

THE EXCAVATION OF A TRIPLE BARROW IN MICHELDEVER WOOD, HAMPSHIRE

(MARC 3, site R4)

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SUMMARY

Fieldwork in advance of a proposed motorway extension led to the discovery of a previously unrecorded barrow, consisting of three axially aligned mounds enclosed by a continuous oval ditch. Excavation showed that the mounds covered primary cremation burials of Early Bronze Age date, two of them with collared urns and bronze awls, and a possible later burial, probably accompanied by two collared urns, was also found. The barrow had been damaged by quarrying of flint nodules as raw material for a substantial flint industry of Middle Bronze Age date, associated with bucket urn pottery, and by later prehistoric ploughing. Radiocarbon determinations suggest that the barrow dates from ca 1700 BC and the flint industry from around the middle of the second millennium BC.

INTRODUCTION

The barrow, one of three surviving as earthworks in Micheldever Wood, lay towards the southern edge of the wood in the parish of Micheldever (NGR SU 5255 3653), and 200m north of the Lunways Road, which is traditionally the line of a prehistoric route (Fig. 1). It was situated four-fifths of the way down a gentle (1:19) south-facing slope at a height of 100 m (330 ft), overlooking the dry valley along which runs the Lunways Road. Geologically, it lay at the junction of a deposit of Clay-with-flints and Upper Chalk, the surface of which had been rilled under peri-glacial conditions. The Clay-with-flints started about half-way across the site increasing in thickness uphill to the north. The soil was a brown forest earth, probably of the Winchester series.

Discovery and History

Despite extensive fieldwork in 1972 by members of the then Farnborough and District Archaeological Society (Biddle and Emery 1973), by L. V. Grinsell (1938) in the 1930's, and despite the existence of several aerial

photographs, on which, with hindsight, the barrow is visible, the site was not discovered until October 1973. The discovery came about during the routine inspection, by the writer, of a test pit excavated by Ground Engineering Ltd. for the South-Eastern Road Construction Unit, Hampshire Sub-Unit. The pit was dug into what proved to be the berm of the barrow. Immediately prior to Grinsell's fieldwork the site had been planted with beech, and similarly in 1973 the site was planted with young spruce, interspersed with young beech, broom and long grass, making recognition of the site difficult.

Grinsell (1938, 33) had examined the immediate area looking for a barrow which is mentioned in three Saxon charters. Grundy (1926, 188) claimed that the 'charter' barrow lay half a mile east of the Lunways Inn, i.e. 400 m west of the site. There is no evidence of a barrow at that place.

Physical Description

The first impression was of a low oval mound, 22 m long and aligned east-west, higher at the west than at the east. On closer inspection it was apparent that there were several distinct features (Fig. 2), including two mounds, separated by a shallow depression. The larger western mound stood 1m above the natural slope on the downhill side, and the smaller eastern mound 0.8m. A compact deposit of flint nodules was visible in the depression between the mounds. The ditch, which was just visible on all sides except the north—where it lay under a Forestry Commission track—enclosed an apparently narrow berm. A fluxgate gradiometer scan by Mr. A. J. Clark, of the Ancient Monuments Laboratory, showed that the ditch was continuous

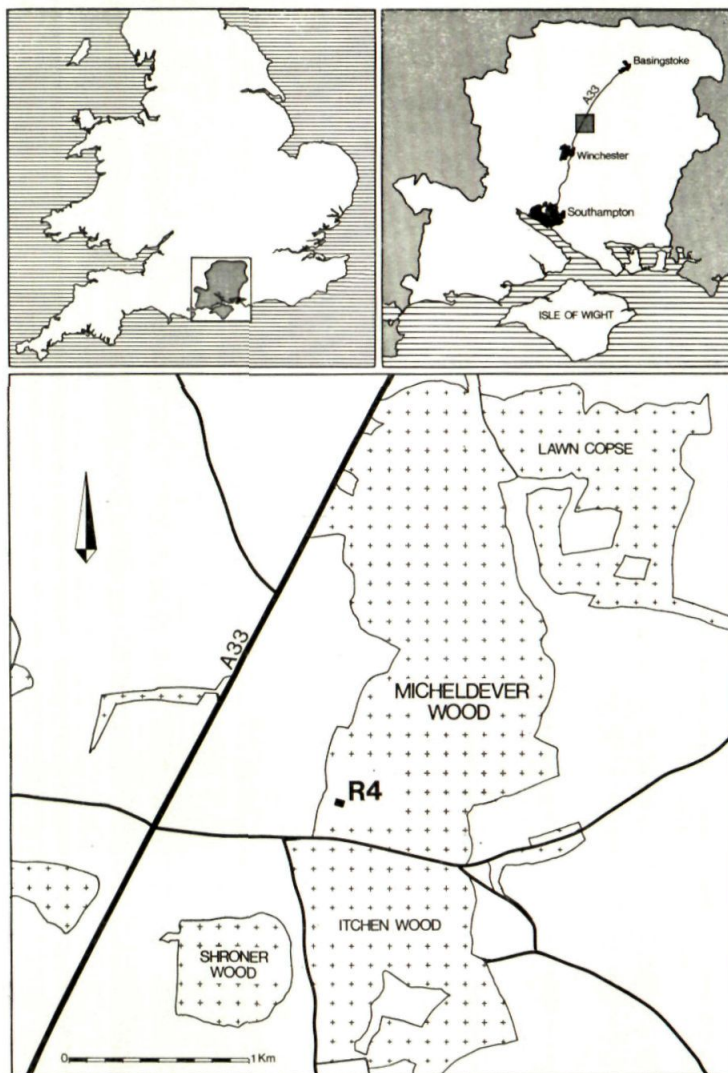


Fig. 1. Location maps (Based on Ordnance Survey maps and plans, Crown Copyright reserved).

(Clark 1975a and b). The reading on the ditch varied between 2 and 5 gamma. Mr. Clark's survey also revealed two anomalies, A and B, on Fig. 2, of 8 and 2 gamma respectively. These correspond fairly closely with two of the cremation pits. One further feature of the site was a slight external bank on the north and east.

Excavation Method

Once the vegetation had been cleared a contour survey of the site was completed (Fig. 2), which confirmed the first visual impression of two peaks with an intervening depression. Baulks were laid out to record the sections of the main long axis through the site and any relationships that might exist there between

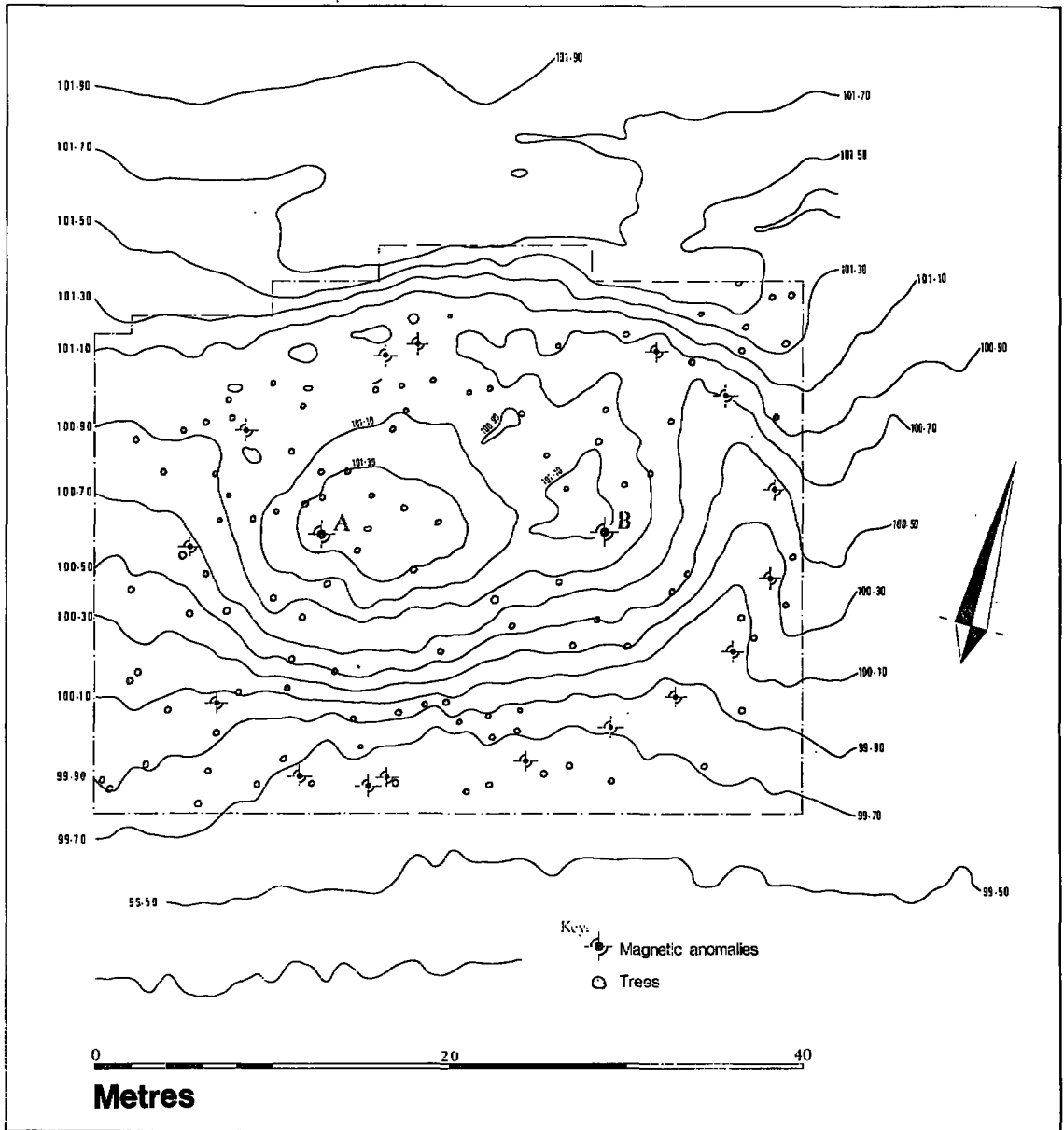
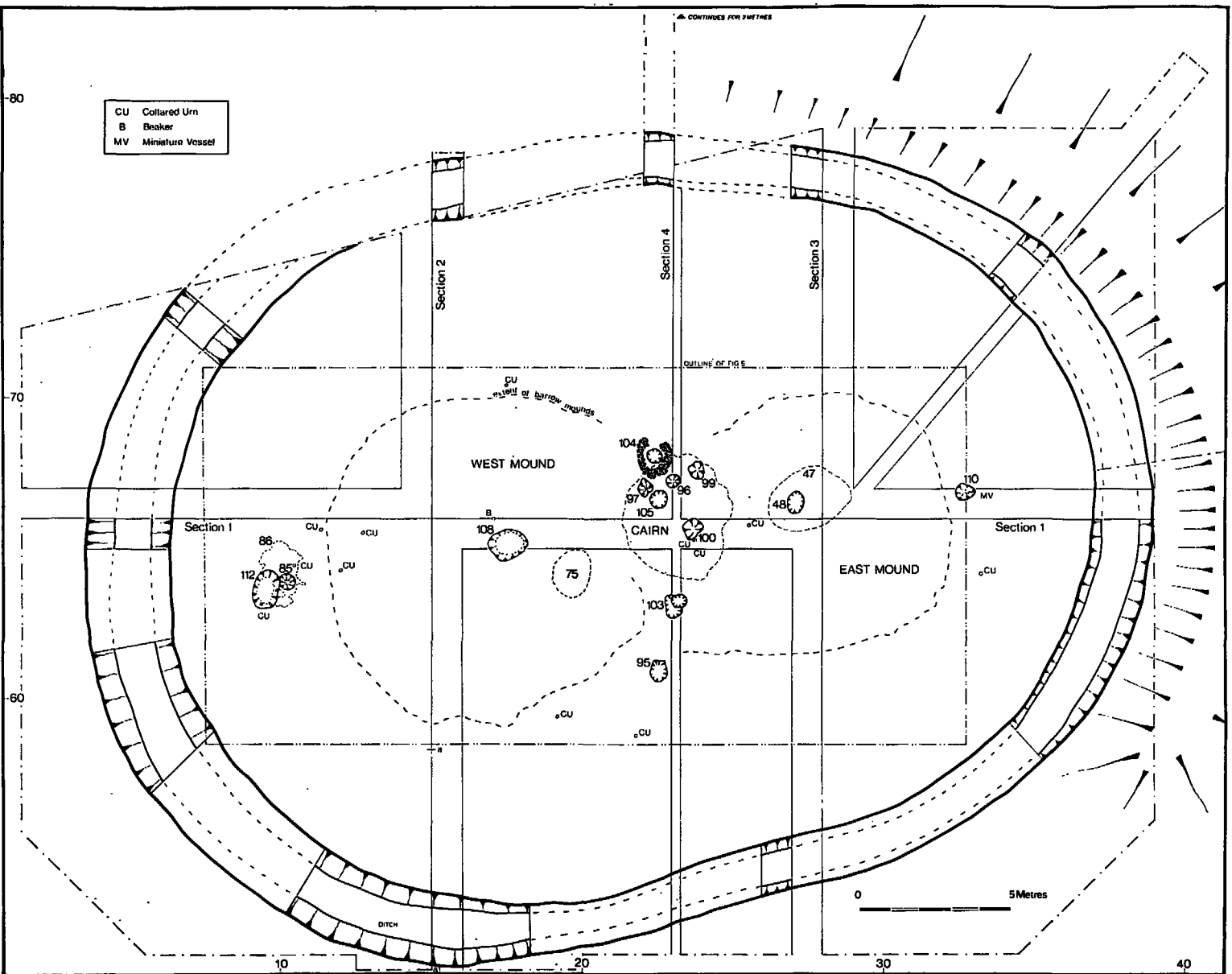


Fig. 2. Micheldever Wood barrow R4: Contour plan of site, showing the positions of geophysical anomalies and tree stumps.

the mounds and the berm, the short axes of the two mounds and the intervening flint-filled depression, and the section through the mound, berm, ditch and bank at the north-east. The positioning of these baulks (Fig. 3),

divided the site into eight trenches. Excavation started in the south-west trench, No. 1. Twelve trenches, 1m wide, were dug across the ditch, and three of these were extended so that a third of the ditch was excavated. The entire



area bounded by the ditch was excavated to natural. All pottery and flint artifacts, including cores, were recorded three-dimensionally, and the debris from the post-barrow flint industry was recorded in 1m squares. Some flint artifacts were added to the list of recorded ones during analysis and do not necessarily have co-ordinates.

DESCRIPTION

The stratigraphic sequence for the site can be divided into eleven phases, which have been amalgamated into five main ones for this report. The phases, which will be dealt with chronologically, are:

- Phase 1: Pre-barrow soils and features older than the barrow.
- Phase 2: Primary features of barrow, barrow mounds, cairn, ditch and primary silting.
- Phase 3: Secondary filling of ditch and primary tumble from barrow.
- Phase 4: Post-barrow flint industry.
- Phase 5: Post-flint industry to modern activities.

