relationship between the three enclosed graves and the enclosures in which they lay was not straightforward, however.

70 Ibid. p. 25; A.J. Evans, 'A Roman Villa at Frilford', *Archaeological Journal*, 54 (1897), p. 341.

71 R.A. Chambers, 'The Late- and Sub-Roman Cemetery at Queenford Farm, Dorchester-on-Thames, Oxon.', *Oxoniensia*, 52 (1987), p. 54.

72 H.E.M. Cool, 'Objects of Glass, Shale, Bone and Metal (except Nails)', in P. Booth et al., *The Late Roman Cemetery at Lankhills, Winchester: Excavations 2000–2005* (Oxford, 2010), pp. 272–4.

73 Booth, 'Late Roman Cemeteries in Oxfordshire', p. 33.

The enclosed burials did not share the same orientation as the enclosures within which they lay, and the ditch that defined the south-western side of enclosure 1677 continued to join up with the adjacent late Roman field boundary ditch (1673). Indeed, the enclosures appeared to derive their orientation from that of the boundary ditch, and it is unfortunate in this respect that the relationship between these features was not investigated by excavation. None of the enclosure ditches produced any dating evidence, and this association with the late Roman ditch might imply that the enclosures were also late Roman in date, and that their subsequent funerary use was opportunistic. Against this, however, is the form of the enclosures, which are significantly smaller than the Roman agricultural enclosures and possible settlement enclosures elsewhere on the site. They also lack internal features other than the graves, with the exception of an undated pit or tree throw hole in enclosure 1679. It is also possible that ditch 1673 continued to function as a boundary into the post-Roman period, particularly if it was additionally defined by a hedge. On balance it is perhaps more likely that the graves and enclosures were contemporary. This still leaves their dissimilar orientations to be explained, and it may be relevant that two of these graves are orientated north–south, as are two of the three unenclosed burials. Perhaps the divergent orientations of the graves and enclosures result from the tension between a desire to maintain this orientation for cosmological or liturgical reasons and a competing desire to orient the enclosures according to the spatial logic of the existing boundary feature.

If the interpretation of the enclosures as contemporary with the burials is accepted, this has consequences for the two adjacent, rather larger, conjoined enclosures (1675 and 1676). Enclosure 1676 appeared to be deliberately constructed so that the ditch of funerary enclosure 1677 would serve as the eastern side of enclosure 1676, suggesting that they are of similar date. The larger enclosures contained no evidence for burials and so are not likely to have been funerary in nature, but they abutted ditch 1673. This might therefore provide further evidence for the suggestion that the boundary ditch was still in use when the enclosures were established, and so provides rare evidence for the continued use of elements of the late Roman agricultural landscape into the fifth or sixth century.

The radiocarbon dates obtained for the individuals in graves 1321 and 1389 indicate that they were buried during the fifth or early sixth century. This was a period of great upheaval, when Roman rule came to an end and Germanic peoples migrated into the eastern England and began to push westward, assimilating or displacing native communities. From an archaeological perspective this period is difficult to interpret because the demise of the highly visible Roman material culture means diagnostic remains are limited.[74] Consequently, although palaeoenvironmental evidence from a number of sites in the upper Thames valley indicates that the landscape continued to be farmed much as before, the people who were farming it appear to be all but undetectable.[75] Rather more readily identified is the Anglo-Saxon material culture that was introduced into the area at this time, characterised by cemeteries containing burials accompanied by distinctive pottery and metalwork. Oxfordshire appears to have lain at the western limit of the distribution of the earliest Anglo-Saxon communities, and indeed a recent programme of radiocarbon dating of burials from the Anglo-Saxon cemetery at Berinsfield, *c.* 13 km east of Tubney Wood, has produced a date range almost identical to those obtained for burials 1321 and 1389.[76] Early Anglo-Saxon burials have also been identified at Saxton Road, Abingdon, where a group of three graves has been assigned to the early fifth century, and Anglo-Saxon brooches of similar date have been recorded in burials at West Hendred (Berks.).[77]

74 Booth et al., *Thames Through Time*, p. 80; J. Blair, *Anglo-Saxon Oxfordshire* (Stroud, 1994), p. 9.

75 Blair, *Anglo-Saxon Oxfordshire*, p. 9.

76 C.M. Hills and T.C. O'Connnell, 'New Light on the Anglo-Saxon Succession: Two Cemeteries and their Dates', *Antiquity*, 83 (2009), pp. 1096–1108.

77 S.C. Hawkes, 'The Early Saxon Period', in G. Briggs et al., *The Archaeology of the Oxford Region* (Oxford, 1986),

In this cultural milieu, in which both populations and cultural identities appear to have been rather fluid, it is highly significant that the burial practices of the cemetery at Tubney Wood are consistent with late Roman rather than Anglo-Saxon funerary traditions. These practices were characterised by the burial of each individual in an extended posture in a discrete grave. The grave pits themselves were of considerable depth, the deepest (1388) measuring 1.3 m deep, and although this is somewhat in contrast to the Roman burials at this site, it bears comparison with the cemetery at Roden Downs, Compton (Berks.), which stands out amongst late Roman cemeteries in the region for the depth of the graves.[78] Roden Downs was also unusual in the provision of nailed coffins for all of the burials, whereas this practice is generally more occasional. At Tubney Wood, the burial in grave 1321 was interred within a nailed coffin, represented by eighteen nails (Fig. 13). Two substantial nails, measuring 93 mm and 87 mm long, from grave 1389 may have secured the lid of a coffin that was otherwise secured by different means, a situation that was also recorded at Queenford Farm.[79] Stones had been placed around the body in grave 1413, four surrounding the feet and two lying on either side of the torso (Fig. 13), and this practice is well attested in Roman cemeteries, as well as having been recorded in both Roman and post-Roman graves at Alchester.[80] They may have performed a symbolic role, enclosing the burial, or may have had a more prosaic purpose, supporting the end and sides of a coffin of unsecured planks. The burial of the individual in grave 1389 in a prone position (Fig. 13) is again a characteristic of Roman burial practices, albeit a minority rite. If, as seems likely, the individuals in burials 1408 and 1409 were also prone, then half the burials for which a posture could be established had been buried in this way, which would be an unusually high proportion. The significance of this rite is unknown, although much discussed. It is most commonly assumed to be a sign of disrespect, a punishment, or intended to prevent the spirit of the deceased from returning to haunt the living, although such interpretations would seem to be at odds with the provision of a funerary enclosure for burial 1389. Rahtz suggested that prone burials at the Anglo-Saxon monastery at Beckery (Som.) may have been an indication of penitence.[81]

The construction of rectilinear funerary enclosures is a practice known both from Roman cemeteries and from a number of cemeteries of fifth- to seventh-century date in western Britain, a part of the country where clear cultural continuity from the Roman period into succeeding centuries can be traced. Such structures have been recorded in Oxfordshire at Queenford Farm and Radley II, as well as at the cemeteries of contemporary urban centres further afield such as Winchester (Hants.) and Dorchester (Dorset).[82] A detailed survey of the use of such enclosures in a post-Roman context concluded that they were consistently located outside the areas of Anglo-Saxon settlement and contained the burials of a secular elite that was consciously copying Roman funerary structures.[83] In contrast to these potentially Roman characteristics, the grave goods that characterise Anglo-Saxon burial rites are absent from these graves, as indeed Anglo-Saxon items of any sort are completely absent from the site as a whole, and it seems most likely that these individuals represent a community that was maintaining a native cultural identity based on Romano-British practices into the fifth or sixth century. This may have represented direct

pp. 78–9; H. Hamerow, 'An Anglo-Saxon Cemetery near West Hendred', *Anglo-Saxon Studies in Archaeology and History*, 6 (1993), pp. 113–23.

78 S. Hood and H. Walton, 'A Romano-British Cremating Place and Burial Ground on Roden Downs, Compton, Berkshire', *Transactions of Newbury District Field Club*, 9 (1948), pp. 10–62.

79 Chambers, 'The Late- and Sub-Roman Cemetery at Queenford Farm', p. 56.

80 R. Philpott, *Burial Practices in Roman Britain*, BAR BS, 219 (1991), p. 63.

81 P.A. Rahtz, Glastonbury (London, 1993), pp. 120–1.

82 Ibid. p. 20; G. Clarke, *The Roman Cemetery at Lankhills*, Winchester Studies 3: Pre-Roman and Roman Winchester Part 2 (Oxford, 1979), pp. 183–5; D.E. Farwell and T.L. Molleson, *Poundbury, Vol. 2. The Cemeteries*, Dorset Natural History and Archaeological Society Monograph, 11 (1993), pp. 49–51.

83 C.J. Webster and R.A. Brunning, 'A Seventh Century AD Cemetery at Stoneage Barton Farm, Bishop's Lydeard, Somerset and Square-Ditched Burials in Post-Roman Britain', *Archaeological Journal*, 161 (2004), pp. 54–81.

continuity from the community who buried their dead in the late Roman cemetery to the east, but it is possible that the change in cemetery location was associated with a corresponding change in the burying community.

Although late Roman cemeteries dating from the fourth century are well known in Oxfordshire, and an unusual concentration of early Anglo-Saxon cemeteries dating from the middle of the fifth century or a little earlier have been identified in this part of the upper Thames valley, it is only recently that burials securely dated to the fifth to sixth century that can be attributed to the native, Romano-British population have been identified.[84] The significance of the burials at Tubney Wood lies in adding to this picture. One possible group of such remains is located only *c.*3 km south of Tubney Wood at Frilford, where the late Roman cemetery associated with the temple complex and settlement was overlain by Anglo-Saxon burials, at least one of which dates from the first half of the fifth century.[85] The excavator believed that burial here was continuous from the Roman period into the early Anglo-Saxon period, but the records from the nineteenth-century excavation are insufficient to demonstrate this beyond all doubt. The burials at Tubney Wood are, of course, adjacent to the Roman road on which Frilford lay.

Radiocarbon dates similar to those from Tubney Wood have recently been obtained for Roman-style burials at two other sites in the region. At Horcott Quarry (Glos.) radiocarbon determinations of AD 390–570 were obtained for three of a group of nineteen unaccompanied burials, one of which was buried in a coffin roughly constructed from sheets of lead.[86] Lead coffins, which were usually contained within a wood outer coffin, are known from a number of late Roman cemeteries in Oxfordshire, including Crowmarsh, Frilford, and the Church Piece cemetery at Dorchester-on-Thames, as well as Roden Downs, and it is possible that the use of the coffin at Horcott was a conscious continuation of Roman funerary practices.[87] The location of these burials was also similar to that of the group at Tubney Wood in that they were located a short distance from a late Roman cemetery and appeared to respect a Roman boundary ditch. At Horcott the radiocarbon dates from the burials were contemporary with those from the sunken-featured buildings of the adjacent Anglo-Saxon settlement, with which the burials may therefore be associated. That site lies just 1 km from the Fairford Anglo-Saxon cemetery, which appears to have been in use at the same time and may have served as the burial ground for the scattered communities of the surrounding area. It is striking, therefore, that the nineteen individuals at Horcott were buried separately, away from the main cemetery, and it is tempting to speculate that they may have been deliberately excluded from it because they had a cultural identity that distinguished them from the rest of the burying community.

The other site that has produced similar radiocarbon dates is at Shakenoak Farm, North Leigh. Excavation of the Roman villa at this site during the 1960s and 1970s revealed a cemetery of twenty-two burials, including five that were provided with a lining of flat stones set on edge similar to that of late Roman grave 1661 at Tubney Wood Quarry.[88] Some of the graves had been dug into the ruins of the villa building and the excavators attributed the cemetery to the seventh to eighth century.[89] A recent programme of radiocarbon dating, however, has yielded dates that place them in the fifth to early sixth century.[90]

84 Booth et al., *Thames Through Time*, pp. 164–6; Blair, *Anglo-Saxon Oxfordshire*, p. 9.

85 J.Y. Akerman, 'Report on Excavations in an Ancient Cemetery at Frilford, near Abingdon, Berks.', *Proceedings of the Society of Antiquaries of London*, 2nd series, 3 (1867), pp. 97–308.

86 C. Hayden et al., *Prehistoric, Roman and Anglo-Saxon Occupation at Horcott Quarry, Fairford, Gloucestershire*, Oxford Archaeology Thames Valley Landscapes Monograph, forthcoming.

87 Booth, 'Late Roman Cemeteries in Oxfordshire', p. 25.

88 A.C.C. Brodribb et al., *The Roman Villa at Shakenoak Farm, Oxfordshire: Excavations 1960–1976*, BAR BS, 395 (2005), pp. 298–301

89 Ibid. p. 300.

90 John Blair, personal communication.

A further group of burials that may be contemporary with the cemeteries at Tubney Wood, Frilford, Horcott, and Shakenoak is associated with the Roman town of Alchester. These comprise a group of ten burials, two of which cut a layer that contained sherds of early Anglo-Saxon pottery, indicating that they date from no earlier than the mid-fifth century.[91] The character of these burials appears to perpetuate late Roman customs: none were provided with grave goods, two definitely and two possibly had coffins, and three had crude stone linings that may represent a continuation of the tradition of rather more well-constructed stone linings seen in the adjacent late Roman cemetery. Although the precise dating of these burials remains uncertain, it is quite possible that they date from the fifth to sixth century and represent a further instance of burials of individuals who retained a 'native' cultural identity into the post-Roman period.

A rather different situation appears to have prevailed at Queenford Farm, one of the cemeteries associated with the Roman town of Dorchester-on-Thames. Continuity of occupation from the Roman period into the Anglo-Saxon period has long been suggested for the town, and formerly appeared to be confirmed by a group of radiocarbon dates that implied that Roman burial practices continued at Queenford Farm well into the fifth or even sixth century. However, this has been refuted by a more recent set of radiocarbon results from Queenford Farm and the nearby Anglo-Saxon cemetery at Berinsfield that indicate that the former cemetery passed out of use rather abruptly during the early part of the fifth century, and that cemetery at Berinsfield may have been a direct replacement.[92] Unless the native population at Dorchester had been completely supplanted, it seems likely that the burying community was, to a significant extent, the same, and had simply changed its cultural affiliations.

The burials at Tubney Wood Quarry thus form part of an emerging body of evidence for native communities in the upper Thames valley region that maintained Romano-British burial practices well into the fifth or sixth century. Furthermore, the provision for three of the burials of funerary enclosures of a type not otherwise attested in a post-Roman context in this region suggests that these individuals were singled out for special treatment, perhaps indicating that they were of high status, at least within their immediate community. It is possible also that they provide an insight into the divergent reactions on the part of native communities to the arrival of Anglo-Saxon populations, with some, such as the inhabitants of Dorchester-on-Thames, undergoing relatively rapid acculturation, and others, typified by those at Tubney Wood, attempting to maintain 'native', Romano-British traditions.

Sixth to Seventh Century

The final episode of burial recorded at Tubney Wood Quarry comprised a single grave (1668), which was situated in a rather isolated location in the southern part of Extension Area 2. The grave was fairly shallow and contained the poorly preserved remains of a female who was aged 18–25 years at death. The burial contained no artefactual evidence that could be used to establish a date, but a sample taken from the right femur produced a radiocarbon date of cal. AD 535–640 (NZA-34917; 1495 ± 25 BP). Although the early end of this date range is similar to the latest dates indicated by the determinations obtained for the individuals in grave 1321 and 1389, the location of this burial *c.*90 m from the fifth- to sixth-century cemetery indicates that it is not associated with those burials, and it is perhaps more likely that this burial was significantly later.

The burial itself was distinctly unusual. Due to the acidic soil conditions less than half the skeleton survived, and was represented partly by a soil stain rather than solid bone, hampering interpretation of the remains. It was nevertheless clear that the individual had been decapitated and the skull placed on the legs, just above the knees (Fig. 14). This was not the only evidence

[91] P. Booth et al., *Excavations in the Extramural Settlement of Roman Alchester, Oxfordshire, 1991*, Oxford Archaeology Monograph, 1 (2001), pp. 202–7.

[92] Chambers, 'The Late- and Sub-Roman Cemetery at Queenford Farm'; Hills and O'Connell, 'New Light on the Anglo-Saxon Succession'.

for mutilation: the legs were missing from the knees down, and although this absence might be explained by the generally poor survival of the bone, a left tibia lay near the left shoulder. There are several reasons for believing that this bone was not intrusive to the burial, and that it derived from the leg of the individual who was buried in this grave and had been deliberately amputated and placed in this location. Firstly, no other graves lay close by from which this bone could have been redeposited and no evidence was observed for post-depositional disturbance of the grave that could have introduced the bone into the grave. Although some displacement of skeletal elements during decomposition of the body is to be expected, the lateral movement required to move the bone to the location in which it was found is far greater than would normally be expected to result of such processes.[93] Furthermore, with the exception of the skull and tibia, the surviving elements of the corpse appeared to be arranged in normal anatomical order, indicating that this was a primary burial and not that of a partly decomposed cadaver. The position of the remains within the grave pit were also suggestive as, although the burial measured 2.1 m long, the individual had been placed close to the south-eastern, 'foot' end of the grave pit, leaving little room for the lower parts of the legs if, as seems likely from the disposition of the surviving parts of the body, they had lain in an extended posture (Fig. 14). It therefore appears that, in addition to the obvious decapitation, one or both legs had been amputated at the knee and at least part of one of the removed elements buried beside the corpse. It can only be regretted that skeletal preservation was too poor to enable definite evidence for this procedure to be identified.

During this period such mutilation was an accepted part of the judicial processes. Capital punishment appears as a punishment for specific crimes in early English law codes, and beheading was one of the favoured techniques.[94] A small number of early Anglo-Saxon execution cemeteries have been excavated, and grave 1668 exhibits several of the characteristics that are common to such burials. These include its isolated location, which suggests that the individual had been denied burial in the community's cemetery, wherever that may have lain at this time, and its proximity to both a Roman road, which presumably remained a locally important routeway, and to prehistoric barrows.[95]

Capital punishment was first referred to in the law code of Ine, king of Wessex, which was produced between 688 and 692, but archaeologically recorded burials of beheadings that have been interpreted as judicial in nature have been identified from as early as the fifth century.[96] In Oxfordshire, instances dating from the fifth to seventh centuries have been recorded at Abingdon, Brighthampton, Wheatley, and Chadlington, the latter comprising two burials in which, like grave 1668, the head had been placed between the legs.[97] The amputation of this individual's legs may also fit with a judicial interpretation, as amputation of hands or feet appears as a punishment in early Anglo-Saxon laws. Ine's law code, for example, prescribes such a punishment for theft.[98] A recent survey identified only fourteen instances of amputation from early Anglo-Saxon England, and some of these may have been medical rather than judicial in origin.[99] At least three of these instances exhibited evidence for healing of the wound, indicating that the individual survived the process, but in the case of burial 1668 the presence within the grave of part of one of the amputated limbs clearly suggests that the removal occurred around the time of death. The association of the amputation with beheading in this instance suggests that the former was also judicial in character.

93 H. Duday, *The Archaeology of the Dead: Lectures in Archaeothanatology* (Oxford, 2009), pp. 32–8.

94 A. Reynolds, *Anglo-Saxon Deviant Burial Customs* (Oxford, 2009), pp. 23–6.

95 J. Buckberry, 'Off with their Heads: The Anglo-Saxon Execution Cemetery at Walkington Wold, East Yorkshire', in E.M. Murphy (ed.), *Deviant Burial in the Archaeological Record* (Oxford, 2008), p. 150; Reynolds, *Anglo-Saxon Deviant Burial Customs*, p. 44.

96 Reynolds, *Anglo-Saxon Deviant Burial Customs*, p. 81.

97 Ibid. p. 79.

98 Ibid. p. 85.

99 Ibid.

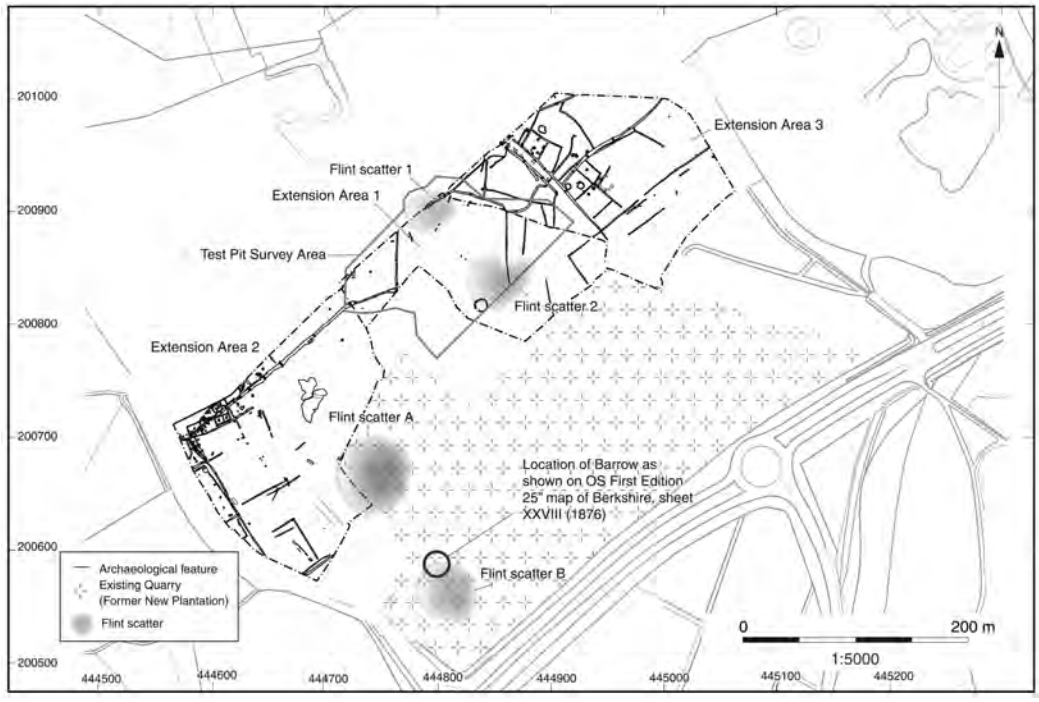

Fig. 2. Plan of all archaeological features.

The Middle Ages

Ditch 1659, which extended along much of the north-western edge of Extension Area 2 and the southern tip of Extension Area 1, appears to have been associated with the adjacent deserted medieval village of Tubney. Earthworks representing part of the village have been recorded in the field immediately to the north of Tubney Manor Farm, but the settlement is likely to have extended further south than these remains, as the former location of the church is shown to the south of the farm on the first edition OS map.[100] Although the village appears to have become deserted during the fifteenth or early sixteenth century, the graveyard was still identifiable in the early twentieth century,[101] and is shown on the tithe map of 1841, where its south-eastern boundary corresponds with the eastern part of ditch 1659. It is therefore possible that ditch 1659 formed the southern boundary of the village, that the area to the east of ditch 1634, where no features were identified, was the graveyard, and that the area south-west of this, where subsidiary enclosure ditches were excavated, had a more utilitarian use. The repeated re-cutting of the ditch would certainly be consistent with a boundary of some importance and longevity.

EXCAVATION RESULTS

Fieldwork Methodologies

During the evaluation of Extension Area 1, forty litres of topsoil and subsoil from each end of each trench was sieved through a 5-mm mesh. This identified the presence of significant surface flint scatters. A test pit survey was carried out across these scatters, comprising the excavation of 0.5 m² test pits through the topsoil and subsoil, with all soil passed through a 5-mm sieve. Initially test pits were placed on a 20-m grid to identify key scatters; additional

100 Brooks, 'Tubney, Oxfordshire: Medieval and Later Settlement', pp. 129–31 and fig. 2.
101 *VCH Berks.* 4, p. 379.

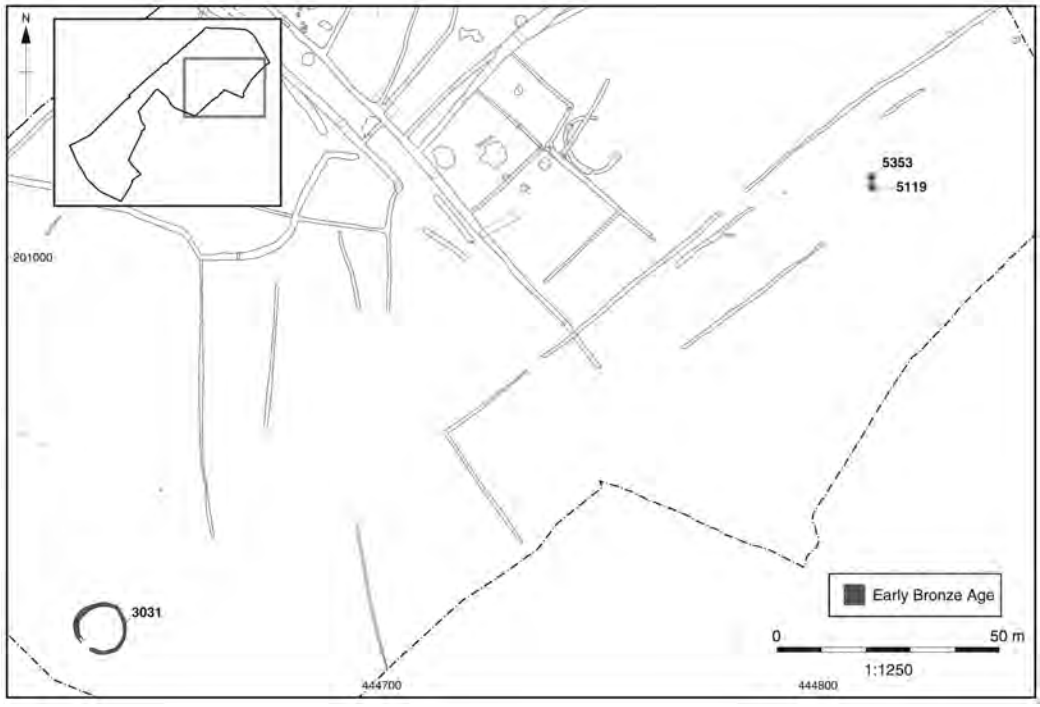

Fig. 3. Early Bronze-Age features in the north-eastern part of the excavation.

test pits were then excavated at 10-m intervals, and subsequently 5-m intervals, over the densest areas of the scatter (see Figs. 15 and 16). The latter strategy provided a 1% sample of the total deposit over the densest area of the scatters. In total, 194 0.5 m² test pits were excavated, representing a total volume of 48.5 m² of soil. The evaluation and test pit survey resulted in the recovery of a total of 1,572 flints from Extension Area 1 (see Anderson-Whymark, below). A small quantity of additional flints was recovered during the subsequent watching brief.

During the evaluation of Extension Areas 2 and 3, thirty litres of topsoil and subsoil at each end of each trench was sieved through a 5-mm mesh. The density of flint identified within the topsoil and subsoil was relatively low, apart from a slight increase in density noted to the east of Extension Area 2, close to Scatter B identified in the previous excavations. A test pit survey was consequently not undertaken in Extension Areas 2 and 3.

During the strip, map and sample excavations, the overburden was stripped under archaeological supervision using a 360° tracked mechanical excavator with a toothless ditching bucket. Machine excavation continued until either archaeological deposits or the natural geology were encountered. A provisional pre-excavation plan of the stripped area was produced digitally using a total station, and hand excavation of the archaeological features then followed. All discrete features were half-sectioned, while a sufficient proportion of each ditch or gully was excavated to characterise and date the feature. All recording followed procedures detailed in the OA fieldwork manual.[102]

Bronze-Age Cremation Burials (Fig. 3)

Two possible cremation burials (5119 and 5353) were excavated in the north-eastern part of the excavation area, one of which was associated with a radiocarbon date that indicated a likely early Bronze-Age origin. An undated ring ditch (30313) of possible Bronze-Age date was also investigated. The cremation burials were situated within a disturbed area in an otherwise rather isolated part of Extension Area 3.

