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at Groom's Farm, Hampshire

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Introduction

Archaeological investigations in advance of sand quarrying at Groom's Farm, Frithend, Hampshire, revealed evidence of prehistoric, Romano-British and medieval activity on a terrace overlooking the River Slea, a tributary of the River Wey. The site, which lies less than 1km south of the Romano-British pottery production centre at Alice Holt Forest, was subject to a programme of archaeological works as a condition of Hampshire County Council (HCC) granting planning permission for sand extraction.

The programme of archaeological works started in 1988 with an investigation by the Oxford Archaeological Unit (OAU). This comprised aerial photographic survey, fieldwalking and evaluation trenching (OAU 1988), and was followed, between 1990 and 2010, by a series of excavations and watching briefs undertaken by Wessex Archaeology (1991; 1999a; 2000; 2010).

The quarry site, including the access road to the west, extended east for approximately 1.1 km from the A325 trunk road to the Cradle Lane footpath, and was *c.* 0.2 km wide north to south (Fig. 1). Within the site, four largely contiguous excavation areas, centred on NGR SU 81253890, extended approximately 300 m east–west by 150 m north–south.

Most of the archaeological features were located above the 75 m contour on the north side of the River Slea, the ground dropping quite sharply to the south into the valley at *c*. 65 m aOD, and more gently to the south-east. From a high point of *c*. 80 m aOD on Ranks Hill in the south-west corner of the site, the ground sloped gently down to the north and west. Features lay mostly on highly variable, loose, medium and fine sands of the Folkestone Beds (part of the Lower Greensand formation) (British Geological Survey 1988, Sheet 300), although Gault Clay lay to the north, and deposits of clay were recorded overlying the sand in several parts of the site. The soil profile, a podsolic brown earth, was consistent across most of the site, although it was slightly deeper below Ranks Hill, indicating some colluviation. Alluvium is mapped along the valley floor.

Archaeological Background

The archaeology of the landscape around Groom's Farm has been increasingly well documented due to the investigation of sites in advance of sand extraction, and the work of archaeologists such as Malcolm Lyne and David Graham. The geology, combining blown sand with stiff, intractable clay, has given this strip of land the fertility of the Gault and the lightness of a sandy soil, an attractive combination for settlement in all periods.

Major Mesolithic sites characterised by very large flint assemblages are known to the south-west on Kingsley Common, Shortheath Common and around Oakhanger (Jacobi 1981; Rankine 1953). These sites have provided a series of radiocarbon dates indicating occupation within the Early Mesolithic (*c.* 8250 BC). There is little known evidence of Neolithic activity, but there are Early Bronze Age burial mounds near Trottsford Farm and on Boxford Common to the south of the site, and later Bronze Age field boundaries were identified at Rookery Farm, Kingsley, to the south-west (Davies 1989). Lyne and Jefferies (1974) identified an Iron Age settlement on the southern part of the Groom's Farm quarry site from finds of pottery, while south of the river, on Rabbitfield Hill, they recorded a large, univallate earthwork enclosure of possible Iron Age date, with an apparent entrance at its south-east corner.

During the Romano-British period, the area surrounding Alice Holt Forest to the north became a major centre of pottery manufacture, and numerous kilns, clay extraction pits and waster dumps have been recorded. This area is now a Scheduled Monument (Hampshire 244). Roman roads linked the area with towns in the north, west and south (Silchester, Neatham, Winchester and Chichester respectively), while the River Slea provided access, via the Wey and the Thames, to the important London and eastern markets. Pottery production probably started around AD 60 and continued into the 5th century (Lyne and Jefferies 1979, 20). Evidence for more widespread production in the area is provided by the remains of a pottery kiln and waster dump recorded at Baigents Bridge, east of the site (Swan 1984), and three pottery kilns at Rookery Farm to the south-west (Davies 1989). Numerous occupation sites have also been identified (Lyne and Jefferies 1979, fig. 1), including one, largely quarried away, on Ranks Hill. Fieldwalking immediately north of the site has identified dense pottery scatters to the west of Cradle Lane and south-east of Kites Copse (Wessex Archaeology 1999b).

Although there is no recorded archaeology of Saxon date in the vicinity of the site, Lyne and Jefferies (1974) suggested that a field known as the *Ham* on its northern edge may indicate a Saxon successor to the Romano-British settlement on Ranks Hill. They also suggested that Groom's Farm was one of two farms mentioned in *Domesday* held by villein farmers in the Manor of Broxhead (Lyne and Jefferies 1974), pottery scatters around it dating back to at least the 13th century. The lane leading from Groom's Farm to Ranks Hill, which forms the western boundary of the site, is thought to be medieval in origin. There was also a small medieval settlement at Baigent's Bridge, then a ford, with ribbon development on both sides of the crossing (Lyne and Jefferies 1974). This included, on the north side of the river, west of Cradle Lane (and within the Groom's Farm site), a square croft defined by an embanked

enclosure that has produced 13th–14th century pottery and which, it is suggested, may have been the location of the mill referred to in *Domesday*.

Lyne and Jefferies (1974) further suggested that the site lay within a large oval earthwork enclosure, the outline of which they were able to trace on modern maps and identify in landscape features. Although there is no dating evidence, they suggested that this feature is referred to in a 17th century title deed for the Headley Estate as 'Old Lands' indicating that it was of some antiquity.

The manufacture of pottery continued in the Alice Holt area during the 12th–14th centuries and waster sherds are known from two locations at Frithend (Lyne and Jefferies 1974). Subsequently, this pottery production seems to have been overtaken by the development of the Surrey whiteware industry.

Fieldwork Undertaken

1988 evaluation

Initial work comprised the plotting of cropmark features visible on aerial photographs. These appeared to show a number of possible enclosures, trackways and other linear features. This was followed by surface artefact collection, with the site being walked on a 20 m grid. Finally, an array of 52 evaluation trenches was excavated, providing a *c.* 2% sample of the site (Fig. 1), some of the trenches being positioned so as to investigate cropmark features. A range of features of Bronze Age to medieval date, a few corresponding to cropmarks, were recorded, including ditches, gullies, pits, post-holes and a cremation burial.

In the light of these results, the Archaeological Advisor to Hampshire County Council recommended that a staged programme of archaeological works involving excavation and a watching brief should be undertaken (Hampshire County Council 1988).

1990–91 watching briefs

The watching briefs were undertaken during the removal of topsoil and overburden in four areas of the site – the access route from the A325 (Area A), the haulage road along the northern edge of the site (Area B), and two adjacent areas towards the site's north-east corner where the 1988 evaluation had revealed no evidence for intensive archaeological activity (Areas C and D). No watching brief was conducted prior to quarrying at the eastern end of the site. Only in Area D were any archaeological features recorded – two lengths of ditch, five possible pits and two possible post-holes (Fig. 2).

1994, 1998, 2000, 2001, 2007, 2008 and 2010 excavations

A total of seven areas were subject to archaeological excavation between 1994 and 2010, each undertaken in advance of renewed quarrying operations (Figs 1 and 2). These areas were stripped of topsoil and subsoil using a tracked excavator fitted with a toothless bucket under constant archaeological supervision. Individual features were

then excavated in accordance with the project specifications and recorded using the Wessex Archaeology *pro forma* recording system.

The combined area of these excavations amounted to some 3.3 ha, and together they revealed a palimpsest of archaeological features ranging from Early Bronze Age to medieval date. A significant number of features could not be phased, although some were natural in origin, whilst others contained no dateable material.

2000 and 2001 test pits

During the stripping of the 2000 excavation area, a significant quantity of later Mesolithic struck flint was noted at the base of the subsoil, particularly towards the north of the area. In order to determine its stratigraphic position and to assess whether it was *in situ*, a series of twelve 1 m² test pits were hand-excavated through the soil profile. These were excavated in spits, and the resultant spoil sieved to recover artefacts.

Prior to any topsoil stripping of the 2001 excavation area, a further 19 test pits were excavated at approximately 10 m intervals across its northern half to detect any further flint scatters.

Archaeological Sequence

Cropmark Features

Relatively few of the cropmark features plotted in 1988 could be identified during the evaluation, excavation or watching brief stages, and only two within the excavation areas proved to be archaeological. Two parallel cropmark features interpreted as a possible trackway (OAU 1988, fig. 1, a) are likely to reflect an erosion channel recorded during the 2001 excavation, whilst another cropmark, interpreted as a possible sub-rectangular enclosure (OAU 1988, fig. 1, b), partly corresponded with the edge of a late Romano-British hollow recorded in the 1998 and 2000 excavation areas.

Several other cropmark features investigated during the evaluation and shown to be of archaeological origin (OAU 1988) lay beyond the areas subsequently subject to detailed excavation.

Mesolithic/Neolithic

A number of struck flints recovered from evaluation trench 19 (at a location where Mesolithic flints had been collected during fieldwalking) suggested activity in this area. The activity appeared to have been transitory and localised, with none of the features in the trench dated to this period, and no struck flints being found in the surrounding trenches. This trench lay to the south-east of the 1994 excavation and outside the areas subsequently excavated. However, further flints of Mesolithic date were recorded during the watching brief in Area D to the north and, later, from all

four excavated areas. Much of this material appears to be of Late Mesolithic date, although the less diagnostic pieces can only be assigned a more general Mesolithic/Early Neolithic date.

The majority of flints were recovered during the 2000 excavation, concentrated in the central northern part of the excavation area. They were recovered either from the soil profile during machine stripping, from the excavation of test pits, or as residual material in later features; again, none of the features containing this material could be dated to this phase. Some flints not associated with later material and recovered from the interface between the soil and the natural sand could possibly be regarded as *in situ* material. However, while they may not have been subject to much horizontal movement, they had probably been moved vertically through the soil profile by natural processes, and none of them were sufficiently diagnostic to confidently assign a Mesolithic date. The small number of diagnostic Mesolithic flints all derived from the upper spits of the test pits.

Further Mesolithic flints were present amongst the assemblage recovered from the three phases of work undertaken between 2007 and 2010, generally as residual finds in the fills of later features.

Early Bronze Age

An oval pit (439) in the 1994 excavation area, 1.2 m long, 0.9 m wide and 0.8 m deep with vertical sides and a concave base, contained fragments of a Collared Urn decorated with round-toothed comb impressions (Fig. 11.1). The sherds, along with struck flint, burnt flint and charred plant remains, including numerous hazelnut shell fragments, acorn kernels, but no grain or chaff, were recovered mainly from the lower fill. A radiocarbon date obtained from a fragment of acorn kernel recovered from this fill returned a date of 1760–1610 cal BC (SUERC-35354; Table 12).

Elsewhere a few residual sherds of grog-tempered pottery, possibly of Early Bronze Age date, were retrieved from the fills of later features during the 2000 excavation.

Middle Bronze Age, Late Bronze Age and Early Iron Age

The main focus of Middle Bronze Age, Late Bronze Age and Early Iron Age activity comprised an unenclosed settlement, within which were several of lengths of curved gully probably indicating the locations of round-houses (Figs 3 and 4). This settlement appears to have lain within a landscape subdivided by a co-axial field system, whilst ritual practices are evident in the burial of complete pots in pits at different times throughout this broad period.

Settlement

Most of the dated features in the settlement contained pottery forms and fabrics dating to the Late Bronze Age/Early Iron Age, although some pottery consistent with a

Middle–Late Bronze Age date was also recorded. The greatest concentration of features was located between ditch 367 (recorded in 1994) and the trackway defined by ditches 1160 and 1200 (recorded in 1998), although at least two possible drip gullies (see below) lay to the west. Very few features of this date were recorded in the southern half of the 1994 and 1998 excavations, where there were extensive spreads of natural clay and ironstone, although a small group of seven pits and a post-hole recorded in the northern half of the 2007 excavations hint at wider peripheral activity.

The earliest of the settlement features appears to be a curving gully (1261) (Fig. 3). Complete or partial gullies like this example, often interpreted as 'drip gullies', are usually associated with round-house structures. Gully 1261 was up to 0.5 m wide and 0.13 m deep, and sherds of Middle/Late Bronze Age pottery were recovered from the fill, one with an applied impressed cordon; other finds included a cylindrical fired clay loomweight (object 2051), a fragment of a sandstone quern, struck flint, burnt flint and pieces of undiagnostic fired clay. There were a number of post-holes within the arc defined by the gully, but no pattern could be identified, and none could be closely dated. Similar pottery was recovered from a small number of pits and post-holes scattered across the 1994 and 1998 excavation areas, often in association with later pottery. This association with later forms has been noted elsewhere in the vicinity (eg, Woodward 2000), suggesting that these earlier forms and fabrics may have remained in use in the later period.

A number of other gullies contained Late Bronze Age/Early Iron Age pottery. Gully 1219, forming the northern arc of a circle with a projected diameter of *c.* 11 m, was up to 0.3 m wide and 0.15 m deep. Gully 1425, which was up to 1 m wide and 0.1 m deep, formed the south-eastern arc of a possible circle of similar diameter, its southern terminal sharply inturned. Gully 1219, like 1261, had post-holes located within its arc, but they formed no recognisable pattern. Similarly, although there were a number of clusters of post-holes across the settlement area, no clear post-built structures, either circular, square or rectangular, could be identified with confidence. One post-hole (1071) contained a whetstone.

A further small curved gully (539) lay to the east of ditch 367. It was 0.25 m wide and 0.2 m deep with steep sides and an irregular base. It was heavily truncated by an Iron Age ditch and by an undated pit, but it had a projected diameter of no more than 5 m, probably too small to represent a domestic structure, its size and position suggesting instead some ancillary function.

A slightly curving gully excavated in 2007 may mark the site of another structure. Gully F100 was 10.3 m long, 0.8 m wide and 0.3 m deep, and had rounded termini at each end. It was not well dated, with most of the pottery dating to the Late Bronze Age/Early Iron Age; there was a single, intrusive, Late Iron Age sherd.

In addition to these gullies, there were numerous other features indicative of settlement. These include a poorly dated four-post structure (1419) to the west of the main focus of settlement and two possible hearths. One of these in particular, a small circular feature (1158), 0.7 m in diameter and 0.16 m deep with vertical sides and a flat base, showed signs of *in situ* burning, and was surrounded by sandstone blocks set into a clay base. Pottery was recovered from its fill; a similar, less well dated feature (1063) is likely to be contemporary.

The remaining Late Bronze Age/Early Iron Age features consisted largely of pits of varying form, size and depositional sequence. In total, 69 pits were dated to this period, the majority of them within the 1994 and 1998 excavation areas. Many contained small quantities of probable settlement debris, including pottery, struck flint, burnt flint, loomweight fragments and fired clay, and most probably served as rubbish pits.

Linear boundaries

The majority of the settlement features lay between parallel features 1160 and 1200 to the west and 367 to the east (Fig. 3). None of these three ditches was well dated by artefacts. Both 1160 and 1200 were cut by a Middle Iron Age ditch (1164; Fig. 2), and all three had similar, approximately north–south orientations, and show a corresponding slight change in alignment, suggesting that they were associated. This, combined with their apparent spatial relationship with features containing Late Bronze Age/Early Iron Age pottery, suggests that they probably belong to this period.

Features 1160 and 1200 comprised lines of irregular depressions indicative of root disturbance, suggesting that they represent hedge lines. Feature 1160 was up to 1.5 m wide and 0.34 m deep, whilst 1200, *c.* 2–3 m to the west, was up to 0.8 m wide and 0.2 m deep. Feature 367 to the east was up to 3.5 m wide but only 0.3 m deep with concave sides and an irregular base; it may have been a hollow-way or trackway, although it seems clearly to have defined the eastern edge of the settlement activity. It continued in the excavation area to the south, where it was recorded as F156. Here it was 4.6 m wide and 0.82 m deep, with shallow, concave sides and a flat base; deeper V-shaped 'steps', 1.7 m apart, in the base are suggestive of wheel ruts. Late Bronze Age/Early Iron Age pottery and struck flint were recovered from the fills of feature 367/F156.

The southern extent of F156 was obscured by a large Late Roman 'erosion scar' (F151; see below). However, further to the south was a narrower and shallower ditch (F153) aligned north–south. Ditch F153 was 0.75 m wide and 0.27 m deep with a shallow U-shaped profile. This almost certainly marked the western edge of a field or enclosure, the northern boundary of which was defined by F152, slightly larger at 1.2 m wide and 0.43 m deep, but which shared a similar U-shaped profile. Both of these ditches terminated within the excavation area, defining an entrance some 5 m wide, which corresponded approximately with the projected line of hollow-way 367/F156. Both ditches had been allowed to silt naturally, and contained a small quantity of Late Bronze Age/Early Iron Age pottery, struck flint and burnt flint.

Approximately 100 m to the east of ditch 367 was an undated north–south linear feature (8/10) recorded during the watching brief in Area D. Ditch 8/10 terminated within the excavation area, and was up to 2 m wide and 0.4 m deep with moderately steep concave sides and an irregular flat base. In addition to a quantity of struck flint and burnt flint, a single sherd of medieval pottery, likely to be intrusive, was recovered from the fill.

Together, this group of linear features appear to represent the organised division of the landscape into a co-axial system of fields set within blocks of land running perpendicular to the river valley.

Placed deposits in pits

In addition to the features directly associated with the settlement, a series of pits containing placed pots were excavated (Fig. 3). Some 27 of these deposits were identified, the majority comprising single vessels placed upright in a small cut, often accompanied by other artefacts or deposits of burnt material. Only one example, the Early Iron Age vessel in pit 1851, appears to have been inverted. As with the settlement, these pits range in date from the Middle Bronze Age to the Early Iron Age. Two cremation-related deposits were also excavated.

The earliest of the pits was 1836, which contained the remains of a Middle Bronze Age Deverel-Rimbury style Bucket Urn. This was a large, shallow, oval pit, some 2.4 m by 2 m across, but only 0.12 m deep. Within the fill of this pit, two discrete dumps of charcoal were recorded in addition to the pot, and sherds from two different Early Bronze Age vessels were also recovered.

Fifteen of the pots placed in pits comprised flint-tempered vessels of a Middle/Late Bronze Age date (those in pits 1023, 1030, 1032, 1037, 1048, 1049, 1140, 1171, 1181, 1174, 1732, 1858, 1861 and 1864, and one of the vessels in spread 1052). In only one case did pits intercut (pit 1171 cut the edge of pit 1174 and partially damaged the vessel within it). Most of the pits seem to have been dug to contain a single vessel, although two vessels were recovered from pit 1032 (where a second, fragmentary, pot had been placed below the extant pot). A radiocarbon date was obtained on charred grain recovered from the deposit placed within the upper of the two pots. This returned a date of 1260–1010 cal BC (SUERC-35357). A second radiocarbon date, on charcoal recovered from a sample of the fill of the pot in pit 1861, returned a date of cal AD 890–1020 (SUERC-35353), in the Late Saxon period. The most likely explanation for this is that the charcoal recovered was intrusive within the deposit.

A further three pits contained Late Bronze Age pots – pits 1012, 1021 and 1787 – whilst a fourth pot was associated with cremation-related deposit 1062 (see below). Two pots were excavated within 1012, along with two cylindrical fired clay loomweights, two fragments of burnt saddle quern and a deposit of burnt material.

This practice continued into the Early Iron Age (Fig. 4), with a further seven vessels placed in pits (pits 347, 433, 436, 1040, 1043, 1052, 1851). One of these, the pot in pit 1851, had been inverted. In addition to these, one small pit 316 also contained the remains of three burnt vessels. Whilst these appear to have been broken prior to their deposition, they may well form part of the same tradition, perhaps representing a final act of deposition.

The distribution of the Middle–Late Bronze Age pits containing pots further suggests continuity of practice. The majority of these features lay in a broad band aligned north-east to south-west, largely respecting the western edge of the contemporary settlement (Fig. 3). Pits 1012, 1021, 1023, 1037, 1140, 1171, 1174, 1181, 1732 1787, 1836, 1851, 1858, 1861, 1864 and 1870 all belonged to this group. Immediately to the south was a further small group of pits containing Middle–Late Bronze Age pots which overlapped with the north-west edge of the settlement. These pits comprised 1030, 1032, 1048 and 1049, and another pot came from spread 1052 in the same area.

Also from spread 1052 came an Early Iron Age pot, and three other pits (1040, 1043 and 1851) containing Early Iron Age pots lay to the north-west where the main group of Middle–Late Bronze Age pots was found. However, a separate group of four pits, comprising 316, 347, 433 and 436, which contained the burnt vessels, is exclusively Early Iron Age in date and lay within the main area of settlement, clearly separate from the distribution of Middle–Late Bronze Age pots (cf, Figs 3 and 4).

A small cremation-related deposit was recovered from Middle/Late Bronze Age pit 1062. This feature was 1.1 m wide and 0.17 m deep, and showed signs of having suffered from animal burrowing. Material recovered from the fill included sherds of pottery, charcoal and a small quantity of cremated human bone. The human bone was that of an unsexed subadult/adult, older than 13 years of age (see McKinley below). Given the small amount of human bone recovered, it is thought unlikely to represent a disturbed cremation burial, but may represent a placed deposit of material derived from a cremation. A radiocarbon date was obtained from a fragment of cremated bone, confirming a Middle/Late Bronze Age date (1370–1110 cal BC (SUERC-35346)).

A similar deposit was recovered from pit 1856, a roughly oval cut 0.45 m long, 0.30 m wide and only 0.11 m deep. This had a single fill which contained small quantities of burnt flint, charcoal, and cremated human bone representing an infant/juvenile *c.* 2–7 years of age (see McKinley below). The small quantity of bone suggests that it is most likely to be a cremation-related deposit rather than a cremation burial itself. No pottery was recovered from the pit, although it cut a subsoil deposit containing pottery likely to be derived from a Middle/Late Bronze Age pot placed in pit 1858, some 0.8 m to the north. Largely on this basis, pit 1856 has tentatively been dated to the Late Bronze Age/Early Iron Age.

Middle Iron Age

There is some evidence for continued settlement on the site into the Middle Iron Age. A number of post-holes, pits and at least two structures were recorded overlying the eastern half of the earlier Middle Bronze Age–Early Iron Age settlement in the 1994 excavation area (Fig. 4).

Settlement

At least two of the structures excavated in 1994 were Middle Iron Age in date (Fig. 4). The first of these comprised three short lengths of curved gully (345), up to 0.8 m wide and 0.15 m deep, forming the north-eastern arc of a projected circle *c.* 12 m in diameter, probably defining a round-house. A number of internal post-holes were identified, some of which contained Iron Age pottery, but these do not form any coherent pattern. There were also several pits or large post-holes containing pottery, fired clay, struck flint and burnt flint, including three (441, 451 and 463) in an arc to the south-east, and one (386) containing a whetstone. Two of these pits or post-holes (451 and 463) probably defined a doorway facing south-east.

Approximately 30 m east of the round-house lay a small rectangular six-post structure (702), *c.* 3.5 m long (north–south) and 2.8 m wide. All of the post-holes were of

similar dimensions, 0.3–0.5 m in diameter and up to 0.25 m deep. Finds from the post-holes included Middle Iron Age pottery and a fragment of burnt clay with wattle impressions. Similar square or rectangular structures found on Iron Age settlements elsewhere are often interpreted as granaries, although other interpretations, including shrines, have been suggested for some.

A few other features, predominantly small pits, dated by the presence of pottery, lay in the vicinity of these two structures. Pit 114 contained pottery likely to date to the Middle Iron Age, whilst a further large assemblage of pottery was recovered from pit 692.

Linear boundaries

There appears to have been a realignment of boundaries in this period, evident in the layout of the Iron Age ditches (Fig. 4).

Ditch 1164, in the centre of the 1998 excavation area, was at least 38 m long, and aligned north-north-east to south-south-west. It was not a continuous feature, comprising four segments, ranging from 4 m to 12 m in length. Its profile also varied, but in general was 1.2 m wide and 0.6 m deep with moderately steep, slightly convex sides and a flat base.

Two hearths lay in the gap between the two southernmost segments of the ditch. The larger, oval feature (1310), to the south, was over 2 m long and 0.1 m deep and had a single fill containing a relatively large quantity of charcoal and burnt sandstone. The northernmost hearth (1374) was similar in profile and fill, but circular and only 0.6 m in diameter. Although neither hearth was well dated, both are likely to be contemporary with the ditch.

Approximately 70 m west of ditch 1164 was another ditch, 1766, on a similar alignment to ditch 1164. The majority of the finds from ditch 1766 comprised struck and burnt flint; a single sherd of Romano-British pottery is likely to be intrusive. Ditch 1766 was up to 0.9 m wide and 0.16 m deep with a wide U-shaped profile, and its alignment suggests that it was contemporary with 1164. A short linear feature (1735) lay on the same alignment some 2.3 m to the south of ditch 1766 and was probably part of the same boundary/feature.

To the east of 1164, ditch 540 appears to represent the south-western corner of an enclosure. From the northern edge of the excavation, this ditch ran approximately south-south-east for *c.* 44 m before turning to the north-east and continuing for at least a further 30 m, extending beyond the eastern edge of the excavation. The western arm of ditch 540 corresponds with a cropmark feature. The ditch was up to 2.8 m wide and 0.8 m deep with a variable profile, being wider and deeper towards the corner, and the fills produced small quantities of Middle Iron Age pottery, burnt clay, struck flint and a possible hammerstone.

A large spread of colluvial sand (5199), measuring 21 m by at least 18 m, was recorded in the 2001 excavations on the south-east slope of Ranks Hill. This sealed a buried soil horizon containing two sherds of Iron Age pottery. Whilst this colluviation may have taken place in the Iron Age, it is perhaps more likely that it occurred in the

Late Romano-British period (similar, extensive deposits of Romano-British date were recorded elsewhere on the site – see below) and that the Iron Age pottery recovered was residual.

Romano-British

There appears to have been a hiatus of activity on site following the decline of the Iron Age settlement, probably in the Middle Iron Age. This apparent lull lasted until the late Romano-British period (Fig. 5). Foci of Romano-British activity were noted during the evaluation (notably trenches 4, 7 and 8) and in work by Lyne and Jefferies (1979; fig. 5), and the late Romano-British activity recorded during the excavations corresponds with some of these foci (Fig. 5). This activity is largely linked to pottery production, with possibly two kilns identified, alongside substantial spreads or midden deposits largely concentrated in the southern areas of the excavations. In addition, a small number of discrete features recorded in 1994 and 1998 hint at peripheral activity, while a number of large erosion scars, many of them containing quantities of Romano-British pottery, indicate localised woodland or ground-cover clearance in this period or subsequently.

