

EXCAVATIONS ON AN IRON-AGE CROP-MARK AT SWARKESTONE LOWES, DERBYSHIRE, 1983

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INTRODUCTION

Thirty-five years ago, at the start of a programme of research into the prehistory of the mid-Trent Valley, Merrick Posnansky was attracted to Swarkestone Lowes (SK367295), the only group of standing barrows in the area (Posnansky, 1955: 123); according to a contour-survey conducted in 1983-4, this group may have contained six mounds: Fig. 2: I-VI. The potential of the site was highlighted further in 1956, when Ernest Greenfield discovered a Beaker settlement beneath one of the barrows (Greenfield, 1960: 12-15). Aerial survey has revealed crop-marks indicating linear ditches and pit-alignments on the Lowes as well as a cluster of ditched enclosures situated a short distance farther west (SK362295; Fig. 1:C). Most prominent among the linear ditches is one which, at first sight, appears to have defined the north and east sides of the barrow-cemetery; it is this ditch which was the subject of excavation in 1983, as will be described below.

These earthworks and crop-marks lie on gravels which cap a narrow east-west ridge of marl, elevated approximately 15 metres above the flood-plain of the River Trent to its south and the low-lying land of Sinfin Moor to its north (Fig. 1:A, B). At its eastern end, this ridge slopes down to the Cuttle Brook, which drains Sinfin Moor into the Trent.

In 1982, it became known that the Derby southern bypass would cross the Lowes (Fig. 1:C). Consequently, in 1983, two trial trenches (Fig. 2:A, B) were opened across the line of the prominent crop-mark ditch where it lay within the strip of the site threatened by the proposed road. The objectives were to date the ditch and to seek evidence of related settlement. The most significant result came from a sample of wood found low in the ditch, which produced an Iron-Age radiocarbon-date of 2280 ± 80 BP. However, before describing the 1983 excavations in more detail, the other evidence for prehistoric and Romano-British settlement at Swarkestone Lowes will be assessed.

BARROW-CEMETERY

The barrow-cemetery includes at least four standing mounds (I-IV). Crop-marks reveal that three of these (II-IV) are each encircled by a ditch (Figs 1:C, 2). The barrows are sited on top of the ridge, which here slopes gently eastwards, falling by only 1 metre over the 320 metres from Barrow I in the west to Barrows III and IV, close to the break of slope down to the Cuttle Brook. Barrow I is under pasture and stands to a height of 3.6 metres; the other three are under regular cultivation and stand 1.0 metre (II and IV) and 0.4 metre (III) high. The 1983-4 contour-survey, covering an area of 10.4 hectares, has shown that Barrows II-IV have been reduced in height by up to 0.8 metre since 1955 (cf. Posnansky, 1955: 125).

The crop-mark ring-ditches surrounding Barrows II, III, and IV are approximately 34 metres, 26 metres, and 32 metres in diameter respectively. Another circular crop-mark to the west of Barrow II can be seen on a single photograph (National Monuments Record no. SK3629/1), and