PHASE 1

At an unknown date a terrace had been levelled across the site extending from site northing 68 to the ditch on the north side (plan Fig. 2, section Fig. 6). This had been done by cutting into the sloping surface of the clay-with-flints and the chalk, this cut being deepest at the north side. The deposition or formation of the pre-barrow soil was subsequent to this since the soil, layers 38, 43, 76, 101, showed no break in profile. The pre-barrow soil itself was a fairly uniform deposit of orange-brown clay loam with small scattered broken flint and chalk fragments, most apparent under the east mound. It contained scattered charcoal including beech, oak and elm, and nutlets of Black Bindweed (*Polygonum convolvulus*). The 196 flint artifacts from it included 4 tools, a retouched blade possibly Mesolithic, 2 scrapers possibly Neolithic, and a borer (Fig. 16, no. 1). Of 15 sherds found in it, 2 from under the west

mound may be Bell Beaker and 13 (including 2 sherds under the west mound) are of collared urn pottery attributable to phase 2. The majority of these artifacts (7 cores, 76 flakes, 70 flint waste and 8 sherds) were in layer 43 on the berm.

Pit 104

Of 13 graves, pits and shallow scoops dug into the pre-barrow soil (Fig. 3), Pit 104 is the only one for which a date substantially older than the barrow might be argued. The remainder can more probably be attributed to the period in which the barrows were constructed, phase 2. Pit 104 (Fig. 4) was circular with sloping sides and irregular bottom, 0.6–0.8m in diameter, 45cm deep, filled with brown loam with charcoal round the edge, and surrounded on the surface by flint nodules in a horseshoe shape, the tops of which protruded from the pre-barrow surface. A radiocarbon date of 6900 ± 170 BP (HAR-1043) was obtained from oak (*Quercus*) charcoal from the pit (see discussion, p. 37). It contained no artifacts, but was sealed by the flint cairn.

PHASE 2: THE BARROW AND DITCH

The north-south sections (Fig. 6, sections 2–4) show a break in the slope of the surface of the pre-barrow soil beneath the mounds (see also contour survey, Fig. 2), which suggests that prior to the construction of the mounds, the pre-existing terrace was deliberately accentuated by further removal of soil. On the north side close to the ditch almost all the old soil had been removed, leaving only a thin layer (34) of orange-brown loam mixed with chalk lumps, overlying the chalk bedrock.

Pits 85, 100, 110, 112 and feature 86, although outside the areas covered by the west and east mounds, were aligned with the primary burial pits, F108 and F48, beneath the mounds, and so may be considered part of the primary layout of the monument. These features, together with the mounds, are therefore described first, in order from west to east, followed by the flint cairn and its associated features and then by the outlying features, pits 95 and 103.

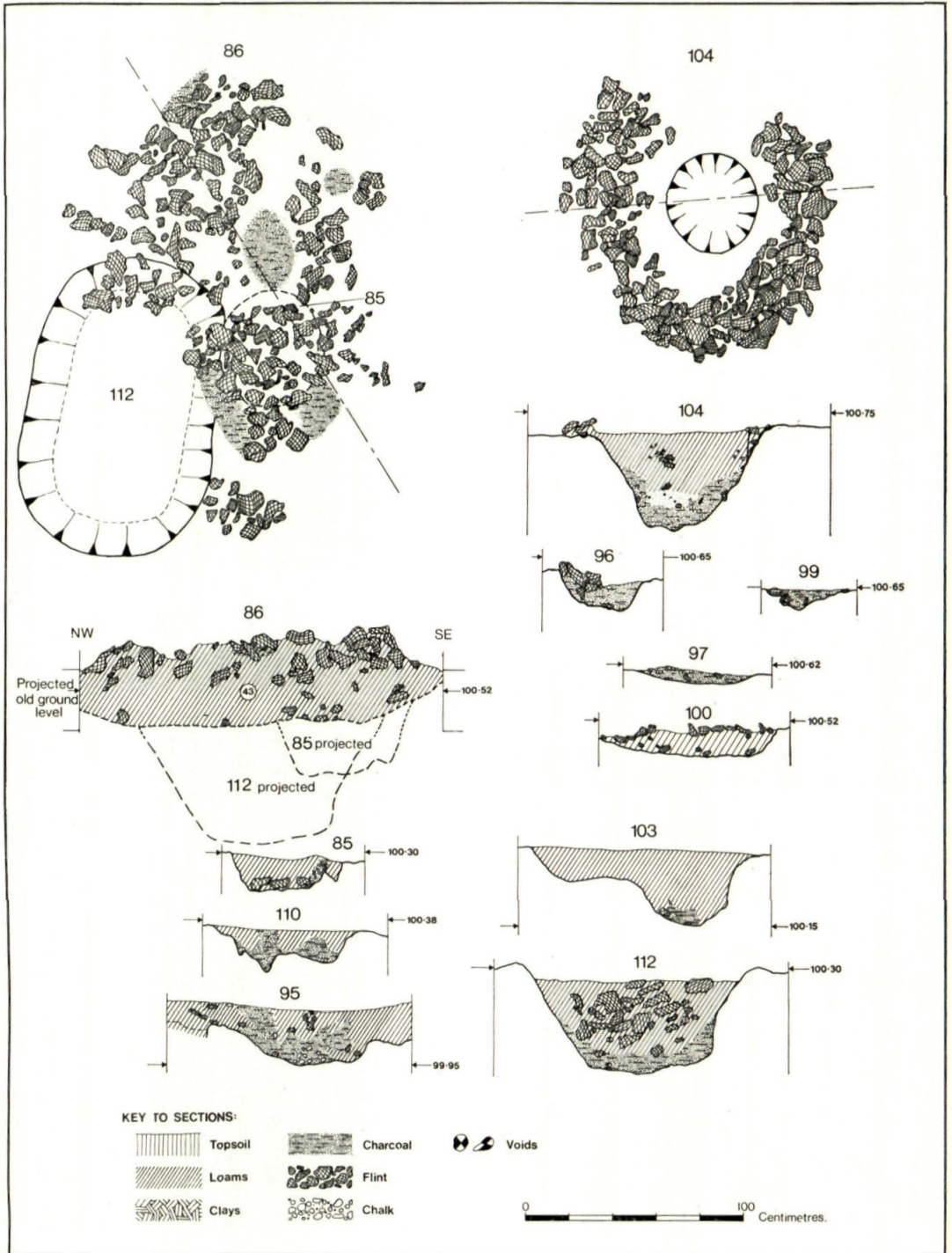


Fig. 4. Micheldever Wood barrow R4: Detail plans and sections of pre-barrow features and of features 86 and 104.

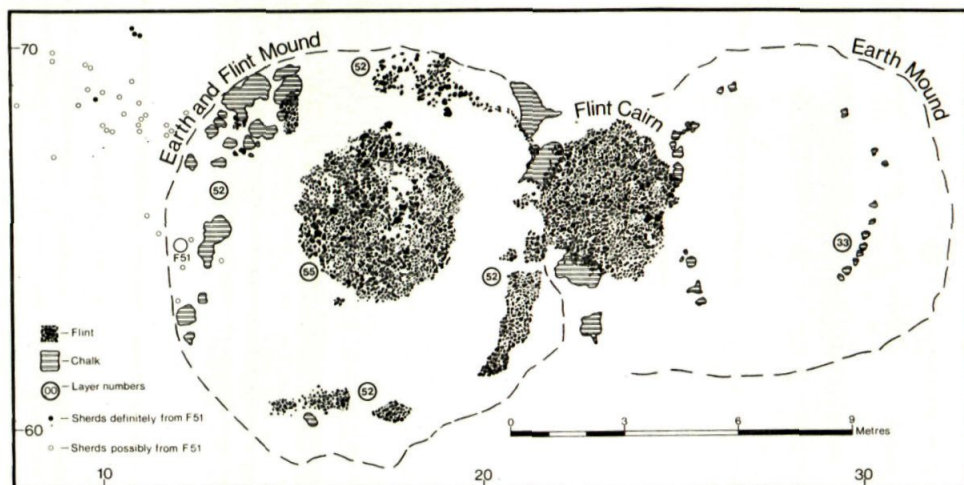


Fig. 5. Micheldever Wood barrow R4: Plan showing the barrow mounds.

Pit 112. This was 8 m west of pit 108, the primary pit beneath the west mound. It was oval with sloping sides and flat bottom, 1.2 by 0.8 m by 50 cm deep, filled with dark grey loam with flint nodules and oak charcoal, and contained a collared urn sherd, a fabricator (Fig. 16, no. 2) and 4 flint flakes.

Pit 85. This was immediately east of F112, circular with a flat bottom and sloping sides, 50 cm in diameter, 15 cm deep, filled with black soil with patches of orange clay and large flints, and contained one indeterminate potsherd. It was sealed by the overlying spread of flint nodules, F86 (Fig. 4).

F86. This spread of flint nodules interspersed with patches of charcoal overlay the old soil and sealed pit 85. It was 2.2 m by 1.5 m by 20–40 cm thick. Among the nodules were 10 non-specific cores, 17 flakes and chips, an end scraper and a roughout, and 4 collared urn sherds.

The West Mound

This was circular, 10–10.5 m in diameter, surviving to a height of 0.8 m above the surface of the old soil. It covered two features, F75 and the central burial pit, F108.

F108 was oval with sloping sides, 1.3 by 1 m

and 50–60 cm deep. Although big enough to have contained an unburnt body, the only remains were a neat, circular pile of ashes some 10 cm high and 30 cm across. Clearly the remains had been deposited in a perishable container. A cat humerus (unfused proximally) with a distal width of 17.6 mm was found in the pit. It is impossible to say whether this is a wild or domesticated animal (Coy, archive). The condition of the human bone was very similar to that of the bone in Pit 105, and most of the bones of the body were represented (Table 4). This individual, who was probably male, was rather older than the one cremated and buried in Pit 105. Slight signs of osteo-arthritis were visible at various joints and articulations (Bayley, archive).

F75 was a dispersed scatter, 1.6 × 1.2 m, of flint artifacts on the old ground surface, comprising 3 non-specific cores, 3 blades, 5 flakes and 8 chips.

The mound had a circular central core, 4–4.4 m diameter, of brown clay-loam with scattered medium-sized flint nodules (10–20 cm long), which was capped by a deposit of similar-sized nodules (layer 55). The layer contained 61 flint artifacts including 20 cores and 13 flakes, and 1 collared urn sherd. Charcoal from the layer has been dated to 3670 ± 80 BP

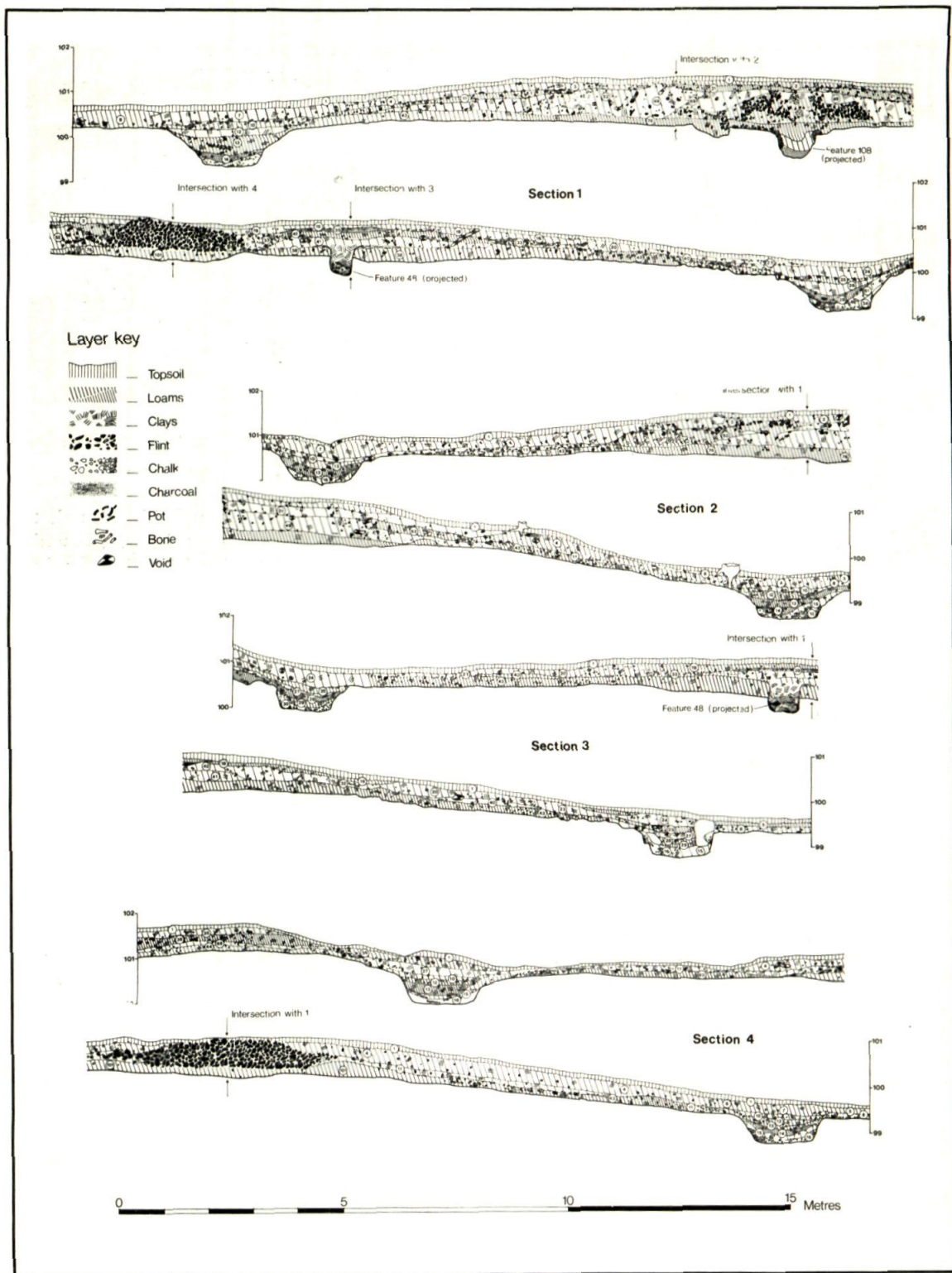


Fig. 6. Micheldever Wood barrow R4: The four principal sections.



Fig. 7. Micheldever Wood barrow R4: The west mound during excavation, in the foreground the remains of the outer flint capping, in the middle distance the flint capping of the central core. Scales 2 m and 50 cm. Photo G. H. Smith.

(HAR-1042). The core was surrounded by layers (49 and 62) of orange-brown clay-loam with a few scattered flints, and these were enveloped by dark-brown friable loam containing small chalk lumps, areas of compacted chalk rubble and concentrations of flint nodules, (layer 52). The chalk lumps occurred in concentrations on the east and west perimeters of the mound and are probably, as with the east mound, a revetment. The groups of flint nodules were present all around the lower portion of the mound, except on the west side. They were either the remains of a flint capping or slip from such a capping. The angle of slope at which they lay and their seemingly undisturbed disposition suggest that they were part of an original capping. Layer 49 contained 258 flint artifacts, including a scraper (Fig. 16, no. 3) and a borer, 6 cores, 8 blades and 97 flakes, and 51 sherds of which 29 were Neolithic, including Fig. 15, nos. 4, 7, Mortlake ware, and an everted rim (no. 9); 4 Beaker

sherds and 12 collared urn sherds. Layer 62 contained only 15 flint artifacts and 5 sherds, 2 probably Neolithic, 1 probably collared urn. In contrast, layer 52 contained 213 flint artifacts including 2 choppers (no. 5) and 10 cores, 3 blades and 72 flakes, and 32 sherds of which 6 are probably Neolithic (no. 10), 3 probably Beaker (no. 12), and 8 may be collared urn.

The greater part of the mound was covered by orange-brown clay-loam with scattered nodules (layer 21) and a dark-brown friable loam with scattered chalk lumps and flint nodules (layer 22). The nodules probably derived from the original capping. The outer layers, 21 and 52, were truncated, probably by the subsequent flint working activities.

