

Bronze Age burials and settlement and an Anglo-Saxon settlement at Claypit Lane, Westhampnett, West Sussex

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Evaluation and excavation revealed slight evidence for Mesolithic activity, an Early Neolithic pit and Late Neolithic pits, one of which included the remains of apples and sloes. As well as an Early Bronze Age cremation burial, three Middle Bronze Age ring-ditches and six associated burials were found. A Middle to Late Bronze Age settlement, one of the first found on the West Sussex Coastal Plain, contained several placed deposits and an important pottery assemblage. Two Anglo-Saxon Sunken Featured Buildings also add to the growing evidence for that period on the Coastal Plain.

Evaluation and excavation at Claypit Lane, Westhampnett in advance of the gravel extraction that preceded the construction of a car assembly plant was undertaken in three phases between September 2000 and September 2001. The archaeological potential of the site was clear from the outset; the West Sussex Coastal Plain has extensive evidence for later prehistoric and Romano-British settlement (Bedwin 1983; Bedwin & Holgate 1985) exemplified by the finds from the A27 Westhampnett Bypass, only half a kilometre to the south of the site (Fitzpatrick 1997; Fitzpatrick *et al.* in press). Stane Street, the Roman road between Chichester and London, is thought to have run along the southern edge of the site (Fig. 1).

Following trial trenching in 2000, two areas, Areas 1 and 2, were chosen for further work, which was undertaken in December and the January of 2001 (Fig. 2). Area 1 lay in the north-west of the site where evaluation had identified a ring-ditch and evidence for Bronze Age settlement. Area 2, in the south of the site, contained a Bronze Age burial and other features. A watching brief was maintained over the remainder of the site, Area 3, that summer and autumn. During this stage Area 1 was extended to the east (Fig. 3).

LOCATION

The site covered 4.3 hectares centred on SU 884066

at the northern edge of the village of Westhampnett on the gently undulating ground of the Coastal Plain, with the highest point at approximately 27 m above Ordnance Datum. The South Downs rise 1.5 km to the north.

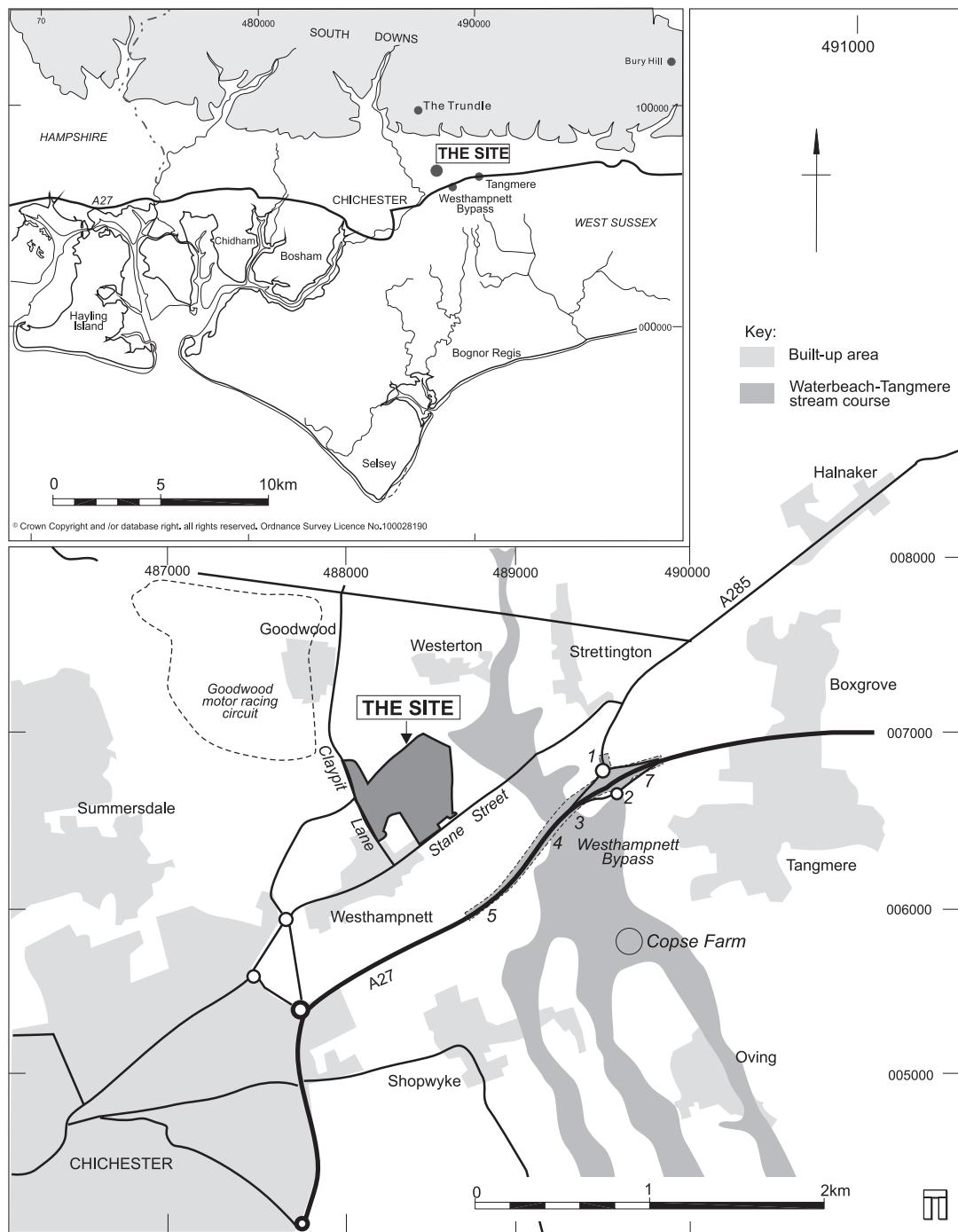
The site lay on the Aldingbourne Raised Beach deposits and the gravel and brickearth subsoils (British Geological Survey 1: 50,000 Sheet 317/332; Hodgson 1967; Fitzpatrick *et al.* in press) and support argillic brown soils that tend to be acidic.

At the time of the fieldwork the main southern field was used for arable, the northern one for pasture. Both fields contained disused gravel quarries, the southern one of nineteenth-century date, the northern dating from the eighteenth century.

METHODS

After the stripping of the topsoil, the similarities in colour and texture between the fills of features and the surrounding undisturbed subsoil meant that initially only large ditches were visible. Smaller features such as pits, post-holes and stakeholes became apparent only once there had been some degree of weathering and when the ground was still damp. As a result, some features in the first phase of Area 1 were not detected until the area was extended to the east some months later.

This caused significant difficulties during the watching brief as it was not always possible to leave



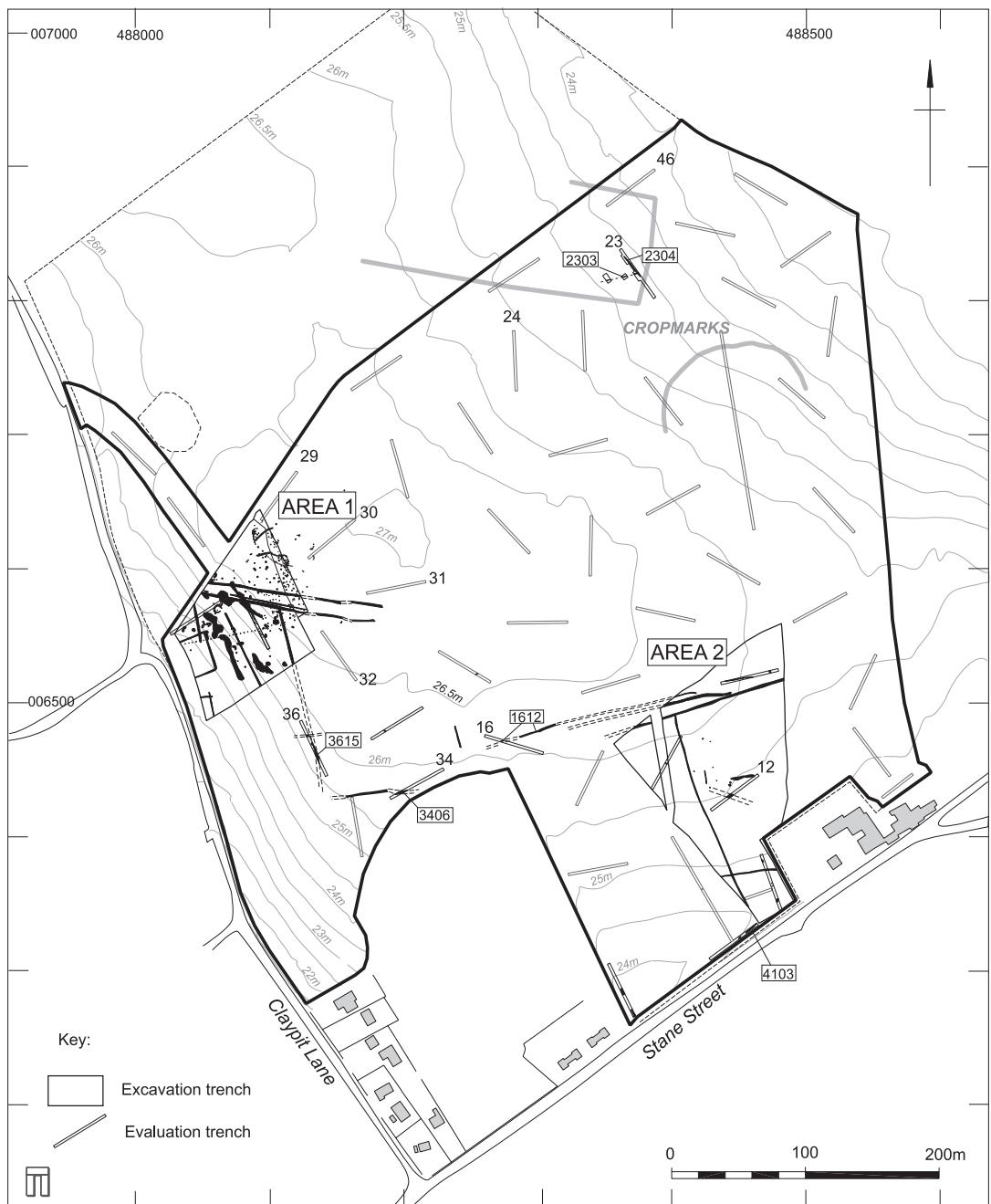


Fig. 2. Excavation areas and location of evaluation trenches.

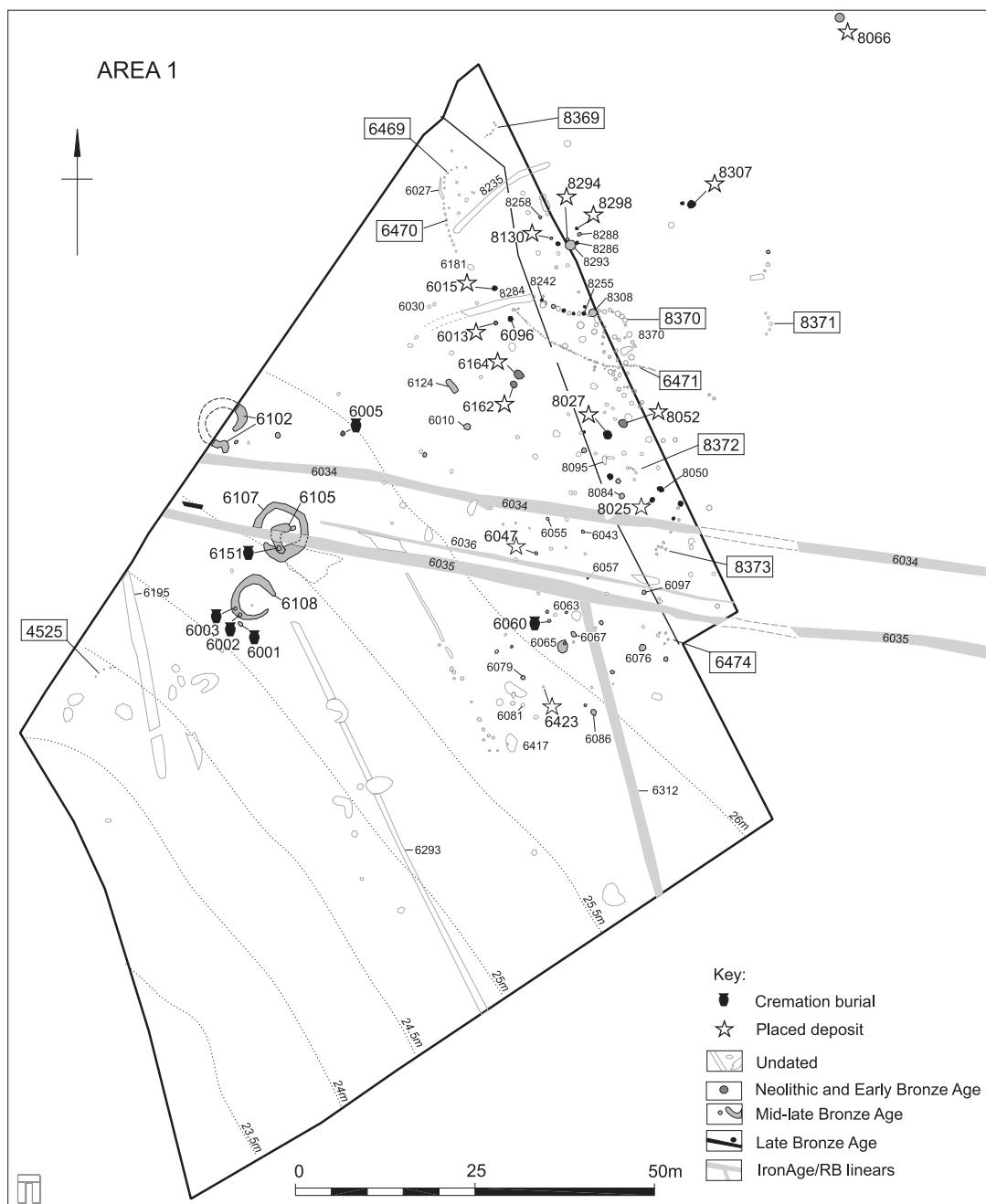


Fig. 3. Plan of Area 1.

areas to weather and sometimes it was not possible to excavate all the archaeological features identified. This was compounded by the removal of the topsoil in strips 20–30 m wide with bunds of soil

between them. These bunds were removed later and it was not possible to be confident that any archaeological features beneath them were noted. Only one new feature was found in the watching

brief, while ditches in the south-west of the site in the evaluation were not located subsequently.

MESOLITHIC

Mesolithic flints were found in a number of later features in Area 1 (Fig. 3), including tranchet adze-sharpening flakes from Bronze Age pit 6105 and Iron Age or Romano-British ditch 6035. A small quantity of flints probably of Mesolithic date was found in a pocket of brickearth immediately to the south of Bronze Age ring-ditch 6107.

NEOLITHIC

A single pit in Area 2, 9050, (Fig. 10) produced sherds from two or more plain bowls (Fig. 15:1) and Early Neolithic flints including knapping waste and a high proportion of retouched tools, a range of items likely to be related to domestic or ritual activity rather than industrial production. Hazel charcoal yielded a date of 3800–3630 cal. BC (NZA-16695; 4919±50) thus providing a rare absolute date for this variety of plain bowls (cf. Robertson Mackay 1987).

A number of small pits containing Late Neolithic Grooved Ware were found in Area 1 (Fig. 3). Two adjacent pits, 6162 and 6164, contained Grooved Ware (Fig. 15:3, 5–6) and worked flint. Joining sherds from the two vessels were found in both pits (one of which is illustrated as Fig. 15:4). The flint from pit 6162 appeared to be a dump of knapping waste, and associated hazel charcoal from mixed charcoals produced a radiocarbon date of 2890–2500 cal. BC (NZA-16617; 4144±65). Two small body sherds of flint-tempered pottery from each pit may be of Bronze Age date and intrusive. Pit 8052 contained abraded, but distinctive, Grooved Ware and charred fruits and nuts. One of the crab apples yielded a radiocarbon date of 2880–2550 cal. BC (NZA 16697; 4132±50) which is statistically indistinguishable from the date from pit 662. Pit 6097 contained abraded Grooved Ware sherds (Fig. 15:7–8) along with burnt and worked flint but also Middle Bronze Age pottery and hazel charcoal from mixed charcoal that yielded a radiocarbon date in the Early Bronze Age of 2120–1750 cal. BC (NZA-16618; 3584±55). The butt end of a polished flint axe, likely to be of Neolithic date, was found in Bronze Age post-hole 6047 (Fig. 9) where it could have been a placed deposit or a packing stone.

EARLY BRONZE AGE

In Area 2 an urned cremation burial was found during the evaluation (Fig. 10). The grave, 4403, was shallow and sub-circular and although the upright Collared Urn had been damaged by ploughing (Fig. 15:9), the burial appeared to be undisturbed. Two, possibly three, individuals were represented: a woman, an infant and possibly a second adult. A radiocarbon determination on oak sapwood charcoal from the fill of the grave that was originally thought to be pyre debris yielded a much earlier, Middle-Neolithic, radiocarbon date of 3370–3030 cal. BC (NZA-16696; 4518±50), suggesting that the charcoal did not derive from the pyre. No other burials were discovered during the subsequent work but, as the grave lay close to the edge of the excavation, it cannot be established if it was an isolated burial or an outlier from a cemetery to the south or east.

MIDDLE BRONZE AGE

The majority of the features securely dated to this period were concentrated in the north-west of Area 1 and included two or three penannular gullies or ring-ditches that may have enclosed small barrows.

THE RING-DITCHES AND OTHER BURIALS

Ring-ditch 6107

Ditch 6107 was flat-bottomed, 1 m wide and up to 220 mm deep. It enclosed an area approximately 7.5 m in diameter (Fig. 4) and contained a small quantity of Middle Bronze Age pottery. The southern part of the ditch was ill-defined, cutting through a spread of material in the subsoil (6410) that was virtually indistinguishable from the fill of the ditch. Both contained worked and burnt flint and charcoal. A later ditch, 6035, also cut across the ring-ditch at this point, further complicating attempts to establish where the causeway lay. It appears that the causeway was on the south-west, in contrast to the south-east-facing causeways of the other two ring-ditches.

There were two intercutting features within the enclosed area. Pit 6105 was kidney-shaped, 1.65 m long, 0.6 m wide and 0.55 m deep. The southern part of this feature appeared to cut the projected arc of ring-ditch 6107 but the relationship could not be established conclusively. Pit 6105 itself was cut by a small undated pit, 6360.

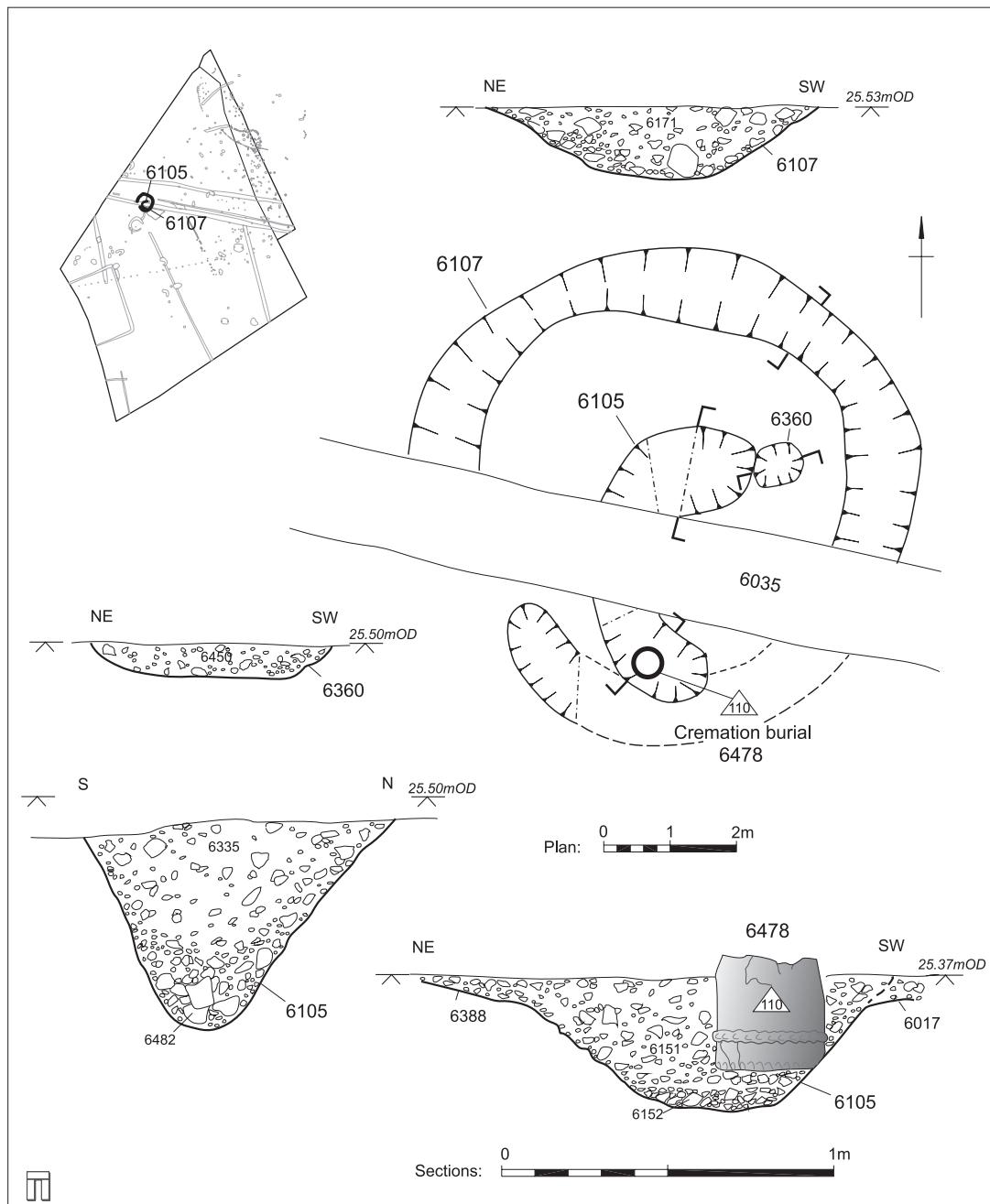


Fig. 4. Middle Bronze Age ring ditch 6107 and burial 6478.