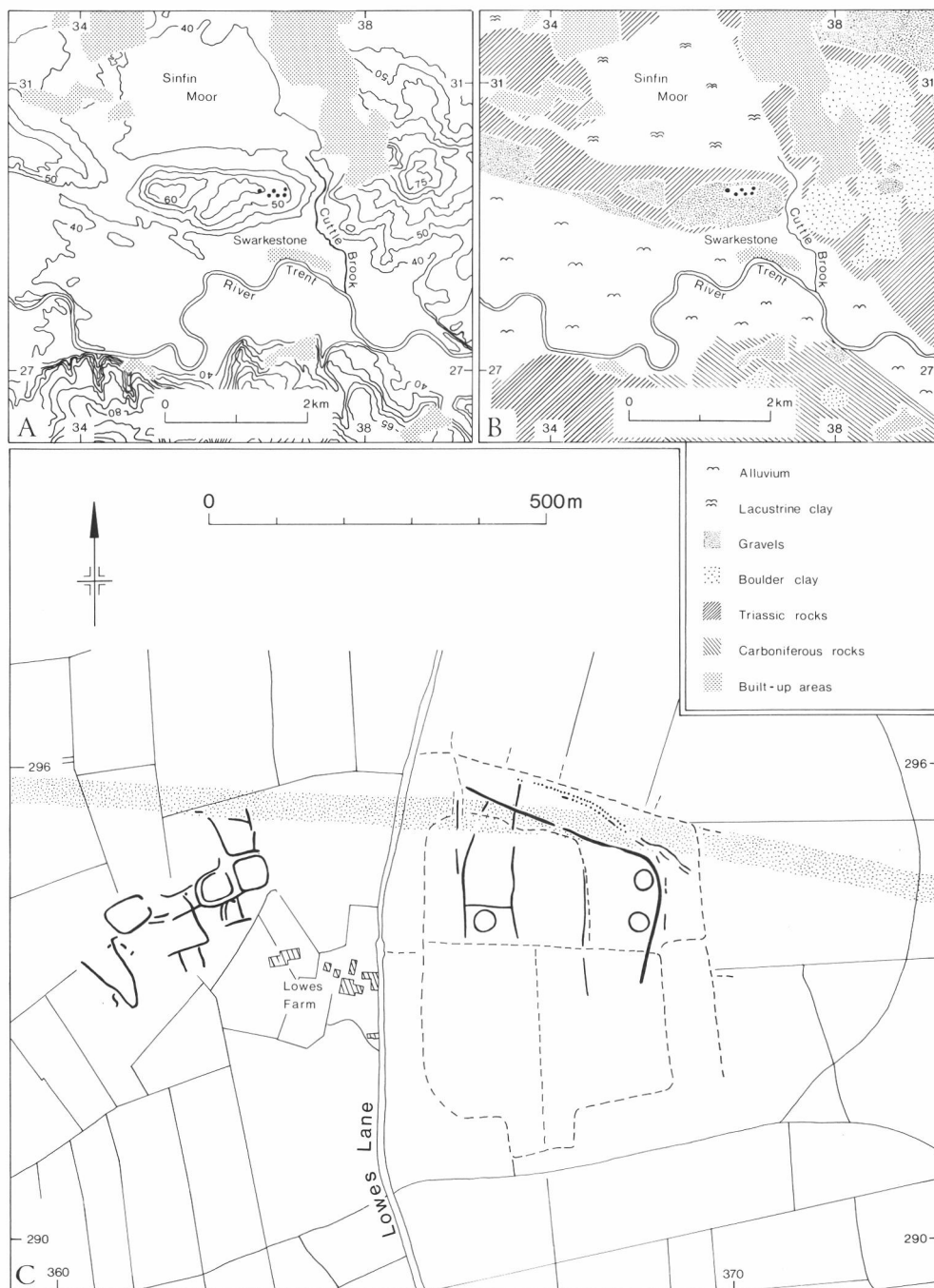


Fig. 1 Swarkestone Lowes. A and B: topographical and geological location of the site (six dots mark barrows). C: plan of the crop-marks in relation to modern field-boundaries (those recorded by Bromley in 1844 shown as broken lines) and the proposed route of the Derby southern bypass (stippled).

its position has been plotted by O'Brien (1978: fig. 6). However, since it shows on only one photograph, it may be an ephemeral agricultural mark. It needs to be confirmed by further air-photography and/or geophysical survey, and has therefore been omitted from Figs 1 and 2.

Between Barrows II and III/IV, the contour-survey has brought to light two additional humps standing 0.3-0.4 metre high (Fig. 2: V, VI). These may well be the degraded remains of burial mounds up to 30 metres (V) and 40 metres (VI) in diameter. Barrow V is seen as a light-coloured soil-mark when recently ploughed. No associated ring-ditch crop-marks are known, but, then again, excavations by Greenfield have shown that no ring-ditch accompanied the earliest phase of Barrow IV (1960: 4). Writing in the mid-nineteenth century, Briggs mentions only four standing barrows at Swarkestone Lowes (1846: 15); but five were noted later in the century, three of which were said to have been 'nearly levelled by ploughing' (Kelly, 1888: 293). One or other of Barrows V and VI may already have been so reduced in height by then as to be difficult to detect.

Posnansky's excavation of Barrow II revealed a small turf mound, incorporating sherds of Food-Vessel type, covering an unaccompanied cremation deposited on the original ground surface (1955: 126-7, 132). In contrast, Barrow IV was shown by Greenfield to have had a primary inhumation accompanied by a flint knife, while fragments of a Collared Urn were recovered from a secondary pit (1960: 4-9, 15-16). More important are the hearths, pits, and lines of stake-holes and post-holes associated with sherds of Beaker and other Neolithic and early-Bronze-Age pottery sealed by this mound (*ibid.*: 11-18). Flintwork from Barrow IV includes Mesolithic and later-Neolithic/early-Bronze-Age tools (*ibid.*: 21-3). A re-assessment of the flintwork from Barrow II, as well as an examination of that recovered during systematic field-walking in 1983, indicates a similar mixture of material relating to these two traditions. (The flintwork found during field-walking was scattered widely over the ridge-top with no obvious patterning; a brief report on the character of this assemblage along with that from Barrow II, written by D. Garton, is held in the Derbyshire County Council Sites & Monuments Record.)