Cremation burial 5119 comprised a slightly irregular, almost 'D'-shaped pit (5366) with steep sides, measuring 0.76 x 0.50 m, and 0.28 m deep. The dark, charcoally fill (5367) contained 23.7 g of calcined bone, comprising the partial remains of an adult of undetermined sex.

Cremation burial 5358, by contrast, had been more severely affected by the disturbance, and it was only due to the greater depth of this feature that the lower part had survived. Much of the cremated material from it had

[102] D. Wilkinson (ed.), 'OAU Fieldwork Manual', unpublished OA document (1992).

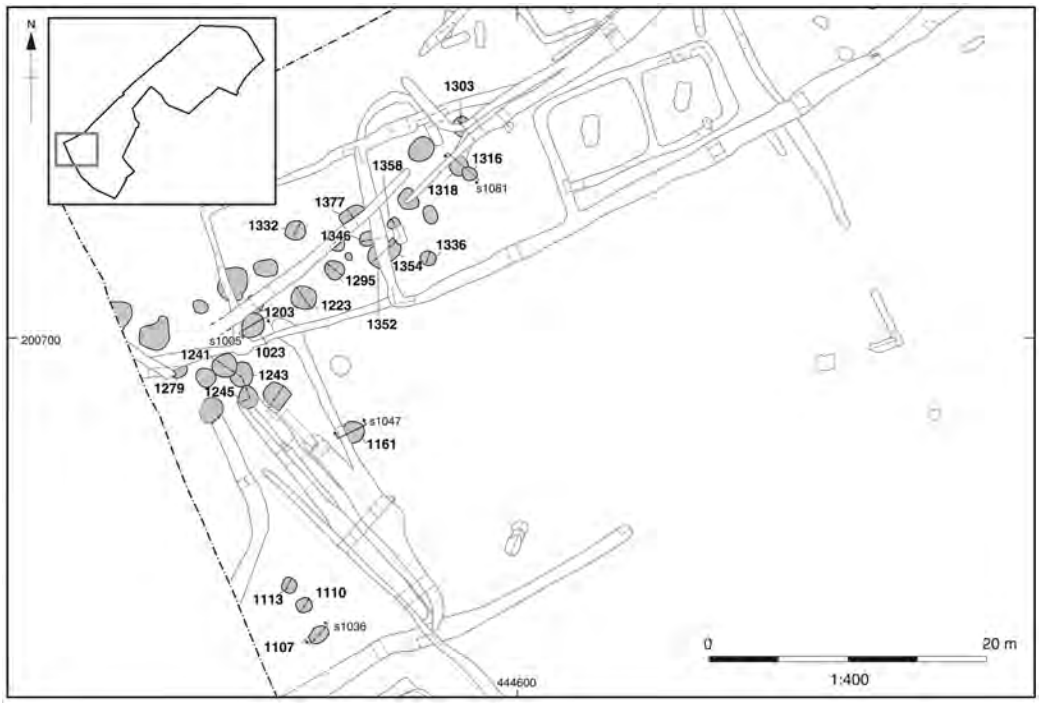

Fig. 4. Plan of middle Iron-Age pits at the south-western end of the excavation.

been redeposited in the fills of tree throw holes that cut it. The total weight of cremated bone from this burial, including the redeposited material, was rather greater than that from burial 5119, amounting to 222.7 g, and similarly represented the remains of an adult of undetermined sex. A sample of bone taken from the redeposited material within the disturbance (5373) yielded a radiocarbon determination of 1870–1840 BC and 1780–1620 BC (NZA-34865; 3409 ± 30 BP).

The penannular ditch (3031) was recorded near the southern limit of Extension Area 1 and may have been the only surviving element of a levelled Bronze-Age barrow, although no dating evidence was recovered from it. The ring ditch was roughly circular in plan with a diameter of 10.2 m. The ditch was best preserved on the western side, where it was up to 1.25 m wide and survived to a depth of 0.4 m, but on the eastern side it had been truncated somewhat and was rather less substantial, with a depth of no more than 0.25 m. A single entrance through the ditch was located on the south-western side of the feature. Six pieces of undiagnostic worked flint were recovered from the ditch fill.

Middle Iron Age (Figs. 4 and 5)

Part of a settlement of middle Iron-Age date was identified near the north-western limit of Extension Area 2, comprising a substantial group of pits (Figs. 4 and 5, and Table 1). A total of twenty-two pits were sampled by excavation, all but four containing middle Iron-Age pottery in varying quantities. Five pits (1161, 1279, 1352, 1346, and 1354) were cut by boundary ditches of Roman date (Figs. 4 and 5). The pits lay within a swathe that was less than 10 m wide and extended into the excavation for *c.*30 m on an approximately east-north-east to west-south-west orientation, with three outliers (1107, 1110, and 1113) to the south that formed a short row at right angles to this. Most of the pits were discrete features, but there were a few instances of pits that intercut (for example, pit 1318 was cut by the shallower pit 1316 – see Fig. 5). Two pits lay partly beneath the baulk forming the western edge of the site, and it is likely that the distribution of pits continued in this direction beyond the area investigated.

Most of the pits were approximately circular in shape, and all had straight, vertical sides and flat bases. There was, however, some difference in their depths, which varied from 0.16–1.05 m, and the character of their fills. The three outlying pits (1107, 1110, and 1113) formed a coherent group both in terms of their size and fills, as well as their location. All three pits were of relatively modest proportions, measuring no more than 1.54 m in diameter and 0.16–0.56 m deep, and each contained a main fill composed of dark, organic soil (Fig. 5). Small quantities of

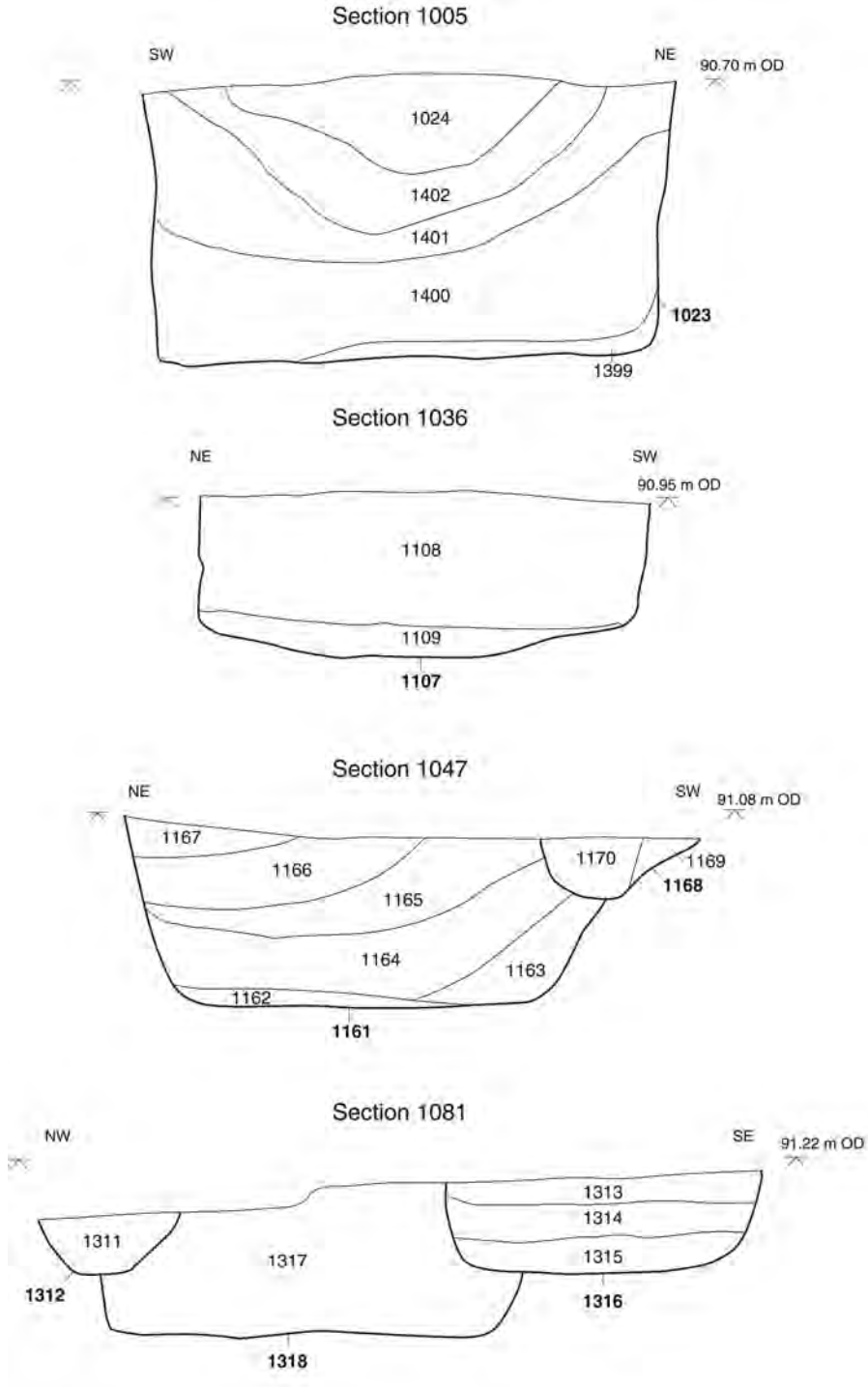

Fig. 5. Sections of selected middle Iron-Age pits.

pottery were recovered from all three pits. Two pits (1316 and 1336) located in the main concentration were similar to this group in terms of size, depth, and fill.

Five pits (1023, 1161, 1279, 1243, and 1352) were significantly deeper than the other excavated examples, with depths of 0.69–1.05 m, although their greater depth was not reflected in their diameters, which fell within the same range as the other, shallower pits. With the exception of pit 1243, which had a single fill of homogeneous light brown sand (1242), this group of features was characterised by a sequence of sandy fills that may be evidence for a fairly gradual infilling process. The fills of each pit were largely artefactually sterile, although all were overlain by an uppermost fill of darker soil that contained pottery and small fragments of animal bone.

The remainder of the pits were of a fairly consistent depth, varying between 0.30–0.55 m, and typically contained a single fill of pale sand. Only a few produced small sherds of pottery, with the only other find being a hobnail recovered from a lower fill (1164) of pit 1161, which probably derived from ditch 1398.

Table 1. Summary of the middle Iron-Age pits

Pit	Shape	Dimensions (m)	Depth (m)	Pottery*	Animal bone	Other finds
1023	Sub-circular	1.60 x 1.60	0.89	18 (197 g)	6 (24 g)	1 flint flake
1107	Oval	1.54 x 1.10	0.56	9 (191 g)	18 (22 g)	4 flint flakes
1110	Sub-square	1.26 x 1.18	0.38	12 (39)		1 flint blade
1113	Sub-circular	1.01 x 1.10	0.16	2 (18 g)		1 flint chip
1161	Circular	1.60 x 1.40	0.69	18 (114 g)	3 (5 g)	1 hobnail
1203	Circular	1.30 x 1.30	0.00			
1223	Sub-circular	1.80 x 1.80	0.55	13 (174 g)	27 (12 g)	
1241	Sub-circular	1.80 x 1.65	0.35			
1243	Sub-circular	1.80 x 1.65	0.85	5 (27 g)		
1245	Sub-circular	1.40 x 1.40	0.30	1 (14 g)		
1279	Circular	1.50 x 1.50	0.74	79 (2705 g)	109 (206 g)	1 flint flake, 5 chips
1295	Sub-circular	1.60 x 1.60	0.40			
1303	Sub-circular	1.70 x 1.40	0.50			
1316	Sub-circular	1.00 x 1.00	0.31			
1318	Sub-circular	1.40 x 1.40	0.46	4 (21 g)		
1332	Sub-circular	1.50 x 1.50	0.54	1 (2 g)		
1336	Sub-circular	1.16 x 1.03	0.20	5 (12 g)	93 (13 g)	
1346	Sub-circular	1.10 x 1.10	0.34	1 (5 g)		
1352	Circular	1.70 x 1.70	1.05	8 (83 g)	5 (12 g)	
1354	Irregular	1.40 x 0.70	0.11			
1358	Irregular	1.00 x 0.60	0.11			
1377	Sub-rectangular	1.90 x 1.40	0.40	5 (24 g)		

* Pottery totals for pits 1107, 1279, and 1318 include one sherd (19 g), six sherds (30 g) and one sherd (6 g) respectively of Roman pottery, which have been interpreted as intrusive.

Early Roman Period (Mid First to Second Century AD)

Two distinct complexes of ditched enclosures, trackways, and other boundaries dating from the first and second centuries were excavated, located at the north-eastern end of the excavation in Extension Area 3 and at the south-western end of Extension Area 2 (Figs. 7–9). Between them lay an area that contained very few features, comprising Extension Area 1 and the north-eastern half of Extension Area 2.

The north-eastern complex (Fig. 7). In its initial form the complex of features at the north-eastern end of the excavation comprised a large enclosure and associated boundary ditches. The date at which these features were established is not certain, but is likely to be towards the end of the first century or the start of the second. The large enclosure lay in the south-western part of Extension Area 3 and was trapezoidal in shape. Its western side was defined by two ditches (5079 and 5080) that both extended beyond the north-western edge of the excavation, suggesting that the enclosure formed part of a larger complex of features that extended further in this direction. The southern and eastern parts of the enclosure were defined by the rather circuitous ditch 5076, which branched off ditch 5079; the north-eastern side was enclosed by ditch 5324. The enclosure measured *c.*75 m east–west and 50 m north–south and had an entrance at the eastern corner, defined by the eastern terminal of ditch 5324 and

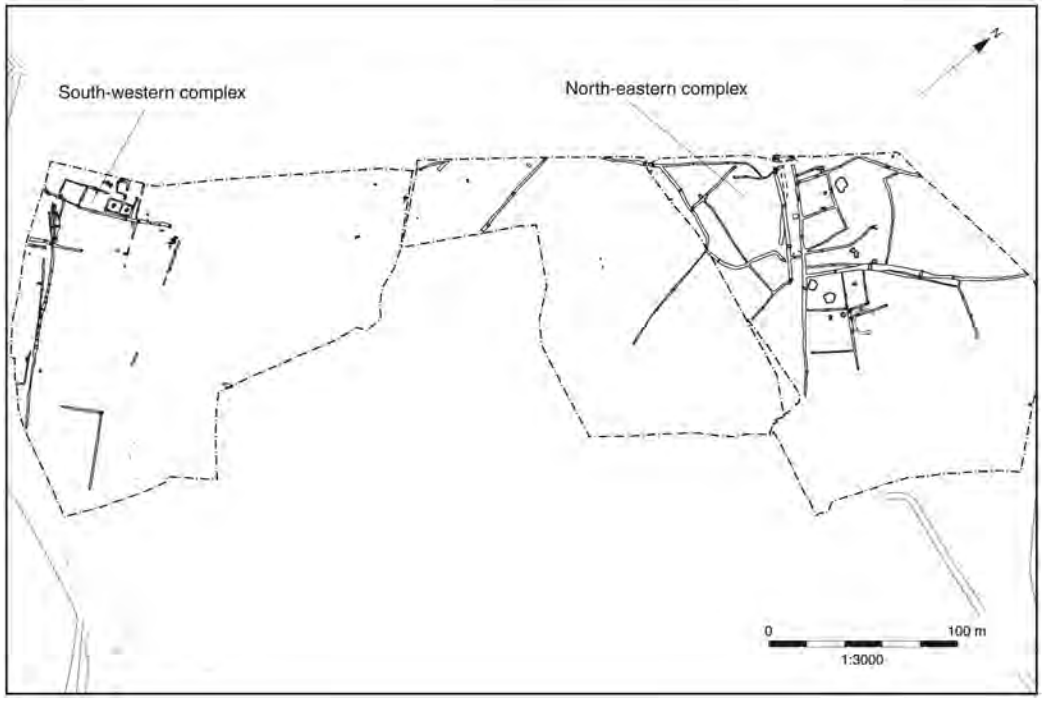

Fig. 6. Plan of all Roman features.

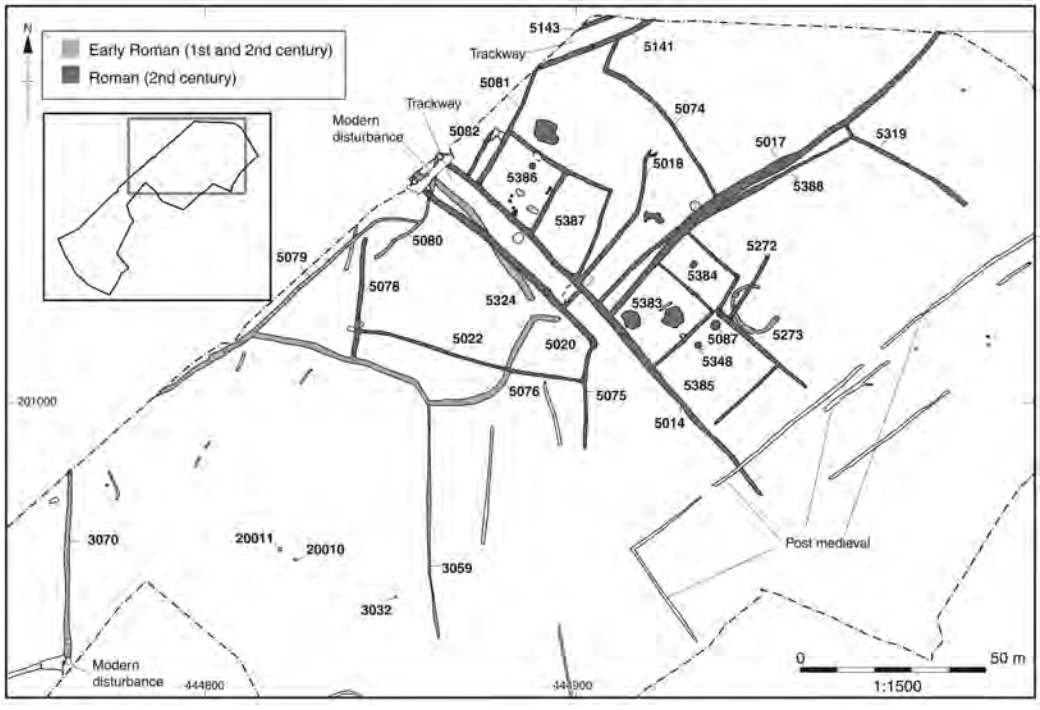

Fig. 7. Roman features in the north-eastern part of the excavation.

the out-turned northern terminal of ditch 5076. The latter projected *c.*7 m beyond the entrance itself. The ditches that formed the enclosure were quite substantial, measuring 0.30–0.74 m deep, but little artefactual material was recovered from them. No features were identified within the interior of the enclosure.

A linear boundary ditch (3059) branched off the south side of the enclosure and extended for *c.*60 m before petering out. Ditch 3070, which lay on a similar north–south orientation to ditch 3059, 100 m to the west, and which yielded four small fragments of first-century pottery, may also be part of this phase of boundaries.

A possible stock enclosure (5273) was located *c.*50 m east of the large enclosure. It was elliptical in shape, defined by a ditch 0.40–0.55 m deep, and measured *c.*14 m x 10 m. It was almost completely open on its north-eastern side (8.75 m wide), and there was also a second break, measuring only 0.6 m wide, on the southern side. Three small sherds of pottery dating from the late first or early second century were recovered from the lower part of the ditch fill.

By the middle part of the second century these enclosures had been replaced by a new complex of features focused on a trackway that extended across the excavation on a north-west to south-east orientation, which was adjoined on both sides by enclosures and fields. The trackway was defined by a pair of flanking ditches (5014 and 5020), with no evidence for any metalling of the surface. At the north-western edge of the excavation the ditches were 8.25 m apart, but they converged slightly as they progressed south-eastward and were only 5.6 m apart in the central part of the site. Both ditches had been re-dug on one occasion. The first phase of ditch 5020, which defined the south-western side of the trackway, only extended into the site for a distance of *c.*65m, terminating in the central part of the excavation. It is likely that the earliest phase of ditch 5014, which defined the north-eastern side, may have been similar. In a later modification, the northern ditch (5014) extended across nearly the full width of the excavation, whereas the southern ditch 5020 turned southward and extended for *c.*30 m to the edge of Extension Area 3. In the eastern part of the site the two ditches thus defined two sides of a large triangular field into which the trackway led. A second ditch (5078) lay on a parallel north–south alignment to the southern part of ditch 5020, *c.*62 m to the west, and the two were joined by an east–west ditch 5022 to form an approximately triangular field or enclosure that abutted the trackway. The southern end of ditch 5078 appeared to be integral to earlier ditch 5076, suggesting that some boundaries from the earlier phase were still in use at this time.

On the north-eastern side of the trackway, ditch 5388 was stratigraphically earlier than the other features and appeared to have defined a major boundary at right angles to the trackway. It branched off trackway ditch 5014 and extended north-eastward on a slightly curving alignment for *c.*80 m, dividing the area on this side of the trackway into two parts. At its end it divided to form a short western branch that was truncated by later ditch 5017 and a more extensive eastern branch (5319) that extended for *c.*30 m before petering out.

The boundary that had been defined by ditch 5388 continued to be a significant part of the landscape and was subsequently defined by ditch 5017, a wide yet relatively shallow feature that followed a slightly different, though similarly circuitous, north-east to south-west alignment. A group of rectilinear enclosures abutted the trackway on the south-eastern side of this boundary. Enclosure 5383, which was situated within the angle formed by the trackway and ditch 5017, was defined on its north-eastern and south-eastern sides by a single, unbroken ditch 0.3 m deep. It was quite regular in plan and measured 20 m x 18.5 m. Two areas of brownish grey sand (5137, 5138) lay within the enclosure. Neither deposit was excavated, but they were interpreted as the remains of a former soil layer, and small quantities of second-century pottery were recovered from their surfaces.

Enclosure 5383 was abutted on its north-eastern side by a smaller, more rectangular enclosure (5384), which enclosed an area measuring 19 m x 10 m. A possible entrance into the enclosure was located at the south corner, where a narrow gap measuring 0.4 m had been left between this ditch and that of enclosure 5383. A single pit measuring 2.15 m x 1.60 m and 0.40 m deep was located within this enclosure.

A third enclosure (5385) adjoined to the south, abutting the later trackway extension. Enclosure 5385 abutted the south-eastern side of enclosure 5383 and was almost square, measuring 24 m x 22 m. Access into this enclosure was provided by a 2.5-m wide entrance at the southern corner. A deep, steep-sided pit (5087) measuring 2 m in diameter and 1.3 m deep was situated within the northern corner of the enclosure. The depth of this pit may indicate that it was a waterhole, although the fills, which comprised a sequence of sand layers, did not provide any specific evidence for this. A second, shallower pit (5348) also lay within the enclosure. No artefactual material was recovered from either pit. The northern enclosure ditch continued south-eastward beyond this enclosure for a distance of 9.5 m before petering out, possibly indicating the former presence of a fourth enclosure. A single ditch (5272) branched off the north-eastern side of this ditch, and cut earlier enclosure 5273, but its function in relation to the other boundaries was uncertain.

To the north of these features, the trackway was abutted by a pair of conjoined enclosures (5386 and 5387) that were associated with a linear boundary ditch (5081). Ditch 5081 branched off trackway ditch 5014 and extended north-eastward for at least 33 m, continuing beyond the edge of the excavation. An approximately square enclosure (5386) that measured *c.*17 m x 17 m was situated in the angle of this ditch and the trackway. The possible presence of structures within this enclosure was indicated by two small groups of postholes, though none of these could be resolved into coherent structures. Two pits were also identified within the enclosure, but the only artefacts recovered from them were two sherds of pottery.

The south-eastern side of this enclosure was abutted by enclosure 5387, which was rather more irregular in shape and measured 22 m x 15 m. No features were observed within the enclosure.

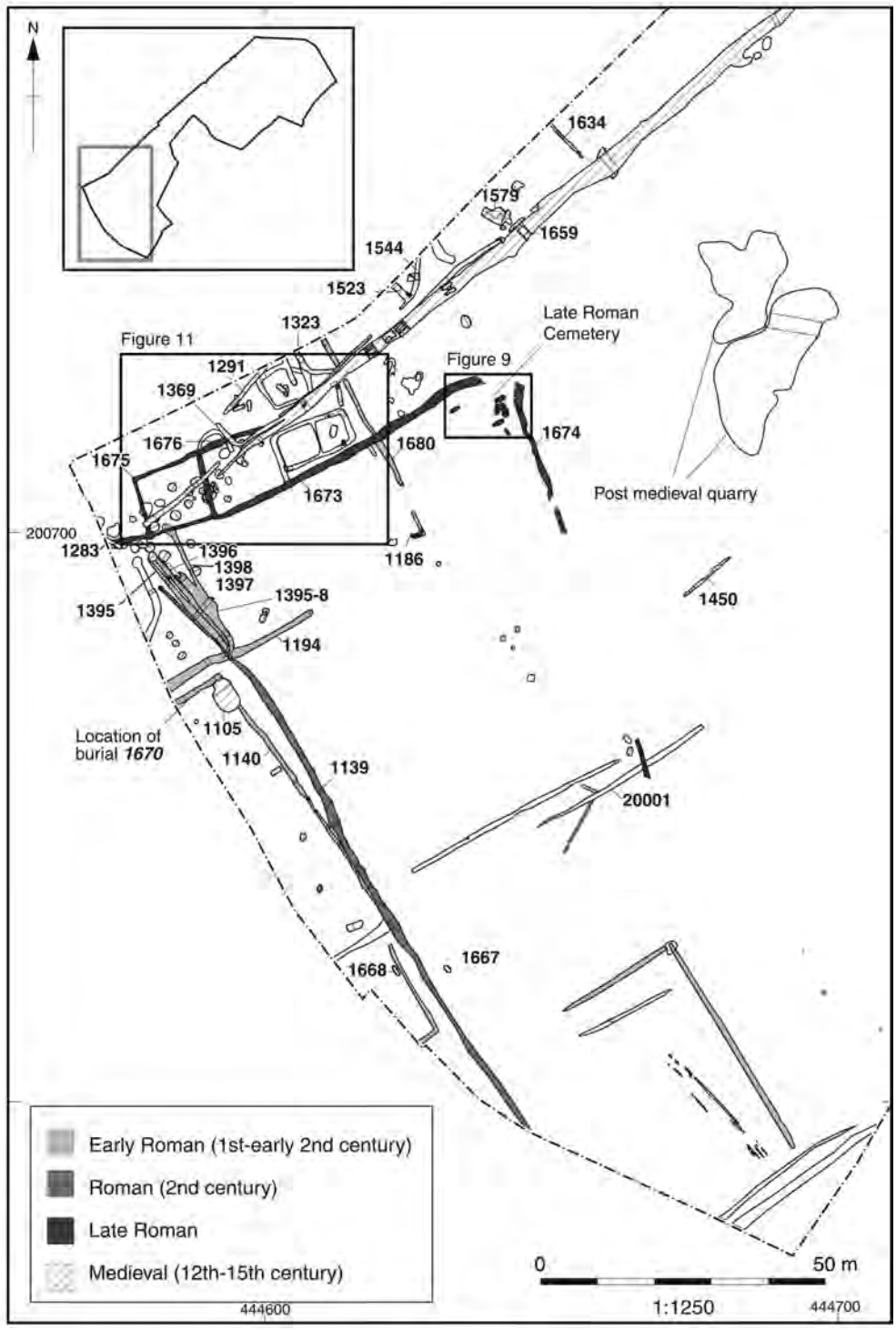

Fig. 8. Roman and later features in the south-western part of the excavation.

