

# Excavation and Survey at Watchfield, Oxfordshire, 1983–89: An Interim Report

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## SUMMARY

*Geophysical survey and trial excavation has demonstrated that early Anglo-Saxon burials and Iron Age settlement features discovered during road construction in 1983 were part of an extensive multi-period site first occupied in the late Mesolithic.*

The multi-period site at Watchfield was discovered in 1983 during construction of the A420 Shrivenham By-Pass, when mechanical excavation of drain trenches disturbed early Anglo-Saxon inhumations. This prompted a week's salvage excavation by Oxford Archaeological Unit on the line of the new road, already partially graded for a cutting, which recovered further Anglo-Saxon inhumations, early-middle Iron Age settlement features and a scatter of late Neolithic-early Bronze Age flints.<sup>1</sup> In 1985, Alistair Bartlett of the Ancient Monuments Laboratory, H.B.M.C.E., carried out a magnetometer survey north and south of the area investigated in 1983, which showed that it was part of a larger complex of archaeological features extending over at least 3 ha. Unfortunately, the damaged and fragmentary sample excavated in 1983 allowed only the most general interpretation of the site, and neither the magnetometer survey nor resistivity survey later carried out in 1988 could convincingly identify graves or discriminate satisfactorily between features belonging to different periods, although the intersection of some linear features confirmed multi-phase activity. Five week's excavation in July and August 1989 was intended to clarify interpretation of the site, and to provide a foundation of understanding upon which more specific research questions or sampling strategies might be framed in the future. It had three specific aims: to define the limits of the cemetery and the density of graves, and to determine whether or not cremations were present; to assess in more detail the character of prehistoric activity on the site; and to evaluate the preservation of the archaeology. Controlled excavation of a small number of graves also afforded an opportunity to investigate the soil conditions and their effect on the Anglo-Saxon burials. Skeletal remains, grave goods and soil samples are being analysed at the Universities of Durham and Bradford as part of complementary programmes of research.

The 1983 salvage excavation was supervised for Oxford Archaeological Unit by R.A. Chambers and Christopher Scull. Fieldwork and excavation in 1988 and 1989 was

<sup>1</sup> C.J. Scull, 'A sixth-century grave containing a balance and weights from Watchfield, Oxfordshire, England', *Germania* 64 (1986), 105–38.