Iron-Age sherds were found in residual contexts at both barrows, while Romano-British coarse pottery and a sherd of Samian were recovered from the upper silt in the Barrow II ditch (Posnansky, 1955: 127, 132-4; Greenfield, 1960: 9-10). Barrow II was also the site of pagan Anglo-Saxon inhumations, reflecting the custom of re-using existing mounds, more commonly encountered farther north among the standing barrows in the Peak District (Posnansky, 1955: 127-30, 135-7; Meaney, 1964: 18-19).

CROP-MARKS

In addition to the mounds and ring-ditches, further archaeological features on the Lowes are represented by linear and rectilinear crop-marks recorded from the air. Photographs taken by Mr J.A. Pickering (N.M.R. no. SK3629/6) and Dr J.K.S. St Joseph (University of Cambridge no. 120/362295) have been used to plot all these features (Fig. 2), using a Bradford University computer program to rectify some of the distortion on the oblique photographs (computer facilities were kindly arranged at Sheffield University by Dr D.N. Riley).

The strongest mark on the photographs is made by a ditch, which can be seen running for about 320 metres along the north side of the ridge, approximately 2 metres below its crest, before turning at the east end to run southwards for a further 175 metres across the tip of the ridge. The quality of this crop-mark varies, but a gap of 8 metres or so in the northern arm probably represents a genuine break, perhaps an entrance. At the junction of the northern and eastern arms, the ditch curves gently, avoiding the ring-ditch of Barrow III by less than 5 metres; if the bank