A small section of a probable second trackway lay across the north-western corner of Extension Area 3, defined by a pair of parallel ditches *c.*4.75 m apart (5141 and 5143). Ditch 5141, which defined the south-eastern side of this trackway, intersected with linear boundary ditch 5081 at the edge of the excavation, but no relationship was discerned. An 'L'-shaped ditch (5074) extended between the trackway and boundary ditch 5017, and the area between this ditch and the enclosures to the south-west was subdivided by the strangely dog-legged ditch 5018.

The south-western complex (Fig. 8). Features were exposed at the south-western limit of Extension Area 2 that appeared to be the north-eastern parts of a group of rectilinear fields and enclosures that extended beyond the excavation area. Ditches 1194 and 1680 enclosed two sides of a large rectilinear enclosure that measured at least 50 m x 38 m. A sequence of four parallel, intercutting ditches (1395–8) that extended north-west from ditch 1194 may have represented repeated re-cutting of a ditch that subdivided the interior of the enclosure. The relationship between these features and ditch 1194 was uncertain, but they were certainly cut by second-century boundary ditch 1139 (below) and so are likely to belong to this initial phase of the complex. The edge of a second large enclosure to the south-east of the first was represented by ditch 1140, which extended north-west to south-east for *c.*75 m, with a return at each end that continued to the south-west beyond the edge of the excavation area. The burial of a child (1670) aged 6–12 years, of uncertain sex, had been inserted in the fill of the northern return. No grave cut could be identified, and it is possible that the corpse was simply placed in the open ditch. The two enclosures were separated by a distance of only *c.*2 m, which may represent the end of a trackway. A third large enclosure lay to the south-east, defined by an unexcavated 'L'-shaped ditch. No datable artefacts were recovered from any of the enclosure ditches.

The enclosure ditches were cut by a boundary ditch (1139) that extended north-west to south-east across the south-western end of the excavation area. The pottery assemblage recovered from the fills of ditch 1139 indicated that it silted up during the second half of the second century.

Ditch 20001 and an unexcavated ditch recorded north-east of these features lay on parallel north-east-south-west alignments and may have defined a trackway measuring *c.*3 m wide and extending for at least 55 m on a north-east to south-west orientation. No datable artefacts were recovered from either ditch, and their orientation would be consistent with a date contemporary with either the enclosures or the subsequent boundary ditch.

Cremation burials in Extension Area 1. Two cremation burials dating from the early Roman period were excavated in the central part of Extension Area 1 (20010, 20011; Fig. 7). Due to the homogeneous nature of the soil it was not possible to define the cut of the grave containing either burial, and the features were initially identified only because of the presence of ceramic vessels. Cremation burial 20010 comprised 77 g of cremated bone, representing the partial remains of an adult male (2986) that had been buried in a fine grey ware 'cooking-pot' type jar from the Oxford industry (2985). The burial was accompanied by a bag-shaped beaker in the same fabric (2987), the fill of which included 4 g of human bone that most likely came from the same individual. Cremation burial 20011 lay *c.*5 m north-west of this feature. The cinerary urn had a similar form to that in burial 20010, but was in black-burnished ware (2989). It contained 112 g of calcined bone from an adult of undetermined sex. Two small 'jar' beakers in fine grey ware (2991 and 2993) had been provided as ancillary vessels. The lattice decorating urn 2989 suggested a date no earlier than the late second century for this burial, and the vessels in burial 20010 are consistent with it being of similar date.

Some evidence was identified for the presence of further cremation burials in this part of the site. A small patch of cremated bone associated with part of a grey ware vessel that probably represents the remains of a plough-disturbed cremation burial (3032) was recorded *c.*25 m east of burials 20010 and 20011. Additional smears of burnt bone were observed on the surface of the natural sand during stripping of topsoil in this area, but were too ephemeral to be recovered.

Late Roman Period (Late Third to Fourth Centuries AD)

Some time after the middle of the third century ditches were dug in the south-western part of Extension Area 2 that defined two sides of a possible rectilinear field and a group of smaller enclosures (Fig. 8). The field was enclosed on its north-western side by ditch 1673, which extended for at least 65 m from the south-western edge of the excavation area, and on its north-eastern side by ditch 1674, which petered out at either end. A near-complete narrow-mouthed jar (SF 78/79) was recovered from the fill of ditch 1673, near the north-eastern end of the feature, and provides the dating evidence for this phase of boundaries; the rest of the pottery from these features consists of a handful of very small, residual sherds of early Roman wares.

Two conjoined rectilinear enclosures (1675 and 1676), each measuring *c.*12 m x 10 m, abutted the north-western side of ditch 1673, and appeared to be contemporary with it, although the apparently contemporary relationship between enclosure 1676 and the adjacent possible post-Roman funerary enclosure 1677 somewhat confuses the dating of these features (see discussion above). No contemporary features were identified within the enclosures, all the discrete features in this part of the site being middle Iron-Age pits.

The only other feature that produced material indicating a late Roman date was pit 1186, which cut early Roman ditch 1680 and contained a few sherds of third- to fourth-century pottery.

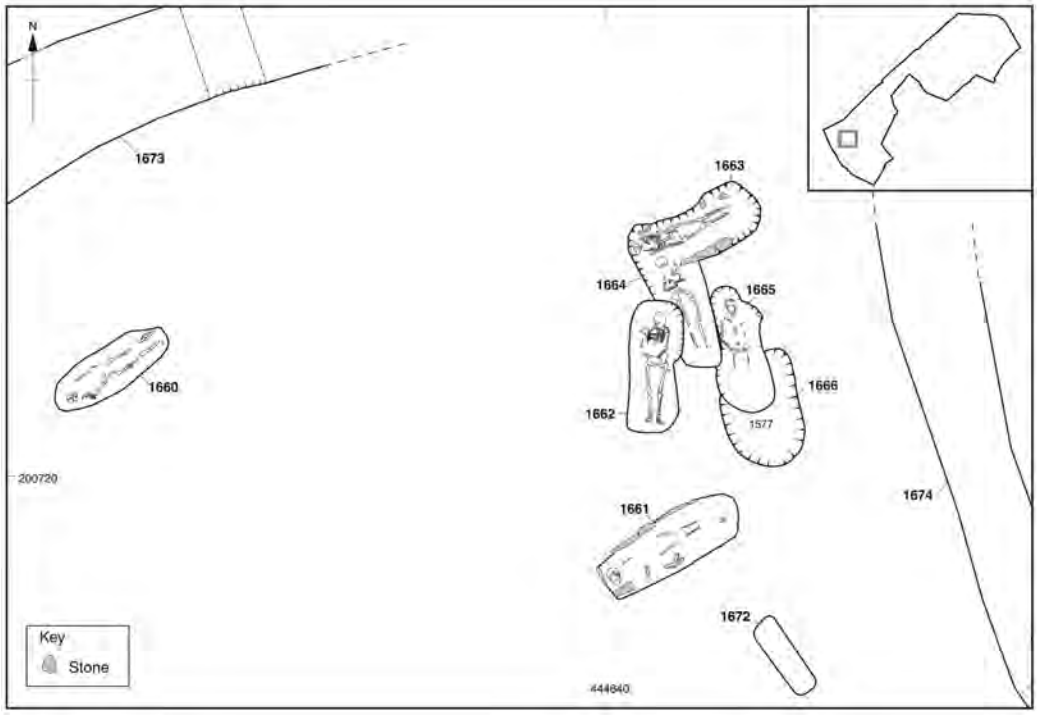

Fig. 9. The late Roman cemetery.

The late Roman cemetery (Fig. 9). During the late Roman period a small cemetery of eight inhumation graves was established within the angle of ditches 1673 and 1674. This comprised a group of five graves (1662 to 1666) that were clustered together and slightly intersected, with two graves (1661 and 1672) a short distance to the south and one outlier (1660) situated *c.*13 m to the west of the main group. The grave pits were all sub-rectangular, although the ends were frequently rather more rounded than square, and were of a size to accommodate an individual interment. The sides were typically vertical and the bases flat. Grave 1660 survived to a depth of only 0.05 m, but the others were more substantial, with depths of 0.15–0.40 m. Skeletal remains survived in seven of these burials (all except 1666) and had in all instances been placed in a supine, extended posture.

The intercutting of the graves in the main group was generally fairly slight and did not allow all of the stratigraphic relationships to be established, but was sufficient to indicate that grave 1663 was one of the earliest, if not the earliest, grave in the sequence. This burial lay at the northern extent of the group and was orientated west-south-west to east-north-east. It contained the remains of a male aged 35–45 years (1516) and had been provided with a stone lining, although the latter was incomplete and comprised only a row of stones placed along the southern edge of the grave pit and three stones against the northern edge. A single nail was recovered from a soil sample. The southern side of grave 1663 was cut by the head end of grave 1664, but fortunately the latter grave was some 0.1 m shallower and so did not impact on the skeletal remains in the former. Grave 1664 was orientated north-north-west to south-south-east and contained the remains of a ?female aged 18–25 years (1527). This individual had been placed in the grave with her arms flexed across her waist, whereas the other burials that were sufficiently well preserved for the posture to be established lay with their hands resting on their laps. The western side of this grave was cut by grave 1662, but once again the later grave was the shallower and so had not disturbed the remains in the earlier burial. Grave 1662 was the burial of an adult female (1487) and was the only one of this group of burials that lay on a cardinal alignment, being orientated north–south.

Two intersecting graves (1665 and 1666) lay on the eastern side of this main group of burials. Grave 1666 was the earlier of the pair, and survived to a depth of 0.4 m. No skeletal remains were preserved in this grave, much of the northern half of which had been destroyed by the digging of grave 1665. This burial was of a similar depth and contained the poorly preserved remains of an adult ?male (1563). Its western side intersected with the eastern side of grave 1664, but the intercutting was very slight and it was not possible to establish a stratigraphic relationship.

Grave 1661 (Figs. 9 and 10) was situated 1 m south of the main group of burials. It was orientated west-south-

Fig. 10. Late Roman stone-lined burial 1661.

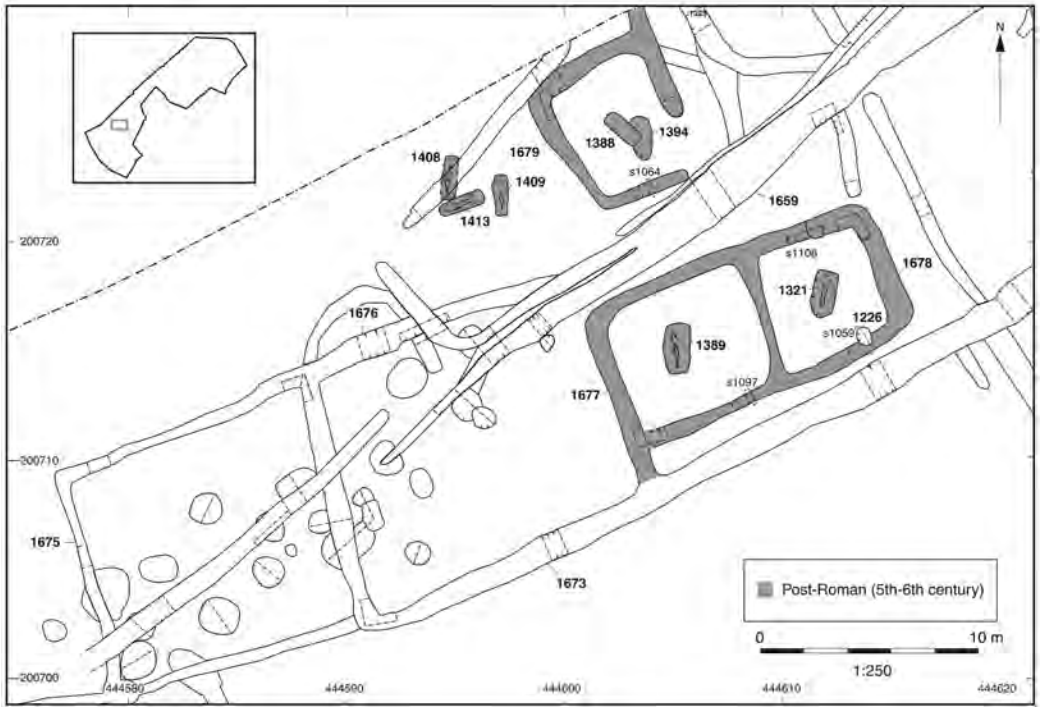

Fig. 11. The fifth- to sixth-century cemetery.

west to east-north-east and had been lined with flat slabs of limestone (1477), measuring up to 0.45 m x 0.27 m x 0.06 m, which had been set vertically against all four sides of the grave pit. The individual interred in this grave was poorly preserved, with only the skull and some long bones surviving, but was probably a male aged 26–35 years. This was the only burial of this group that had definitely been provided with grave goods. A composite bone comb was located behind the skull, a coin of the House of Valentinian (AD 364–78) was located centrally within the base of the grave pit, and an assemblage of 25 hobnails and nine small stem fragments from hobnails was recovered from the area around the feet. A sample from the left femur yielded a radiocarbon determination of AD 255–390 (NZA-34888; 1716 ± 20 BP).

Grave 1672 lay a short distance south-west of grave 1661 and contained the remains of a male aged 30–50 years. The grave was only 0.05 m deep and had been badly affected by ploughing, which had disturbed the skeletal remains within, as a result of which the posture of this individual could not be established.

Although grave 1660 was something of an outlier, being located some 13 m west of the main group of burials, it was nevertheless close enough to be considered part of this cemetery. It was orientated north-east to south-west and, like grave 1672, survived to a depth of only 0.05 m. The poorly preserved remains of an adult ?male (1458) had been buried in a coffin, which was represented by three pieces of coffin plate and eight coffin nails.

Post-Roman Cemetery (Fifth to Early Sixth Century)

A small cemetery was recorded in the north-western part of Extension Area 2 (Fig. 11), consisting of a group of six burials (1321, 1388, 1389, 1408, 1409, and 1413), two of which (1321 and 1389) produced radiocarbon determinations that dated them to the fifth or early sixth century. Two burials were situated within a pair of conjoining enclosures (1677–8) and a third grave lay within a similar enclosure (1679) located a short distance to the north. The remaining three graves lay immediately to the west of this third enclosure.

The conjoined enclosures (1677–8) were defined by insubstantial ditches that measured up to 0.2–0.3 m deep (Figs. 11 and 12; Plate 9). The western enclosure (1677) was slightly larger, with internal dimensions of 6.9 m x 5.9 m. The ditch that defined the south-western side of enclosure 1677 continued beyond the south corner of the enclosure to join up with late Roman ditch 1673, but the relationship between the two features was not ascertained. No finds were recovered from the enclosure ditches. Grave 1389 (Fig. 13a) lay slightly off-centre within this enclosure, on a north–south orientation. The grave pit was substantially deeper than those of the late Roman

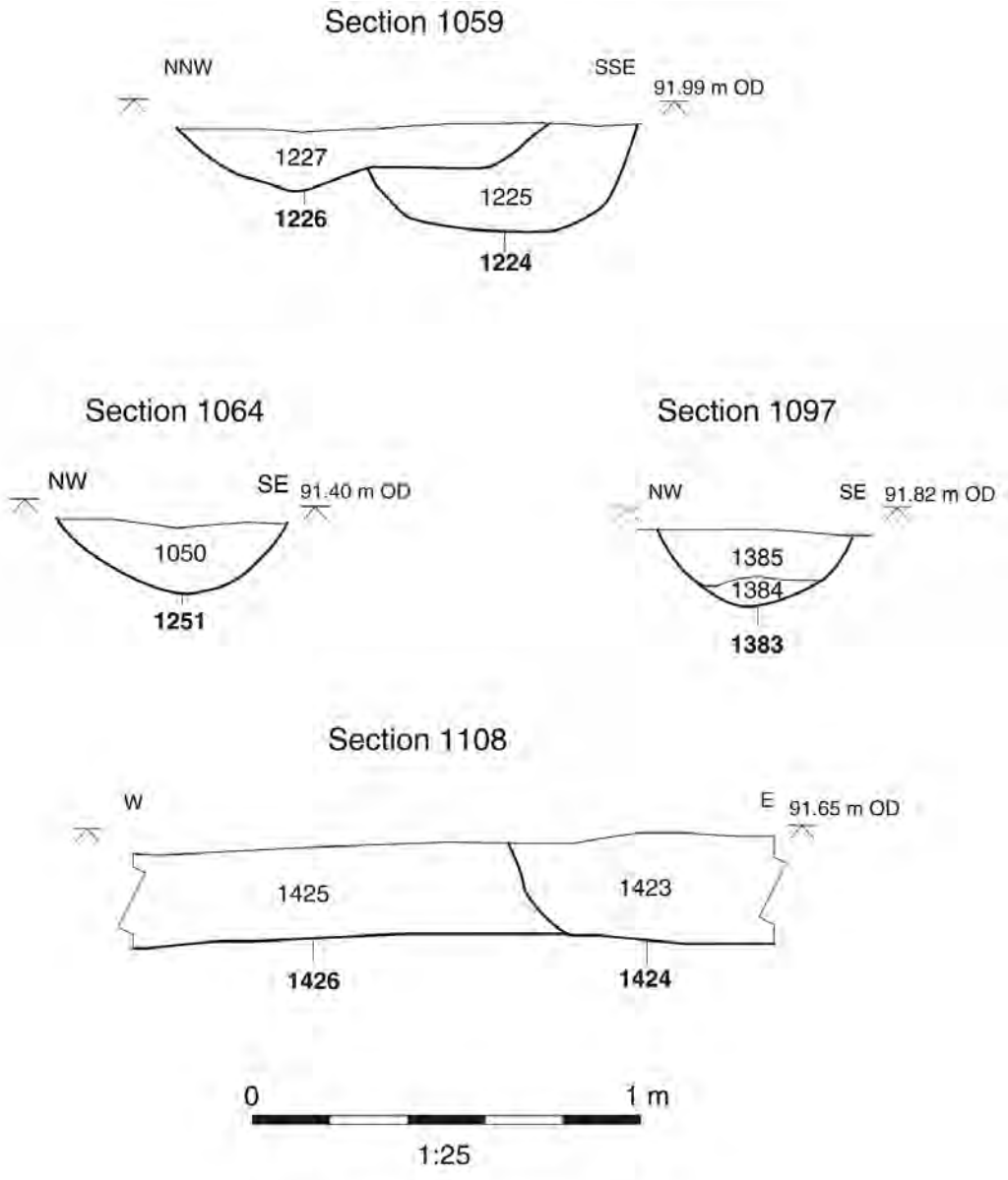

Fig. 12. Sections through the ditches of funerary enclosures 1677, 1678, and 1679.

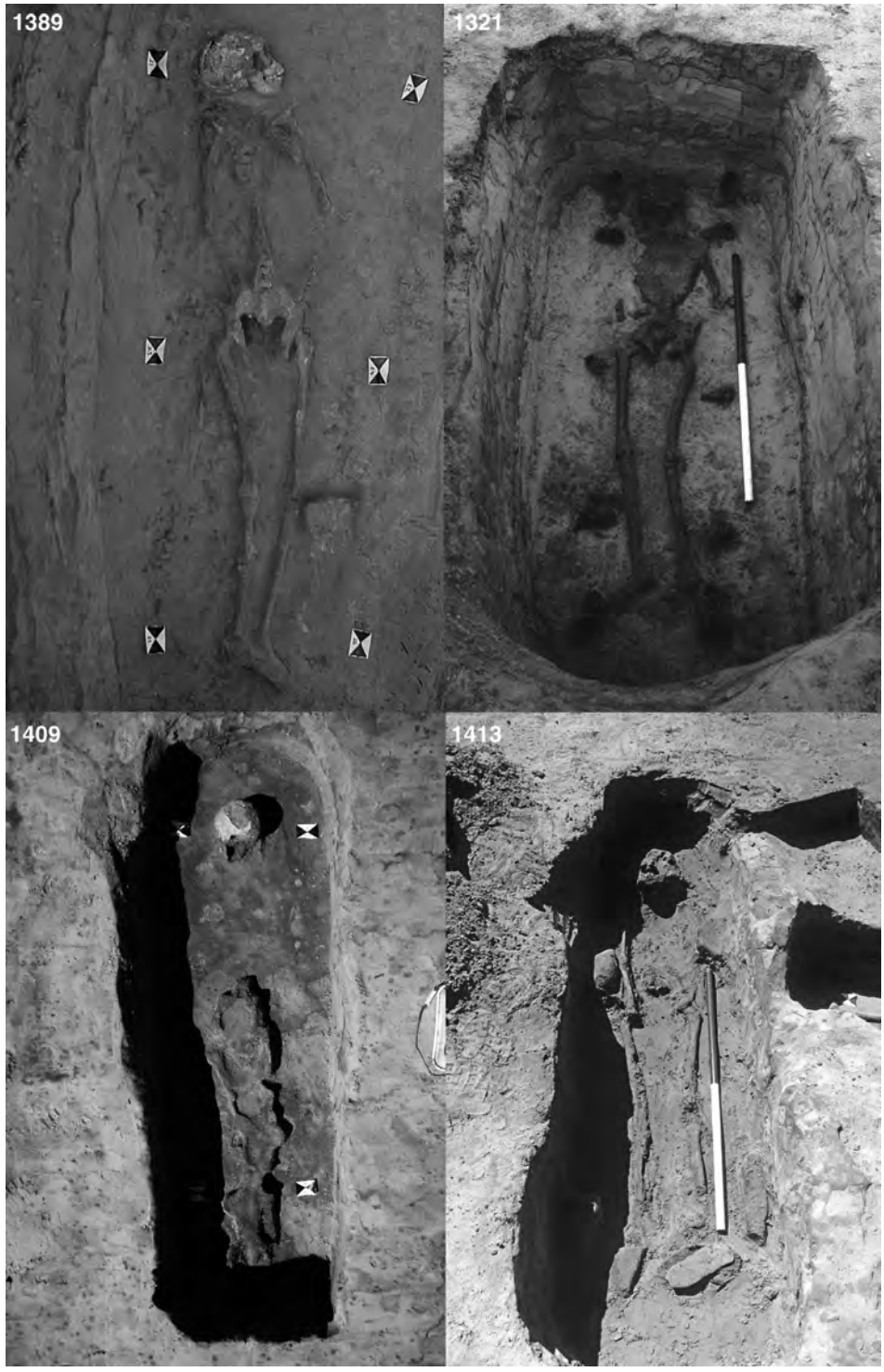

Fig. 13. Photographs of fifth- to sixth-century burials 1321, 1389, 1409 and 1413.

burials, measuring 2.35 m x 1.3 m and 0.85 m deep. It contained the remains of a single individual (1380), who had been buried in an extended, prone position. The arms were only preserved as partial soil stains, but their positions suggest that the hands had lain beneath the pelvis. Due to the poor preservation of the skeleton it was not possible to establish the sex of the individual. A sample taken from the left femur returned a radiocarbon determination of AD 425–545 (NZA-34885; 1565 ± 20 BP). No definite evidence for a coffin was identified, although two iron nails were recovered.

Enclosure 1678 abutted the north-eastern side of enclosure 1677 and was somewhat more square in plan, measuring 5.4 m x 5.2 m. The enclosure ditch was 0.9 m wide and 0.25m deep, and possible evidence for partial re-cutting of the northern side was recorded, although this was by no means certain (Section 1108; Fig. 12). It contained grave 1321 (Fig. 13b), which, like grave 1389, lay on a north–south alignment, somewhat askew to the orientation of the enclosure. The grave pit was again substantial, with a depth of 0.8 m, and contained the poorly preserved remains of a female aged at least 45 years at death (1305). The individual lay in a supine position with the legs extended, but not enough of the arms survived to allow their position to be established. A radiocarbon determination of 420 AD to 540 AD (NZA-34887; 1588 ± 20 BP) was obtained for a sample taken from the right femur. The outline of a coffin measuring *c.*1.7 m x 0.4 m was indicated by an assemblage of 18 iron nails. The south-eastern side of the enclosure was cut by a small, undated pit or tree throw hole (1226).

The third enclosure (1679) was situated a short distance north-west of enclosures 1677 and 1678. It had similar proportions, with dimensions of 5.75 m x 4.65 m, and lay on a similar orientation. A break in the ditch was identified on the eastern side of the enclosure, but it is possible that this represents truncation rather than the location of an original entrance. The ditch that delimited the north-eastern side of the enclosure extended to the north-west, continuing beyond the edge of the excavation area. The only artefactual material recovered from the enclosure ditch comprised two crumbs of early Roman pottery. A shallow feature that may have been a severely truncated grave (1394) lay in the south-eastern quadrant of the enclosure and was cut by grave 1388, which was located more centrally. It lay on a rather different alignment to graves 1321 and 1389, being orientated north-west to south-east, and thus lay almost diagonally across the enclosure. It was the deepest of the burials in this cemetery, with a depth of 1.3 m, but no skeletal material survived.

The three graves that lay outside the enclosures were situated close together immediately to the west of enclosure 1679. Grave 1408 lay at the north-western edge of this group and was cut by a medieval boundary ditch, although the depth of the grave (0.5 m) was sufficiently great to protect the remains interred within from disturbance. It was orientated north–south and contained the remains of an individual (1404) that was in a particularly poor state of preservation and was partly represented by discoloured sand rather than solid bone. The individual lay in an extended posture with the legs turned at a slight angle to the upper part of the body and the feet together. The skull appeared to lie face-down, suggesting that the individual had been buried in a prone position, but the preservation of the other skeletal elements was too poor to confirm this. Neither the sex nor the age could be established, save that the individual was an adult.

Grave 1409 (Fig. 13c) was located two metres east of grave 1408 and was similarly orientated north–south. It was 0.6 m deep and contained the remains of a possibly female adult (1367). The remains were very poorly preserved, and only the skull, right femur and fragments of the pelvis survived as bone, the legs being represented only by a soil stain. No evidence was preserved for the torso. As with the burial in grave 1408, the position of the skull indicated that this may have been a prone burial.

Grave 1413 (Fig. 13d) was orientated west-south-west to east-north-east, on an oblique angle to graves 1408 and 1409. It intersected very slightly with the southern end of grave 1408, but not sufficiently to enable a stratigraphic relationship to be established. The grave pit was 0.4 m deep and contained the remains of a male aged more than 45 years (1411). He lay in a supine position with legs extended and the hands resting on his lap. Four sandstone pieces measuring up to 0.24 m x 0.10 m x 0.06 m had been placed on the base of the grave around the feet, and two further stones lay on either side of the torso. No evidence was identified for a coffin, but a single iron nail was recovered from the backfill.

Inhumation Burial 1668 (Sixth to Seventh Century)

Grave 1668 (Figs. 8 and 14) was situated in a rather isolated location in the southern part of Extension Area 2, some 90 m south of the group of burials attributed to the fifth or early sixth century and a similar distance from the late Roman cemetery. It lay adjacent to a Roman field boundary ditch, and shared that feature's north-west to south-east orientation. The grave pit was 0.21 m deep and contained the remains of a female aged 18–25 years (10007); the skeleton was very poorly preserved and represented partly by a soil stain rather than solid bone. The individual had been decapitated and the head placed on the legs, just above the knees. The lower parts of both legs were missing below the knees and a left tibia, presumably from the same individual, had been placed near the left shoulder. Despite this truncation of the length of the individual, the grave had nevertheless been dug to a length of 2.1 m. A sample from the individual's right femur produced a radiocarbon determination of AD 535–640 (NZA-34917; 1495 ± 25 BP).