Kilns

A pottery kiln (F155) was recorded within the 2008 excavation area (Fig. 6 and Pl. 1). Although heavily truncated, it was identifiable as a single-chambered twin flue kiln, typical of the Alice Holt pottery industry (Swan 1984, 78, 117-120; Lyne and Jefferies 1979). It was aligned east to west, had an overall length of 4 m, and comprised a central firing chamber with two flanking stoke-holes. The oval chamber (F114) was *c.* 2 m long, 1.3 m wide and 0.2 m deep, and narrowed to the east to form a flue. Both stoke-holes were shallow and sub-circular in form, the eastern (F116) measuring *c.* 1.7 m by 1.3 m and 0.2 m deep, the western (F112) measuring *c.* 1 m by 1 m and 0.14 m deep. It appears that the kiln was dismantled after its last firing, as none of the floor or structure survived. However, fragments of locally occurring heath stone recovered from the chamber were probably originally part of the superstructure. A single fill was recorded in each of the stoke-holes and within the central chamber, material from which included late 4th century AD pottery (including firing wasters), animal bone, abundant charcoal, and vitrified globules of organic material. Charcoal recovered from layer F117, the fill of eastern stoke-hole F116, provided a radiocarbon date of cal AD 250–420 (SUERC-35348).

Features in the vicinity of kiln F155 include a line of three post-holes (F120, F122 and F124) to the south which have may belonged to an associated structure, an oval pit (F126) to the south, and a second pit (F144) a short distance to the west. All of these features contained Romano-British pottery dated to the 4th century AD, along with small quantities of animal bone and fired clay.

A second possible kiln was recorded in 2010, within a machine-excavated slot through one of the erosion scars (5201). Excavation revealed three large shallow scoops (5179, 5183 and 5186). Feature 5179 contained pottery of 4th century AD date, and the others undiagnostic Romano-British sherds, but the stratigraphy suggests all three were contemporary. All contained similar sequences of a topsoil-derived

lower fill, overlain by mixed, charcoal-rich deposits. Environmental samples taken from these burnt deposits contained large quantities of roundwood, predominantly of oak, but with some probable hazel/alder, and vitrified material – possibly waste material from pottery manufacture. Similar material has been recovered from nearby pottery production sites at Rookery Farm (Wessex Archaeology 2008) and Alice Holt (Birbeck *et al.* 2008, 115; Lyne and Jefferies 1979, 13). The group of shallow scoops may represent the remains of ephemeral kiln structures, similar to kiln F155, although this could not be ascertained given the limited amount of each excavated, and it may be significant that no pottery wasters were identified.

Middens/spreads

Substantial deposits of late Romano-British 'midden' material (1010, 1053 and 1792) were recorded at the southern end of the 1998 and 2000 excavations (Fig. 5). The largest of these (1010) covered an area of approximately 24 m by 16 m. These middens or spreads contained large quantities of artefacts and typically comprised very dark brown/black sandy silts filling large, irregular, shallow features that may originally have been quarries, in particular 1827 on the western edge of 1010. Further reworked midden material was found in an extensive spread of light grey-brown sand (1801) to the west of midden/spread 1010, probably representing remnant subsoil mixed with a dispersed midden deposit. Spread 1801 overlay and filled hollows within an outcrop of iron-rich natural sand. Together the midden deposits produced nearly 12,000 sherds of late Romano-British pottery, as well as objects of copper alloy (including five coins) and iron, ceramic building material, rotary quern and other worked stone fragments, and sherds of vessel glass.

Of particular note within the pottery assemblage are the remains of four large, near-complete storage jars, each found *in situ* in a purpose dug pit (1004, 1007, 1167 and 1169 – Pl. 2); three pits lay on the northern edge of midden/spread 1010 and one just beyond. One of the jars (object 2033, pit 1167) contained an iron axe-head, and another (object 2002, pit 1004) contained two other vessels – a mortarium and a beaker. Environmental samples from the vessel fills produced moderate to high quantities of charred grain but few weed seeds or hazelnut shell fragments. Also of interest are five complete or near-complete pottery vessels from deposit 1791 (midden 1792), three of which display firing defects, and one complete flanged bowl from deposit 1826, one of the components of midden/spread 1010.

The depositional sequence within the large hollow filled by midden 1010 is worthy of further consideration. The hollow itself does not appear to have been a natural depression, and may have been dug as a working hollow, or more probably to extract sand, perhaps for use in the pottery manufacturing process. The earliest fill within the hollow was a thick deposit of mixed material (1019), possibly comprising trample and midden material, from which substantial quantities of late Romano-British pottery were recovered. Radiocarbon dating of charred grain from this deposit confirmed a late Romano-British date (cal AD 250–420 (SUERC-35356)). Furthermore, a coin of the House of Valentinian minted between AD 364 and 378 indicates that the deposit formed in the later years of the 4th century AD.

Deposit 1019 was cut by several pits containing complete, *in situ* storage jars, all of likely late 4th century AD date. These in turn were sealed by a further thick midden

deposit (1015), from which more pottery and coins were recovered, including a further coin of the House of Valentinian (AD 364–378) and a coin of the House of Theodosius (struck between AD 388 and 402). The latter belongs to the last series of coins supplied to Britain before the edict of Honorius in AD 410 effectively ended Roman rule over Britain. It is not certain how long these coins remained in circulation – although it is likely that they continued in use for at least a short period afterwards.

In order to ascertain whether the coin dating was accurate, and that the *in situ* pots were buried during the later years of the 4th century AD (rather than the pots being buried later and the coins in 1015 being residual), two radiocarbon dates were obtained on charcoal and burnt grain from the deposits within pots 2001 (pit 1007) and 2038 (pit 1169). These returned similar dates of cal AD 240–400 (SUERC-35355) and cal AD 250–420 (SUERC-35349), respectively. This strongly supports the dating provided by the coins, and suggests that the pots were buried in the midden late in the 4th century, probably, given the nature of their fills, as offerings, and that they were then sealed by the final phase of midden deposition in the last years of the 4th century or early in the 5th century.

Midden/spreads 1053 and 1792 appear to have been similar to 1010, but both were considerably smaller. Both contained mixed finds assemblages incorporating significant quantities of pottery, including five broken but almost complete vessels from 1792, all showing firing defects. Ceramic building material was recovered from both hollows, perhaps the remnants of materials used in constructing pottery kilns, and other finds included fragments of a Greensand rotary quern from 1792.

A significant proportion of the Romano-British pottery recovered from the middens or spreads exhibits firing defects, suggesting a link to the local Alice Holt pottery industry, and in particular that the material deposited in these middens derived primarily from pottery production processes in the immediate vicinity.

Erosion scars and other features

A series of large irregular features recorded in the 2007, 2008 and 2010 excavations probably represents erosion scars (Fig. 5). These comprised several channels running roughly north–south down slope, including feature 5201 and a narrower channel (5202 and 5111), both of which appear to have formed during or after the period of pottery production.

Feature 5201 was *c.* 50 m long, 30 m wide and up to 1.2 m deep. Its fills overlay a series of shallow late 4th century AD scoops, (5179, 5183 and 5186, see above), which it probably truncated. The fills of 5201 comprised a slump of eroded topsoil, sealed by colluvial sand up to 0.7 m thick. Sealing these colluvial deposits was a topsoil-derived tertiary fill. The fills in the northern part of this feature produced a large quantity of Romano-British pottery probably washed down slope from the large spreads of midden material (eg, 1010) encountered in the 1998 and 2000 excavations.

A number of other erosion features were investigated in this area, mostly in the 2010 excavations. These included a relatively narrow channel (5202) and a broader continuation (5111) of this to the south. Pottery recovered from these channels was late Romano-British in date.

Erosion scar F151, investigated in 2007, is also likely to be late Romano-British in date. It was at least 57 m long, 21 m wide and approximately 1 m deep. A charcoal-rich basal layer containing Romano-British pottery (F81) was followed first by a series of redeposited sands, then by a thick topsoil-derived deposit. The upper fills contained a range of finds dating from the Mesolithic to early medieval period, demonstrating that this material was very mixed. A radiocarbon date on charcoal recovered from basal layer F81 returned a late Romano-British date (cal AD 250–410 (SUERC-35347)). This suggests that the dumps of charcoal may have been associated with the late Romano-British pottery manufacture in the vicinity.

Two further late Romano-British features, pit 5143 and sub-rectangular feature 5113, lay close to the northern edge of the 2010 excavations. Feature 5113, aligned north-east to south-west, was *c.* 2.6 m long, 0.9 m wide and at least 0.4 m deep, with vertical, straight sides and a flat base. The feature contained a waterlogged plank or possibly a stake fragment on its base, an organic layer above this and a mixed backfill. The waterlogging suggests that the feature may have been dug to hold water, but for what purpose is not clear.

Saxon and Medieval

A small quantity of probable Saxon pottery was recovered from F33, a small pit in the eastern half of the 2007 excavations (Fig. 7). This is the only evidence for Saxon activity on the site, and whilst the recovery of Saxon pottery is both interesting and potentially important, it is difficult to assess the significance of such a small and isolated assemblage.

During the evaluation numerous sherds of 13th–14th century pottery were recovered from a former field boundary ditch, visible as a cropmark, at the eastern end of the site (Trench 50). The ditch, thought to mark the edge of a possible medieval croft (Lyne and Jefferies 1974), also contained a sherd of 16th–17th century pottery, and had been recut at least three times. Unfortunately, this area was quarried without further archaeological investigation.

Overall, however, very few medieval features were identified during the evaluation and excavation. In the 1994 excavation area, a single large pit (617) contained pottery of 12th– 13th century date, some animal bone and a possible quern fragment. Contemporary pottery was also recovered from the test pits in the 2000 excavation area, especially those towards the top of the slope. The main evidence for medieval activity was found at the western end of the site, in the evaluation (trenches 36 and 47), and during the 2001 excavation, close to the hollow-way, thought to be medieval in origin, running from Groom's Farm to Ranks Hill.

Medieval features recorded in evaluation trenches 36 and 47 included a gully, a ditch and a pit, all containing late 12th-13th century pottery. Four medieval pits were also recorded in the 2001 excavation area, to the south of these trenches. The largest of these (5031), possibly a quarry, was 3 m in diameter and 0.7 m deep with irregular sides and a rounded base. Some 30 m to the south-east was a cluster of three smaller pits (5009, 5011 and 5014). Unfortunately, the finds from these features – small fragments of locally-made, coarse sandy wares – provide few clues as to the character

of the activity in this area, although the presence of sherds from cooking pots might indicate settlement in the vicinity.

A few further medieval sherds were found within palaeochannel 5000 to the south-west of the smaller pits, suggesting it was filling in this period. Other sherds, along with pieces of medieval ceramic building material came from colluvium in the westernmost of the 2001 test pits.

Finally, a short stretch of shallow gully (F148) aligned east–west in the 2007 excavation produced 37 sherds of late 12th–13th century pottery.

Finds

A full quantification of all finds from the excavations can be found in Table 1. Full analysis was undertaken on most categories of finds, although, following assessment, detailed study of some categories of finds was deemed unnecessary, and the results of the assessment are presented in summary here. Full details can be found in archive.

Coins and Tokens

by Nicholas Cooke

A total of nine small copper alloy coins were recovered from the excavations (Table 2). Without exception these are in poor condition, showing signs of significant corrosion and surface flaking. Where the original surfaces of the coins did survive, many of the coins also appeared worn. As a result of this, it was only possible to identify three of the six coins to period. These three coins are a small worn Victoria Auggg issue of the House of Theodosius, minted between AD 388 and 402, and two Securitas Reipublicae issues of the House of Valentinian (AD 364–378). All of these were recovered from deposit 1015, the fill of a large late Romano-British hollow, along with two other coins, both undated. The former belongs to one of the last issues of coinage sent to Britain before Honorius' edict of AD 410 effectively ended Roman control of Britain. The remaining six coins are too corroded to be identified, although the sizes and forms of the flans are all consistent with a late Romano-British date.

The small coin assemblage recovered suggests that there was low level coin use on the site in the late 3rd or 4th centuries AD, continuing into the late 4th or possibly early 5th centuries AD.

Metalwork

by Rachael Seager Smith

Metalwork was only present in very small quantities (Table 1). The iron objects, all in a corroded condition, predominantly consisted of hand-made, round-headed iron nails and hobnails or tacks, probably of late Romano-British date. The majority were from midden/spread 1010 (13 nails and 5 hobnails or tacks). Four of the copper alloy

objects (a molten waste droplet, two scraps of sheet metal and a ring) were also from this feature. The thick, heavy ring, approximately 40 mm in diameter, was made from a very high-leaded alloy and may have served a variety of domestic, industrial or agricultural functions, perhaps as part of a chain.

Three other objects from midden/spread 1010 are of greater significance and although none of them can be precisely dated, all are comfortable within the second half of the 4th or early 5th century AD suggested by the radiocarbon dates and other finds from this feature. A large quadrangular bell (Fig. 8, 1), made of sheet iron coated in bronze, was found in pit 1027 on the north-west edge of midden/spread 1010. The corroded condition of the bell masks precise details of its construction but the clapper appears to be made from an iron rod looped onto an internal continuation of the external, semi-circular, suspension loop. While not uncommon finds, Romano-British bells are generally of copper alloy. The quadrangular shape, often with four small feet and a diamond or pentagonal suspension loop, is perhaps the most distinctive (others being hemispherical or conical), but the size of this example (160 mm high, 95 mm wide, 85 mm deep) marks it out as unusual, most being only 40–70 mm high. The bell conforms to Williams (2009) type 8, and other examples include one (65 mm high) from Vindolanda, dated to *c*. AD 235–260 (Bidwell 1985, 147, fig. 53, 93), and another, categorised as an animal (sheep or cattle) bell, from a mid–late 4th century AD context at Frocester in Gloucestershire (Williams pers. comm.). Although made of copper alloy, Williams (2009, 46) notes a third bell of this type and of directly comparable size (166 mm high), found with the bones of a mule and the remains of a draught animal harness under a collapsed bank at Kalkriese in the Teutoburg Forest, Germany, dated to AD 9. The juxtaposition of the remains indicated that the animal was wearing the bell, stuffed with straw to prevent it ringing, around its neck at the time of burial. Similar iron bells are also known in post-Romano-British contexts, from the 5th–6th century AD settlement at Sutton Road, Sutton Courtenay, Oxfordshire[1], for example, and in the 7th century smith's hoard from Tattershall Thorpe, Lincolnshire, and in graves from Lechlade, Gloucestershire (Hinton and White 1993, 160–1, fig. 10a). A date in the second half of the 4th or even early 5th century AD, suggested by the radiocarbon dates and other artefacts from midden/spread 1010, would therefore be well within the long life-span known for bells of this type. Use as an animal (cattle, horses, mules) bell is perhaps its most likely interpretation, but alternatives could also include use as a musical instrument, to spread information or to raise the alarm.

A iron axe-head (Fig. 8, 2) was found inside one of the storage jars (vessel 2033) found in pit 1167 within the north-west quadrant of midden/spread 1010. The axe has a backward curving blade and an oval eye (Manning 1985, 16, type 4, pl. 7, B5 and B6). Manning notes that the type occurred throughout the Roman period, present in 1st century AD Pompeii as well as in 4th century AD contexts at Silchester and Richborough, for example, while the Saxon *francisca* axe was probably derived from it. He also notes that their size varied considerably, but at only *c*. 80 mm long this

[1] http://www.ashmolean.org/ash/amps/leeds/AS_Oxfordshire/Sutton_courtenay/1923-864.html

example is less than half the size of those listed, and it is therefore possible that it is a representational model, rather than a utilitarian woodworking tool. Clearly, if it was used, it could only have been for the most delicate of tasks. A more 'everyday' iron knife (Fig. 8, 3) was also found in the north-east quadrant of the same feature (context 1240). Although the tip of the blade is broken, its back is straight continuing the line of the handle which terminates in a loop (Manning 1985, 114, type 11B, pl. 54, Q40 and 41).

The only other metal object, a flat, disc-shaped lead weight with raised concentric circles on its upper surface, came from channel 5201, where associated pottery suggests a late 4th or early 5th century AD date. At 28 g, its weight is broadly equivalent to that of a Roman ounce or *uncia* (27.288 g; Chantraine 1961, sp.620).

Struck Flint

by Matt Leivers (incorporating information from Frances Healy and Julie Gardiner)

A total of 1802 pieces of worked flint was collected from the various phases of work (Table 3). Although chronologically mixed, much of the material (an unquantified proportion, but most of the retouched artefacts and diagnostic debitage) appears to be of Mesolithic (and an element at least of Late Mesolithic) date. None of the Mesolithic artefacts (which included cores, blades, scrapers and microliths) was *in situ*, the majority being redeposited material retrieved from the fills of Late Bronze Age and Iron Age features, or unstratified pieces recovered during machine stripping or on the surface of the natural sands.

With the exception of 119 pieces which were not identified to type and of which no record survives (recovered from the initial 1988 fieldwalking and trial trenching), all of the struck flint from the various phases of work has been combined into a single assemblage and is treated as such for the purposes of this report. The material sheds further light on the Mesolithic exploitation of this landscape already well known from sites nearby, such as Kingsley Common, Shortheath Common and around Oakhanger (Jacobi 1981; Rankine 1953).

Raw material and condition

The raw material consists primarily of gravel pebble flint, generally with a thin, water-rolled cortex, although there are a small number of pieces with much thicker, fresher cortex which looks to derive from the Chalk (the nearest Chalk outcrops are two miles to the west). There are many cherty pieces and a few pieces of Greensand chert. The quality of the material is variable, and considerable frost shattering is apparent, as is to be expected in gravel flint. The colour of both the flint and cortex varies markedly; pieces are generally only lightly patinated, although a minority have an even cream patina. There is nothing to suggest that the raw material is anything but local in origin. Many of the blades and smaller flakes are broken, but only a moderate amount of edge damage was observed.

Cores

The cores are generally small, producing blades and/or bladelike flakes. Forms vary, and include single-platform, single-platform prismatic (Fig. 9, 1), double-platform (mainly opposed, a few at right angles) (Fig. 9, 2) and irregular multi-platform examples (Fig. 9, 3). A few bladelet cores on flakes are also present. Although there are neat examples, many of the cores are rather irregular and seem to have been abandoned because of flaws or frost shattering. Cortical backs are common; a small number have plain backs and a few have no back. The multiple-platformed examples are likely to be later prehistoric. There are also two discoidal ('keeled') cores which are most probably Late Neolithic (although there is very little diagnostic material of this period).

Debitage

All stages of the reduction sequence are attested in the debitage, from large entirely cortical nodule testing and core preparation flakes to small chips and retouched tool debitage. Core preparation and maintenance is evident in the small number of crested or partially-crested blades and in the more frequent core face trimming and platform rejuvenation flakes. Trimming flakes tend to be side- or platform-struck flakes that remove the entire face; platform rejuvenation was mostly achieved by the removal of a triangular flake transversely across the platform edge (as for instance in Clark 1932, xix).

The waste material includes many regular blades with both hard- and soft-hammer percussion and some evidence for prepared platforms. For the quantified material, around 25% of blades and 14% of flakes are broken, presumably as a result of ploughing and compaction of the sand resulting from the movement of heavy machinery. Most pieces recovered from the 2000 test pits are very small – only 22% of complete flakes and 28% of complete blades had a maximum dimension of more than 50 mm.

Retouched tool debitage was limited to a large microburin and a probable resharpening flake struck from the blade end of a scraper.

Retouched tools

The number and range of implements is small, and most are definitely or likely to be Mesolithic. These include a leaf-shaped flake with neat bifacial pressure-flaking on the butt; eight microliths (two rods, three obliquely-blunted (a large example from test pit 1507 (spit 1: context 1706)), a broken rod type from the same spit (context 1708), one narrow scalene triangle, one small geometric rhomb from 1037) (Fig. 9, 5); two blades with micro-retouch along one or more edges (Fig. 9, 7); an obliquely-blunted blade (Fig. 9, 8); a shouldered blade and three transverse truncations. The majority of the scrapers are probably of Mesolithic date, including the long end scrapers made on blades (Fig. 9, 9), although others are likely to be later (Fig. 9, 10).

Other later tools are likely to include an unstratified piercer of spurred type (Figure 9, 4). These are most often found in Late Neolithic contexts. A rod/fabricator (Figure 9, 6) found with a discoidal core is likely to be of a similar date.

The overall impression is that most of this assemblage is of Mesolithic date although there is some suggestion of an admixture of Bronze Age material.

Distribution

Mesolithic

During the 1988 evaluation, a number of flints were recovered from evaluation trench 19 which coincided with a location where Mesolithic flints had been collected during fieldwalking. Any Mesolithic activity in this location appeared to have been transitory and localised, with none of the features in the trench dated to this period, and no flints were found in the surrounding trenches. However, trench 19 was outside the areas subsequently excavated, lying south-east of the 1994 excavation, so the location was not further investigated. Another small concentration of Mesolithic flint came from watching brief Area D, where a microlith (an almost complete edge-blunted point with light retouch on the leading edge) and eight blades and bladelets (mostly from feature 2) belong to this period. The majority of the flints were recovered during the 2000 excavation during machine stripping and excavation of the test pits, or as residual material in later features.

The combined assemblages indicate the presence of a Mesolithic assemblage that appears to concentrate towards the northern part of the site. It is not possible to state whether any of this material is effectively *in situ* as the excavated sample is small and no three-dimensional information is available for the stripped material. It is also not possible to state how representative a sample of material has been recovered. The recovery of flintwork during the machine stripping included many small pieces, including a few microliths, but it is very likely that much more of the smaller element was missed. Consequently a variety of possible implement types and diagnostic waste material, such as microburins, may not have been recovered. The assemblage from the test pits and other features is approximately 75% of that from the machine stripping, but the various elements are clearly not represented in similar proportions (for instance, only 3.4% of the excavated assemblage consists of cores and trimmings with 1.6% retouched pieces, compared with 6.9% and 3.6% respectively from the machine stripping). Consequently no reliable comments on site function can be made. Some mixing of material in the topsoil at least, and in the later pits, is suggested, but to what extent the assemblage has been moved by post-depositional factors such as ploughing or colluviation is undetermined.

Bronze Age

Knapping debris in evaluation trench 5 seems to have been associated with Late Bronze Age settlement. Other similarly dated material came from watching brief area D, represented by thick-butted, hard-hammer flakes and correspondingly rough cores, as well as an irregular scraper or denticulate made on a thermally fractured fragment. This material is often much fresher that the Mesolithic element, especially that from feature 4 in Area D which contained a core and at least three refitting flakes.

A Bronze Age element was distinguished in the 2000 phase. In contrast to the test pits, 44% of flakes and 50% of blades had a maximum dimension of more than 50 mm. The uppermost spits of some of the test pits (eg, test pit 1705) and the fills of several of the pits (eg, pits 1844, 1836 and hollow 1792) include crude, hard-hammer struck flakes likely to belong to later prehistoric periods.

Discussion

A number of Mesolithic sites characterised by very large flint assemblages are known in the vicinity, several of which lie along the course of the River Slea (otherwise the Oakhanger, Kingsley or Oxney Stream): to the west and south-west at Trottsford, on Kingsley Common, Shortheath Common and around Oakhanger (Jacobi 1981; Rankine 1953). At Oakhanger, the various sites appear to be of different dates: one (Site III) having only rod microliths, conspicuously absent at the other sites (Rankine 1952), which appear to be Early Mesolithic. At Trottsford, material recovered from wind-blown sands included narrow-blade cores, blunted points, microliths, microburins, utilised blades and end scrapers (Rankine 1953, 169), evidently very similar to the Groom's Farm material.

The evidence (numerous more-or-less discrete 'floors' probably of different ages) suggests an episodic but continued human presence along the streams and watercourses crossing the Greensand throughout the Mesolithic period. The better dated sites (primarily Oakhanger V and VII) suggest Early Mesolithic occupation, with, in some places, Late Mesolithic activity superimposed (Jacobi 1981). Elsewhere, Late Mesolithic activity appears to be spatially separate (for instance, at Fir Hill, Kingsley and Oakhanger III, VIII and IX). The quantities of distinctive tools from Groom's Farm makes it impossible to assign the site to one period or the other with any degree of certainty, although the presence of both large obliquely-blunted points and small geometric microliths suggests that Mesolithic activity of more than one period may be present. The absence of hollow-based retouch seems to preclude a Middle Mesolithic date.

Burnt Flint

by Rachael Seager Smith

Burnt flint was recovered as a low-level background scatter within numerous features across the site. This material is intrinsically undatable, but is frequently associated with artefacts of prehistoric date, and is generally interpreted as indicative of prehistoric activity on or near the site. The most significant concentrations associated with later prehistoric pottery were found in contexts 424 (142 g), 659 (1120 g), 665 (640 g), segment 1267 of ring-gully 1261 (554 g) and pit 1354 (242 g), while pieces occurring with late Romano-British pottery came from pit 1109 (2366 g), with smaller amounts from ditches F126 and F134, kiln F155, natural feature 5111 and channel 5202.

Ceramic Building Material

by Rachael Seager Smith

The bulk of the ceramic building material consists of fragments of undiagnostic tile dispersed in small numbers across the site. Pieces of Romano-British date included *tegulae* and *imbrices* roof tiles, the smaller, thinner (up to 40 mm thick) types of brick and two pieces of box flue or voussoir tile with combed keying. All were made in sandy, oxidised or variably fired fabrics similar to those used for Alice Holt pottery and perhaps indicative of local manufacture. Most were recovered from the late Romano-British middens/spreads 1010, 1053 and 1792 and from erosion scar 5201. However, the small quantity and highly fragmentary nature of the pieces suggests that they may have been used in the structure of the kilns and/or associated workshops, rather than implying the existence of a tilery or a sophisticated Romanised building boasting a tiled roof and under-floor heating in the vicinity.

At least 16 pieces from medieval/post-medieval peg-hole roof tiles were also found. Tiles of this type developed in the 12th century and continued, with little typological change, into the middle of the 20th century. Two pieces, both of post-medieval date, came from the 1994 excavation area, while others were associated with medieval pottery in the test pits. Many of the pieces recovered, especially during the evaluation, are too fragmentary to be chronologically diagnostic.