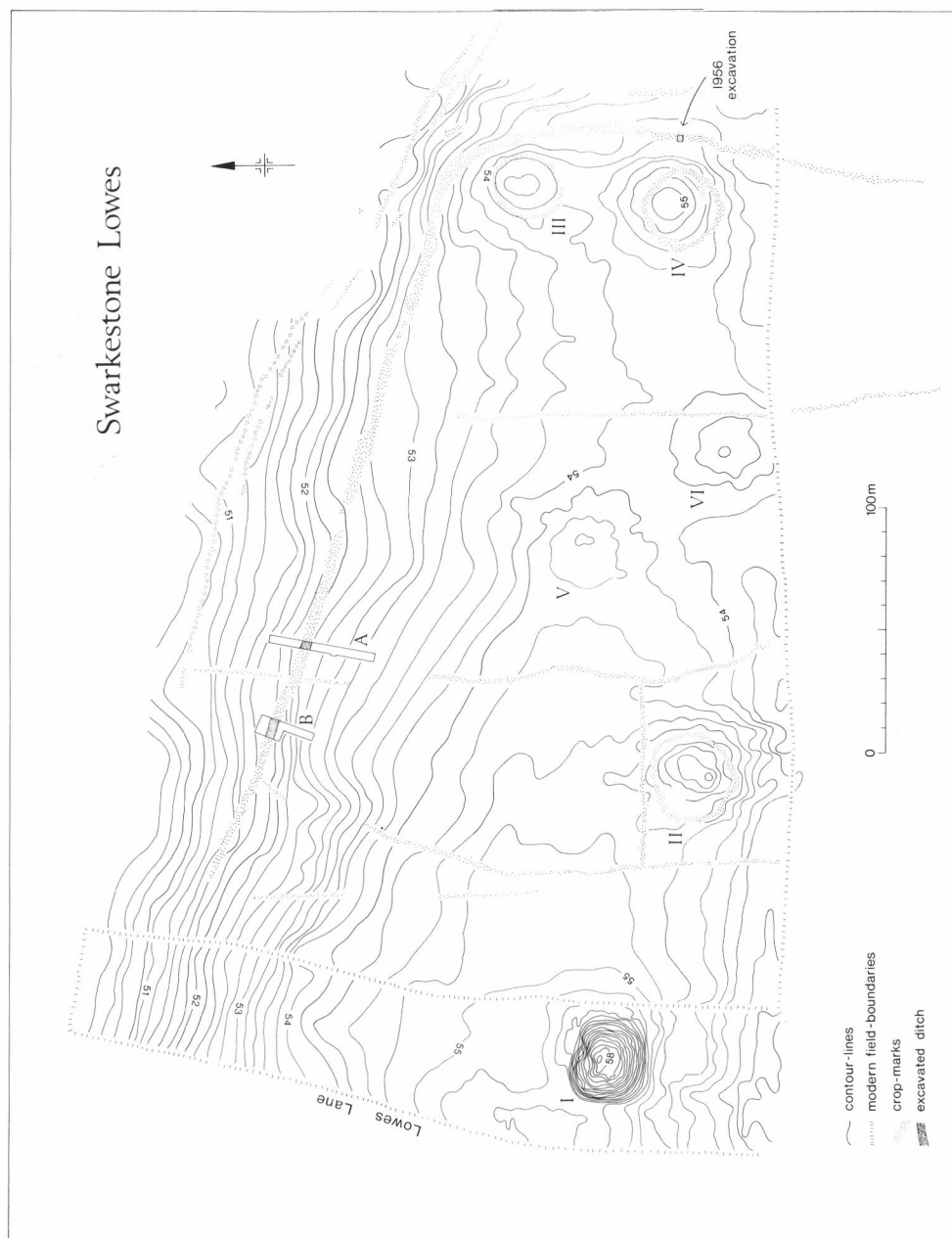


Fig. 2 Swarkestone Lowes. Contours at 0.2 metre vertical interval, numbered in metres above Ordnance Datum, showing Barrows I-VI, crop-marks, Trenches A and B, excavated lengths of ditch, and modern field-boundaries. Scale 1:3000.

constructed from the spoil of ditch-digging lay within the curve, it can hardly have stood separate from this barrow. Further south, the ditch passes only 12 metres east of Barrow IV. In 1956, a section was excavated across this ditch adjacent to Barrow IV (Fig. 2), but nothing was found to date it (Greenfield, 1960: 10). The discovery of part of a Beaker settlement beneath Barrow IV led to more speculation about the date of this ditch (O'Brien, 1978: 9). However, as noted above and described below, the 1983 excavations have demonstrated that the ditch was not contemporary with either the barrow-cemetery or the Beaker settlement. At the west end, the crop-mark of this ditch ends short of Lowes Lane, but its line is continued to the west of the Lane by a modern field-boundary standing on a positive lynchet. There must be a possibility that this boundary perpetuates the line of, or even incorporates, the ditch, which is now detectable to the east of the Lane by nothing more than the crop-mark. The relation of this line to the enclosure-cluster described below is of some interest since they may well be broadly contemporary.

Three narrower linear crop-marks extend across the ridge-top to the south of the northern arm of the wider ditch described above, and at least one of these also extends some way to the north of it. A fourth follows a similar alignment to the wider ditch, at a short distance to the east of its eastern arm. Together, they appear to form a system of land-division, comprising three elongated units between 70 metres and 130 metres wide, the westernmost of which was further sub-divided by a cross-ditch just to the north of Barrow II. Trench B revealed another possible element in this ditch-system (see below), while another development may be represented by the diverging lines of the western cross-ridge ditch towards its north end.

Another undated linear boundary is formed by a double pit-alignment running along the north slope of the ridge, 2-4 metres below the summit, and converging eastwards upon the most marked linear ditch but not conflicting with it at any point. In places, the crop-marks of this alignment disappear or the pits blur to form a continuous mark, but in general it is traceable for 300 metres or so. Both lines of pits are slightly sinuous, but appear to lie a consistent 5 metres or so apart. Between them, a dark crop-mark may reflect disturbed subsoil, one possible cause of which may be trampling on a trackway, though it could equally be due to the former existence of a central bank (an interpretation favoured by Riley, based on excavated evidence, to explain the double-ditched boundaries in north Nottinghamshire and South Yorkshire — 1980: 23, 77). Pit-alignments show as crop-marks on several sites in the Trent Valley, and an excavated example at Catholme, near Barton-under-Needwood in Staffordshire, is arguably of late-prehistoric date (unpublished excavations by the writer). The Catholme pit-alignment was replaced by a ditched boundary, and a similar relationship could explain the presence of these two types of feature at Swarkestone Lowes.

To the west of Lowes Lane, a cluster of ditched enclosures is visible on air-photographs as substantial crop-marks (Fig. 1:C). In the eastern part of the cluster, three enclosures with intervening trackways each encompass an area of approximately 0.2 hectare. Another enclosure of similar size lies approximately 75 metres to the west. In 1961, five small trenches were excavated across the ditches of the two most easterly enclosures (Cummins, 1961). This produced both scored wares and later fine wares of the Iron Age, but the majority of the pottery is Romano-British, ranging from the first to the fourth centuries AD (as identified by R. Leary).