Fig. 14. Burial 1668.

Medieval Period (Twelfth to Fifteenth Centuries)

A north-east to south-west-aligned boundary ditch (1659) extended along much of the north-western edge of Extension Area 2 and the southern tip of Extension Area 1 (Fig. 8). It exhibited evidence for up to four phases of recutting, and the fills contained pottery dating from the late twelfth to the early fifteenth centuries. A group of ditches (1283, 1291, 1323, 1369, 1523, 1544, and 1634) that were partly exposed between this feature and the edge of the excavation appeared to define enclosures abutting its north-western side (Fig. 8). The precise forms and extents of these enclosures were not revealed within the area of the excavation, but ditch 1634 appeared to define their north-eastern limit. A feature situated within this area and interpreted as a sand quarry pit (1579) produced pottery indicating a thirteenth- to fourteenth-century date, and an undated pit (1105) that truncated a Roman ditch (1140) in the western part of the site may have been a similar feature. A short segment of ditch (1450) that lay parallel to ditch 1659 further south contained eleventh- to thirteenth-century pottery, and may represent a contemporary boundary.

Post-Medieval Period

Linear ditches were recorded in Extension Area 3 that correspond with the boundary of an enclosure shown on an estate map of 1767 (Fig. 8), and a large area of sand quarrying was identified in the central part of Extension Area 2 that corresponds with a quarry shown on the first edition OS map (Fig. 8).

Undated Burial

An undated inhumation grave (1667) identified close to the western limit of Extension Area 2 contained no datable material. The grave was extremely shallow, and the skeleton (10004) had been partly truncated by ploughing resulting in the loss of part of the skull and the lower parts of the legs. The remains were those of a male aged over 45 years, who had been placed in an extended, supine position.

FLINT by HUGO ANDERSON-WHYMARK

A total of 2,811 stuck flints were recovered from the investigations (Table 2). Two discrete scatters of early Mesolithic flint were identified in Extension Area 1 (scatters 1 and 2 on Fig. 2), as well as a background scatter that extended across all of the extension areas. The two discrete Mesolithic scatters are situated to the north-west of two similar scatters that were investigated in 1988–91 within the footprint of the existing quarry (scatters A and B on Fig. 2). In addition to the Mesolithic flintwork, a small assemblage of Neolithic and early Bronze-Age flint was identified. The methodology for the recovery of flint on site is outlined above.

Artefact Recovery and Distribution

The evaluation and test pit survey resulted in the recovery of a total of 1,572 flints from Extension Area 1 (Table 2). The majority of these flints (1,167) were recovered from the test pit survey, recording an average density of 47 flints per m³. The density of flint in Extension Areas 2 and 3 was considerably lower, with an average of 10 and 6 flints per m³ respectively.

The distribution plots of Extension Area 1 revealed two discrete surface concentrations (Table 3; Figs. 15 and 16). The northern scatter (Scatter 1) measured *c.*45 m x 40 m, with the northern limit extending beyond the mitigation area. A total of 6.5 m³ of soil in this area was sieved, resulting in the recovery of 576 flints, including those from the evaluation trenches (89 flints per m³). Densities up to 190 flints per m³ were recorded from individual test pits. The southern scatter (Scatter 2) measured *c.*50 m x 55 m. A total of 6.66 m³ of soil from this scatter was sieved, and 609 flints were recovered, including those from evaluation trenches (91 flints per m³). Densities up to 210 flints per m³ were recorded from individual test pits. A slightly elevated finds density was recorded in the area between Scatters 1 and 2, but the density rapidly fell to the south-west and north-east. A total of 11.50 m³ of soil from the background scatter was sieved, recovering 387 flints (an average density of 34 flints per m³). The distribution plots (which just include material from the test pits) in Figs. 15 and 16 demonstrate that the flint in the subsoil had a more discrete distribution pattern than that in the topsoil. This may indicate that the flint in the subsoil has been less dispersed by agricultural activities than that in the topsoil. This is further suggested by the identification of a refit between two blades from the subsoil in test-pit 163, indicating that these pieces had experienced limited movement.

Analysis and Terminology

Metrical and technological attribute analysis was undertaken on 275 complete flakes from Extension Area 1 to clarify dating and reduction strategies. Metrical attributes were recorded following Saville.[103] Technological

[103] A. Saville, 'On the Measurement of Struck Flakes and Flint Tools', *Lithics*, 1 (1980), pp. 16–20.

Table 2. Quantification of the flint assemblage

	Extension Area 1			Extension Area 1 sub-total	Extension Area 2		Extension Area 2 sub-total	Extension Area 3		Extension Area 3 sub-total	Total
CATEGORY TYPE	Eval. Tr.	Test pits	Excavation		Eval. Tr.	Excavation		Eval. Tr.	Excavation		
Flake	181	471	213	*865*	30	138	*168*	22	125	*147*	1180
Blade	67	56	29	*152*	4	36	*40*	13	39	*52*	244
Bladelet	14	73	40	*127*	2	34	*36*	1	35	*36*	199
Blade-like	28	45	24	*97*		21	*21*	2	19	*21*	139
Irregular waste	18	35	14	*67*	1	4	*5*	2	7	*9*	81
Chip	43	429	126	*598*	3	49	*52*	10	58	*68*	718
Micro burin		9	6	*15*		1	*1*		1	*1*	17
Burin spall			1	*1*		1	*1*				2
Rejuvenation flake core face/edge	1	6	6	*13*							13
Rejuvenation flake tablet	6		8	*14*		2	*2*	1	1	*2*	18
Rejuvenation flake other	6	5	4	*15*		5	*5*	1	7	*8*	28
Axe sharpening flake	2	1		3							3
Single platform blade core	2	2	3	*7*	1	2	*3*	1	2	*3*	13
Bipolar (opposed platform) blade core	4		5	*9*				2	3	*5*	14
Other blade core						1	*1*				1
Tested nodule/bashed lump	1		1	*2*				1	2	*3*	5
Single platform flake core	2		3	*5*		1	*1*		1	*1*	7
Multiplatform flake core	1	4	1	*6*		2	*2*		1	*1*	9
Core on a flake	3			3					3	*3*	6
Unclassifiable/fragmentary core	3	1	2	*6*							6
Microlith	6	5	4	*15*	1	4	5		6	*6*	26
Burin	1	1	1	*3*		1	*1*				4
Leaf arrowhead		1		1							1

Barbed and tanged arrowhead	1			1							1
End scraper	6	2	5	*13*		3	*3*	1		*1*	17
Side scraper		2	3	*5*							5
End and side scraper	4		1	*5*		1	*1*				6
Thumbnail scraper	1			1		1	*1*		1	*1*	3
Other scraper		2		2		2	*2*				4
Piercer	1	1	1	*3*					1	*1*	4
Spurred piece	1			1							1
Serrated flake	2	2	1	*5*		1	1		2	*2*	8
Notch		1		1							1
Backed knife		1		1							1
Other knife						2	*2*				2
Retouched flake	6	5	6	*17*		2	*2*		3	*3*	22
Misc retouch	1			1							1
Tranchet axe									1	*1*	1
Grand total	412	1160	508	*2080*	42	314	*356*	57	318	*375*	2811
Burnt unworked flint no./wt (g)	5/1933	33/561	6/10	*44/2504*		3/8	*3/8*	4 (8.5)	25 (9.6)		47/2512
No. Burnt worked flints (%)*	49 (13.2)	139 (18.8)	44 (11.5)	*232 (15.6)*	3 (7.7)	41 (13.1)	*44 (14.5)*	18 (38.3)	101 (38.7)	*29 (9.4)*	305(14.5)
No. Broken worked flints (%)*	181 (48.9)	393 (53.3)	165 (43.2)	*739 (49.6)*	10 (25.6)	138 (43.9)	*148 (48.7)*	1 (2.1)	14 (5.4)	*119 (38.6)*	1006 (47.9)
No. Retouched flints (%)*	24 (6.5)	17 (2.3)	18 (4.7)	*59 (4)*		14 (4.5)	*14 (4.6)*			*15 (4.9)*	88 (4.2)

* Percentage excludes chips

Table 3. The flint assemblage from Extension Area 1: Flint Scatters 1 and 2

	Scatter 1		Scatter 1	Scatter 2		Scatter 2	Background scatter		Background	
CATEGORY TYPE	**Eval. Tr.**	**Test pits**	**Total**	**Eval. Tr.**	**Test pits**	**Total**	**Eval. Tr.**	**Test pits**	**Total**	**Grand total**
Flake	35	204	*239*	70	166	*236*	76	101	*177*	652
Blade	16	23	*39*	25	25	*50*	26	8	*34*	123
Bladelet	2	34	*36*	8	31	*39*	4	8	*12*	87
Blade-like	8	17	*25*	8	21	*29*	12	7	*19*	73
Irregular waste	7	11	*18*	5	10	*15*	6	14	*20*	53
Chip	4	194	*198*	25	166	*191*	14	69	*83*	472
Micro burin		3	*3*		5	*5*		1	*1*	9
Rejuvenation flake core face/edge		1	*1*		3	*3*	1	2	*3*	7
Rejuvenation flake tablet	1		*1*	1		*1*	4		*4*	6
Rejuvenation flake other	2		*2*	3	1	*4*	1	4	*5*	11
Axe sharpening flake				2		*2*		1	*1*	3
Single platform blade core				2	2	*4*				4
Bipolar (opposed platform) blade core	1		*1*	1		*1*	2		*2*	4
Tested nodule/bashed lump				1		*1*				1
Single platform flake core				1		*1*	1		*1*	2
Multiplatform flake core	1	2	*3*					2	*2*	5
Core on a flake				3		*3*				3
Unclassifiable/fragmentary core	1	1	*2*				2		*2*	4
Microlith		2	*2*	3	2	*5*	3	1	*4*	11
Burin							1	1	*2*	2
Leaf arrowhead		1	*1*							1
Barbed and tanged arrowhead							1		*1*	1
End scraper	1	1	*2*	2		*2*	3	1	*4*	8
Side scraper					2	*2*				2
End and side scraper				2		*2*	2		*2*	4
Thumbnail scraper							1		*1*	1
Other scraper					1	*1*		1	*1*	2
Piercer				1		*1*		1	*1*	2
Spurred piece				1		*1*				1
Serrated flake				2	2	*4*				4
Notch		1	*1*							1
Backed knife		1	*1*							1
Retouched flake		1	*1*	4	2	*6*	2	2	*4*	11
Misc retouch							1		*1*	1
Grand Total	79	497	*576*	170	439	*609*	163	224	*387*	1572
Burnt unworked flint no./wt (g)		15/490	*15/490*	3/120	8/31	*11/151*	2/1813	10/40	*12/1853*	38/2494
No. Burnt worked flints (%)*	15 (20)	54 (17.7)	*69 (18.2)*	21 (14.4)	59 (21.4)	*80 (19)*	13 (8.7)	26 (16.6)	*39 (12.7)*	188 (17)
No. Broken worked flints (%)*	37 (49.3)	153 (50.2)	*190 (50)*	66 (45.2)	167 (60.5)	*233 (55.2)*	78 (52.3)	73 (46.5)	*151 (49.3)*	574 (51.8)
No. Retouched flints (%)*	1 (1.3)	7 (2.3)	*8 (2.1)*	15 (10.3)	9 (3.3)	*24 (5.7)*	14 (9.4)	7 (4.5)	*21 (6.9)*	53 (4.8)

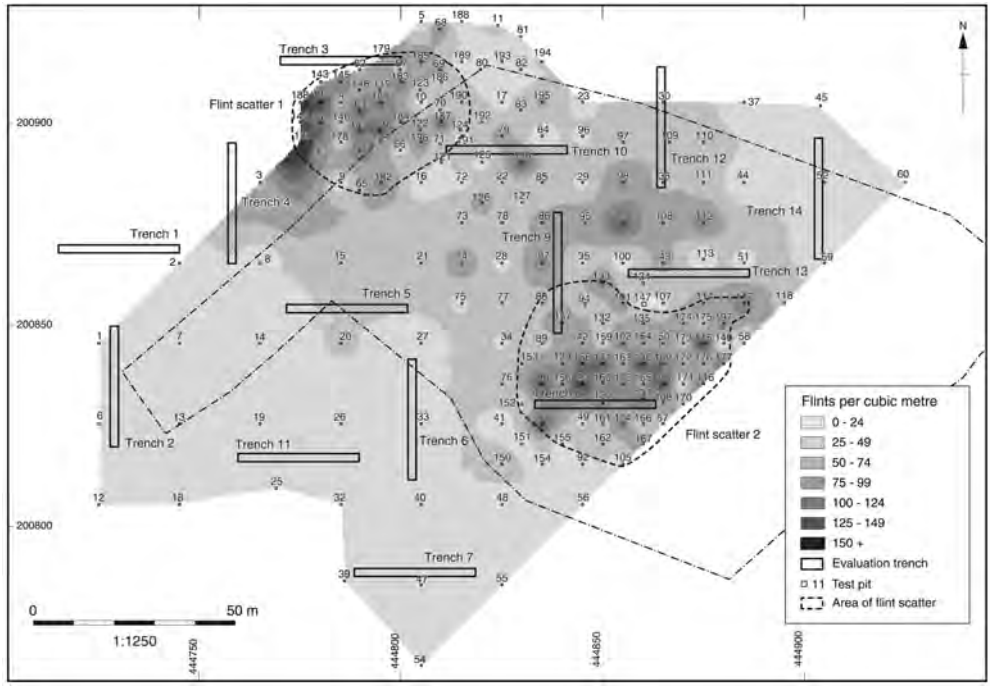

Fig. 15. Test pit survey: contour map of flints found per m³ of topsoil.

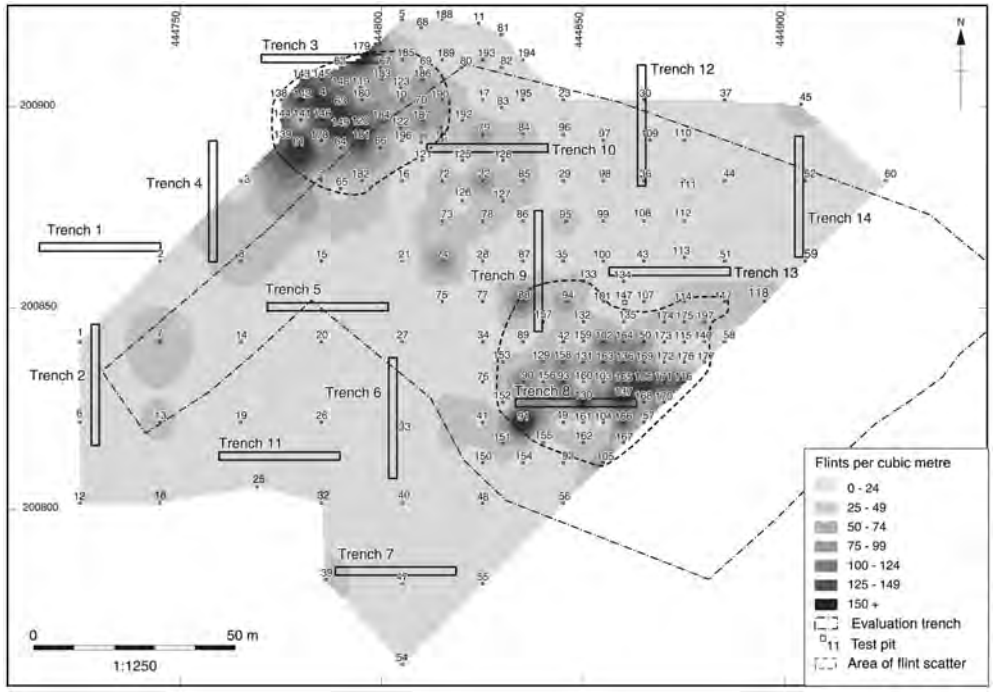

Fig. 16. Test pit survey: contour map of flints found per m³ of subsoil.

attributes recorded include butt type (see below), extent of dorsal cortex, termination type, flake type (see below), hammer mode, platform abrasion, and the presence of dorsal blade scars.

Core typology follows Bradley, rather than the commonly adopted classification of Clark and Higgs, as the former is more informative for reduction strategies.[104] Retouched artefacts are classified using standard morphological descriptions.[105] A blade is defined as flake with a length to breadth ratio of 2:1 or higher, and a bladelet is a small blade less than 40 mm in length; blade-like flakes exhibit traits of true blades, for example parallel sides, but do not achieve blade proportions.

Butt Type[106]
1. Cortical – completely covered by cortex.
2. Plain – formed by one removal.
3. With more than one removal – more than one flake scar on striking platform.
4. Faceted – a series of negative bulbs along the dorsal edge, forming part of flake scars truncated at the ventral edge by detachment of the flake.
5. Linear – long slender butt.
6. Punctiform – negligible butt.
7. Other – any other butt type.

Flake Type[107]
1. Preparation flake – dorsal surface is covered by more than 75% of cortex.
2. Side trimming flake – cortex remaining on one side of the flake.
3. Distal trimming flake – cortex present on the distal end of the flake.
4. Miscellaneous trimming flake – some cortex remaining but in none of the above positions.
5. Non-cortical flake – all non-cortical flakes.
6. Rejuvenations – core face/edge rejuvenations, tablets, crests.
7. Thinning flakes.

Raw Material and Condition

Flint from at least two sources was present in the assemblage. The most common raw material was a very good quality, dark grey-brown flint with few cherty inclusions. The flint exhibits a thick, unabraded cortex measuring up to 10 mm thick, which is frequently stained light brown. It contains a few internal flaws, perhaps resulting from thermal damage. This flint was probably collected from a chalk region, such as the Berkshire Downs to the south. The second flint type, represented by only a few flakes, is a light brown to grey flint exhibiting a heavily abraded, pitted cortex. This flint originates from river gravels or a similarly derived deposit.

The condition of the flint was variable. Flint from the topsoil and subsoil exhibited light to moderate post-depositional edge-damage, including plough damage.[108] A small number of flints were free from surface cortication, but the majority bore a light bluish-white to heavy white surface cortication; no correlation was observed between the degree of cortication and technological traits/date of the artefacts. The flint assemblage contained a high proportion of broken pieces, amounting to 47.9% of the total. A number of these flints were broken in antiquity, but other breaks were more recent, resulting from post-depositional disturbance. The breaks that occurred in antiquity may represent knapping errors, debitage from the segmentation of blades and production of tools, or breakage during use. The assemblage also has relatively high levels of burning, amounting to 14.5% total of worked flints. Scatters 1 and 2 contained the highest proportions of burnt worked flints at 18.2% and 19% of the total assemblages, respectively (see Table 3). The background material in Extension Area 1 contained 15.6% burnt worked flints, while the figures for Extension Areas 2 and 3 were lower, at 14.9% and 9.4% respectively. This pattern, although subtle, indicates a higher incidence of burning in the main scatters, and may reflect the presence of more activities associated with fire in these areas.

104 P. Bradley, 'Worked Flint', in A. Barclay and C. Halpin, *Excavations at Barrow Hills, Radley, Oxfordshire. Volume 1: The Neolithic and Bronze Age Monument Complex* (Oxford, 1999), p. 212; J.G.D. Clark et al., 'Excavations at the Neolithic Site of Hurst Fen, Mildenhall, Suffolk, 1954, 1957 and 1958', *Proceedings of the Prehistoric Society*, 26 (1960), pp. 202–45.

105 H. Bamford, *Briar Hill: Excavations 1974–1978*, Northampton Development Corporation Archaeological Monograph, 3 (1985), pp. 72–7; F. Healy, *The Anglo-Saxon Cemetery at Spong Hill, North Elmham. Part 6: Occupation in the Seventh to Second Millennia BC*, East Anglian Archaeology, 39 (1988), pp. 48–9; Bradley 'Worked Flint', in Barclay and Halpin, *Excavations at Barrow Hills*, pp. 211–27; C. Butler, *Prehistoric Flintwork* (Stroud, 2005).

106 After M-L. Inizan et al., *Technology of Knapped Stone* (France, 1992).

107 After P. Harding, 'The Worked Flint', in J.C. Richards, *The Stonehenge Environs Project* (London, 1990).

108 R.J. Mallouf, 'An Analysis of Plow-Damaged Chert Artefacts: The Brookeen Creek Cache, Hill County, Texas', *Journal of Field Archaeology*, 9 (1982), pp. 79–98.

The Early Mesolithic Assemblage

The greater part of the flint assemblage forms a coherent group that was dated to the early Mesolithic through the presence of obliquely blunted points and edge blunted points.

Debitage

In total, 25.2% of the complete flakes were of blade proportions, with the average blade measuring 32 mm x 12.5 mm and 5.1 mm thick. The longest complete blade measured 68 mm. This proportion of blades is relatively low for Mesolithic assemblages, as they typically contain >33% complete blades.[109] Blades, however, are underrepresented in the measured sample due to high levels of breakage: 65% of blades and bladelets are broken compared to only 50.5% of flakes. Therefore, in the assemblage as a whole, blades form *c.*33% of flakes, a total comparable to the figure of >36% suggested by Ford for combined assemblages of complete and broken blades. The technological attributes of the flake debitage further suggest that the industry was orientated towards blade production. In total, 28.1% of flakes exhibited the scars of earlier blade removals on their dorsal surface. A careful reduction strategy is also apparent through the 44% of flakes that exhibit abrasion on their platform-edges and the frequent rejuvenation of platform and core faces. Platform tablets were removed to refresh and extend platforms. Blade production was initiated by the preparation of the core face on one side and the removal of a unifacially crested blade. Cresting was also used to renew blade production on partially worked cores. Flakes were most frequently detached using a soft hammer percussor, such as antler, but a small number of flakes, particularly cortical trimming flakes, appear to have been detached using a hard hammer such as a flint or quartzite pebble; a few of these hammerstones were recovered (Shaffrey and Anderson-Whymark, below). The combination of soft hammer percussion and platform-edge abrasion elevated proportions of linear and punctiform butts to 8.6% and 26.3% respectively, although plain butts were most frequent (42.5%).

The proportion of flake types present and dorsal extent of cortex indicate that the raw flint arrived on site as partly dressed nodules. A large proportion of the flakes are non-cortical (56.7%) and only 1.1% of flakes exhibit 100% of cortex on their dorsal surface, with a further 7.9% exhibiting 76% to 99% cortex. It is also notable that the flakes with cortex are on average the same size as those without cortex. This indicates that the raw materials may have been partly prepared elsewhere, as if these flakes resulted from the initial preparation of nodules they would be larger than the internal flakes. The presence of some cortex on 43.3% of flakes, however, indicates that cortex remained on many of the prepared nodules. In this respect, it is noteworthy that the many cores have cortex on their back, indicating that only the front surface of the core was extensively prepared before reduction.

One blade from Extension Area 2 is notably larger than the other flints in the assemblage, although the proximal end is burnt and slightly broken. This fragmentary blade, measuring 103 x 31 mm and 13 mm thick, was struck from a well prepared core at an early stage of reduction. The size of the blade in relation to other blades and cores in the assemblage may indicate that it belongs to a different industry, which was orientated to the production of larger blades. A Late Glacial date is possible, but in the absence of diagnostic technological attributes this cannot be suggested with any degree of confidence. Moreover, even if this artefact predates the early Mesolithic scatter, it is still possible that it was transported to this location during the period of early Mesolithic activity.

A total of sixty-one cores and tested nodules were recovered (Table 2). Single platform blade cores and opposed platform blade cores were the most frequent forms, with 13 and 14 examples recovered respectively (Fig. 17.2–4). Many of these cores exhibit a regular form that results from the careful preparation of core pre-forms. One example of a core pre-form was recovered that had been used as a hammerstone rather than being reduced, possibly due to slight irregularities in its form (Fig. 19a). This artefact exhibits a flat back and a well prepared curving front edge, forming a strong ridge. In order to initiate blade production, platforms would be established by striking a flake from each end. Crested removals could then be struck along the ridge from each end to create an opposed platform blade core.

A considerable disparity exists in the core:flake ratio between hand collected and sieved contexts. The core:flake ratio for hand-collected flints ranges between 1:15 and 1:27, whilst among the sieved contexts the ratio ranges between 1:73 and 1:131. The ratio from the sieved sample may be considered more representative of the overall composition of the assemblage, as hand collection will always be biased towards the collection of larger artefacts. In Extension Area 1 it is noteworthy that the flake:core ratio is lowest in the background scatter (1:73), with higher proportions in Scatter 1 (1:98) and Scatter 2 (1:131). This indicates that Scatters 1 and 2 contain high proportions of knapping debitage.

The cores present in the assemblage are generally fully exhausted; the majority of cores have been worked until it was no longer viable to remove flakes from the existing platform or renew the platform by removing a core rejuvenation tablet. Cores were also occasionally abandoned due to faults in the flint or knapping errors that would have proved difficult to remove. It is also notable that several of the flake cores were blade cores prior to a final round of removals before abandonment. The cores ranged between 9 and 118 g, with the average core weighing *c.*40 g.

[109] S. Ford, 'Chronological and Functional Aspects of Flint Assemblages', in A.G. Brown and M.R. Edmonds (eds.), *Lithic Analysis and Later British Prehistory: Some Problems and Approaches*, BAR BS, 162 (1987), pp. 67–81.

Retouched Component

Eighty-eight retouched flints were recovered from the excavations, including a small number of Neolithic and early Bronze-Age flints (below). Twenty-six microliths were recovered. All were broken except for one obliquely blunted point and two irregular, possibly unfinished, points (Fig. 18, nos. 6–7). Twenty microliths were classifiable. These comprise eleven obliquely blunted points (Fig. 18, nos. 8–11) and nine edge-blunted points (Fig. 18, nos. 12–15). One of the six unclassifiable fragments was clearly a different form as it exhibited inverse basal retouch (Fig. 18, no. 16). The dominance of simple obliquely blunted points and edge-blunted points is comparable to the previous excavations, and is typical of early Mesolithic industries.[110] Due to the small number of complete microliths, metrical analysis was not undertaken. The microliths are unevenly distributed, with only two examples from Scatter 1 and five from Scatter 2. Fifteen were recovered from Extension Area 1 in total. In addition to the microliths, seventeen micro-burins from the manufacture of microliths were recovered (Fig. 18.17). Fifteen of these were recovered from Extension Area 1 and they were more common in Scatters 1 and 2, with three and five examples respectively, than in the background scatter, which contained a single example. The other examples were recovered from the watching brief and have not been assigned to a scatter. Eleven of the micro-burins represent the removal of the bulbar, proximal, end of a flake, whilst five represent the removal of the distal end. The other piece classed as a micro-burin is a medial segment of a blade that has been notched and snapped at either end without further modification, and may be classed as a microlith blank. Four burins and burin spalls were recorded (Fig. 18, nos. 18 and 19). Two were dihedral burins and two were burins on a truncation. The burins and spalls were all recovered away from Scatters 1 and 2, suggesting that they were manufactured, used and disposed of away from the main activity areas. Eight serrated flakes were recovered (Fig. 18, no. 20), of which four were from Scatter 2. None were present in Scatter 1. Other tools recovered include several scrapers, piercers, and awls. These tools are again common in Scatter 2, but not in Scatter 1. The scrapers were generally manufactured on small blade and blade-like flakes and exhibit curving abrupt retouch (Fig. 18, nos. 20 and 21). Twenty-two flints have been classified as edge-retouched flakes. This category is characterised by small areas of slight edge retouch on flakes and blades.