The southern end of 6105 contained an urned cremation burial 6478 in an inverted Middle Bronze Age Deverel-Rimbury bucket urn (Fig. 15:12. Object Number [hereafter ON] 110). The base of the urn had been removed by ploughing. As the urn did

not rest on the base of the grave or on an obvious platform, it seems that the feature was extant and partly infilled when the burial was made. No grave cut was identified. The burial which, despite the plough damage to the urn, did not appear to

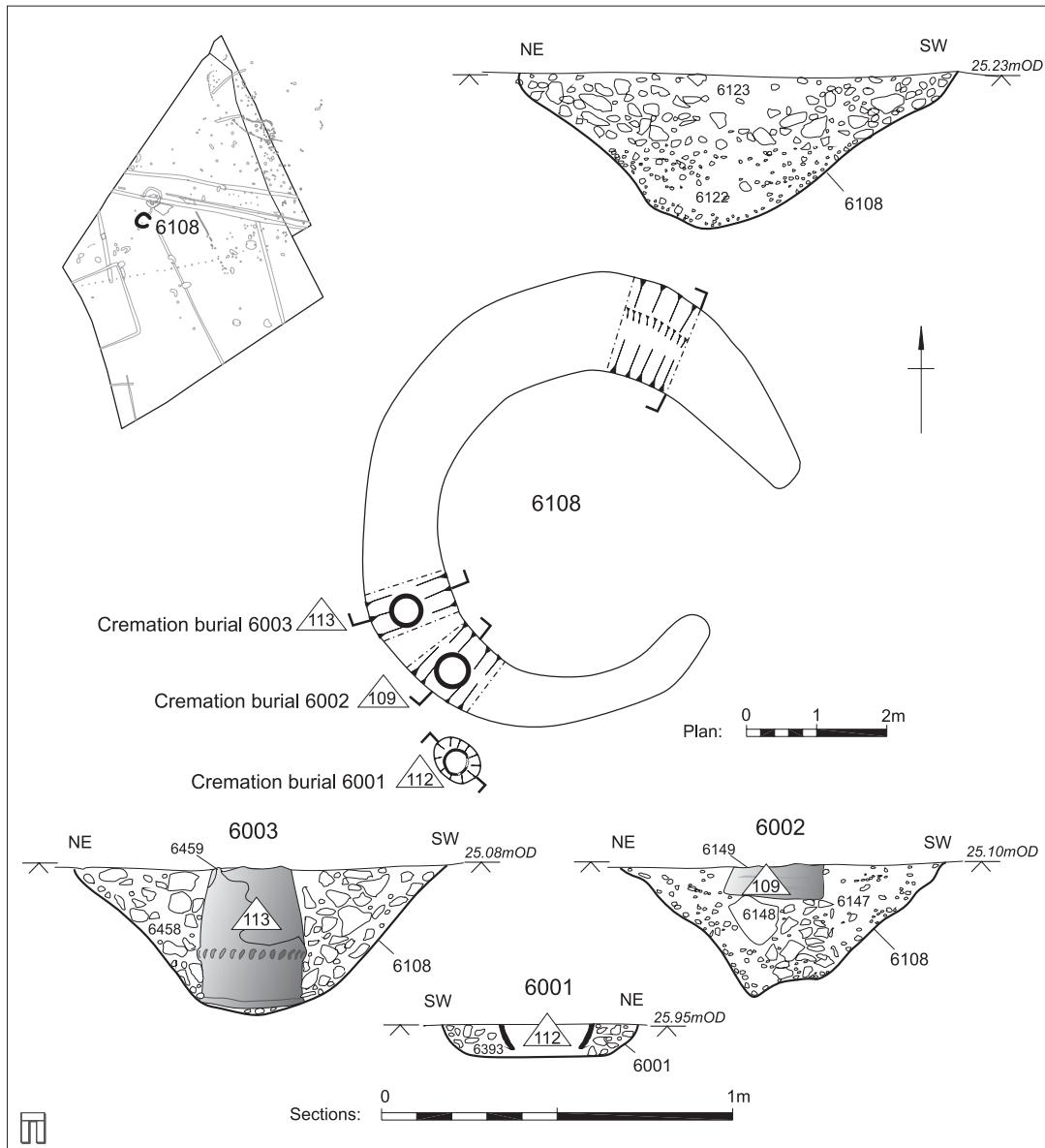


Fig. 5. Middle Bronze Age ring ditch 6108 and burials 6001–3.

have been disturbed, was of an older woman and included a single bone that may have come from another individual. Hazel charcoal from near to the urn provided an Early Bronze Age radiocarbon date of 2460–2140 cal. BC (NZA-16698; 3852 ± 45) but the urn is unlikely to be earlier than 1500 BC. There is no reason to doubt the date (see p. 41) and as there is no other evidence for activity at this date in the immediate vicinity, the possibility

that the monument is earlier and represents, for example, a small hengiform monument has been discounted.

Ring-ditch 6108 and grave 6001

This lay to the south of ring-ditch 6107 (Fig. 5) and was 1.25 m wide and 450 mm deep with an irregular base, enclosing an area 6.2 m in diameter. The entrance faced south-east. The remains of two

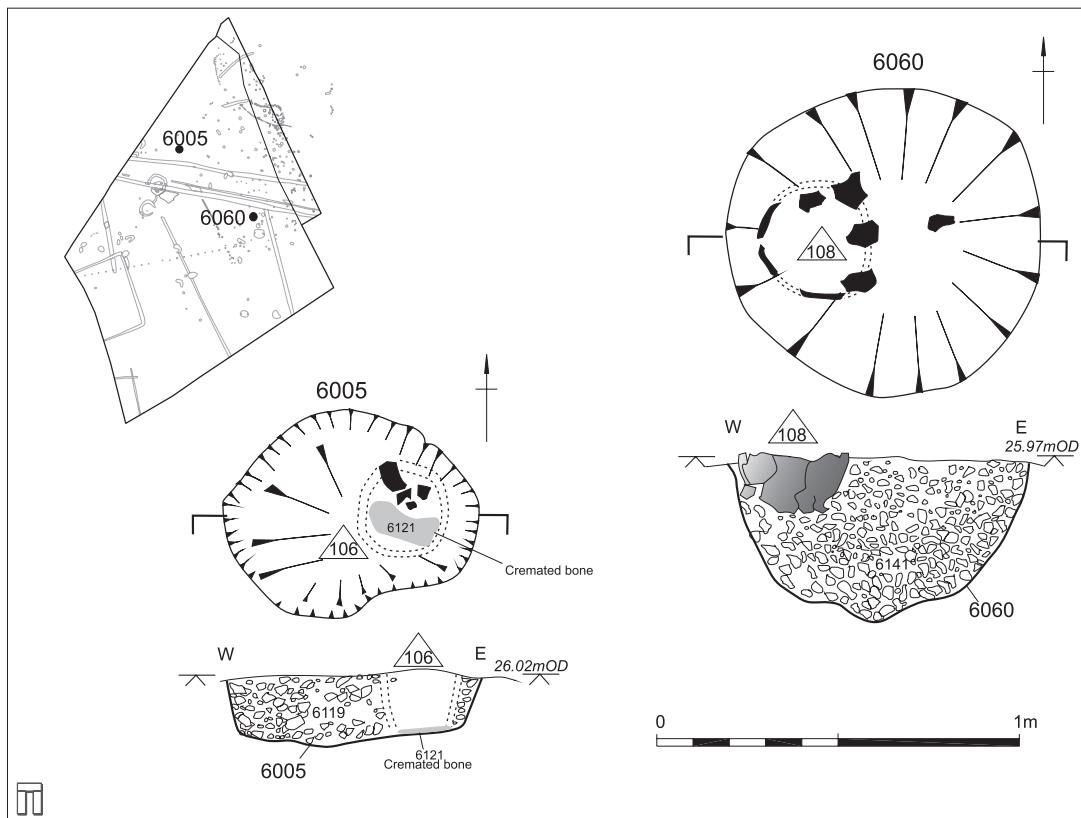


Fig. 6. Middle Bronze Age cremation burials 6005 and 6060.

inverted funerary urns were visible in the south-west of the ditch.

Grave 6002 was a Deverel-Rimbury urn that had been placed on a 'plinth' of flint nodules (6148) set on the ditch bottom. No grave cut was noted. (Fig. 16:15. ON. 109). The urn contained a small quantity of bone (6149) from someone who was 13- or more years-old. Oak charcoal (6147) from around the urn yielded a radiocarbon date of 1420–1160 cal. BC (NZA-167699; 3063±45). The charcoal could represent pyre debris (6147) deposited or spilled around the vessel.

Grave 6003 contained a large and almost complete Deverel-Rimbury urn (Fig. 16:16, ON 113) that had been placed on the base of the ditch. Again no grave cut was identified. The urn contained some bones of a woman and another adult, possibly a woman, and a child. Pyre debris had been placed in the urn after the bone.

As the remainder of the ditch was not excavated, the presence of further, unurned, burials

cannot be excluded. Immediately to the south of the ring-ditch was a small, badly truncated oval pit, 6001, some 0.54 m long, 410 mm wide and 90 mm deep (Fig. 5). The pit contained the upper part of an inverted Deverel-Rimbury urn (Fig 16:14, ON 112) but no bone. It may well be that this feature was a grave, but if so, all evidence of the cremation burial(s) had been destroyed.

Ring-ditch 6102

Part of a third ring-ditch, 6102, was identified (Fig. 3) at the north-western edge of the excavation part of the site, approximately 20 m north of 6107. Enough of the ditch was exposed to show that the entrance faced south-east. No burials were found in the portion of the ditch available for excavation, only worked flint and a sherd of Middle Bronze Age pottery being recovered.

Other burials

Grave 6005 was 0.70 m long, 0.57 m wide and

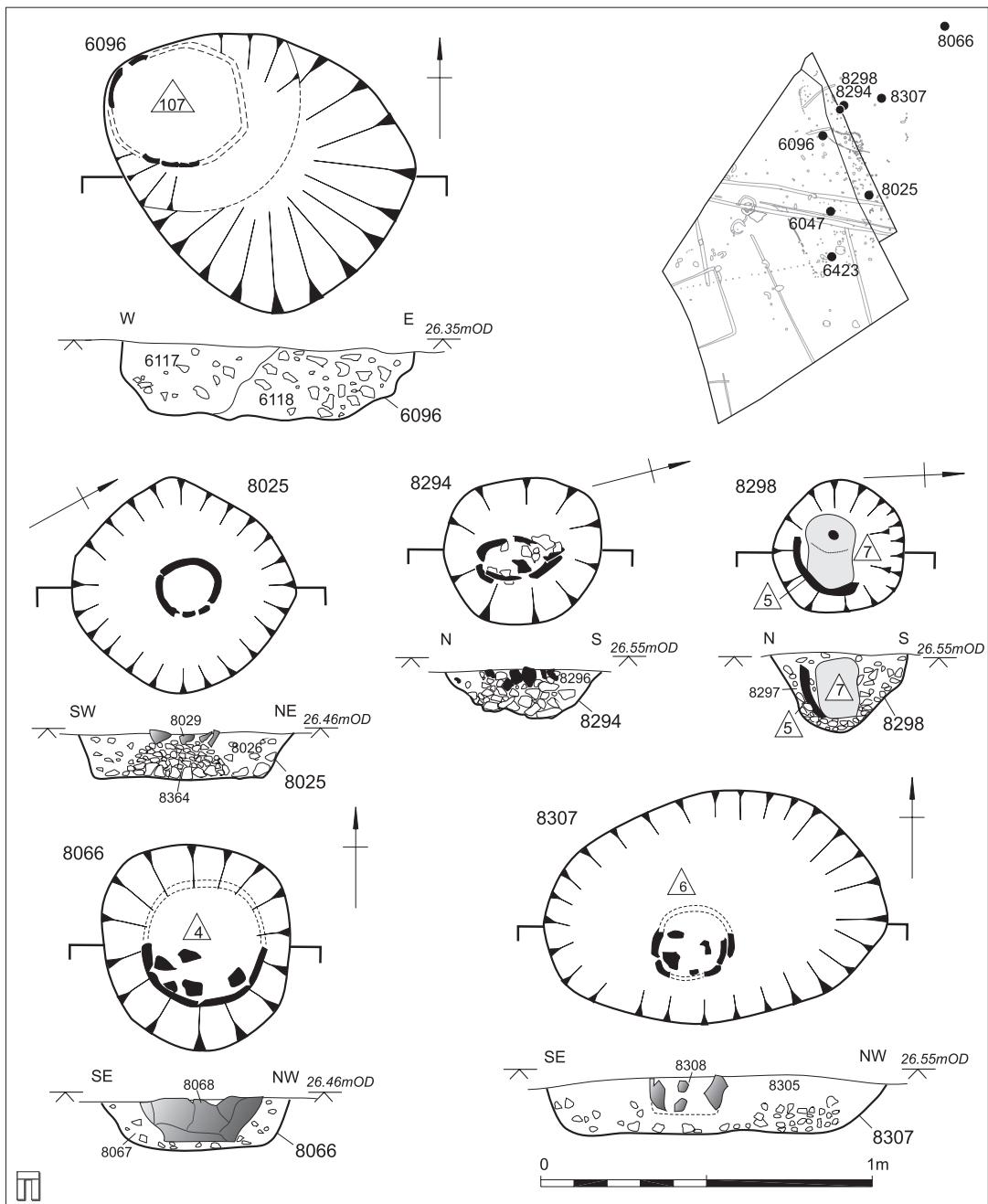


Fig. 7. Late Bronze Age 'placed deposits'.

180 mm deep, and contained the upper part of an inverted Deverel-Rimbury barrel urn (Fig. 16:17. ON. 106) and the cremated bones of a 14- to 16-year old, and a possible second young adult.

Grave 6060 was 0.93 m in diameter and 450 mm deep (Fig. 6). The badly damaged remains of a Deverel Rimbury urn (ON 108, not illustrated) had, in contrast to the other burials, been placed

in an upright position in what may be a partially infilled grave; or within an existing pit. The burial was of the remains of an adult, possibly female. The grave fill also contained worked flint. Charcoal from within the urn gave a radiocarbon date of 1420–1160 cal. BC (NZA-16700; 3063±45). A nearby pit, 6067, contained a large quantity of Middle Bronze Age pottery, but also Late Bronze Age material.

MIDDLE-LATE BRONZE AGE

The north-east of Area 1 contained a dense scatter of pits and post-holes representing a settlement. The site extended beyond the eastern limit of the area initially defined for excavation as Area 1, as there was no evidence for it in evaluation trenches 29–32. As a result, the area was subsequently extended by c. 10 m to the east. This additional area was excavated some months after the completion of the area originally defined as Area 1 and the limited time available to record the features meant that not all could be excavated. At this point it also became apparent that some smaller features had not been identified in Area 1 and these were also excavated. When it became clear that the boundary of the settlement still did not lie within the enlarged excavation area, it was extended again. However, as part of this work was undertaken under controlled watching brief conditions, it must be regarded as unlikely that all features were recorded. As a result, the full extent of the settlement and the date and character of some features within it were not defined.

Owing to the similarities of their flint-tempered fabrics it was not always possible to distinguish between unfeatured Middle and Late Bronze Age sherds so some features have been assigned to a 'Middle to Late Bronze Age' category. As Middle Bronze Age pottery was also often associated with Late Bronze Age pottery, this is interpreted most economically as indicating that the settlement was founded at the time that Deverel Rimbury pottery began to be replaced by Late Bronze Age forms.

Many pits appeared to contain objects that had been deposited deliberately. Here the term 'placed deposits' has been substituted for the more common term 'structured' as the latter may imply formalized and rigid rites and ceremonies. It is likely that some placed deposits would have been the result of informal, even mundane practices that

were, nonetheless, interwoven with concerns about place, identity, fertility and regeneration, and structured by cosmology, age, gender and status.

Owing to the poor survival of bone in the acidic soils, identification of placed deposits has relied on the pottery, sometimes associated with clay objects or stone. Placed deposits are defined as including vessels that had clearly been complete or substantially complete at the time of their deposition or as the presence of substantial fragments of vessels where these sherds appeared to have been deliberately selected and/or intentionally placed in features. This classification was, inevitably, hampered by the damage caused by ploughing to some vessels that had been complete at the time of deposition. The harsh acidic soil also meant that it was often difficult to ascertain whether pottery had been deposited in a relatively fresh condition or was already worn or weathered.

Apart from in the burials, Middle Bronze Age pottery was found in small quantities in a number of features in the settlement. Although a few large groups were found, they all also contained Late Bronze Age pottery. Five features produced more than 50 sherds of pottery: pits 6065, 6067, 6079, 6178 and 8294. Pit 8294 contained the remains of what appears to have a complete pot (Fig. 7). Three of these pits (6065 — which had the largest amount of pottery — 6067 and 6079) are fairly close together; and close to grave 6060.

LATE BRONZE AGE

FENCES

Two fences (6470–71) ran roughly north-south and north-west to south-east across the settlement area. A gap between the fences 5.7 m wide may have been an entrance with which post-holes 6015 and 6181 might have been associated. The northern fence (6470) was built of timbers that were both more substantial and more widely spaced than the post- and stakeholes of 6471. Between them the post-holes of both fences yielded only a single piece of worked flint, but post-hole 6015 contained abundant oak charcoal that produced a radiocarbon date of 1010–800 cal. BC (NZA-16701; 2758±55).

CIRCULAR AND SEMI-CIRCULAR STRUCTURES

Structure 8370 (Fig. 8) was represented by post-holes 8101, 8308, 8327, 8316, 8320, 8335 and a

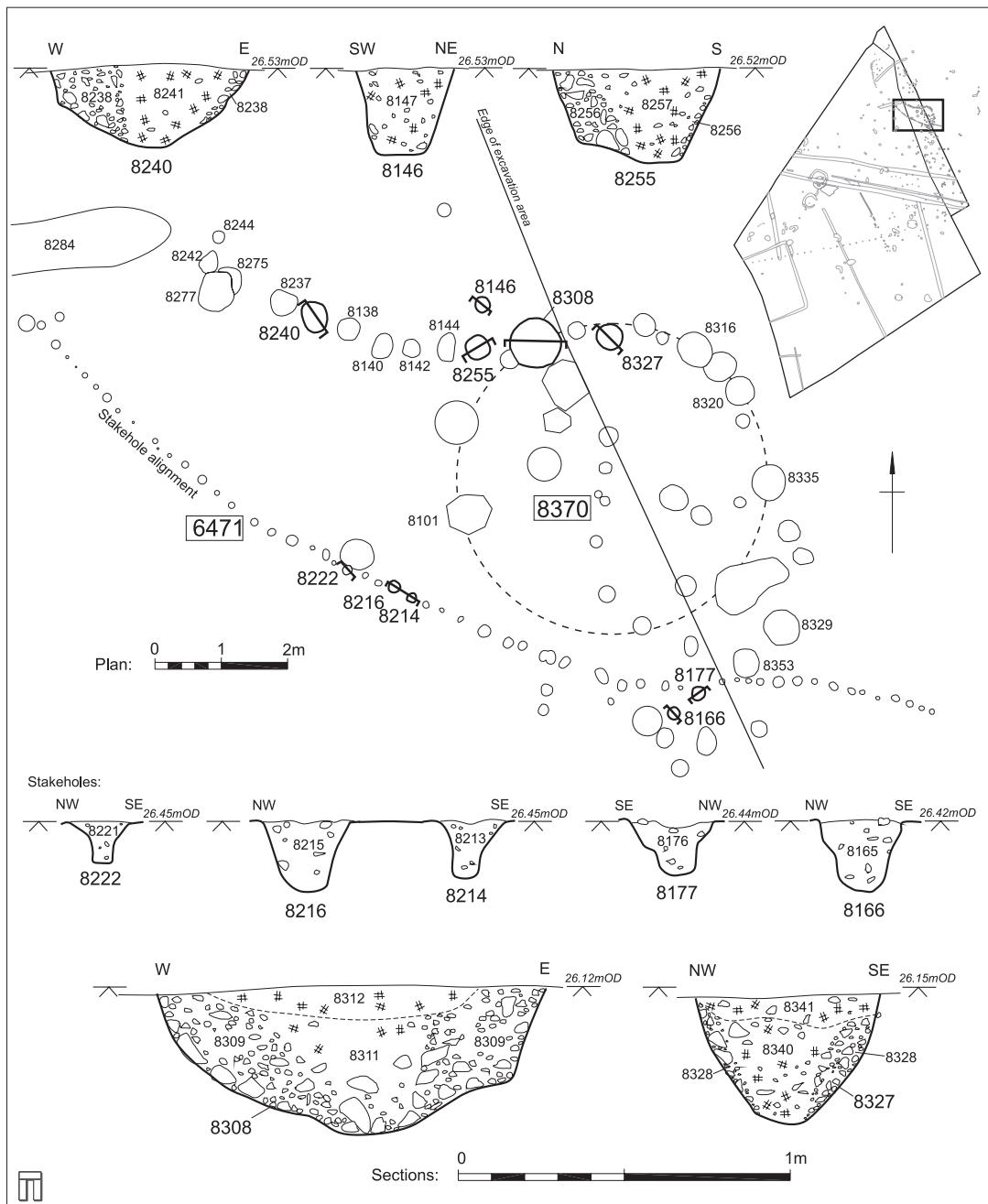


Fig. 8. Plan of Late Bronze Age circular building 8370, fence 6471 and related features.

number of stakeholes and post-holes which may have belonged to internal features. The post-holes that it was possible to excavate were substantial features, up to 0.65 m in diameter and 0.59 m deep.