Layer 21 contained 23 flint artifacts, including 6 cores, 1 blade, and 7 flakes, and 3 sherds, 1 Neolithic (no. 6) and 2 Beaker sherds (no. 11); layer 22 contained 101 flint artifacts including 2 cores, 1 blade, and 53

flakes, and 1 Beaker sherd (no. 16). Fragments of cattle bone were found in layers 55 and 52.

Feature 51 was a possible secondary cremation in layer 22 on the top of the western side of the mound. Pieces of a smashed collared urn (Fig. 14, no. 3) were recovered from a concentrated area of 1.5 m², and also from up to 7 m away. One fragment of human bone was directly associated with the concentration, and two calcined fragments of human tibia in layer 49 of the western mound may be associated (Bayley, archive). There was no evidence for a pit, and it seems likely that this was the remains of a secondary cremation deposited in a shallow hole in the top of the mound which had been damaged and dispersed by later activities, particularly the flint working of Phase 4.

Pit 100

This lay between the two mounds in line with their primary burial pits and with pits 112 and 110, and was sealed by the flint cairn. It was a circular scoop 0.8 m in diameter and 25 cm deep, filled with closely packed flint nodules in a brown loam matrix and contained 2 flint flakes and a chip. Its location suggests that it may have been part of the original layout of the site, its fill may indicate that it was open when construction of the cairn began.

The East Mound

This was not absolutely circular, being 8 m in diameter north to south, 7 m east to west, its west side apparently having been cut away to permit construction of the flint cairn. It survived to a maximum of 0.6 m above the buried soil. This mound covered two features, a burnt area, layer 47, and the primary burial pit, F48. A single collared urn sherd was found in the old soil (layer 38) beneath it.

Burnt area, layer 47. This was oval, 3 m by 2 m, burnt to a depth of 4 cm below the surface of the pre-barrow soil. Carbonised material suggests that straw containing cereal crop weeds was burnt, perhaps as kindling—a single rachis internode of barley was recovered

(Murphy, archive), and that oak, blackthorn, hawthorn-type and hazel were also burnt (Keepax, archive), perhaps as the main constituent of the fire. One flake and nine sherds from two collared urns, including no. 15, were found; sherds from these collared urns were found on the berm (layer 43), in the east mound (layers 41 and 33), beneath the cairn (layer 101) and in tumble from the cairn ((layer 32). This feature may be interpreted as a bonfire burnt during clearance of the site before the mound was raised, alternatively it may have been the site of the pyre, although no burnt bone was found in it. A sample of the burnt soil was submitted via the Ancient Monuments Laboratory to Harwell for radiocarbon dating, but unfortunately it failed to produce sufficient gas on combustion for a determination.

The Primary burial. This was in an oval pit, F48, 64 cm by 42 cm, dug through the burnt area, layer 47, and the old soil, layer 38, to a depth of 55 cm. The cremation burial was contained in an inverted collared urn (Fig. 13, no. 1) which had collapsed in fragments. A small bronze awl (Fig. 13, no. 3) was amongst the 800 grams of fairly well-calcined bones within the urn. The bones, the largest fragments of which were only 20–30 mm long and most far smaller, were the remains of an adult (Bayley, archive). The contents of the pit included 2 flint flakes and charcoal of oak and blackthorn.

The mound. Fig. 6 shows that it had a core of dark-brown clay-loam with a few scattered flints and some darker patches (layer 41), an almost stone-free layer of orange-brown clay-loam (layer 42) and a layer of orange-brown clay-loam with many small broken flints (layer 39). The dark patches in layer 41 could be interpreted as the remains of turves. Layer 41 contained 88 flint artifacts, including 1 core, 5 blades and 45 flakes, and 15 sherds, 1 possibly Neolithic, 14 probably of Collared Urn, including sherds of nos. 15 and 24. Layer 42 contained 120 flints, including 2 scrapers, 3 blades, 3 cores and 62 flakes; layer 39 contained 224 flints including 4 scrapers, a borer, 3 blades, 4 cores and 108 flakes. The scrapers



Fig. 8. Micheldever Wood barrow R4: The flint cairn during excavation. Scale 50 cm.
Photo. G. H. Smith.

are white patinated with fine retouch and may be Neolithic, but much of the material from layer 39 may be of phase 4 date. Neither 42 nor 39 contained any sherds.

Surrounding the clay-loam core were the remains of a ring of chalk blocks (layer 33) which formed an irregular circle some 5.5 m–6 m in diameter. This chalky material, probably derived from the ditch, was almost certainly used to revet the core. Layer 33 yielded 38 flints, including 1 scraper, 1 core and 30 flakes, and 7 sherds, 1 possibly Neolithic, 3 of collared urn (including 1 of no. 15) and an intrusive scrap of samian.

The flint cairn (Fig. 8)

This stood between the two mounds. It covered an eccentrically placed primary burial pit, F105, and five other pits, F96, 97, 99, 100, 104, of which F100 and F104 have already been described.

The primary burial: This was in a circular pit, F105, 50 cm in diameter and at least 40 cm deep, and filled with material derived from the pre-barrow soil. This pit was under the north-west part of the cairn, 0.75 m north of a line running through the two primary burial pits under the mounds. The cremated bones were covered by an inverted collared urn (Fig.

13, no. 2) and were accompanied by a small bronze awl (Fig. 13, no. 4). The well-calined bones were in comparatively large pieces, some being up to 100 mm long. As Table 4 shows almost every bone in the body was represented. The remains were those of a youngish adult, almost certainly female. No teeth had been lost ante-mortem and no abscesses were noted. Two vertebrae had small irregular pits in their articular surfaces due to Schmorl's nodes, a normal but genetically-linked degeneration leading to herniation of the intervertebral disc material (Bayley, archive).

Other features pre-dating the cairn. Pits 96, 97 and 99 lay under the north side of the cairn. They were roughly circular, ranging in diameter from about 50 to 65 cm and dug into the old soil to depths of 25 cm, 50 cm and 10 cm respectively. All three were filled with black loam, apparently burnt soil, containing some flint and carbonized material, among which oak was identified from F97 and F99. F96 contained 53 flints, including 2 cores and 16 flakes, also burnt flints. F97 contained 1 flint flake and a chip. The old soil itself, layer 101, yielded 1 core and three flint flakes and 2 small sherds of collared urn.

The cairn. This was oval, 2.7 m in diameter from north to south, 2.3 m from east to west

and 0.6 m high. It was composed of tightly packed flint nodules generally about 10 cm long and its flattened top sloped from north-east to south-west. In the body of the cairn were 289 flint artifacts, including 48 cores, 2 blades, 105 flakes, a waisted implement and a broken polished axe (Fig. 17, nos. 10, 11). The bones include a burnt cow molar and nine cow-sized fragments (Coy, archive).

Pit 110

This small circular pit, 60 cm in diameter and 15 cm deep, with irregular sides and bottom, lay 0.75 m east of the east mound, on a line running through F112, F108, F100 and F48. It was filled with brown loam with chalk fragments and silt with charcoal including oak (*Quercus* sp) and contained a small cord-decorated cup in collared urn fabric (Fig. 15, no. 25). As this feature lay on the axis of the barrow and was the only one, apart from the two inurned cremations, to contain a complete vessel it seems reasonable to suggest that it may have been connected with the funerary ritual.

Other features in the old soil (Fig. 3)

Two pits, F95 and 103, were found in the area south of the cairn. F95 was oval, with irregular sides and rounded bottom, 25 cm deep. F103 was irregular, 38 cm deep, possibly with 2 phases. Both had loamy silty filling with charcoal including cf hawthorn and a hazel nut in F95 and possibly oak in F103. F95 contained 1 flint chip and some unidentified long bone fragments, F103 a flint flake.

The ditch

This was roughly oval or egg-shaped in plan (Fig. 3). It had apparently been laid out by setting out a nearly semicircular arc from a centre corresponding to a point on the south side of each of the primary burial pits, F108 and F48. The radii of these two arcs were proportionate to the diameters of the respective mounds, the western being about 11.4 m, the eastern about 10.2 m, so that the berm left round each mound was similar in width—about 5 m on the longitudinal axis of the

barrow. The west arc was slightly more than a semicircle, the east slightly less; they were joined by relatively straight lengths of ditch converging eastwards.

A total length of 28 m, 32%, was excavated. The sides, as excavated, sloped at an angle of 40° from the flat bottom, but had weathered back from a more vertical angle, perhaps in the order of 55°–60°. The original volume of the ditch is estimated as being 100 m³±10%, the average depth was 0.71 m, average top width 1.78 m and average basal width 1.22 m.

The ditch fill was fairly uniform throughout the circuit and can be related to the four main phases. A typical section is illustrated in Fig. 9, and others can be seen in the general sections of the site in Fig. 6.

The primary silt, layer 30 (16), was reddish-yellow/strong brown (7.5YR 5.5/6), very stony (small chalk), fine, sub-angular, blocky, very friable, *silty clay*.

The secondary silting, layers 29, 28 (14) (phase 3) was strong brown (7.5YR 5/6), medium, sub-angular, blocky, friable, very slightly (29) to slightly (28) stony (small flints), *silty clay-loam*; becoming yellowish brown (10YR 5/5) above, layer 27 (13, plus associated knapping clusters of phase 4).

The upper filling of the ditch (phase 5), layers 25 (12) and 24 (7, 10), consisted of brown/strong brown (7.5YR 5/5) to dark brown (10YR 4/3), friable *silt loams*, similar in texture, and very slightly stony (small flints); stoneless at the top of layer 25.

The chalky primary silts that relate to phase 2 were carefully examined to determine any differential weathering patterns that might occur. The volume of primary silt varied by up to a factor of 5 within one metre's length. It was greatest in the south-west corner (Shirley, archive), where the ditch is wider, deeper and of a greater radius than elsewhere on the site.

The few finds from the primary silt were all flint and included two Bronze Age scrapers

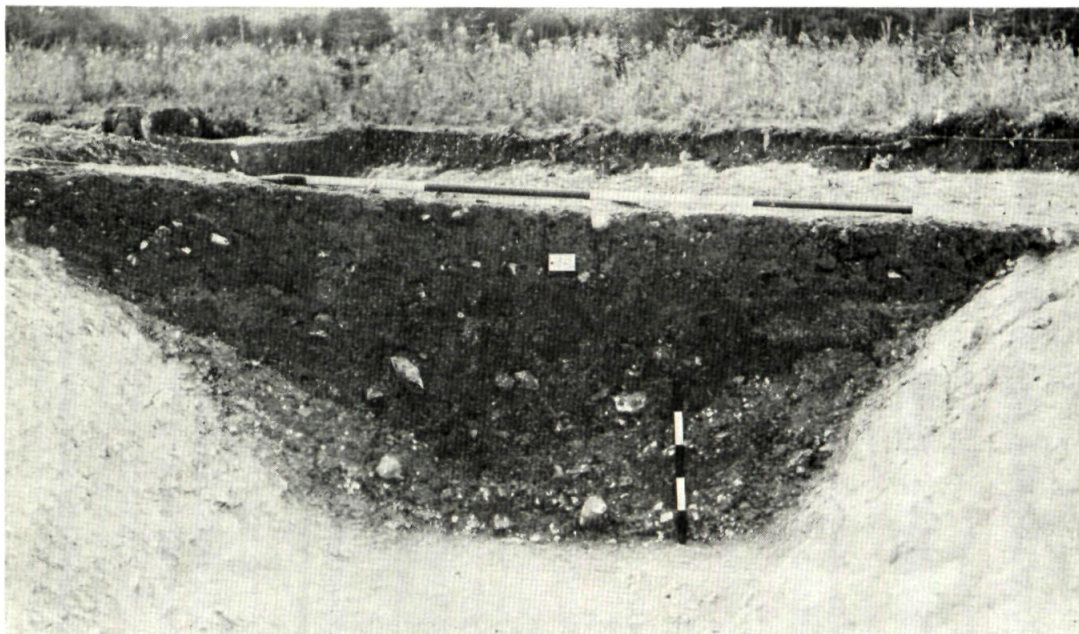


Fig. 9. Micheldever Wood barrow R4: Typical section across the ditch south-east sector. Scales 2 m and 50 cm. Photo G. H. Smith.

(Fig. 16, no. 12). Finds from the secondary and upper filling of the ditch are described in the sections which follow this.

The Bank

This survived on the north and east sides of the site, but ploughing in Phase 5 had removed all traces of it from the south side. Whether it ever extended round the west is not clear. It was 3.5 m wide and extant to a height of 6 cm above the slope of the modern topsoil (Fig. 6). Two trenches were excavated across its line and revealed 0.25 cm depth of soil above natural. Outline field descriptions of the soil horizons were made, and a column of samples taken through the profile. The samples (soil analysis by P. F. Fisher) were subjected to ignition tests (Goodyear 1971, 207) under reducing and oxidising conditions in order to estimate the humic and iron contents respectively, at least one of which should show a definite concentration if an undisturbed buried soil had existed. No such

concentration was observed. (Fisher, archive). The profile through the bank is that of a fairly typical brown earth and it is possible that the bank was constructed entirely of topsoil, indistinguishable from the existing soil.

The few finds from the bank include 1 core, 1 scraper, 11 flint flakes, 4 flint chips and 2 pieces of Roman pottery.

PHASE 3: TUMBLE FROM BARROW AND SECONDARY SILTING IN THE DITCH

The period represented by this phase is one when the barrow was no longer maintained. The earthen composition of the east and west mounds did not permit positive identification of soil slip. However, tumble from the flint cairn was recognisable as a collection of medium-sized flint nodules in dark-brown loam (layer 32). It spread for some 2 m to the south and 1.5 m to the north-west of the cairn but was constrained on the east and west sides by the two mounds.