A single tranchet axe was recovered from Extension Area 3 (Fig. 19b), but the presence of further axes is indicated by three tranchet axe sharpening flakes from Extension Area 1. The axe is complete, weighing 304 g and measuring 150 x 68 mm and 28 mm thick. It exhibits a very sharp edge with a slight use-gloss. The form of the axe is unusual, as it has a lenticular section and sides that taper towards the butt – characteristics more commonly associated with Neolithic axes. However, the blade-edge has been expertly sharpened by a tranchet blow, confirming a Mesolithic date. The fine condition of the artefact and absence of re-working may suggest that it was deliberately buried or cached for future use.

The distribution of retouched artefacts indicates that differing activities were performed in each scatter, and also in the area surrounding the main scatters. However, the limited number of retouched tools recovered make it difficult to identify any patterning with confidence. It does, however, appear that retouched tools are both fewer in number and more restricted in range in Scatter 1 than in Scatter 2. This may reflect a more limited range of activities in Scatter 1, focused on knapping and including the manufacture of microliths and the maintenance of toolkits. But considering the small sample of the overall assemblage recovered, it is probable that the full range of activities is not adequately represented.

The Neolithic/Early Bronze-Age Assemblage

A small number of diagnostic Neolithic and early Bronze-Age artefacts were recovered. An earlier Neolithic leaf-shaped arrowhead was recovered from the subsoil in Extension Area 1, Test Pit 148. The arrowhead measures 27 x 15 mm and has been reworked from a finely retouched, larger point by abruptly retouching (presumably broken) edges to form a point. Late Neolithic/early Bronze-Age artefacts comprise a barbed-and-tanged arrowhead, two thumbnail scrapers, a backed knife, and two crude knives. The barbed-and-tanged arrowhead, from Extension Area 1, is irregular in form, with semi-invasive retouch and slight notches. In addition, *c.*25 flakes, two flake cores and a tested nodule have been broadly assigned to this period on the basis of flake morphology and technological attributes. These were excluded from the technological analysis. A multi-platform flake core with discoidal removals and a scraper re-worked corticated early Mesolithic flints; the new removals remained in a fresh uncorticated condition. Several flakes considered to date from the Neolithic/early Bronze Age were also struck from corticated cores. This represents the opportunistic reworking in the Neolithic and early Bronze Age of Mesolithic flintwork.

The Neolithic and Bronze-Age flint assemblage is relatively limited and is not indicative of extensive activity in the area, but adds to a growing corpus of finds in the area. A chisel arrowhead and a piece of late Neolithic Grooved Ware was recovered from the previous excavations at New Plantation and two early Neolithic leaf-shaped arrowheads and two barbed-and-tanged arrowheads were previously collected in the vicinity of Extension Area 1

[110] J.G.D. Clarke, 'The Classification of a Microlithic Culture: The Tardenoisian of Horsham', *Archaeological Journal*, 90 (1934), pp. 52–77; R. Jacobi, 'The Mesolithic of Sussex', in P.L. Drewett (ed.), *Archaeology in Sussex to AD 1500*, CBA Research Report, 29 (1978), pp. 15–22

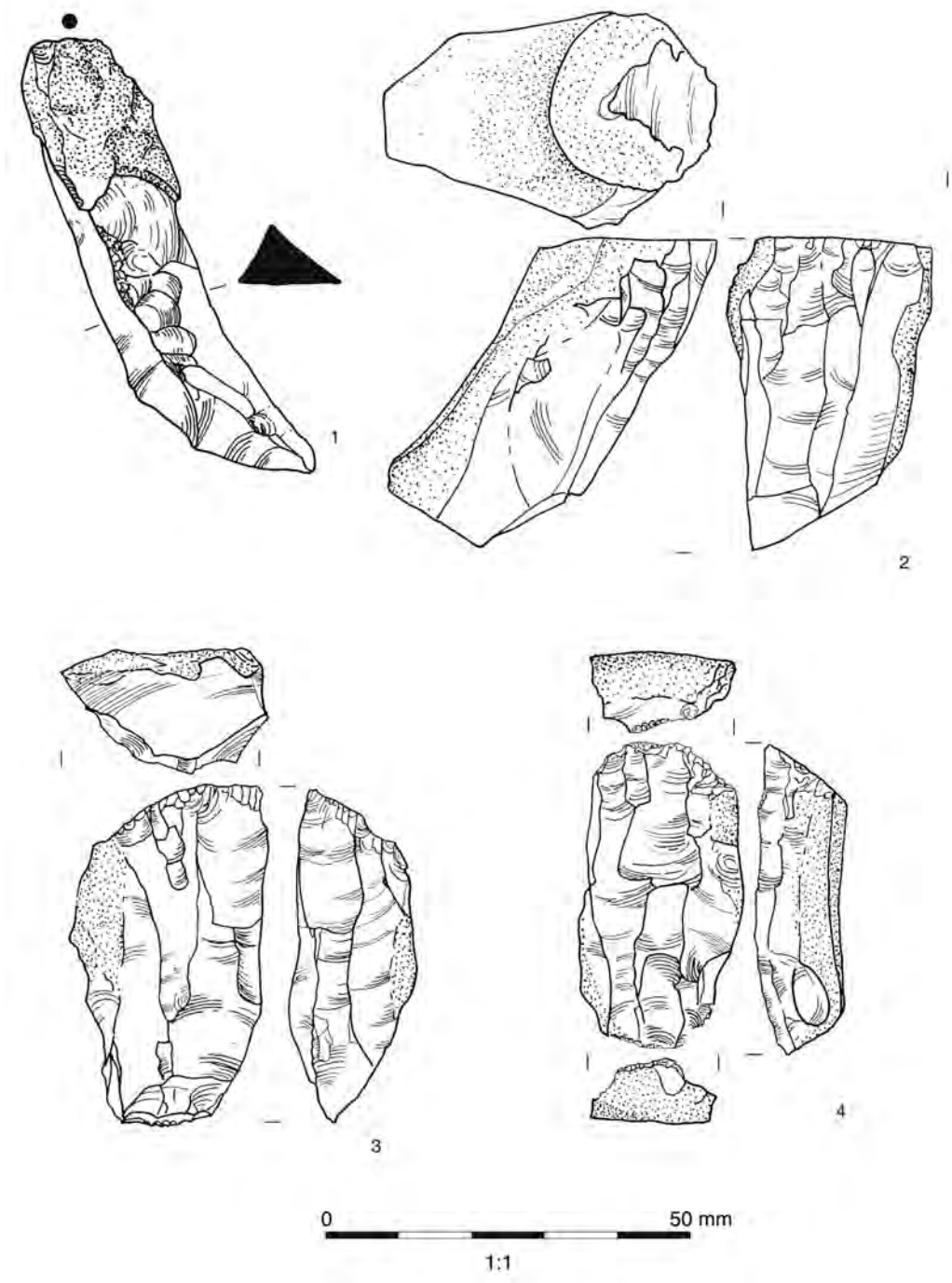

Fig. 17. Worked flint, nos. 1–4.

and 2.[111] The number of arrowheads recovered in relation to the overall size of Neolithic and early Bronze-Age flint assemblage may indicate that hunting was an important activity in the local environment.

Illustration catalogue (Figs. 17–19):
1. TUWQ01. 807 fill of tree throw hole 806. Evaluation Trench 8. Extension Area 1. Scatter 2. Unifacially crested blade. Early Mesolithic.
2. TUWQ01. Subsoil 2436. Test Pit 88. Extension Area 1. Scatter 2. Single-platform blade core. Plain platform. Early Mesolithic.
3. TUWQ01. Subsoil 802. Evaluation Trench 8. Extension Area 1. Scatter 2. Single-platform blade core. Plain platform. Early Mesolithic.
4. TUWQ01. Subsoil 802. Evaluation Trench 8. Extension Area 1. Scatter 2. Opposed-platform blade core. Plain platforms. Early Mesolithic.
5. TUWQ01. 309 fill of tree throw hole 310. Evaluation Trench 3. Extension Area 1. Scatter 1. Opposed-platform blade core. Plain platforms. Early Mesolithic.
6. TUWQ07. Context 1441. Extension Area 2. Irregular, possibly unfinished, microlith. Early Mesolithic.
7. TUWQ05. Context 10012. SF526. Extension Area 2. Obliquely or edge-blunted point. Early Mesolithic.
8. TUWQ09. Context 5137. Extension Area 3. Obliquely blunted point. Early Mesolithic.
9. TUWQ01. Topsoil 801. Evaluation Trench 8. Extension Area 1. Scatter 2. Obliquely blunted point, broken. Early Mesolithic.
10. TUWQ01. Topsoil 901. Evaluation Trench 9. Extension Area 1. Scatter 2. Obliquely blunted point, broken. Early Mesolithic.
11. TUWQ01. Topsoil 2736. Test Pit 148. Extension Area 1. Scatter 1. Obliquely blunted point, broken. Early Mesolithic.
12. TUWQ02. Context 2984. SF 146. Extension Area 1. Edge-blunted point. Early Mesolithic.
13. TUWQ09. Context 5045. SF5045. Extension Area 3. Edge-blunted point, broken. Early Mesolithic.
14. TUWQ09. Context 5045. SF5179. Extension Area 3. Edge-blunted point. Early Mesolithic.
15. TUWQ09. Context 5101. SF5078. Extension Area 3. Edge-blunted point, broken. Early Mesolithic.
16. TUWQ01. Topsoil 901. Evaluation Trench 9. Extension Area 1. Scatter 2. Broken base of microlith with inverse retouch. Early Mesolithic.
17. TUWQ01. Topsoil 2680. Test Pit 137. Extension Area 1. Scatter 2. Proximal micro-burin. Early Mesolithic.
18. TUWQ01. Subsoil 2221. Test Pit 45. Extension Area 1. Background scatter. Unifacial crested blade with angle burin removals. Early Mesolithic.
19. TUWQ01. Subsoil 1201. Evaluation Trench 12. Extension Area 1. Background scatter. Dihedral burin on blade. Early Mesolithic.
20. TUWQ01. 309 fill of tree throw hole 310. Evaluation Trench 3. Extension Area 1. Scatter 1. End scraper on a blade-like flake. Early Mesolithic.
21. TUWQ01. Topsoil 1301. Evaluation Trench 13. Extension Area 1. Scatter 2. End scraper on a flake. Early Mesolithic.
22. TUWQ02. Topsoil 2983. Watching brief. Extension Area 1. Broken serrated blade. Early Mesolithic.
a) TUWQ09. Context 5292. Extension Area 3. Core pre-form used as a hammerstone. 61 g. Early Mesolithic.
b) TUWQ09. Context 5101. SF 5067. Extension Area 3. Tranchet axe. Early Mesolithic.

IRON-AGE AND ROMAN POTTERY by PAUL BOOTH

A total of 2,263 sherds (36,515 g, 39.93 EVEs) of Iron-Age and Roman pottery was recovered (Table 4), the great majority from Extension Area 3. All but three of the Iron-Age sherds came from the south-western end of Extension Area 2. The smaller assemblages, from the 2002 watching brief and the 2003 second phase of evaluation, contained high proportions of effectively unstratified material, but also produced a few significant feature assemblages including burial groups.

The Iron-Age pottery was almost entirely of middle Iron-Age date. A little late Iron-Age to early Roman pottery was present, but the majority of the Roman pottery came from context groups of second-century date. A much smaller amount of pottery came from late Roman contexts.

The material was recorded using the approach set out in the OA later prehistoric and Roman pottery recording system.[112] The condition of the pottery was variable. The mean sherd weight was reasonably high overall (12 g for the Iron-Age pottery and 16.4 g for the Roman) but there was considerable variability in sherd size from group to group. Surface condition of sherds was also very variable. A large proportion of sherds had quite poorly preserved surfaces, although in view of the reasonably high mean sherd weights this was probably for the most part a consequence of the action of the acidic soil on the site, rather than indicating extensive abrasion from redeposition.

[111] Bradley and Hey, 'A Mesolithic Site at New Plantation'; personal communication from Mr B. Astell.
[112] P. Booth, 'Oxford Archaeology Roman Pottery Recording Guidelines', unpublished OA document (2008).

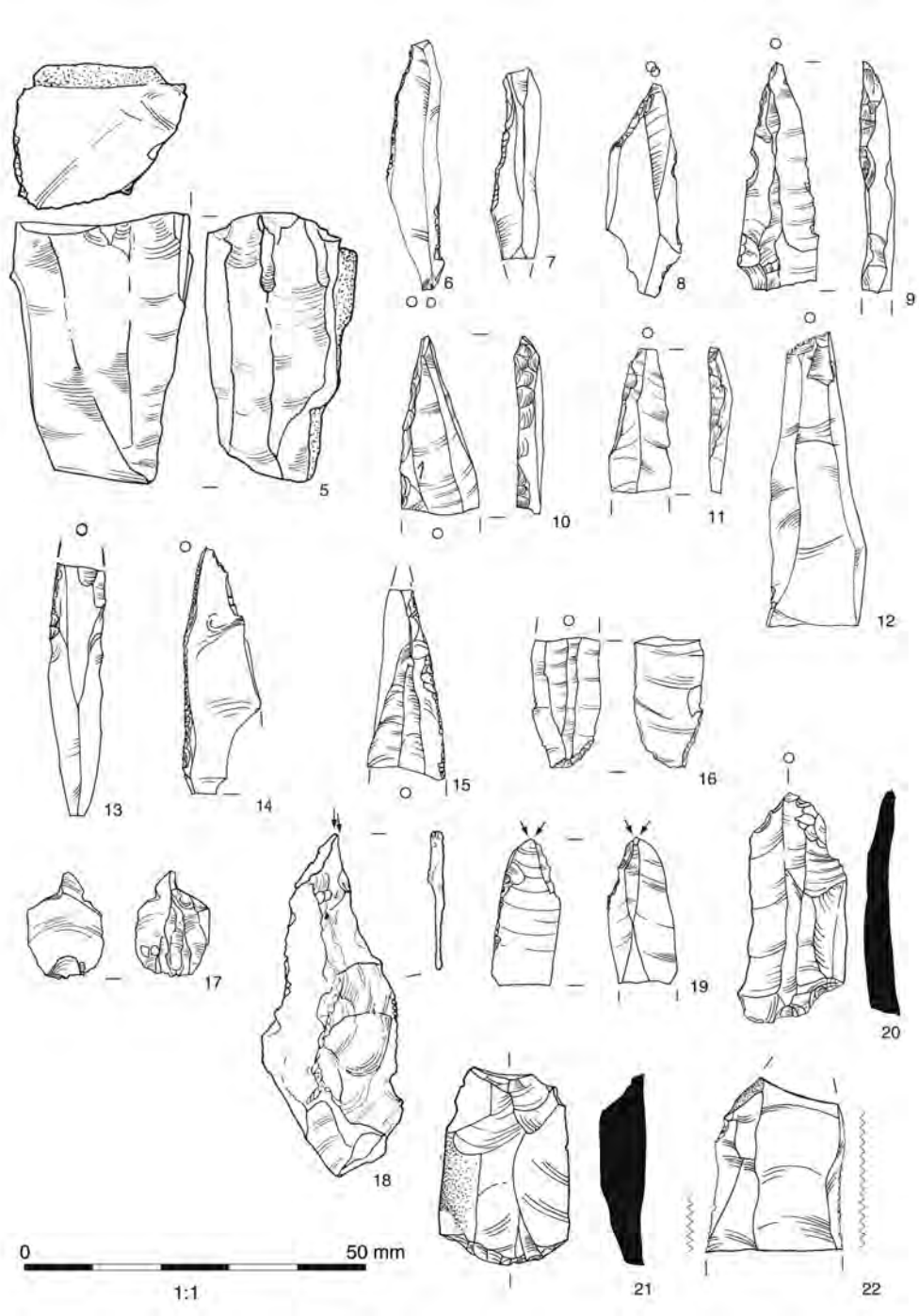

Fig. 18. Worked flint, nos. 5–22.

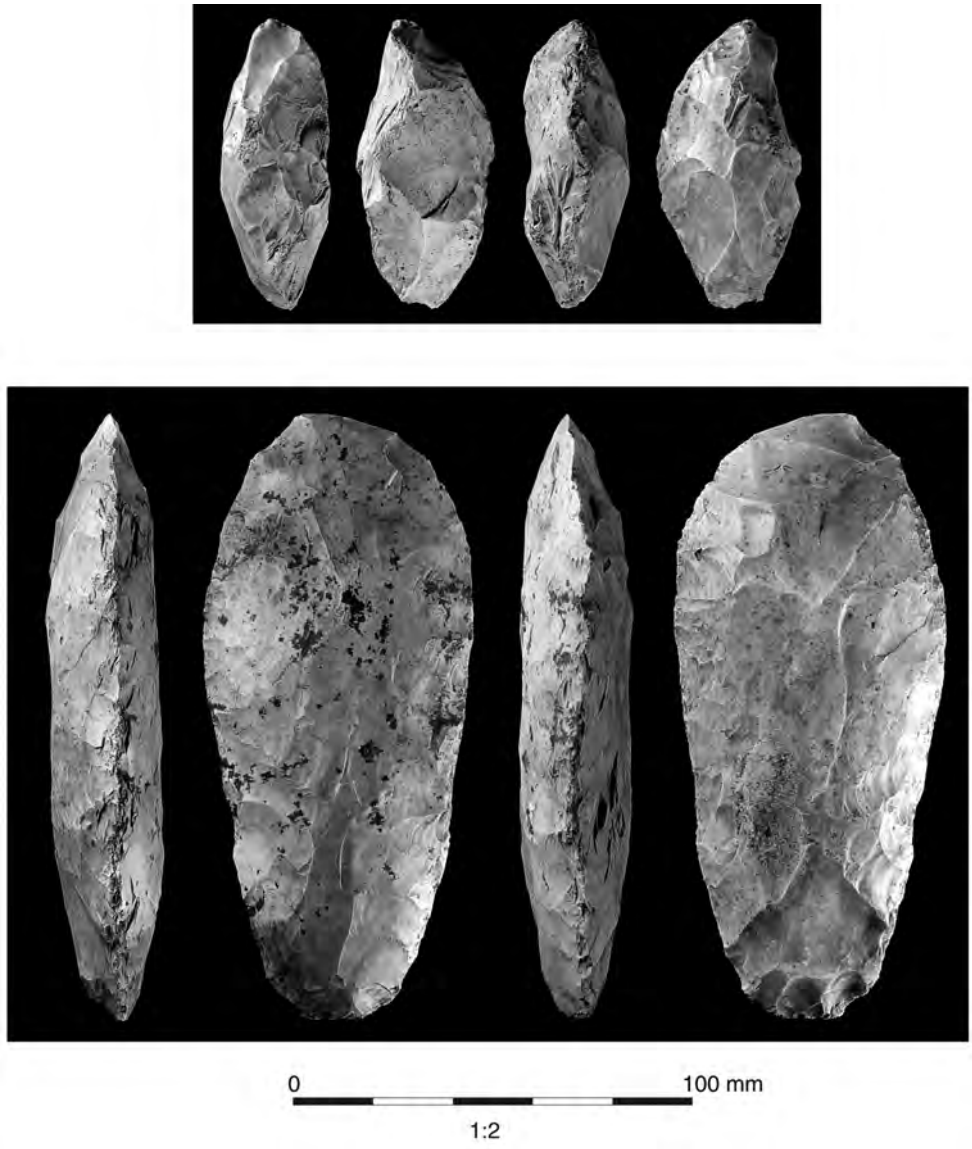

Fig. 19. Worked flint: a) core pre-form used as a hammerstone; b) tranchet axe.

Table 4. Quantification of Iron-Age and Roman pottery by principal excavation area

	Iron Age			Roman		
Area	**No. sherds**	**Wt. (g)**	**RE**	**No. sherds**	**Wt. (g)**	**RE**
2002 surface collection	3	8	0.08	196	3035	2.39
2003 evaluation areas 1 and 2				183	2753	4.72
2005-7 Extension Area 2	143	1739	0.70	203	3086	2.46
2009 Extension Area 3				1535	25894	29.58
Total	**146**	**1747**	**0.78**	**2117**	**34768**	**39.15**

Iron Age

The Iron-Age assemblage comprised a total of 146 sherds weighing 1,747 g (Table 5). Some 80% of the Iron-Age pottery by sherd count (but nearly 88% by weight) derived from contexts assigned to the middle Iron Age. These were without exception from pits, seventeen of which produced pottery. Quantities were quite variable but none of the groups was particularly distinctive, unless variation in group size was significant in itself. The largest groups, for example, consisted of sherds of average size and there were no obvious concentrations of rims or decorated pieces. From a ceramic point of view, therefore, there is no suggestion of the presence of special deposits of any kind. Three of the pits contained intrusive Roman sherds. These do not invalidate the chronology of the pits, but demonstrate the ease with which feature fills could be contaminated on this site owing to the combination of soft permeable sandy soils and post-Roman agricultural disturbance.

Fabrics. Iron-Age fabrics were defined in terms of (usually) their two most common inclusion types and an indicator of fineness on a sliding scale of 1 (very fine) to 5 (very coarse). The definition of fabrics using this system does not necessarily serve to identify production sources, since these are generally unknown for Iron-Age material within the region. Nor does it automatically follow that identically coded sherds were from the same (unknown) source, merely that their makers exploited very similar clay and tempering resources, indicating a uniformity of potting tradition. Quantification of the material by individual fabric is shown in Table 5. The identifying letters of the inclusion types present are as follows:

A Quartz sand
B 'Black' sand (derived from Greensand)
I Oxide minerals, mainly iron oxides
M Mica
N None visible
V Vegetable/organic (sometimes voids)
Z Indeterminate voids

Table 5. Quantification of Iron-Age fabrics

Fabric	No. sherds	Weight	Res	Comment
A	2	2		
AB3	3	14		
AI3	3	24	0.02	Jar
AM2	1	1		
AN2	12	126	0.05	Jar, globular bowl body sherd
AN3	102	1399	0.51	Jars (8), globular bowl
AV3	13	132	0.12	Jars (3)
AZ3	3	12		
AZ4	2	18		
Z	3	8	0.08	Jar. Sherds from 2002 area
ZA5	2	11		
Total	**146**	**1747**	**0.78**	

The assemblage was completely dominated by sand-tempered fabrics, with very little significant variation perceptible. In a large proportion of cases no significant secondary inclusion type was present at all (fabrics AN2 and AN3), while a few sherds were so small that identification of secondary inclusions, if present, was not realistic (fabrics A and Z). The single tiny fragment of fabric AM2, with prominent mica, might in fact have been of fired clay rather than pottery.

The minor inclusion types as well as quartz sand are indicative of a local origin for these fabrics. 'Black' sand was obtainable from Greensand-derived deposits, the nearest of which lies very close by, just west of Oxford. The iron oxides in fabric AI3 may have been a natural component of the clay matrix, but were relatively prominent in these sherds. It is likely, however, that the organic inclusions in fabric AV3 were a deliberate addition, and it is possible that the 'uncertain' (Z) voids also indicate the former presence of organic material, although shell is another possibility. If all these sherds were originally organic-tempered this group (AV/AZ/ZA fabrics) amounted to 15.8% of the Iron-Age assemblage by sherd count, but only 10.4% by weight.

Vessel forms and decoration. Fifteen vessels were represented by rim sherds, but most of these were small, the total RE value of 0.78 indicating that on average only *c.*5% of the rim circumference of each vessel was present. Consequently, close identification of vessel type was usually not possible. The rims were all simple types either

upright or slightly in- or out-sloping, even-sided or slightly tapering or thickening, which also restricts identification of specific vessel types. All of these variants are consistent with the identification of the vessels as general-purpose jars, and the identification of these vessels as jars has therefore been followed here for 12 of the 15 rims. The form of these vessels is likely to have been either barrel-shaped or slightly ovoid. The other three comprise two more distinctive jar types – a simple bucket-shaped form and a saucepan pot – and a globular bowl, all in fabric AN3.

The saucepan pot sherd is small, but has a distinctive groove just below the tip of the upright rim, and is burnished overall on the exterior. Burnishing is also characteristic of the globular bowl type, the single example with a rim again having overall exterior burnish. Two further body sherds, one each in fabric AN2 and AN3, had exterior surface burnish and indications of infilled burnished line swags typical of this type. The only other linear burnished decoration was what appeared to be internal lattice on a sherd of AN2 in context 1282. Overall, burnishing of surfaces was more common. External burnish occurred on twenty-one sherds (including those mentioned above), while four sherds had internal burnish and a further nineteen had both interior and exterior burnish. In total forty-four sherds (30% of the total) had a burnished surface or surfaces, and all the main varieties of sand-tempered fabrics had examples with this treatment, although it was most common in AN2/AN3 fabrics; 34% of these sherds had a burnished surface or surfaces. Burnished internal surfaces are particularly characteristic of the globular bowl form, and its relative frequency suggests that this form was probably more common than the single rim sherd would suggest, particularly as it was noted on sherds of four different fabrics, AB3, AN2, AN3, and AV3.

Chronology. The middle Iron-Age character of the assemblage is indicated by all aspects of the material. In terms of fabrics the dominance of sand-tempering, and the absence of the shell-tempered sherds so characteristic of the early Iron Age in the region, is evident.[113] The range of forms also lacks distinctive early Iron-Age examples, and the presence of the saucepan pot and of globular bowls is particularly indicative of a date in the later part of the middle Iron Age. Saucepan pots are rare in the upper Thames valley, which lies very much at the northern limit of their distribution, a situation noted by Harding in 1972 and one which has hardly changed since.[114] Harding's further assertion that 'the saucepan-pot and the globular bowl form do belong within the same cultural framework, in spite of their different, almost mutually exclusive, distributions' is broadly supported by the present assemblage and by other recent work, for example on the assemblages from the Chalgrove to East Ilsley gas pipeline. The area of the latter, like the closely adjacent site of Blewbury, does demonstrate overlap of the distributions of the two types in a manner that is otherwise unusual for the upper Thames region.[115] The evidence of the admittedly small assemblage from Tubney perhaps supports the view that the 'overlap zone' of the two traditions in the part of the region west of Oxford lies south of the valley itself.

The most distinctive elements of the assemblage therefore suggest a date in the second or first century BC. The extent to which middle Iron-Age ceramic traditions continued beyond the end of the first century remains uncertain, the question being related to the equally uncertain issue of the introduction of the 'Belgic type' tradition. These issues are discussed further below.

Roman

The assemblage of Roman pottery comprised a total of 2,117 sherds (34,768 g, 39.15 EVEs). This material was attributed on stratigraphic grounds to two phases of early Roman activity, designated ER1 (mid first to early second century) and ER2 (second century) and a late Roman phase (LR, late third to fourth century).

In terms of context, assemblage sizes, and the types of features from which they derived, the overall early (ER1) and late Roman assemblages are too small to produce meaningful data. Nineteen context groups were assigned to phase ER1, of which only four produced more than five sherds. Two of these were from ditches and two from pits 3115 and 3118, which between them produced half of the sherds (and two-thirds of the pottery by weight) assigned to this phase. Seventy-four context groups were assigned to phase ER2, producing 1,713 Roman sherds (28067 g, 32.67 REs). Small amounts of this material derived from cremation burials and pits, with a slightly larger component from four soil layers (accounting for 12%, 11% and 15% by count, weight and REs respectively). Three of these deposits were within enclosures and the fourth was recorded in a test pit so its character is uncertain. The great majority of the pottery assigned to this phase (76%, 78.5%, and 73% by count, weight, and REs respectively) derives from ditch contexts, amongst which the trackway ditches were the largest contributors. These latter features alone contained 44% (by sherd count and weight) of all the Roman pottery in this phase, and almost exactly 50% in terms of REs, and clearly represented a favoured locus for deposition of waste material.