Many contained packing stones and had evidence of the timbers. An amorphous feature might be a tree-throw or, given its location in the south-east of the circle, a post-hole associated with the entrance

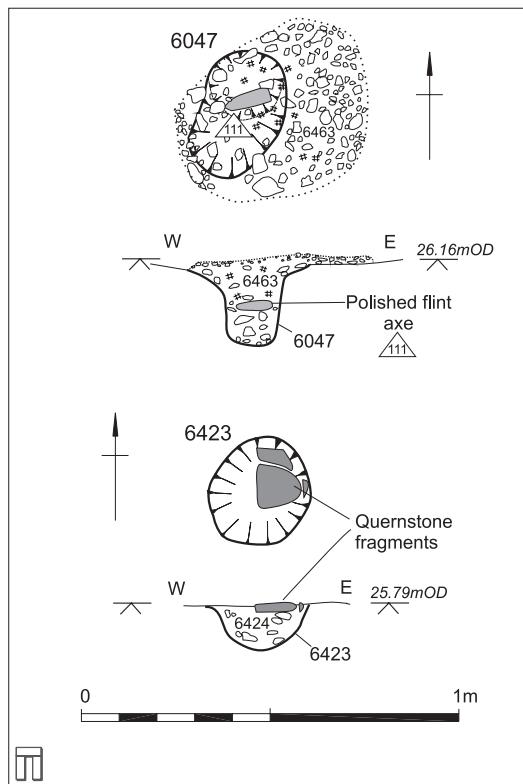


Fig. 9. Late Bronze Age Postholes 6047 and 6423.

where the post had been replaced, causing the irregular shape and shallow profile. The building measured c. 7 m in diameter, a size comparable with other roundhouses of this date in Sussex. Two sherds of Late Bronze Age pottery were recovered from 8308. Other post-holes contained only burnt flint and charcoal.

Several of the post-holes in an arc to the north, including 8242, 8237, 8240, 8138, 8140, 8142, 8144 and 8255, also showed evidence for post packing and/or the removal of timbers (Fig. 8). Three post-holes (8138, 8142 and 8255) contained Late Bronze Age pottery. It is uncertain if the alignment represents a fence or one or more circular buildings.

A curvilinear gully, 6027, appeared to continue the northern line of fence 6470 (Fig. 3), but it may well have been a drip gully belonging to another postulated structure, 6469. This was represented by an arc of post-holes immediately to the east of it. The structure would have been between 4 and 6 m in diameter. Gully 8235 to the south may have formed another boundary to the structure.

The smaller arcs of post-holes 8369, 8372 and 8373 are not considered likely to represent circular buildings. The post-holes that formed group 4525 in the west of Area 1 beyond the ring-ditches are perhaps more likely to represent a building, but they lie 50 m from the settlement and they contained only burnt and worked flint.

OTHER STRUCTURES

While it is likely that a range of two-, three- or four-post structures stood within the settlement, no convincing examples could be identified. That such structures did once stand is suggested by the isolated post-hole 6423, which contained burnt flint but also seven fragments of a saddle quern reused as packing stones to support a post (Fig. 9).

PITS AND PLACED DEPOSITS

A number of pits and post-holes contained Late Bronze Age pottery, burnt flint and charcoal. They appeared to be evenly distributed across the settlement with the exception of the area around building 8370, from which they were absent. Several of the pits (8025, 8027, 8066, 8298 and 8307) contained what appeared to be deliberately-placed deposits.

Pit 8025 contained a large fragment of an inverted Late Bronze Age shouldered jar that had been placed on a small mound of flint and gravel similar to Middle Bronze Age burial 6002. Feature 8027 (not illustrated) may have been a tree-throw rather than a pit, but contained fragments of two Late Bronze Age jars (Fig. 16:19). Early Neolithic pottery was also present. The lower half of one Late Bronze Age vessel survived, filled with burnt flint and ferruginous sandstone. This had also originally been placed on a pedestal in the feature. In pit 8066 burnt flint and ferruginous sandstone were also present in the lower half of the vessel that survived in pit 8066 (Fig. 7), while the lower half of the vessel in pit 8307 contained a flint tool and burnt flints (Fig. 7).

In contrast, the deposit in pit 8298 included a complete loomweight placed on the base of a pot, and possibly fragments of a second loomweight. Other sherds had been placed around the weight, along with burnt flint. A substantial deposit of charred grain, including emmer, spelt and barley was also present and this yielded a radiocarbon date of 1010–800 cal. BC (NZA-16502; 2730±70).

Pit 6096 contained the lower part of a pot in a very coarse flint-tempered ware (FL4) more commonly used in the manufacture of Middle Bronze Age pottery. As in pits 8027 and 8066, this pit also

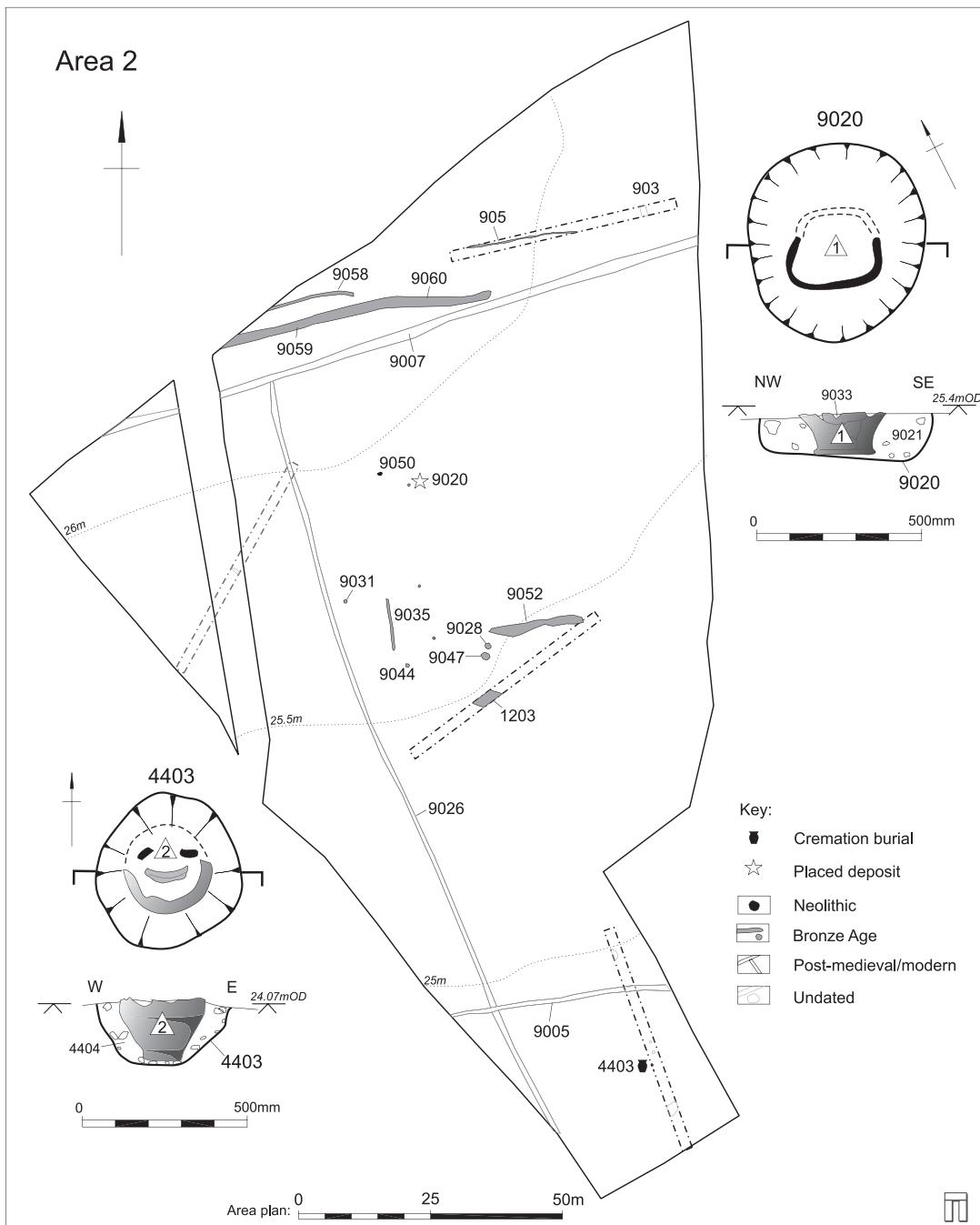


Fig. 10. Plan of Area 2, burial 4403 and 'placed deposit' 9020.

contained burnt flint and ferruginous sandstone. Although this pit contained 1 g of cremated human bone, this may not have been included de-

liberately, though the quantities of stone and also the presence of barley, oat and probably emmer as well as hazelnut and fragments of unidentified,

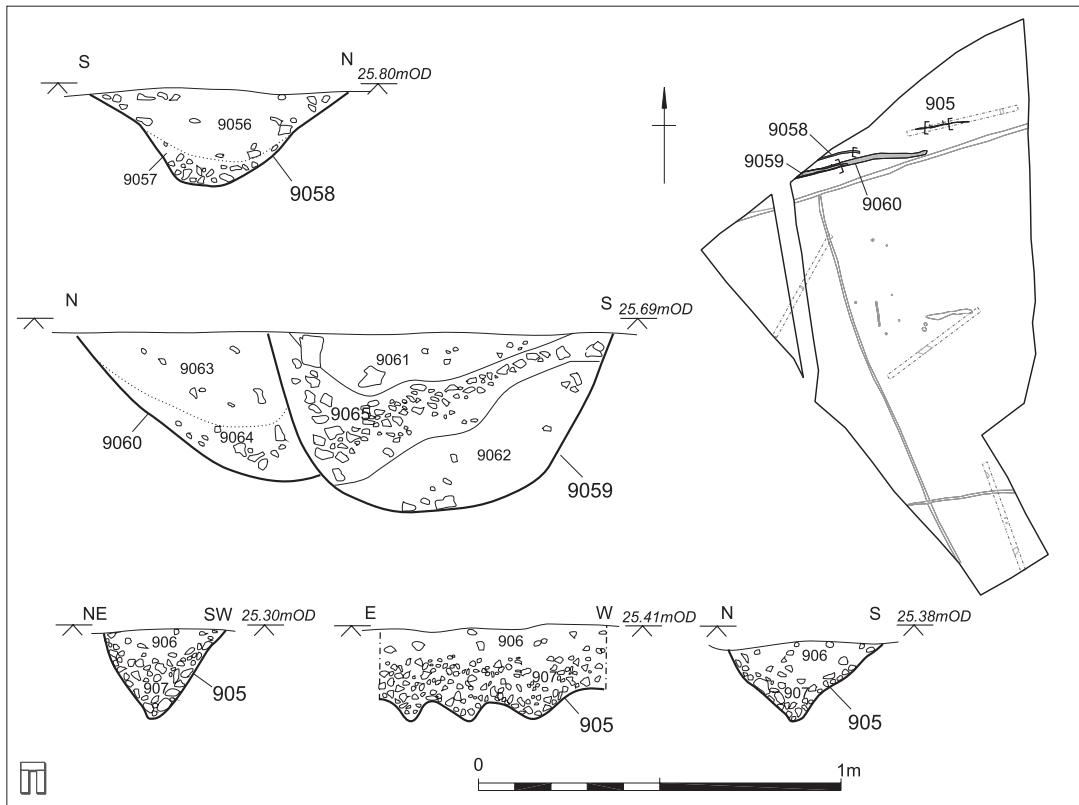


Fig. 11. Sections of Bronze Age ditches and gullies in Area 2.

probably organic material are similar to those of materials interpreted as placed deposits. A radiocarbon date of 920–800 cal. BC (NZA-16703; 2703±45) was obtained for charcoal within the vessel.

Post-hole 6047 produced a sherd of Middle Bronze Age pottery but also the butt end of flint axe (ON 111) amongst the packing stones. While this may be a placed deposit, with the axe possibly having been curated from the Neolithic, the axe could be later and might have been discarded after it broke in use (Fig. 9).

DITCHES/GULLIES

In the north-east of Area 1 curvilinear gully 8235 was just over 30 m long, 0.75 m wide and 210 mm deep with steep sides and a flat base with distinctly rounded terminals. This feature may have bounded building 6469 to the north-west and it clearly respected the position of the fence line 6470.

To the south, undated ditch 8284 was 1.02 m wide, 340 mm deep and also steep-sided with

a flat base. It ran between the possible entrance post 6015 for fences 6470–71 and the northernmost stake of fence 6471. Its western terminal had been truncated but it appeared to end at the east, close to the fence or building adjacent to building 8370. It is possible that this ditch is not Bronze Age in date.

AREA 2

Middle/Late Bronze Age features were also identified in Area 2, but the level of activity was much less intense than in Area 1, 300 m to the north-east (Fig. 10). A group of rounded and relatively shallow pits formed a small cluster. Pits 9028 and 9031 are Middle Bronze Age, 9044 and 9047 are Late Bronze Age. All contained burnt flint and charcoal and pottery. In contrast, pit 9020 contained the base of a Late Bronze Age vessel associated with burnt flint while pit 9031 also contained sherds from the base of a pot and a large quantity (*c.* 16 kg) of

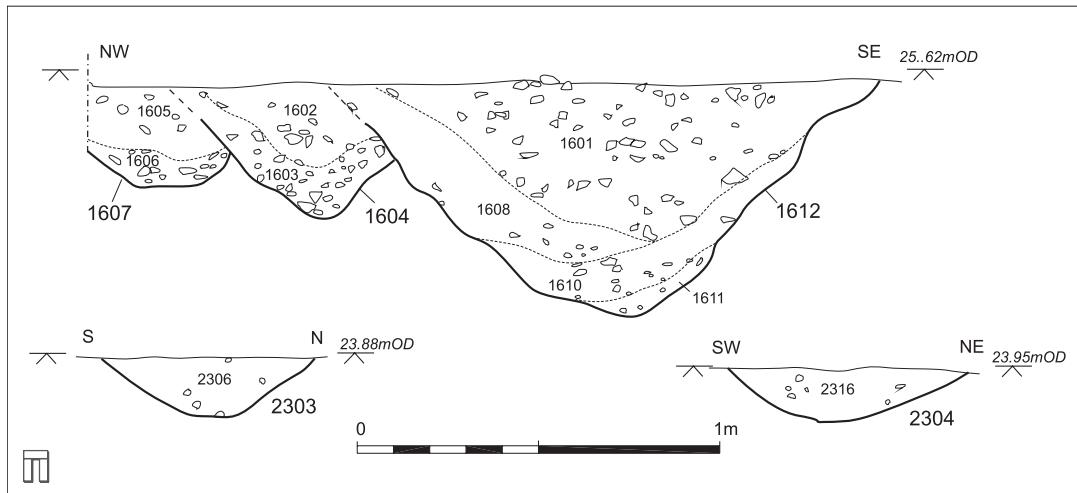


Fig. 12. Sections of ditches 1604, 1607 and 1612; 2303 and 2304.

burnt flint. These two pits are similar to the placed deposits associated with the settlement. Feature 1203, which was found in the evaluation, was a pit or rectilinear feature that also contained Late Bronze Age pottery, burnt flint but also Mesolithic or Early Neolithic worked flint.

A group of ditches ran east–west (Fig. 11). The largest of these, 9060, ran for at least 53 m and was 1.8 wide and 0.57 m deep, with relatively steep sides and a rounded base. Its eastern terminal was rounded. The ditch contained burnt and worked flint. Its western length was recut by a slightly smaller ditch (9059), which was up to 1.6 m wide and 0.56 m deep with a more variable profile. It too contained burnt flint but also a sherd of Late Bronze Age pottery. The gully running parallel to the north, (9058) was undated. Gully 905, which was found during the evaluation, was on a similar orientation, at least 21 m long, up to 400 mm wide and 250 mm deep but had numerous stakeholes along its base. This group of ditches may represent a driveway.

Gully 9035 ran north–south for at least 10 m long. It was up to 470 mm wide but only 100 mm deep, with a slightly concave or flat base, and contained burnt and worked flint and charcoal.

A very irregular linear feature (9052), lay to the south of the ditches, close to the cluster of pits. It appeared to consist of a series of interlinked, irregular depressions that may have been ‘working hollows’ and which contained Late Bronze Age pottery, burnt and worked flint and charcoal.

Ditches 9005, 9007 and 9026 were modern in date, with 9007 and 9026 containing post-medieval pottery and early modern brick and being recorded on maps.

EVALUATION TRENCH 16 (Fig. 2)

Intercutting gullies 1607 and 1604 in evaluation trench 16 to the west ran north-east–south-west. Gully 1607 was 450 mm wide and 260 mm deep and was cut by gully 1604, which was on a similar alignment (Fig. 12). This gully was 0.65 m wide and 370 mm deep and contained two small sherds of flint-tempered pottery, probably of Bronze Age date, and a single piece of worked flint. These gullies may represent a continuation of the ditches seen in Area 2 (Fig. 2). Gully 1604 was in turn truncated to the south-east by a larger feature, ditch 1612, which was undated but which recalled the Romano-British ditch 3406 found to the west in evaluation trench 34.

EVALUATION TRENCH 23 (Fig. 2)

In the north-east of the site, ditch 2304 ran for at least 20 m north-west to south-east, where it terminated. It was 420 mm wide and 330 mm deep, with irregular, gently sloping sides and a rounded base (Fig. 12) and contained worked and burnt flint. It was cut almost at a right angle by a shallow ditch, (2303), which was up to 0.64 m wide and 170 mm deep. Its length was traced for 61 m and it also contained worked and burnt flint.

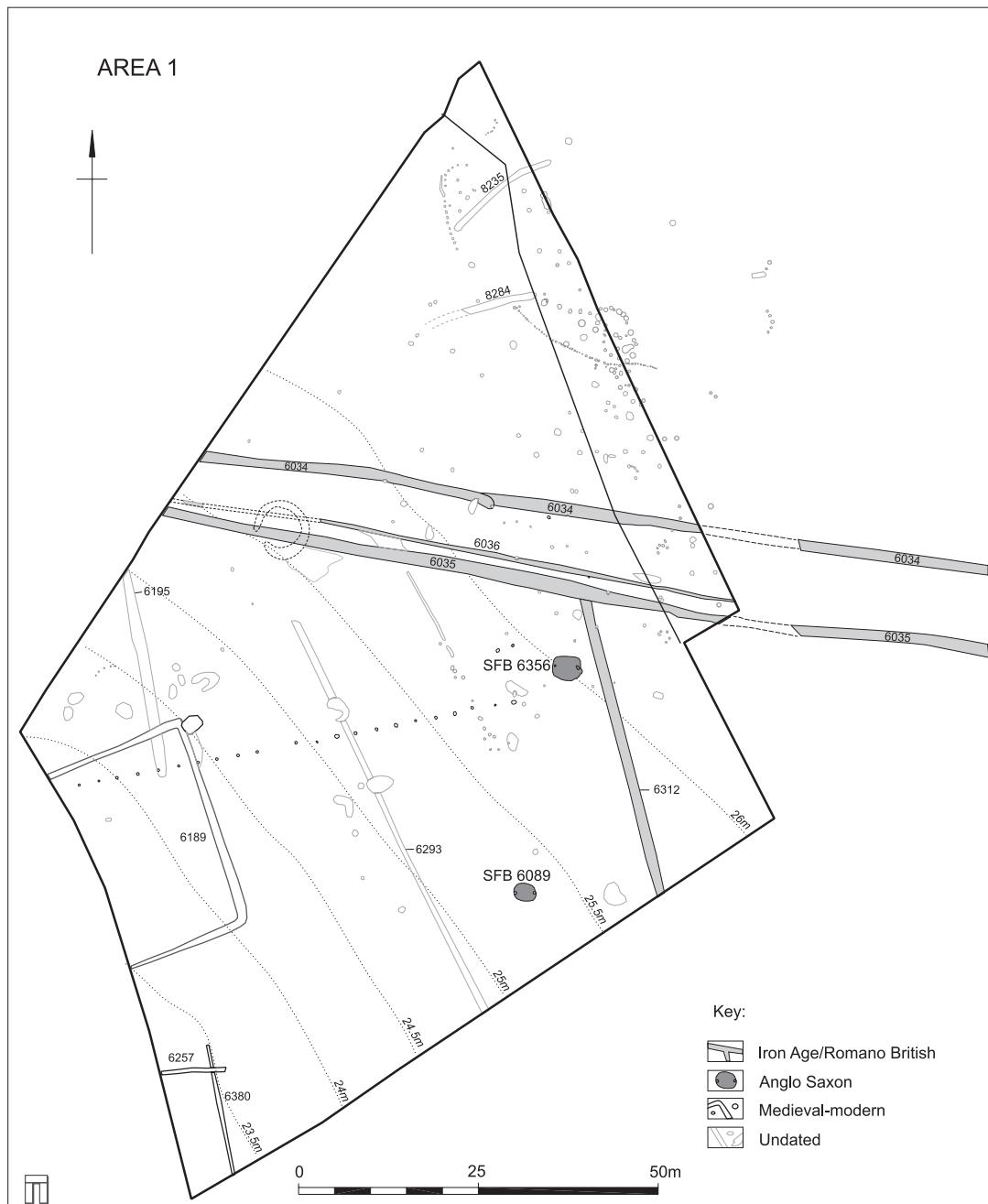


Fig. 13. Area 1, features of Iron Age or later date.

IRON AGE AND ROMANO-BRITISH

Two parallel trackway or driveway ditches, 6034 and 6035, between 3.5–6 m apart, ran east–west for

75 m across Area 1 (Fig. 13). The ditches were up to 1.6 m wide and 0.65 m deep with steep, regular sides and narrow flat bases. There was some evidence of an external bank along the north of ditch 6034.