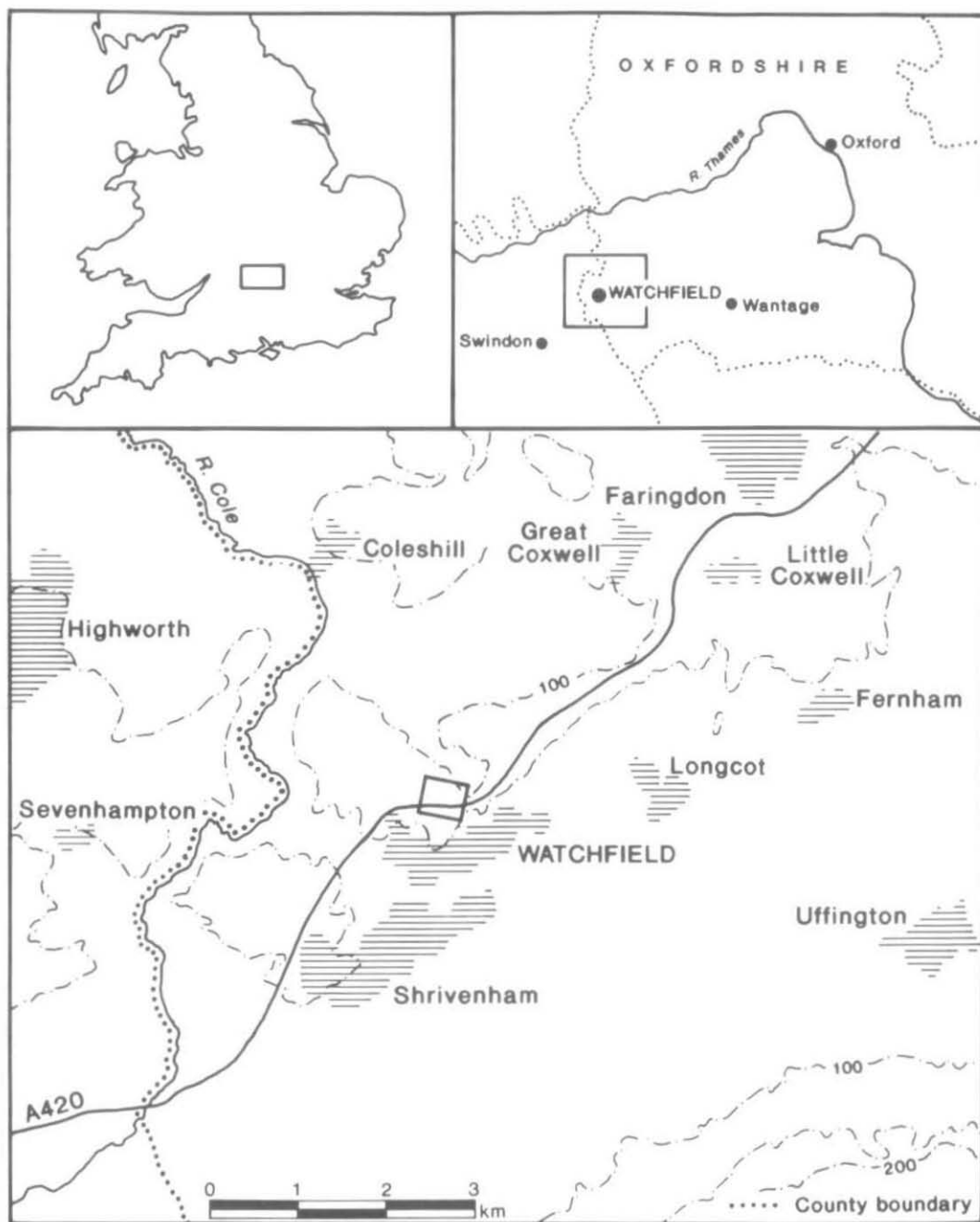


Fig. 1. Location Map.

directed by Christopher Scull, Dept. Archaeology, University of Durham. The 1983 finds are at Oxfordshire County Museum, Woodstock, where material from the 1989 excavation will also be housed. A full report of all work since 1983 is in preparation; this article is intended to serve as a brief interim statement.

#### LOCATION

Watchfield village is in the Vale of the White Horse, on the southern edge of the corallian ridge 32 km. south-west of Oxford and 8 km. north-east of Swindon. The site is c.500 m. east and north of the village, on a low north-south ridge which rises from c.100 m. to 107 m. asl. The subsoil here is a cohesive sandy clay, and iron pan has formed as a result of a perched water table and periodic waterlogging; the new road cutting, however, must have affected groundwater conditions. The fields north and south of the area investigated in 1983 are under pasture, and have been since 1942 when Marsh Field, as it was then known, was taken out of cultivation when a radio direction-finding post was established just north of the line of the modern road. Upstanding ridge-and-furrow in Marsh Field was deliberately ploughed-out between 1931 and 1942; a part of the same field system still survives under pasture further to the north of the site.<sup>2</sup>

#### SALVAGE EXCAVATION, 1983

Mechanical grading had removed topsoil and subsoil to depths of up to c.0.80 m., and the machinery had churned and compacted the graded surface. This overburden was machine-stripped over an area of c.1700 sq. m., and the archaeology planned and selected features excavated. Eighty-one feature numbers were allocated during the week's excavation.

Six inhumations were disturbed by the drain trenches north and south of the road line, and a further 20 identified and excavated within the graded area. None of the latter was more than a few centimetres below the machined surface, and skeletal remains had been broken and crushed by the weight of machinery. In some cases only fragmentary remains survived; some burials, however, may already have been damaged by ploughing, as excavation in 1989 demonstrated. Unstratified human skeletal material brings the minimum number of individuals to 31, but very probably a considerable number of burials was destroyed without trace; a further 4 excavated features might have been the severely damaged remains of graves.

The graves were aligned west-east or north-south. Grave goods were recovered from 19, and date the excavated burials to the late 5th and 6th centuries A.D. One particularly important grave group, including a balance and weights and a runic inscription, has already been published in more detail.<sup>3</sup> Another male grave contained a spearhead, shield boss and knife, a sword with a pattern-welded blade, and a copper-alloy cauldron; grave goods from female burials included gilded copper-alloy saucer brooches, and among unstratified finds were another copper-alloy cauldron, bucket-bindings, and part of another pattern-welded sword blade. The age of 23 individuals and the sex of 20 can be determined: 5 were juvenile or adolescent, the remainder adult; 10 were men and 10 women.