Fired Clay

by Rachael Seager Smith

The fired clay can be divided into portable objects and small, undiagnostic fragments probably of structural origin.

Pieces from at least eight cylindrical loomweights were recovered. All were made in fairly soft, variably fired sandy fabrics, the most complete measuring from 75–100 mm in diameter, 55–105 mm high and weighing between 472 g and 1932 g. Cylindrical loomweights are generally considered to be a Middle Bronze Age type, often associated with Deverel-Rimbury ceramics, and superseded by pyramidal forms at some point during the Late Bronze Age. In this instance, however, as at Marnel Park, Basingstoke (Barclay 2009, 42), they were associated with Late Bronze Age pottery. Two (Fig. 10, 1–2) were found in pit 1012, while a third, now fragmentary, weight (object 2058; not illustrated) had been placed inside the burnt Late Bronze Age pot (Fig. 12, 5) deposited in this feature. These weights had been constructed from a finger-squeezed cylinder clay *c*. 80 mm in diameter and 65 mm high placed onto flat, *c*. 10 mm thick sheet of clay which had then been drawn up to cover the sides of the cylinder and smoothed over at the open end to a depth of *c*. 5 mm; the whole was then perforated. Although quite roughly made, all surfaces of another more or less complete weight were decorated with closely-spaced but slightly irregular rows of round-toothed comb impressions (Fig. 10, 3). Other, more fragmentary weights were

found in scoop 1192, Middle/Late Bronze Age pit 1767, Late Bronze Age post-hole 1226 and in the subsoil in the 2001 excavation area. Weights of this type were probably used in an upright, warp-weighted wooden framed loom (Burgess 1980, 278).

Fragments from perforated triangular objects were also found in Middle Iron Age enclosure ditch 540, pit 692 and in Late Bronze Age/Early Iron Age pit 1243. The object from pit 692 was made in a fine, poorly-wedged sandy fabric with some organic inclusions and measured 85 mm high and 50 mm thick. It was perforated through each corner. These items are traditionally interpreted as loomweights, although it is possible that some were used in different ways, perhaps as oven furniture (Lowther 1935; Poole 1995). These items are common in Iron Age contexts across southern Britain, remaining current well into the 2nd century AD (Wild 2002, 10).

The remaining fired clay consists of small, often featureless fragments, some with wattle impressions, probably of structural origin. Most were made in oxidised or variably-fired sandy fabrics. Associated pottery indicates both later prehistoric, including one piece with wattle impressions from the Early–Middle Iron Age structure 702, and late Romano-British dates for this material type. The most significant quantities (*c*. 12 kg overall) were found in the late Romano-British middens/spreads 1010 and 1053, quarry 1827 and pit 1109, probably representing oven/hearth lining associated with pottery production in the area.

Pottery

by Rachael Seager Smith

The pottery provides the primary dating evidence for the site and ranges in date from the Early Bronze Age to the post-medieval period, with emphases in the Middle/Late Bronze Age to Early Iron Age and late Romano-British period. Confident dating, however, has been hampered by the condition of the sherds and, among the later prehistoric material in particular, the scarcity of diagnostic pieces. Overall, the assemblage survived in moderately good condition, although some sherds, especially from the quarry extension areas, showed high degrees of surface abrasion and edge damaged. Overall, the mean sherd weight is 18.5 g.

The whole assemblage has been scanned to provide spot-dates for each context (Table 4). Sherds were subdivided into broad ware groups (eg, flint-tempered wares, calcareous wares) or known fabric types (eg, Oxfordshire red colour-coated ware) and quantified by the number pieces with some indication of the number of rims and/or vessel types present on a context by context basis. Levels of detail varied and, given the long duration of this project, the results of the scan are contained in a mixture of paper records (watching brief, evaluation, 1994 and 1998 excavations), Excel worksheets (2000 and 2001 excavations) and an Access database (2007–2010 excavation areas).

As part of the post-excavation analysis programme, 77% (15,270 sherds) of the total assemblage was examined in more detail. This sample included all the deliberately-

deposited prehistoric vessels, together with representative feature groups from each of the later prehistoric chronological periods and the largest groups of Romano-British pottery. All the sherds were recorded using an abbreviated version of the standard Wessex Archaeology pottery recording system. The resulting data is stored in the same Access database as that used for the 2007–2010 excavations. The fabrics present within this more fully analysed portion of the assemblage are summarised by period in Table 4.

Later prehistoric

The prehistoric pottery largely comprised sherds in a range of coarse flint-gritted fabrics, together with smaller numbers of sandy, grog- and mixed-tempered sherds. Full fabric descriptions are contained in the archive. Overall, there were relatively few diagnostic pieces, but the vessel forms present indicate that the assemblage spanned the period from the Early Bronze Age to the Middle Iron Age, with an emphasis on the Late Bronze Age/Early Iron Age. The bulk of the assemblage comprised the remains of 27 deliberately deposited vessels. In most cases, these had been placed upright in small pits, either alone or with other artefacts (eg, cylindrical loomweights, sandstone slabs), although one Early Iron Age vessel (pit 1851) was found in an inverted position. Almost all the vessels had been truncated by subsequent agricultural activities, hampering their precise dating. The assemblage is considered by chronological period below.

Early Bronze Age

Sherds belonging to a single Collared Urn (Fig. 11, 1) made in a grog-tempered, variably-fired fabric, were found in pit 439. Although not fully reconstructable, the profile of this vessel seems to have been of fairly globular, bipartite form with narrow base (70 mm in diameter). The collar base of this vessel is slightly peaked and all the decoration, consisting of round-toothed comb impressions (although the presence of a sandy, iron-rich, post-depositional concretion masked the detail on all but one or two sherds), occurred on the collar, the interior, bevelled edge of the rim being decorated as well as the outside. Stylistically, these traits suggest that this vessel belongs within the latter part of the chronological sequence of Collared Urns (Burgess 1986, 345; Longworth 1984, 35–40), and this is confirmed by a radiocarbon date of 1760–1610 cal BC (SUERC-35354) obtained on a charred acorn from pit 439.

Middle Bronze Age

Only one vessel, a Deverel-Rimbury style Bucket Urn (Figure 11, 2) deliberately deposited in pit 1836, could be confidently assigned to this period. This vessel (141 sherds, 3826 g) was made in a variably-fired, coarsely flint-gritted fabric. The base and lower walls (to a height of 50–60 mm) were dark grey in colour, relatively soft and eroded; thereafter, the walls and rim were oxidised, much harder and better fired. Decoration consisted of finger-tip impressions on the rim and on an applied cordon around the body as well as a row of more or less equally spaced pre-firing perforations *c*. 25 mm below the rim. Two residual Early Bronze Age sherds, one from the decorated collar of a Collared Urn and a base sherd from a small jar, both in grog- and flint-tempered fabrics, were also found in this feature (contexts 1845 and 1847).

Middle/Late Bronze Age

Fourteen of the *in situ* vessels (pits 1023, 1030, 1032, 1037, 1048, 1049, 1140, 1171, 1174, 1732, 1858, 1861 and 1864 and spread 1052) are considered to be of Middle/Late Bronze Age date (*c*. 1400–700 BC). All are very fragmentary, consisting of the bases and lower bodies of large, thick-walled jars. None survived to more than 180 mm high, while the diameter of the bases varied from 160–300 mm and the walls from 7–15 mm thick. The shape of the exterior base angle was variable between vessels and even around the circumference of the same vessel, some being more or less vertical while others were externally expanded; six vessels are too eroded in this area to provide any indication of shape or diameter. Surfaces are unaltered, hand-smoothed or vertically finger-smeared. Two rim sherds found inside the jar bases from pits 1171 (a simple upright, flat-topped rim representing less than 5% of the diameter) and 1864 (a rim flake with finger-tip impressions on its upper surface) provide the only indication of the shape of the upper parts of these vessels.

Nine of the *in situ* vessels (pits 1023, 1030, 1032 (Fig. 11, 3), 1048, 1049, 1732, 1858, 1861 and 1864) were tempered with sparse to moderate, coarse (up to 15 mm across), poorly-sorted, angular, calcined flint, often with a very dry, crumbly texture. Three others (pits 1037 (Fig. 11, 4) and 1174, spread 1052) were made in finer (up to 5 mm across) flint-tempered wares, while two (pits 1140 and 1171) were made in crumbly, variably-fired fabrics containing sparse grog (up to 6 mm across) and coarse, angular calcined flint in a slightly sandy matrix. The very coarse flint-tempered fabrics are comparable with those of the Middle Bronze Age Deverel-Rimbury urns found widely across central southern England. The finer flint- and flint with grog- tempered fabrics may suggest a date within the Late Bronze Age post-Deverel-Rimbury tradition, although a fabric containing both flint and grog inclusions from Marnel Park, Basingstoke, is considered to be of Middle Bronze Age date or slightly earlier (final EBA 1700–1500 BC) (Barclay 2009, 19, fabric FG1/MBA). A radiocarbon date of 1260–1010 cal BC (SUERC-35357), obtained from charred grain in pit 1032, confirms a transitional Middle/Late Bronze Age date for this vessel.

Numerous other sherds in similar, coarse, thick-walled flint-tempered wares were also assigned to this period at the scanning and spot-dating stage. Diagnostic pieces were, however, scarce, and most were dated on fabric grounds alone. No significant groups were identified, most sherds occurring in small numbers, sometimes residually, in features scattered across the site.

Late Bronze Age

Four *in situ* vessels found in Late Bronze Age pits 1012 (Fig. 12, 5), 1021 (Fig.12, 6) and 1787 (Fig. 12, 7) and Middle–Late Bronze Age cremation-related deposit 1062 (Fig. 12, 8) indicate the continuation of the practice of burying complete pots, while five features comprising pits 618 (Fig. 12, 9-10), 653, 654 and 659 and post-hole 621 (Fig. 12, 11-12), all containing significant groups of sherds, provide further indications of settlement activity during this period. Flint continued to be the predominant tempering material, although the majority of vessels characteristic of this period were made in a more finely-tempered fabric (inclusions up to 5 mm across) with a very fine sandy or micacous matrix (Table 4).Vessel forms included shouldered and ovoid jars with simple or internally hooked rims, and sometimes with finger-tip or

nail impressed decoration on the shoulder and/or rim. One finger-impressed jar shoulder and part of a convex, shouldered jar with simple unelaborated rim were also found, in feature F15. Base angles were either plain or slightly externally expanded and one, from pit 652, had additional flint grits on the underside. The exterior surfaces were left unaltered or were vertically finger-smeared.

One of the deliberately deposited vessels (Fig. 12, 5) showed signs of over-firing or post-firing burning. The rim of this vessel, a jar with an externally bevelled rim and an inward sloping shoulder, was slightly mis-shapen, its exterior surface spalled and the whole vessel had a cindery texture. Three cylindrical loomweights and part of a Greensand saddle quern were also found in this feature (see *Fired Clay* above and *Stone* below).

A radiocarbon date of 1370–1110 cal BC (SUERC-35346) obtained on bone from cremation-related deposit 1062 indicates that it too belongs within the Middle/Late Bronze Age, although ceramically this vessel (Fig. 12, 8), an ovoid jar with a slightly inturned rim and finger-smeared surfaces, owes greater affinities to the Plain Ware phase (1150–850 BC) of the Late Bronze Age. It may be of some relevance that the vessel forms from this site considered to belong within this post-Deverel-Rimbury ceramic tradition are all notably smaller and made in finer fabrics than those of Middle/Late Bronze Age date.

Early Iron Age

By the Early Iron Age, a different range of finer, more carefully finished fabrics were in use (Table 4). Sand had replaced flint as the predominant inclusion type, and calcareous wares were introduced for the first time. Finds of this date were largely confined to the 1994 and 1998 excavation areas and included large jars with roughly wiped surfaces and finger-impressed decoration, straight-sided bowls and fine, burnished long-necked bowls with incised decoration and red-finished surfaces. These vessels are characteristic of the Early Iron Age and fall within a ceramic style defined as the All Cannings Cross-Meon Hill group, which was widely distributed over much of Wessex from at least the 6th to the 3rd centuries BC (Cunliffe 1991, fig. A:6).

Seven of the deliberately deposited vessels belonged within this period and included the flat bases (66–100 mm in diameter) of three small, well-finished jars, two, from post-hole 436 and pit 347, made in sand and organic-tempered fabrics and one, from midden/spread 1052, in a fine flint and micaceous/sandy fabric. No cut was seen surrounding part of a wide-mouthed, shouldered bowl/jar with an upright, flat-topped internally thickened rim (cf, Cunliffe 1984, 261, form JB2, fig. 6, 28–31) in a burnished sandy fabric found in layer 433, but it too seems to have been deliberately deposited alone. The other three vessels were more complete and included a large, highly fragmentary, calcareous ware jar, thin-walled with a flat base, a vertically-wiped exterior surface and a finger-tip impressed rim from pit 1043, while a jar/bowl with an internally cupped rim (Cunliffe 1984, 261, form JB1, fig. 6, 26–7; Fig. 13, 13) was found in pit 1040. The shouldered jar from pit 1851 (Fig. 13, 14) was unique amongst the group of deliberately deposited vessels because it had been placed in an inverted position.

Sherds from a shouldered jar in a sand- and fine flint-tempered fabric (Fig. 13, 15) and two decorated, tripartite fineware bowls (Fig. 13, 16–17), both in red-finished sandy wares, were found in post-hole 316. All three vessels showed signs of heat damage (surface discolouration, textural changes, slight cracking, surface spalling and/or shape distortion), although it is unclear whether this resulted from overfiring or refiring of the vessels, perhaps in a house fire. Heat-damaged pottery has been noted on a number of other prehistoric sites, most commonly of Late Bronze Age and earliest Iron Age date (Barclay 2002; 2006, 81–2; 2009, 24; Morris 1992, 13–6; 2004, 90).

Feature 423 also contained a range of Early Iron Age fabrics and vessel forms, probably derived from the disposal of domestic refuse. In total, 142 sherds (1871 g) were recovered, representing at least 13 vessels. These included part of a sharply-shouldered jar with upright, flat-topped rim and finger-nail impressed decoration on the outer edge of the rim and at the shoulder in a variably-fired, leached calcareous ware fabric (33 sherds, 234 g) and three flat bases (one from a large, fairly thick-walled jar), a necked jar shoulder sherd, and five other shoulder sherds with finger-tip impressions in sand- and fine flint-tempered wares (31 sherds, 846 g). The sandy coarsewares (23 sherds, 235 g) included rims from at least three slack-shouldered jars, one necked jar and an externally-thickened, flat-topped jar rim. The remaining sherds (55 pieces, 556 g) all occurred in fine sandy fabrics, mostly burnished on both surfaces and some with traces of red-finish; two rims, from a shallow, round-shouldered bowl and a wide-mouthed dish with an internally-thickened, flat-topped rim were included amongst this material.

Middle Iron Age

The presence of a rim from an S-shaped jar with impressed decoration (Fig. 13, 18) and a few saucepan pots in better-finished, flint-tempered fabrics suggest that occupation continued into the Middle Iron Age. Sherds of this date were recovered from the fill of the large enclosure ditch 540 and pit 692 (Fig. 13, 19–21) while a few well burnished sherds, two with tooled decoration (feature F15), and two possible saucepan pot rims (pit F17 and layer F39) were also identified. These vessels are typical of the Middle Iron Age over much of southern England and have a date range within the 3rd to 1st centuries BC (Cunliffe 1991, fig. A:15); similar vessels are known from the Iron Age settlement at Tongham (Poulton 2004, 61, fig. 4.7b), some 15 km to the north-east of Groom's Farm.

Discussion

The later prehistoric pottery assemblage represents a mixture of deliberately deposited vessels and general rubbish accumulations from small-scale settlement activity. In general, Bronze Age activity is not well known in the vicinity, although scatters of large fresh sherds, often associated with burnt flint, have been identified elsewhere within Kingsley parish (Hampshire HER rec. nos. 39429, 39430 and 39787) mostly during fieldwalking by Malcolm Lyne. Iron Age sherds have also been found under similar conditions; these include the base of a single vessel (Hampshire HER rec. no. 17243) and a collection of sherds in a variety of coarse and fine, hand-made wares, some red-finished and well-burnished (Hampshire HER rec. no. 22997). The practice of deliberately depositing ceramic vessels in small pits is, however, paralleled at

Rookery Farm (Wessex Archaeology 2008) some 4 km to the south-west, where the remains of four other Middle or Late Bronze Age (*c.* 1400–700 BC) vessels, all made in fabrics tempered with varying amounts of angular, burnt flint, have been found. It is probable that at least two of these were originally placed in an inverted position, although all were very fragmentary having been heavily truncated. The function of vessels deposited in this way remains unknown but similar practices have also been observed at other sites in Hampshire (Nicholls 1987; Seager Smith *et al.* 2000, 157; Woodward 2000, 51–2). At Groom's Farm, these vessels do not appear to have had obvious funerary associations as only one (from cremation-related deposit 1062), contained any cremated human bone. However, it may be of some relevance that at least one of the Rookery Farm vessels was filled with burnt soil, burnt flint and other stones. At Groom's Farm, pieces of burnt Greensand were also included in the Late Bronze Age placed deposit in pit 1012, and the Middle/Late Bronze Age vessel in pit 1861 rested on large flat slabs of heathstone deliberately placed on the bottom of the pit. In a recent review of the function of 'potboilers', Seager Thomas (2010) lists a dozen or so Middle to Late Bronze Age pots from Hampshire and Sussex containing assemblages of heated stones, and suggests that in some way the stones may have been treated like dead people (eg, cremated and buried in pots) or were at least a by-product of other aspects of the funerary ritual.

Romano-British

The Romano-British pottery considered here derived from nine features or deposits: pit 1004, midden/spread 1010, pit 1027, midden/spreads 1053 and 1792, quarry 1827, erosion channels 5201 and 5202, and kiln F155, but this material is typical of the assemblage overall. The quantity and range of fabrics from each feature is presented in Table 5, while Table 6 shows the number and range of rims present. The assemblage appears to represent dumps or accumulations of production waste together with small amounts of settlement debris, perhaps vessels used by the potters themselves. The date range of this material is restricted to the end of the Romano-British period (the late 3rd or, more probably, the 4th century AD), with a few sherds perhaps extending into the early 5th century.

Overall, the sherds survive in moderate condition, although with some surface abrasion and edge damage. However, at 24 g, the mean sherd weight has been artificially raised by the presence of numerous large, heavy storage jar sherds which represent up to 10% of the sherds overall.

Coarse greywares represented 92% of the sherds. Most are likely to originate from the local Alice Holt industry whose fabrics vary widely in the frequency and coarseness of the sand filler (Lyne and Jefferies 1979 18, fabrics A–F). It is, of course, possible that some were obtained from more distant sources, but in the absence of distinctive forms or fabrics, no attempts were made to distinguish these. Vessels made in the buff/yellow Overwey/Tilford fabric variant, introduced from *c.* AD 330 (Lyne and Jefferies 1979, 35), were also recognised, especially in midden/spreads 1010 and 1792, pit 1027 and kiln F155, although these wares represent fewer than 5% of the Romano-British sherds overall. Up to one-third of the Alice Holt sherds of both fabric types were discoloured (orange, red, and brown), or very soft compared with the successful hard, grey or buff/yellow products typical of this industry. Discoloured

sherds were especially frequent (up to one-third of the total) in midden/spreads 1010 and 1792 and quarry 1827, strongly suggesting production in close proximity to these features as well as downslope, associated with the extant kiln (F155). Although fewer than 10% of the sherds exhibited clear firing defects (eg, shape distortion, spalling, bloating, surface cracking and blistering), sufficient were present to indicate low-level, or at least occasional, problems with temperature, as well as atmospheric, control.

The surface treatments and decoration also conform to the industry standards outlined by Lyne and Jefferies (1979, 34–7), while most of the vessel forms (Table 6) can be paralleled within the published range for the Alice Holt kilns, although variations in rim form, vessel profile, decoration and/or surface finish are apparent. Many of the rims were broken at or above the neck/shoulder junction, so certain vessel classes, such as the straight-sided dishes and bowls (Lyne and Jefferies 1979, classes 5A and 6B, 5B and 6C) have been combined. Although no complete or partial kiln loads were encountered, a number of complete or substantially complete vessels were identified. These include a cordoned necked jar, a triangular rimmed jar and a convex-sided dish (Lyne and Jefferies 1979, classes 1A, 3C and 6A.8–11), as well as a small globular-bodied jar/bowl and a round, very narrow-necked flask, all displaying clear firing defects, and all from midden/spread 1792. A more or less complete developed beaded and flanged bowl (class 5B) with spalled surfaces was found in quarry 1827, while the upper half of a single-handled, globular-bodied flagon (class 8) with white-slipped and burnished bands on the rim and shoulder and vertical burnished lines on neck was found in kiln F155. A dunting crack in the shoulder of this vessel extends all the way through the wall. Overall, jar forms predominate, (Lyne and Jefferies 1979, classes 1A–C, 3A–C, 4 and 10), with smaller quantities of flanged bowls (classes 5A/6B and 5B/6C), strainers (class 5C), straight- and convex-sided dishes (class 6A) some with raised boss decoration, lids (class 7) and flagons (class 8) (Table 6). Each of these vessel classes included examples with firing errors, although many of the vessels exhibit the ‘wear and tear’ typical of domestic use. The flat bases of at least three medium/large jars (from channel 5201, context 5102, and unstratified in the area of midden/spread 1792, for example, had very worn base angles around part of their circumference and, approximately centrally placed within this area, a vertical groove on their lower walls (Plate 3), as if they had repeatedly tipped forward against a narrow metal spike. On present evidence, the forms span the period from the mid-late 2nd century AD to the late 4th or early 5th century (Lyne and Jefferies 1979, 34–51; Millet 1979), but Millet’s seriation of the industry has been questioned (Orton *et al*. 1993) and the introduction of some of these types may be up to a century too early. Other chronological indicators within the assemblage include the presence of the white or black firing slip introduced from about AD 270, unfinished bases and a relatively high proportion of decorated sherds, including horizontally rilled sherds, suggesting that the bulk of the assemblage can be dated to the 4th century AD (Lyne and Jefferies 1979, 37).

Sherds from less common forms include a small, globular bodied, narrow-necked flask, akin to greyware forms made in the New Forest (Fulford 1975, types 21 and 22) and probably based on colour-coated ware prototypes made by both this industry and the Oxfordshire potters, as well as a small, globular-bodied, necked jar/bowl, both from hollow 1972. Both these vessels were spalled, indicating local manufacture.

Parts of two fairly squat, indented or dimpled jars/bowls with short, everted rims were recovered from the fill of channel 5201 (Fig. 14, 22–23), while indented body sherds were also found in kiln F155 and midden/spread 1010. Although uncommon, sherds from similar Alice Holt vessels have also been found in 3rd century AD contexts at Neatham (Millett 1979, fig. 7.33 and 34, table 1) and among the later 3rd to 4th century AD wasters from the route of the A325 through the Alice Holt Forest (Birbeck *et al*. 2008, 124, fig. 7, 19). A small, square, pre-firing perforation in the base of a grey convex-sided dish otherwise conforming to the shape of Lyne and Jefferies (1979, 48, fig. 38) class 6A.11 vessels, from kiln F155, may indicate that cheese presses were at least occasionally made by the Alice Holt potters. All these vessels probably represent 'curiosities', typically present among kiln assemblages but never distributed much beyond the immediate contact zone of the kilns.

Other notable greyware sherds include a shoulder from a large, thick-walled storage jar (layer 5116) which carried a post-firing, scratched graffito, the surviving letters reading]V DICI A N[(Fig. 14, 24) and a jar base with a scratched X on the underside from midden/spread 1010. Two jar base sherds found in kiln F155 had been deliberately trimmed to form flat discs, and probably represent items of rudimentary kiln furniture. They could have been used as temporary 'floors' or 'setters' within the firing chamber, for example, to level up the floor, to span gaps or separate layers of vessels within the load (Swan 1984, 40).

The other coarseware fabrics (oxidised wares, grog- and flint- tempered and calcareous wares) occurred in only negligible quantities, but form part of the standard range seen at sites such as Neatham (Millett 1986; Powell 2011). Few vessel forms were present among the oxidised wares, although a body sherd from a thin-walled indented form was found in midden/spread 1053, while sherds from a small closed form in a fine-grained sandy fabric which carry part of a post-firing, scratched graffito reading VARU[(Fig. 14, 25) were found in midden/spread 1792. A funnel-necked shouldered beaker (Fig. 14, 26), found inside storage jar 2002 in pit 1004, could be a local product, as similar but more fragmentary beaker rims occurred amongst the greywares from recent excavations along the route of the A325 (Birbeck *et al*. 2008, 126, R113, fig. 7, 20–2). The shape of this vessel, however, is comparable with the standard late Romano-British colour-coated ware beakers from the Oxfordshire region (Young 1977, 152, types C22–25), which became increasingly common in the 4th century AD, suggesting that it, too, may be of similarly late date. The Alice Holt potters are also known to have made at least some use of grog as a tempering material (Lyne and Jefferies 1979, 18, fabrics A and G), but it may be more appropriate to see these vessels as forming part of the crude, hand-made Wessex grog-tempered ware tradition (Tomber and Dore 1998, 139, fabric HAM GT), of the later 3rd and, more commonly, 4th centuries AD.

Both sherds of samian are from Eastern Gaulish sources, one from a Curle 15 bowl and the other from a form 45 mortarium. Although of late 2nd or 3rd century AD date, these pieces are significantly earlier than the bulk of the assemblage and they are therefore likely to be residual. However, a small, post-firing perforation drilled through the wall of the mortarium sherd indicates that this vessel had been repaired in antiquity, and it is possible that this vessel belonged to one of the potters and was perhaps curated over a considerable period of time. The New Forest colour-coated

ware sherds were all from beakers, one with rouletted decoration, from midden/spread 1053.