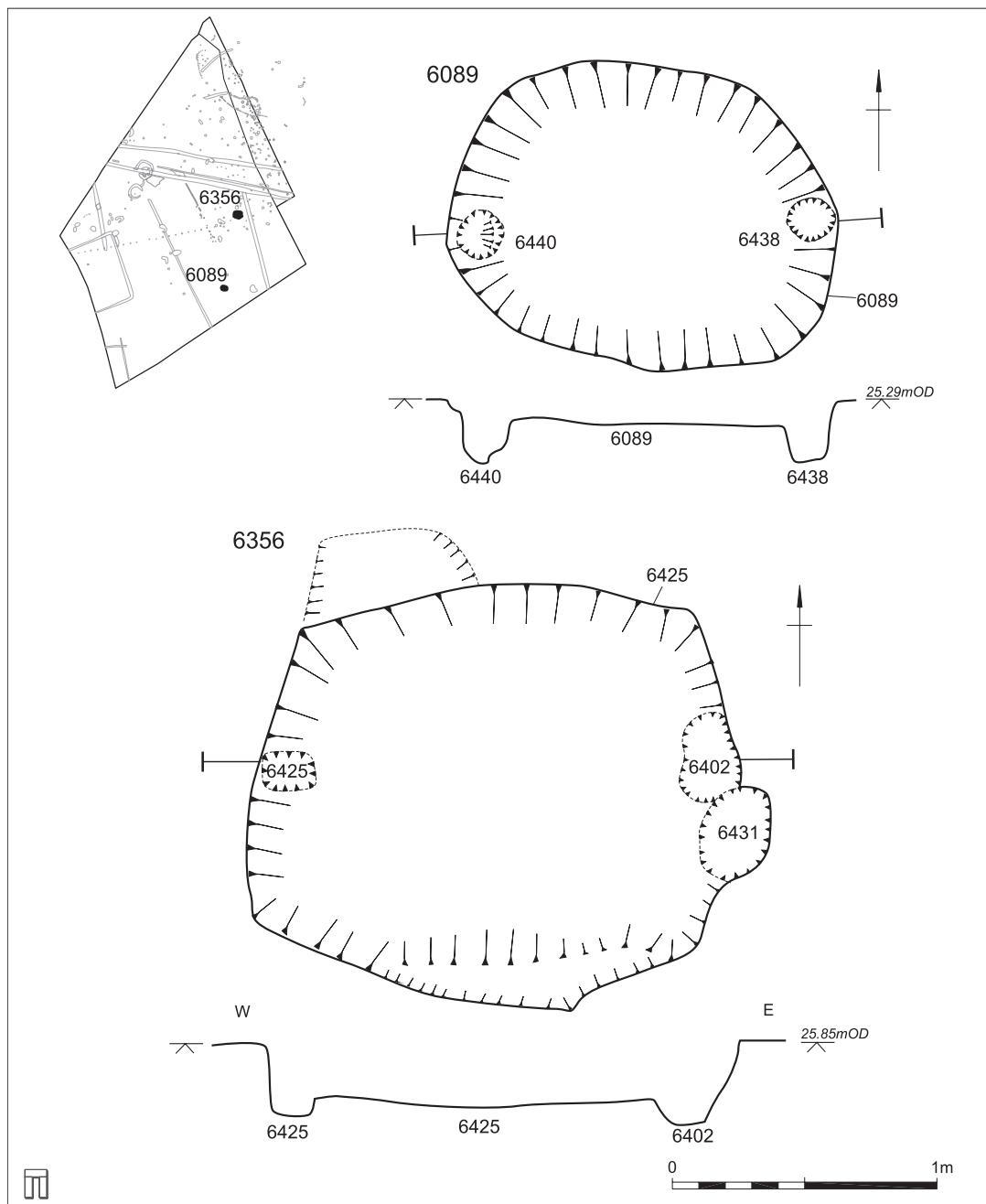


Fig. 14. Anglo-Saxon sunken-featured buildings 6089 and 6356.

Another large ditch (6312) that ran north-south, appeared to terminate at the southern edge of ditch 6035. The droveway contained some Bronze Age pottery but also a fragment of tegula in 6035.

A shallow gully (6036) ran parallel to ditch 6035 for about 30 m but may predate it as it could not be traced close to ring-ditch 6107, suggesting that the monument may still have been upstand-

ing at that time. Although a few sherds of Bronze Age pottery were found within the shallow gully (6036), these may well be residual. Five residual Late Iron Age rim sherds were recovered from the fill of medieval enclosure 6189 in the west of Area 1. Shallow ditches or gullies 6380 and 6257 in the south-west of Area 1, while undated, may be contemporary with 6036.

Evaluation trench 34 (Fig. 2) encountered a large ditch (3406), aligned east-west, which was 1.65 m wide and 0.7 m deep. A smaller gully (3414) ran parallel to the ditch, recalling gully 6036 in Area 1. Five small and heavily abraded sherds of samian came from the uppermost fill of ditch 3406. This ditch was not relocated during the watching brief, though another length of undated ditch that was seen may to the north-east may be related. Ditch 1612 in evaluation trench 16, which cut gullies that may be of Bronze Age date was undated. However, its size and shape recalled ditch 3406.

ANGLO-SAXON

Two apparently isolated Sunken Featured Buildings were found in Area 1 (Figs 13–14). Building 6089 was oriented approximately east-west and was 3.1 m long, 2.5 m wide and up to 250 mm deep. It was subrectangular in plan with rounded corners and a post-hole at each end. Building 6356 was also oriented approximately east-west and was 3.8m long, 3.4m wide, up to 0.53 m deep with one post-hole at its western end and two intercutting

post-holes at its eastern end which may represent a repair to the roof.

A small quantity of pottery, perhaps of sixth-to seventh-century date was recovered from both buildings, but while Building 6089 contained charred plant remains and charcoal from a range of species (although probably in secondary contexts) and a fragment of a cattle tooth, Building 6356 was almost entirely devoid of these materials. A possibly utilized pebble was found in Building 6356.

The other Anglo-Saxon pottery found was a single unstratified sherd, but it cannot be excluded that some of the undated post-holes within the area of the Bronze Age settlement, on the edge of which Building 6356 lies, are Anglo-Saxon in date.

MEDIEVAL AND LATER

Two abraded sherds of medieval pottery and seven quern fragments were recovered from the subrectangular enclosure 6189 partially revealed in the west of Area 1 (Fig. 13). The ditch was 1.27 m wide and 0.65 m deep, with steep sides and a rounded base. The enclosure marked by the ditch was 14.2 m wide and at least 9.7 m long and may have been set out parallel to Claypit Lane. The enclosure may have been for stock. The row of post-holes that ran across the enclosure was a modern fence line. A cropmark in the north of the site tested in trenches 24 and 46 resulted from a World War II extension to the runway at Goodwood airfield (Fig. 2).

THE FINDS

POTTERY

by Rachel Every & Lorraine Mepham

A total of 3019 sherds (44,173 g) ranging in date from the Early Neolithic to the medieval period was recovered (Table 1). The bulk of the assemblage dates to the Middle/Late Bronze Age, and includes several complete and partially complete vessels, some of which are burial urns and others which were apparently deliberately deposited. The occurrence of groups of Early and Late Neolithic vessels is significant, and the small Early/Middle Saxon assemblage is also of interest. Only the prehistoric and Saxon pottery is discussed in this report; details of the Romano-British and medieval pottery are held in archive.

Methods

Material was subjected to a detailed fabric and form analysis, and a selection of other variables were also recorded (e.g. surface treatment, decoration, evidence of use) following nationally recommended guidelines for the recording of prehistoric pottery (PCRG 1997), and the standard Wessex

Archaeology recording system (Morris 1994). All data have been entered onto an Access data base.

A total of 19 fabric types was identified. These have been grouped for the purposes of discussion into six chronological periods. Quantified data for all fabric types are presented in Table 1.

The prehistoric pottery is from 116 features, of which 24 contained over 30 sherds and 61 produced five sherds or fewer. Perhaps unsurprisingly, the earlier prehistoric material has a lower mean sherd weight than the later material (Table 1).

Early Neolithic

A total of 113 sherds (653 g) was identified as Early Neolithic, from two isolated pits. Owing to the difficulty in distinguishing plain body sherds from the flint-tempered Middle and Late Bronze Age wares, it is possible that some residual material may have been overlooked. The sherds occur in two flint-tempered fabrics: FL9 and FL10 (Appendix 1).

One rim could be classified as a plain rim according to the type series created for the Staines causewayed enclosure (Fig. 15:1) (Robertson-Mackay 1987, fig. 37). This vessel came from pit 9050 in Area 2 (Fig. 10) in association with

two other undiagnostic rim forms, probably fragments from open bowls, and contemporary flint. A second isolated pit or possibly a tree-throw (8027) also contained 13 body sherds of Early Neolithic pottery, in this instance residual in a Late Bronze Age context.

Early Neolithic pottery is rare in this part of West Sussex (Drewett 1980). A single vessel, in a fairly well-sorted, flint-tempered fabric corresponding to FL10, was recovered from Area 4 on the Westhampnett Bypass (Fitzpatrick *et al.* in press), while recent excavations at Drayton Lane, Oving, have produced the largest assemblage of this date on the West Sussex Coastal plain (172 sherds; Raymond in prep.) and there is a large assemblage from The Trundle to the north on the Downs (Fig. 1) (Curwen 1929). It is difficult to place this small assemblage in the overall classificatory scheme for Early Neolithic pottery, particularly given recent criticisms of such a system (e.g. Cleal 1992), and Drewett (1980) has demonstrated the prevalence of localized pottery manufacture in Sussex at this period. The two fabrics represented here (FL9 and FL10) correspond to Drewett's fabrics I and II respectively, which make up the bulk of Early Neolithic pottery in Sussex.

Late Neolithic

Some 85 sherds (495 g) were identified as Late Neolithic, and of these, the majority have been positively identified as Grooved Ware. These fabrics are exclusively grog-tempered - GR14 and G16 (Appendix 1). A minimum of seven Grooved Ware vessels is present.

The Grooved Ware was recovered from four pits and from an unstratified context. The largest group came from pit 6162 with at least three vessels (Fig. 15:3–6), one of which has curvilinear plastic decoration on the internal rim bevel (Fig. 15:4). The decoration on the exterior of the vessel has been largely erased by post-depositional abrasion, but consists of grooved decoration that appears to form converging linear motifs. The adjacent pit 6164 produced a fragmented rim sherd conjoining with this vessel. The base of a Grooved Ware vessel from pit 6162 exhibits similar grooved decoration (Fig. 15:6), and may be part of the same vessel. Similar grooved decoration may be present on the exterior of a second, smaller vessel (Fig. 15:2), although very little survives. The third rim (Fig. 15:3), for which the diameter is not reconstructable, has faint twisted cord impressions on the exterior. In both pits 6162 and 6164 the Grooved Ware sherds, which are relatively highly abraded, were associated with small quantities of Late Bronze Age material, but also with worked flint in relatively fresh condition that might represent Neolithic knapping waste. Charcoal from pit 6162 yielded a radiocarbon date of 2890–2500 cal. BC (NZA-16617; 4144±65) suggesting that the Bronze Age material is intrusive. The Grooved Ware and flint could represent a placed deposit.

This group of vessels, in particular the best-preserved vessel with plastic decoration, displays a range of traits which have affinities with two sub-styles of Grooved Ware pottery — the Clacton and Woodland styles. The style and complexity of the plastic decoration on the internal rim bevel is certainly characteristic of the Clacton style (Wainwright & Longworth 1971, 237), but the decoration on the exterior is more typical of the Woodlands style (Wainwright & Longworth 1971, 240). This mixture of traits from the two sub-styles tends to support the recent theory concerning the similarities between Clacton and Woodland styles, and may indicate that the two styles constituted a single ceramic sequence within the

Table 1. Pottery fabric totals.

Date	Fabric code	No. sherds	Weight (g)
Early Neolithic	FL9	88	572
	FL10	25	81
Late Neolithic	GR14	6	40
	GR16	79	455
Early Bronze Age	GR11	103	1307
	<i>subtotal early prehist.</i>		2455
Middle Bronze Age	FL4	304	10,150
	FL5	216	1818
	FL7	815	13,354
	FL8	68	671
Late Bronze Age	FL1	820	10,678
	FL2	168	1909
	FL3	131	864
	FL6	8	38
	QU1	3	8
	<i>subtotal later prehist.</i>		2533
Early/Middle Saxon	QU400	12	86
	QU401	122	1683
	QU402	1	7
	VE400	40	326
	VE401	1	10
	<i>subtotal Saxon</i>		176
TOTAL		3010	44,057

Grooved Ware tradition, distinct from the Durrington Walls type (Garwood 1999, 157). The development of decorative motifs between Clacton and Woodlands is unclear, but the occurrence of complex decoration on the inside of rims appears to be a later feature.

A fourth Grooved Ware rim sherd, with impressions along the top of the rim, was recovered from an unstratified context (Fig. 15:2), along with four body sherds and a base sherd. Seven more body sherds and three base sherds were recovered as residual finds from Middle Bronze Age pit 6097. These represent a minimum of two decorated vessels (Fig. 15:7–8) that are probably of a similar style to those found in pit 6162.

Two further small rim sherds and 34 body sherds came from pit 8052. These are all highly abraded but have faint traces of impressed decoration. A radiocarbon date of 2880–2550 cal. BC (NZA 16697; 4132±50) was obtained from this pit.

The determinations from pits 6162 and 8052 fall into the typical range of dates for Grooved Ware in southern England (Cleal 1999; Cleal & MacSween 1999). The two results are statistically indistinguishable at the 95% confidence limit (Ward & Wilson 1978). Only two other findspots of Grooved Ware have been published in this area previously; from Findon and from Area 4 on the Westhampnett Bypass.

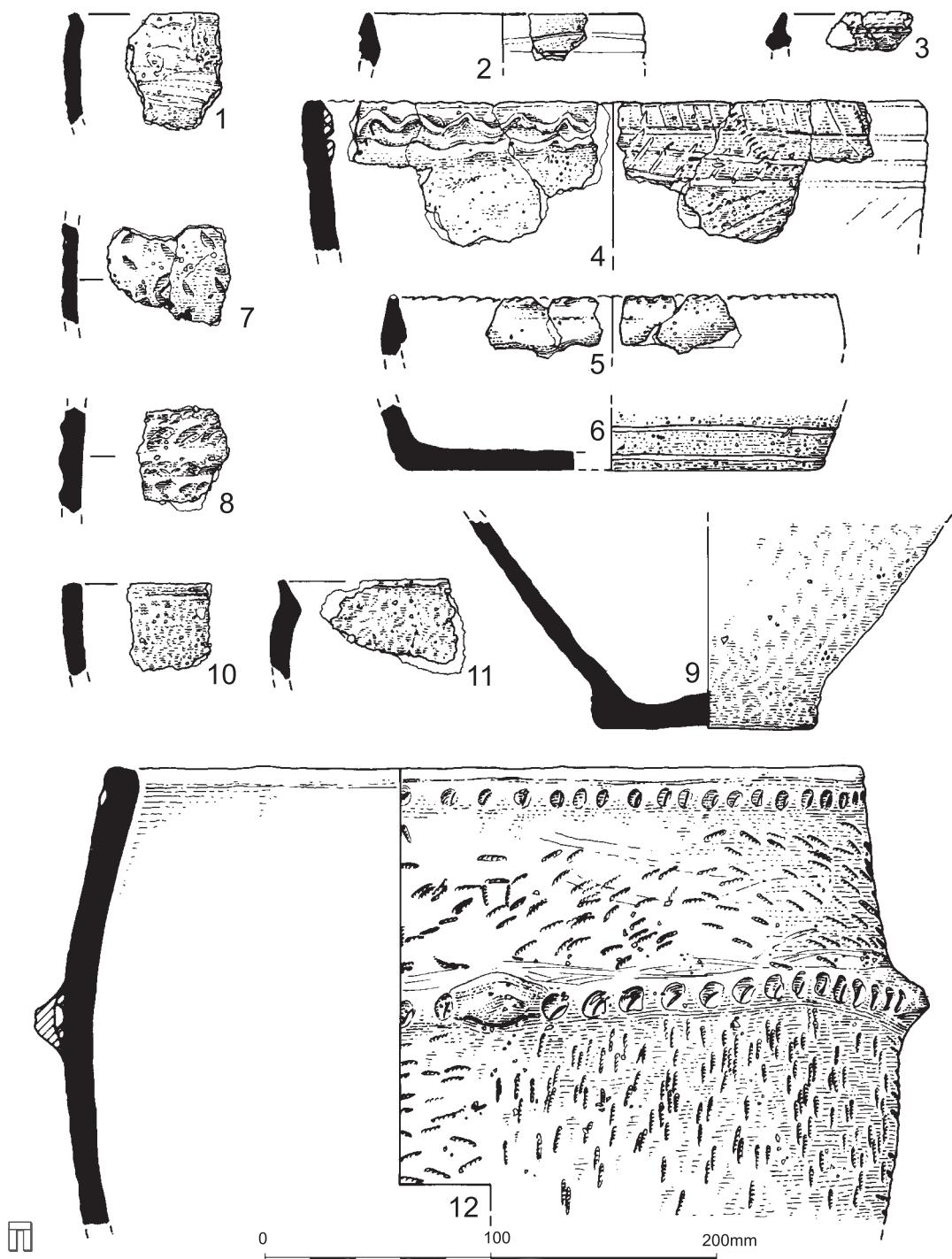


Fig. 15. Early Neolithic (1), Late Neolithic (2–8), Early Bronze Age (9) and Middle Bronze Age (10–12) pottery.

Table 2. Middle Bronze Age vessel forms by fabric.

Type	Description	FL4	FL7
E2	ovoid jar, plain unperforated lugs (Fig. 15:15)		1
E10	bucket urn, fingertipped cordon (Fig. 15:16)	1	
OV1	ovoid vessel, fingertipping direct on body, plus applied unperforated lugs (Fig. 15:17)		1
BU1	bucket-shaped vessel, applied ribs (Fig. 15:14)		1
BU2	bucket-shaped vessel, fingertipped cordon, applied lugs and comb impressions (Fig. 15:12)	1	
TOTAL		2	3

Both of these Grooved Ware assemblages were recovered from similar, single pits (Longworth & Cleal 1999, 196; Fitzpatrick *et al.* in press).

Early Bronze Age

The Early Bronze Age is represented by a single Collared Urn (103 sherds, 1307 g), used as a funerary urn in grave 4403 (Fig. 10; 15:9). The vessel had been truncated just above the collar and a full profile could not be reconstructed. The vessel is in a grog-tempered fabric (GR11). According to the classification of Collared Urns the vessel appears to belong to a late group on the basis of two features: an absence of decoration below the collar and a disproportionately narrow base (Longworth 1984; Burgess 1986, 345). Charcoal from the grave yielded a Middle Neolithic radiocarbon date of 3370–3030 cal. BC (NZA-16696; 4518±50).

Middle Bronze Age

A total of 1403 sherds (25,993 g) was identified as Middle Bronze Age. These comprise well-known Sussex Deverel-Rimbury types (Ellison 1978; 1982) as well as other variants, and one form which appears to exhibit traits more characteristic of the Ardleigh style of Essex. The assemblage includes at least six funerary vessels, with the remaining sherds probably representing a domestic assemblage.

Fabrics

The four fabrics are all flint-tempered (Appendix 1), and include both coarsewares and finewares. The coarser fabrics (FL4, FL5 and FL7) were used for bucket-shaped or ovoid forms with the finer variant (FL8) used for thin-walled, decorated vessels. The coarseware fabrics vary quite widely in coarseness, containing frequent to moderate calcined flint in variously sized inclusions, with occasional quartz grains.

Forms

The range of vessel forms that could be defined is relatively limited, comprising five forms identified from amongst the group of funerary urns (Table 2). Two (E2, E10) (Fig. 16:15–16) fall within the type series developed for Sussex Deverel-Rimbury ceramics by Ellison (1978; 1982); two more (OV1, BU1) (Fig. 16:17 & 14) are probably variants of these types, while a fifth (BU2) (Fig. 15:12) has distinct non-local affinities.

Other rims, including one with pre-firing perforation(s) below the rim, presumably for some sort of lid attachment (Fig. 15:10–11; 16:13), are too small to attribute to vessel form. Fineware vessels (probably equivalent to Ellison's type 7) are represented only by plain body sherds and have been recognized solely on the basis of their fabric type (FL8).

In terms of manufacturing technology, the Middle Bronze

Age vessels demonstrate varying levels of surface finishing ranging from the fairly crude (e.g. ON 106) (Fig. 16:17) to the well-finished (e.g. ON 110 and 113) (Figs 15:12 & 16:16). The presence of vertical finger-smearing on vessel ON 109 can be noted. This technique is known from other Middle Bronze Age assemblages in Sussex (elsewhere it seems to be more of a Late Bronze Age characteristic), and is taken to indicate the emergence of slab-building as a potting technique during this period (Hamilton 2002a, 48).

Both fabrics and forms are well paralleled within other Deverel-Rimbury assemblages from Sussex, from both funerary and domestic contexts, for example from Blackpatch (Ellison 1982), Itford Hill (Burstow & Holleyman 1957; Holden 1972), Mile Oak Farm, Portsdown (Hamilton 2002a) and Steyning (Burstow 1958), all in the east of the county. Excavations nearby on the Westhampnett Bypass yielded a small Middle Bronze Age assemblage, apparently of domestic origin from Area 4 (Fitzpatrick *et al.* in press), and vessels used as funerary urns have been found sporadically on the West Sussex Coastal Plain and on Selsey (e.g. Watson 2000; Kenny 1992; Musson 1954).

The exception is the funerary urn ON 110 from burial 6151 in ring-ditch 6107 (Fig. 15:12). This has comb-impressed decoration on the exterior of the urn, arranged horizontally above and below an applied finger-impressed cordon with four equally spaced, unperforated lugs. The vessel has been well finished, with a carefully smoothed surface. Such decoration is unparalleled within the Middle Bronze Age ceramic tradition of Sussex, and is equally rare elsewhere within the Deverel-Rimbury distribution area. However, a comb-impressed vessel has recently been found at Beddington Cross, Surrey (Cotton 2001), and another, identified as Ellison's class 1b globular urn, is known from a cremation burial cemetery at Oliver's Battery, Winchester, Hampshire (King 1989, fig. 4, no. 11). The affinities of this decorative technique appear to lie to the north-east, in Essex, where the use of comb-point impression is a minor decorative trait on Ardleigh-type urns (see below). A vessel recovered from White Colne, Essex, exhibits very similar decoration, although in this instance only above the cordon (Brown 1999, pl. 22).

Another unusual feature occurred on a fragmented vessel from pit 6065, which had decoration in the form of at least two deeply impressed bosses (Fig. 16:18). Again, there are no direct parallels for this decorative trait amongst the Sussex tradition, but a similarly bossed vessel is known from a Deverel-Rimbury assemblage from Hurst, Berkshire (Laidlaw forthcoming).