1983 EXCAVATIONS

The excavations were undertaken by the Trent Valley Archaeological Research Committee (now Trent & Peak Archaeological Trust) in anticipation of the Derby southern bypass. They were funded by the Department of the Environment (now English Heritage) and Derbyshire

County Council. The excavation, field-walking and survey records are housed in the Derbyshire County Council Sites & Monuments Record, with selected copies deposited at the City Museum in Derby, together with the finds.

Trench A (Fig. 3)

Trench A was intended not only to locate and date the main crop-mark ditch but also to identify any other features, in particular traces of prehistoric settlement, on the line of the proposed new road. At the position chosen, this trench extended more to the south (upslope) of the ditch than to its north (Fig. 2). It was 45 metres long, and a little under 6 metres wide.

Modern plough-soil was stripped mechanically to about 0.20-0.25 metre, revealing mainly undisturbed sand and gravel in the northern third, and areas of light-brown sand or grey clay-silt elsewhere. The surface of both the clay-silt and the sand had small marl inclusions to about 0.05 metre depth; this thickness was removed by shovel-cleaning. Excavation of the light-brown sand showed that it filled two medieval furrows running south-east to north-west, and part of a third was identified in the north-east corner of the trench (dotted outline with hachures in the plan in Fig. 3). The grey clay-silt formed a thin capping over the sand and gravel with a maximum depth of 0.10 metre, becoming progressively thinner towards the south end of the trench. Dr H. Keeley (of the Ancient Monuments Laboratory, English Heritage) has suggested that the grey clay is probably a remnant of a glacial deposit of similar origin to the boulder-clays recorded by the Geological Survey to the north and east of Swarkestone Lowes (Fig. 1:B).

The three furrows were probably part of a furlong in 'Mill Field' (Senior, 1633), and may date from as early as the twelfth century according to pottery recovered from the Barrow IV excavation (Greenfield, 1960: 39). Presumably the ditch, numbered 5 in Figs 3 and 4, was no longer sufficiently prominent at that time to dictate the position of the headland, which was formed elsewhere. A line of at least eight post-holes, and possibly another four at its northern end, cut through the medieval plough-soil; if not part of a building, their location along the medieval ridge suggests they might represent seasonal or even permanent land-closing. The line of post-holes pre-dated Ditch 6, which may have marked the south side of a race-track on the northern part of its circuit; the extent of the race-track is implied in the names of some fields (among those indicated by hatched lines in Fig. 1:C) recorded in a survey in the mid-nineteenth century (Bromley, 1844). Ditch 6 was shallow and irregular, suggesting that it was cut across the ridge-and-furrow before the latter was completely flattened. A drainage-trench filled with rubble (17) was dug roughly parallel to the putative race-course boundary. At some time, perhaps while the race-course was in service, the field was ploughed, with the result that ridging, represented by the base of a small furrow (26), developed parallel to Ditch 6.

Emptying of the medieval furrows exposed the fill of Ditch 5. A line of seven closely-spaced post-holes was cut into the top of the ditch, their dark sandy fill contrasting with that of the ditch, which showed at this stage as a gravelly spread in the west and as dark-grey sand-silt in the east. The post-holes survived to depths of between 0.15 metre and 0.05 metre, the shallower ones being at the eastern end. The ditch was cut into undisturbed layers of sand and gravel for much of the excavated length, but near the eastern side of the trench it was dug through a large irregular pocket of red clay (boulder-clay has often been observed as inclusions in fluvio-glacial gravels — Rice, 1968: 348). Ditch 5 was 3.6 metres wide at the eastern limit of excavation, narrowing to 3.0 metres beneath the furrow at the west, and survived to an average depth of 1.25 metres below the base of the medieval plough-soil. It had a flaring V-profile, resulting from the weathering of an originally steeper-sided ditch, perhaps 3.0 metres or so in width at the top.