Fabrics/wares. The fabrics are placed in major ware groups, defined on the basis of significant common characteristics. The ware groups can be combined to constitute two main classes of material: fine and specialist wares on the one

[113] G.H. Lambrick, 'Pitfalls and Possibilities in Iron Age Pottery Studies – Experiences in the Upper Thames Valley', in B. Cunliffe and D. Miles (eds.), *Aspects of the Iron Age in Central Southern Britain* (Oxford, 1984), pp. 162–77.

[114] D.W. Harding, *The Iron Age in the Upper Thames Basin* (Oxford, 1972), p. 113 and plate 7.

[115] Ibid.; P. Booth, 'Prehistoric Pottery along the Pipeline Route', in T. Wilson, *A Narrow View across the Upper Thames Valley in Late Prehistoric and Roman Times*, BAR BS, 467 (2008), p. 299.

hand, and on the other the rest of the coarse wares.[116] Within these classes are hierarchically arranged subgroups, usually defined on the basis of inclusion type, and individual fabrics/wares are then indicated at a third level of precision, both levels of subdivision being expressed by numeric codes. Thus R20 is a general code for sandy reduced coarse wares, while R21 is a specific sandy reduced Oxfordshire product. For the bulk of the present assemblage fabric identification was at the intermediate level of precision. Quantification of the pottery by fabric/ware is set out in Table 6. Only summary fabric descriptions are given here, but where appropriate these are cross-referred to codes in the National Roman Fabric Reference Collection.[117]

The fine and specialist wares form quite a significant proportion of the assemblage, but one which is dominated by sandy white wares (fabrics W20 and W22). The distinction between these two fabrics is likely to be of little significance as a relatively local source, whether or not within the core area of the Oxford industry, seems likely for all of these sherds (they are also closely related to sandy reduced wares of the R20 group, as discussed further below). A single sandy white ware sherd was assigned to the Verulamium region industry (W21). Quantities of samian ware were small and consisted mainly of Central Gaulish material, entirely in plain forms. Fine wares were almost non-existent, comprising two probable products of the Nuneham Courtenay kilns, a mica-coated ware (F35) and a colour-coated ware (F59) of second-century date, and a possible 'west Oxfordshire' colour-coated ware fragment (F65).[118] Mortaria were not numerous but were characteristically much better represented by weight and REs than by sherd count. All were Oxford products, as were the white-slipped sherds from the site, all in fabric Q21.

The coarse ware element of the assemblage, and indeed the assemblage overall, was dominated by reduced fabrics, which accounted for just under 60% of the assemblage by sherd count and weight and almost 70% by REs. Many of these are insufficiently diagnostic for their sources to be absolutely certain, but most if not all of fabrics R10, R20 and R30, as well as R50 and R90, will have been products of the Oxford kilns, while fabrics R11 and R21 were certainly from these kilns. Together these fabrics amounted to 43.6% of total sherds (73.6% of reduced coarse wares) and 56.7% of total REs (81.5% of reduced coarse wares). Other reduced coarse wares included Savernake ware (R95), which accounted for almost 6% of all sherds and was even better represented by weight, but only contributed 1.6% of REs. A small component of the assemblage was formed by fabric R37 and related fabric R38, which are unsourced but likely to have derived from an industry located in the Witney area of west Oxfordshire, the products of which are particularly common at the Akeman Street sites of Wilcote and Asthall and also in the lower Windrush valley at Gill Mill, Ducklington.[119] It is possible that a few further examples are subsumed in the general R30 ware group. The other significant reduced coarse ware was R29, a distinctive fabric characterised by the presence of moderate quantities of large rounded glassy quartz grains. This or a very similar fabric was recognised at Claydon Pike, Fairford, where it amounted to 0.2% of the stratified sherds and it has also been noted at Gill Mill, but generally appears to be uncommon in the area.[120] The quantity recovered at Tubney might suggest that this site lies relatively close to the source, which is certainly not the main Oxford industry. It should be noted that a very small number of sherds was assigned to the R29 code at Nuneham Courtenay, where they were thought to be a kiln product, but these are clearly distinct from the sherds recorded as fabric R29 at Tubney.[121]

Other coarse ware groups were significantly less important than the reduced wares. The 'Belgic type' (E ware group) fabrics amounted to 7.4% of sherds, but only 6% of weight and a mere 0.7% of REs. A large proportion of this material comprises sherds from parts of two (or possibly more) vessels of fabric E30 from a single ditch fill context (5240), which also produced well over half (by weight) of the Savernake ware from the site. Otherwise E wares were poorly represented, occurring at a level that suggests, at most, very limited pre-conquest activity at Tubney.

Oxidised coarse wares showed a very similar pattern to the reduced wares. Forming about 6% of the site assemblage, these were dominated by Oxford or probable Oxford products (O10, O11, O20, O21, and O80) with

116 P. Booth, 'Inter-Site Comparisons between Pottery Assemblages in Roman Warwickshire: Ceramic Indicators of Social Status', *Journal of Roman Pottery Studies*, 4 (1991), pp. 1–10; idem, 'Quantifying Status: Some Pottery Data from the Upper Thames Valley', *Journal of Roman Pottery Studies*, 11 (2004), pp. 39–52.

117 R. Tomber and J. Dore, *The National Roman Fabric Reference Collection: A Handbook*, Museum of London Archaeological Services Monograph, 2 (1998).

118 P. Booth et al., 'A Romano-British Kiln Site at Lower Farm, Nuneham Courtney, and Other Sites on the Didcot to Oxford and Wootton to Abingdon Water Mains', *Oxoniensia*, 58 (1993), pp. 138, 140.

119 A.R. Hands, *The Romano-British Roadside Settlement at Wilcote, Oxfordshire I. Excavations 1990–92*, BAR BS, 232 (1993), p. 77; P. Booth, *Asthall, Oxfordshire, Excavations in a Roman 'Small Town', 1992*, Thames Valley Landscapes Monograph, 9 (1997), pp. 117, 133; P. Booth and A. Simmonds, 'Gill Mill, Ducklington and South Leigh, Oxfordshire, Post-Excavation Assessment and Project Design', unpublished OA report (2011).

120 S. Green and P. Booth, 'Roman Pottery', 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 ROM, section 3.2, table 5.

121 Booth et al., 'A Romano-British Kiln Site at Lower Farm', p. 149.

Table 6. Summary description and quantification of Roman pottery fabrics

		Sherd count		Weight (g)		REs	
Ware code	**Summary description**	**No.**	**%**	**No. (g)**	**%**	**No.**	**%**
S20	South Gaulish samian ware, including (LGF SA).	2	0.1	3	+	-	
S30	Central Gaulish samian ware, including (LEZ SA 2).	11	0.5	251	0.7	0.44	1.1
S subtotal		13	0.6	254	0.7	0.44	*1.1*
F35	'mica coated' sandy oxidised fabric, ?Nuneham Courtenay	1	+	37	0.1	0.15	0.4
F59	Nuneham Courtenay red colour-coated ware	1	+	2	+	0.14	0.4
F65	fine sandy oxidised, red-brown colour-coat	1	+	9	+	-	
F subtotal		*3*	*0.1*	*48*	*0.1*	*0.29*	*0.7*
M22	Oxfordshire white mortarium fabric (OXF WH).	7	0.3	953	2.7	0.57	1.5
M41	Oxfordshire red colour-coated mortarium fabric (OXF RS)	1	+	15	+	-	
M subtotal		*8*	*0.4*	*968*	*2.8*	*0.57*	*1.5*
W10	fairly fine white fabric(s), source uncertain	45	2.1	564	1.6	0.24	0.6
W12	Oxfordshire fine white ware (OXF WH)	17	0.8	498	1.4	-	
W20	sandy white fabric(s), source uncertain	83	3.9	1190	3.4	1.63	4.2
W21	Verulamium sandy white ware	1	+	6	+	-	
W22	Oxfordshire sandy white ware	137	6.5	3960	11.4	2.40	6.1
W30	very fine white fabrics (generally thin walled and no/few inclusions	4	0.2	4	+	-	
W50	Miscellaneous white ware (unsourced)	1	+	6	+	-	
W subtotal		288	13.6	6228	17.9	4.27	*10.9*
Q21 (subtotal)	Oxfordshire oxidised white-slipped fabric Wc (OXF WS)	18	0.9	212	0.6	-	
Fine and specialist subtotal		*330*	*15.6*	*7710*	*22.2*	*5.57*	*14.2*
E20	'Belgic type' fine sand-tempered fabrics	8	0.4	26	0.1	-	
E30	'Belgic type' sandy fabrics	114	5.4	1826	5.3	0.22	0.6
E40	'Belgic type' shell-tempered fabrics	2	0.1	3	+	-	
E80	'Belgic type' grog-tempered fabrics (SOB GT)	32	1.5	235	0.7	0.05	0.1
E subtotal		*156*	*7.4*	*2090*	*6.0*	*0.27*	*0.7*
O	oxidised fabrics, unspecified	1	+	4	+	-	
O10	fine oxidised coarse wares, mainly Oxfordshire	56	2.6	400	1.2	0.73	1.9
O11	Oxfordshire fine oxidised 'coarse' ware	15	0.7	248	0.7	0.58	1.5
O20	coarse sandy oxidised wares	32	1.5	561	1.6	0.60	1.5
O30	common fine/medium sand-tempered coarse wares	7	0.3	51	0.1	0.30	0.8
O38	common medium sand-tempered coarse fabric, local	1	+	41	0.1	-	
O80	coarse grog-tempered oxidised wares, Oxfordshire	8	0.4	218	0.6	0.12	0.3
O81	pink grogged ware (PNK GT)	1	+	26	0.1	-	
O subtotal		*121*	*5.7*	*1549*	*4.5*	*2.33*	*6.0*
R10	fine (slightly sandy) reduced coarse wares, mainly Oxfordshire	417	19.7	5221	15.0	10.00	25.5
R11	fine Oxfordshire reduced ware (OXF FR)	37	1.7	311	0.9	2.20	5.6
R20	coarse sandy reduced wares, mainly Oxfordshire	139	6.6	1889	5.4	2.37	6.1
R21	coarse sandy Oxfordshire reduced ware	37	1.7	467	1.3	0.29	0.7
R29	large grained coarse sandy reduced ware	196	9.3	2454	7.1	4.16	10.6
R30	medium sandy reduced wares, mainly Oxfordshire	193	9.1	3417	9.8	6.46	16.5
R37	fine abundantly sandy, ?West Oxfordshire	6	0.3	203	0.6	-	
R38	as R37 with additional grog inclusions	3	0.1	190	0.5	0.33	0.8
R50	dark surfaced reduced sandy fabrics (Young 1977 reduced fabric 5)	13	0.6	118	0.3	0.44	1.1
R60	reduced coarse ware with organic inclusions	1	+	52	0.1	-	
R90	coarse grog-tempered reduced wares, Oxfordshire	87	4.1	3251	9.4	0.43	1.1

		Sherd count		Weight (g)		REs	
Ware code	**Summary description**	**No.**	**%**	**No. (g)**	**%**	**No.**	**%**
R94	(hard) grey, cf. Savernake, sand, subrounded white, grog and organic inclusions. A source in the Cassington area is likely	1	+	19	0.1	–	
R95	Savernake ware (SAV GT).	124	5.9	3203	9.2	0.64	1.6
R subtotal		1254	59.2	20795	59.8	27.23	*69.6*
B11 (subtotal)	Dorset BB1 fabric (DOR BB 1).	186	8.8	1750	5.0	2.82	7.2
C10	shell-tempered wares, various	11	0.5	115	0.3	0.33	0.8
C11	Roman shell tempered ware, Harrold?, includes (HAR SH).	59	2.8	759	2.2	0.51	1.3
C subtotal		*70*	*3.3*	*874*	*2.5*	*0.84*	*2.1*
Total		**2117**		**34,768**		**39.15**	

a minor contribution from the probable west Oxfordshire industry (O37 and O38). The only other fabric present was pink grogged ware (O81), typically of later Roman date, represented by a single sherd.

Black-burnished ware was quite well represented in the assemblage, and while it was typically less prominent when quantified by weight rather than sherd count (5% compared to 8.8%) its RE level, 7.2%, was quite significant. All the black-burnished ware appeared to be typical BB1 from south-east Dorset. Shell-tempered wares (C10 and C11), on the other hand, are all likely to be of relatively local origin, but the source(s) of the material, which is well attested in the area in the early Roman period, remains unknown. Nevertheless these wares only contributed 3.2% of the assemblage by sherd count, and 2.1% of REs. Fabric C11 can include sherds of the Harrold industry, usually of late Roman date, but no such pieces were identified in the present assemblage.[122]

Vessel forms. Vessel forms were grouped in classes relating to their general shape. The classes are defined by commonly used labels (jar, bowl, dish) with a perceived relationship to the function of the vessels, although the latter association has to be treated with caution. In those cases where distinction between broad classes, such as jars and bowls or bowls and dishes, is dependent upon the ratio of the vessel height to its rim diameter, intermediate categories are sometime employed for vessels where there is significant doubt about the likely height:diameter ratio.[123] Class D therefore comprises uncertain jars/bowls, and class I comprises uncertain bowls/dishes.

Most of the major classes in the present system are divided into subclasses, and further definition is provided by a detailed coding system for rim type, while reference was also made to detailed typologies, such as that of Young for the Oxford industry.[124] This level of detail is not used extensively here, but the data are available in the project archive.

Quantification of vessel types (by REs) in relation to ware groups is shown in Table 7, which presents the percentage of each vessel class represented in the repertoire of a particular fabric. The assemblage is dominated by jars, as would be expected. Including the uncertain class D vessels these amounted to 75% of all vessels. Although a reasonably wide range of other types was present, many of these were only poorly represented and only beakers and dishes totalled more than 5% of the overall assemblage.

Jars were produced in a wide range of fabrics, dominated by reduced wares with minor contributions in oxidised coarse wares and shell-tempered wares and a more significant element (7.3%) in black-burnished ware. Amongst the reduced wares R20, R21, R38, and R95 were present only as jars, which were also a very significant part of the output in fabrics R29, R30, R50, and R90. The last of these was widely used for large storage jars (type CN) and is commonly found only in this form, but at Tubney a single bowl also occurred in fabric R90. Fabric R29 was particularly notable; it contributed 14.1% of all jars, which accounted for 96.6% of REs in this fabric, the only non-jar types being small fragments of a beaker and a bowl/dish.

The minimal importance of E wares amongst the jars is notable as is, conversely, the contribution of white wares, which accounted for 14.6% of all jars, a remarkably high proportion. Jars were produced in the finer fabrics of the main ware group ranges (W10, O10 and R10/R11) as well as in their more coarsely tempered counterparts, but of the finer fabrics only R10 accounted for a significant percentage of the total number of jars (20.9%). So amongst the white wares, for example, two rim sherds in fabric W10 were from jars while there were a further 18 jars in W20 and W22. Nevertheless, it is remarkable that all the white ware vessels at Tubney were jars, with the sole exception of a single dish in fabric W22. Flagons, which might have been expected in fabric W10, for instance, were indeed represented by a handle in this fabric, with a further three in fabric W12. White ware flagon rims happened to be absent, as they were also in white-slipped oxidised fabric Q21, usually used for this type (again a single handle

122 A. Brown, 'A Romano-British Shell-Gritted Pottery and Tile Manufacturing Site at Harrold, Beds.', *Bedfordshire Archaeology*, 21 (1994), pp. 19–107.

123 G. Webster (ed.), *Romano-British Coarse Pottery: A Student's Guide*, CBA Research Report, 6 (1976), pp. 17–19.

124 C.J. Young, *The Roman Pottery Industry of the Oxford Region*, BAR, 43 (1977).

Table 7. Quantification of Roman vessel classes by fabric/ware (row % of RE totals)

Ware code	B	C	D	E	H	I	J	K	L	Z	Total.
S30 (subtotal)							*100*				*0.44*
F35							100				0.15
F59				100							0.14
F subtotal				*48.3*			*51.7*				*0.29*
M (subtotal)								*100*			*0.57*
W10		100									0.24
W20		100									1.63
W22		95.8	1.7				2.5				2.40
W subtotal		*97.7*	*0.9*				*1.4*				*4.27*
Fine & specialist subtotal		*74.9*	*0.7*	*2.5*			*11.7*	*10.2*			*5.57*
E30		100									0.22
E80			100								0.05
E subtotal		*81.5*	*18.5*								*0.27*
O10		24.7	9.6	34.2	12.3		19.2				0.73
O11					74.1		25.9				0.58
O20		43.3					36.7		20.0		0.60
O30		76.7			23.3						0.30
O80		100									0.12
O subtotal		*33.9*	*3.0*	*10.7*	*25.3*		*21.9*		*5.2*		*2.33*
R10	3.5	59.4	7.6	12.8	7.5	1.9	7.1			0.2	10.00
R11		40.9		59.1							2.20
R20		100									2.37
R21		100									0.29
R29		96.6		1.2		2.2					4.16
R30	4.2	80.0	3.6		4.5	2.9	4.8				6.46
R38		100									0.33
R50		79.5	6.8		13.7						0.44
R90		83.7			16.3						0.43
R95		100									0.64
R subtotal	*2.3*	*75.0*	*3.7*	*9.7*	*4.3*	*1.7*	*3.7*			*0.1*	*27.23*
B11 (subtotal)		*73.8*			*1.8*	*6.4*	*18.1*				*2.82*
C10		100									0.33
C11		100									0.51
C subtotal		*100*									*0.84*
Total	**0.62**	**28.47**	**1.18**	**3.02**	**1.81**	**0.65**	**2.69**	**0.57**	**0.12**	**0.02**	**39.15**
%	*1.6*	*72.7*	*3.0*	*7.7*	*4.6*	*1.7*	*6.9*	*1.5*	*0.3*	*0.1*	

scar was identified). Only two flagon or flask rims were present on the site, one each in reduced fabrics R10 and R30, the class therefore constituting only 1.6% of the total vessels from the site.

Drinking vessels consisted entirely of beakers, the second most numerous vessel class at Tubney. Cups were absent, not even occurring as body sherds in samian ware, for example. Equally there were no tankards. This type did not form part of the repertoire of the Oxford kilns, but was quite common amongst the products of the 'west Oxfordshire' industry. There was only a single fine ware beaker rim, in fabric F59, a roughly mid second century type (the body sherd in F65 might also have been from a beaker). Apart from the single example in fabric R29 mentioned above the remaining examples were all in fine oxidised and reduced fabrics (O10, R10, and R11). While beakers formed a third of REs in fabric O10 these only amounted to 8.3% of all beakers. Like the flagons, therefore, this class was dominated by vessels in reduced fabrics. Amongst these, poppyhead beakers (EF) of Young type R34 were present, as well as small 'jar' and bag-shaped beakers, including a vessel (Fig. 22, no. 29) not paralleled in Young's corpus. This and two other bag beakers were from graves and together amounted to 35% of all the beakers from the site by REs. Other specific beaker types were not isolated.

Bowls were surprisingly poorly represented at Tubney, totalling only 4.6% of all REs. There were no samian ware or fine ware bowls, so with the exception of a single example in black-burnished ware all examples of this

class were in oxidised and reduced wares, the fine (probably) Oxford fabrics in these groups (O10, O11, and R10) accounting for 70% of all bowl REs, supplemented by R30 and single examples in O30, R50 and R90. The range included carinated (HA), straight-sided (HB) and curving sided (HC) forms. The type HB bowls were all flanged, mostly having simple flat flanges. This type was also present in black-burnished ware, but the rim alone does not permit distinction between bowls and dishes in this fabric, hence the relatively high representation of BB1 in the uncertain bowl/dish class, although in overall terms such vessels were not numerous.

Dishes were the third most common vessel class, amounting to 6.9% of total REs. Almost a quarter of these were in fine and specialist wares, with all the samian ware rims being of this class. Amongst the samian ware only certain and probable examples of Drag 18/31 were represented by rim sherds, although body sherds of at least two examples of Drag 36 were also present. Other fine ware dishes were a loosely Gallo-Belgic derived form in mica-coated fabric F35, and a flat-rimmed, straight-sided form in fabric W22. The remaining examples of dishes were divided between reduced wares, accounting for almost 38%, and oxidised and black-burnished wares each producing 19%. Simple straight-sided, flanged, and curving-sided forms were all present.

Other forms require little comment. The three mortaria represented by rims were all Oxford white ware types, of Young forms M2 (two examples) and M6, the latter with a poorly preserved stamp. A fragmentary piece, missing its outer edge, was probably of type M1. There was only a single possible lid in fabric O20, an absence which is striking considering the predominance of jars in the assemblage. Completely unidentified forms (class Z) were numerically insignificant.

Vessel use. The poor surface condition of many of the sherds makes consistent assessment of the way in which vessels were used impossible. Evidence for burning and sooting was, however, noted on some 206 sherds (just under 10% of the total), but its significance is not always clear. Thirty-one sherds, a majority of them in white ware fabrics, were simply recorded as burnt. In almost all the remaining cases sherds were noted as sooted. Both these characteristics could relate to taphonomic processes affecting vessels after they were broken, but in the case of the sooted sherds, for example, an unquantified assessment suggests that the great majority were sooted only on the exterior surface. Had contact with soot only come about after breakage there should have been a higher incidence of internal sooting as well, so it can be suggested that in a majority of cases the presence of soot on vessel exteriors relates to their use, probably as cooking pots. That fabrics with a higher proportion of sooted sherds are broadly those which are most likely to have been used for cooking vessels, although sooting also occurred on a rather wider range of types, including a beaker, a bowl and three dishes, as well as several sherds from a flask or flagon in fabric R21/W22. Allowing for the fact that some instances of sooting were probably accidental and not related to vessel use, it still seems clear that some vessels in the sandy white wares (W20 and W22) were used in the same way as cooking pots in the sandy reduced wares (particularly R20 and R29).

No evidence for repairs to vessels was recorded. There was a single example of vessel modification, on a narrow mouthed Savernake ware (R95) jar in context 5240. A large part of this vessel survived, including part of the upper body in which a hole had been drilled above the girth. The function of this hole is unknown.

Phasing and chronology. The great majority of the Roman pottery from phased contexts came from the second-century phase here defined as ER (Early Roman) 2. Contexts of this phase produced 81.4% of all the Roman pottery by sherd count (80.7% by weight, 83.4% by REs), with the result that the groups from other phases (ER1 and LR (Late Roman)) were too small for detailed comparison to have any statistical validity.

The ER1 phase group (first to second century) comprised 95 sherds weighing 2,109 g and with a mere 0.46 REs. The most notable aspects of this group were that it included a large proportion of all the E80 sherds, which is consistent with the relatively early date of ER1 features (although E20 and E30 sherds were completely absent), and that over half the group (by weight) was in fabric R95 (Savernake Ware), again consistent with a first- to early second-century date range. The presence of Oxford white mortaria and black-burnished ware (two sherds of each) indicates that some features in this phase group did not fill up until at least the early second century, but at least one of the black-burnished ware sherds, of a type not earlier than the late second century (see below) is likely to have been intrusive. The status of the others is less certain but the mortarium sherds were quite large and therefore perhaps less likely to have represented contamination.

The late Roman phase group (late third to fourth century) was even smaller, containing only 30 sherds (879 g, 1.05 REs), of which 16 sherds (813 g, 1.00 RE) derived from a single narrow-mouthed jar in fabric R30 from ditch fill 1448 (Fig. 22.33). This vessel is of Young type R18, dated AD 250–400. The remaining material from this phase group consisted of small sherds quite likely to have comprised redeposited earlier material, except for a single sherd of fabric O81, for which a third- to fourth-century date is preferred.

The bulk of the Roman activity at Tubney that can be dated by pottery is therefore associated with material of broadly second-century date (Phase ER2), although groups of this phase clearly contained some earlier material. The relative paucity of E wares, which are particularly characteristic of the middle quarters of the first century AD, has been mentioned above. The overall quantity of this material, and in particular the scarcity of the grog-tempered (E80) subgroup, seems insufficient to indicate pre-conquest activity in the excavated parts of the site. Occupation may have commenced about the middle of the century and in its earliest stages would have been reflected by fabrics such as the E wares and R95, potentially supplemented in the later first century by a range of

oxidised and reduced coarse wares and white wares. Types that must have dated specifically to the Flavian period cannot be isolated, however.

The regular occurrence of black-burnished ware, which is unlikely to have reached the region before about AD 120 at the earliest, is a marked characteristic of the phase ER2 assemblage. The fact that the samian ware sherds are almost entirely of Central Gaulish (Lezoux) origin also suggests an emphasis on the period after AD 120. The only dateable fine wares (F35 and F59) are again securely assigned to the second century, as are all the identifiable Oxford mortaria. The majority of the oxidised and reduced coarse wares are not closely datable, but distinctive late forms are lacking.

Black-burnished ware provides some of the best evidence for the possible end date of phase ER2. As already indicated, the most common BB1 type at Tubney is the 'cooking-pot type' jar. A few body sherds from vessels of this type have obtuse- rather than acute-angled burnished lattice decoration, the cremation urn no. 30 (Fig. 22) being a particularly clear example. Gillam saw this development as characteristic of the first half of the third century AD.[125] A further aspect of the BB1 assemblage concerns bowls and dishes. Three flat-rimmed examples are present in phase ER2 contexts, as well as two with flat grooved rims, the latter broadly datable to the second half of the second century. A single plain-rimmed dish with burnished interlocking arcades is also present. Three further examples of this type occur in unstratified or post-Roman groups (while a single example in a phase ER1 context is likely to have been intrusive). This type, particularly characteristic of the third to fourth centuries, can appear as early as the mid to late second century.[126] At Tubney it may indicate a date from the later second century onwards and together with the instances of obtuse angled lattice decoration could suggest the presence of at least some vessels of early third-century date. With the notable exception of one jar (see above), however, there is a complete absence of later Roman pottery from stratified contexts. This absence is almost complete even amongst the unstratified material. All later Roman assemblages in the region contain fairly significant quantities of the colour-coated ware and other products of the Oxford industry dating from the period of its major expansion in the middle of the third century. Such products are conspicuous by their absence at Tubney. A single unstratified sherd of a colour-coated mortarium (fabric M41) is the exception which firmly underlines the rule. Other distinctive late Roman coarse wares are also completely absent, and it seems clear, therefore, that there was a significant change in the character of use of the site, probably in the early part of the third century, that resulted in an almost complete cessation of deposition of pottery derived from domestic or other activity.

Vessels from burials. Only two cremation burial groups amongst the various burials on the site produced pottery vessels. Both burials can be dated to the mid to late second century. Each is characterised by the use of a relatively small jar of 'cooking pot type', one in black-burnished ware and one in fabric R10, as the cremation urn, accompanied by one or two small beakers, again in fine reduced fabrics almost certainly from the Oxford kilns. None of the vessels is complete, reflecting truncation of the site by post-Roman ploughing.

Discussion

The pottery assemblage from Tubney has two main components. A small and very homogeneous group of sherds indicates activity within the middle Iron Age. The complete absence of sherds of early Iron Age character from this group, and the presence of a saucepan pot and globular bowls, indicate that this activity took place within the later part of the middle Iron Age, and a second to first century BC date can be suggested. The date of introduction into the region of 'Belgic type' pottery, the distinctive ceramic marker of the late Iron Age, remains uncertain, but may be at about the beginning of the first century AD or possibly a little later.[127] As discussed above, however, the quantity of these wares at Tubney is small and if, as seems likely, this indicates a lack of pre-conquest late Iron-Age activity then it is probable that, on any chronology for the E wares, there was a gap in the site sequence, at least in the first half of the first century AD. This is potentially consistent with the complete difference in the character of activity on site between the middle Iron Age and early Roman phases.