Distribution

Six Middle Bronze Age vessels were associated, or possibly as-

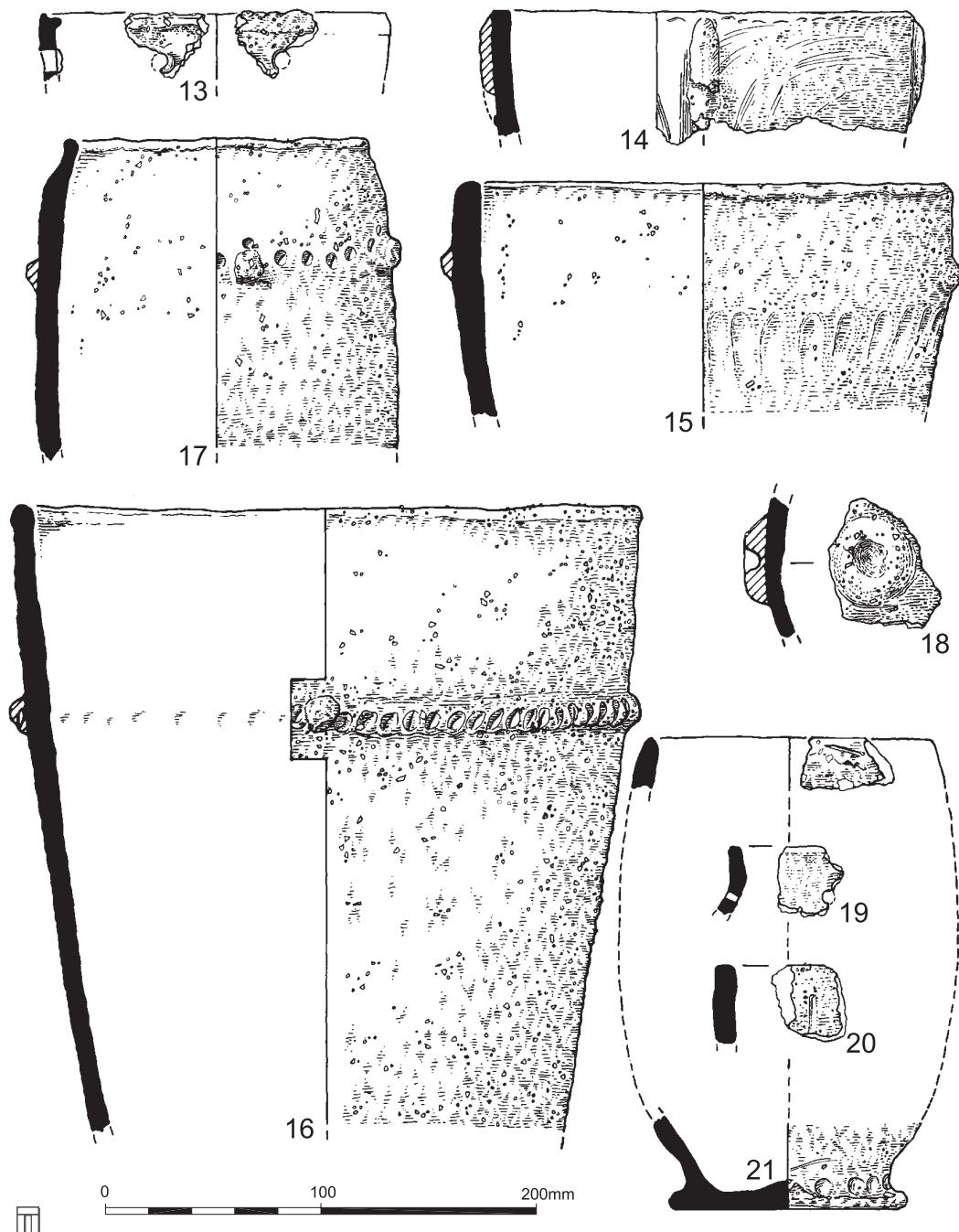


Fig. 16. Middle Bronze Age (13–18) and Late Bronze Age (19–21) pottery.

sociated, with funerary activity in Area 1. One of the vessels was found in an upright position (grave 6060), the remaining five inverted; all had been truncated to a greater or lesser degree.

Three of the vessels came respectively from burials 6001–3 associated with ring-ditch 6108 (Fig. 16:14–16). The remaining two vessels were located in isolated graves 6005 (Fig. 16:17),

and 6060 to the east (Fig. 6). The vessel in grave 6005 has an internal residue, suggesting that the pot had been used before being buried as a funerary urn.

Other Middle Bronze Age pottery was mainly from Area 1 with a negligible quantity (39 sherds) from Area 2. Their distribution across Area 1 is generally low-level and, apart from the burials to the west, is confined to the eastern half of the excavated area. A few large groups were found, but none of these can be securely dated to the Middle Bronze Age since each also contained Late Bronze Age pottery. Five features produced more than 50 sherds of pottery: pits 6065, 6067, 6079, 6178 and 8294. The largest group came from pit 6065 (292 sherds; 5688 g); this appears to represent several different vessels (a maximum of eight, on the basis of rim sherds), and includes one finger-impressed boss (Fig. 16:18). Three of these pits (6065, 6067, and 6079) are fairly close together; and close to burial 6060.

Discussion

The Middle Bronze Age assemblage from Claypit Lane exhibits interesting traits that suggest affinities more wide-ranging rather than simply coming from within the local Sussex ceramic tradition as previously defined (Ellison 1978; 1982). Decorative techniques are paralleled within the Deverel-Rimbury tradition and also within the Ardleigh group of urns in Essex. Recently excavated assemblages from the route of the Brighton Bypass, in particular from Mile Oak Farm, Portslade, have also shown other decorative traits best paralleled within the Ardleigh group (Hamilton 2002a,b). Closer to Claypit Lane, an assemblage showing a similar mixture of decorative traits has recently been excavated at Drayton Lane, Oving; two vessels there carried fingertip/fingernail impressions just above the base, which is an Ardleigh style characteristic. Parallels can also be found here for the ovoid jar with fingertipping and lugs (OVI), which may in fact be a local variant of Ellison's form 10 (Raymond in prep.). Raymond does, however, point out that Ardleigh-style characteristics, and indeed other motifs unusual within the Sussex repertoire, may be more widespread than previously thought. Recent evidence is now combining to demonstrate that the Middle Bronze Age ceramics of Sussex were more diverse than originally identified by Ellison.

A broadly early date for the Ardleigh urns on stylistic grounds is supported by recent radiocarbon dates, and the use of comb-impressed decoration, with a hint of a throwback to the preceding Beaker ceramics, could also be taken as evidence of an early origin (Brown 1999, 78). Recent radiocarbon dating has shown that the Sussex Middle Bronze Age ceramic tradition emerged in parallel with that of Wessex, although of the two sites from the Brighton Bypass producing pottery with Ardleigh style decoration only one, at Downsvie, has a correspondingly early radiocarbon date (Hamilton 2002b, 180). At Claypit Lane, on the other hand, the association of certain large groups of Middle Bronze Age material with small quantities of Late Bronze Age style fabrics (e.g. pit 6065) could indicate a date range with a continuation into the Late Bronze Age.

Radiocarbon determinations were obtained from materials associated with three funerary urns: ON 108, 109 and 110. Two dates are precisely the same at 1420–1160 cal. BC (ON 108: NZA-16700; 3063±45, ON 109: NZA-16699; 3063±45) and are entirely consistent with the dates for other parts of southern England, which mostly fall between c. 1500–1100 cal. BC (Hamilton 2002b, 180), but do not help to place the

Claypit Lane assemblage any more closely within the Middle Bronze Age. The date from charcoal from near to the urn in ring-ditch 6107 (2460–2140 cal. BC; NZA-16698; 3852±45) is Neolithic.

Late Bronze Age

A total of 1130 sherds (13,497 g) was identified as Late Bronze Age in date. The assemblage contains mainly flint-tempered fabrics of varying degrees, with a much smaller proportion of finer sandy fabrics. It should be stated at the outset that significant difficulty was experienced in distinguishing between the Middle Bronze Age flint-tempered fabrics and those of Late Bronze Age date, a difficulty exacerbated by the relative scarcity of diagnostic material amongst the Late Bronze Age assemblage. In fact this close similarity in fabric types may be due to a relatively close timespan between the two assemblages, and the possibility that this may represent a very early post-Deverel-Rimbury group, possibly even transitional, will be discussed further below.

Fabrics

The range of fabrics incorporates both coarse (flint-tempered) and fine (sandy) wares, although the latter is represented only by three sherds from a single context. The flint-tempered wares show a variation in the size of inclusions, and also in the degree of sorting of those inclusions which suggests that more effort was expended on the preparation of some fabrics than was made for others.

Vessel forms

There is a very small amount of diagnostic material, 26 rim sherds in total, and these derive from a very restricted range of vessel forms – only two were identified:

- Ovoid jars with upright or slightly inturned, simple rims (Fig. 16:19);
- Straight-sided, bucket-shaped vessels with simple rims (Fig. 16:20, 21).

These forms occur only in the coarseware fabrics; the finewares lack any diagnostic material that would allow forms to be identified. One example of a type-2 jar has a markedly splayed base (Fig. 16:21); other bases are assumed to have a simpler basal angle. The illustrated example of a type-1 jar (Fig. 16:19) has a pre-firing perforation below the rim. The function of this is uncertain, but it may have been one of a row of such perforations, perhaps designed for the attachment of a lid.

Surface treatment is generally fairly crude, with few vessels having more than superficial surface wiping. Bases are frequently heavily gritted on the underside. Decoration is extremely scarce, confined to finger impressions on rims.

Distribution

Several features, one, possibly two, in Area 2 and the rest in Area 1, contained substantial parts of single vessels which have been identified as forming part of 'placed deposits'. All had been heavily truncated, but appeared to have been placed in these features in an upright position, the bases only surviving, although two also included rim sherds. In one instance, a cylindrical loomweight (Fig. 17:25) had been carefully placed on the base of a pot.

Three of these vessels were associated with significant quantities of burnt, unworked flint and stone — a total of c. 3.4 kg from pit 8027, just under 6 kg from pit 8066, and just over 20 kg from pit 6096. This practice, although not commonly

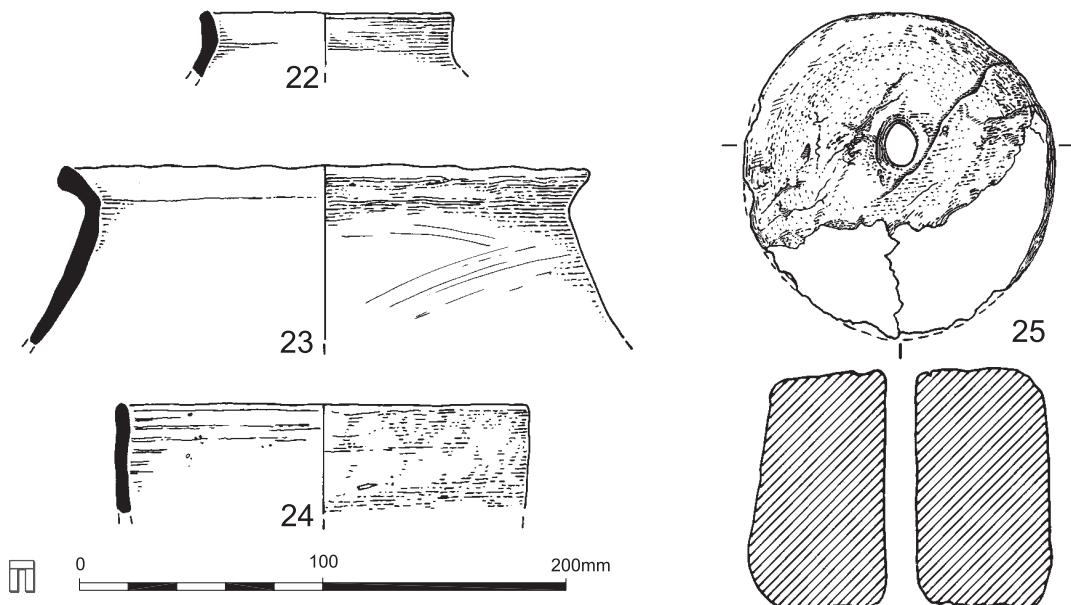


Fig. 17. Anglo-Saxon pottery (22–24) and Late Bronze Age loomweight (25).

occurring, is known from several other Late Bronze Age sites in the region, such as Twyford Down, Winchester and Langstone Harbour, both in Hampshire (Walker & Farwell 2000, 21–2; Allen & Gardiner 2000, 157). A potential connection has been made with deliberately deposited, but apparently empty, vessels of a similar date (e.g. Grooms Farm, Alton, Hampshire: Wessex Archaeology 2002), and possible interpretations including funerary-related activity and special deposits to mark and reinforce boundaries have been discussed.

The rest of the Late Bronze Age material was recovered in small amounts across the site; the distribution largely mirrors that of the Middle Bronze Age pottery, with a concentration in the eastern half of Area 1.

Discussion

The Late Bronze Age assemblage from Claypit Lane provides an interesting addition to the post-Deverel-Rimbury ceramics of Sussex, and particularly to those from the western part of the county, where fewer assemblages of this date have been excavated (Hamilton 2003). There are sufficient features within the assemblage to place it early in the post-Deverel-Rimbury sequence — an overwhelming preponderance of coarse, flint-tempered fabrics, a restricted range of simple vessel forms, and a marked absence of decoration beyond simple finger-impressions. Straight-sided and convex jars emerged in Sussex as part of the post-Deverel-Rimbury tradition as early as the eleventh century BC. The absence from Claypit Lane of shouldered or bipartite jars, which also form part of the earliest post-Deverel-Rimbury repertoire (Barrett 1980, fig. 5) may be noted, but may be due at least in part to the fragmentary nature of the assemblage which has prevented their identification. A similar range of ovoid and bucket-shaped forms can be seen at Plumpton Plain site B (Hawkes 1935, figs 8–10), at Bishopstone, where they have a thermoluminescence date of

1250–650 BC (Hamilton 1977, figs 40, 41 & 47; Bell 1977, 290) and, closer to Westhampnett, at Yapton (Hamilton 1987). The Late Bronze Age assemblage from Yapton (Hamilton 1987), however, together with that from Selsey (Seager Thomas 2001), covers a wider range of vessel forms with a greater emphasis on round-shouldered jars, including fineware variants. These assemblages have associated radiocarbon dates within the ranges of, respectively, late tenth to late sixth century BC and early tenth to late fifth century BC. On typological grounds both are likely to be later than the Claypit Lane assemblage. This seems to be borne out by the eleventh- to eighth-century BC radiocarbon determinations from pit 8298 and pit 6096, respectively 1030–790 cal. BC (NZA-16702; 2730±70) and 920–800 cal. BC (NZA-16703; 2703±45).

Early/Middle Saxon

A total of 176 sherds (2112 g) was identified as Early/Middle Saxon. Five fabrics were defined, three sandy (QU400, QU401, QU402) and two organic-tempered (VE400, and VE401). Apart from one unstratified sherd, all of this material was recovered from the two sunken featured buildings excavated (6089 and 6356).

Diagnostic material comprises eight rim sherds, deriving from jars with upright or everted rims (Fig. 17:22, 23), and one straight-sided bowl (Fig. 17:24). There are no decorated sherds in the assemblage and the sherds are in general not well finished.

Early/Middle Saxon pottery is notable on account of its scarcity within West Sussex, and this moderate assemblage is therefore a significant addition to the ceramics of the region. The absence of a regional ceramic sequence for this period makes it difficult to date this assemblage more closely than within an overall potential date range of fifth to eighth centuries. No detailed fabric analysis has been undertaken

on the few published assemblages, and where fabrics have been broadly described, for example, from the Apple Down cemetery assemblage (Down & Welch 1990, 134–6), they appear to comprise sandy or organic-tempered wares, such as those defined here.

One small Saxon assemblage is known from the immediate area, recovered from a sunken featured building in Area 7 on the Westhampnett Bypass (Mepham in press). This small assemblage is, however, slightly different in character to that from Claypit Lane, as it includes non-local granitic fabrics and an example of a coarse-slipped surface treatment (*Schlickung*), characteristic of an early Saxon date (fifth to early sixth century). The absence of any such early characteristics within the Claypit Lane assemblage probably indicates a slightly later date, perhaps within the range of sixth to seventh century.

List of illustrated sherds (Figs. 15–17)

1. Early Neolithic rim sherd, fabric FL9. Pottery Record Number (PRN) 83, context 9051, pit 9050.
2. Grooved Ware rim sherd, fabric GR14. PRN 89, unstratified.
3. Grooved Ware rim sherd, fabric GR16. PRN 234, context 6173, pit 6162.
4. Grooved Ware rim sherd, fabric GR16; plastic decoration on internal rim bevel; grooved decoration on exterior. PRNs 231/232, contexts 6173/6175, pits 6162/6164.
5. Grooved Ware rim sherd, fabric GR16; grooved decoration on exterior. PRN 235, context 6173, pit 6162.
6. Grooved Ware base, fabric GR16; grooved decoration on exterior. PRN 214, context 6163, pit 6162.
7. Grooved Ware decorated body sherd, fabric GR16. PRN 269, context 6250, pit 6097.
8. Grooved Ware decorated body sherd. PRN 269, context 6250, pit 6097.
9. Base of Collared Urn. ON 2, context 4405, grave 4403.
10. Middle Bronze Age rim sherd, bucket-shaped vessel, fabric FL4. PRN 38, context 8289, pit 8288.
11. Middle Bronze Age rim sherd, fabric FL4. PRN 106, ON 107, context 6117, pit 6096.
12. Upper part of Middle Bronze Age bucket-shaped vessel (BU2), fabric FL4; finger impressions around outside of rim; applied, finger-impressed cordon around shoulder; four equally spaced unperforated lugs around cordon; random comb-tooth impressions over exterior. PRN 103, ON 110, context 6151, grave 6151.
13. Middle Bronze Age rim sherd with pre-firing perforation, fabric FL5. PRN 133, context 6295, tree-throw 6039.
14. Middle Bronze Age rim sherd from bucket-shaped vessel (BU1), fabric FL7; vertical applied 'ribs'. PRN 205–6, ON 112, context 6393, grave 6001.
15. Upper part of Middle Bronze Age ovoid jar (E2), fabric FL7; applied bosses around shoulder. PRNs 107–8, ON 109, context 6147, grave 6002.
16. Almost complete profile of Middle Bronze Age bucket-shaped vessel (E10), fabric FL4; applied, finger-impressed cordon around shoulder with four equally spaced bosses. PRNs 109–11, ON 113, context 6458, grave 6003.
17. Upper part of Middle Bronze Age ovoid vessel (OV1), fabric FL7; finger-impressed shoulder with four equally spaced applied bosses. PRNs 197–9, ON 106, context 6120, grave 6005.
18. Middle Bronze Age body sherd with applied, finger-impressed boss, fabric FL7. PRN 281, context 6259, pit 6065.
19. Late Bronze Age rim sherd, fabric FL1; post-firing perforation. PRN 29, context 8028, pit 8027.
20. Late Bronze Age rim sherd, fabric FL2. PRN 63, context 9015, ditch 9016.
21. Late Bronze Age rim and base sherds from same vessel, fabric FL1. PRN 93–5, ON 5, context 8299, pit 8298.
22. Saxon rim sherd, fabric QU401. PRN 153, context 6414, SFB 6089.
23. Saxon rim sherd, fabric QU401. PRN 178, context 6427, SFB 6089.
24. Saxon rim sherd, fabric QU400. PRN 180, context 6427, SFB 6089.

FLINT

by Phil Harding

There was a relatively low density of flint per context (mean 8.2 pieces) across the site and only 652 pieces of flint from 79 contexts in Area 1. The flint, including material from the sieved sample residues, is quantified in Table 3. With the exception of a spread of Mesolithic material, the most significant material came from small stratified groups of Early and Late Neolithic date. The flint from the pits was in mint condition, unpatinated and was probably taken from the gravel at the site. It was of good quality, black throughout or grey with mottled cherty inclusions.

Elsewhere, small quantities of undiagnostic, undated material were found in a variety of features in which it is likely to have been residual and individual pieces were frequently characterized by plough damaged edges.

Mesolithic

A collection of Mesolithic blades, bladelets, associated cores, crested blades and a proximal microburin was found from a dispersed flint scatter. There was nothing to define the extent of the activity, which may once have extended across most of the site. Material had silted into features, principally of Middle Bronze Age date such as pit 6105 within ring-ditch 6107. However, tranchet adze sharpening flakes came from the later ditch 6035 which cut through 6107, and nine undisturbed blades/bladelets and six flakes were located in a residual pocket of brickearth (6387) immediately south of this ring-ditch.

Early Neolithic

A small assemblage of 34 flakes and blades with nine retouched tools was associated with Early Neolithic pottery in pit 9050 in Area 2 and charcoal which yielded a radiocarbon date of 3800–2330 cal. BC (NZA-16695; 4919±50).

The blade component accounted for 20% of the assemblage and was accompanied by a blade core. It is likely that no more than three or four nodules of raw material were represented and that the blades were removed from the same nodule. The flakes were predominantly by-products of core trimming. The proximal ends indicate that striking platforms were routinely abraded and suggest that both soft and hard hammers were used for flaking.

The retouched tools, which accounted for 18% of the assemblage, included six end-scrapers. The scraping edges, which were often irregular and may have resulted from re-sharpening, were produced by abrupt or semi-abrupt retouch at the distal end. Two scrapers also had inverse retouch along one edge. There was also an edge flaked knife, a probable broken scraper, and a naturally backed blade.

Table 3. Flint ordered by type of feature.

Feature	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Mesolithic brickearth pocket					5	2	2		1	5							1
Early Neolithic pit 9050	1				4	5	2	2	14	12				5	6	3	3
Late Neolithic pit 6162			3	2	16	4	2	4	73	45	1			6		2	3
Late Neolithic pit 6164			2	1	2		1	1	19	7		1				3	1
Late Neolithic pit 8052					7		2	1	41	16				2		3	1
Middle and Late Bronze Age features			3	12	11	2	22	98	104	2	2	1	28		4		15
Iron Age/RB features		1			5	2		2	7	7						2	
Saxon SFBs					1				4	1							5
Unphased features			1		3	6	1	4	31	197		3		1	1	5	4
TOTAL	1	1	6	6	55	30	12	36	288	237	3	6	1	42	7	22	33

KEY

1	Blade cores	7	Bladelets	13	Microburins
2	Bladelet cores	8	Broken bladelets	14	Chips
3	Flake cores	9	Flakes	15	Scrapers
4	Broken cores	10	Broken flakes	16	Other retouched
5	Blades	11	Crested blades	17	Quantity burnt
6	Broken blades	12	Rejuvenation tablets		

The butt of a polished flint axe was found in post-hole 6047. It was made of good quality grey flint, which is likely to have come locally from the South Downs. Almost all traces of original flaking were removed by grinding. It snapped due to flexing near the point at which the axe entered the haft and underwent limited re-flaking at the snapped end. It is possible that the axe is later in date and was broken and reused in the Bronze Age settlement.