Other fineware fabrics were limited to products typical of the Oxfordshire region – red and brown colour-coated wares, white wares and white-slipped red wares, including mortaria (Fig. 14, 27) – the vessel forms again showing a 4th century AD emphasis (Table 6). It is possible that at least some of the red colour-coated wares represent attempts by the Alice Holt potters to imitate Oxfordshire products, as many sherds are softer and slightly sandier than usual, of inferior quality and some are burnt. However, as the vessel forms are all well within the range of variation known amongst the products of the Oxfordshire industry and the rounded, multi-coloured, translucent quartz trituration grits are macroscopically indistinguishable from those which so characterise the mortaria from this region, all the sherds have been left as a single fabric group. Although predominantly of 3rd century AD date, local micaceous red colour-coated wares have been identified at Neatham (Millet 1986, 70), while a 4th century mortaria from Abbots Wood, Frithend (Lyne 2000, 103, fig. 8, 25) is also considered a potentially local product. The possibility of red colour-coated ware production in the Alice Holt Forest in the style of the Oxfordshire potters during the late Romano-British period is of great potential significance to broader Romano-British pottery studies, providing the first evidence for fineware production in the region; hitherto, the Alice Holt industry has been considered rooted in coarse kitchen ware production. In addition, it provides evidence for direct links, perhaps even the movement of potters, between the two major pottery industries of the time. However, the chemical analysis required to confirm or refute this possibility, to characterise and distinguish between the products of both industries, lies beyond the scope of this project and remains an avenue for future research.

Of particular interest are the four Alice Holt storage jars from pit 1004 (Fig. 14, 28, object 2002) and midden/spread 1010 (Fig. 15, 29–31, objects 2001, 2033 and 2038). These are unusual not only for their state of completeness but for the nature of the deposits placed within them. Although the upper parts of all four vessels have been damaged, it has proved possible to reconstruct the profiles of three of them and it is only the rim itself of the fourth (object 2001, curiously the smallest of the four), that is missing. The three reconstructable profiles all belong within Lyne and Jefferies (1979, 45, fig. 29) class 4.45; the fourth vessel is probably from a similar form, although the presence of slight cordons and grooves on the upper part of the shoulder may suggest that it is of class 1C.6 (Lyne and Jefferies 1979, 40, fig. 25). Both forms are, however, of similar date – *c*. AD 350–420, which corresponds well with a date in the second half of the 4th century for the other pottery and material types from these features. This date also corresponds well with the radiocarbon determinations of cal AD 240–400 (SUERC-35355) for charred grain found inside vessel 2001, cal AD 250–400 (SUERC-35349) for charcoal inside vessel 2038 and cal AD 250–420 (SUERC-35356) for charred grain from midden/spread 1010, which was cut by the pits (1007, 1167 and 1169) containing vessels 2001, 2033 and 2038.

Although the reasons for the deposition of these vessels remain unclear, it is likely that all were complete when they were placed in their purposely-dug pits. It is conceivable that they served some practical purpose for the potters themselves, although moderately severe dunting cracks in the base and lower walls of two of them

(vessels 2001 and 2002), suggest that storage would have been limited to dry goods. The vessels themselves provide no evidence of the way(s) in which they were used, although found inside vessel 2002 were pieces from a complete Oxfordshire white-slipped red ware mortaria (Fig. 14, 27), an oxidised ware funnel-necked shouldered beaker (Fig. 14, 26), a small, Overwey/Tilford hooked rim jar and a piece of polished sarsen stone, as well as a few stray sherds and fired clay oven/hearth lining fragments. Furthermore, the iron axe-head (Fig. 8, 2) was found inside vessel 2033, while the cow-bell (Fig. 8, 1) was found in a pit (1027) cut into the base of midden/spread 1010. These items may represent some form of special, deliberately-placed deposits made within the vessels, although unfortunately no details of their relative positioning were recorded during excavation.

It may be of relevance that a large, cordoned storage jar (Lyne and Jefferies 1979, type 1C) containing a small amount of animal bone, a beaded and flanged dish (Lyne and Jefferies 1979, type 6C), burnt stone and a number of metal objects was found in a pit close to a late Romano-British pottery kiln at Rookery Farm, Kingsley (Wessex Archaeology 2008), a few kilometres to the south-west of Groom's Farm. The metalwork included three copper alloy coins – an *as* of the Emperor Domitian, minted in AD 86, a *sestertius* of 1st or 2nd century date and a Barbarous Radiate minted in the late 3rd century AD – a highly curious collection to be found together, but indicating that the vessel must have been buried in the late 3rd century or shortly after. Numerous fragments of sheet copper alloy, perhaps derived from the fittings of a box or other container, as well as iron nails, tacks, chain links, a socketed spearhead with a leaf-shaped blade pierced by nails or chain links, a tapered strip or bar, probably from a binding or drop hinge but perhaps deliberately bent in two, and an implement consisting of a diamond-shaped blade with a long, twisted shaft and a knobbed terminal, were also found inside this vessel. The latter implement could have functioned as some form of fire tool, probably a poker (Manning 1985, 144, pl. 70, S134), while the spearhead may represent a more rustic version of a pole-tip such as one in bronze found in a 2nd–3rd century AD priest's cache or votive deposit at Felmingham Hall, Norfolk (Brailsford, 1964, 60, pl. 24, ix).

These vessels may represent some form of special deposits, perhaps to safeguard kiln loads or to mark the end of pottery production in the area.

Stone

by Rachael Seager Smith

The stone includes both portable objects, such as whetstones and querns, as well as fragments without obvious signs of working but probably utilised as building stone. These unworked fragments were mostly of locally available rock types, including Greensand, some showing signs of burning, and ferruginous sandstone (commonly known as heathstone or ironstone). Three pieces of burnt Greensand were included in the Late Bronze Age placed deposit in pit 1012, for example, while the base of the Middle/Late Bronze Age vessel 2112 (pit 1861) rested on large flat slabs of heathstone deliberately placed on the base of the pit. Three pieces of heathstone were also found among the material filling kiln F155 and it is possible that this heat-resistant stone was utilized within the kiln structure itself. More unusual rock types

included a small chip (7 g) of granite found in the secondary fill (5124) of channel 5202. Although other finds from this feature included late Romano-British pottery, fired clay and struck flint, it is possible that this piece derives from a modern intrusion. Although unworked, a flake of fine-grained metamorphic rock (schist or phyllite), from the south-west quadrant of midden/spread 1010 (context 1235) is a highly unusual rock type in this area and its significance here remains unknown.

Portable stone objects from later prehistoric contexts comprise two saddle quern fragments, three possible whetstones and six rounded chert pebbles. Two joining pieces from a burnt Greensand saddle quern formed part of the placed deposit in Late Bronze Age pit 1012, while the second quern fragment, in hard, coarse-grained grey sandstone, came from segment 1265 of Middle–Late Bronze Age ring-gully 1261. A flake from a rectangular, coarse sandstone whetstone was found in Middle Iron Age pit 386, while the slight surface and edge smoothing noted on a triangular piece of heathstone from pit 439 could indicate its use as a whetstone. A flat, trapezoidal sandstone pebble from Late Bronze Age/Early Iron Age post-hole 1071 may also have been used in this way. The chert pebbles, each roughly oval and no more than 50 mm long, were found in Iron Age ring-gully 1144 (a single pebble) and ditch 1219 (five pebbles), although it is unclear whether or not these were utilised, perhaps as sling-shots.

A complete but fragmentary Lodsworth Greensand disc-type quern of late or post-Romano-British date (Curwen 1937, 146, fig. 22 and 23) and showing some signs of burning, was found in late Romano-British midden/quarry spread 1010 (Fig. 16). Querns of this type comprise relatively large, thin, discs of more or less uniform thickness. This example measured 680 mm in diameter and varied from 25–40 mm thick, the underside being left rough and unfinished while the grinding surface was radially tooled with milled edges (Fig. 16). The central cavity was circular and its edges had been smoothed but there was no evidence for a surrounding collar, handle hole or rynd slot. It is unclear whether this stone would have been hand- or mechanically-operated; while Shaffrey (2003, 163) notes that stones over 600 mm in diameter are usually millstones, this example is much thinner than her defining thickness of at least 100 mm. Similar disc-type querns have been found in demolition/collapse deposits inside a corn-drying oven at High Post near Salisbury, Wiltshire; charred wheat grain representing the final (or near-final) firing of this oven has been radiocarbon dated to cal AD 330–540 (1645±25 BP, SUERC-32322) (Powell 2011, 32–3).

Fragments from at least three Greensand rotary querns were also found in layer 1015 within midden/spread 1010, while a fourth, from the south-west quadrant (context 1235), may be from a another disc-type quern; all were burnt. Although fairly small, a rounded heathstone pebble from this layer may have been utilised as a rubber or grinder, or perhaps as a burnisher used by potters, examples of which are already known from the Alice Holt industry (Lyne and Jefferies 1979, 19). A piece from a flat (70 mm thick) sarsen block with finely polished surfaces and part of a single, straight, chamfered edge surviving, was found inside the large storage jar 2002 from pit 1004, just to the north-west of midden/spread 1010. The exact function of this piece is unknown, although it could perhaps derive from a step or a window-cill, a work-bench or table edge.

Three joining pieces from another Greensand rotary quern were found in midden/spread 1792. The top surface of this upper stone was slightly domed, the hopper positioned centrally; the edges of the stone were chamfered and milled while the grinding surface had concentric ware marks. Four other Greensand rotary quern fragments, two with milled edges and all with flat grinding surfaces, were found in quarry 1827 on the western edge of midden/spread 1010. All of these pieces showed signs of burning. Swan (1984, 50) notes that querns are common finds on Romano-British kiln sites and suggests that, as well as being used to prepare food for the potters and their workmen, they could have been used either to grind up tempering materials or the ingredients for slips, or as components of potters' kick-wheels. Other examples are already known in the Alice Holt Forest area, from AH52 (Swan 1984, 50) and waster dump AH65 (Lyne and Jefferies 1979, 19), for example.

Other Finds

by Rachael Seager Smith

Animal bone

Animal bone did not survive well in the acidic and abrasive sandy soils of the area. In addition to the modern animal burials in pits 1131 (sheep, less than two years old), 1769 (cow) and 5006 (sheep), and cattle bones, including an axis vertebrae and an upper molar from different individuals, from the 12th–13th century pit 617, only a few tiny scraps were recovered. These mostly consisted of pieces of burnt antler from contexts associated with midden/spread 1010 (contexts 1015, 1020, 1234 and the fills of storage jars 2033 and 2038); one piece (from vessel 2038) was sufficiently large to suggest that it came from a roe deer.

Shale

Roughly half a perforated Kimmeridge shale object (35 mm in diameter and 20 mm thick), made from a re-worked lathe-core, was also found in midden/spread 1010 (context 1015). The item is probably too small and light to have functioned as a spindle whorl, although a similarly-sized Iron Age example is known from Danebury (Cunliffe 1984, 396, fig. 7.41, 4.7), and it may represent a large bead (cf, Woodward 1987, 108, fig. 58, 267).

Glass

The glass included seven Romano-British pieces, all the others (both vessel and window fragments) being of post-medieval/modern date. The Romano-British glass included a piece from the fire-rounded rim of a small, fine, clear glass cup found in an otherwise undated gully (149). Five other fragments came from midden/spread 1010. These included part of a fire-rounded rim with pincer marks from a pale blue/green jug with a pulled-out spout and a globular or discoid body (Price and Cottam 1998, 159–61, fig. 70) of 2nd to 3rd century AD date and part of a tubular footring base (Price and Cottam 1998, 25, fig. 3, 7). Although bases of this type were common on a variety of forms throughout the Romano-British period, the green colour (as opposed to blue/green) of this piece suggests that a late Romano-British date may be more

likely. A piece from a green, narrow-necked vessel with a vertical, edge cracked off and ground rim, and the two green glass body sherds, one from another narrow-necked vessel, are also likely to be of late Romano-British date. The seventh piece, another green glass body sherd, was found unstratified in the 1998 excavation area.

Slag

Just over 1 kg of highly vesicular slag was found in layer 5116, associated with pottery of 4th century AD date, while small fragments also came from channel 5201 and kiln F155. This material is likely to represent fuel ash slag, probably derived from the kilns of the Alice Holt pottery industry.

Cremated Human Bone

by Jacqueline I. McKinley

Cremated bone from two features (1062 and 1856) situated *c*. 80 m apart in the north-western part of the site was subject to analysis. Both features were located in the vicinity of one of several groups of 'pot pits', but the nature of the bone deposits is inconclusive. Radiocarbon dating of the bone from pit 1062 corroborated the Middle/Late Bronze Age date indicated by the pottery (Table 12). The date of the material from pit 1856 (insufficient bone for radiocarbon dating) is suggested by that of the adjacent 'pot pit' (2111; *c*. 0.4 m distant) as Middle–Late Bronze Age, although there may be no connection between the two features.

Methods

Osteological analysis of the cremated bone followed the writer's standard procedure (McKinley 1994, 5–21; 2004). Age was assessed from the stage of skeletal development (Scheuer and Black 2000), and the patterns and degree of age-related changes to the bone (Buikstra and Ubelaker 1994). Insufficient evidence survived for the sex of the individuals to be deduced.

Results

The features survived to relatively substantial depths, both being greater than 0.1 m (1856 at 0.11 m and 1062 at 0.17 m); depths of 0.1–0.2 m are within the average recorded for cremation graves across the temporal and geographic range in Britain. Both charcoal-rich fills were apparent at surface level and there is likely to have been some horizontal truncation of the features. The locations within the fills of the very small quantities of bone recovered (only 18.1 g and 1.6 g respectively) were not recorded and it is possible, although unlikely, that some bone may have been lost due to this disturbance.

The predominantly small bone fragments (majority from 5 mm (1062 – 61%) or 2 mm (1856 – 69%) sieve fractions; maximum fragment sizes 28 mm and 11 mm respectively) are slightly worn in appearance, and no trabecular bone (subject to preferential loss in acidic soil conditions as seen at Groom's Farm; McKinley 1997a, 245; Nielsen-Marsh *et al.* 2000) was found.

The remains represent those of an unsexed subadult/adult >13 years of age (1060, cut 1062) and an infant/juvenile *c*. 2–7 years of age (1857, cut 1856). No pathological lesions were observed. The overall numbers of cremation burials known for this period remain relatively small despite those which have been found – often with the assistance of radiocarbon dating on otherwise undated deposits – in recent years (eg, Brown 1996, 29; Lewis and Batt 2006; McKinley 2008; Timby *et al.* 2007; Webley *et al.* 2007, 139). Most occur, as here, either as singletons or small dispersed clusters indicative of small, probably equally dispersed domestic settlements/households. Their location within the vicinity of the 'pot pits' at Groom's Farm may be deliberate – the latter being in some way linked with mortuary rites (eg, cenotaphs), or purely fortuitous; the singularity of the cremation-related deposits and lack of consistency in their presence amongst the various 'pot pit' groups suggests the latter may be more likely.

All the cremated bone is white in colour, indicating a high level of oxidation of the bone (Holden *et al.* 1995a and b); it should be noted, however, that some poorly oxidised bone may be subject to preferential destruction in strongly acidic burial conditions. The weight of bone recovered from the fills is extremely small, that from 1060, for example, representing only *c*. 1% of the average expected from an adult cremation (McKinley 1993). Although some bone may have been lost in response to taphonomic influences the quantity is unlikely to have been substantial. This, together with the apparently dispersed distribution of the bone amongst the fuel ash (since no concentration was observed), indicates both these deposits represent redeposited pyre debris rather than the remains of burials; ie, most of the bone from both cremations was collected and deposited/distributed elsewhere. The recovery of pyre debris from a variety of deposit types in the Bronze Age, including 'formal' deposits such as appear to be represented here, is relatively common (McKinley 1997b).

Palaeoenvironmental Remains

Charred Plant Remains

by Chris J. Stevens

A total of 130 bulk samples were taken from all phases of fieldwork. Sample sizes ranged from 2 to 80 litres, but most were around 10 to 15 litres. The samples were assessed for the preservation of charred cereals, charcoal and other charred remains and, on this basis, a number were selected for more detailed analysis. Sixteen were selected for charcoal analysis (see below) and eleven, all from the 1994–2001 excavations, were selected for charred plant remains, with a further two grain-rich samples scanned in detail.

The earliest sample came from Early Bronze Age pit 439. Most came from Middle to Late Bronze Age features, although these produced relatively few remains and only four samples were analysed in detail. These included pit 1312, cremation-related deposit 1062 and pot 2022 from pit 1032. A relatively small number of Early Iron Age features were sampled but these produced few or no remains. Seven samples were analysed from features of late Romano-British date. Of these, six were

associated with buried pots and the midden deposits. A single sample was scanned from 12th to 13th century pit 5032.

Methods

The samples were processed by flotation in a modified Siraf-type machine, with the flots collected onto a 500 µm mesh, with the exception of those seen to be mineralised or containing richer 'ashy' deposits, which were collected onto a 250 µm mesh. The residues were fractionated and sorted and the flots dried and sorted under a low-powered binocular microscope. Plant macrofossils were then extracted, identified and quantified. The plant taxa identified from each sample are shown in Tables 7 and 8 following the nomenclature of Stace (1997) for native species, Zohary and Hopf (2000) for cultivated taxa and using the traditional nomenclature for cereals of Zohary and Hopf (2000, 28, table 3, and 65, table 5).

Results

Early Bronze Age

While there were only small amounts of oak charcoal (see below), this sample, from pit 439, produced at least ten whole kernels of acorn (*Quercus* sp.*)* (Table 7), most likely pedunculate oak (*Quercus robur*), rather than sessile oak (*Quercus petraea*). It should be noted that no remains of acorn cups were recovered, although a number of parenchyma fragments are likely to be from acorn kernels. A reasonably large number of hazelnut fragments were also recovered. A radiocarbon date 1760–1610 cal BC (SUERC-35354) on one of the kernels indicates that the deposit dates to the very end of the Early Bronze Age, bordering on the transition with the Middle Bronze Age.

Middle to Late Bronze Age

These samples generally produced very few remains(Table 7), with occasional cereal grains of barley (*Hordeum* sp.), hulled wheat (*Triticum dicoccum/spelta*) and quite possibly rye (*Secale cereale*), the latter from cremation-related deposit 1062. Remains of rye of such an early date are unusual, but the grains were more characteristic of this type than, for example, hulled wheat. Two of the hulled wheat grains from the fill of pot 2022 in pit 1032 more closely resembled emmer (*Triticum dicoccum*) than spelt and these were radiocarbon-dated to the Middle to Late Bronze Age transition, at 1260–1010 cal BC (SUERC-35357). Chaff, comprising three glume bases, was only present in pit 1312.

Weed seeds were relatively rare with just a single grain of oats (*Avena* sp.) from pit 1032 and a single seed of dock (*Rumex* sp.) from pit 1312. The cremation-related deposit also had a single seed of vetch/tare/wild pea (*Vicia/Lathyrus*) and three tubers of onion couch grass (*Arrhenatherum elatius* var. *bulbosum*).

Romano-British

The late Romano-British samples were somewhat variable in terms of the remains present (Table 8). That from quarry 1827 had well over 3000 grains of hulled wheat,

but relatively few glume bases, probably little more than 30. The only other remains from this sample were grains of oats and/or brome grass (*Bromus* sp.).

The samples associated with the pot fills and the middens/spreads were much more variable in the remains they produced, with those from one of the middens (1010) containing very few charred remains. Cereal remains were most prolific within pit 1007, pot 2001, although there were relatively few weed seeds or chaff. The sample from this feature produced fairly high numbers of grains of hulled wheat, along with several glume bases; only in two cases were these well enough preserved to allow the identification of spelt wheat (*Triticum spelta*). Other remains included single fragments of hazelnut shell (*Corylus avellana*) and stones of sloe (*Prunus spinosa*). The weed seeds present included occasional seeds of goosefoot (Chenopodiaceae), redshank/pale persicaria (*Persicaria maculosa/lapathifolium*), clover (*Trifolium* sp.), vetch, and oats.

Two samples from the fills of pot 2002 within pit 1004 were broadly similar, although (1084) was notably richer than (1006). Both had cereal grains including single grains of barley, but mainly those of hulled wheat, most probably spelt, but neither contained any glume bases. Slightly more unusual was a probable seed of coriander (*Coriandrum sativum*).

The various deposits contained several other potential food resources or cultigens. These included fragments of hazelnut shell and stones of sloe, the latter invariably with evidence of rodent gnawing. From similar environments were a few seeds of crab apple (*Malus sylvestris*). Other remains included probable seeds of strawberry (*Fragaria vesca*), and several seeds of black mustard (*Brassica nigra*) might also be of a cultivated species, but are equally found within arable fields and disturbed areas, and more commonly recovered from sites close to the sea.

A wide range of other seeds of various habitats was also recorded including several whole fruits of branched bur-reed (*Sparganium erectum*), probable common sedge (*Carex nigra*), spike-rush (*Eleocharis palustris*) and a capsule of rush (*Juncus* sp.), all associated with wetlands. Seeds of heath grass (*Danthonia decumbens*) are common on wet, acidic rough grasslands and buttercup (*Ranunculus* sp.) is also found in wetter grasslands in general. Fairy flax (*Linum catharticum*), narrow fruited corn-salad (*Valerianella dentata*), self-heal *(Prunella vulgaris*) and ribwort plantain (*Plantago lanceolata*) might all be seen as more characteristic of drier, calcareous, grasslands. Other seeds present included oats, dock (*Rumex* sp.) and meadow grass/cats' tails (*Poa* sp./*Phleum* sp.), thistles (*Carduus/Cirsium* sp.), clover (*Trifolium*) and vetch/wild pea, although these are all associated with a range of grassland habitats. Also present was evidence for a large number of grass (Poaceae) stems comprising culm nodes and culm internodes.

Discussion

Early Bronze Age

Charred remains of wild foods in Late Neolithic to Early Bronze Age contexts are common (Moffett *et al*. 1989); for example, Easton Lane near Winchester (Carruthers 1989), as is the general absence of evidence for cereal agriculture. However, given the relatively late Early Bronze Age date of the deposit, 1760–1610 cal BC (SUERC-35354), cereal cultivation is likely to have been present in the general area at this time (Stevens and Fuller 2012).

The remains of acorns are slightly more unusual in the Early Bronze Age. While commonly used as a food resource in other parts of the world, and in southern Europe, they are rarely found on British sites, and indeed the high tannin content of the acorn from common British oaks might have precluded their regular use as a food resource. However, they are recorded as having been used both for swine and as a famine food in Saxon times (Grieve 1985).

Middle/Late Bronze Age

As with many sites of this general date in southern England, there is often only limited evidence for cereals, with few remains of weed species. For example, Easton Lane produced little or no such remains from later Bronze Age features (Carruthers 1989). However, reasonably rich deposits of emmer wheat have been recorded from some other sites in Hampshire during this period, in particular from Middle to Late Bronze Age contexts at Adanac Park, Southampton, (Pelling 2011) and Meonstoke (Wessex Archaeology 2006), in keeping with the general evidence for its cultivation at this time.

Remains of tubers of onion couch grass are common within Bronze Age cremation deposits, and have been recovered from Bronze Age ring-ditches in Hampshire (see Clapham 2000). Such remains can probably be related to the clearance of grassland to create fire-breaks, the grass then used as tinder in funeral pyres (Stevens 2009). Furthermore, the presence of tubers of onion couch grass does point to cremations taking place in areas of open grassland that were not intensively grazed (cf, Robinson 1988).

The occurrence of grains of rye (*Secale cereale*) is unusual for the Bronze Age, especially since it is generally not believed to have become a crop within Europe until the later part of the Iron Age (cf, Behre 1992). Grains of rye have been recovered from Middle Bronze Age contexts at Bray, Berkshire (Clapham 1995), although in the absence of radiocarbon dating such remains should be regarded as potentially intrusive.

Romano-British

While only a few glume bases were recovered, the main wheat appears to have been spelt, which is fairly typical of Romano-British sites in southern England (Grieg

1991). In general, domestic sites of this date are glume-rich, indicative of the generation of waste from the processing of crops on a regular basis taken from storage (see Stevens 2003). In contrast to these typical domestic settlement assemblages, the samples from Groom's Farm comprise what appears to be relatively clean grain, as opposed to waste. It might be noted that grain often survives much better than glume bases, and samples taken from clear deposits of burnt ears at Ham Hill, Somerset, contained no glume bases at all (personal observation). As such, it is possible that the deposits at Groom's Farm might just as easily have derived from burnt ears or spikelets as clean grain, and this is particularly true of the quarry sample. The possible seed of coriander and those of black mustard might represent further cultigens, and it might be noted that at least the latter is likely to have been cultivated in the Middle to Late Iron Age (de Moulins 1995).

The remains of hazelnut shell, crab apple, sloe and possible strawberry would appear to represent the charring of remains of wild foods collected from scrub or open woodland. The presence of gnawed stones of sloe, however, suggests that such material lay in the open for some period prior to becoming charred.

The remainder of the late Romano-British assemblage appears to represent the burning of material from a mixture of habitats. The general impression is that it represents the burning of material collected from the clearance of grassland, although it might come from weeds burnt with whole ears of cereals. This latter interpretation, however, seems less likely given the general absence of larger cereal sized culms and culm nodes of grasses, and also given the much higher number of weed seeds in comparison to cereal grains within these deposits. The presence of fruits of branched bur-reed is also difficult to explain given that they are most common in channel deposits, although they can be found on drier land adjacent to such habitats. It is possible that they come from either clearance episodes, or possibly the deliberate burning of sheaves of hay from various habitats. Although the range of species is not necessarily characteristic of hay meadows, many of those present are capable of growing in such habitats, especially if relatively unmanaged.

The late Romano-British assemblages associated with the four deliberately placed pots are unusual and the exact circumstances leading to their formation are difficult to interpret. The material associated with pot 2002 appears unique in that similar material was not observed within any of the other samples. It is, therefore, quite possible that this material was associated with events surrounding the placing of the pot within the midden. As such it is quite conceivable that the material was deliberately charred, including the cereal grains of spelt. The remains of hazelnut, crab apple, sloe and strawberry appear to have been from waste, which in the case of sloe must have been left for a while prior to its charring. It would be expected, however, that the rodents responsible for the gnawed sloes would also have consumed much of the grain, which is otherwise very well preserved, and they may have been charred in a separate event. The assemblages of grain from other parts of the middens/spreads would also further suggest the deliberate burning of whole ears, spikelets and/or clean grain.

Wood Charcoal

by Catherine Barnett

Sixteen charcoal samples were chosen for analysis in order to investigate aspects of late prehistoric and late Romano-British activity at the site. Of particular interest was the possibility of elucidating the sourcing and use of wood for the Alice Holt pottery industry.