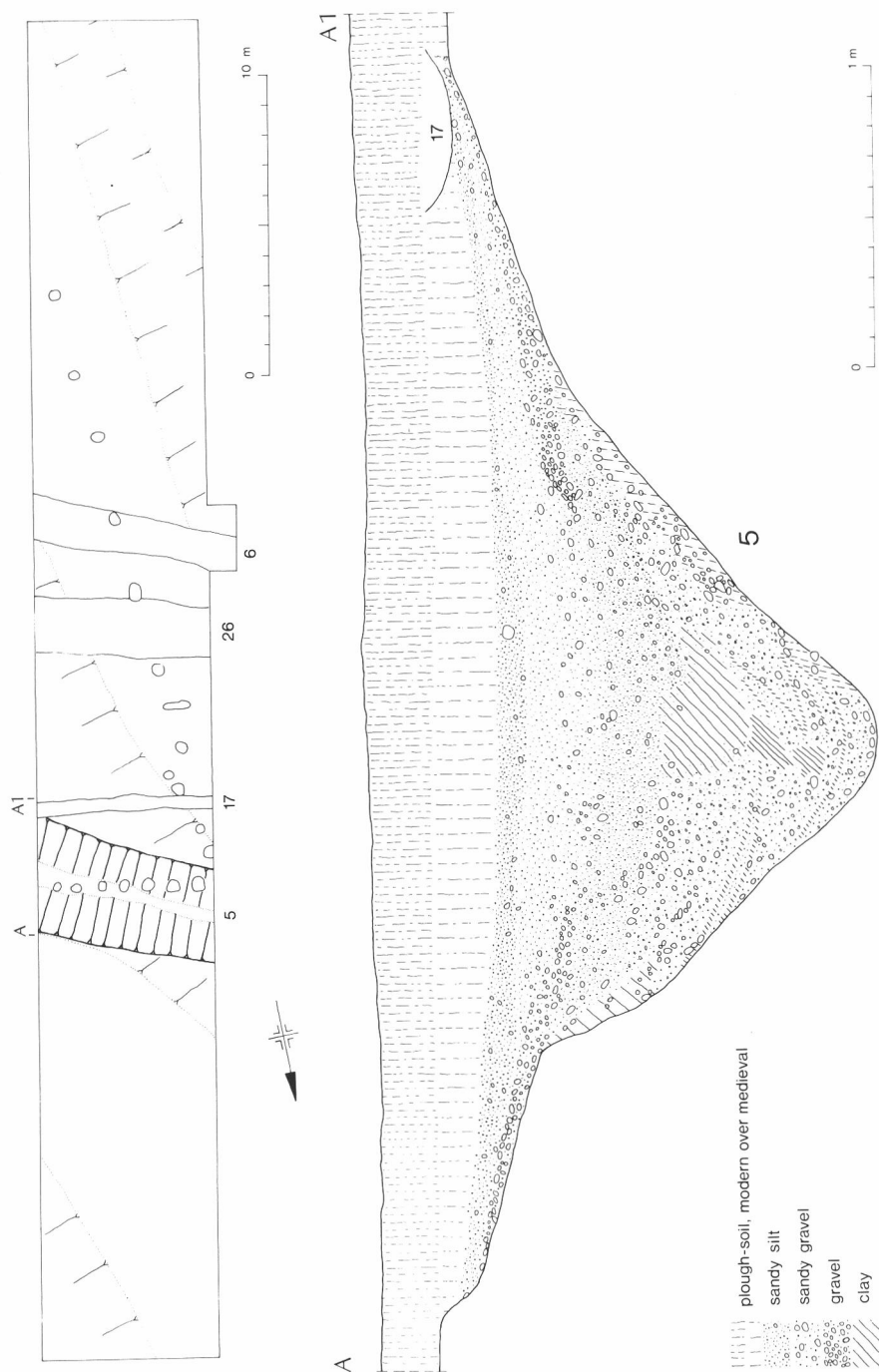


Fig. 3 Swarkestone Lowes. Trench A: plan at 1:250 (upper) and ditch-section at 1:25 (lower).

The fill of the ditch can be described as comprising two main zones. The upper fill consisted of mainly sandy silts with relatively few pebbles, except for two distinct gravel layers near the margins of the ditch. The sandy silts were grey and flecked with iron-pan towards their base, paler (perhaps due to leaching) in the middle, and dark grey/black at the top. The darkness of the top band could result from its relative richness in humus, and it may therefore represent a period at which the process of ditch-filling had halted before medieval ploughing. The interleaved gravel layers on each side of the ditch perhaps comprised material derived from banks originally thrown up from the ditch in combination with that weathered out of the ditch-scarps.