Late Neolithic

The three Late Neolithic pits all contained Grooved Ware. Pit 6162 contained 160 pieces of worked flint, of which 90% were flakes and metrical blades. The blade component (18%) was consistently high although there were no blade cores or associated by-products of deliberate blade manufacture. There were also proportionally more unbroken flakes than might be expected from an average assemblage. The contents included three pairs of conjoining flakes and a flake and core, which could also be refitted and a higher number of small trimming flakes than from the other pits. This suggests that the material may represent an unbiased sample of dumped knapping waste. The retouched component comprised a microdenticulate, with edge gloss, made on a naturally backed blade. There was also a broken flake with denticulate retouch, which may have been a denticulate scraper.

Pit 6164 contained a small collection of material dominated by flakes, many of which were unbroken. The retouched component comprised three flakes with short lengths of undiagnostic edge retouch.

Pit 8052 produced 71 flakes and blades. The material contrasted to that from the Early Neolithic pit 9050 in the treatment of striking platforms, which were trimmed rather than meticulously abraded. Raw material from at least two nodules was present although attempts to refit the material

were unsuccessful. There were also two pieces of gravel flint with well-worn cortex. Three flakes with miscellaneous retouch were also present.

Middle-Late Bronze Age

Although most of the features dated to the Middle - Late Bronze Age they contained only small quantities of flint, some of which may have been residual and which were insufficient to provide meaningful conclusions. A number of flakes were retouched with irregular retouch similar to that associated with Late Bronze Age material elsewhere.

Discussion

The total quantity of flint from the site is relatively small, it has, however, provided the only evidence for the earliest occupation of the site. Mesolithic occupation is well documented on the Downs but had been thought to be scarce on the West Sussex Coastal Plain (Pitts 1980). However, there is now increasing evidence for Mesolithic activity in the area. Hunting camps were found in Areas 1 and 4 on the A27 Westhampnett Bypass, both of which overlooked an area of low-lying wet ground that extended northwards and which will have lain to the east of the Claypit Lane site (Holgate 2003, 34–6; Fitzpatrick *et al.* in press). Additional flint scatters that may represent camp sites have been found nearby at Strettington Farm, Boxgrove (Pitts 1980, 155) and at East Hampnett Road, Tangmere (Turner 1997).

A similar picture has emerged of Neolithic occupation in the area. The three small assemblages from the pits all represent short-term activity and are placed deposits, including flints from a limited number of nodules. The Early Neolithic material from pit 9050 in Area 2 is technologically typical of flint-working of the period, with a significant blade component. The assemblage includes some knapping waste, but also

includes a high proportion of retouched tools including end-scrapers made on thick flakes, which are the prevalent tool type in the Early Neolithic. The inclusion of an edge-flaked knife and utilized backed blade, with the associated pottery, confirms that the contents were probably related to domestic or ritual activity, rather than to industrial production.

Most of the Late Neolithic Grooved Ware pits contained sufficient flint to confirm the broad date and provide general indications of their function. Pit 6162 included a microdentate, which would not be out of place in a Late Neolithic feature and quantities of unselected debris from tool manufacture that are more likely to have been regarded as refuse. Pit 6164 lay close by and contained considerably less flint and no classifiable retouched tools, however both pits contained a blade component that was higher than might be expected in a normal Late Neolithic assemblage when blade production was replaced by a technology geared to the manufacture of squat flakes. There is nothing to indicate that intentional blade production was being practised, however, the higher than normal blade quota and large numbers of unbroken flakes may indicate that some form of selection was being undertaken.

BURNT FLINT

by Lorraine Mepham

Burnt, unworked flint was the most common find — over 213 kg was collected. Approximately half this material derived from just four features — pits 6280 (c. 41 kg), 6076 (c. 40 kg), 6048 (c. 16 kg), and 9028 (c. 16 kg). Pit 9028 is Middle Bronze Age in date, the others Late Bronze Age. Other large deposits came from features 6221 (c. 15 kg) and 6007 (c. 9.5 kg). The overall distribution largely mirrors that of the Middle and Late Bronze Age activity on the site, with a concentration across the central part of Area 1.

Apart from sheer quantity, there is nothing else to mark these deposits out as being in any way 'special' and they could just represent dumps of material deriving from some nearby pyrotechnic process such as cooking. There is no evidence for any associated industrial activity such as metalworking. At the nearby site of Chalkpit Lane, Lavant, there were several pits that contained large quantities of fire-cracked pits but no pots (Kenny 1993a, 26).

OTHER FINDS

by Rachel Every

Fired clay

A total of 180 fragments of fired clay (5685 g) largely derives from cylindrical loomweights. One almost complete loomweight (Fig. 17:25) was found in pit 8298, deliberately placed on the base of a pot (Fig. 7), and a less complete weight was recovered from the adjacent pit 8294. In both cases the weights appeared to have been burnt, as had the two fragmentary loomweights deposited in post-hole 8130 within two metres of pits 8294 and 8298, and post-hole 6417 at the south of the settlement. Fragments of further probable loomweights came from small pits 6013 and 6178 and post-hole 8130. The loomweights are mostly in an oxidized sandy fabric with rare large subangular patinated flint inclusions, with the exception of those from pit 8298 and post-hole 8130, which are organic-tempered.

Some of the remaining 39 fragments have wattle impressions, such as from pit 6067, showing that they are daub. A

further 11 fragments from 6067 and one from gully 9025 in Area 2 are very highly fired, almost to vitrification, and have the appearance of hearth lining.

Illustrated object (Fig. 17)

25. Cylindrical loomweight. ON 7, context 8299, pit 8298.

Ceramic building material

The 27 fragments includes a fragment of Romano-British tegula from ditch 6297 and a fragment of brick of the same date from ditch 6385. A further 20 fragments, from post-hole 6081, Sunken Featured Building 6356 and ditch 6415, are undiagnostic but probably also Romano-British on the basis of fabric similarity. The remaining fragments are medieval or later.

Worked and utilized stone

Seven fragments of a greensand saddle quern had been used as packing in post-hole 6423 in the south-east of Area 1 (Fig. 9), and a greensand rotary quern fragment was found in the Roman or later ditch 6385. Both querns are from the Lodsworth quarries (Peacock 1987). A possible whetstone was recovered from Middle Bronze Age pit 6057 and a possibly utilised flint/quartz pebble was found in the Anglo-Saxon Sunken Featured Building 6356.

In addition, a large quantity (c. 26 kg) of unworked stone was found as fragments within deliberately-placed vessels of Late Bronze Age date. There was a large amount (13 kg) in vessel 106 in pit 6096 (Fig. 7), with smaller quantities associated with pots in pits 8027 and 8066, all with smaller quantities of burnt flint. Three other Middle and Late Bronze Age features (pits 6072 and 6124 and tree-throw 6039, pit 6072) also contained significant amounts (>1 kg) of unworked stone. All of this material is in the same stone type – a coarse, granular, ferruginous sandstone.

Worked bone

Two objects of worked bone were recovered, from pits 6013 and 8095. Both have been heavily burnt and fragmented, but appear to have been similar in form — narrow, tapering objects, possibly pins, although the object from pit 8095 is made from a sheep metapodial, which, allowing for some shrinkage during burning, could have been a gouge. The latter object also has been longitudinally incised along one side.

HUMAN BONE

by Jacqueline I. McKinley

Methods

Five of the urned burials (contexts 4405, 6459, 6474, 6476 and 6478) were excavated in the laboratory in 20-mm spits, between 4–15 depending on the surviving height of the vessel. The subdivisions were maintained throughout analysis except in the case of 6476, which had clearly been severely disturbed.

Osteological analysis followed the author's standard procedure for the examination of cremated bone (McKinley 1994a, 5–21; 2000a). Age was assessed from the stage of skeletal and tooth development (Beek 1983; Scheuer & Black 2000) and the general degree of age-related changes to the bone. Sex was ascertained from the sexually dimorphic traits of the skeleton (Buikstra & Ubelaker 1994; Gejvall 1969). All small fraction (1 mm and 2 mm) residues from the whole-

Table 4. Human bone by context.

Context	Cut	Deposit type	Bone wt (g)	Age/sex	Pathology	Comment
4404	4403	grave fill	1.1			Incidental scatter redeposited pyre debris?
4405	4403	urned burial	978.1	1) adult female c. 30–40 yr 2) young infant c. 2–3 yr ?3) adult >18 yr	1) dental abscesses - r. & l. mandible; destructive lesion - mandibular premolar root; ?muscle trauma - prox. humerus shaft	
6117	6096	?redeposited pyre debris - ??cenotaph	1	subadult/adult >13 yr		deposited around pot 107
6119	6005	grave fill	4	subadult/adult >13 yr		deposited around urned burial 6474, incidental scatter redeposited pyre debris?
6121	6005	spill from burial	51.9	subadult >13 yr		spill from inverted vessel
	6005	?	27	subadult 14–20 yr ??male		could be from one of three contexts within this cut
6126	6010	?placed deposit	0.1	?>infant		from burnt flint & fuel ash deposit
6141	6060	redeposited pyre debris in grave fill	0.2			this bone could just be spill
6147	6002	ditch fill ass. burial 6149	0.2	>infant	periosteal new bone — rib shaft	incidental redeposited pyre debris around burial, bone could just be spill
6149	6002	urned burial	4.9	subadult/adult >13 yr		very badly truncated
6151A	6105	ditch fill ass. burial 6478	0.9	>infant		incidental redeposited pyre debris
6151B	6105	redeposited pyre debris below burial 6478	0.7	>infant		
6179		?placed deposit	0.9	?>infant		+ animal
6458	6003	ditch fill ass. burial 6459; ?redeposited pyre debris	0.4	>infant		incidental quantities fuel ash - ?redeposited pyre debris
6459	6003	urned burial + redeposited pyre debris	935.4	1) adult female c. 30–45 yr 2) adult ??female c. 18–22 yr ?3) young infant	1) ante mortem tooth loss - mandibular right M1; periodontal disease; ?infection - lumbar	redeposited pyre debris added to vessel after bone
6474	6005	urned burial	866.6	1) subadult c. 14–16 yr, ??male ?2) subadult-adult c. 17–25 yr	?infection in mandibular molar socket	?very small fragment animal bone
6476	6060	urned burial	86.8	adult >18 yr, ??female		0.2 g ?immature animal bone. inc. intrusive fuel ash
6478	6105	urned burial	457.2	adult female c. 30–50 yr	ante mortem tooth loss - mandibular left M2 & right ?M1, maxillary left P1	?single bone from 2nd individual

earth samples of cremation-related and suspected cremation-related deposits were scanned for osseous material and other archaeological components (Table 4).

Results

The position of the burials within the grave fills varied; not all were made at or near the base of the graves or ditches (e.g. 6002, 6151 in 6105) but all of the burial urns had been damaged by ploughing. The surviving depth of the burials ranged from as little as 50 mm for 6149, which was placed on a plinth of flint nodules (Fig. 5), to 350 mm for burial 6478, made close to the base of feature 6105. Although the bases of the inverted vessels from graves 6003 and 6151 (burials 6459 and 6478) had been removed, it is improbable that any bone was lost from the deposits since the uppermost spits were devoid of bone. The upper 20 mm of burial 4405 in grave 4403 held very little bone and it is likely that all that was originally deposited remained *in situ*. It is probable that varying quantities of bone will have been lost from the remaining burials, particularly the badly disturbed 6149 in grave 6002.

With a few minor exceptions from non-burial contexts, the visual condition of the bone is good, with no evidence for surface erosion or abrasion, and trabecular bone (articular surfaces, vertebrae, carpal/tarsal bones) is generally well represented. This has been demonstrated to be the first to be lost in acidic soil condition (McKinley 1997a, 245; Nielsen-Marsh *et al.* 2000). The exception is burial 6478, where the relative paucity of trabecular bone (e.g. 4% of identifiable bone representing axial skeletal elements compared with between 12–18% from other burials) may be indicative of a harsher burial micro-environment.

The remains of a minimum of eight individuals were identified from the six burials (one Early and five Middle Bronze Age) including one young infant (Early Bronze Age); two subadults, one possibly male; and five young or mature adults (including one Early Bronze Age), three confidently sexed as female, two as most likely female. The remains of another four individuals may be represented but the evidence for the bone deriving from wholly different individuals to those described above is debatable. These latter individuals, one possible young infant from burial 6459, a subadult from burial 6474, an adult from the Early Bronze Age burial 4405, and a subadult from pit 6096 were all represented by very few fragments of bone. It is probable that some bone has been lost from burial 6474 and more of the second individual may have been amongst that missing bone, but no bone appears to have been lost from burials 4405 or 6459. Whilst it is relatively common to find the remains of young infants poorly represented, particularly within multiple cremation burials, the five fragments of skull vault from 6459 seem particularly sparse. The second individual in burial 6474 was represented by one duplicate bone and two bones showing more advanced fusion than most of the rest. The second adult from 4405 is represented by two duplicate fragments, whilst the fragments of thicker skull vault may have derived from a different individual. Similarly, the second adult in burial 6459 was represented by only one duplicate fragment and two elements indicative of a younger individual than the rest, but the age range indicated is not represented elsewhere in the overall assemblage. The problem lies in deducing whether these few bone fragments are representative of genuine multiple cremations and/or burials, or if they reflect some other form of deposit.

It is well known that not all of the bone remaining at the end of cremation was subject to burial, but it is unclear what was done with the remaining fragments (McKinley 1997b; 2000b). One possibility — for which there is some anthropological evidence (Hiatt 1969; McKinley 1997b) — is that bone may have been distributed to those attending the mortuary rite. If this were the case, it is possible that fragments of bone from an earlier cremation — retained at the time — may have been included in the burial of remains from a later one. If this were so here, some individuals could be represented within more than one burial.

An average of c. 5% of cremation burials contain the remains of two individuals, predominantly those of an adult and an immature individual (McKinley 1997b; 2000b). Although there are 33–50% potential multiple burials here, the sample is small. The Early Bronze Age burial may be compared to that of the contemporaneous burial of a young adult female and a foetus/neonate from Area 3 on the Westhampnett Bypass c. 0.5 km to the south-east (Fitzpatrick *et al.* in press).

Pathological lesions were observed in the remains of a minimum of four individuals. *Ante mortem* tooth loss was recorded in two of the adult female dentitions (4/60 tooth positions; 6.7%), affecting molar and premolar teeth, with lesions indicative of dental abscesses in a third. There was also a possible infection within one molar socket from 6474, indicated by abnormal socket morphology and woven open new bone across the alveolus. Slight periosteal new bone on the visceral surface of a rib shaft fragment from context 6147 adjacent to burial 6149 in 6002 probably formed in response to some form of lung infection. Erosion of the cortical bone on the body of a lumbar vertebra from burial 6459 in grave 6003, with woven new bone creating a striated appearance (a second fragment showed thick smooth new bone) is also suggestive of some form of infection, though the fragmentary condition renders further diagnosis difficult.

The bone was almost uniformly white in colour, indicative of full oxidation (Holden *et al.* 1995a,b). The very slight grey variations noted in a few (1–6) bone fragments from four deposits were all to elements of the extremities (hands, foot, skull vault) and are within the realms of 'normal' variation.

The weights of bone recovered from relatively undisturbed burials (4405/grave 4403, 6459/grave 6003 and 6478/grave 6151) show a broad range of 457.2–978.1 g; the former representing c. 28% of the average weight of bone expected from an adult cremation and the latter c. 61% (McKinley 1993). Whilst 4405 and 6459 may be expected to contain a greater weight than 6478 since they are multiple burials, such variation in weight from a single individual included for burial is common. As discussed above, the amount of bone indicative of second or possible third individuals within the burials here is very small. The reasons for such variation are poorly understood, but unlikely to be purely practical (McKinley 1997b).

Skeletal elements from all areas are represented within each of the burials with no clear bias towards the inclusion of certain skeletal elements. The small bones of the hands and feet (including distal foot phalanges), tooth roots and even some fragments of tooth enamel are also present. The latter are not uncommon in Bronze Age burials and may reflect a collection procedure that included raking-off the upper levels of the burnt-out pyre to recover bones. Hand collection of individual fragments from the surface, by contrast, would enhance the recovery of many small bones.

The deliberate inclusion of pyre debris in Bronze Age cremation graves is frequently observed. Generally these deposits were placed around or above the burial, but there is increasing evidence for the less common practice of making these deposits before the burial (e.g. McKinley 1997b). Inclusions of pyre debris at Claypit Lane appear to have been both deliberate and possibly — given the small quantities of fuel ash in some cases — incidental. As has been observed elsewhere (McKinley 1997b; 2000b; Walker & Farwell 2000), its inclusion indicates the proximity of the burial to the pyre. Deliberate inclusion of fuel ash within the burial itself is relatively rare, and where it does occur the quantities are generally small and may represent an accident of the process of collection from the pyre (McKinley 1997b). In the case of burial 6459, the fuel ash appears to have been added as a final act after deposition of the bone, being confined to the latest fill of the inverted vessel.

The inclusion of 1 g of cremated bone in pit 6096 may well be accidental as the features and the finds within it are similar to those from other Late Bronze Age pits with special deposits. However, the possibility that it was a mortuary-related deposit cannot be excluded entirely and it may represent a 'cenotaph' or 'memorial'; a type of deposit with many of the characteristics of a burial but little or no bone (McKinley 2000c; Brück 2001).

The bone within the upper 80 mm of the Collared Urn from burial 4405 (grave 4003) was concentrated towards one side of the vessel, suggesting that it had been tipped over on one side as the bone was being deposited though the urn was placed upright in the grave. As is common, the vessels were clearly not filled to capacity and the upper spits are either devoid of bone or, where more truncated, hold a relatively small proportion (<10%) of the contents, most having gravitated towards the central and lower levels. The individual spits each contain at least a few bone fragments from each of the four skeletal areas (skull, axial skeleton, upper and lower limb) and where they do not, it reflects the paucity of bone in general (<5 g) rather than in any one skeletal area.

CHARRED PLANT REMAINS

by Pat Hinton

Soil samples were processed by Wessex Archaeology's standard methods with floated results retained on a 0.5 mm mesh. Selected flots, items recovered from their residues, and in some cases from artefact sieving, were searched for charred plant remains by stereo microscope at $\times 7$ –40 magnification. Higher magnification was used for some surface details. Nomenclature, except for cereals, accords with Stace (1991). Taxa in Table 5 are represented by seeds (which term also includes achenes and caryopses) unless otherwise stated.

All samples included some recent intrusive root material and seeds. Fragments showing different effects of charring also occurred in almost all samples. Some, characteristically vesiculated, were obviously parts of cereals. There were other vesiculated pieces that were probably of organic and vegetable origin, and also glassy black lumps of denser structure with, in a few samples, some suggestions of a more molten condition. There were also frequent small, angular coal-like fragments.

Neolithic

Early Neolithic pit 9050 included two grains of wheat (*Triticum* sp.), one in good condition with some of the characteristics of spelt (*Triticum spelta*) but the second, a badly preserved half

grain, was emmer (*Triticum dicoccum*), and both might belong to this category. There were also a few small fragments of cereals and the equivalent of one or two hazelnut shells.

Late Neolithic pit 8052 was exceptional in that it contained only hedgerow fruits, including charred fragments of apple (*Malus* sp.), a sloe fruit (*Prunus spinosa*) and more than a hundred fragments of hazelnut shell. There were no cereals or other seeds. At least two apples were represented as seen in two of the larger pieces, 10.0 \times 8.8 mm and 9.2 \times 7.3 mm, which showed sufficient portions of the endocarp (core), with radiating carpels and three partial seeds. The skin, where visible, occurred mostly on the smaller fragments, and was wrinkled but not in-rolled over the edge of the flesh as would occur in a cut and dried section (Helbaek 1952a). No trace of a pedicel (stalk) was found. The overall size of the apples could not be measured, but would seem to have been within the range of wild crab apples (*Malus sylvestris*). An apple was submitted for radiocarbon dating.

The sloe was in better condition, although part of the fruit and stone was missing. The skin was shrunken and the broken edge showed the flesh to be c. 1 to 2 mm thick and the stone (endocarp) c. 1 mm. The seed was missing. It seemed unlikely that this damage would have occurred during charring, but whether it took place before or subsequent to the charring was uncertain.

The nutshell fragments weighed 3.9 g, probably the equivalent of about eight nuts. Most fragments were very small, and it was difficult to estimate the original nut size, or how they were broken. There was no sign of natural dehiscence or rodent damage. Charring as broken shells seemed most likely, and although this sample included several of the shiny black fragments described above, there was nothing to suggest charred kernels.

Bronze Age

A sample from ditch 6105 adjacent to burial 6151 contained what was probably wheat and half of a split (dehisced?) sloe stone (*Prunus spinosa*). In the settlement, the fill of Late Bronze Age pit 8298 (Fig. 7) included about 500 more or less whole grains and degraded grains, and fragments representing more than another 300 cereals. A much smaller sample (134) associated with the base of a pot in the pit contained about 140 grains and fragments equal to a further 100 grains. Roughly two-thirds of the grains from the fill were wheat, and wheat grains slightly outnumbered those of hulled barley next to the pot. A large proportion of the wheat grains showed the classic form of emmer, and this had some small support from one glume base and part of a spikelet fork, which by their size were likely to be emmer. Other obvious glume wheats, some retaining faint impressions of the veins of enclosing glumes, could have been either emmer or spelt.

Approximately a third of the grains in the pit fill were barley, including hulled barley (*Hordeum vulgare*). Of about 170 better preserved grains, only 21 were thought to be the lateral grains of 6-row barley, while 62 were straight and symmetrical, proportions which are the reverse of the ideal in a perfectly preserved sample of 6-row hulled barley. A few grains might be naked barley, but there were no classic signs such as transverse surface wrinkling.

Oats (*Avena* sp.) occurred in this and a few other samples, always in the very low numbers indicative of weeds growing with cultivated cereals. There were no diagnostic floret parts for specific identification. Other wild plant seeds, all typical

Table 5. Charred plant remains of prehistoric date.