▪	Bucket Urn sherds in phase 4
✱	Flint Flakes
⬢	Flint Nodules
■	Ditch Features

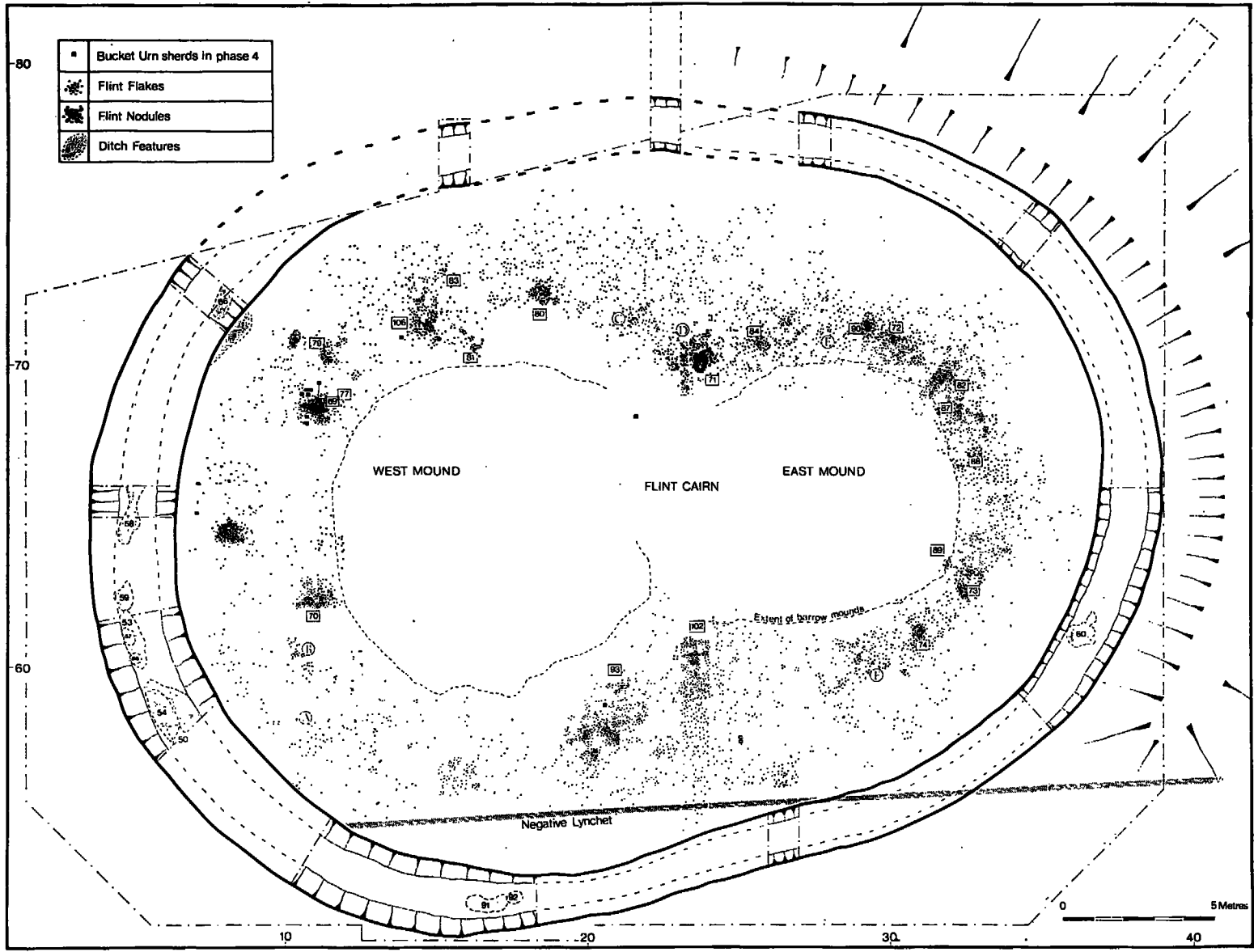


Fig. 10. Micheldrever Wood barrow R4: Plan showing the distribution of the Middle Bronze Age (phase 4) flint industry and the line of the negative lynchet (phase 5).

Some two-thirds of the flint artifacts associated with Phase 3 were discovered in the ditch. The majority were flakes or chips, and only 11 cores and 1 scraper were present. A further scraper and 6 cores were found in the tumble from the cairn. Thirteen collared urn sherds were found in the ditch, and a total of 6 diverse sherds in the cairn tumble.

A charcoal sample from layer 28 in the north-east sector of the ditch provided a radiocarbon date of 3370 ± 90 BP (HAR-1044).

PHASE 4: THE POST-BARROW FLINT INDUSTRY (Fig. 10)

About the middle of the second millennium BC, presumably once the funereal and religious aspects of the monument were no longer significant, the site was used as a flint working centre. The flints in the cairn and the west mound provided a ready source of raw material.

Altogether 10,539 pieces of worked flint were recovered during the excavation of this phase, mainly from the berm and ditch. The industrial levels were clearly identified as occurring a few centimetres above the pre-barrow soils in the berm and about half-way up the ditch (layer 13). The waste was not present under the mounds, but because the mounds were disturbed it is impossible to say whether flint working occurred on the mounds themselves. Probably it did and a certain amount of the flint from the upper part of the mounds may relate to this phase.

The 1974 excavation did not show whether the industry extended beyond the ditch. In 1977 a series of 18 1m squares, randomly chosen from an area up to 10 m away from the ditch and representing $2\frac{1}{2}\%$ of that area, were excavated. The material recovered, 73 pieces of worked flint, was compared, using *t* and *F* tests, with that derived from 13 randomly chosen 1m squares from the industrial levels in the berm. At the 5% level there is a significant probability that the sample means are drawn from different populations, and at the 1% level that the sample variances are

drawn from different populations. This implies that the flint industry did not extend beyond the ditch.

The 10,539 pieces of flint comprised 4,973 complete flakes, 5,263 broken flakes and chips, 48 tools and 255 cores. During the excavation clusters of flakes were identified and recorded as separate features; 21 such clusters were on the berm and 6 in the ditch. The analysis of the flakes recorded in 1m squares suggested that the absolute limits of some clusters were not identified during excavation; where this is the case the relevant data from the 1m squares has been amalgamated with the original feature. There were a further 6 groups of 1m squares which may have been knapping clusters, but not recognised as such during the excavation. These are lettered A to F on Fig. 10. This gives a total of 33 knapping clusters on the berm and in the ditch, one is shown in Fig. 11. The 26 berm clusters were scattered all round the berm, but there was a greater density of debitage on the north side of the barrow. The small percentage of the ditch that was excavated does not allow worthwhile discussion on the distribution of the industry in the ditch. The totals within clusters of complete flakes, waste material and general workshop rubbish vary from 9 in clusters 81, 83 and 90, to 1,402 in cluster 69. The area covered by a cluster also varies from 0.06 m², in cluster 81, to the large cluster 69, over 6 m².

Apart from knapping clusters only 3 features were recorded in this phase. Feature 56 was a circular post hole in the ditch, 0.3 m deep, 0.5 m top diameter and 0.1 m basal diameter, filled with friable dark-brown loam overlying a dark-brown loam containing small flint. Also in the ditch was an ovoid scoop, feature 57, 0.53 m long, 0.4 m wide and 6 cm deep, filled with a dark loam and flint nodules, amongst which were 3 cores. There was an approximately circular hearth, 0.75 m diameter, in the berm. This feature, No. 71, was also a knapping cluster.

The 176 sherds found in this phase (162 on the berm, 14 in the ditch) come from a variety

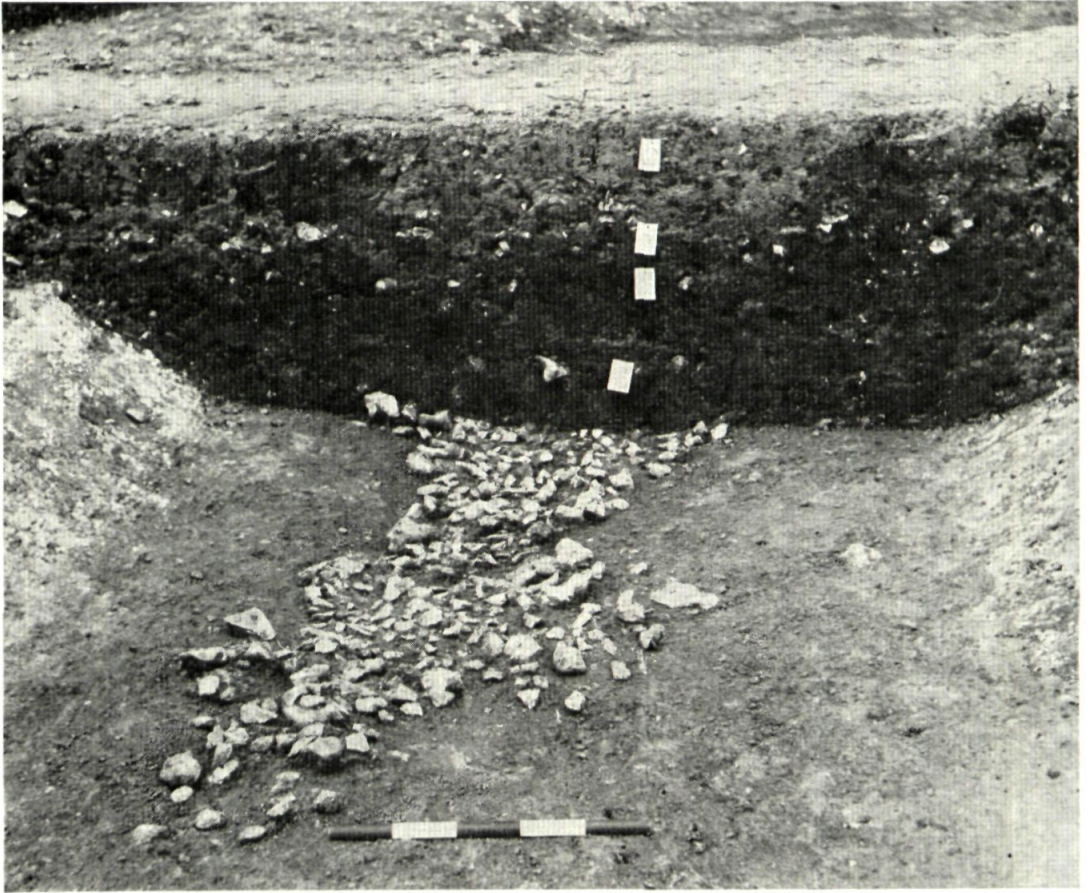


Fig. 11. Micheldever Wood barrow R4: Knapping cluster, feature 58 (phase 4) in layer 13 of the ditch. Scale 50 cm. Photo. G. H. Smith.

of vessels. Some sherds are residual, including the rim of a Neolithic bowl (Fig. 15, no. 4), and perhaps as many as 40 plain sherds from the smashed collared urn (Fig. 14, no. 3) of the secondary cremation. Sherds from two separate vessels of bucket urn type were recovered from knapping clusters. There were 14 Iron Age and Roman sherds, including 2 of samian, concentrated on the south side of the site in an area disturbed by later farming.

Oak and hawthorn charcoal were found associated with Features 53 and 54 in the ditch, and an intrusive fragment of modern conifer with Feature 69. A charcoal sample from above the flint industry in layer 13 in

the south-west part of the ditch produced a radiocarbon date of 3100 ± 90 BP (HAR-1041).

PHASE 5: POST-FLINT INDUSTRY TO MODERN ACTIVITIES

Phase 5 covers the long period from the end of the flint industry to the present day. There were only three features of antiquity—a lynchet and two hearths in the ditch.

The Lynchet

A negative lynchet runs east-west along the south side of the barrow, Fig. 10. It was 2 m wide and up to 10 cm deep (Fig. 12). It was not a visible part of the earthwork and only

became clear during excavation when it was seen to cut through the Phase 4 flint working debris. The ploughing that formed the lynchet had two effects on the site: the destruction of the bank on the south side (if it existed there) and its truncation and partial slipping into the ditch on the east side; the dispersal of finds from Phases 4 and 5 on the south side of the site in the area of the ditch.

The Hearths

Both hearths lay in the upper fill of the ditch north of the lynchet. Feature 50 was an ovoid scoop, 50 cm × 75 cm and 15 cm deep, filled with burnt flints and dark loam in the

south-west section of the ditch. The only associated find was an unidentifiable pottery fragment. Feature 60, in the east part of the ditch, was an oval spread, 1 × 0.7 m, of burnt flints, many of which had totally fragmented as a result of being burnt *in situ*. A small sherd of Roman grey ware was discovered in this feature.

The finds from Phase 5 represent 20% of all the flint and some 25% of all the pottery recovered from the excavation. It has been demonstrated that artifacts were incorporated in the make-up of the mounds which, in turn, had been damaged during Phase 4. In places

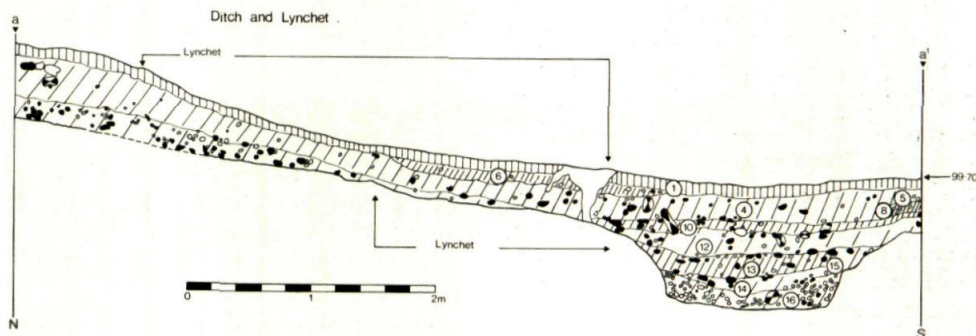


Fig. 12. Micheldever Wood barrow R4: Section across the phase 5 lynchet on the south side of the barrow.

there was less than 10 cm of stratification for Phase 5, and all the upper part of the site was badly damaged by tree and animal (definitely hare and rabbit) disturbances. It seems reasonable to assume that the finds in Phase 5 were largely residual, being derived from Phases 2 and 4.

Some Iron Age and Romano-British activities of uncertain nature were clearly indicated by the presence of pot sherds scattered all around the upper part of the barrow and ditch. Apart from one hearth, Feature 60, no features could be directly associated with these sherds.

THE FINDS

By P. J. Fasham, J. M. Ross and V. W. Denham

BRONZE (Fig. 13)

3. Awl, 27 mm long, with rectangular cross section 3 by 2 mm, tapers at both ends, which are broken. Presumably cast. Milliprobe analysis (X-Ray fluorescence) of the corroded surface shows that it is made of a copper-tin alloy (Bayley, archive). E. Mound, pit 48, from primary burial with inverted collared urn, Fig. 13, no. 1.
4. Awl, 26 mm long, made of rolled bronze sheet, joint clearly visible, no evidence of soldering. Milliprobe analysis gave strong

signals for copper and tin and a weak signal for lead (Bayley archive). Cairn, pit 105, from primary burial with inverted collared urn, Fig. 13, no. 2.

POTTERY

The pottery associated with the barrow belonged to collared urns and that with the flint working activity to Middle Bronze Age bucket urns. Small amounts of Neolithic, Bell Beaker, Iron Age and Romano-British pottery were also found.

Fabrics by Dr. D. F. Williams, detailed report in archive.

Six fabric groups were distinguished:

Fabric 1. Hard, heavily grog tempered, with occasional quartz and flint, brown to reddish brown. Beaker sherds are relatively oxidized with fine grog tempering, collared urn sherds coarser with large grog tempering and brown to yellow-brown in colour. Four pots and 200 sherds.

Fabric 2. Medium hard, light buff to black, abundant inclusions of crushed burnt flint. Neolithic and Bucket urn sherds can be distinguished on fabric, temper and firing, 100+ sherds.

Fabric 3. Medium hard, buff to black, numerous inclusions of small fragments of burnt flint. 30 sherds.

Fabric 4. Medium hard sandy, dark brown to grey, numerous inclusions of sub-angular quartz grains 0.4–0.6 mm, sparse inclusions of flint. 63 sherds.

Fabric 5. Fairly hard, fine sandy, dark brown to grey, numerous inclusions of subangular quartz grains, 0.1–0.2 mm. 5 sherds.

Fabric 6. Medium hard, coarse sandy, reddish buff to black, frequent subangular quartz grains 0.4–0.6 mm. 25 sherds.

Neolithic (Fig. 15, nos. 4–9, 10)

There are 39 sherds likely to be Neolithic, all in flint tempered ware (fabric 2). Nos. 4 and 5 may be reasonably early within the Mortlake style of Peterborough ware and 6,

7 and 10, and possibly 8, may belong to the same series. No. 9 is possibly representative of the somewhat earlier Windmill Hill series (Early–Middle Neolithic). A radiocarbon age of around 4400–4500 BP might be guessed for the Late Neolithic site from which this fragmentary material derives.

Bell Beaker (Fig. 15, nos. 11–14, 16, 22)

There are about 19 Bell Beaker sherds, mostly in grog-tempered fabric 2. Most are featureless weathered fragments and not much can be said about the sherds illustrated, except that they probably derive from more than one pot, which is in favour of their deriving from a settlement site, and that the balance of probability favours their assignment to the Middle Bell Beaker phase for which radiocarbon dates of the order of 3650–4000 BP are available.