Methods

All wood charcoal >2 mm was separated from the processed flots and the residue scanned or extracted as appropriate. Most samples proved moderately or very rich and therefore a proportion of each was selected which was felt to be representative of the sample as a whole. This was normally 100 or 200 fragments. Smaller samples were identified in their entirety. The fragments were prepared for identification according to the standard methodology of Leney and Casteel (1975; see also Gale and Cutler 2000). Identification was undertaken according to the anatomical characteristics described by Schweingruber (1990) and Butterfield and Meylan (1980) to the highest taxonomic level possible, usually that of genus, with nomenclature according to Stace (1997). Individual taxa were quantified (mature and twig separated), and the results tabulated. The high proportion of roundwood found in this analysis enabled further investigation of the age of cut wood to be undertaken, in particular where the exact number of growth rings could be counted.

Results

As shown in Table 9, the number of species represented at the site was relatively restricted, despite the sometimes exceptional volume of the assemblages, with ten identified in total. Of these, only five taxa were found for the Bronze Age and Iron Age periods and nine for the Romano-British. The assemblages are described by phase and feature type below (Table 10).

Early Bronze Age

Pit 439 proved to contain only small numbers of oak (*Quercus* sp.), both mature and twigwood, and little can be inferred from this sample in isolation.

Late Bronze Age–Early Iron Age

The charcoal assemblage from cremation-related deposit 1060 proved extremely limited in terms of species, condition and volume of material. The only identifiable pieces were of oak, both mature and twigwood. The consistent use of oak for pyres is well documented, providing readily available dense wood with a high calorific value (Edlin 1949; Gale and Cutler 2000). Of more interest given the context is the highly vitrified nature of the remaining unidentifiable pieces, with the experimental work of Prior and Alvin (1983) indicating a temperature of >800°C.

Pits 1065 and 1067 both provided substantial charcoal assemblages. These were overwhelmingly dominated by large oak pieces at 98.5% and 100%, respectively. In addition, pit 1065 contained a small quantity of pomaceous fruit wood, which may have been used as kindling.

Early Iron Age pot (object 2029) in pit 1043 contained large pieces of roundwood including oak cut at 10 years and 70% hazel cut at 5–6 years and 11–13 years. In addition, there were small quantities of ash (*Fraxinus excelsior*) and the only representation of ivy (*Hedera helix*), likely to have been included adhering to one of the other wood types rather than being specifically selected for fuel use.

Romano-British

Many late Romano-British samples were very rich in charcoal and 11 were selected for analysis. These are described below and interpreted together since they seemingly represent a single phase of broadly associated activities.

Scoops 5179 and 5183, possibly pottery kiln related, proved particularly rich, with 5179 producing in excess of 2 litres of charcoal. The assemblages from both of these features contained only two taxa and were heavily dominated by roundwood. That from 5179 was mainly oak (*Quercus* sp., at 97% oak roundwood), while that from 5183 had both oak (at 40%) and hazel (*Corylus avellana*, at 45%) roundwood. The remainder of the assemblage was of mature pieces of oak and hazel. The volume of roundwood in these two scoops has enabled consideration of the age when cut profile of these assemblages (Table 11). The oak pieces from 5179 were cut at between 3 and *c*. 32 years of age, but dominantly at 5–15 years (*c*. 63%) and 21–26 years (*c*. 22%), while both the oak and hazel from 5183 were cut at 5–25 years.

The three substantial assemblages from the charcoal-rich layers within erosion scar F151 all proved to contain only oak charcoal fragments. Mature wood dominated, but roundwood cut at 5–16 years was also common. Partly vitrified pieces were common in the assemblage from context F85, indicating a high temperature of burn (>800°C, Prior and Alvin 1993), while some of those from F83 were fissured, indicating they were damp when burnt.

Charcoal was not recovered from most of the definite kiln contexts in any significant quantity, which would be consistent with the features being regularly cleaned of spent fuel. Occasional pieces of highly vitrified puffed, possibly organic, matter were, however, noted in kiln F116, which may derive from fuel burnt at high temperatures. Like other late Romano-British contexts, this assemblage was heavily dominated by oak (at 90%), with lesser hazel but this was of mature pieces. In addition, a few pieces of Pomoideae charcoal were identified which may represent kindling.

Two large pots (objects 2001 and 2002) within midden/spread 1010 were found to be full of charred material. The composition of the charcoal assemblages varied greatly between the two vessels, with that from pot 1007 (object 2001) comprising 95% oak, with a small quantity of oak roundwood, and 2% ash. Pot 1004 (object 2002) was dominated by hazel roundwood at 61%, all of which had been cut at 5–10 years, with lesser mature oak and hazel and oak roundwood, the latter cut at 20–22 years. Ash was again present (at 8%) but also holly (*Ilex aquifolium*) roundwood, cut at 5 years.

Pot 1169 (object 2038) was, like pot 1007, heavily dominated by oak, mainly mature, but in this case no other lesser taxa were found.

Quarry 1827, on the western edge of midden/spread 1010, contained a small number of large, well preserved (though mineralised) charcoal pieces. Oak was common with lesser amounts of hazel, holly and the only representations of hornbeam (*Carpinus betulus*), probable cherry type (*Prunus* sp.) and willow/poplar (*Salix/Populus* sp.).

The charcoal assemblage from pit 1027 was heavily dominated by (mature) oak, accompanied by a little hazel roundwood and the only occurrence of possible beech (*Fagus sylvatica*).

Discussion

The overall dominance of oak as a fuel source for cremation and other activities has been demonstrated for the later prehistoric contexts at Groom's Farm. However, the dominance of rod-like hazel roundwood in Early Iron Age pot 1043 (object 2029) provides a hint that management of hazel stands in the form of coppice may have operated during this period.

Evidence for such woodland management becomes stronger for the Romano-British period from the contexts analysed. A set of large and apparently consistent assemblages in terms of taxa have been described. Mature and oak roundwood plus hazel roundwood dominate overall, although one or the other tends to be heavily dominant in individual features. Of the 1550 charcoal fragments identified from late Romano-British contexts, only 29 pieces were of other taxa. Estimating the age of the roundwood when cut shows a clear propensity for the hazel rods at 5–10 years, although pieces ranging from 2–35 years were found. The oak roundwood was also cut at a range of ages, although 5–10 years again often dominated and pieces up to 25 years were also common. More mature oak was also much utilised, with evidence of larger timbers, collected locally or brought in from further afield. A pattern of regular coppicing is apparent, providing a predictable and substantial fuel source for the Alice Holt pottery industry.

The material in the large pots (objects 2001 and 2002), while different to each other, showed some similarity to the kiln and dumped fuel assemblages in that oak and hazel roundwood heavily dominated. However, ash pieces occurred in only these late Romano-British samples, as well as holly. This slight disparity may be due to differences in the sources of the material, although it might be attributed to a chronological difference. Possibly, the pottery kilns fell into disuse and the exploitation of woody types slightly broadened, perhaps as coppice yields somewhat declined or became less reliable.

Analysis of charcoal has also previously been undertaken for a substantial kiln related to the Alice Holt pottery industry, where a somewhat greater range of taxa was found (Birbeck *et al.* 2008). There, a contrast in the assemblages from the north and south flues was apparent. Mature oak was common in the north flue, accompanied by alder (*Alnus glutinosa*) and hazel roundwood, with lesser amounts of oak roundwood, field maple (*Acer campestre*, both mature and roundwood), birch (*Betula* sp.), hazel, ash, willow/poplar and Pomoideae. Oak also dominated the south flue, but at least half of it was young rod-like

pieces of roundwood up to 15 mm in diameter, cut from 2–5 year old growth (most of it at 3 years). Many of the fragments were fissured and partly vitrified, indicating, as in one of the assemblages from erosion scar F151 at Groom's Farm, high temperatures of burn and possibly the use of damp wood in this flue. The south flue also contained willow/ aspen and birch, with lesser quantities of hazel, ash, holly and Pomoideae. A contrast in the temperatures attained is indicated, assisted by the use of smaller tinder and grass and weed stems in the south flue. This contrast between different parts of the kiln may also hold true for the larger assemblages described from Groom's Farm which had already been removed from the kilns and dumped, hence the appearance of lesser taxa only in particular deposits. The charcoal from both analyses is also comparable to a smaller assemblage previously described from another kiln waste dump, AH5, where roundwood dominated, mostly oak but with hazel and possible willow also described (Pratt 1979).

Radiocarbon Dating

by Chris J. Stevens and Alistair Barclay

Nine samples were selected for radiocarbon dating, four from prehistoric features and five from Romano-British deposits. The prehistoric samples included a single kernel of charred acorn (*Quercus* cf *robur*) from Early Bronze Age pit 439, associated with fragments of Collared Urn, and a long bone from Bronze Age cremation-related deposit 1062. Two grains of probable emmer wheat (*Triticum dicoccum*) were selected from a large intact pottery vessel (object 2022) within pit 1032 of later Bronze Age date, and a charred fragment of hazel (*Corylus avellana*) charcoal was submitted from a further later Bronze Age pottery vessel 2112 within pit 1861.

The remaining five samples were all from probable late Romano-British features and deposits. From midden/spread 1010 three grains of probable spelt wheat (*Triticum spelta*) were selected, along with another three grains of probable spelt from pot 2001 within cut 1007 associated with the midden. A sample of oak twig charcoal in pot 2028 in cut 1169 was also submitted. It was hoped that the dates from the material within the pottery vessels might provide some indication as to whether these large vessels were inserted at a later date into the midden deposit or were broadly contemporary with it. However, it was always considered that there was the likelihood that the pots were filled with material from the midden and, therefore, that the samples might only yield results of similar date to the midden itself.

Of the other two Romano-British samples, one came from the fill of pottery kiln F117, which is likely to have gone out of use within the Romano-British period, although it was unknown to what extent it might have been contemporary with the midden. The other sample comprised oak roundwood charcoal from a charcoal-rich layer (81) that was thought to be related to the clearing out of spent fuel from the pottery kilns.

Results

The radiocarbon determinations were calibrated using OxCal 4.1.7 (Bronk Ramsey 2001; 2009) and the IntCal09 calibration curve (Reimer *et al.* 2009), and are quoted in

the form recommended by Mook (1986) with the end points rounded outward to 10 years (Table 12).

The acorn from pit 439 provided a date of 1760–1610 cal BC (SUERC-35354), in the latter part of the Early Bronze Age, as anticipated. Cremation-related deposit 1062 indicated a date of deposition at the end of the Middle Bronze Age, into the transition to the Late Bronze Age, at 1370–1110 cal BC (SUERC-35346). Pottery vessel 2022 in pit 1032 produced a similar date of 1260–1010 cal BC (SUERC-35357), and thus the placing of this and the cremation-related deposit are potentially contemporary (χ^2 df=1 T=2.0 (5% 3.8)).

The hazel charcoal from Late Bronze Age pot 2122 (pit 1861) produced a Late Saxon date of cal AD 890–1020 (SUERC-35353). The sample had relatively few modern roots and it was therefore considered that the chances of intrusive material within this deposit would be minimal. However, given the returned date, it must be assumed that some material was intrusive in the pot and that the date is, therefore, unreliable. It might be noted that as the pot was likely to have gone into the ground unbroken, but had since become broken and fragmented, indicating that some disturbance in antiquity must have occurred.

The remaining five samples are all broadly statistically contemporary (χ^2 df=4 T=0.9 (5% 9.5)), the dates covering the period between 240 and 420 cal AD. The three from the midden area, at cal AD 250–420 (SUERC-35356) on grain from the midden itself (1010), cal AD 250–420 (SUERC-35349) from charcoal in pot 1169, and cal AD 240–400 (SUERC-35355) from grain in pot 2001, all cover the same broad date range (χ^2 df=2 T=0.5 (5% 6.0). Furthermore, the remaining two dates, from pottery kiln F117, at cal AD 250–420 (SUERC-35348), and charcoal dump 81, at cal AD 250–410 (SUERC-35347), also suggest a similar broad period of activity in the late 3rd to 4th century AD.

Discussion

The excavations at Groom's Farm revealed evidence for human activity from the Mesolithic through to the medieval period, in the form of flint scatters, domestic settlement, agricultural land divisions, ritual practices and pottery production.

Prehistoric

The earliest remains comprised a scatter of Mesolithic struck flints, with a concentration in the northern half of the 2000 excavation area. Much of this material was recovered from the topsoil and subsoil, and is likely to represent only a proportion of the original assemblage. However, the evidence from similar sites in the vicinity suggests that it is probable that the site was visited, perhaps repeatedly, by bands of prehistoric hunter-gatherers at various times in the Early and Late Mesolithic. This is not altogether surprising as the combination of a headland of high ground overlooking a watercourse is a typical location for a small Mesolithic camp.

This Mesolithic presence is always likely to have been transient, and linked to the availability of food resources. Indeed, despite the introduction of agriculture to Britain during the Neolithic, the earliest evidence for agriculture and settlement in the vicinity of the Groom's Farm site dates to the Middle Bronze Age. The single earlier feature, pit 439, containing sherds of Collared Urn, provided no evidence of an agricultural landscape. Instead the charred remains recovered comprised hazelnut shells and acorn kernals, and it seems that wild foodstuffs may have continued to be important well into the Early Bronze Age. No human bone was found and there is no indication that the vessel, probably complete when placed in the pit, was associated with a burial.

By the Middle Bronze Age the pattern of land-use had changed. The Middle–Late Bronze Age settlement at Groom's Farm, which continued into the Late Bronze Age and Early Iron Age, lay within a landscape that appears to have been extensively cleared. Although environmental samples contained very little evidence for cereal cultivation and processing, several fragmentary quernstones were recovered, suggesting some processing did take place on site. The small quantities of animal bone surviving in the acidic soils make it impossible to draw firm conclusions on the levels of pastoral agriculture. However, the co-axial field systems which seem to have developed in the Late Bronze Age and Early Iron Age, associated here with trackways, would have been well suited to animal husbandry. The location of Groom's Farm, on a headland above the floodplain of the river valley, would have allowed access to areas of fertile floodplain on which crops could be grown, whilst the sands on which the site lay were probably better suited to pasture.

The settlement appears to have gradually shifted in focus over time, with the earliest structure, represented by a partial ring-gully (1261), and associated features in the western and central parts of the site, and later Early–Middle Iron Age settlement found mainly in the central and eastern parts. Where evidence for domestic structures survived, this tended to take the form of clusters of post-holes associated with short lengths of drip gullies. The remains of only one of these structures, a Middle Iron Age round-house, were sufficiently coherent to indicate the location of an entrance, in the south-east side.

There is also some limited evidence for other, probably ancillary structures, including a small circular Late Bronze Age/Early Iron Age curvilinear ditch (539) some 5 m or so in diameter, probably defined a small circular structure. There was also a Late Bronze Age/Early Iron Age four-post structure (1419) and a Middle Iron Age six-post structure (702). Similar structures are common features on settlements of this period, and are traditionally interpreted as granaries, although they could have served a variety of other functions.

Early settlement on the site appears to have been unenclosed, prior to the subdivision of the landscape in the Late Bronze Age/Early Iron Age, when contemporary settlement on the site was largely confined between the trackway formed by ditches 1160 and 1200 and trackway 367. This was also the focus of Early Iron Age activity, and it is was in the Middle Iron Age, with the digging of enclosure ditch 540, that the settlement shifted further to the east.

It seems unlikely that settlement at Groom's Farm was ever very dense, and it is probable that the excavated remains represent a farmstead, perhaps comprising a

single extended family unit. Nevertheless, it appears that the settlement was long-lived, with the pottery suggesting that the site was occupied from the Middle/Late Bronze Age through to the Middle Iron Age, although probably not continuously.

The longevity of settlement is mirrored in the extended practice of burying pots in pits. Their distribution follows a similar pattern from the Middle Bronze Age to the Early Iron Age, with most pits concentrated in a linear zone, on a north-east to south-west axis which does not correspond with any of the surviving late prehistoric boundaries. In only one case does the burial of a vessel (in Middle/Late Bronze Age pit 1062) have a clear funerary association, and none of the remaining vessels, which range in date from the Middle Bronze Age (a Deverel-Rimbury style Bucket Urn in pit 1836) to several Early Iron Age pots, is associated with human remains. However, there are a number of similarities between the pits, the pots and their contents which suggest that their deposition represents a long-term tradition. The majority of pits appear to have been dug to contain a single pot placed upright, with only one inverted example, in Early Iron Age pit 1851.

Very few pots were associated with other artefacts. Nevertheless, it is unlikely that pottery vessels were the only objects or materials being deposited, and at least some of the pots may have served as containers for some perishable commodity. Only in pit 1012 were several other objects deposited, in this case two loomweights and a fragment of saddle quern, along with a small quantity of charred material. This group is interesting, as it contains items and debris which could be seen to represent key elements of the economy of the settlement: weaving, crop processing and possibly cooking, as well as the vessel itself. It seems reasonable to assume that the burial of these vessels, along with whatever objects and materials were selected for deposition with them, represent some sort of propitiatory act, perhaps for continued or renewed prosperity. Within this context, the burial of three burnt and broken Early Iron Age pots in pit 316 might also be of some significance. Whilst it is possible that this was simply the disposal of pots damaged and burnt in a house fire, it is tempting to suggest that they represent the final act of deposition within the sequence, with the burnt and broken pots contrasting with the intact pots buried earlier.

There are parallels for the placement of pots in pits at other sites in Hampshire (Woodward 2000, 51–2), as well as further afield, although the number and sequence at Groom's Farm is rather unusual. At Twyford Down, Hampshire, for example, eight Late Bronze Age vessels were recorded at approximately equal intervals along one or two alignments, perhaps related to some sort of topographical boundary (eg, trees, fence, hurdles, hedge or lynchet) subsequently destroyed by ploughing (Woodward 2000, 32). This may also have been the case at Groom's Farm, with such a boundary perhaps marking the northern extent of the settlement and lying broadly parallel to the River Slea some 200 m to the south, although, as noted above, there is no other surviving evidence for this boundary. Research over the last 30 years (eg, Drewett 1982; Ford 1982; Bradley *et al*. 1994) has indicated that complex processes of land division were taking place over much of central southern England during the Late Bronze Age and Early Iron Age, sometimes reinforced and perhaps legitimised by special, placed deposits. It is possible that such vessels could have served as containers for other commodities, perhaps even perishable ones, placed at intervals along these boundaries, rather than as meaningful deposits in their own right.

Romano-British

The large quantities of late Romano-British pottery recovered from the site, together with the coins and radiocarbon dates, all suggest that Romano-British activity at Groom's Farm was relatively short lived and probably confined to the 4th century AD. The main focus of this activity was the manufacture of pottery, forming part of the wider Alice Holt industry.

One kiln was certainly identified, comprising a single-chambered twin flue kiln, typical of those found in the area (Swan 1984, 78, 117ff; Lyne and Jefferies 1979). Most of the vessel forms produced by this kiln (and possibly others nearby) can be paralleled within the published range for the Alice Holt kilns (Lyne and Jefferies 1979), as can the surface treatments and decoration, although there are minor variations in rim form, vessel profile, decoration and/or surface finish.

It seems likely that the material comprising the various middens/spreads was largely derived from waste generated by the nearby pottery kilns. Charcoal analysis indicates the use of oak and hazel coppiced woodland to produce vigorous straight shoots as a fast-growing crop (eg, Edlin 1949, 82–4; Buckley 1992), unsurprising given the amount of fuel that would have been required by the Alice Holt pottery industry. An experimental firing of the type of kiln found at Alice Holt showed that long, straight (coppiced) poles 20 mm in diameter and 0.6 m long worked best for the main firing in the constricted flues, with finer brushwood being used for producing higher temperatures (Lyne and Jefferies 1979, 13), the diameter consistent with those pieces observed in the Groom's Farm analysis.

The development of several erosion channels or 'scars' indicates a degree of instability on the sandy slopes at Groom's Farm during the Romano-British period, and local deforestation is likely to have been the cause. This may have been related more to clearance for the kilns and associated features, as the preservation of larger areas of managed woodland would have been required for the long term operation of the pottery industry. Clearly, however, this industry had a significant impact on the local landscape, its vegetation and soils.

It is possible that the four large late Romano-British storage jars buried in and around midden/spread 1010 may have been intended as a 'closing' deposit, marking the end of pottery production on the site. At least two of these vessels appear to have been buried with deposits of burnt material, and one of jars also contained two smaller pottery vessels (a mortarium and a beaker), whilst an iron axe had been placed in another; a large iron bell was recovered nearby. A number of quern fragments also came from midden/spread 1010, the querns possibly associated with the pottery industry rather than crop processing (see Seager-Smith above). Pottery and, in particular, the coins, supported by the radiocarbon dates, indicates that the lower midden deposit was forming in the last few decades of the 4th century, and that the pot pits were dug through it before the formation of the upper deposit, probably in the last decade of the 4th century or very early in the 5th century.

There is some evidence for activity on the site in both the Saxon and medieval periods, but this is small scale, of indeterminate nature and likely to be peripheral to any foci of settlement, for example the probable medieval croft which lay to the east.

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Table 1: Finds totals by material type

	Eval	*WB*	*1994 Excavation*		*1998 Excavation*		*2000 Excavation*		*2001 Excavation*		*2007-10 Excavations*		*Overall totals*	
Material Type	*No.*	*No.*	*No.*	*Wt (g)*	*No.*	*Wt (g)*	*No.*	*Wt (g)*	*No.*	*Wt (g)*	*No.*	*Wt (g)*	*No.*	*Wt (g)*
Animal bone	-	-	12	38	138	84	1	1	18	80	4	3	173	206
Human bone	-	-	-	-	107	20	-	-	-	-	-	-	107	20
Burnt flint	-	-	234	3143	280	4557	176	487	6	20	31	528	727	8735
CBM	64	-	2	32	64	4903	102	1934	27	1154	42	3048	301	11,071
Clay pipe	-	-	-	-	-	-	1	5	-	-	1	3	2	8
Fired clay	*	-	67	1235	1691	21,923	51	313	4	627	8	120	1821	24,218
Worked flint	129	40	196	1625	287	6450	1024	7982	24	342	120	1233	1820	17,632
Glass	-	-	1	1	7	40g	4	6	-	-	6	14	18	61
Pottery	160	23	1112	10,782	14,133	281,652	1469	37,690	167	2305	2686	33,635	19,750	366,064
Prehistoric	*42*	*19*	*1069*	-	*2597*	-	*526*	-	*12*	-	*125*	-	*4390*	-
Roman	*66*	*3*	*12*	-	*11,510*	-	*863*	-	*5*	-	*2469*	-	*14,928*	-
Saxon	-	-	-	-	-	-	-	-	-	-	*3*	-	*3*	-
Medieval	*43*	*1*	*30*	-	-	-	*67*	-	*141*	-	*87*	-	*369*	-
Post-medieval	*9*	-	-	-	*3*	-	*4*	-	*9*	-	*2*	-	*27*	-
undated	-	-	*1*	-	-	-	*9*	-	-	-	-	-	*10*	-
Shale	-	-		-	1	8	-	-	-	-	-	-	1	8
Stone	-	-	14	1270	470	65,695	9	2629	-	-	4	1451	497	71,045
Copper alloy	-	-	-	-	12	-	1	-	-	-	-	-	13	-
coins	-	-	-	-	*9*	-	*1*	-	-	-	-	-	*9*	-
other objects	-	-	-	-	5	-	-	-	-	-	-	-	5	-
Iron	-	-	1	-	22	-	3	-	1	-	5	-	32	
Lead	-	-	-	-	-	-	-	-	-	-	1	-	1	
Slag	-	-	-	-	-	-	-	-	1	1	8	1053	9	1054

NB. * denotes materials present but not quantified; CBM = ceramic building material

Table 2. Coins

Object	*Context*	*Denomination*	*Description*	*Issue Date*	*References*
-	1015	Cu Alloy AE 3	Illegible. Corroded to two other coins.	C4	-
-	1015	Cu Alloy AE 3	House of Valentinian. Securitas Republicae reverse. Corroded to two other coins.	AD 364– 378	As LRBC II, 87
-	1015	Cu Alloy AE 4	Illegible. Corroded to two other coins.	C4	-
-	unstrat	Cu Alloy AE 3	Illegible	C3–C4	-
-	1616	Cu Alloy AE 3	Illegible	C3–C4	-
2003	1015	Cu Alloy AE 4	House of Theodosius, Victoria Auggg reverse	AD 388–402	As LRBC II, 162
2006	1015	Cu Alloy AE 3	Illegible	C3–C4	-
2018	1019	Cu Alloy AE 3	House of Valentinian. Securitas Reipublicae reverse	AD 364–378	As LRBC II, 87
2030	1058	Cu Alloy AE 4	Illegible	C3–C4	-

LRBC = Late Roman Bronze Coinage; Carson *et al.* 1989

Table 3: Composition of the flint assemblage

Flint Types	*No.*	*% of assemblage*
Retouched tools:		
Microlith	8	0.44
Sub-categories		
Rod	(3)	(0.17)
Oblique	(3)	(0.17)
Scalene	(1)	(0.05)
Rhomb	(1)	(0.05)
Scraper	18	1
Notch	9	0.5
Rod/fabricator	2	0.11
Truncation	3	0.17
Piercer	1	0.05
Burin	3	0.17
Knife	1	0.05
Shouldered	1	0.05
Misc. retouched pieces	21	1.16
Retouched tools sub-total	*67*	*3.72*
Debitage:		
Flakes (incl. broken)	583	32.35
Blade(lets) (incl. broken)	278	15.43
Chips	67	3.72
Irregular debitage	66	3.66
Unclassified flakes, blades, chips	499	27.69
Core rejuvenation	28	1.55
Blade(let) cores	58	3.22
Flake cores	27	1.50
Core fragments	9	0.5
Unclassified cores	1	0.05
Unclassified:		
Flint	119	6.60
Total	1802	99.99