	Early Neo-lithic	Late Neolithic	Early Bronze Age	Middle Bronze Age	Middle/Late Bronze Age							
Feature	Pit	Pit	Pit	Funerary								
Context	9050	8052	4403	6060 6096 6105 6043	8298	9020	9028	6010	6042	6054	6058	6067
Sample	9051	8071	44-4	6141 6117 6151 6099	8297	8299	9021	9029	6126	6247	6261	6184
Sample vol. (litres)	109 + 109A	117 + 117A	1	86	16	26	13	128+	102	107	25	41
Cereals	37	36	10	10	10	14	0.3	10	2	10	10	10
<i>Triticum cf. dicoccum</i> - glume bases - spikelet base frags. (emmer)					1		1			1	1	2
<i>Triticum cf. dicoccum/spelta</i> - grains (emmer and/or spelt)	2				2	23.5	55			1		1
<i>Triticum</i> sp. (undifferentiated wheat)				1		75	20	1	4			
<i>Hordeum</i> sp. inc. <i>H. vulgare</i> (undifferentiated and hulled barley)				2		170	63		7	?1	1	1
<i>Avena</i> sp. (oats)						4		1				3
<i>Avena/Bromus</i> sp. (oats or bromie grass)					1		2					1
Cerealia indet. - fragmented grains (ml) (unidentifiable cereals)	0.25	-	0.25	0.25	0.5	0.25	0.5	7.0	2.5	0.25	0.5	0.5
Other organic material (frags.)	-	c. 1.5	1	1	>10	5	-	>10	-	-	1	3
Cultivated legumes												
<i>Vicia faba</i> var. <i>minor</i> (broad or field bean)						1						
Arable/Waste/Grassland												
<i>Chenopodium album</i> (fat hen)							1				1	1
<i>Persicaria maculosa</i> Gray (reddishrank)								1			1	
<i>Fallopia convolvulus</i> (L.) Å.Löve (black bindweed)								2	1			2
<i>Rumex</i> sp. (dock)								1				1
Polygonaceae indet. (knotweed family)										1	?	
<i>Vicia</i> ct. <i>tetrasperma</i> (smooth tare)								1	1			
<i>Vicia/Lathyrus</i> sp. (vetch or vetchling)							2			1		
<i>Bromus hordeacens/secalinus</i> (soft or rye bromie)												
Poaceae indet. - small grass seeds									4	1		
Woodland, wood margin/hedge												
<i>Corylus avellana</i> L. - nut shell frags. (hazel)	11	>100 3.9 g				1		1		1	6	2
<i>Prunus spinosa</i> fruit - fruit stone (stone)		1								1		
<i>Malus</i> cf. <i>sylvestris</i> - fruit (apple)		2										
Cf. fruit fragments ?inc. <i>Malus</i> sp.		0.3 g								1		
Unidentified ?seeds									2	1	2	2

of disturbed ground, were very few in this and other contexts. Pit 6043 included a field bean (*Vicia faba* var. *minor*).

The sample from pit 8288 was particularly noteworthy, containing a large number of cereals, c. 435 grains, in which wheat grains numbered double those of barley, plus the equivalent of c. 350 grains as small fragments. As in pit 8298, the better-preserved wheat was comparable to emmer and small glume base confirmed its identification. The barley included 6-row hulled barley, but three oats were likely to be weed species. There were very few wild plant seeds.

Anglo-Saxon

Samples from the Sunken Featured Building 6089 and post-hole 6438 in it, contained only a few grains of wheat, one of which was a bread wheat type (*Triticum* cf. *aestivum* s.l.), and hulled barley. Oats were found in the post-hole, while dock (*Rumex* sp.) from the building was the only wild plant seed. Hazelnut shell fragments were present only as a trace in both contexts. Other organic material may have been represented by glassy, coal-like material and the post-hole included one or two pieces that suggested charred soft fruit or other vegetable matter.

Discussion

Although few samples contained more than a few charred plant remains, taken together, and particularly with the larger assemblages in pits 8288 and 8298, the evidence indicated a background agricultural economy of cereal cultivation and the use of natural resources.

The few fragments of cereals and the hazelnut shells from the Early Neolithic and Early Bronze Age are typical, but the possibility of spelt was interesting. Helbaek identified wheat of this date from the causewayed enclosure of Hembury, Devon, as spelt (Hillman 1981, 187–8), but subsequent identifications were usually qualified as emmer or spelt. In view of the overlapping shapes of wheat grains it was quite possible in this case that both grains were of emmer, the common wheat of early prehistory, with the caveat that uncharred recent roots and seeds, which may have indicated disturbance and infiltration from later periods.

Wheat and barley were both important cereals in the Bronze Age in southern England. On this evidence wheat may have been slightly more common than barley in the Westhampnett area. These results may be compared to those from Early and Middle Bronze contexts in Area 4 on the nearby Westhampnett Bypass (Fitzpatrick *et al.* in press) where naked barley, not definitely identified here, was recorded only once in an Early Bronze Age context on the Bypass sites, and in small quantities in the Middle–Late Bronze Age.

Beans appeared in only one Middle Bronze Age context in Area 4 on the route of the Bypass. These small beans were found only occasionally in earlier prehistoric contexts, perhaps because they were less often exposed to fire, although they have been recorded as pottery impressions as early as the Neolithic (Hillman 1981, 88).

Unfortunately, the scarcity of weed seeds and chaff meant that little could be inferred about where the cereals and beans were grown, or the stage of preparation for use at the time of charring. Fat hen (*Chenopodium album*), black bindweed (*Fallopia convolvulus*), dock (*Rumex* sp.), small vetches (*Vicia* sp.) and grasses (Poaceae) occurred occasionally and are all common weeds of disturbed ground, with red shank (*Persicaria maculosa*) perhaps more typical of moister, weakly acid soils.

The few Anglo-Saxon remains were just sufficient to note the presence of wheat and barley, and that in the Anglo-Saxon period, free-threshing bread wheat may well have replaced the earlier glume wheats. The use of wild resources is shown by a few traces of hazel and by pieces of presumed organic substance.

Many of the samples contained very few cereals and seeds, and could only serve as examples of the more or less constant presence of charred debris widespread in an area of human activity. The larger quantities in the samples from pits 8298 and 8288 were, however, likely to represent the deliberate deposition of cereals that had been accidentally or deliberately burned elsewhere. The scarcity of chaff and weeds indicate that this was either waste, in which more fragile items had been destroyed, or was in fact grain that was cleaned and ready for use.

Late Neolithic pit 8052

The singular nature of the plant remains in pit 8052 suggested some form of intentional placing. It was tempting to regard the apple, sloe and hazel as having some ceremonial significance, as a funerary food offering, although one might expect apples to be offered whole or dried, and hazelnuts intact. Alternatively, however, they may represent the disposal of specialized refuse.

In an attempt to understand the condition of the items in the deposit four crab apples, four sloes and one hazelnut were charred for 24 hours in the hot ash of a bonfire of tree stumps. This was carried out in late August, when the fruits and nut were fully formed but not completely ripened.

Two apples remained whole after charring, and one retained its stalk. The second stalk was detached. The skin of both was shrunken with small collapsed areas. Two freshly bisected apples, one axially (from stalk to calyx) and one across the greatest diameter were shrunken, and in parts the skin was separating from the flesh. Only fragments of the seeds remained, burned almost to white ash. The apples, whole and halves, were harder than the Neolithic fragments and did not break easily, probably an effect of different temperature or burning time. It seemed certain that the Neolithic apples were not cut before charring, but it was still not clear whether they joined the sloe and nutshells as whole fruits, or as unwanted charred fragments. The four sloe fruits remained whole, and their skin had a shrunken appearance similar to that of the apples. They were very hard, and normal hand pressure was not sufficient to break them. It was probable, therefore, that the sloe in the pit deposit was damaged before charring.

The hazelnut remained whole but had a small quantity of dark glassy exudate from one side, where the nut would split if naturally dehiscing. This nut was also hard and did not break easily, but on very firm pressure shattered into very many small pieces and ash. The inner surface of the larger fragments had adherent black glistening traces of the charred kernel. All the fragments of ancient nutshells were completely free of any such trace, reinforcing the impression that they were broken when charred. The weight of the remains of the one recently charred nut was 0.5 g.

It appeared therefore that the deposited food remains represented refuse. This explained the nutshell fragments, and perhaps a bird or rodent had damaged the sloe, but it was more difficult to explain the discarding of whole apples. Burning could have occurred during cooking (baked apples?) or through accidental or deliberate incorporation into a bonfire

or pyre. Windfall apples can lie thick on the ground in a good season, and although most would almost certainly have been gathered, a few small ones might unintentionally be swept into a burning area. An indication of the time of year at which burning took place was provided by the apples. Nuts could have been stored and an overlooked sloe could have remained on a branch for months, but apples, if not dried, implied a late summer or autumn date for the deposition.

CHARRED APPLES

by Michael J. Allen

What is significant about the charred apples is not so much their Neolithic date but the charring of them and their incorporation into this context. Apple is not uncommon in Neolithic contexts. Charred pips are known from Neolithic contexts (Moffett *et al.* 1989), such as those at Down Farm, Dorset (Jones 1980; 1991) and impressions of crab-apple pips were found on Early Neolithic pottery from Windmill Hill, Wiltshire (Smith 1965, 40–41, pl. xiv–xv; Helbaek 1952b). However, the preservation here of the whole apple is rather different. Similar Late Neolithic deposits containing Grooved Ware pots, hazelnuts and fragments of whole crab apples have also been found recently at Dog Farm, Bedfordshire, Dorney, Buckinghamshire, Eyhorne Street, Kent, and Yarnton Floodplain, Oxfordshire (Robinson 2000 and pers. comm.). An Early Bronze Age apple has also recently been found in a funerary context at Hengistbury Head, Dorset (Wessex Archaeology 2001).

CHARCOAL

by Rowena Gale

Bulk soil samples were processed using 1 mm and 0.5 mm meshes by flotation and sieving. The resulting flots and residues were scanned under low magnification and charcoal fragments measuring >2 mm in cross-section were considered for species identification.

The charcoal was generally rather sparse and consisted of fairly small fragments. It was too fragmented to include intact radial segments of roundwood. Samples were prepared for examination using standard methods (Gale & Cutler 2000). The fragments were supported in washed sand and examined using a Nikon Labophot-2 microscope at magnifications up to $\times 400$. The anatomical structures were matched to prepared reference slides. When possible, the maturity of the wood was also assessed (i.e. heartwood/ sapwood).

The charcoals are summarized in Table 6 and discussed below. Group names are given when anatomical differences between related genera were too slight to allow secure identification to genus level. These included members of the Pomoideae (*Crataegus*, *Malus*, *Pyrus* and *Sorbus*) and Salicaceae (*Salix* and *Populus*). Similarly, in degraded charcoal some unrelated taxa can be problematical, such as *Viburnum* and *Cornus*. Where a genus was represented by a single species in the British flora, this was named as the most likely origin of the wood, given the provenance and period. However, it is rarely possible to name individual species from wood features, and exotic species of trees and shrubs were introduced to Britain from an early period (Godwin 1956; Mitchell 1974). Classification follows that of *Flora Europaea* (Tutin *et al.* 1964–80).

The anatomical structure of the charcoal was consistent with the following taxa or groups of taxa:

Aceraceae. *Acer campestre* L., field maple
Betulaceae. *Alnus glutinosa* (L.) Gaertner, alder

Caprifoliaceae. *Viburnum* sp., wayfaring tree and guelder rose

Cornaceae. *Cornus sanguinea* L., dogwood

Corylaceae. *Corylus avellana* L., hazel

Fagaceae. *Quercus* sp., oak

Oleaceae. *Fraxinus excelsior* L., ash

Rosaceae. Subfamilies:

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

Prunoideae which included *P. avium* (L.) L., cherry; *P. padus* L., bird cherry, and *P. spinosa* L., blackthorn. In this instance the broad heterocellular rays suggested *P. spinosa* as the more likely. It was frequently difficult or impossible, as in this instance, to identify *Prunus* to species level using anatomical methods.

Salicaceae. *Salix* sp., willow, and *Populus* sp., poplar. In most respects these taxa are anatomically similar and, in this instance, it was not possible to distinguish between them.

Taxaceae. *Taxus baccata* L., yew.

Neolithic

Early Neolithic pit 9050, interpreted as containing a placed deposit, contained oak heartwood (*Quercus* sp.), hazel (*Corylus avellana*) and the hawthorn/*Sorbus* group (Pomoideae), probably fuel debris. Late Neolithic pit 8052 contained hazelnut shells, indicating more open locales as fruiting hazel trees require sunlit habitats.

Middle–Late Bronze Age

Cremation burials

Charcoal was examined from three of the urned burials (6002, 6005, 6060) and from ditch 6107 adjacent to burial 6151. A range of species was recovered from most of the samples including the hawthorn/*Sorbus* group (Pomoideae), ash (*Fraxinus excelsior*), hazel (*Corylus avellana*), maple (*Acer campestre*), blackthorn (*Prunus spinosa*) and alder (*Alnus glutinosa*). Oak (*Quercus* sp.) was found in most of the samples and in grave 6002 it was the only species. Here the charcoal was comminuted but included oak heartwood and sapwood but was more abundant (although mostly very comminuted) from the urn, which was again exclusively of oak.

Settlement

Charcoal was recorded from several pits, sometimes in large quantities, and mostly derived from a range of species. Pit 8298, which contained a placed deposit (Fig. 7), was especially rich in charred grain (see above) and charcoal of blackthorn (*Prunus spinosa*), oak (*Quercus* sp.), hazel (*Corylus avellana*) and maple (*Acer campestre*). It may be significant, however, that in post-hole 6015 the comparatively large and frequent fragments consisted exclusively of oak (*Quercus* sp.) heartwood and sapwood (see discussion). In pit 6043 growth rings measuring some 4 mm in width (when charred) were noted in the oak sapwood, suggesting that fuel was obtained from trees growing in open or stress-free conditions.

Discussion

The taxa identified from Bronze Age contexts typically occur on acid soils. The dominant woodlands probably consisted of oak and hazel, with woodland trees such as field maple and ash as lesser components. By the Middle Bronze Age the landscape was probably quite open, with extensive areas of

Table 6. Charcoal.

Feature type/no.	Context	Sample	<i>Acer</i>	<i>Alnus</i>	<i>Betula</i>	<i>Corylus</i>	<i>Fraxinus</i>	<i>Pomoideae</i>	<i>Prunus</i>	<i>Quercus</i>	<i>Salicaceae</i>	<i>Viburnum/Cornus</i>	<i>Taxus</i>	
Early Neolithic														
Pit														
9050	9051	109	-	-	-	1	-	1	-	8h	-	-	-	
		109A	-	-	-	2	-	1	-	10h	-	-	-	
Early Bronze Age														
Grave														
4403	4404	1	-	-	-	-	-	-	-	7h, 1s	-	-	-	
Middle Bronze Age														
Funerary														
Grave 6005	6119	17	-	-	-	1	-	-	-	-	-	-	-	
		17A	-	-	-	-	1	-	-	3h, 1s	-	-	-	
pot 106	6121	85	-	6	-	-	-	-	-	-	-	-	-	
Grave 6060	6141	22	-	-	-	1	-	-	-	6h	-	-	-	
		22A	4	-	-	1	-	3	4	7h	-	-	-	
		86	-	-	-	-	-	5	1	6h, 1s	-	-	-	
Grave 6002	6147	23	-	-	-	-	-	-	-	2h, 12s	-	-	-	
		23A	-	-	-	-	-	-	-	7h, 6s	-	-	-	
		83	-	-	-	-	-	-	-	4h, 29s	-	-	-	
Ditch 6105	6151	26	-	-	-	1	-	-	-	1h, 1s, 1r	-	-	-	
		26A	1	-	-	1	-	3	cf. 1	9h, 2s	-	-	-	
Settlement														
Pits														
6015	6116	14	-	-	-	-	-	-	-	27h, 29s	-	-	-	
		15	-	-	-	-	-	-	-	25h, 41s	-	-	-	
6040	6180	33	-	-	1	-	-	-	-	13h, 15s	1	-	-	
6043	6099	13	-	-	-	4	-	5	2	12h, 4s	-	-	-	
6054	6261	47	-	-	-	-	-	1	1	6h, 3s	-	-	-	
6058	6184	38	-	-	-	-	-	-	1	2h, 7r	-	-	-	
		38A	2	-	-	-	-	2	3	6h, 5r	-	-	-	
6067	6267	50	-	-	-	38r	-	-	-	3h	-	-	-	
6096	6117	16	3	-	-	-	-	1	-	1s	-	1	-	
		16A	-	-	-	-	-	1	-	-	-	-	-	
6097	6250	43	-	-	-	8	cf. 1	6	-	2h, 2s	-	-	-	
6162	6173	35	-	-	-	16	2	-	1	2h, 2s	-	-	-	
8052	8071	117	-	-	-	29	-	3	-	1h	-	-	-	
		117A	-	-	-	21	3	35	3	-	-	-	-	
6178	6179	32	-	-	-	-	-	1	2	6h	-	cf. 1	-	
		32A	1	-	-	-	-	2	31	1	21h, 4s	-	-	-
8298	8297	128	1	-	-	1	-	-	-	1h	-	-	-	
		128A	-	-	-	-	-	-	1	2h	-	-	-	
9028	9029	107	-	-	-	-	-	-	-	7s	-	-	-	
Anglo-Saxon														
Sunken-featured building														
6089	6411	61	6	-	-	8	7	6	6	9h, 2s	-	-	2	

Key: h = heartwood; r = roundwood (diameter <20 mm); s = sapwood (diameter unknown but >20 mm)

The number of fragments identified is indicated.

grassland interspersed with small areas of surviving woodland, many probably managed.

The Bronze Age pyres appear to have been constructed from a range of woods — including oak, maple, alder, hazel, ash, the hawthorn group, blackthorn, and dogwood. It seems reasonable to suggest that large billets of wood, probably mainly oak, would have been used for the main structure, with

roundwood and brushwood for infill. Timber and wood for the construction of the pyre was probably obtained from the immediate vicinity. The use of such a wide range of species suggests that the practical aspect of pyre building was more important than the ritual use of specific trees.

The charcoal from grave 6002 consisted entirely of oak (*Quercus* sp.), suggesting the possibility of symbolic or ritual

use for this species. The exclusive use of oak was, however, unusual both in the cremation burials and the pits containing placed deposits.

The use of single wood species in Bronze Age and later cremations is of considerable interest. Based on current data from Bronze Age sites, it seems that certain circumstances required the use of oak (*Quercus* sp.) — possibly associated with status, gender and age (Smith in prep.). A local example of the selective use of oak was recorded in Area 3 on the Westhampnett Bypass where the charcoal from the central double burial within a ring-ditch consisted entirely of oak (*Quercus* sp.) (Gale in press).

Historically, the oak tree has been endowed with mythical connotations and sacred properties, largely through folklore and anecdotal evidence (Ellis Davidson 1964; Green 1991; Phythian 1907; Piggott 1968). Nevertheless, there is now increasing archaeological evidence for its significance in prehistoric societies, as for example at Seahenge, Norfolk, where an upturned oak tree lay in the centre of the Bronze Age circular timber structure (Brennan & Taylor 2000). A similar inverted stump was recovered from a Bronze Age waterhole at Bradley Fen (Knight in prep.) and a buried oak trunk came from beneath a Late Neolithic barrow or mortuary enclosure at St Neots (Ellis 2004), both in Cambridgeshire. The possible significance of some tree-throws in prehistoric contexts has also been noted (Evans *et al.* 1999).

Charcoal from the settlement contained a range of species, except for post-hole 6015 and pit 9028, from which only

oak (*Quercus* sp.) was recorded. The charcoal from 9028 was insufficient to give a secure impression of the selective use of oak fuel, but the charcoal-rich oak deposit in post-hole 6015 could certainly be construed as such. This could imply a ritual or cosmological connotation.

The charcoal from Anglo-Saxon Sunken Featured Building 6089 probably derived from domestic fuel. By this period extensive woodland management was established in most parts of England, with coppiced growth supplying the bulk of domestic fuel requirements (Berryman 1998; Hooke 1989; Rackham 1994). Unfortunately, the charcoal was too comminuted to assess its origin from coppiced stems, but the use of oak heartwood suggested that some at least was derived from wider poles or cordwood.

The presence of yew in this context was of interest. Yew wood is extremely hard and difficult to cut, and although it makes good firewood, it has rarely been recorded in domestic fuel residues from archaeological sites. The trees have many folklore associations and superstitions attached to them, including a strong association with death and rebirth (Williamson 1978). Yews commonly favour the south-facing slopes of chalk downland and fare better on these aspects than most other trees (Williamson 1978). For example, in the medieval period the South Downs supported a dense yew forest, surviving remnants of which can be seen in the reserve at Kingley Vale near Chichester. Yew trees sometimes tolerate some degree of acidity and it is possible that outliers may have grown on the Coastal Plain close to Claypit Lane.

RADIOCARBON DATING PROGRAMME

by Michael J. Allen

Eleven radiocarbon determinations were intended in order to:

- define the date of the Neolithic pits to compare with other similar features/activities in southern England;
- examine the chronological relationship between the Bronze Age burials and the Bronze Age settlement;
- examine the history and longevity of funerary activity on site.

All charcoal selected was identified and sapwood, twigs/roundwood, or fast-growing species chosen to minimize the potential off-set between the date and the event. The results are calibrated using the maximum intercept method and all calibrated date ranges are quoted at two standard deviations (95% confidence), with the end points rounded outwards to 10 years. The probability distributions (Fig. 18) have been prepared using OxCal 2.15.