While it seems certain that there was some occupation in the vicinity in the second half of the first century AD the pottery evidence suggests that the most intensive activity in the excavated part of the site dated from the early second to the early third century. In ceramic terms this activity was characterised by dependence on locally produced pottery, the only exceptions being the use of a very small quantity of undecorated samian ware vessels from Central Gaul and of a rather larger quantity of black-burnished ware from Dorset. It is quite likely that the latter only arrived at the site in quantity from about the middle of the second century onwards.

Fine and specialist wares were scarce at the site, with the sole (but potentially important), exception of sandy white wares in fabrics W20 and W22. This is an unusual pattern. A review of fine and specialist ware occurrences in

125 J.P. Gillam, 'Coarse Fumed Ware in North Britain and Beyond', *Glasgow Archaeological Journal*, 4 (1976), p. 63.

126 N. Holbrook and P.T. Bidwell, *Roman Finds from Exeter*, Exeter Archaeological Report, 4 (1991), pp. 99–100.

127 For the earlier date see J. Timby, 'The Pottery', in D. Jennings et al., *Thornhill Farm, Fairford, Gloucestershire. An Iron Age and Roman Pastoral Site in the Upper Thames Valley*, Thames Valley Landscapes Monograph, 23 (2004), pp. 92–3; for the later see P. Booth, 'Pottery and Other Ceramic Finds', in C. Mould, 'An Archaeological Excavation at Oxford Road, Bicester, Oxfordshire', *Oxoniensia*, 61 (1996), pp. 81–2.

upper Thames valley region sites, carried out with a view to establishing correlations between pottery assemblages and other evidence informative of site status, showed that in the early Roman period (broadly first to second centuries AD) lower status rural settlements typically had fine and specialist ware levels (based on sherd count) below 5%.[128] Nucleated settlements had slightly higher levels of fine and specialist wares, while significantly higher representations were seen at three rural sites, two of which were characterised as probable 'proto-villas'.[129] At the third site, Watkins Farm,[130] the high fine and specialist ware figure consists almost entirely of white wares, while at Hatford, a clearly low-status settlement with an above average fine and specialist ware level of 5.1%, the same characteristic was observed. This is the pattern that is seen at Tubney, where white wares contributed 87% of the fine and specialist ware sherds. Moreover, these consisted almost entirely of coarse sandy white wares. At Hatford, where half of the white wares were of the same character (the remainder being finer sherds, probably from butt beakers) it was suggested that these were closely related to the coarse sandy reduced ware fabrics R20 and R21.[131] A similar case can be made for Tubney, where it is supported by the fact that the vessel types in fabrics W20 and W22 are almost entirely jars rather than table wares. There was in fact genuine ambiguity in definition of these fabrics in some cases, so for example vessel no. 27 was recorded as R20 but many of the sherds are almost white, while no. 14, recorded as W22, could easily have been defined as R20. The fact that this assemblage is in all other aspects decidedly of 'low status' character suggests that the methodology of the 2004 review should be modified to exclude coarse white wares of the W20 group. On this basis the Hatford fine and specialist ware figure would have been 2.8%, and that at Tubney would be 5.2%, still quite a high figure for an early Roman assemblage in the region but reflecting the emphasis of the assemblage on the second century rather than on the first (rural assemblages specifically of first-century date almost invariably have very low fine and specialist ware levels).

The effect of this adjustment still leaves the fine and specialist ware category dominated by white wares, but at a level which is matched in a number of other assemblages of this period.[132] Amongst other particularly useful indicators of status are the total absence of amphora sherds and the size and character of the samian ware assemblage.[133] Out of 38 sites listed in a recent review, 18 have less than 1% samian ware (by sherd count), as here.[134] These are all firmly placed in the lower status rural settlement category. Decorated vessels are often absent from such assemblages, as is also the case here.

The character of the Tubney assemblage can also be assessed in terms of the vessel types present. Comparative data for this aspect are fewer than for fabric variation, but some have been assembled for the region, but with an emphasis mainly on sites west of Tubney.[135] Representation of the principal vessel class, jars (classes C and D combined), in these sites ranges from 59% to 92%, with variation being linked to status (low-status assemblages are characteristically more completely jar-dominated) and also to variations in chronology.[136] Tubney, with jars at 75.7%, sits in the middle of this range, between Stubbs Farm, Kempsford (72.1%), and Yarnton (83.3%). Both of these are low-status rural settlements, the former with occupation almost entirely in the second century, and so quite comparable to Tubney in this respect, the latter occupied through the first and second centuries (and beyond), so with a high proportion of jars from first century contexts in particular. The vessel class data for Tubney, with respect to jars and other class groupings (liquid containers/drinking vessels and bowls/dishes) explored for the upper Thames, therefore places the site securely within a regional context of lower status rural settlements.

Illustration catalogue (Figs. 20–22):

Phase ER1 contexts

1. Fabric E80. Body sherd of probable girth beaker with rough burnished lattice decoration above and below central grooves, and small applied bosses. Context 5127.

Phase ER2 contexts

2. Fabric C11. Simple jar with beaded rim. External sooting. Context 1018, ditch 1139.

128 P. Booth, 'The Iron Age and Roman Pottery', in Bourn, 'Manorhouse Farm, Hatford', p. 45.

129 Henig and Booth, *Roman Oxfordshire*, pp. 84–5.

130 Allen, *Watkins Farm, Northmoor*.

131 Booth, 'The Iron Age and Roman Pottery', in Bourn, 'Manorhouse Farm, Hatford', p. 31.

132 For comparative data see Booth 'Quantifying Status', p. 43, table 4.

133 Ibid. p. 49.

134 P. Booth, 'The Occurrence and Use of Samian Ware in Rural Settlements in the Upper Thames Valley', in D. Bird (ed.), *Dating and Interpreting the Past in the Western Roman Empire: Essays in Honour of Brenda Dickinson*, forthcoming.

135 P. Booth, 'Cotswold Water Park Roman Ceramic Assemblages in their Regional Context', in Miles et al., *Claydon Pike*, pp. 331–4.

136 J. Evans, 'Material Approaches to the Identification of Different Romano-British Site Types', in S. James and M. Millett (eds.), *Britons and Romans: Advancing an Archaeological Agenda*, CBA Research Report, 125 (2001), pp. 26–35.

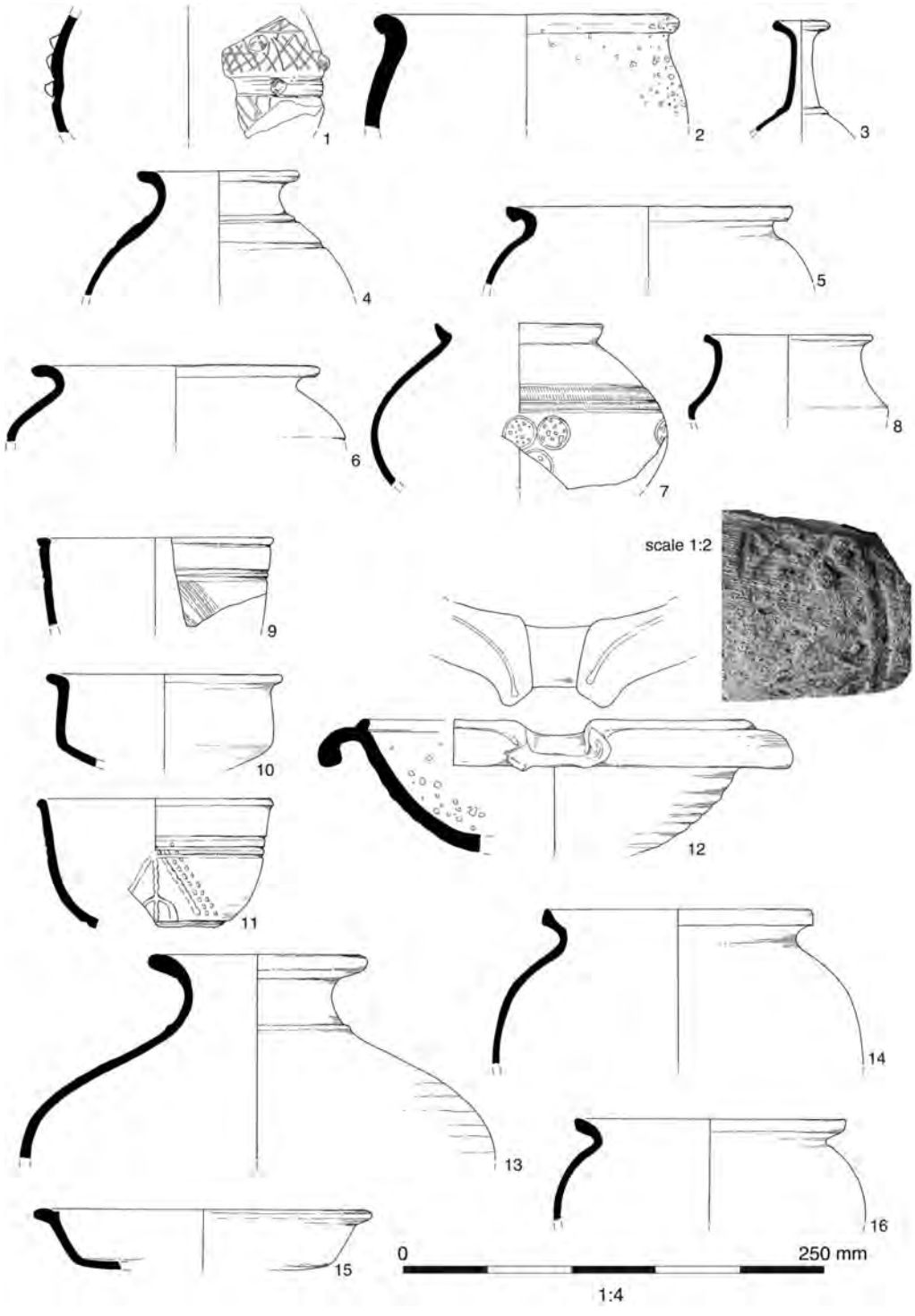

Fig. 20. Roman pottery, 1–16.

Trackway ditch 5020
3. Fabric R10. Narrow-necked unhandled flask with cordon at base of neck. The form is not paralleled in Young. A similarly narrow-necked type, but with a handle, occurs at Nuneham Courtenay in fabric R10 and an oxidised form from the same site may or may not have had a handle.[137] Flasks or flagons with tall narrow necks are also known at Blackbird Leys.[138] Context 5023.
4. Fabric R29. Narrow-mouthed jar with cordon at base of neck and groove on shoulder. External sooting. Context 5182.
5. Fabric R29. Medium-mouthed jar. Context 5027.
6. Fabric R30. Medium-mouthed jar with groove on shoulder. Context 5182.
7. Fabric R10. Angled everted rim jar/beaker; cf. Young type R31.6 with rouletted bands above groups of roundels containing dots, executed in barbotine. Context 5023.
8. Fabric O30. Carinated jar. Burnt. Context 5023.
9. Fabric R50. Bowl of Young type R64 or R68, with fine oblique combed decoration. Context 5023.
10. Fabric R30. Carinated bowl of Young type R57, roughly burnished on upper body. External sooting. Context 5023.
11. Fabric O11. Hemispherical bowl of Young type O45 with very eroded white-painted decoration. Contexts 5182 and 5183.
12. Fabric M22. Mortarium of Young type M6 with very eroded potter's stamp, not obviously paralleled in Young. Context 5023.

Trackway ditch 5014
13. Fabric W22. Narrow-/medium-mouthed jar with cordon at base of neck. Context 5053.
14. Fabric W/R22. Medium-mouthed jar with slightly dished everted rim. External sooting. Context 5047.
15. Fabric O11. Dish with slightly flanged rim, not in Young's oxidised wares corpus but related to O38 and O39 and very close to his type W48. Context 5050.

Enclosure 5383
16. Fabric R10, micaceous. Medium-mouthed jar with girth groove. The lower body is burnished but the upper part of the vessel is eroded. Context 5049.
17. Fabric R10 with occasional large quartz grains as R29. Medium-mouthed jar with vestigial groove at base of neck and pronounced girth groove. Context 5049.
18. Fabric W22. Slightly curving-sided dish with upsloping flat flange. Close to Young type W44. External sooting. Context 5053.
19. Fabric F35. Slightly curving-sided dish. Burnt. Context 5137

Enclosure 5386/5387
20. Fabric R10. Medium-mouthed jar with girth groove, burnished overall. Context 5150.
21. Fabric R10. Narrow-mouthed jar, burnished on upper shoulder and body with zone of burnished lattice on shoulder defined by grooves above and below. Context 5150. Both these vessels are in a fine distinctly micaceous version of R10 and presumably derive from the same source.

Miscellaneous contexts
22. Fabric W22. Medium-mouthed jar. External and internal sooting. Context 5044, ditch 5018, and unphased context 5016.
23. Fabric R10. Wide-mouthed jar of Young type R38 with cordon at base of neck and girth groove. Context 5153, ditch 5072.
24. Fabric E30. Squat high-shouldered jar with cordon at base of neck and prominent girth groove. Context 5240, ditch 5078.
25. Fabric R90. Medium-mouthed jar. Context 5033, pit 5031.
26. Fabric R10. Straight-sided slightly chamfered dish; cf. Young type R51 dated by him AD 180–240. Original ?burnished surfaces poorly preserved. Context 5033, pit 5031.
27. Fabric R20. High-shouldered jar with cordon at base of neck. Context 5349, pit 5348.

Grave group 20010
28. Cremation urn. Small, incomplete 'cooking pot type' jar in fine reduced fabric R10 with burnished zones on top of rim, shoulder and lower body and acute angled burnished lattice decoration between. Context 2985.

[137] Booth et al., 'A Romano-British Kiln Site at Lower Farm, Nuneham Courtney', pp. 198 (no. 270), 193 (no. 225).
[138] P. Booth and G. Edgeley-Long, 'Prehistoric Settlement and Roman Pottery Production at Blackbird Leys, Oxford', *Oxoniensia*, 68 (2003), pp. 201–62; S. Westlake and P. Booth, 'Roman Pottery Production at Blackbird Leys, Oxford: The Illustrated Vessels' (2007): www.thehumanjourney/publications/downloads, nos. 120, 124.

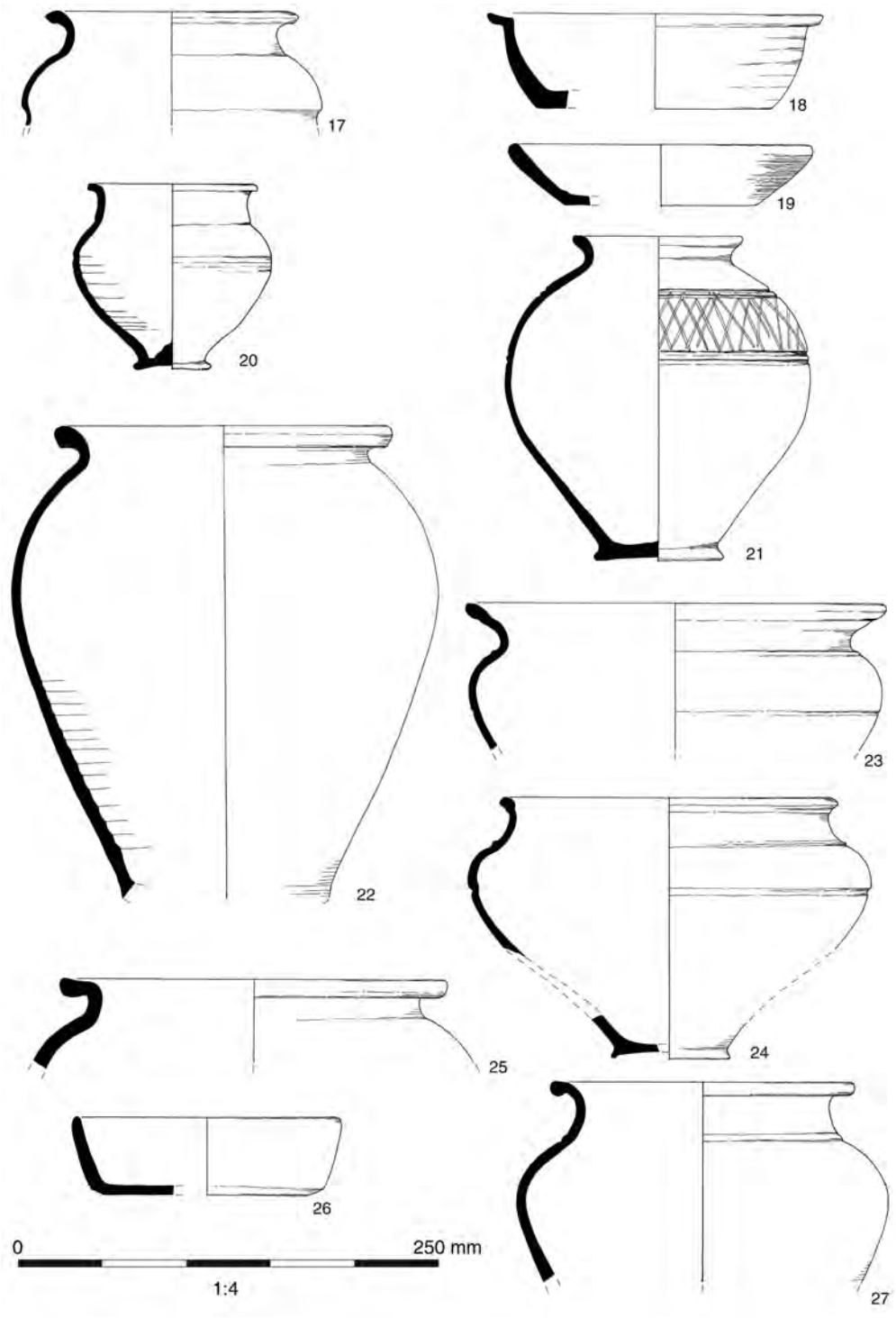

Fig. 21. Roman pottery, 17–27.

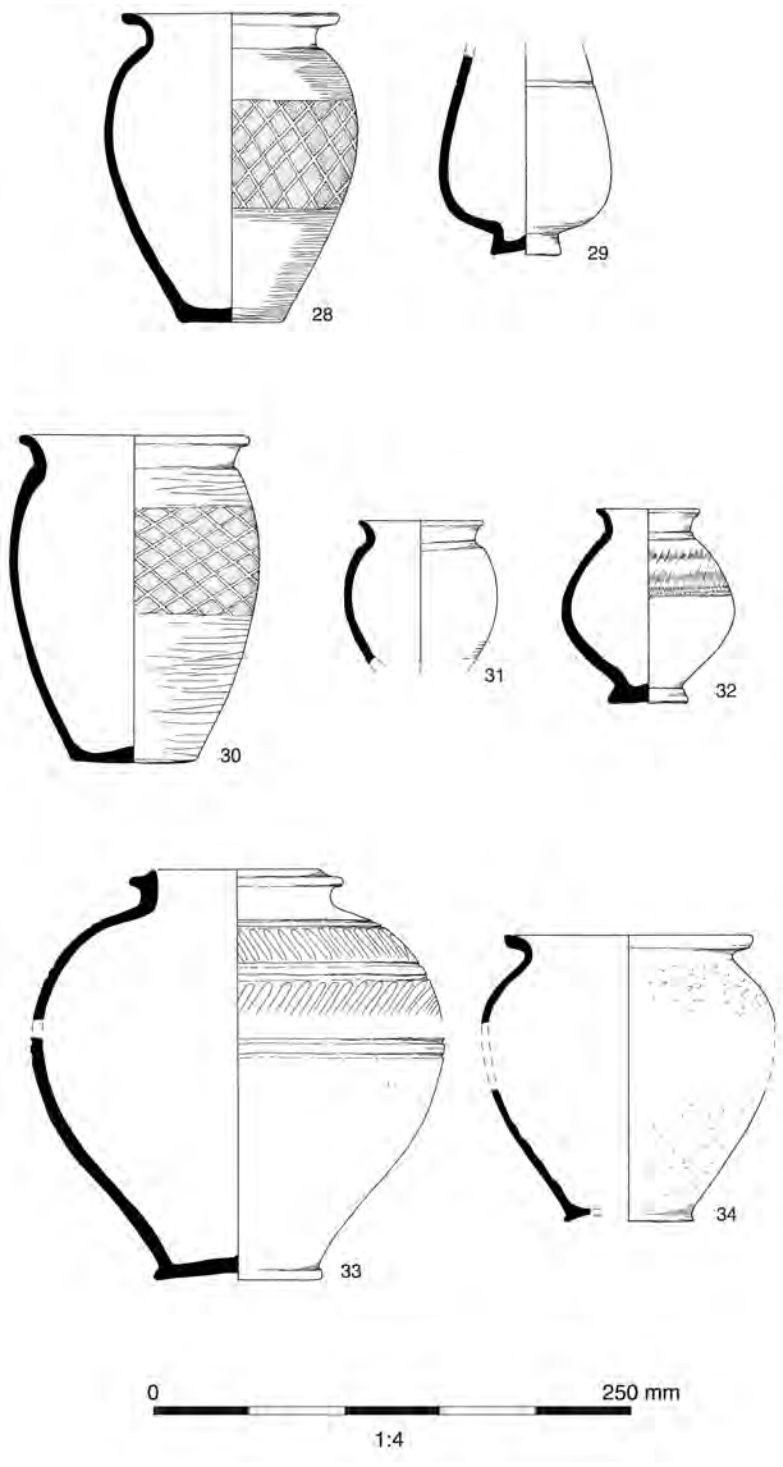

Fig. 22. Roman pottery, 28–34.

29. Ancillary vessel. Small bag-shaped beaker, rim missing, in fine reduced fabric R10 with grooves at base of neck and on lower body. Context 2987.

Grave group 20011
30. Cremation urn. Incomplete cooking pot type jar in black-burnished ware fabric B11 with burnished zones on top of rim and shoulder, and relative obtuse-angled burnished lattice below. Context 2989 and 2990.
31. Ancillary vessel. Small incomplete bag-shaped beaker in fine reduced fabric R11, with overall burnish and a cordon at the base of the neck. Context 2991.
32. Ancillary vessel. Small incomplete bag-shaped beaker in fine reduced fabric R10. Context 2993.

Phase LR contexts
33. Fabric R30. Narrow-mouthed jar (Young type R18) with flanged rim and zones of oblique burnished lines between horizontal grooves on the shoulder. Contexts 1447, 1448, and 1449.

Unphased contexts
34. Fabric R29 with oxidised interior. Medium-mouthed jar. External sooting. Context 5382.

MEDIEVAL POTTERY by JOHN COTTER

A total of 122 sherds of medieval pottery weighing 1,585 g were recovered from boundary ditches near the north-western edge of the site and from quarry fills.[139] The pottery assemblage is in a very variable condition: some sherds are large and fresh but most are quite small and worn, suggesting a fair degree of redeposition.

The medieval pottery comprises mainly types common in Oxford and south-west Oxfordshire during the eleventh to early fifteenth centuries, but the dating emphasis here is probably between the twelfth and fourteenth centuries. One abundantly flint-tempered pottery type, Late Saxon-Early Medieval South-West Oxfordshire ware (OXBF) could potentially date to the late Saxon period but its full date range (*c.*875–1250), coupled with the complete absence of other late Saxon indicators, suggests that a post-Conquest date is more likely here. Most of the fabric types have date ranges covering several centuries and there are few pieces in the assemblage that are diagnostic enough to date much closer than this. These, however, include one or two distinctively slip-decorated sherds from glazed jugs in Ashampstead-type ware (OXAG) which date to the thirteenth or fourteenth century. A few sherds of early Brill/Boarstall ware (OXAW) jugs may be of similar date. One of the most common coarse ware types here is East Wiltshire ware (OXAQ), which has a broad twelfth- to early fifteenth-century date range but the vessels here are probably not from the later end of this range.

The source of the wares present here is almost entirely limited to Oxfordshire and neighbouring counties. One or two pieces, however, may be from medieval Surrey white ware jugs. Cooking wares predominate. Apart from those mentioned above there are very few items of note. A small, near-complete jar/cooking pot in eleventh- to thirteenth-century Medieval Oxford ware (OXY) was recovered, and an unusual broken stem-like object in the same fabric may be from a rare cresset oil lamp.

METALWORK by IAN SCOTT

The small metalwork assemblage from Tubney comprises 104 objects (161 fragments). The great majority of these (88 items) were recovered from Roman contexts and it is likely that many of the others were also Roman in origin, including the hobnail recovered from middle Iron-Age pit 1161. Most were nails or hobnails, although there were also a length of curved rod or bar from early Roman ditch 5080 and a small length of narrow twisted copper alloy strip from ditch 5017, which was dated to the second century. Small concentrations of hobnails were identified in early Roman ditch 1680 (ten hobnails) and second-century ditch 1139 (eight hobnails).

Gold 'Sun-Disc' from Bronze-Age Cremation 5353

A small piece of sheet gold was recovered from a soil sample taken from Bronze-Age cremation burial 5353 (Plate 8). The piece was rather damaged and appeared to have been partially crushed or 'scrunched up', perhaps deliberately. It was approximately circular or oval in shape and measured *c.*12 mm x 9 mm. A cruciform pattern could be discerned incised into the object, comprising four vertical lines and a similar number of horizontal lines, surrounded by an incised band around the surviving parts of the circumference, although the latter was less well preserved due to damage to the edges of the object.

[139] Fabric codes referred to are those of the Oxfordshire type series in M. Mellor, 'Oxfordshire Pottery: A Synthesis of Middle and Late Saxon, Medieval and Early Post-Medieval Pottery in the Oxford Region', *Oxoniensia*, 59 (1994), pp. 17–217.

Based on photographs of the object, Stuart Needham has suggested that it is almost certainly a gold-sheet disc of the type often called 'sun-discs'. The lightly scored cruciform design within a peripheral annular band and the two near-central perforations are recurrent features of the type.[140] It is common for the decoration not to be executed very neatly, as seems to be the case here. Most such discs are from Ireland, but several come from Britain. Datable contexts are rare, but suggest that simple designs such as seen at Tubney Wood Quarry belong to the earliest phase of metallurgy in these islands, essentially that of the Chalcolithic period (*c.*2450/2400–2200/2150 BC). The context of this example is thus unexpectedly late and consideration must be given to the possibility that it was an heirloom that had been in circulation for a considerable period of time, or that it had been retrieved during the disturbance of an earlier grave. This might conceivably account for its ragged condition, assuming this was not due to it having been cremated with the accompanying body. The object was probably displayed on a garment, to which it was sewn by means of two small perforations, each measuring *c.*0.5 mm across, that were located slightly off-centre to the disc *c.*1.2 mm apart.

Metal Items from Late Roman Burials

A late Roman burial within grave 1660 had been interred in a coffin, represented by eleven fragments of nail and three possible coffin fittings (Fig. 23). The nail fragments included five incomplete nails or nail heads. The nail heads are all from Manning Type 1 nails and have traces of mineralised wood.[141] None of the nails is complete, but the size of the surviving heads indicates that they were probably quite large nails (*c.*80–100 mm long). In addition to the nails, the grave also produced three pieces of iron that might be coffin fittings, although their precise function is unclear.

Grave 1663 produced a single small but incomplete nail of Type 1 and two nail stem fragments.

Grave 1661 contained 25 hobnails and nine small stem fragments from hobnails, suggesting that the body in the grave may have been buried with a pair of nailed shoes.