Collared Urn (Figs. 13, nos. 1, 2; 14, no. 3; 15, nos. 15, 18–21, 23–6)

There are three more or less complete urns, a cup and about 170 sherds, of which about 50 may belong to no. 3, and among which at least three or four more collared urns are represented. Nos. 3 and 26 are so similar as to suggest that they were both originally associated with the disturbed secondary burial in the west mound. All the sherds are in typical coarsely grog-tempered collared urn fabric. The poorly articulated profiles of nos. 1 and 2 and the cordon-like collars of nos. 3 and 26, as well as the use of pointed-tooth comb decoration on no. 2 and of lattice patterns and cord-impressed arcs on nos. 3, 15, 24 and 26, indicate that this material is to be attributed to Longworth's Secondary Series (Longworth 1970). Nos. 3 and 26 should be close to the end of that series. The cup, no. 25, is interesting as showing that there was more variety of form in the domestic pottery of this series than the rather stereotyped selection of collared urns chosen to accompany burials suggests. These pots probably belong to the later part of the Early Bronze Age, for which a radiocarbon age of about 3000–3250 BP can be suggested, although the dating of the series is made difficult by almost all the

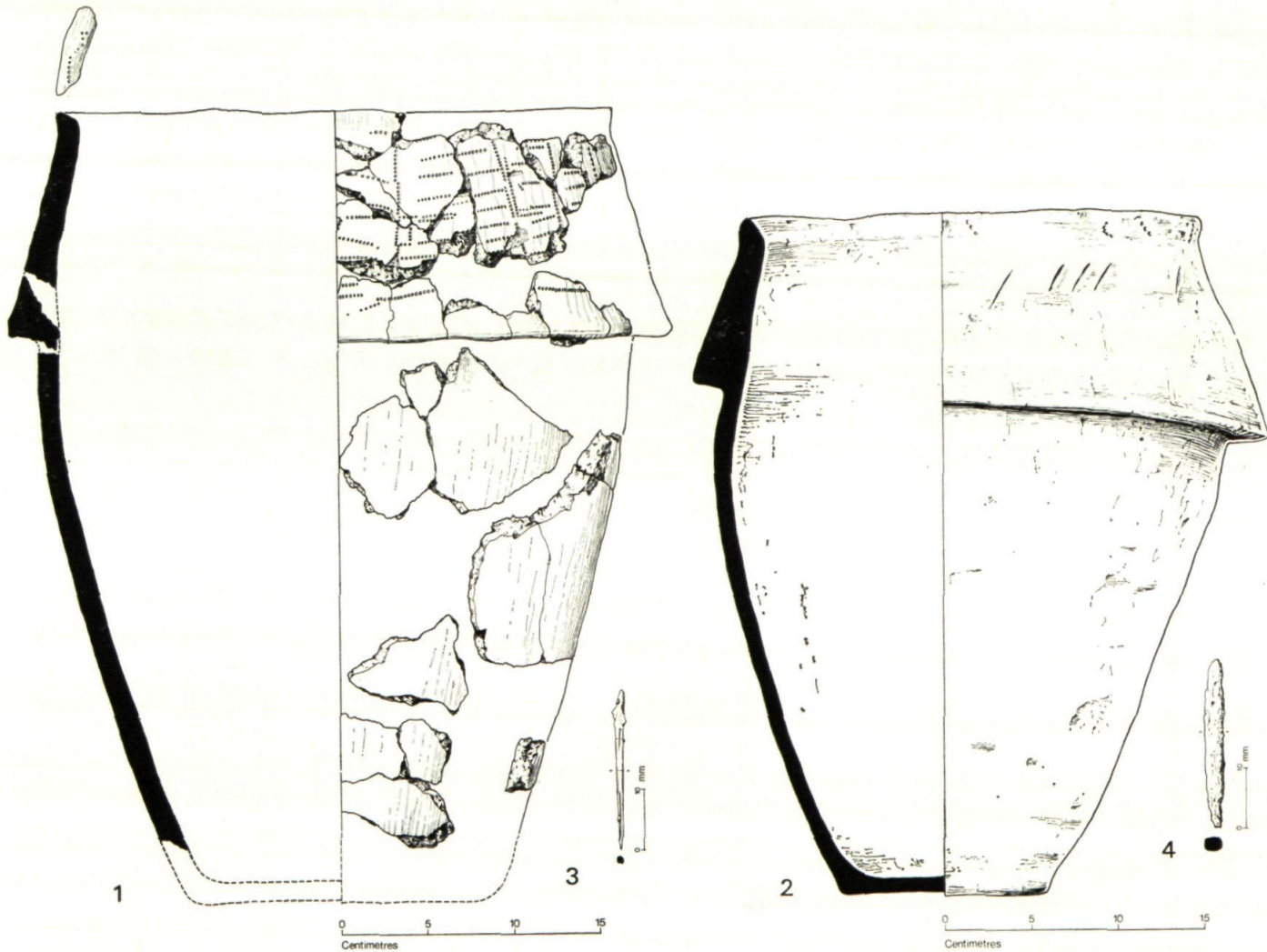


Fig. 13. Micheldever Wood barrow R4: 1,3. Collared urn and bronze awl from the primary burial, F48, under the east mound; 2,4. Collared urn and bronze awl from primary burial, F105, under the flint cairn. Scales: pottery $\frac{1}{4}$, bronzes 1:1.

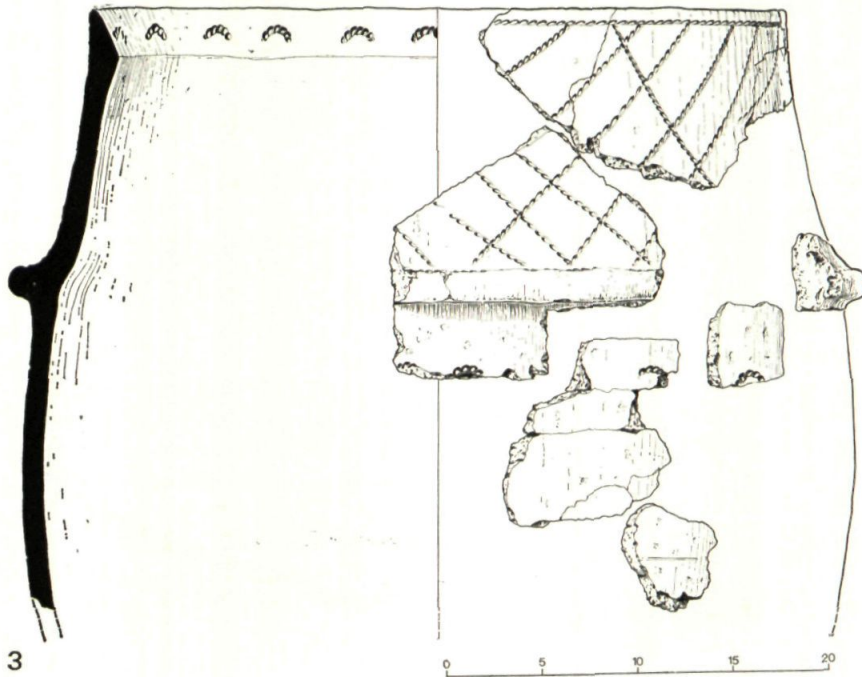


Fig. 14. Micheldever Wood barrow R4: Collared urn from secondary cremation in west mound, layer 22, F51. Scale $\frac{1}{4}$.

dates having been obtained from oak charcoal, probably from funeral pyres, for which a substantial discrepancy between the date of the charcoal and the date of the burial can be suspected.

Bucket Urn (Fig. 15, nos. 27–32)

There are about 40 sherds in flint tempered ware (fabric 2) attributable to this series. Nos. 27 and 28, have traces of fingertip impressions, no. 30 has a possible cordon, no. 31 is incised and no. 32 has an out-turned rim. Such bucket urns are attributed to the Middle Bronze Age, with radiocarbon dates between about 3100 and 2850 BP.

Iron Age (Fig. 15, nos. 34–7)

The few Iron Age sherds were mostly in fabrics 3 and 5. Three simple rims, nos. 34–6, and the rim, no. 37, of a Late Iron Age–Romano-British bowl are illustrated.

Romano-British (Fig. 15, nos. 38–9)

Only 10 definite Roman sherds were found. They included a handle of a Dressel Type 1 amphora in Peacock's Fabric 1, of late 2nd to 1st century BC date, some grog-tempered sherds, no. 38 (cf. Cunliffe 1970, fig. 1, no. 5; Fulford 1975, fig. 156), some small abraded samian sherds, a jar rim, no. 39 and a sherd of Oxfordshire pottery (Young 1977, type C51).

Fig. 13

1. Collared urn, fragmentary when found, yellowish brown (Munsell 10YR 5/6) outside, lumpy, grog fragments to 2–4 mm, height 457 mm, rim diameter 320 mm, base diameter 170 mm. Simple bevelled rim, well marked collar, shoulder indefinite. Decorated with pointed tooth comb impressions on rim bevel and outside of

collar, where impressions are arranged in the form of vertical panels containing horizontal lines, with bordering horizontal lines above and below. E. Mound, pit 48, inverted over cremation, accompanied by awl, Fig. 13, no. 3.

2. Collared urn, brown to dark brown (7.5YR 4/4), abundant angular grog fragments to 4–5 mm visible in surfaces, to 10 mm in fractures, rather lumpy, height 395 mm, rim diameter 260 mm, base diameter 120 mm. Simple bevelled rim, thick, mis-shapen collar, moderately well marked shoulder. Most of external surface has disappeared but it may have been decorated with incisions and twisted cord impressions. Flint cairn, pit 105, inverted over cremation burial, accompanied by awl, Fig. 13, no. 4.

Fig. 14

3. Collared urn, partially reconstructed from sherds, exterior very dark reddish brown (5YR 2.5/2) above collar, brown (7.5YR 5/4) below, liberally tempered with angular grog to 8 mm, outside appears scoured, fabric 1, exactly like no. 26. Rim diameter 360 mm, base and lower wall missing. Bevelled rim, concave collar with sharply defined 'cordon' at its base which appears to have been worked up at a ring joint, body barrel-shaped with no defined neck. Arc-shaped cord impressions on rim bevel and below collar, cord-impressed lattice outside collar. W. Mound, layer 22, F51, with one fragment of calcined human bone; Berm, layer 11, F69 and F79, about 40 plain sherds.

Fig. 15

4. Inbent rim in fabric 2, fairly sparse pounded-up calcined flint tempering to 2–3 mm, pit on outside of neck, impressed decoration outside rim and inside neck, twisted cord impressions outside neck, Mortlake ware. W. mound, layer 49.
5. Sherd, same fabric with sparse flint temper to 9 mm, black core, inside brown, shallow pit on neck, two impressed lines above, as 4. Layer 4.

6. Rim, slightly expanded, from simple bowl, some gravel flint in temper, not quite similar to 4, 5, two incised lines on outside, burnt. W. mound, layer 21.
7. Rim, simple bowl, similar to 4, 5. W. Mound, layer 49.
8. Rim, out-turned, black ware with angular flint temper, single line of cord impressions on rim. W. Mound, layer 11.
9. Rim, everted, simple bowl, black flint tempered. W. Mound, layer 49.
10. Rim, simple, as 6, 7, Neolithic or possible Iron Age. W. Mound, layer 52.
11. Base, fabric 1, dark core, grog tempering 1–2 mm, 1 flint inclusion, reddish surfaces, trace of one line of impressed decoration, Bell Beaker. W. Mound, layer 21.
12. Sherd, fabric 1, probably Beaker. W. Mound, layer 52.
13. Sherd, fabric 1 as 11, one line very worn probable comb decoration, Beaker. Layer 3.
14. Sherd, fabric 1, reddish brown exterior, dark brown interior, fine grog temper, 1 line impressed decoration, Beaker. Berm layer 11.
15. Sherds including rim, collar and neck, fabric 1, smooth soapy feel like complete collared urns, third sherd is broken off piece of lower edge of collar. E. Mound, layers 32, 33, 41, 47 and Berm, layer 43.
16. Sherd, fabric 1 with grog to 2 mm, reddish ext., black int., fingernail impressions, Beaker. W. Mound, layer 22.
17. Sherd, black, rounded grog to 2–3 mm, herringbone spatula decoration, indeterminate. Berm, layer 40.
18. Sherd from lower part of collar, black grog tempered, 3 lines of cord impressions with near vertical lines above, Collared Urn, burnt. As 17.
19. Sherd from collar(?), fabric as 1, 2, Collared Urn. Berm, knapping cluster, F69.
20. Rim, convex outside, grog tempered as 1, 2, line of cord impressions, Collared Urn. Berm, F86.
21. Sherd, black, traces of cord impressions, very worn, could be same pot as 18. W.

- mound, layer 76, pre-barrow soil.
22. Rim sherd, reddish ware, three lines of indeterminate impressions, probably Beaker. Berm, layer 11.
 23. Sherds, joining, from rim and collar, blackish ware with brown surfaces, probably from small Collared Urn. Berm, layer 40.
 24. Rim sherd with external bevel, fine reddish ware with greasy feel like Collared Urns, traces of cord-impressed lattice pattern, E. Mound, layer 41.
 25. Cup, in collared urn fabric 1, simple flower pot shape, pointed rim, crude horizontal and vertical impressed cord lines on outside. Pit 110.
 26. Sherds from rim and collar, fabric identical to no. 3, rounded rim and collar, collar has impressed cord decoration, sloping lines probably between verticals, with horizontal line along projecting collar. Berm, layer 11.
 27. Rim, flat topped, fabric 2 with abundant fine flint tempering, finger-tip impressions, Bucket urn. Ditch, layer 13.
 28. Rim and body sherds, fabric 2, heavily flint tempered, fingertip decoration, Bucket Urn. Berm, layer 11 and knapping cluster F69.
 29. Rim, fabric 2, Bucket Urn? F69, knapping cluster.
 30. Sherd, fabric 2, cordon?, Bucket Urn? Berm, layer 11.
 31. Sherd, fabric 2, traces of incised decoration, Bucket Urn? E. Mound, layer 33.
 32. Rim, everted, fabric 2 heavily flint tempered, Bucket Urn. Berm, layer 11.
 33. Rim, fabric 1, slight external thickening, internal bevel has diagonal slash marks, indeterminate. Layer 3.
 - 34-6. Simple rims, fabric 3, Iron Age. Berm, layers 11, 4, 5.
 37. Rim, fabric 5, bowl, late Iron Age/Romano-British. Layer 25.
 38. Rim, everted, fabric 7, grog tempered, Romano-British. Layer 7.
 39. Rim, coarse grey sandy fabric with haematite (?) inclusions, Romano-British. Layer 4.

The Flints

A total of 16,030 pieces of flint was recovered, comprising 7,657 complete flakes, 7,734 broken flakes and chips, 62 retouched and utilized flakes, 419 plain cores, 57 cores with secondary retouch and 103 tools. This is summarized in Table 1. They occur in all phases, but predominantly in Phases 2, 4 and 5. The flints have been discussed in detail elsewhere (Fasham and Ross 1979).

TABLE 1. Summary of flint artifacts

Context	Waste	Flakes	Cores†	Implements†	Totals
Pre-barrow soil	80	100	12	4	196
Feature 75	8	8	3	0	19
Pits	39	24	2	1	66
Graves	3	3	0	0	6
Mounds*	696	626	108	33	1463
Ditch (primary)	1	8	0	2	11
Bank	4	11	1	1	17
Phase 3	293	312	19	7	631
Berm (phase 4)	4878	4263	212	82	9435
Ditch (phase 4)	385	676	29	14	1104
Phase 5	1347	1626	62	47	3082
Totals	7734	7657	448	191	16030

* Includes Feature 86

† Includes cores used as hammer stones etc.