Most dates fell within the anticipated ranges. Middle Bronze Age cremation burials were dated by charcoal that was assumed to be the pyre debris

or pyre material relating to the cremation. In each case selection was of material that was stratigraphically associated with the cremation burial or the funerary urn. The two samples from the Middle

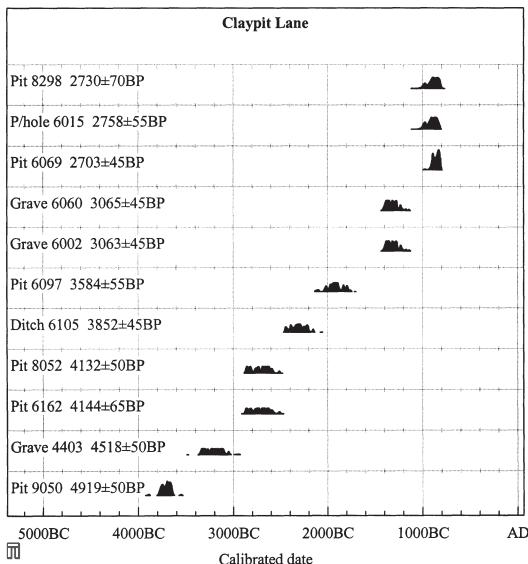


Fig. 18. Probability distributions of radiocarbon dates (OxCal 2.15).

Table 7. Radiocarbon results.

Description Context and sample no.	Material	Lab no.	Age BP	$\delta^{13}\text{C}$	Calibrated
Early Neolithic					
Pit 9050, context 9051, s 109a	charcoal - <i>Corylus</i>	NZA-16695	4919±50	-25.94	3800–3630
Middle Neolithic					
Grave 4403, s 1	charcoal, oak sapwood	NZA-16696	4518±50	-24.11	3370–3030
Late Neolithic–Early Bronze Age					
Pit 6162, context 6173, s 35a	charcoal - <i>Corylus</i>	NZA-16617	4144±65	-27.24	2890–2500
Pit 8052, context 8071 s 117	charred apple <i>Malus</i> cf. <i>sylvestris</i>	NZA-16697	4132±50	-26.75	2880–2500
Ditch 6105, adjacent to burial 6151	charcoal - <i>Corylus</i>	NZA-16698	3852±45	-26.79	2460–2140
Pit 6097, context 6250, s 43a	charcoal - <i>Corylus</i>	NZA-16618	3584±55	-27.62	2120–1750
Middle Bronze Age					
Grave 6002, burial 6147, s 23	charcoal, oak sapwood	NZA-16699	3063±45	-25.11	1420–1160
Grave 6060, burial 6474, s 83	charcoal, oak sapwood	NZA-16700	3065±45	-25.6	1420–1160
Late Bronze Age					
Pit 6096, s 16/a	charcoal, Pomoideae	NZA-16703	2703±45	-25.05	920–800
Posthole 6015 s 15	charcoal, oak sapwood	NZA-16701	2758±55	-26.43	1010–800
Pit 8298 context 8267 s 128/a	charred emmer/spelt wheat	NZA-16702	2730±70	-23.55	1030–790

Bronze Age burials 6002 and 6060 yielded dates of 1420–1160 cal. BC. However, the hazelnut from feature 6105, assumed to be part of pyre debris apparently associated with burial 6478 yielded an Early Bronze Age result of 2460–2140 cal. BC. The $\delta^{13}\text{C}$ record accords with the range expected for the submitted material (Bowman 1990) and the Carbon/Nitrogen ratio is also within the expected range. As the charcoal was from the fill of the ditch and not within the urn, it is likely that the charcoal represents older material within the ditch.

Settlement activity was more difficult to date, with few suitable contexts. Most post-holes did not contain datable material or material that could be demonstrated to be from the timber post. Samples were selected from one post-hole and pits which were assumed to relate directly to the settlement and to examine if the settlement and burials were contemporary with each other. The settlement was dated to the Late Bronze Age; 1030–790 cal. BC. However, a charred hazelnut from pit 6097 associated with large sherds of Middle Bronze Age urn with which it was assumed to be contemporary yielded a result of 2120–1750 cal. BC, which falls in the Early Bronze Age. Earlier material is present in this feature, as is shown by the presence of abraded sherds of Late Neolithic pottery that had not been identified as such at the time that the radiocarbon samples were selected.

DISCUSSION

by Adrian M. Chadwick with
A.P. Fitzpatrick

MESOLITHIC

Although the evidence for Mesolithic activity largely comes from flints found redeposited in later features, the scatter of material adds to the growing evidence for activity on the West Sussex Coastal Plain (Holgate 2003; Fitzpatrick *et al.* in press). Two hunting camps of Middle Mesolithic date were found in Areas 1 and 4 on the A27 Westhampnett Bypass to the south. Both of these camps overlooked what was at that time the low-lying ground of the Waterbeach-Tangmere stream course that flowed from the north (Hodgson 1963; 1967). This former stream also ran to the east of the Claypit Lane site, which also lies on the higher ground that flanks it. There may be another camp site at Strettington Farm, 700 m to the east of Claypit Lane.

NEOLITHIC

The Early Neolithic pit 9050 in Area 2 is a typical find from this period, containing a placed deposit. Isolated pits of this date are not uncommon across southern England, reflecting short-term occupation by groups who practised herding and shifting cultivation (Pollard 1999; Thomas 1991). While the

type of deposit is well known, it is a rare find from the Coastal Plain.

The three pits containing Grooved Ware, 6162, 6164 and 8052, located in close proximity to each other in Area 1, provide evidence for a characteristic type of Late Neolithic activity of making placed deposits on the site in the period before the construction of the ring-ditches. The presence of charred fruits, crab apples and sloe, and whole hazel nuts in pit 8052 is noteworthy. These pits are also important additions to the small number of finds known from the Coastal Plain.

BRONZE AGE

Activity on the site was at its most intense during the Bronze Age, with burials of Early and Middle Bronze Age date, and settlement during the Middle-Late Bronze Age.

The burials

The Early Bronze Age grave 4403 in Area 2 which contained an urned cremation burial in a Collared Urn is an isolated find, but the burials in Area 1 appear to be part of a small cemetery of unknown extent. The three ring or penannular ditches 6102, 6107 and 6108 may have been marked by low barrows. A single urned cremation burial was found with 6107, either in a pit within the area encircled by the ditch or possibly in a grave cut into the ditch. Two urned burials were found in the ditch of 6108 and another immediately lay to the south. Two further apparently isolated urned burials, 6005 and 6060, lay to the east and are interpreted as outliers of the cemetery. Much of 6102 lay outside the excavation area and no burials associated with it were found.

The Middle Bronze Age burials are characteristic of the funerary traditions of the time (fifteenth-twelfth centuries BC) with the cremation burials placed within urns of Deverel-Rimbury type. Some of the burials, such as burial 6003, contain pyre debris that was deliberately included in the pot. The multiple interment of an adult and a juvenile in this burial is an uncommon, though not unusual discovery. What is unusual, is the presence of a third individual. One burial, 6002, was placed on a plinth or pedestal of flint, something seen nearby on the Westhampnett Bypass and which may prove to be a distinctive feature of Bronze Age burials in the region. Other relatively recent discoveries of Bronze Age cremation burials nearby include East

Dean (Kenny 1993b), Drayton House, Oving and Pagham (Watson 2000), Shopwycke (Kenny 1992) and the Westhampnett Bypass (Fitzpatrick *et al.* in press). Few are known to have been associated with barrows (Garwood 2003, 50, fig. 5, 9).

The setting of the monuments may be significant in that to the west the ground slopes down into a broad, shallow valley, which, even today, and despite modern drainage ditches, often floods after heavy rain. The ring-ditches are located on the side of this valley and the location of Bronze Age barrows by watercourses is well established (McOmish *et al.* 2002). Later, ring-ditch 6107 appears to have been used as a sighting point from which to lay out one of the later ditches.

The settlement

The settlement later established to the north-east of the ring-ditches may have continued to regard the monuments and their associated burials as significant during several hundred years of occupation. That this occupation started some time later than the burials is shown both by the pottery, an important assemblage that appears to straddle the transition between Middle and Late Bronze ceramic styles, and by the radiocarbon determinations, which are Late Bronze Age (eleventh–eighth centuries BC). Although quantities of Middle Bronze Age pottery were found, they were almost invariably associated with Late Bronze Age material.

The full extent and character of the settlement could not be established with certainty but it may have shared many characteristics with the better known Bronze Age settlements to the east on the South Downs, including Itford Hill, Black Patch, Mile Oak Farm, Coldean Lane and Varley Halls (Burstow & Holleyman 1957; Drewett 1982; Ellison 1978; 1987; Greig 1997; 2002; Rudling 2002; Russell 2002). Unlike some of these sites (Hamilton 2003, 71), the small cemetery and settlement at Claypit Lane were not contemporary.

The settlement was not enclosed by a ditch and bank but it was bounded and divided by a number of fences and ditches, within which lay a number of circular buildings, and probably other post-built structures whose form cannot be determined. The fences did not appear to form a complete circuit around the settlement, and numerous pits lay to the west. However, fences 6470–71 do form a boundary between the earlier burials, none of which are found to the east of it.

Only a few circular buildings can be identified with any degree of confidence: 8370, 6469, and possibly 8371. Building 8370 appeared to have undergone several phases of repair or rebuilding. All floor layers, including any evidence for a hearth, had been removed by ploughing. Other semicircular arcs of four or five smaller post-holes seem likely to have been other, less substantial, structures. The circular buildings were post-built and this, along with their size, between 6–7 m in diameter, and the probably south-east facing entrance of 8370, is typical of contemporary houses. The presence of what appears to be an eaves drip-gully to the west of building 6469 is a feature not seen on the downland sites and may relate to the wetter conditions on the Coastal Plain or simply to the current rarity of sites of this date.

A number of placed deposits were contemporary and these included three features that contained complete or fragmentary loomweights to the north of building 8370. The complete weight in pit 8298 had clearly been buried deliberately as is probably the case with the fragmentary examples in nearby pits 8130 and 8294. These may mark the location of either a specialized activity area or a building associated with weaving, consistent with Ann Ellison's model of Bronze Age 'modular' settlement (Ellison 1981, 419–21). Each 'module' may have consisted of one major residential house, at least one ancillary outhouse or other subsidiary building, storage facilities, and areas for open-air activities. The not infrequent identification of placed deposits associated with weaving suggests that a particular emphasis was placed on it at this time (Brück 1999a, 2000). All the pottery seems to have been manufactured locally, but the greensand saddle quern found reused as packing stone in a post-hole came from the Lodsworth quarries to the north (Peacock 1987).

The charred plant remains show that emmer wheat and barley were both important crops, with wheat perhaps being slightly more common, and beans may also have been a crop. The rarity of chaff and weed seeds makes it difficult to establish where these crops were grown and processed. However, as fat hen, black bindweed, dock, small vetches and grasses were all found and are all common weeds of disturbed ground, it may be surmised that crops were grown locally. The presence of red shank which prefers moister, weakly acid soils might support this.

The evidence from the charcoals is consistent with this. The landscape is thought to have been quite open, with extensive areas of grassland interspersed with small areas of surviving woodland, many probably managed. The dominant woodlands probably consisted of oak and hazel, with woodland trees such as field maple and ash as lesser components, all of which typically occur on acid soils.

The virtual absence of animal bone makes it impossible to say more about the livestock other than that sheep and pig were present.

A number of other features contained 'placed' deposits of pottery, sometimes of complete vessels, sometimes accompanied by large quantities of charred grain. Some pots also contained burnt flint and ferruginous sandstone that may have been used to heat or boil the contents, as is known on other sites in Sussex (Seager Thomas 1999, 46–7; Hamilton 2003, 71). Some of these pots rested on small pedestals of flints, a feature seen earlier in a Middle Bronze Age urned burial 6060. Some features which were initially classified as tree-throws (6080 and 8039, and possibly 8027) also contained substantial quantities of pottery, burnt and worked flint and stone fragments. This may simply represent the levelling of inconvenient hollows, but it may also indicate that natural features were used for placed deposits.

Memory and materiality

Differentiating between the ritual and prosaic in prehistory is problematic. In the past, archaeologists interpreted agricultural activity in terms of basic food production, and regarded ritual as involving behaviours beyond the realm of practical subsistence. Ethnographic work disputes this distinction (Brück 1999b). During prehistory, invoking the help of spirits, gods or ancestors may have been considered as essential as ensuring that boundaries were maintained, animal movement controlled and crops properly tended. In considering the Bronze Age the concepts of 'ritual' and 'domestic' should not necessarily be regarded as representing opposing spheres of behaviour (Brück 1999b; 2000; 2001). Indeed, it has been argued that, from the Middle Bronze Age, notions of identity and community were expressed through activities relating to the agricultural cycle that included small-scale votive depositional practices (Barrett 1994). The Claypit Lane settlement can be seen in this light.

Pit deposition might have been an activity linked to wider concepts of transformation, renewal and rebirth and fertility played out through the manipulation of material culture, agricultural practices and both formal and informal acts of deposition. There may have been metaphorical or metonymic links between reproduction and birth, the fragmentation of the body after death, and the production, destruction and disposal of material culture such as pots, metal objects and woven fabrics. Crushed pottery (grog) and burnt flint used as temper in Middle and Late Bronze Age pottery were recycled from old pots and cooking fires. These may have provided a symbolic link between past and present episodes of food preparation and consumption, the drying of crops, the warmth and companionship provided by hearths, and feasts celebrating significant annual events (Woodward 2002, 111). Human bones were transformed and fragmented by fire and incorporated into formal burials. Fragments of cremated bone may have been collected from the pyre site and added to later burials, thus maintaining kinship or other social links beyond death. Relatives or friends may have retained fragments of bone as a means of binding the living and the dead into the complex weave of place, myth, memories, material culture and daily tasks.

Field systems and settlements

The gullies and ditches in Area 2 may represent a Bronze Age droveway or possibly a field system and the length of ditches and gullies identified in evaluation trenches 16 and 23 may also be of this date. During the Middle and Late Bronze Age extensive field systems and more permanent settlements were established widely across southern England (e.g. Field 2001; Fleming 1988; McOmish *et al.* 2002; Yates 1999).

The defining of territory in this way may indicate that ownership of or access to the land became more tightly controlled, perhaps due to increasing competition for land and resources or to a shift to short-fallow agriculture (Barrett 1994). Neither view is without its difficulties (Brück 1999a).

Although individual details are clearer than the overall patterns at Claypit Lane, the settlement and the few pits from Area 1, nonetheless represents a valuable addition to the evidence for Bronze Age settlement on the Coastal Plain. Until relatively recently evidence for Middle–Late Bronze Age oc-

culation consisted mostly of finds of metalwork (Bedwin 1983).

Since then part of a Late Bronze Age settlement has been excavated at Knapp Farm, Bosham (Gardiner and Hamilton 1997), another at Yapton (Rudding 1987), and a burnt mound and Middle–Late Bronze Age settlement has been found at Patching (Stevens 1997). Initial field survey has also shown that metalwork findspots may correspond with flint scatters and burnt mounds (Dunkin 2001). Further west in Hampshire, there is also increasing evidence for Bronze Age settlement, at Hayling Island temple (King & Soffe pers. comm.), Creek Field, Hayling Island (Allen & Gardiner 2000) and Grange Road, Gosport (Hall & Ford 1994).

IRON AGE AND ROMANO-BRITISH

Only a few sherds of Iron Age pottery were found and despite the fact that the course of Stane Street ran past the southern boundary of the site, evidence for activity at Claypit Lane in the Romano-British period is notable mainly for its absence. Some of the larger ditches in the south of the site and the trackway running across Area 1 have small quantities of Roman material in them, but it is quite possible that these features were excavated in the Iron Age when there was increased emphasis on the laying out of droveways and enclosures on the Coastal Plain, as shown by the nearby sites of Oldplace Farm, Westhampnett, and Copse Farm, Oving (Bedwin 1984; Bedwin & Holgate 1985).

ANGLO-SAXON

The two Sunken Featured Buildings, or *Grubenhäuser*, are typical examples of the type. Both buildings contained a moderate quantity of pottery, perhaps of sixth- to seventh-century date. Two vessels from building 6089, a bowl and a jar, bear traces of residues inside and sooting outside, suggesting that they were cooking-pots. The building also produced a substantial quantity of charcoal, probably from a domestic hearth, though rather unusually, yew was present. Samples of charred plant remains included wheat, barley and oats as well as hazelnuts and perhaps soft fruits. Building 6356, in contrast, yielded few charred plant remains or charcoals. The charred materials may be in secondary contexts and give little direct evidence as to the use of the buildings but they were perhaps workshops or stores; structures ancillary to a house that was post-built (e.g. Hooke 1998).

No evidence for such buildings was identified at Claypit Lane.

Scattered, but significant, evidence for earlier Anglo-Saxon activity was identified nearby along the route of the A27 Westhampnett Bypass. A Sunken Featured Building was found in Area 7, a second, probable example was found in Area 4 and Anglo-Saxon pottery was also identified in Area 5. A small inhumation cemetery, probably of sixth- to seventh-century date, with a funerary enclosure lay on the low hill in Area 2 (Fitzpatrick 1997; Fitzpatrick *et al.* in press).

Otherwise most of the other evidence for earlier Anglo-Saxon settlement on the West Sussex Coastal Plain currently identified comes from stray finds from in and around Chichester, at Selsey (Welch 1983, 34), and the cemeteries at Apple Down in the Marden Valley above Chichester (Down and Welch 1990). The buildings from Claypit Lane are useful additions to the currently limited evidence for earlier Anglo-Saxon settlement on the West Sussex Coastal Plain.

Acknowledgements

Wessex Archaeology would like to thank the Goodwood Estate

for their initial commission of the project, in particular Nigel Draffan the Land Agent and Director of the Estate, the BMW Group Construction Management Team who supported the excavation, reporting and publication, especially Werner Endres, Edward Geary and Paul Regan, and Ron Allen of the Environmental Project Consulting Group. The collaborative role of James Kenny (Chichester District Council), John Mills and Mark Taylor (West Sussex County Council) and Dominique de Moulins (English Heritage) is also acknowledged. Rachel Every and Lorraine Mepham would like to thank Frances Raymond for generously sharing unpublished information on the prehistoric assemblage from Drayton Lane and to Dr Rosamund Cleal for commenting on the Neolithic pottery.

The evaluation was led by Adrian Chadwick, assisted by Barry Atkinson, Rod Brook, Hayley Clark, Dennis Price and Dave Webb. The excavation was led by Dave Godden, assisted by Mark Beatty-Edwards, Dave Budd, Jon Crisp, Mike Dinwiddie, Guy Kendall, Gail Mabbott, Hannah Marriott, Dave Patterson, Chris Penny, Pauline Phillips, Dave Webb and Nick Wells. The subsequent excavations and watching brief were led by Adrian Chadwick, assisted by Nathalie Barrett, Dave Budd, Laura Cassie, Mike Dinwiddie, Tamsin Edmed, Dave Norcott, Steve Thompson and Tom Urch. Sarah F. Wyles processed and extracted the environmental samples. The illustrations are by S.E. James. Rachel Morse managed the excavation stage and Andrew Fitzpatrick managed the evaluation and reporting stages.

The Archive (WessexArchaeology project number 48672) is deposited with Chichester and District Museum, 29 Little London, Chichester, West Sussex PO19 1PB.

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APPENDIX 1: FABRIC DESCRIPTIONS

EARLY NEOLITHIC FABRICS

- FL9 Coarse, moderate to rare calcined flint <2 mm, moderate muscovite mica and sub-rounded iron oxides <1 mm. Rare large patinated flint <3 mm, moderate small calcined flint <1 mm and rare organic.
- FL10 Soft, moderately coarse-textured sandy matrix; moderate fairly well-sorted subangular flint <3 mm, rare iron oxides 1 mm, rare sub-rounded quartz <0.5 mm, rare mica.

LATE NEOLITHIC FABRICS (GROOVED WARE)

- GR14 Soft, friable, moderately fine sandy matrix, poorly sorted grog <2 mm, rare patinated flint <3 mm and rare sub-rounded quartz <0.5 mm and iron oxides <1 mm.
- GR16 Frequent sub-rounded medium to large grog <2 mm, sparse sub-rounded quartz <1 mm and flint <1 mm, large, subangular, patinated flint <3 mm and rare mica.

EARLY BRONZE AGE FABRIC (COLLARED URN)

- GR11 Soft, moderately fine matrix, common, poorly sorted grog <3 mm; rare subangular flint <5 mm; rare sub-

rounded quartz <0.5 mm; rare fine mica; soapy feel. Oxidized (orange to orange pink) with unoxidized interior.

MIDDLE BRONZE AGE FABRICS

- FL4 Frequent flint <2 mm, sparse organic and mica with moderate iron oxides <1 mm and moderate sub-rounded quartz <1 mm.
- FL7 Moderately soft fabric, frequent fine and coarse, sub-angular calcined flint, <3 mm sparse mica and rare iron oxides <1 mm and sub-rounded quartz <1 mm.
- FL8 Well finished fabrics; frequent small subangular calcined flint <1 mm; sparse, large sub-rounded quartz <1 mm; sparse mica and iron oxides.
- FL12 Soft, moderately fine, sandy matrix; moderate to common v. poorly sorted, subangular flint <5 mm rare mica.

LATE BRONZE AGE FABRICS

- FL1 Soft, moderately fine sandy matrix, small to medium subangular calcined flint <5 mm, with sparse muscovite mica and rare iron oxides <1 mm.

FL2	Sparse, large subangular and moderate, medium calcined flint <2 mm, sparse muscovite mica and frequent sub-rounded quartz <2 mm with moderate iron oxides.	QU401	Frequent sub-rounded quartz 0.5 mm and rare sub-angular quartzite <1 mm, sparse iron oxides <0.5mm and mica.
FL3	Small -large frequent subangular flint <3 mm, sparse mica and rare, large sub-rounded iron oxides <3 mm.	QU403	Frequent sub-rounded quartz <1 mm and sparse, subangular patinated flint <2mm, sparse iron oxides <0.10 mm and subangular rock fragments <10 mm.
FL6	Fine sandy matrix with sparse, fine to moderate, subangular flint <1 mm; sparse rounded quartz <1 mm; rare mica.	QU402	Frequent fine sub-rounded quartz <0.05 mm and rare organic inclusions.
QU1	Frequent sub-rounded quartz <1 mm, rare organic and sparse mica.	VE400	Moderate organic with moderate sub-rounded quartz <2 mm and sparse iron oxides <1 mm and mica.
ANGLO-SAXON FABRICS		VE401	Frequent organic, moderate coarse subangular patinated flint <2 mm mica and moderate sub-rounded quartz <1 mm.
QU400	Moderate to frequent sub-rounded quartz <1mm, moderate subangular patinated flint <3 mm and moderate organic inclusions.		