Metal Items from Fifth- to Sixth-Century Burials

Burial 1321 contained a coffin represented by eighteen nails or nail heads (38 fragments). Thirteen nails are complete, and these range in length from 80 mm to 105 mm. Most of the nails are either 95–97 mm long or 100–105 mm long. The distribution of the nails provides good evidence for the construction of the coffin (Fig. 13). At least two nails were located at each corner, three nails on each side secured the sides and base together, and four nails were used to secure the lid. The positions of the nails indicate that the sides of the coffin were nailed to the base and the ends were then nailed to the sides. This is the reverse of evidence for late Roman practice found at Lankhills, Winchester, where the base was nailed to the sides and the sides to the ends.[142] In addition to the nails this grave contained a fragment of iron wire and a fragment of iron plate, although these may be residual objects unconnected with the burial.

Graves 1389 and 1413 produced two nails and one nail stem fragment respectively. The nails from grave 1389 are of Manning Type 1 and both were complete or nearly complete and measure 93 mm and 87 mm long respectively. They would be suitable as coffin nails, but the lack of other nails does raise doubts about the presence of a nailed coffin.

In addition to these burials, a nail stem fragment was recovered from funerary enclosure ditch 1678 and two hobnails were recovered from funerary enclosure ditch 1679, although these items may be residual.

Catalogue of illustrated coffin fittings from grave 1660 (Fig. 23):

1. Iron plate with extended corners. Possibly a handle plate. No visible nails or nail holes. Well-preserved but encrusted with corrosion products. L: 50 mm; W: 38 mm. Grave 1660, context 1457.
2. Strip or plate, iron. Rectangular fragment, either originally 'L'-shaped, or part of a larger rectangular plate with a slot. L: 43 mm; W: 24 mm. Grave 1660, context 1457.
3. 'L'-shaped strip or plate, iron; 'L'-shaped strip with rounded corner. No obvious nails or nail holes. Broken. L: 55 mm; W: 32 mm. Grave 1660, context 1457.

140 H. Case, 'An Early Accession to the Ashmolean Museum', in V. Markotic (ed.) *Ancient Europe and the Mediterranean* (Warminster, 1977), pp. 19–34.

141 W.H. Manning, *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum* (London, 1985), pp. 134–5 and fig. 32.

142 K. Powell, 'Structural Nails and Coffin Fittings', in Booth et al., *The Late Roman Cemetery at Lankhills*, p. 324 and fig. 4.19.

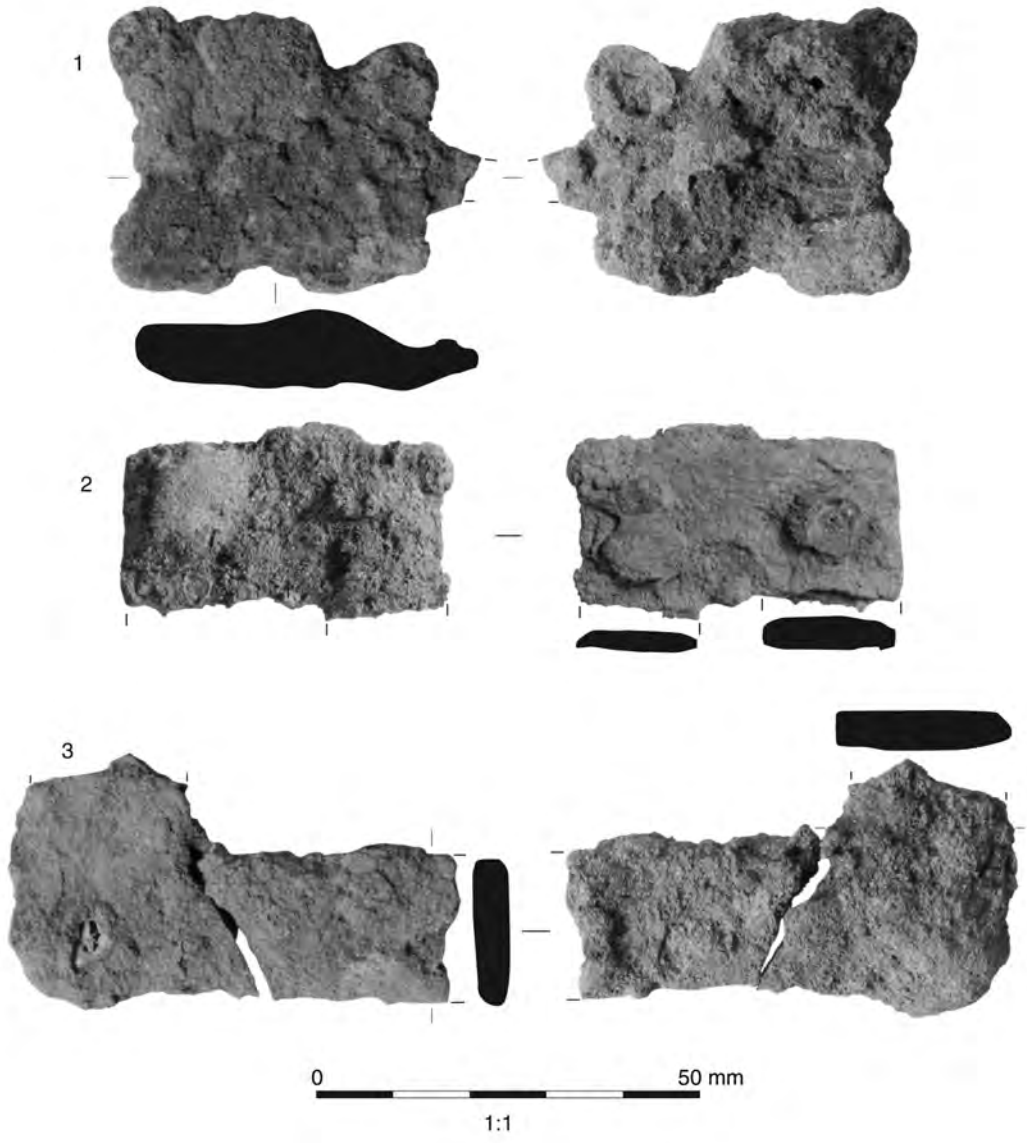

Fig. 23. Coffin fittings from late Roman grave 1660.

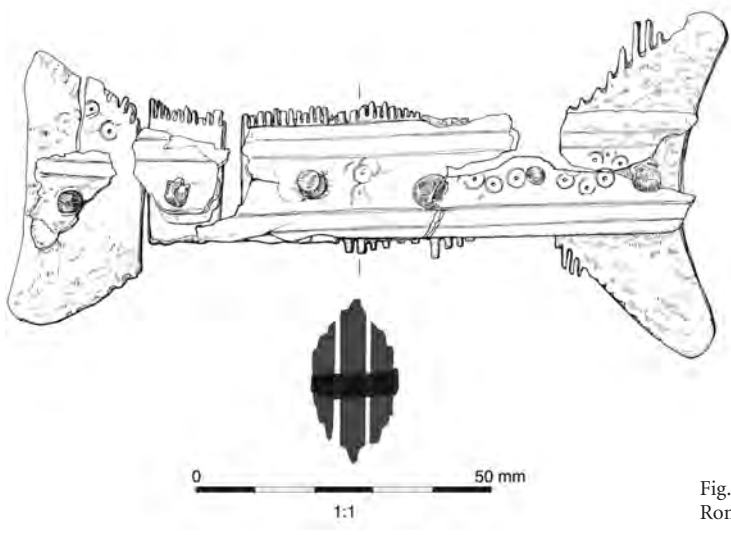

Fig. 24. Composite comb from late Roman grave 1661.

BONE OR ANTLER COMB by ROSEMARY GRANT and IAN SCOTT

The late Roman composite comb recovered from grave 1661 is poorly preserved (Fig. 24). The end plates are concave, and the side or connecting plates have bevelled and stepped edges and have ring and dot decoration. They are secured to the comb segments with 6 iron rivets. There are no complete teeth surviving *in situ*, but the spacing of the cuts and the remaining stubs of the teeth indicate that there were fine teeth on one side of the comb and coarser teeth on the other. There are notches on the edge of the side plates suggesting that the teeth were cut after the side plates were attached. One concaved-sided end segment is wider (W: 53 mm) than the other end plate (W: 44 mm). The comb is similar to combs from the late Roman cemetery at Lankhills, Winchester.[143]

WORKED STONE by RUTH SHAFFREY and HUGO ANDERSON-WHYMARK

The investigations produced eleven quartzite cobbles that demonstrate use as processors, either through percussion wear and flaking at the ends or through wear caused by rubbing rather than pounding. The stones range in weight from 22 g to 227 g, with an average weight of 127 g. Although it is possible that some of these pebbles were used as hammerstones, some of the larger examples exhibit one or more facets, suggesting that it is more likely that they were used as processing tools such as pot burnishers or for food processing. These artefacts are not intrinsically dateable, and could be associated with either the Mesolithic or Roman phases of occupation. Three were recovered from Roman features and eight from topsoil/subsoil.

A burnt rectangular block of sandstone weighing 1.7 kg was recovered from the subsoil. This stone is apparently unworked, but it has flat surfaces that may have been used to process foodstuffs. The burning may have resulted from heating associated with cooking activities or use as a hearthstone.

HUMAN REMAINS by ANGELA BOYLE, SHARON CLOUGH, DIANA MAHONEY, and NICHOLAS MÁRQUEZ-GRANT

The assemblage comprises two Bronze-Age cremation burials, two Roman cremation burials (Table 8), an inhumation burial of possible second-century date, six late Roman inhumation burials, five inhumation burials dating from the fifth to sixth century, one inhumation burial from the sixth to seventh century, and one undated inhumation burial (Table 9). All the remains from inhumation burials were in poor condition, with eroded cortical bone. Long bones epiphyses were rarely preserved, and ribs and vertebrae had been heavily damaged, along with dentition. This state of preservation limited the information that could be obtained during osteological examination.

[143] P. Galloway, 'Combs', in Clarke, *The Roman Cemetery at Lankhills*, p. 247, fig. 31, no. 521; Cool, 'Objects of Glass, Shale, Bone and Metal', pp. 272–4.

Table 8. Summary of the cremation burials

Burial	Date	Age	Sex	Total weight (g)	Identifiable weight (g)	Skull	Axial	Upper limb	Lower limb
5119	Bronze Age	Adult		25.7	4.8	2.9	0.2	1.7	0
5353*	Bronze Age	Adult		222.7	72.9	26.8	2.8	18.1	25.2
20010**	Early Roman	Adult?	M?	81	52	24	3	15	10
20011	Early Roman	Adult?		112	46	30	1	11	4

* Includes bone from tree throw hole fills 5373, 5375, 5380, and 5381.
** Includes 4 g of bone from fill of ancillary vessel 2987.

Table 9. Summary of the inhumation burials

Burial	Skeleton	Date	Completeness	Condition	Age	Sex	Skeletal pathology	Dental pathology
1670	1022	Early Roman	<25%	2 good	6-12 y	?		
1660	1458	Late Roman	25–50%	5+ very poor	>18 y	M?		
1661	1478	Late Roman	25–50%	5+ very poor	26–35 y?	M?	Marginal osteophytosis	Caries, calculus
1662	1487	Late Roman	50–75%	4 poor	> 18 y	F?	Osteophytosis, degenerative disc disease, vertebral osteoarthritis	Caries, calculus, periodontal disease, hypoplasia, ante-mortem tooth loss
1663	1516	Late Roman	75–100%	3 Fair	36–45 y	M	Cribra orbitalia, possible healed rib fracture, degenerative disc disease, vertebral osteoarthritis	Caries, calculus, periodontal disease, hypoplasia, ante-mortem tooth loss
1664	1527	Late Roman	50–75%	4 poor	18–25 y?	F?		Ante-mortem tooth loss
1665	1563	Late Roman	<25%	5+ very poor	>18 y	M?	Osteoarthritis on right hip and vertebral facets, degenerative disc disease	
1672	1472	Late Roman	25–50%	4 poor	30–50	M		
1321	1305*	5th–6th C	<25%	5+ very poor	25–35 y or >45 y	F?		
1389	1380	5th–6th C	25–50%	5+ very poor	35–45 y	?		Caries, ante-mortem tooth loss
1408	1404	5th–6th C	75–100%	5+ very poor	>18 y	?		
1409	1367	5th–6th C	<25%	5+ very poor	>18 y	F?		
1413	1411	5th–6th C	25–50%	5+ very poor	>45 y	M		Ante-mortem tooth loss
1668	10007	6th–7th C	25–50%	4 poor	18-25 y	F		Caries, calculus, ante-mortem tooth loss, periodontal disease
1667	10004	Undated	25–50%	4 poor	>45 y	M	Fractured left clavicle, lytic lesion on right rib, degenerative disc disease, osteoarthritis on left hip	Caries, calculus, hypoplasia, ante-mortem tooth loss, periodontal disease

* Includes material recorded as coming from context 1306, the grave backfill.

The Bronze-Age Cremation Burials

Two unurned cremation burials (5119 and 5353) were excavated (Table 8), with cremated bone also recovered from the fills (5373, 5375, 5380, and 5381) of tree throw holes that had disturbed cremation burial 5353. This material was interpreted as having been redeposited from the burial and is considered here as part of it. A sample of bone from context 5373 returned a radiocarbon date of 1870–1840 and 1780–1620 cal BC. Each burial contained the remains of a single adult individual, but it was not possible to determine the sex of either burial. Neither deposit is substantial enough to represent the remains of a complete skeleton.[144] A fragment of occipital bone from burial 5353 had a straight cut mark from the outer through to the inner table; there was also an adjacent unsuccessful cut. Shallow striations associated with the cut are quite eroded and appear more 'U'-shaped than 'V'-shaped in profile. The peri-mortem margin on the fragment is very straight. It is possible that these are tool cuts, but unlikey given the nature of the striations, as tool marks tend to have a 'V'-shaped section (Louise Loe, personal communication).

The Roman Cremation Burials

Two urned cremation burials (20010 and 20011) dating from the second century AD were excavated (Table 8). Cremated bone (2988) was also recovered from an ancillary vessel (2987) that accompanied burial 20010. Both urns had been damaged by ploughing, which may have affected the quantities of bone present. The condition of the surviving bone was good, with little erosion or weathering of the cortical surface. Neither burial contained enough bone to represent the remains of a complete skeleton.[145] The most commonly identified skeletal elements were skull (54 g; 27.9% of the entire assemblage, and 55.1% of the identifiable bone), mainly comprising frontal, parietal, and occipital bones. Both individuals were adults, and the individual in burial 20010 may have been a male.

The Roman Inhumation Burials

Early Roman skeleton 1022. A single skeleton (1022) was found in an early Roman ditch (Table 9). Less than a quarter of the skeleton survived, although the condition of the surviving bone was good. The remains were identified as those of a child aged 6–12 years.

Late Roman burials. A group of six skeletons (1458, 1478, 1487, 1516, 1527, and 1563) and one disturbed burial (1472) are late Roman in date (Table 9). A radiocarbon date of 255–390 cal. AD was obtained from skeleton 1478. The condition of the remains was poor with the exception of skeleton 1516, from burial 1663, the condition of which was fair. All seven individuals were adults, and both sexes were represented: two were male, three others were possibly male, and two were possibly female. Stature could be estimated only for skeletons 1487 and 1516, and was calculated as 1.52 m and 1.64 m respectively. These estimates are lower than the estimates for average height during the Roman period, which was 1.59 m for females and 1.69 m for males.[146] Dental and skeletal pathology is listed in Table 9.

The Fifth- to Sixth-Century Inhumation Burials

A total of five individuals (1305, 1367, 1380, 1404, and 1411) are of fifth- to sixth-century date (Table 9). All five skeletons were in extremely poor condition. All were adults, comprising one male, two females, and two individuals of uncertain sex. Stature could only be calculated for skeleton 1367, who had a height of 1.61 m.

The skull of skeleton 1380 displayed marked prognathism (outward projection) of the maxilla, which can be indicative of non-Caucasoid ancestry.[147] The skull had a straight and wide facial profile, rectangular orbits, slight projection of the lower eye border, small brow ridges, and smooth muscle markings. These reflect a mixture of Caucasoid, Black and Asian traits, but an analysis of twelve cranial measurements indicated that this individual was likely to be White (Caucasoid) compared to other individuals with African or Asian ancestry.[148] This is consistent with the results of a programme of stable isotope analysis, which indicated that this individual was of local origin (see Smith et al., below).

Sixth- to Seventh-Century Inhumation Burial 10007

This was a young adult female with substantial dental pathology (Table 9). Additionally, an upper second molar had an accessory root, which is a relatively common variation. Although this skeleton had apparently suffered

144 J.I. McKinley, 'The Analysis of Cremated Bone', in M. Cox and S. Mays, *Human Osteology in Archaeology and Forensic Science* (London, 2000), p. 404.

145 Ibid.

146 C. Roberts and M. Cox, *Health and Disease in Britain from Prehistory to the Present Day* (Stroud, 2003), pp. 142, 396.

147 S. Byers, *Introduction to Forensic Anthropology*, 2nd edn (Boston, 2005), p. 163.

148 Analysis carried out using S.D. Ousley and R.L. Jantz, *FORDISC 2.0: Personal Computer Forensic Discriminant Functions* (Knoxville, 1996).

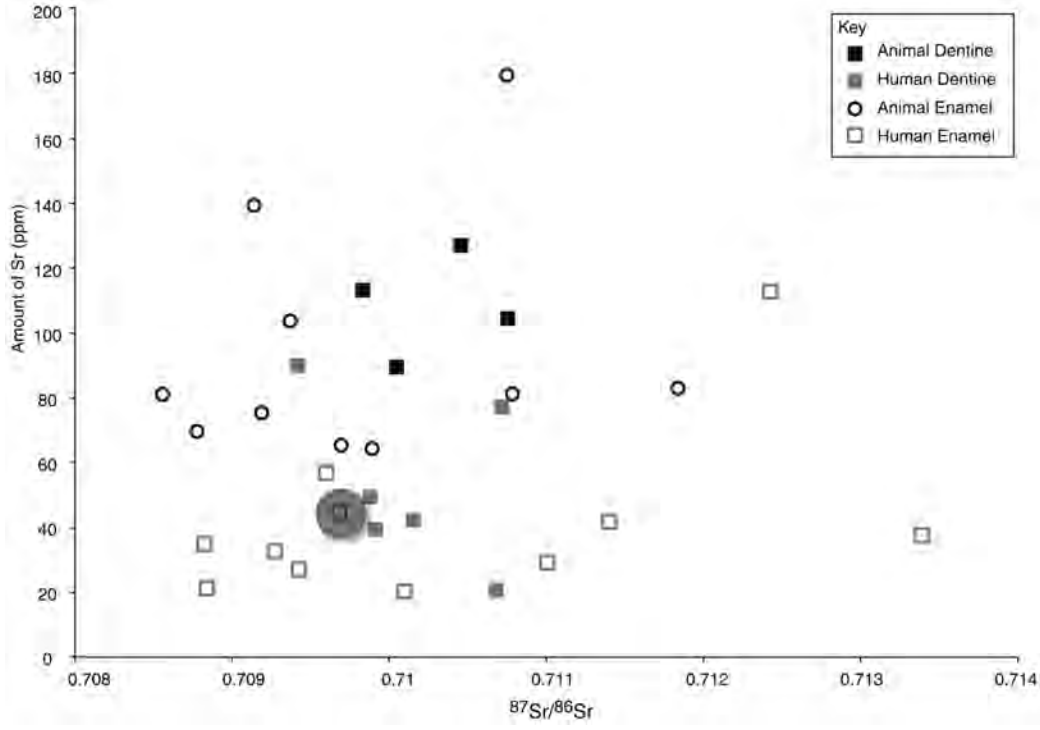

Fig. 25. Concentration of strontium vs $^{87}Sr/^{86}Sr$ strontium isotope ratio.

significant mutilation, including decapitation and removal of the lower parts of both legs, no osteological evidence for this dismemberment survived due to poor preservation of the remains.

Undated Inhumation Burial 10004

Skeleton 10004 was an adult male aged upwards of 45 years (Table 9).

STABLE ISOTOPE ANALYSIS by COLIN SMITH, OLAF NEHLICH, and ALICE MORA

Samples from all the inhumation burials with the exception of 1472 were submitted for strontium isotope analysis in order to investigate whether the individuals excavated from Tubney represented a single, 'local' population, with particular regard to skeleton 1380, who had unusual cranial morphology and dentition, with mixed Caucasian/Black and Asian features (although statistically within range of Caucasian populations). Samples were also taken from a number of animals from the site in order to assist in establishing a local isotopic signature.

The majority of the dentine values (human and animal) fell between 0.7090 and 0.7110, as did the majority of the enamel samples (Fig. 25). Dentine is a mineralised tissue and thus contains strontium, but is less crystalline and more open to post-depositional inclusion of soil strontium. This diagenetically added strontium is likely to obscure the biological signal and bias it towards a local soil value. If this has occurred then the dentine samples will be a useful reflection of local soil Sr isotope values. If this range is therefore assumed to represent a local strontium isotope value, then we cannot use this method alone to attribute a 'non-local' origin for individual 1380, whose value lies within the range represented by the rest of the assemblage.

ANIMAL BONES by LENA STRID

The investigations produced 1,069 fragments of animal bone, of which 118 (11%) could be determined to species (Table 10). Some 77.3% of the bones were recovered during hand-excavation and 22.7% came from the residues of sieved soil samples. Most of the bones from the sieved samples were rather small (<1% of the total weight) and mainly unidentifiable to species. With the exception of crow/rook and small commensal species, the assemblage consists exclusively of domesticated animals. In all periods the assemblages are very small, and consequently it is not possible to carry out a reliable analysis of the species ratio for the main domesticates.

Most bones were in a fair condition, although the small size of the assemblage strongly suggests that it has experienced a significant amount of attrition due to the soil conditions. Traces of burning and animal gnawing were found on 61 and 8 bones respectively. Most burnt bones occurred in middle Iron-Age features, although the apparently large proportion of this assemblage that was burnt is likely to be a result of the better survival of burnt bone compared to unburnt bone. The low rate of gnawing suggests a rapid disposal of organic waste.

Ageing data are scarce for all species. Only 11 bones and two mandibles could be aged: seven were middle Iron Age and two were early Roman, and in all instances the epiphyses were fused, suggesting that these animals were sub-adult or adult at the time of death. The presence of younger animals is indicated by one early Roman cattle mandible aged 8–18 months. The only sexable bone, a pig canine from a middle Iron-Age pit, was male.

Measurable bones were rare. One sheep metacarpal from a middle Iron-Age context had a distal breadth of 20.6 mm, slightly smaller than the typical value for this period,[149] and a withers' height of 1.26 m was calculated for one early Roman horse metatarsal.

Butchery marks occurred on four bones, including cut marks from filleting on a large mammal vertebra and cut marks from skinning or disarticulation on one sheep/goat and two cattle tarsal bones.

Table 10. Quantification of identified bones/taxon by phase

	MIA	ER	LR	5th–6th C	Med	Total
Cattle	5	25			15	45
Sheep/goat	19	6	1		10	36
Sheep	2					2
Pig	2	2			2	6
Horse	1	17			1	19
Dog		2			1	3
Crow/rook					3	3
Indet. bird					14	14
Rodent					1	1
Frog	2					2
Toad					2	2
Microfauna					3	3
Small mammals	1				1	2
Medium mammals	35	7	1		5	48
Large mammals	6	44	5		50	105
Indeterminate	191	349	8	8	222	778
TOTAL	**264**	**452**	**15**	**8**	**330**	**1069**
Weight (g)	323	1538	41	0	1138	3040

CHARRED PLANT REMAINS by RUTH PELLING and WENDY SMITH

A total of 46 bulk soil samples ranging in volume from 1–77 litres of sediment, but typically 40 litres, were collected for the recovery of charred plant macrofossils (including charcoal) and any accompanying artefacts/ecofacts.

In general, charred plant remains (excluding charcoal) were limited. Two samples from middle Iron-Age pits (sample 45, fill 1400 of pit 1023; sample 49, fill 1108 of pit 1107) contained moderate quantities of barley (*Hordeum* spp.) and spelt grain (*Triticum spelta* L.) and spelt chaff. Both samples also produced a range of weed/wild taxa,

[149] Animal Bone Metrical Archive Project (ABMAP): http://ads.ahds.ac.uk/catalogue/specColl/abmap/index.cfm.

which most likely are weeds of the cereals. It is likely that these remains represent fine sieving waste from day-to-day cereal processing that has been swept into domestic fires and consequently distributed across the site.[150]

Bronze-Age cremation deposit 5118, from burial 5119, produced a few charred tubers (most likely from a grass – POACEAE) and a fairly abundant charcoal assemblage with at least three distinct taxa noted: oak (*Quercus* spp.), a strongly ring porous taxon with wide rays that has been tentatively identified as beech (*Fagus sylvatica* L.), and an unidentified semi-ring porous taxon with long radial files of cells (often >8 individual cells).

RADIOCARBON DATING

Five samples were submitted for radiocarbon dating at Rafter Radiocarbon Laboratory, New Zealand. The samples were taken from inhumation burials 1321, 1389, 1661, and 1668, and from cremated human bone in tree throw hole 5372 that is believed to have been redeposited from cremation burial 5353. The results are presented in Table 11. The calibrated date ranges cited within the text are those for the 95% confidence level (2 sigma).

Table 11. Radiocarbon dates

Laboratory ID	Feature	Context	Material	∂13C	Radiocarbon age (BP)	Calibrated date (95% confidence)
NZA-34887	Grave 1321	1305	Human bone, right femur shaft	-20.5 ‰	1588 ± 20 BP	420 AD to 540 AD
NZA-34885	Grave 1389	1380	Human bone, left femur shaft	-20.4 ‰	1565 ± 20 BP	425 AD to 545 AD
NZA-34888	Grave 1661	1478	Human bone, left femur shaft	-20.2 ‰	1716 ± 20 BP	255 AD to 390 AD
NZA-34865	Tree throw hole 5372	5373	Cremated human bone, unident.	-22.5 ‰	3409 ± 30 BP	1870 BC to 1840 BC and 1780 BC to 1620 BC
NZA-34917	Grave 1668	10007	Human bone, right femur shaft	-20.8 ‰	1495 ± 25 BP	535 AD to 640 AD

Note: The reported age is the conventional radiocarbon age before present (BP). Age Δ14C, ∂14C and absolute percent modern are as defined by M. Stuiver and H.A. Polach, 'Reporting of C14 Data', *Radiocarbon*, 19 (1977), pp. 355–63. The dates have been calibrated using Winscal – version 5 (17 June 2007) utilising atmospheric data from P. J. Reimer et al., 'IntCal04 Terrestrial Radiocarbon Age Calibration, 0–26 Cal Kyr BP', *Radiocarbon*, 46 (2004), pp. 1029–58.

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[150] Stevens, 'An Investigation of Agricultural Consumption and Production Models', pp. 61–76; M. van der Veen and G. Jones, 'A Re-Analysis of Agricultural Production and Consumption: Implications for Understanding the British Iron Age', *Vegetation History and Archaeobotany*, 15 (2006), pp. 217–28; M. van der Veen and G. Jones, 'The Production and Consumption of Cereals: a Question of Scale', in C. Haselgrove and T. Moore (eds.), *The Later Iron Age in Britain and Beyond* (Oxford, 2007), pp. 419–29.

Plate 8. Gold foil from Tubney Bronze-Age cremation burial 5353. [Simmonds, p. 110]

Plate 9. View of funerary enclosures 1677 and 1678, facing south-east. [Simmonds, p. 117]