Table 4: Pottery totals by chronological period and ware type

Period	*Ware*	*Totals*	
		No.	*Wt (g)*
Early Bronze Age	Fine grog-tempered ware	26	532
	Grog and flint-tempered ware	2	46
	subtotal:	*28*	*578*
Middle Bronze Age	Coarsely flint-tempered	141	3826
	subtotal:	*141*	*3826*
Middle/Late Bronze Age	Coarsely flint-tempered	1061	19,695
	Flint-tempered	252	6714
	Grog and flint-tempered ware	190	4772
	subtotal:	*1503*	*31,181*
Late Bronze Age	Flint in a micaceous/sandy matrix	238	2897
	Grog and flint-tempered ware	16	153
	Sand, fine flint and grog	3	58
	Flint-tempered	1	10
	subtotal:	*258*	*3120*
Early Iron Age	Calcareous ware	380	2517
	Flint in a micaceous/sandy matrix	92	1490
	Sand and fine flint-tempered	217	3314
	Sand and organic tempered ware	29	372
	Sandy	145	1725
	subtotal:	*863*	*9418*
Middle Iron Age	Flint-tempered	43	874
	Sandy	4	50
	subtotal:	*47*	*924*
Later prehistoric	Flint-tempered	7	44
	Sand and fine flint-tempered	6	57
	Sandy	3	20
	subtotal:	*16*	*121*
Romano-British	Greyware	11,451	284,955
	OverweyTilford-type ware	569	7031
	Grog-tempered ware	21	370
	Oxidised ware	41	377
	Calcareous ware	3	19
	Flint-tempered	2	7
	Samian	2	37
	Oxon colour coat	235	3623
	Oxon colour coat mortaria	13	331
	Oxon whiteware	2	28
	Oxon whiteware mortaria	28	598
	Oxon white-slipped red ware	6	75
	Oxon white-slipped red ware mortaria	29	1757
	New Forest colour coat	12	107
	sub-total:	*12,414*	*299,315*
	Overall total	15,270	348,483

Table 5: Romano-British pottery totals (No./Wt) by ware type and feature group

Ware	*Pit/pot 1004*	*Midden 1010*	*Pit 1027*	*Midden 1053*	*Midden 1792*	*Quarry 1827*	*Channel/scar 5201*	*Channel/scar 5202*	*Kiln F155*	*Total*
Greyware	223/ 24,364	7207/ 183,972	121/ 3083	1367/ 27,443	148/ 6402	556/ 18,511	1360/ 13,758	96/ 718	373/ 6704	11,451/ 284,955
Overwey/Tilford	16/ 102	290/ 3692	95/ 982	40/ 662	29/ 445	3/ 29	56/ 524	-	40/ 595	569/ 7031
Grog-tempered ware	-	14/ 202	-	6/ 143	-	-	-	-	1/ 25	21/ 370
Calcareous ware	-	-	-	-	-	-	3/ 19	-	-	3/ 19
Flint-tempered	-	-	-	2/ 7	-	-	-	-	-	2/ 7
Oxidised ware	29/ 323	2/ 9	-	3/ 11	6/ 26	-	-	-	1/ 8	41/ 377
New Forest colour-coated ware	-	11/ 102	-	1/ 1	-	-	-	-	-	12/ 107
Oxon colour-coated ware	-	106/ 1298	-	75/ 637	-	18/ 388	18/ 265	2/ 206	16/ 529	235/ 3623
Oxon red colour-coated mortaria	-	2/ 23	-	5/ 117	-	-	3/ 37	-	3/ 154	13/ 331
Oxon whiteware	-	2/ 28	-	-	-	-	-	-	-	2/ 28
Oxon whiteware mortaria	1/ 2	18/ 381	1/ 15	4/ 113	-	1/ 26	3/ 61	-	-	28/ 598
Oxon white-slipped red ware	1/ 6	4/ 44	-	1/ 25	-	-	-	-	-	6/ 75
Oxon white-slipped red ware mortaria	15/ 1356	11/ 255	1/ 74	2/ 72	-	-	-	-	-	29/ 1757
Samian	-	-	-	2/ 37	-	-	-	-	-	2/ 37
Overall total: No.	285/	7667/	218/	1508/	183/	578/	1443/	98/	434/	12,414/
Wt	26,153	190,006	4154	29,572	6873	18,954	14,664	924	8015	299,315

Table 6: Number of rims present in each feature group; dates after Lyne and Jefferies 1979 and Young 1977

Class	*Description*	*Pit/pot 1004*	*Midden 1010*	*Pit 1027*	*Midden 1053*	*Midden 1792*	*Quarry 1827*	*Channel/ scar 5201*	*Channel/ scar 5202*	*Kiln F155*	*Total*
Alice Holt fabrics:											
1	Cordoned jars (AD 150+)	-	28	-	17	-	32	4	-	-	81
1A	Cordoned and necked jars (AD 180–400+)	-	25	1	5	1	3	1	-	3	39
1B	Narrow-necked jars (AD 150+)	-	14	-	2	-	1	4	-	-	21
1C	Large cordoned storage jars	-	28	-	6	-	2	2	-	-	38
3A	Flat-rimmed jars (2nd–3rd century AD)	1	4	-	-	-	-	-	-	-	5
3B	Everted and ‘cavetto’ rimmed jars (mid-2nd century AD+)	2	146	-	48	2	9	43	8	14	272
3C	Triangular and hooked rim jars (AD 220+)	1	111	2	73	4	6	47	2	12	258
4	Bead rimmed jars (AD 150+)	1	7	-	-	-	1	-	-	-	9
5A/6B	Flat and triangular rimmed bowls/dishes (AD 150/180–3rd century AD)	-	6	-	-	-	-	-	-	-	6
5B/6C	Beaded and flanged bowls/dishes (AD 220/220+)	1	98	-	67	1	4	24	3	3	201
5C	Strainers (AD 200–400+)	-	14	-	4	-	1	7	-	-	26
6A	Straight-sided dishes (AD 180+)	-	7	-	17	-	2	22	-	1	49
6A.8-11	Convex-sided dishes (AD 330–420)	-	63	1	22	4	1	5	-	7	103
6A.12	Straight-sided dishes with grooved exterior (AD 270–420)	-		-	1	-	1	-	-	-	2
7	Lids(decline from C3rd AD)	-	4	-	3	-	-	-	-	-	7
8	Flagons (AD 150+)	1	9	-	2	-	-	3	-	2	17
10	Large cable-rimmed storage jars (AD 180)	-	8	-	3	-	-	2	-	-	13
	Round-bodied flask	-	-	-	-	1	-	-	-	-	1
	Small necked jar/bowl	-	-	-	-	1	-	-	-	-	1
	Indented vessels	-	-	-	-	-	-	2	-	-	2
Grog-tempered wares:											
	Convex-sided dishes (C4th AD)	-	3	-	-	-	-	-	-	-	3
	Deep, plain-rimmed bowl/dish (C4th AD)	-	-	-	1	-	-	-	-	-	1
	Beaded and flanged bowls/dishes (C4th AD)	-	-	-	1	-	-	-	-	-	1
	Hooked rim jar (C4th AD)	-	-	-	1	-	-	-	-	-	1
Oxidised ware:											
	funnel-necked, shouldered beaker	1	-	-	-	-	-	-	-	-	1
Oxon colour-coated ware:											
C16	Narrow-necked jar (AD 270–400+)	-	1	-	-	-	-	-	-	-	1
C22	Funnel-necked beaker (AD 240–400+)	-	2	-	1	-	-	-	-	-	3

Class	*Description*	*Pit/pot 1004*	*Midden 1010*	*Pit 1027*	*Midden 1053*	*Midden 1792*	*Quarry 1827*	*Channel/ scar 5201*	*Channel/ scar 5202*	*Kiln F155*	*Total*
C45	Bowl copying samian form 31 (AD 240–400+)	-	-	-	2	-	-	-	-	-	2
C47	Bowl with wide rolled rim (AD 270–400+)	-	-	-	-	-	-	-	2	-	2
C49	Bowl with out-turned rim upturned at tip (AD 240–400+)	-	4	-	-	-		-	-	-	4
C51	Flanged bowl copying samian form 38 (AD 240–400+)	-	13	-	12	-	3	1	1	-	30
C55	Bead rim bowl copying samian form 37 (AD 240–400+)	-	4	-	-	-	-	1	-	-	5
C69	Carinated bowl with white-painted decoration (AD 325–400+)	-	-	-	1	-	-	-	-	-	1
C71	Carinated bowl with double bead rim (AD 300–400+)	-	-	-	-	-	-	1	-	-	1
C75	Necked bowl (AD 325–400+)	-	2	-	2	-	-	1	-	-	5
Oxon red colour-coated mortaria:											
C97	Mortarium copying samian form 45 (AD 240–400+)	-	-	-	1	-	-	-	-	-	1
C100	Mortarium with upstanding rim and angular flange (AD 300–400+)	-	1	-	1	-	-	-	1	-	3
Oxon whiteware mortaria:											
M17	Mortarium with flat flanged, hooked at tip (AD 240–300)	-	1	-	-	-	-	-	-	-	1
M22	Mortarium with upstanding rim and squat flange (AD 240–400+)	-	2	-	1	-	1	1	-	-	5
Oxon white-slipped red ware:											
WC3	Wall-sided carinated bowl (AD 240–400+)	-	1	-	1	-	-	-	-	-	2
WC4	Mortarium with flat flanged, hooked at tip (AD 240–300)	-	1	-	-	-	-	-	-	-	1
WC5	Mortarium with wide flat flange, closed hook (AD 240–300)	-	1	-	-	-	-	-	-	-	1
WC7	Mortarium with upstanding rim and squat flange (AD 240–400+)	1	1	1	1	-	-	-	-	-	4

Table 7: Prehistoric charred plant remains

	Phase	*EBA*	*Middle–Late Bronze Age*			
	Feature type	*pit*	*pit*	*pot*	*crem.*	*pit*
	Feature	*439*	*652*	*1032 ob. 2022*	*1062*	*1312*
	Context	*503*	*653*	*1033/ 1069*	*1060*	*1313*
	Sample	*57*	*58*	*3021*	*3016*	*3074*
	Size (l)	*3*		*15*	*10*	*10*
	Flot size (ml)	*60*	*250*	*130*	*30*	*40*
Cereals	Common name					
Hordeum vulgare sl.(grains)	barley	-	2	-	-	-
Hordeum vulgare sl.(hulled grains)	barley	-	1	2	-	-
Secale cereale	rye	-		-	cf. 2	-
Triticum dicoccum/spelta (grain)	emmer/spelt wheat	-	2	2	-	6
Triticum dicoccum/spelta (glume bases)	emmer/spelt wheat	-	-	-	-	3
Cereal grain indet.	cereals	-	-	1	-	-
Cereal grain indet. (frags.)	cereals	-	-	-	-	+
Other species						
Quercus cf. *robur* (acorn kernels)	common oak	est. 10	-	-	-	-
Corylus avellana	hazelnut	63 (7 ml)	-	-	-	
Rumex sp.	dock	-	-	-	-	1
Vicia./Lathyrus sp.	vetch/pea	-	-	-	1	-
Arrhenatherum elatius var. *bulbosum*	false oat-grass	-	-	-	3	-
Avena sp. L. (grain)	oat grain	-	-	1	-	-

Table 8: Late Romano-British charred plant remains

	Feature type	*pot*	*pot*	*pot*	*pot*	*midden*	*midden*	*quarry*
	Feature	*1007*	*1004*	*1004*	*1169*	*1010*	*1010*	*1827*
		obj. 2001	*obj. 2002*	*obj. 2002*	*obj. 2038*			
	Context	*1009*	*1006*	*1084*	*1185*	*1015*	*1058*	*1826*
	Sample	*3002*	*3001*	*3006*	*3056*	*3003*	*3025*	*3103*
	Size (l)	*20*	*20*	*20*	*10*	*20*	*15*	*10*
	Flot size (ml)	*400*	*225*	*350*	*130*	*125*	*225*	*350*
Cereals	Common name							
Hordeum vulgare sl.(grains)	barley	-	1h	1	-	-	-	-
Secale cereale	rye	cf.3	-	-	-	-	-	-
Triticum sp.	wheat	-	3	2	-	4	2	-
Triticum aestivum/turgidum type	bread/rivet wheat	5	-	-	-	-	-	-
Triticum dicoccum/spelta (grain)	emmer/spelt wheat	226	29	37	12	15	33	3000+
Triticum dicoccum/spelta (glume bases)	emmer/spelt wheat	6	-	-	-	-	8	-
Triticum spelta(glume bases)	spelt wheat glume bases	2	-	-	-	-	2	30+
Cereal grain indet.	cereals	17	2	2	1	5	2	-
Other species	Common Name							
Ranunculus acris/repens)	meadow/creeping buttercup	-	-	6	-	1	-	-
Corylus avellana (shell)	hazelnut	1	5	11f.	-	3f.	-	-
Chenopodiaceae indet.	goosefoot	1	-	-	-	-	-	-
Chenopodium album	fat-hen	-	-	8	-	-	-	-
Atriplex sp.	orache	-	-	1	-	-	-	-
Persicaria maculosa/lapathifolium	redshank/pale persicaria	2	-	-	-	-	-	-
Rumex sp.	dock	-	49	70	-	3	1	-
Rumex acetosella group	sheep's sorrel	-	cf.2	-	-	-	-	-
Brassica nigra	black mustard	-	7	29	-	-	-	-
Fragaria vesca	strawberry	-	1	3	-	-	-	-
Prunus spinosa (stone)	sloe (whole gnawed)	-	2	2	-	-	-	-
Prunus spinosa (stone)	sloe	1f.	2f.	-	-	3f.	-	-
Malus sylvestris	crab apple	-	-	2	-	-	-	-
Vicia./Lathyrus sp.	vetch/pea	1	1	2	1	-	-	-
Trifolium sp.	clover	2	16	28	-	-	-	-
Linum catharticum	fairy flax	-	-	2	-	-	-	-

	Feature type	*pot*	*pot*	*pot*	*pot*	*midden*	*midden*	*quarry*
	Feature	*1007 obj. 2001*	*1004 obj. 2002*	*1004 obj. 2002*	*1169 obj. 2038*	*1010*	*1010*	*1827*
	Context	*1009*	*1006*	*1084*	*1185*	*1015*	*1058*	*1826*
	Sample	*3002*	*3001*	*3006*	*3056*	*3003*	*3025*	*3103*
	Size (l)	*20*	*20*	*20*	*10*	*20*	*15*	*10*
	Flot size (ml)	*400*	*225*	*350*	*130*	*125*	*225*	*350*
Coriandrum sativum	coriander	-	-	cf.1	-	-	-	-
Stachys sp.	woundwort	-	-	3	-	-	-	-
Prunella vulgaris	self-heal	-	-	5	-	-	-	-
Plantago lanceolata	ribwort plantain	-	4	9	-	-	-	-
Odontites vernus	red bartsia	-	1	-	-	-	-	-
Galium palustre	marsh bedstraw	-	cf.1	-	-	-	-	-
Galium aparine	cleavers	-	-	1	-	1	-	-
Valerianella dentata	narrow fruited corn salad	-	1	-	-	-	-	-
Asteraceae indet. (small)		-	-	1	-	-	-	-
Carduus/Cirsium sp.	thistle	-	1	3	-	-	-	-
Juncus sp. (capsule)	rush	-	-	1	-	-	-	-
Eleocharis sp.	spike-rush	-	-	1	-	-	-	-
Carex nigra type (flat)	sedge (lenticular)	-	14	23	-	-	-	-
Poaceae (culm internode)		-	17	54	-	-	-	-
Poaceae (culm node)		-	20	36	-	-	-	-
Poaceae (rootlets)		-	2	6	-	-	-	-
Lolium /Festuca type		-	9	23	-	-	-	-
Lolium perenne L.	rye grass	-	2	20	-	-	-	-
Poa/Phleum sp.	meadow grass/cats'-tails	-	14	3	-	-	1	-
Avena sp. L. (grain)	oat grain	2	-	-	-	-	3	+
Avena/Bromus sp. (grain)		-	-	-	-	-	-	100+
Danthonia decumbens	heath grass	-	6	9	-	-	-	-
Sparganium erectum (fruit/achene)	branched bur-reed	-	-	7	-	-	-	-
Tuber type.		-	2	2+9f.	-	-	-	-
Buds		-	-	-	-	-	1	-
twigs		-	-	-	-	-	1	-
Parenchyma		-	-	-	-	-	-	++

Table 9: Wood charcoal species list

Species	*Common name*	*Late prehist. assemblages*	*Romano-British assemblages*
Carpinus betulus	Hornbeam	-	✓
Corylus avellana	Hazel	✓	✓
cf. *Fagus sylvatica*	Beech	-	✓
Fraxinus excelsior	Ash	✓	✓
Hedera helix	Ivy	✓	-
Ilex aquifolium	Holly	-	✓
Pomoideae	Pomaceous fruits (eg, apple, whitebeam, hawthorn)	✓	✓
cf. *Prunus* sp.	Cherry type	-	✓
Quercus sp.	Oak	✓	✓
Salix/Populus sp.	Willow/aspen (anatomically indistinguishable)	-	✓

Table 10: Wood charcoal identifications

Feature	*Pit 439*	*Crem. dep. 1062*	*Pit 1065*	*Pit 1067*	*Pot 1043 obj. 2029*	*Channel / scar F151*	*Channel / scar F151*	*Channel / scar F151*	*Scoop 5183*	*Scoop 5179*	*Pot 1007 obj. 2001*	*Pot 1004 obj. 2002*	*Pot 1169 obj. 2038*	*Kiln F155*	*Quarry 1827*	*Pit 1027*
Context	*503*	*1060*	*1066*	*1072*	*1044/ 1045*	*F083*	*F085*	*F081*	*5184*	*5174*	*1009*	*1084*	*1185*	*F117*	*1826*	*1020*
Sample	*57*	*3016A*	*3018*	*3024*	*3019 A*	*3*	*5*	*2*	*3204*	*3203*	*3002*	*3006*	*3056*	*15*	*3103*	*3009*
Phase	*EBA*	*M/LBA*	*LBA/ EIA*	*LBA/ EIA*	*EIA*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*	*LRB*
Carpinus betulus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Corylus avellana	-	-	-	-	-	-	-	-	5	-	-	7	-	3	7	-
Corylus avellana rwd	-	-	-	-	35*	-	-	-	45*	5	-	61*	-	-	1	3
twd cf. *C. avellana*	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
cf. *Fagus sylvatica*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Fraxinus excelsior	-	-	-	-	2	-	-	-	-	-	4	8	-	-	-	-
Hedera helix	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Ilex aquifolium rwd	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-
cf. *Ilex aquifolium*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Pomoideae	-	-	2	-	-	-	-	-	-	-	-	-	-	4	-	-
cf. *Prunus* sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Quercus sp.	13	1	194	100	9	194	165 (-)	194	10	-	191	16	105	90	23	91
Quercus sp. rwd	-	-	-	-	4*	6*	26 (+)*	6*	40*	187*	5*	2	-	-	3	-
Quercus sp. twd	7	2	1	-	-	1	9*	-	-	6*	-	-	2	-	-	-
Salix/Populus sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
unid (vitrified)	-	7	-	-	-	-	-	-	-	-	-	-	-	-	1	-
unid degraded (pre-charring)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
unid twd	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-
Total no. fragments ID	20	10	200	100	52	200	200	200	100	200	200	100	110	100	40	100
Charred vitreous mass/parenchyma	-	-	3	-	-	3	-	-	-	-	-	-	2	26	-	-
Charred bark	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-

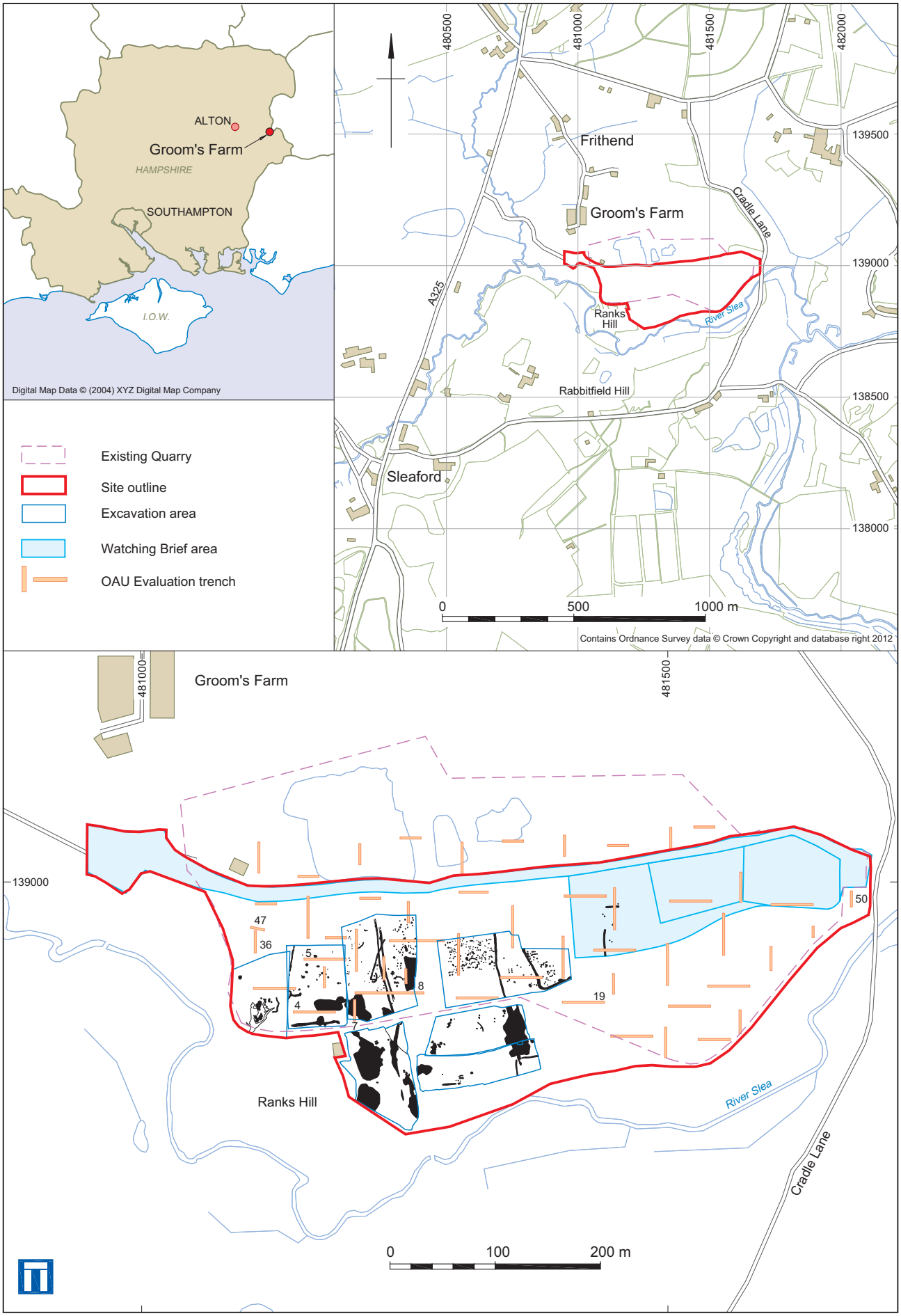
rwd= roundwood; twd= twigwood

Table 11: Age of roundwood when cut (where discernible)

Sample	*Species*	*Age when cut*	*Total no. pieces*
EIA			
Pot/pit 1043, obj. 2029 (1044/ 1045)	*Quercus* sp.	10	2
	Corylus avellana	5–6	7
		11–13	4
LRB			
Erosion scar F151 (F81)	*Quercus* sp.	16	4
Pot/pit 1004, obj. 2002 (1084)	*Corylus avellana*	5–10	55
	Ilex aquifolium	5	1
Erosion scar F151 (F83)	*Quercus* sp.	5–6	6
Pot/pit 1007, obj 2001 (1009)	*Quercus* sp.	20–22	5
Erosion scar F151 (F85)	*Quercus* sp.	>6–10	4
		12	2
Scoop 5179 (5174)	*Quercus* sp.	3	1
		5–10	19
		11–15	18
		16–20	7
		21–26	13
		c. 32	1
Scoop 5183 (5184)	*Quercus* sp.	5–10	3
		15	2
		16–20	3
		25	1
	Corylus avellana	5–10	3
		11–15	0
		16–20	7
		21–25	2