The lower fill, 0.6-0.7 metre thick, comprised layers of sand, gravel, clay-silt, and clay. The last included two distinct deposits (hatched in Fig. 3): thick homogeneous clay lumps of irregular polygonal outline, probably derived from the grey clay capping the natural sands and gravels — these could have collapsed into the ditch from the eroding scarps — and thin bands of clay, mainly in the eastern part where the ditch was cut through the patch of red clay. In this eastern part, the lowest sediments were saturated by water, presumably because the drainage had been impeded by the clay on the edge of the ditch. A small fragment of uncharred wood was preserved on top of one of the lower clay bands, 0.15 metre from the ditch-bottom. The wood, identified as poplar by Mr D. Haddon-Reece (of the Ancient Monuments Laboratory), was submitted to the Isotope Measurements Laboratory at Harwell, and produced an uncalibrated radiocarbon-date of 2280 ± 80 BP (HAR-6497). On calibration by the intercept method with the Stuiver and Pearson (1986) curve, this becomes 402-353 and 308-234 cal BC at 68% confidence limits, or 520-170 cal BC at 95% confidence.

Trench B (Fig. 4)

The absence of any features which might be contemporary with Ditch 5 in Trench A allowed time for further investigation of the ditch itself, and a second trench, B, was opened with similar objectives. Trench B lay 30 metres to the west of A (Fig. 2). It was also positioned within the threatened strip of the Lowes, as close as possible to a former damp area of the field (as reported by the farmer, Mr J. Prince), in the expectation that this might increase the chances of obtaining further waterlogged wood for radiocarbon-dating. After the removal of the plough-soil, it became clear that few archaeological features could have survived the medieval furrows, and it was decided to excavate a greater length of the ditch. Trench B therefore became L-shaped, with a maximum length of 23.5 metres and width of 8.2 metres. In the event, the ditch was here found to be cut into well-drained sand without pockets of clay to impede drainage, with the result that no further datable material was recovered.

Mechanical removal of the plough-soil exposed a mottled brown-orange sand with a high silt content. This was cut by three furrows, one of which was cut in turn by two linear features, the alignment of which means that they can reasonably be identified with drainage-trench 17 and small furrow 26 in Trench A. Apart from Ditch 5, two other features pre-dated the medieval plough-soil: one was linear (23) and was cut into Ditch 5 (discussed below); the other (25) was only a few centimetres deep, had maximum dimensions of 2.0 x 1.4 metres, was filled with a blue-yellow clay, and is of unknown function and date.

Ditch 5 was of similar depth to the length excavated in Trench A. It was at least 3.4 metres wide at the top and had a flaring profile which differed from that in Trench A by narrowing in the bottom 0.4 metre to a nearly vertical 0.5 metre-wide channel, which followed a slightly sinuous course and became less marked westwards. At the western limit of Trench B, the ditch had a profile more directly comparable to that seen in Trench A.