‡ Includes retouched cores and flakes

Cores

188 of the 476 cores have a single platform with flakes removed part of the way round. In general the cores from Phase 4 are smaller than those from Phase 2. Only 15 cores show deliberate attempts to produce specific flakes (Green 1974). 57 cores had been used in a secondary capacity, (Table 2).

TABLE 2. The function of secondary cores by phase

Function	Phase					Totals
	1	2	3	4	5	
Hammers	0	7	1	11	2	21
Borers, group 1	0	0	0	4	1	5
Scrapers	0	7	0	15	3	25
Hammer/scrapper	0	0	0	0	1	1
Utilized	0	1	0	3	1	5
Totals	0	15	1	33	8	57

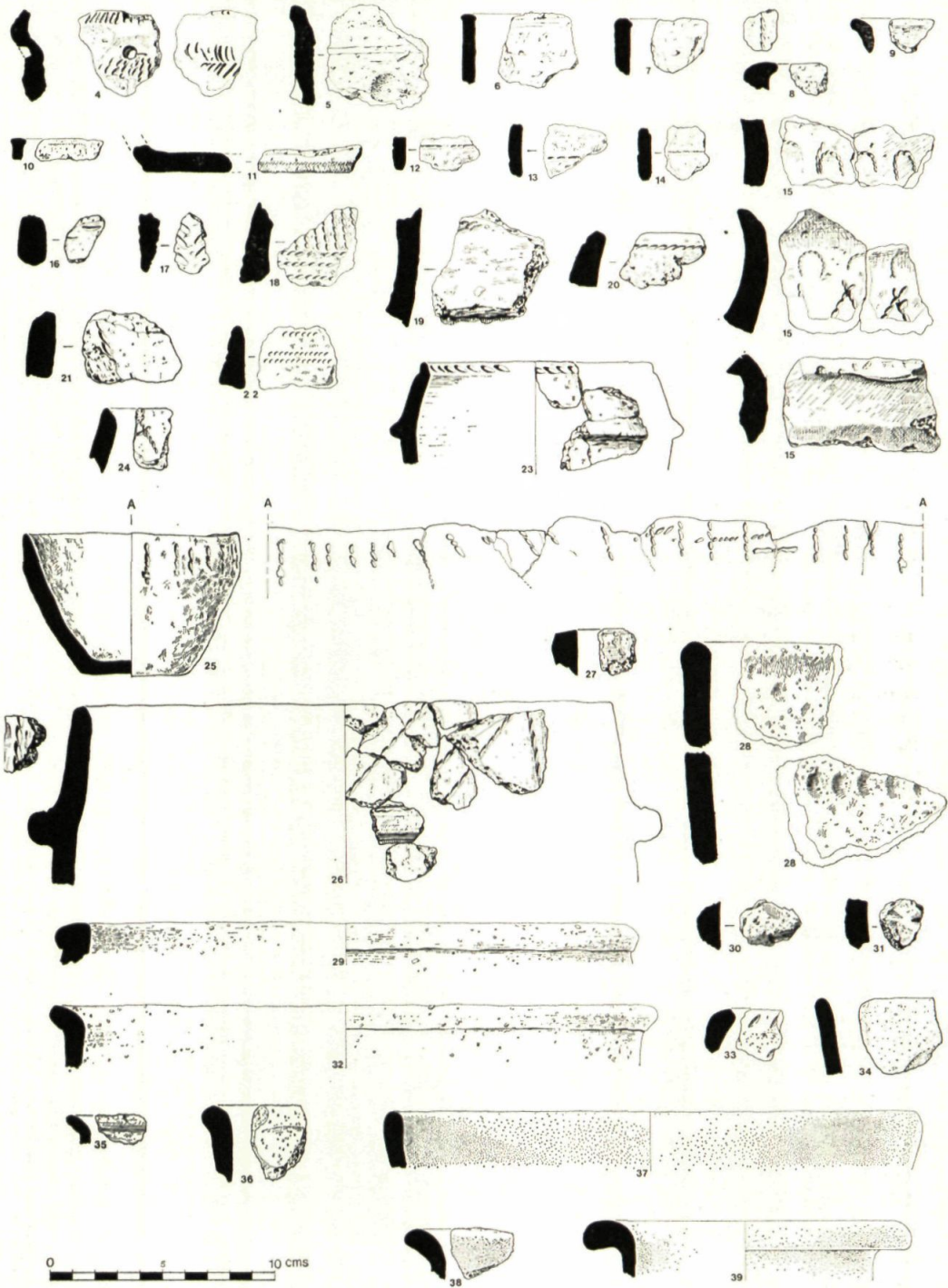


Fig. 15. Micheldever Wood barrow R4: Pottery: 4-10. Neolithic; 11-14, 16, 22. Beaker; 15, 18-21, 23-6. Collared urn; 27-32. Bucket urn; 34-9. Iron Age to Roman; 17, 33. Indeterminate; 16 is from pit 110. Scale $\frac{1}{3}$.

Flakes and other waste

The breadth, length, and breadth: length ratios of all flakes have been calculated, and reveal no significant variation in those measurements between phases. 25.7% of all the flakes have blade-like proportions not greater than 3:5, but only 198 (9.9%) of those flakes resemble blades in being fairly long, thin and flat. 26.7% of all the flakes have proportions between 3:5 and 4:5; a second notable peak, 34.6%, occurs with flakes, the proportions of which are greater than 5:5. 76% of the flakes are between 20 and 49 mm long with the preferred length occurring between 30 and 39 mm. There is less variation in width, 82.7% of all flakes are between 10 and 39 mm broad, preferred breadth being between 20 and 29 mm.

80% of the flakes have some cortex, and perhaps this reflects a method of knapping in which the cortex of the nodule is not removed as a preliminary stage of working.

Retouched Flakes

Secondary use is evident on 62 flakes which do not fall into any regular group of implements. Two types of retouched flake were identified:

Class 1 – retouch in one place. 31 flakes, e.g. no. 23.

Class 2 – retouch in two or more places. 17 flakes, e.g. no. 7.

In addition, two flakes are serrated, 4 natural pieces of flint have Class 1 retouch, 3 flakes are utilized, and 5 of the 198 blade-like flakes show Class 1 retouch, (no. 27).

Implements (Figs. 16–19)

The few implements from phases 1–3 can be summarised as follows:

Pre-barrow soil: 2 scrapers, 1 borer (no. 1), 1 retouched blade; Pits: 1 fabricator (no. 2); Primary ditch silt; 2 scrapers (no. 12); Bank: 1 scraper; Mounds and cairn: 8 scrapers (nos. 3, 4, 7, 8), 2 borers (no. 9), 7 retouched flakes/blades (no. 6), 3 choppers (no. 5), a waisted implement (no. 10), 8 retouched cores and a broken polished axe (no. 11); Phase 3: 2 scrapers, 5 retouched flakes/blades, etc.

Flint implements from later phases are summarised in Table 3.

Miscellaneous implements from the berm and ditch include 2 cutting tools, 2 serrated flakes, 3 fabricator roughouts, a roughout for a discoidal knife (?) (no. 22) and 2 utilized flakes.

Scrapers

The 51 scrapers were analysed for breadth, length, breadth: length ratio, shape, profile, angle of retouch, location and extent of trimming and

patination. Two broad groups emerged from this analysis.

TABLE 3: Flint implements from later phases

Type	Phase 4		Phase 5	Totals
	Berm	Ditch		
Scrapers	16	2	19	37
Borers	18	2	3	23
Retouched flakes ¹	19	2	8	29
Retouched flakes ²	5	1	5	11
Retouched cores	12	3	4	19
Retouched blades	1	0	1	2
Fabricators	1	0	0	1
Arrowheads, leaf	1	1	0	2
.. barb & tang	1	0	1	2
Knives	1	1	2	4
Miscellaneous	7	2	4	13
Totals	82	14	47	143

Group 1. Scrapers with thin, flat profiles and a slight angle of retouch. The retouch, often pressure flaked, is delicate, 35 scrapers (nos. 7, 8, 14, 18, 28–9, 39–42).

Group 2. Scrapers with thick, angular profiles and coarse steep retouch. 16 scrapers (nos. 3, 12, 15, 30–2).

External parallels and the stratification, particularly of Group 2 scrapers, suggest that Group 1 are Neolithic and Group 2 Bronze Age.

Borers

The 26 borers can be divided into 5 groups:

Group 1. Retouched jagged edge of core fragment.

Group 2. Flakes with 2 facets carefully retouched, 80°–90°, into a neat triangular point at the distal end.

Group 3. Isosceles triangular point.

Group 4. Irregularly-shaped flake, one end of which is worked into a long, thin point, protruding from the body of the flake. One side of the point is curved, the other straight.

Group 5. Double-ended borer.

Only 3 borers occurred in contexts earlier than Phase 4, and they are of Groups 2 and 3 which display high quality pressure flaking. Groups 1, 4 and 5, present only in Phases 4 and 5, are of a much poorer standard of workmanship and can probably be seen as a Bronze Age development of this type of tool.

Twelve of the tools (5.3%), including re-used cores and flakes, have double patination, showing that they have been worked on more than one

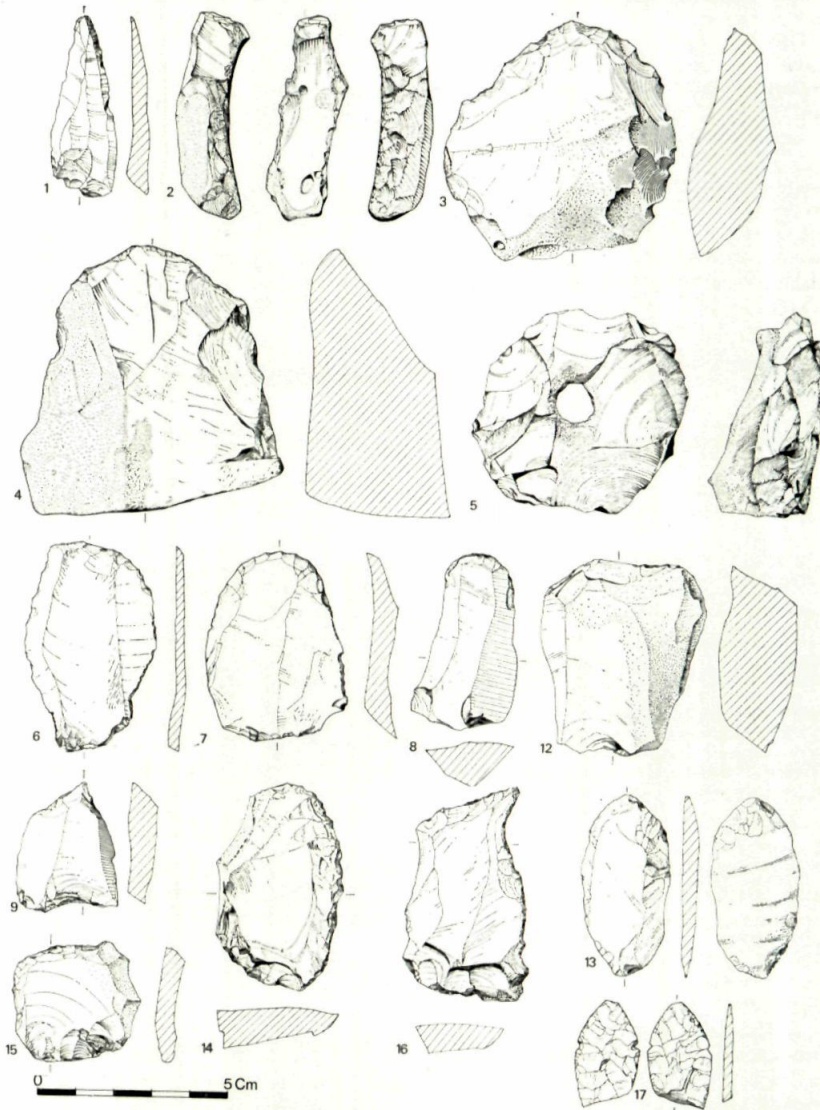


Fig. 16. Micheldever Wood barrow R4: Flint implements, 1-9, 12-17. Scale $\frac{2}{3}$.

occasion. They comprise 3 scrapers (including no. 30), 2 borers, 3 reused cores, a broken knife (no. 21) and 3 class 2 retouched flakes.

Fig. 16

- 1. Flake, borer, group 3. Layer 38, old soil beneath east mound.
- 2. Fabricator on flake, very worn. Pit 112.
- 3-6. From W. Mound.

- 3. Large convex scraper on thick flake. Layer 49.
- 4. Scraper on thick nodule. Layer 52.
- 5. Chopper?, bifacially worked on naturally holed nodule. As 4.
- 6. Flake, retouched. As 4.
- 7-9. From E. Mound, layer 39.
- 7. Convex end scraper/knife.
- 8. End scraper.
- 9. Borer, group 2.

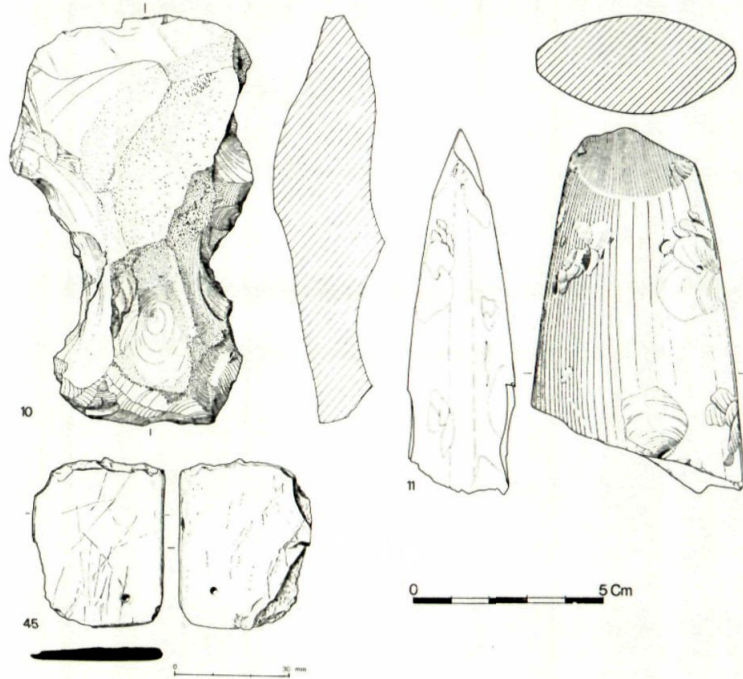


Fig. 17. Micheldever Wood barrow R4: Waisted implement, 10, and broken polished axe, 11, from flint cairn. Scale $\frac{1}{2}$.

10–11. From cairn, layer 17 (Fig. 17).

10. Waisted implement made on a core, possibly a heavy concave scraper for wood working.

11. Polished axe, oval cross-section, broken.

12–16. From the ditch (Figs. 16, 18).

12. End scraper on thick core trimming flake. Layer 30, primary silt.

13. Leaf-shaped arrowhead, Clark (Clark et al 1960) class B. Layer 13, phase 4.

14. Side scraper. Layer 12, upper filling.

15. Convex scraper. As 14.

16. Borer, group 4. As 14.

17–24. From knapping clusters on the berm, phase 4.