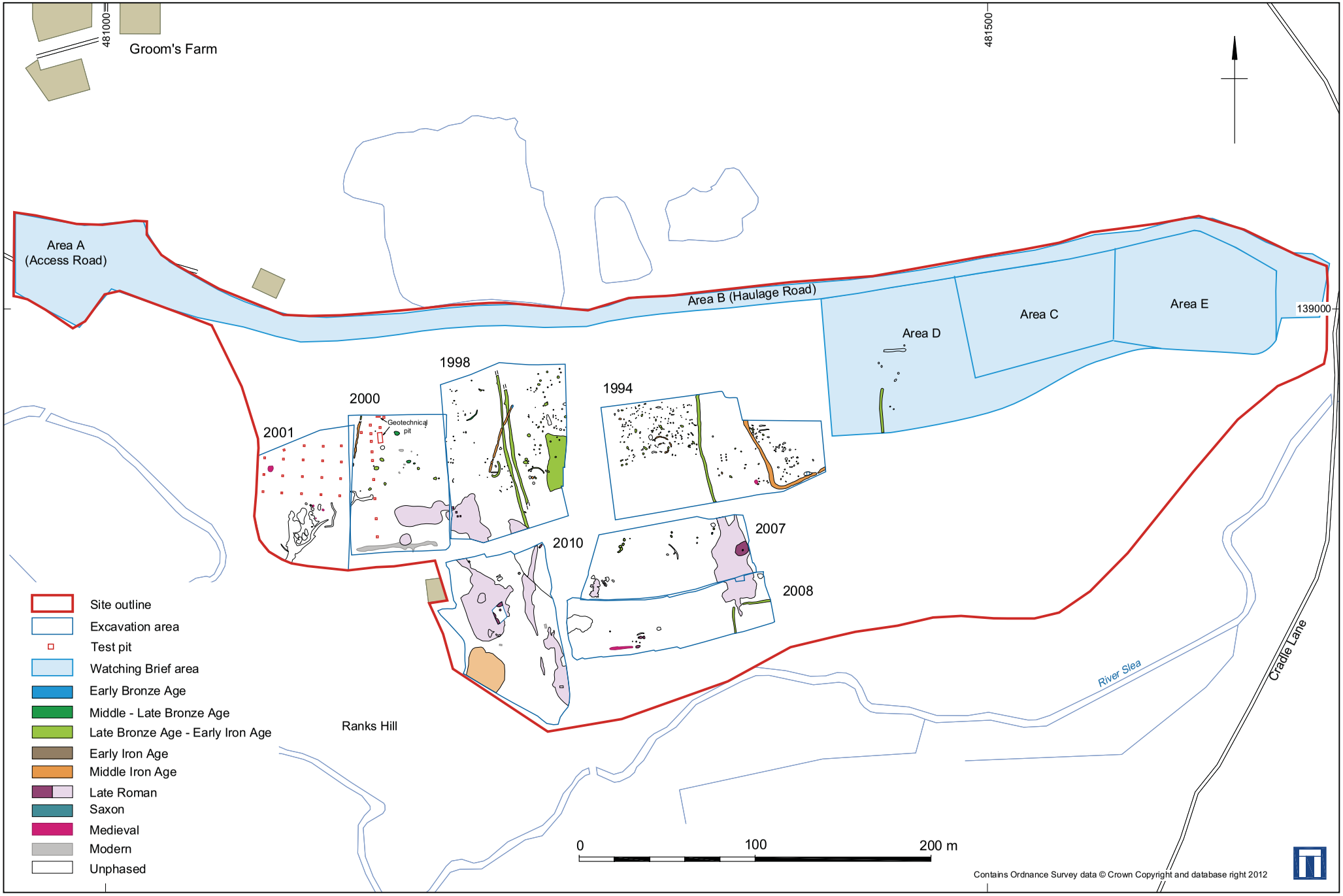
Table 12: Radiocarbon determinations

Feature	*Context*	*Sample*	*Material type*	*Identification*	*Lab code*	*$\delta^{13}C$*	*Date BP*	*Calibration (2 sig. 95.4%)*
Cremation deposit 1062	1060	3016	human bone	long bone shaft. 1.7 g	SUERC-35346	-20.6 ‰	2980±30	1370–1110 cal BC
Erosion scar F151	81	2	charcoal	*Quercus* roundwood	SUERC-35347	-27.8 ‰	1715±30	cal AD 250–410
Kiln F155	117	15	charcoal	*Corylus avellana*	SUERC-35348	-26.2 ‰	1690±30	cal AD 250–420
Pot/pit 1169 obj. 2038	1185	3056	charcoal	1 frag. *Quercus* twig	SUERC-35349	-24.1 ‰	1700±30	cal AD 250–420
Pot/pit 1861 obj. 2112	1863	3112	charcoal	*Corylus avellana*	SUERC-35353	-24.9 ‰	1080±30	cal AD 890–1020
Pit 439	503)	57	charred acorn	*Quercus* cf. *robur* (acorn)	SUERC-35354	-28.1 ‰	3390±30	1760–1610 cal BC
Pot/pit 1007 obj. 2001	1009	3002	charred grain	3x *Triticum* cf. *spelta*	SUERC-35355	-23.0 ‰	1725±30	cal AD 240–400
Midden 1010	1019	3010	charred grain	3x *Triticum* cf. *spelta*	SUERC-35356	-21.1 ‰	1700±30	cal AD 250–420
Pot/pit 1032 obj. 2022	1033/1069	3021	charred grain	2x *Triticum* cf. *dicoccum*	SUERC-35357	-23.3 ‰	2920±30	1260–1010 cal BC



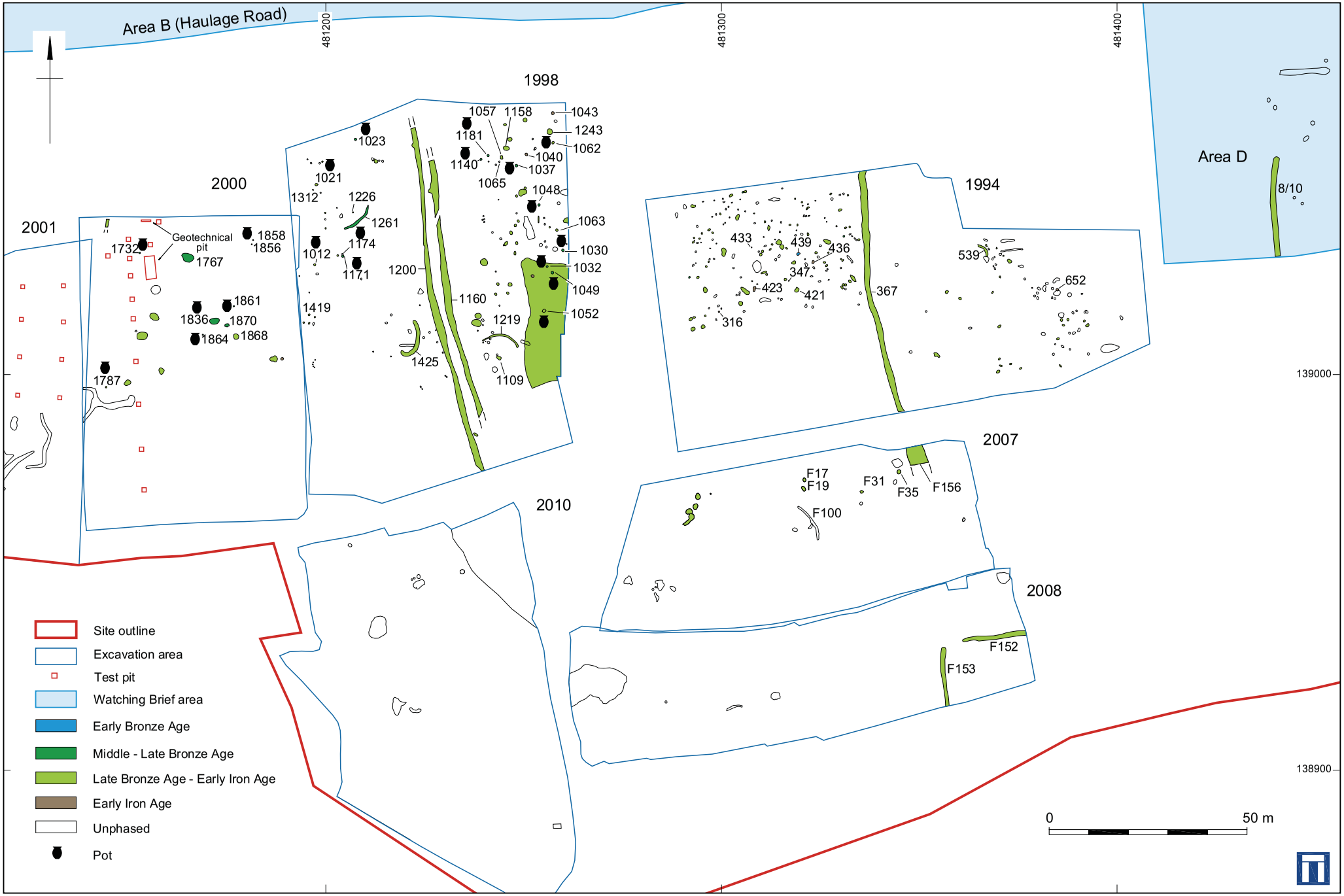
Site location

Figure 1



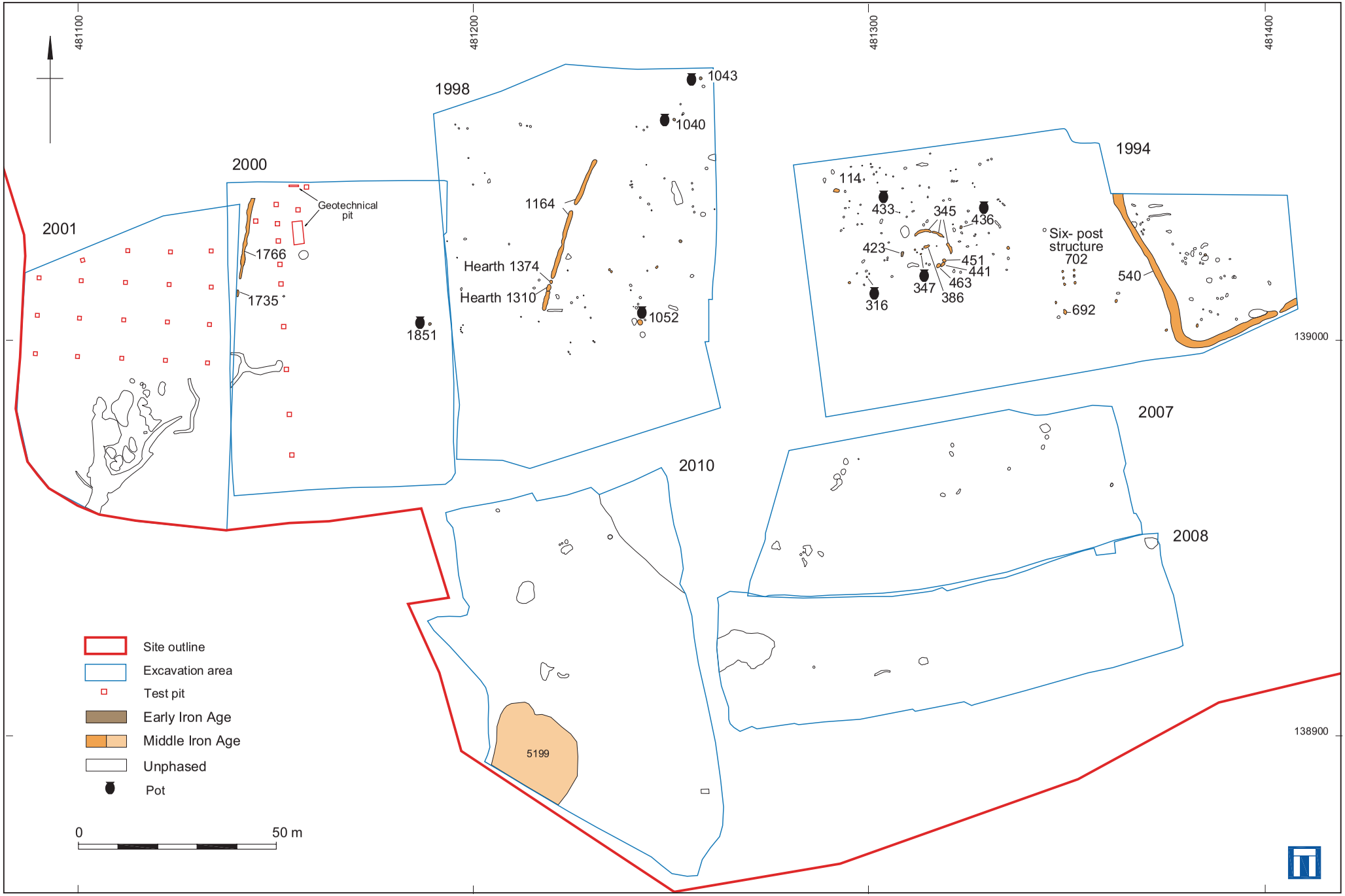
All archaeological features recorded during the excavations

Figure 2



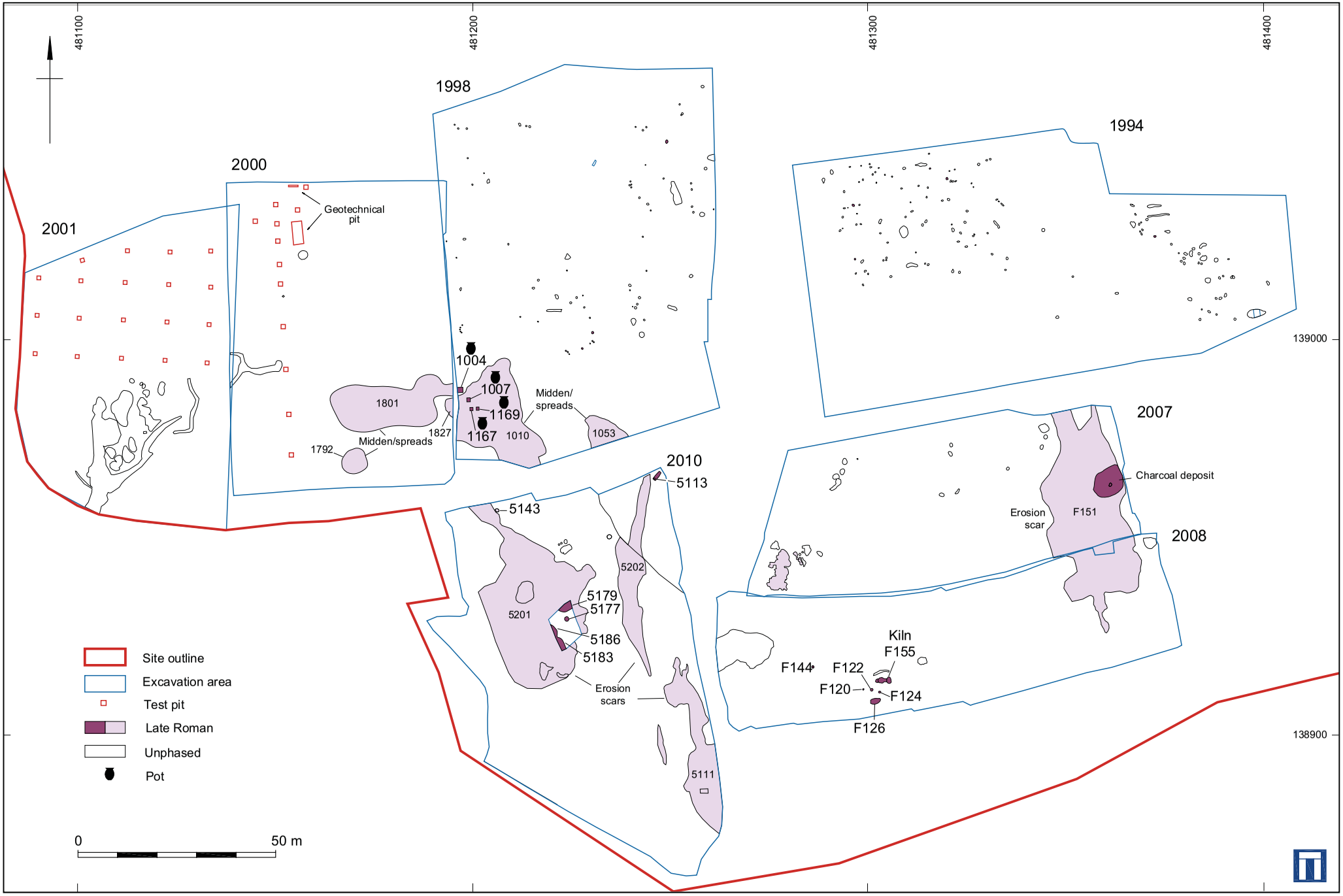
Early , Middle and Late Bronze Age-Early Iron Age features

Figure 3



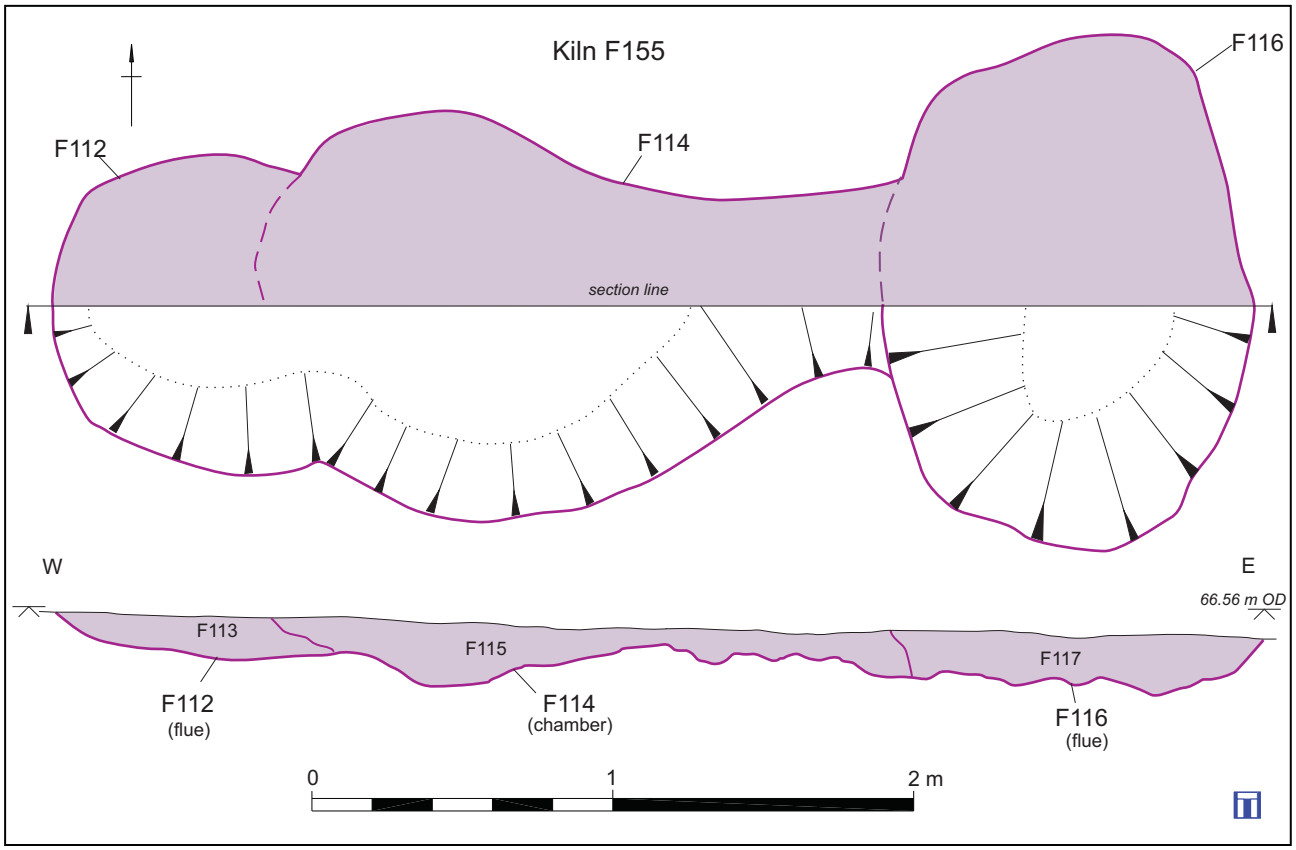
Early and Middle Iron Age features

Figure 4



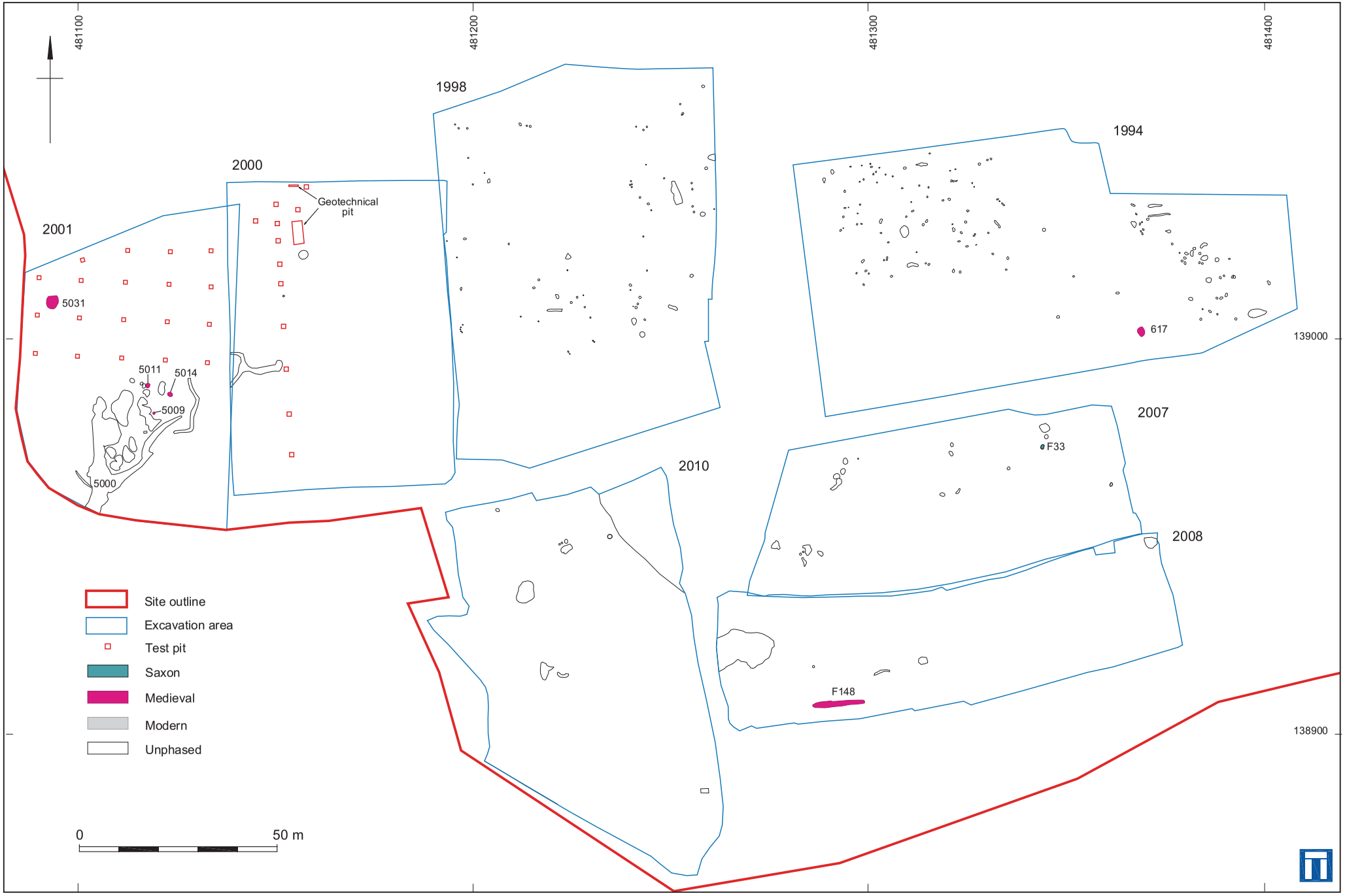
Late Roman features

Figure 5



Kiln F155; Plan & section

Figure 6



Saxon and medieval features

Figure 7

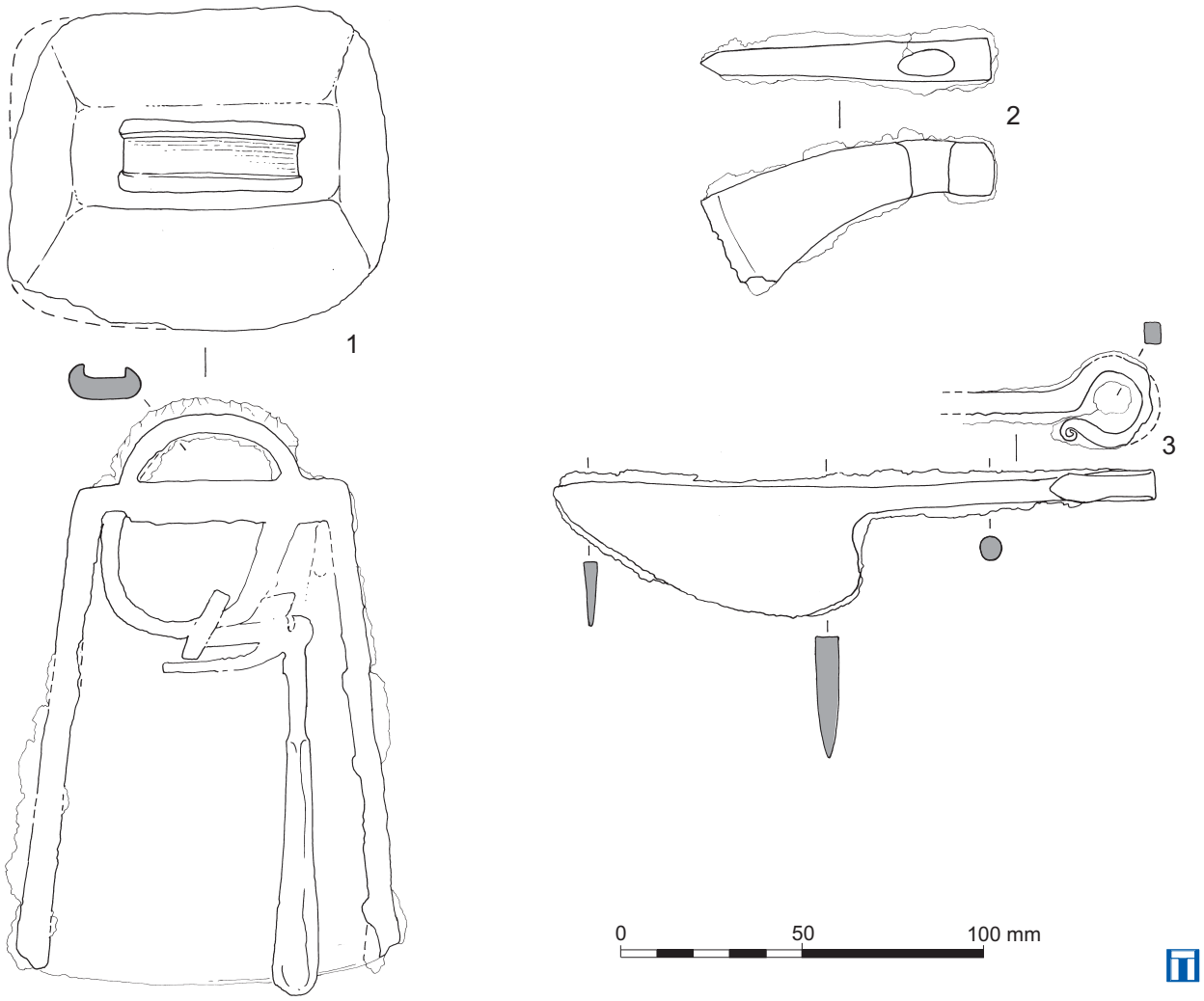


Figure 8 Iron objects Nos 1 to 3 (from X-ray)