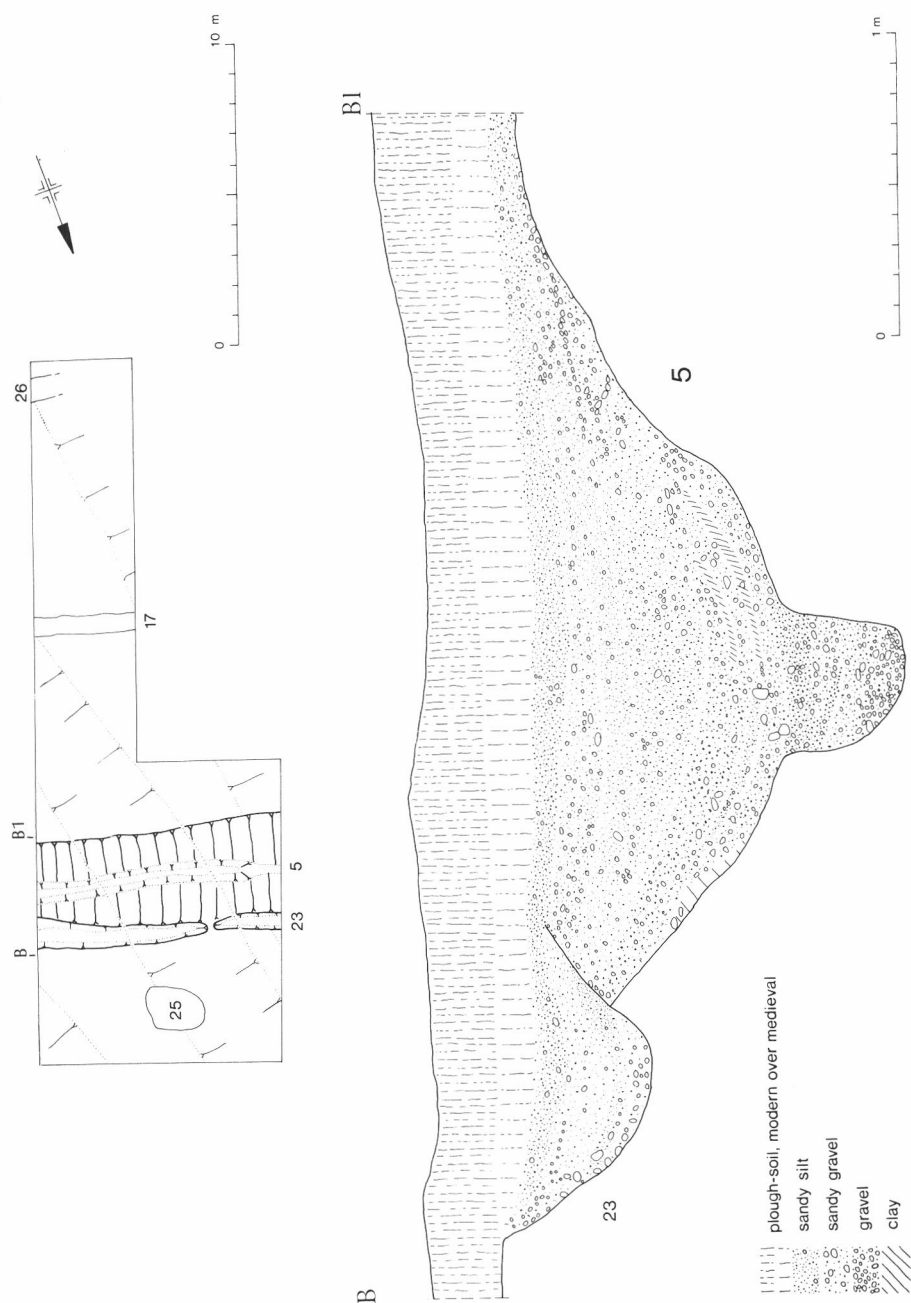


Fig. 4 Swarkestone Lowes. Trench B: plan at 1:250 (upper) and ditch-section at 1:25 (lower).

The sequence of the ditch-fill was broadly similar to that in Trench A, though the lower fill lacked the polygonal lumps of grey clay and the upper silts here became progressively thinner towards the west end, where only the dark top silt and part of the pale horizon were recorded. Medieval plough-soil filled the top of the ditch even where it lay between the furrows, suggesting that the ditch remained visible as a slight hollow until that time. Three sherds of Romano-British Derbyshire Ware, dating from the second to fourth centuries AD, were found in Trench B: one on top of the uppermost dark silt, another within it, and one within the paler silt.

The upper dark sandy silt of Ditch 5, though not the paler layer beneath it, appeared to overlap the fill of small Ditch 23, which had been cut into the north side of Ditch 5. To judge from the evidence of the postsherds noted above, Ditch 23 could have been dug at any time from the Roman period onwards. It was discontinuous at the level of excavation, with well-defined butt-ends flanking a gap of 0.25 metre. It had a blunt V-profile, at the top varying in width from about 0.6 metre to over 1.0 metre, and surviving below the base of the modern plough-soil to a depth of 0.52 metre in the eastern part and 0.30 metre in the western. It was filled with sandy silt, which became darker towards the bottom, with many more pebbles in the western length than in the eastern. As Ditch 23 was not located in Trench A, it may be supposed that it extended only between the two westernmost cross-ridge ditches identified among the crop-marks, and that it may therefore have been a part of that same field-system (see above).

CONCLUSIONS

The 1983-4 contour-survey has shown that the Bronze-Age barrow-cemetery on Swarkestone Lowes probably contained two more mounds than have been recorded previously, making six in all. However, excavation has demonstrated that a ditch seen on air-photographs as circumscribing two sides of the cemetery is more recent than the cemetery itself. A fragment of water-logged wood recovered from low in the ditch-fill has given a radiocarbon-date which places it in the second half of the first millennium BC. The size of the ditch suggests that it was not intended for any defensive purpose, and it seems more reasonable to suppose that it formed some kind of land-use boundary. Iron-Age pottery recovered from earlier excavations of two of the barrows, and Romano-British pottery from both excavation and field-walking, perhaps relate to this episode of activity on the ridge-top. A short distance to the west, a similar range of pottery has been recovered from an enclosure-cluster which may represent a nucleated farm of the period.

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