17. Leaf-shaped arrowhead, Clark class A, broken. F73.

Fig. 18

18. Large convex scraper. F94.

19. Borer, group 3. F69.

20. Borer, group 4. F70.

21. Convex scraper/knife on bicipatinated flake, broken. F72.

22. Rough-out for discoidal knife? F69.

23. Flake, retouched. F69.

24. Side scraper. F102.

25–38. From berm, layers 11, 40, flint working level

25. Flake, obliquely blunted.

26. Barbed-and-tanged arrowhead, long triangular form, barbs and tang broken.

27. Blade-flake, retouched.

28. Convex scraper/knife, on ?core trimming flake.

29. Large, double ended convex scraper.

Fig. 19

30. Nosed scraper on thick flake/core fragment, bi-patinated.

31. Scraper.

32. Convex scraper on flake.

33. Convex scraper on thick flake.

34–6. Borers, group 4.

37. Core, re-used as hammerstone.

38. Fabricator.

39–44. From topsoil

39. Nosed/side scraper.

40. End scraper/knife.

41. Large convex scraper on thick flake.

42. End scraper.

43. Oval knife, retouch down both edges.

44. Barbed-and-tanged arrowhead, barbs broken.

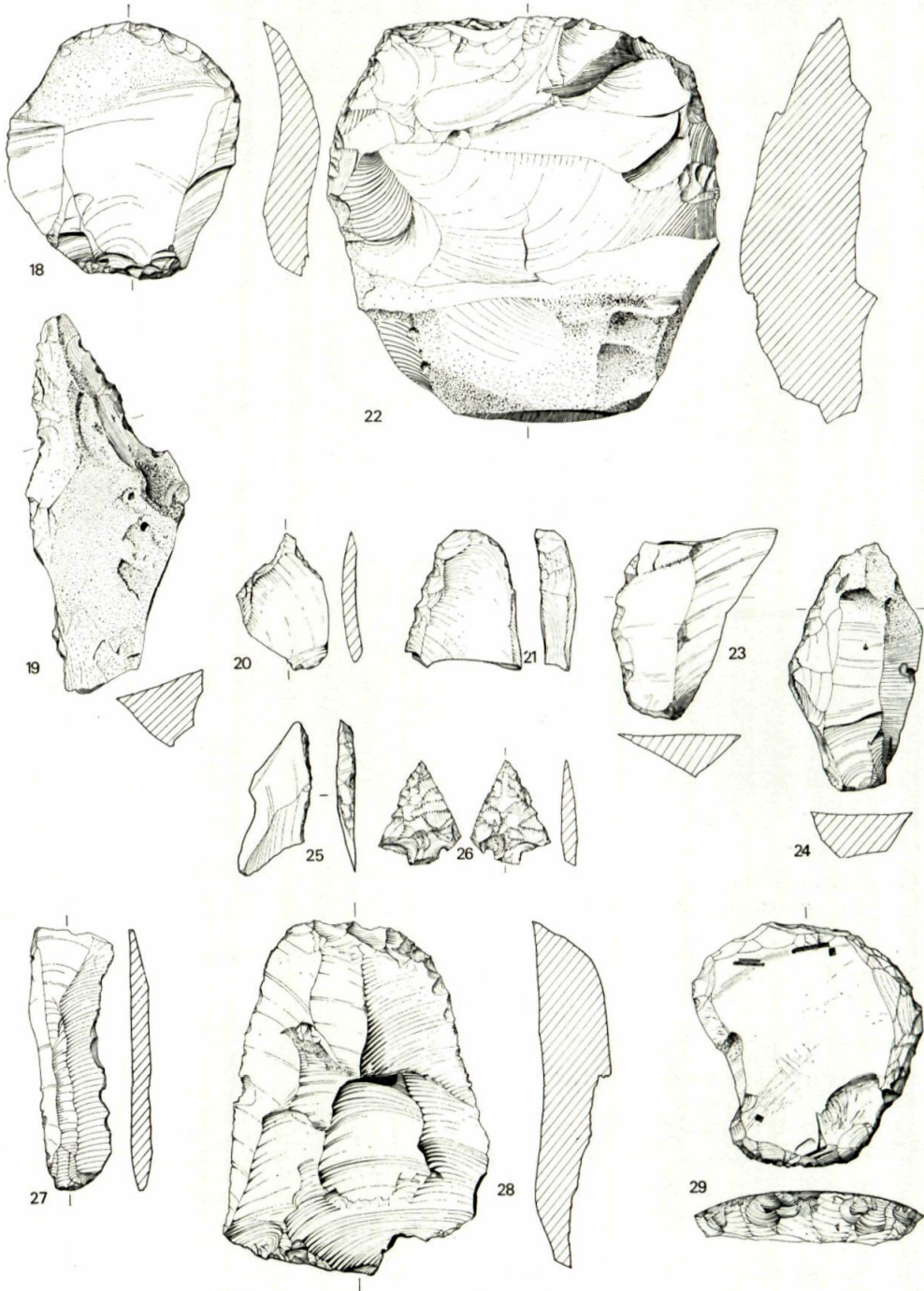


Fig. 18. Micheldever Wood barrow R4: Flint implements. 18-24, from knapping clusters, 25-9, from flint working level on the berm. Scale $\frac{2}{3}$.

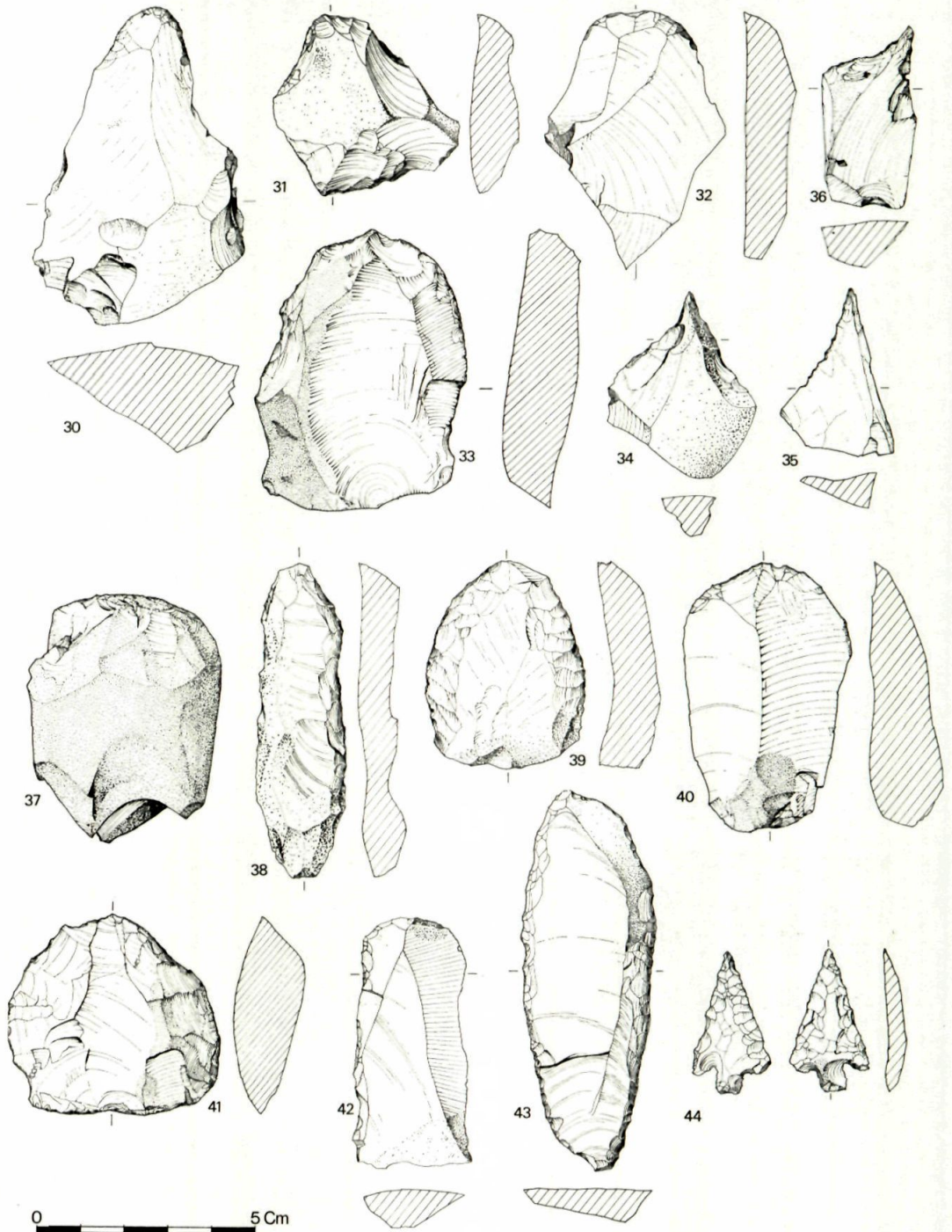


Fig. 19. Micheldever Wood barrow R4: Flint implements, 30-8 from flint working level on berm, 39-44, from topsail: Scale 30-44, $\frac{2}{3}$.

Comment

Implements nos. 11, 13, 17, 43 and some of the group 1 scrapers, including nos. 3-4, 7-8, from the mounds, could be derived from the same Neolithic site as the pottery, although the two leaf-shaped arrowheads are as likely to be stray losses and the flint axe from the cairn was probably picked up along with the nodules in it. The Bell Beaker element is represented by the arrowhead, no. 44, but the other, no. 26, could be post-Beaker.

Among the implements, virtually only the fabricator (no. 2) might be associated with the phase of barrow burial and construction, but it is heavily worn and may be older.

The phase 4 industry is distinguished by a high ratio of flakes and waste to cores (42:1) and a very low ratio of tools to cores (1:2.6) indicative of a flint working site from which the great majority of finished or partly finished tools have been removed, leaving only the debris. This is further emphasized if the tools which are likely to be older than this phase—the arrowheads (nos. 13, 17, 26, 47), the oval knife (no. 43) and the group 1 scrapers (including nos. 14, 18, 39-42 and two not illustrated)—are subtracted from the total of implements from phases 4 and 5, the material from phase 5 being essentially derived from the previous phases.

Stone (Fig. 17, no. 45)

Rectangular piece of Cornish slate (Anderson, archive), three worked and polished edges surviving, providing two sides and one end—width 35 mm, minimum length 44 mm. The other end is broken off. The upper surface polished, the lower surface not, suggesting that the fragment has detached itself from a thicker piece of slate. Small, 1.8 mm diameter, depression on both surfaces, suggesting that an attempt was made to perforate it rather than to decorate it. The wear suggests that it is not a whetstone fragment, so perhaps it came from a wristguard, such as are known in Bell Beaker contexts. W. Mound, layer 52.

Other Finds

There were 4 fragments of tile, possibly Roman, 3 from Phase 4 and one from Phase 5. The remains of 5 shotgun cartridges are evidence of recent sporting activities. One was recovered from within the flint cairn, and demonstrates how easy it has been for later finds to move downwards.

DISCUSSION

Phase 1: The removal of a wedge of the pre-barrow soil on the north of the site, preparatory to the construction of the barrow,

probably destroyed some of the evidence for pre-barrow activities. Nevertheless, some general observations about these activities can be made from the 12 features cut into the pre-barrow soil, and from the flint artifacts and pottery sherds of this phase.

Shallow pits or scoops beneath barrows have been recorded elsewhere in Wessex, and frequently are regarded as 'ritual' (Ashbee 1960, 44). The pits and scoops here need not have had ritual purposes, but may have been functional such as small temporary hearths, or may have been associated with the laying-out and construction of the barrow.

Feature 104, which produced a Carbon 14 date of 6900 ± 170 BP, is the only feature that may pre-date the barrow by a considerable length of time (see discussion of this date below).

The small numbers of artifacts recovered from this phase (Table 1) suggest that pre-barrow activities were limited. This is in sharp contrast with the evidence from under a round barrow on Arretton Down, Isle of Wight, where 1,667 flakes, 48 tools and 25 cores were recorded in pre-barrow contexts (Alexander et al. 1960), and were regarded as evidence for pre-barrow occupation.

Mesolithic, Neolithic and Bell Beaker activity in the general area, but not necessarily on the site, is attested by the flint tools and potsherds incorporated in the mounds and the flint cairn. A recent series of excavations in Micheldever Wood suggests that flint working on various scales took place throughout the wood (Fasham forthcoming).

Phase 2: The absence of Neolithic pottery, and the fact that 11 out of 15 sherds from the pre-barrow soils were from collared urns, suggest that many of the remaining pits/scoops and one of the flint piles, F86, were associated with constructional or immediately pre-constructional activities. The argument that the barrow was constructed soon after the pits were dug is reinforced by the distribution

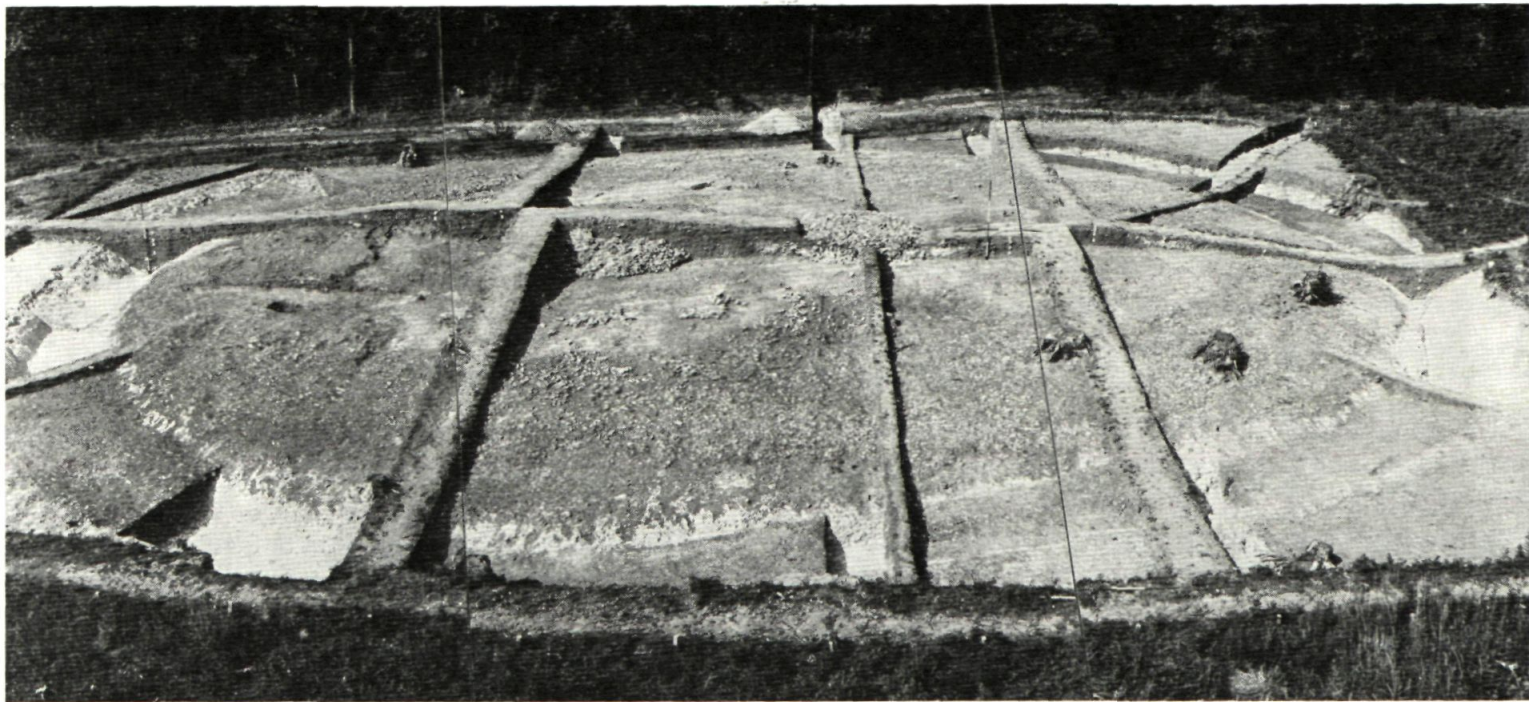


Fig. 20. Micheldever Wood barrow R4: View from the south during excavation, showing profiles and limits of mounds and cairn. The flint scatter of the phase 4 flint industry is truncated in the foreground by the phase 5 lynchet. Scales 2 m. Photo. P. J. Fasham.

of sherds of two collared urns on the surface of the pre-barrow soil, especially the burnt layer, layer 47, under the east mound and also under the cairn and in the body of the east mound.