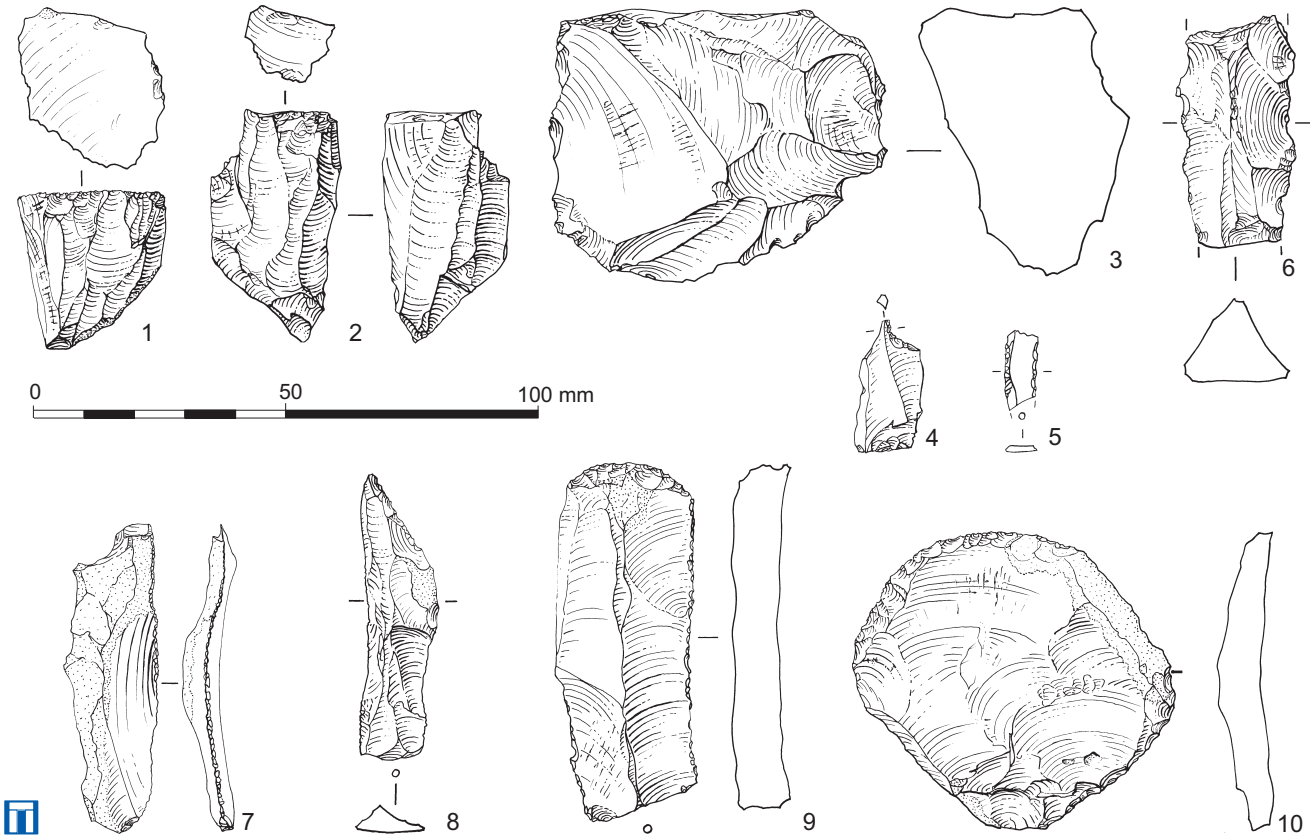


Figure 9 Struck Flints Nos.1 to10

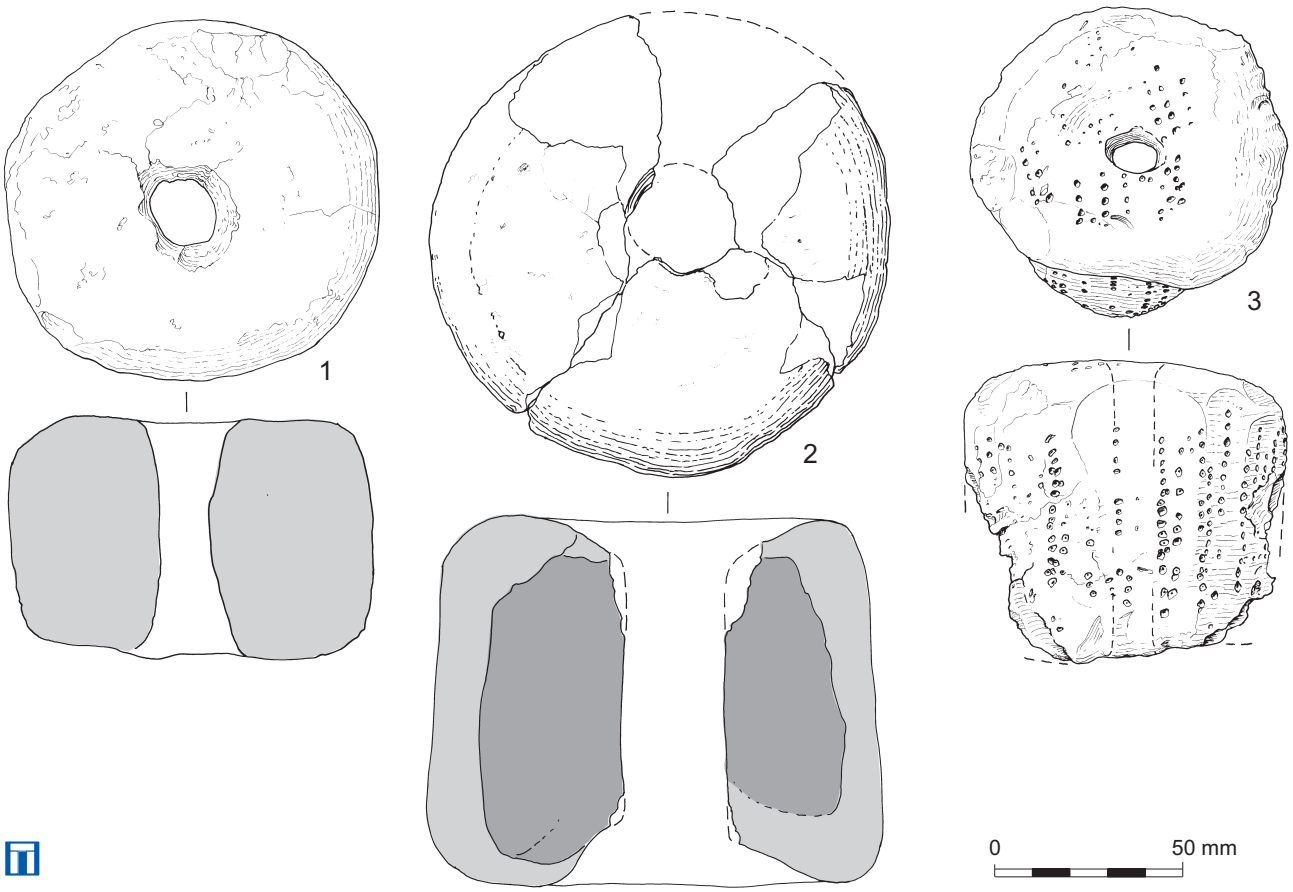


Figure 10 Fired clay objects Nos 1 to 3

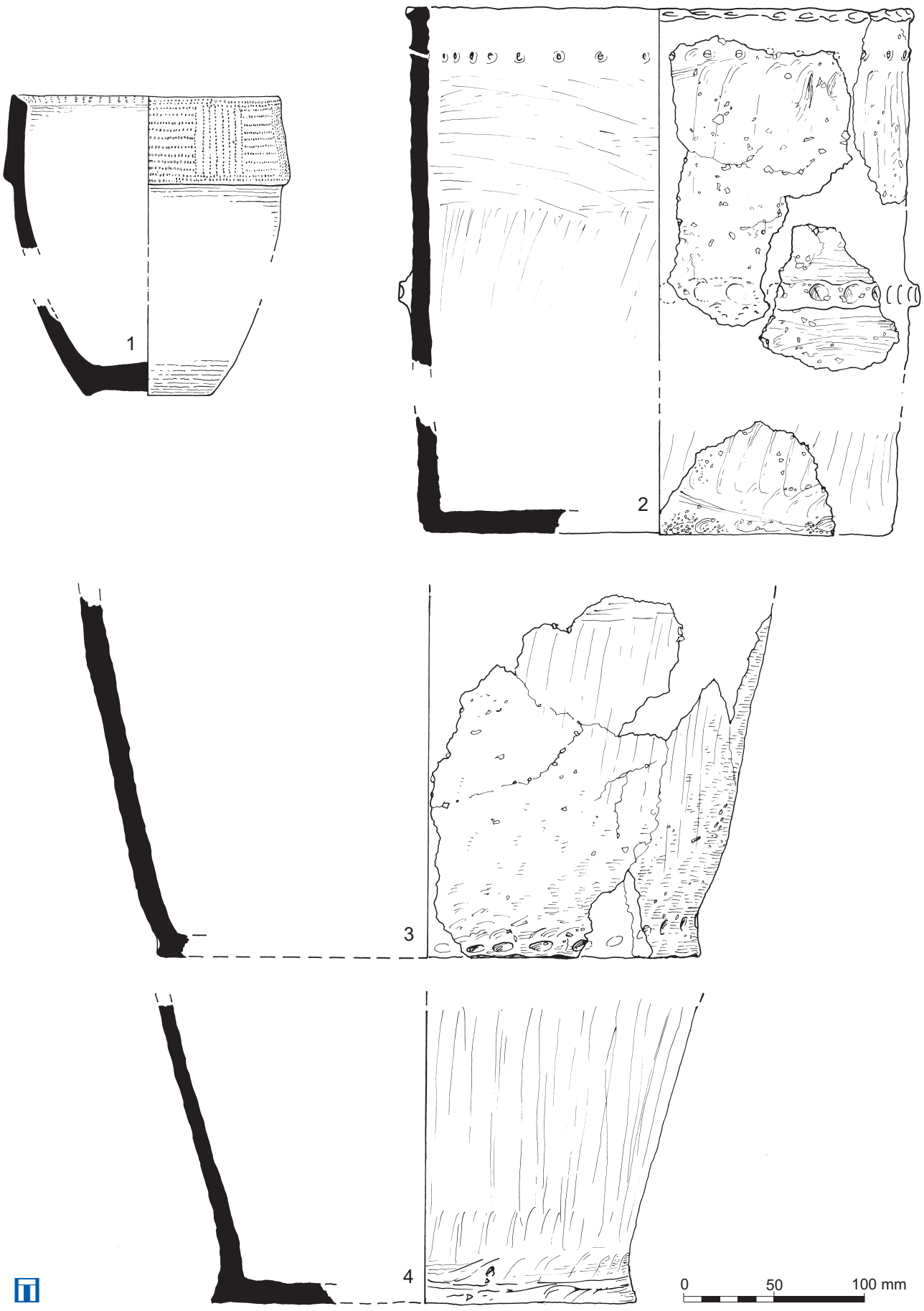


Figure 11 Early Bronze Age to Middle/Late Bronze Age pottery Nos 1 to 4

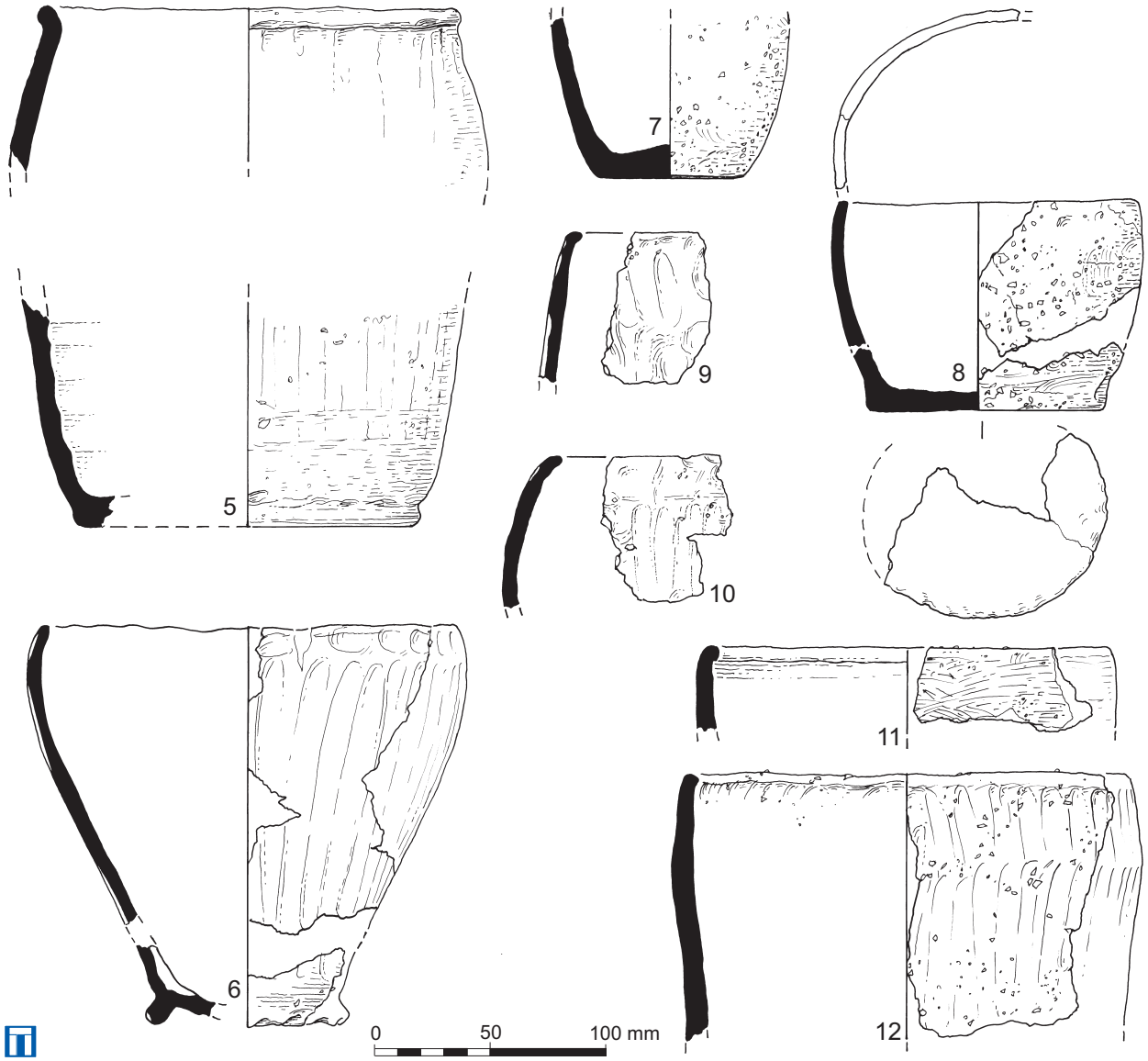


Figure 12 Late Bronze Age pottery Nos 5 to 12

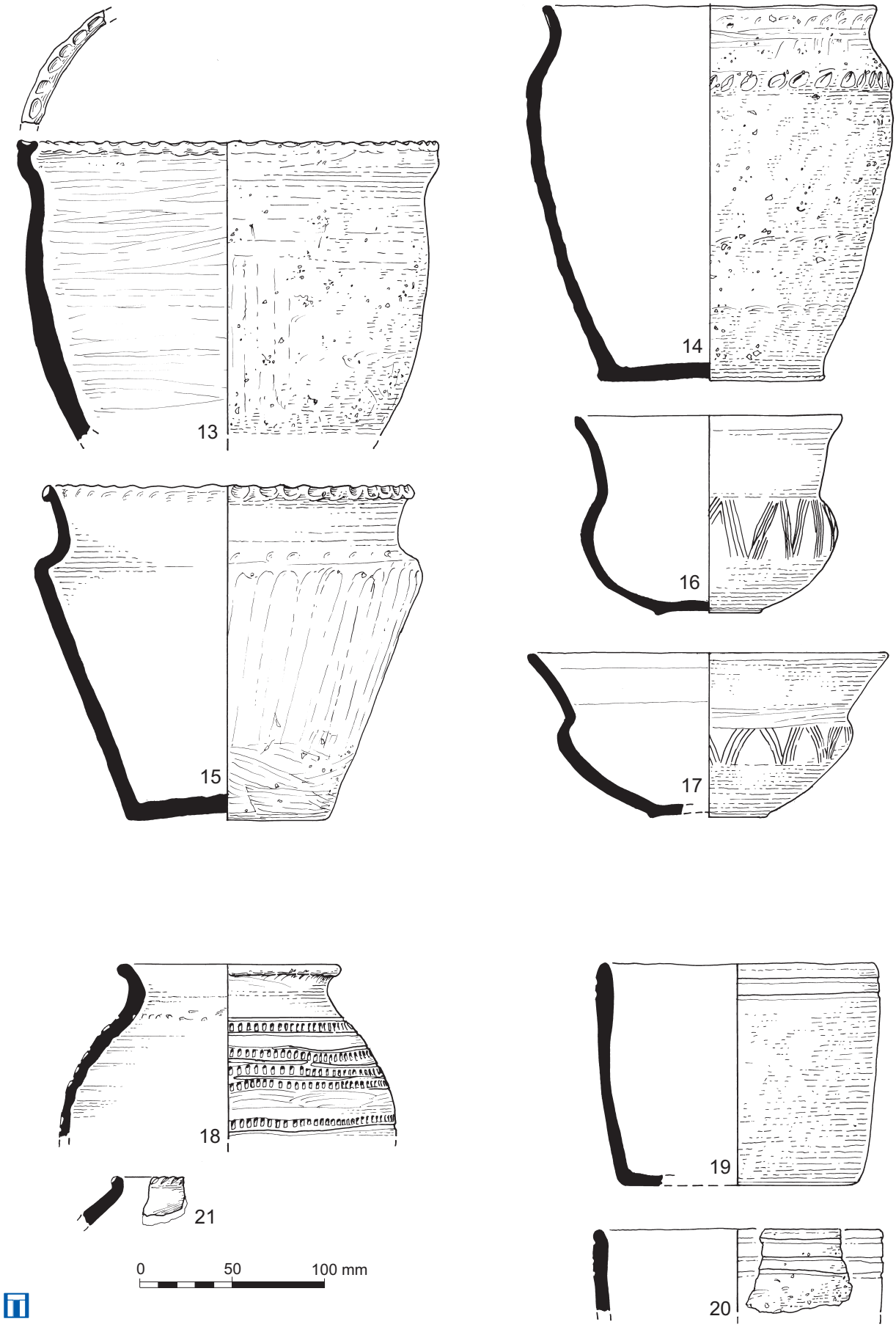


Figure 13 Early Iron Age pottery Nos 13 to 17 and Middle Iron Age pottery Nos 18 to 21

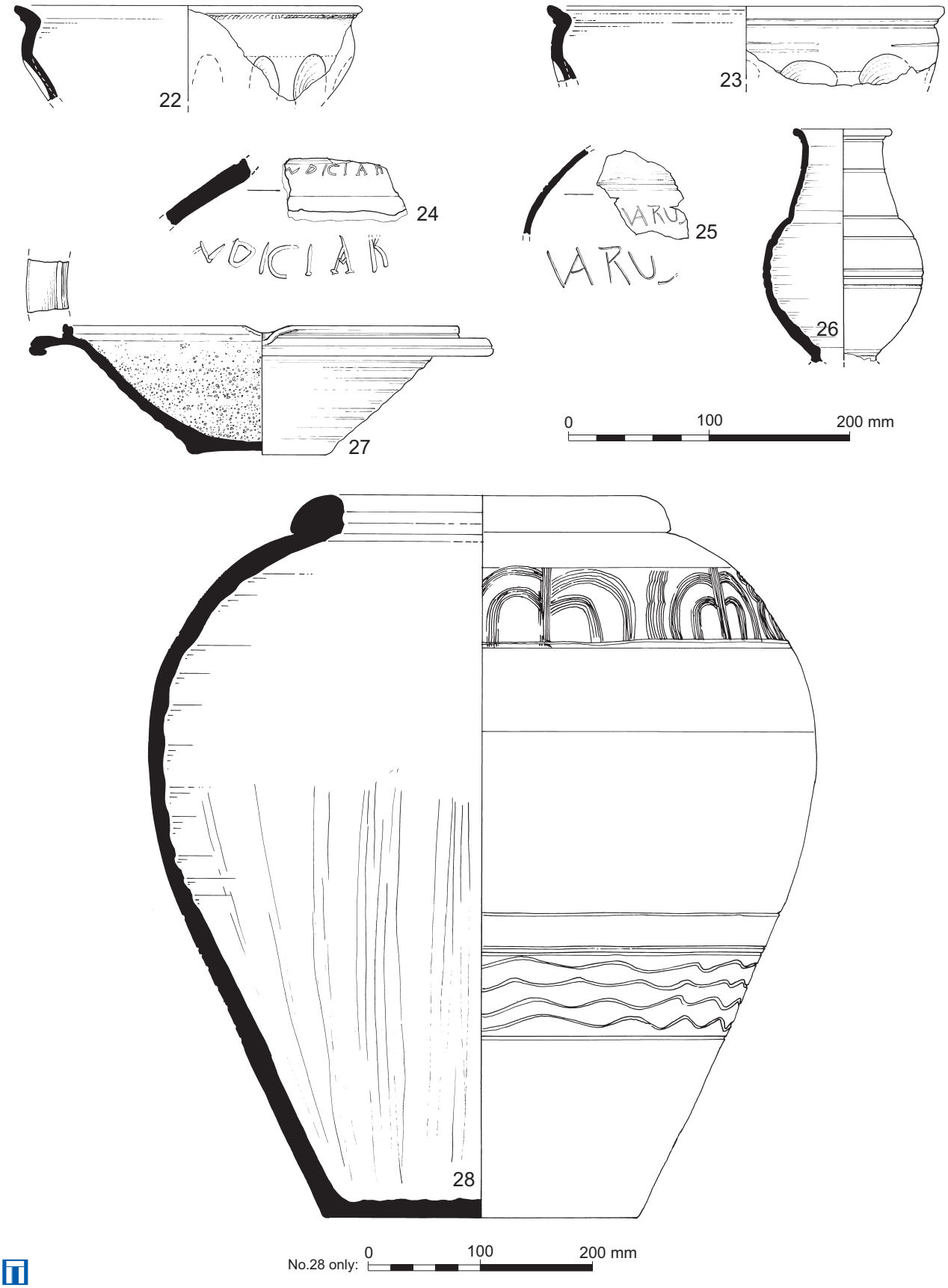


Figure 14 Late Romano-British pottery Nos 22 to 28

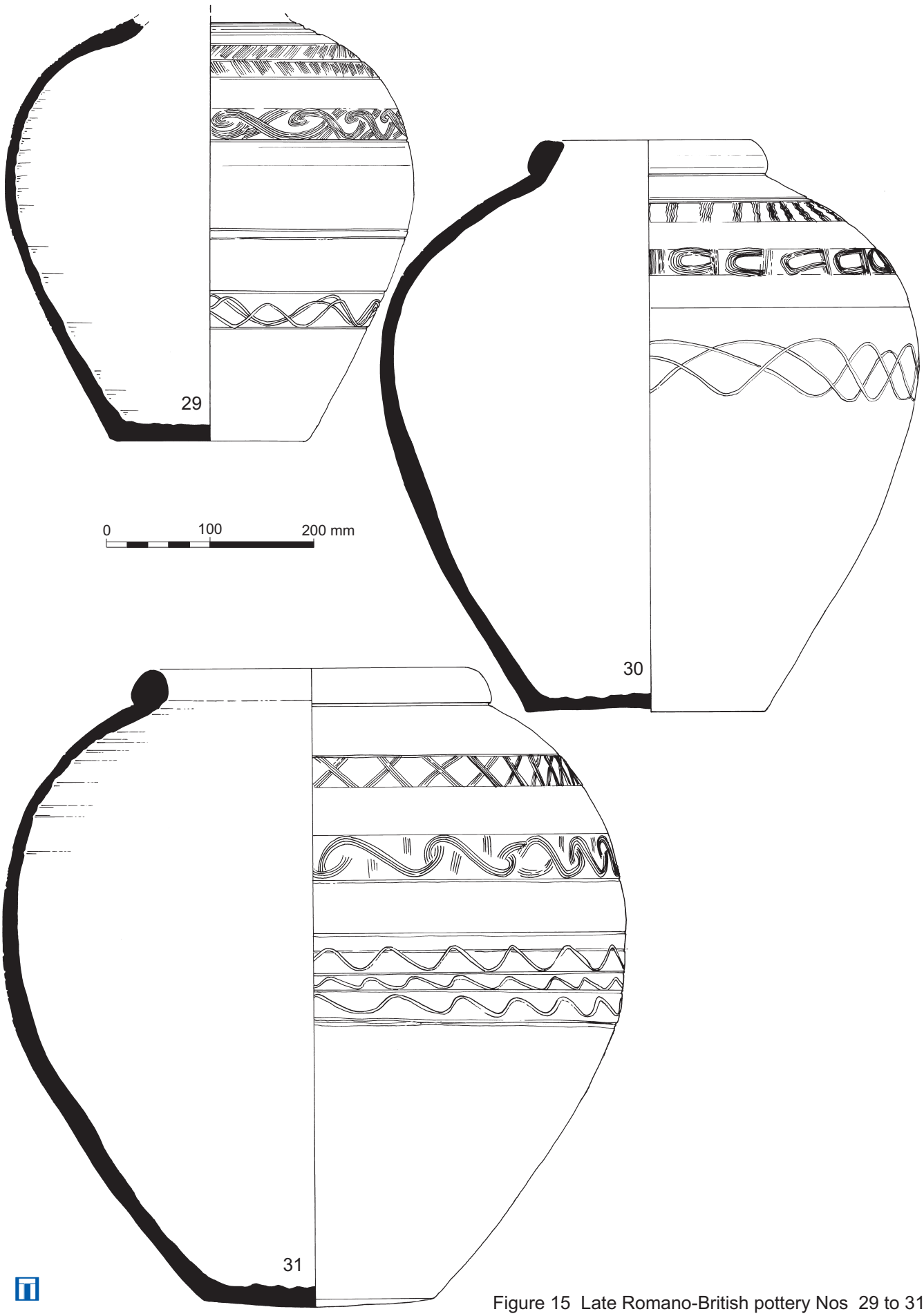


Figure 15 Late Romano-British pottery Nos 29 to 31

Figure 16 Quern (context 1015)

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