The barrow was not situated on a 'false crest', but was erected on a deliberately created scarp, which enhanced the downhill southern aspect of the barrow. The deliberate improvement of barrow sites is not a common phenomenon, but has been observed in a different geological and topographical situation at Charmy Down Barrows 1 and 2 (Williams 1950; Grimes 1957, 215-23). There were no discernible stratigraphic relationships between the mounds but the alignment of mounds and features on its long axis argues strongly for its design and construction being of one period. The alignment is spoilt by the flint cairn and its associated cremation pit being centred north of the long axis. This may indicate that the cairn was later, and that originally the monument was a twin bell barrow. This argument is supported by the fact that part of layer 33, containing chalk block revetting material for the eastern mound, occurred south of the cairn, and that the west side of the east mound appeared to have been truncated by the cairn.

However, the presence of sherds of the same collared urn both in and under the east mound and under the flint cairn, suggests that even if the flint cairn were an insertion and thus the latest of the funerary mounds, it must have been built soon after the others.

Six features lay on the axis of the barrow; three, F100, 85 and 112, may have been related to the construction, two, the cremation pits under the east and west mounds, respectively F48 and 108, were definitely ritual, and the sixth, Feature 110, containing the miniature vessel, may have had ritual associations. The burnt area, layer 47, if a pyre and not a bonfire, was the only other ritual aspect of the barrow discovered. The cremation pit under the east mound, F48, had been dug through the burnt area, a situation similar to that at Roundwood, Laverstoke (Crawford 1922).

The absence of post holes anywhere in the pre-barrow soil suggests that there were no mortuary structures.

The mounds showed different structural methods, all of which are known from other Bronze Age round barrows. Parallels for the flint cairn occur at Rag Copse, Doles Wood, Hurstbourne Tarrant, near Andover (Knocker 1963) and at Roundwood (Crawford 1922). The east mound was a simple earthen mound, but the west mound was more complex, having an earthen core capped with flints enveloped by a further deposit of earth, which itself was capped by flints. The traces of a ring of chalk blocks round both the east and west mounds (layers 33 and 52) resembles the bell barrow at Roundwood. The chalk probably came from the excavation of the ditch and may have been used as a means of revetting the central portion of the mound.

The volume of the pre-barrow soils removed to create the scarp was insufficient to provide all the loamy soils in the mounds, and presumably topsoil or turf was collected from outside the limits of the barrow. The flints used in both the cairn and the west mound were probably collected from the surface in the immediate neighbourhood; there are no areas near the barrow which suggest flint quarrying. Artifacts that lay in the collected soils would thus have become incorporated in the mounds; at Arretton Down pre-barrow occupation material was found scattered through every tip layer forming the mound (Alexander et al. 1960), and on Stockbridge Down, Hants., burnt flint, ox and sheep bones, a quern fragment and pot sherds were found in what was basically a flint cairn (Stone and Hill 1940). Some of the incorporated artifacts may have been lost by the barrow builders, and some, such as those in layer 49, may represent activity during construction.

The cremation burials themselves were simple, two in inverted collared urns associated with awls, and one unurned. Table 4 shows that the majority of identified human bone fragments were from long bones and, to a lesser extent, the skulls, a recognition factor

TABLE 4. Relative bone weights of cremations from Pits 105 and 108. The percentage figures are calculated on the total weight of identified fragments, not the total bone weight.

	Pit 105		Pit 108	
	Weight (in grams)	%	Weight (in grams)	%
Skull	478	37.5	140	16.6
Vertebrae	49	4.9	54	6.4
Pectoral Girdle	13	1.0	9	1.1
Ribs	86	6.8	61	7.2
Pelvic Girdle	76	6.0	42	5.0
Long Bones	544	42.7	508	60.2
Extremities	28	2.2	30	3.6
	—		—	
	1,274		844	
Unidentified fragments				
> 6 mm	750		558	
< 6 mm	Mainly soil		212	
	—		—	
Total	2,024		1,614	
	—		—	

that would be true of an uncremated skeleton, but one that is enhanced from cremations, for the long bones are fairly robust and tend to be in larger fragments, and so are more readily identifiable. The more friable bones, such as vertebrae, are usually under-represented in cremations, as they are found only in small fragments and, therefore, are not often identified. The different ratios of skull to long bone fragments in Pits 105 and 108 may reflect, in the first case, some degree of selection or added care in collecting the skull fragments after cremation and before deposition in the urn (Bayley, archive). Secondary cremations, such as (perhaps) Feature 51, are of common occurrence in Bronze Age burial mounds.

The perspective drawing, Fig. 21, gives an impression of how the barrow appeared after its construction. The external bank, omitted for technical reasons from the drawing, is an enigma, since neither its method of construction nor its function is properly understood. If one reason for digging the ditch was to get chalk to revet the mounds, perhaps the topsoil from above the ditch was surplus and was piled on the bank. However, it has already been suggested that topsoil was

required from outside the ditch. Disc, pond, saucer and bell-disc barrows have external banks, but normally they extend for the whole circumference of the monument. On R4 ploughing on the south side would have removed the bank; there was no evidence of it at the west end. The linear arrangement of the primary features of the barrow may represent the germ of the ideas which led to the development of linear round barrow cemeteries in Wessex.

Phase 3: This phase covers the 200–300 years following the barrow's erection. There was no evidence to suggest how long the monument was maintained in a tidy state, but the few finds suggest that very little happened on the site. By the end of this phase the mounds had begun to decline, the cairn to tumble and the ditch to silt up.

Phase 4: The physical appearance of the monument was drastically altered during this phase; the mounds, particularly the west one and the flint cairn, were reduced by perhaps as much as one third. The disturbance was caused by the quest for suitable nodules to provide the raw material for the flint working on the berm and in the ditch, but the volume of workshop waste on top of the west mound suggests that a limited amount of knapping took place on the mounds. One of the principal components of the flint debris that was left behind was the borer. With the exception of Saville's (forthcoming) work on flint assemblages from four Wiltshire barrows, little work has been done on post-barrow flint collections, although several instances are recorded; the Wiltshire barrows are G70 and G71 at Earl's Farm Down, Amesbury (Christie 1964 and 1967), and Winterbourne Stoke, G30 and G45 (Christie 1963 and 1970). 'The Great Barrow' at Bishop's Waltham produced considerable evidence for what appears to be a post-barrow flint industry (Ashbee 1957). The flint industry in Phase 4 is more numerous than any of the above examples, and is clearly later than the barrow, which may not be the case with the five assemblages cited. One reason for the existence of this industry was that raw

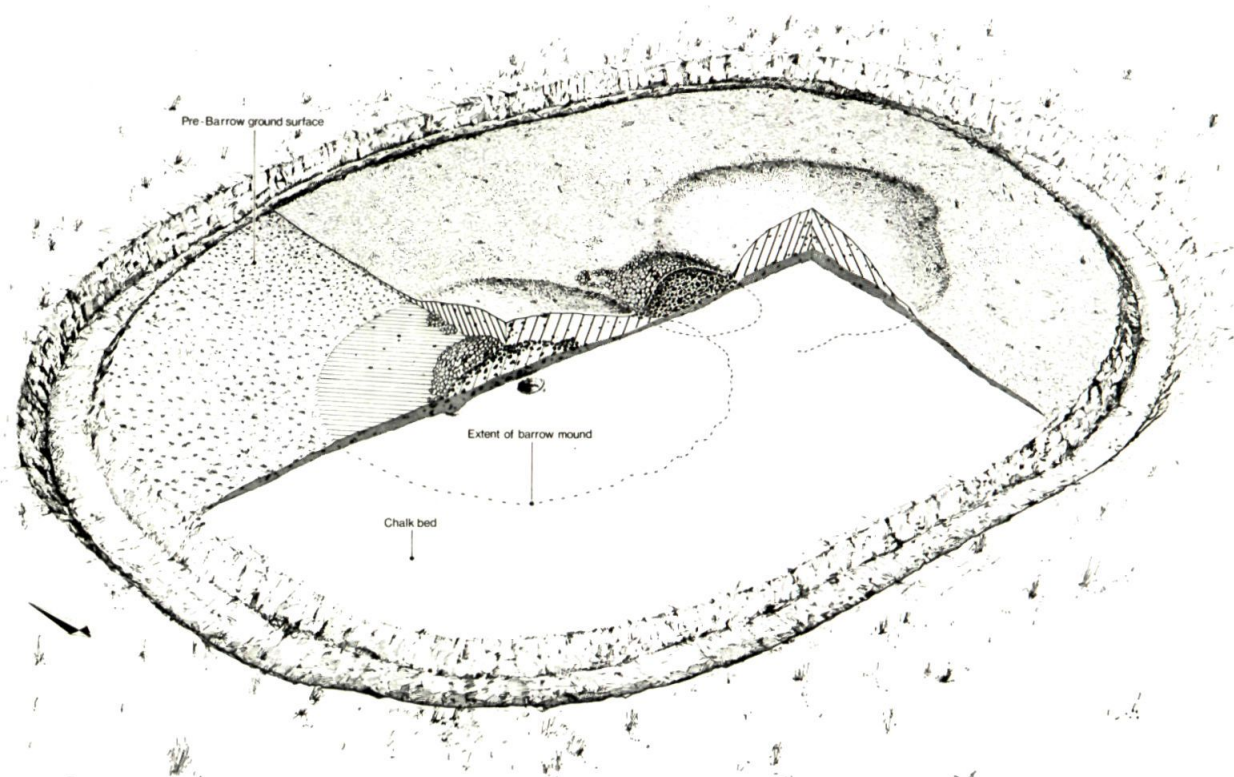


Fig. 21. Micheldever Wood barrow R4: Cut-away perspective drawing, viewed from the south-west. The external bank has been omitted for technical reasons.

material was readily available on the west mound and the cairn, a factor which is almost certainly reflected by the high percentage of cores with only one platform.

Phase 5: This long phase is one which sees little activity on the site. The negative lynchet suggests that at some time the barrow marked the edge of a field. 'Celtic' fields are known to be aligned on long barrows, and sometimes have round barrows at their corners. It is not surprising to find evidence for Iron Age and Romano-British activities, for large settlement complexes have recently been identified in the immediate neighbourhood (Fasham 1976). Another instance of prehistoric interference with barrows has been recently recorded on Easton Down, near Winchester (Fasham 1975).

This interesting phenomenon will be considered in more detail in a subsequent MARC3 publication.

DATING

The dating of the different phases is provided by ceramic associations and radiocarbon determinations. R. L. Outlet provided the comments on calibration of the radiocarbon dates and on date HAR-1043.

The radiocarbon date of 6900 ± 170 BP (HAR-1043) for charcoal from pit 104 presents problems. This date would fall in the later Mesolithic; there is really very little Mesolithic material from the site and the date itself is doubtful. Difficulties occurred in the measurement process (the sample yielded very

much below the required carbon quantity for the measurement), and it was suspected from the unlikely stable ratio for charcoal ($\delta^{13}\text{C} = -16.9\%$) that the standard pre-treatment process had not adequately removed the ground carbonate contaminant, leading to an earlier than true date.

The dating for Phase 2 is based on the two collared urn sherds on the pre-barrow soil, and on radiocarbon dates from the west mound and from the secondary silt of the ditch. Although radiocarbon dates as early as 3720 ± 130 BP (NPL-133) have been reported for collared urns belonging, like the urns from this barrow, to Longworth's Secondary Series (Longworth 1970), there are considerable difficulties over the dating of this series, as noted above, and in this case it is as least as likely that the date of 3670 ± 80 BP (HAR-1042) for charcoal from layer 55 of the west mound, which has a calibrated range at 1 standard deviation of 2280-1985 BC (for calibration, see Clark 1975), is really a date for the Bell Beaker material from the mound and the old soil underneath.

The date from layer 28 of the secondary silting in the ditch, of 3370 ± 90 BP (HAR-1044), with a calibrated range of 1875-1605 BC, although stratigraphically later than the construction of the barrow, may give a closer approximation to its construction date, which should fall towards the end of the Early Bronze Age, if this is put at about 1500 BC.

The flint industry from the ditch (phase 4) was bracketed stratigraphically between this date and the date, from layer 13, of 3100 ± 90 BP (HAR-1041) with a calibrated range of 1560-1305 BC. Though distinct at one standard deviation, the calibrated ranges of these two dates overlap considerably at the 95% confidence level (2 standard deviations), so that a more precise interpretation of the date of the flint industry is not possible. These dates are however not inconsistent with its assignment to the middle Bronze Age as its association with bucket urn pottery suggests.

The Environment

The environmental data recovered from the

excavation were badly preserved and small in quantity. The non-calcareous drift covering most of the site resulted in poor conditions for the preservation of land molluscan shells; only 10 out of 63 samples examined contained shells (J. G. Evans, pers. comm.). The molluscan data will be considered elsewhere when it can be related to the evidence, currently being studied, from other sites on the M3 extension. Animals, tree root activity and silvicultural practices in general have moved material down from the surface of the barrow, particularly into the west mound and the berm. This is especially true of the fragments of conifer charcoal, most of them of rather fresh appearance, which were found on the berm and under the west mound, and it is also probably true of a fragment of beech charcoal associated with the larch cone in the berm (Keepax, archive). The environmental evidence is, therefore, restricted by the small numbers of the samples and their contamination. Most of the data relate to the pre-barrow environment.

Assuming that none of the samples were introduced from elsewhere, it appears that forest containing at least oak and elm stood in the neighbourhood, and that underforest or scrub in cleared areas could have been formed by shrubs of hawthorn type and of blackthorn. The forest could have been felled originally by stone axes, similar to the polished flint one incorporated in the cairn. The carbonised seeds from layer 47 indicate that cereal crops, one of which was barley, were grown in the vicinity of the barrow. Cattle formed another aspect of the agricultural life. A cat bone was found in the fill of the west cremation pit, Feature 105. Cat has been recorded in a Neolithic, and possibly in a Late Neolithic/Early Bronze Age context, at Windmill Hill (Smith 1965, 142-8).

The Phase 5 lynchet indicates that, at some time after the middle of the second millennium BC, ploughing occurred, and oak charcoal in some of the upper layers indicates a return to woodland, documented for the Middle Ages.

General

R4, with its continuous oval ditch enclosing three mounds separated from the ditch by a berm, is the only Bronze Age triple barrow to be excavated under modern conditions. Comparison with other sites is made difficult because of the poor excavation records of the past and the inherent problems of comparing an excavated site with the surveys of unexcavated ones. An elongated mound composed of a number of individual tumps, although without the single enclosing ditch, has recently been identified by the Royal Commission on Historic Monuments (forthcoming) at Freefolk Wood, Laverstoke, Hants, about 8 km north of this site.

The finds, field records and archive will be deposited with the Hampshire County Museum Service by May 1980.

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