<sup>2</sup> I am very grateful to Mr F. Clarke of Watchfield, who farmed this land until 1961, for this information.

<sup>3</sup> Scull, *op. cit.* note 1.

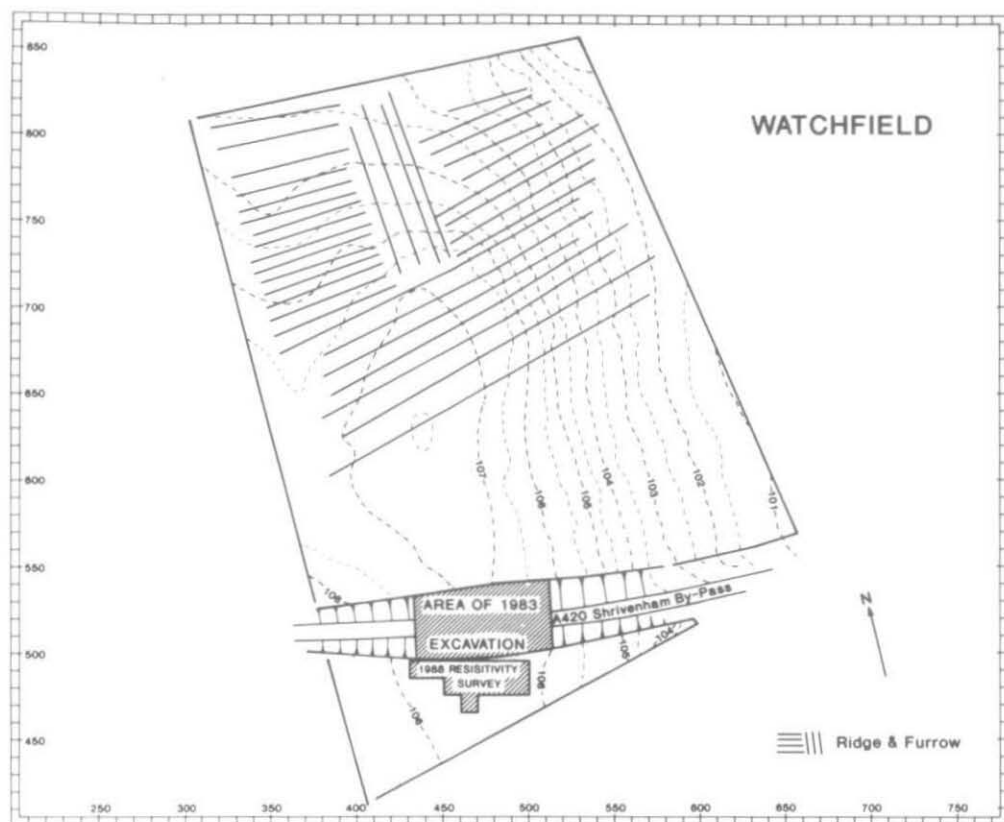


Fig. 2. Areas of excavation in 1983 and resistivity survey in 1988.

Despite the severe truncation of the archaeological levels, post-holes, pits and ditches occurred all over the area investigated and, where excavated, contained early-middle Iron Age pottery. A further concentration of settlement features and a curved length of ditch, recognised on the graded surface east of the excavated area, were not investigated further. No convincing building plans were identified.

Sixty-nine humanly-struck pieces of flint were recovered. Three bladelets are possibly Mesolithic; the remainder are probably later Neolithic. None was from a primary context.

#### GEOPHYSICAL SURVEY

The 1985 magnetometer survey was undertaken to assess the extent of the site and revealed an extensive complex of archaeological features.<sup>4</sup> The 1988 resistivity survey was in an area not fully covered by the magnetometer survey, and intended for excavation. The soil was responsive to geophysical prospecting, but despite the generally good results neither technique proved capable of identifying graves convincingly, as excavation in 1989 demonstrated.

<sup>4</sup> A. Bartlett, Ancient Monuments Laboratory Report No. 4976.

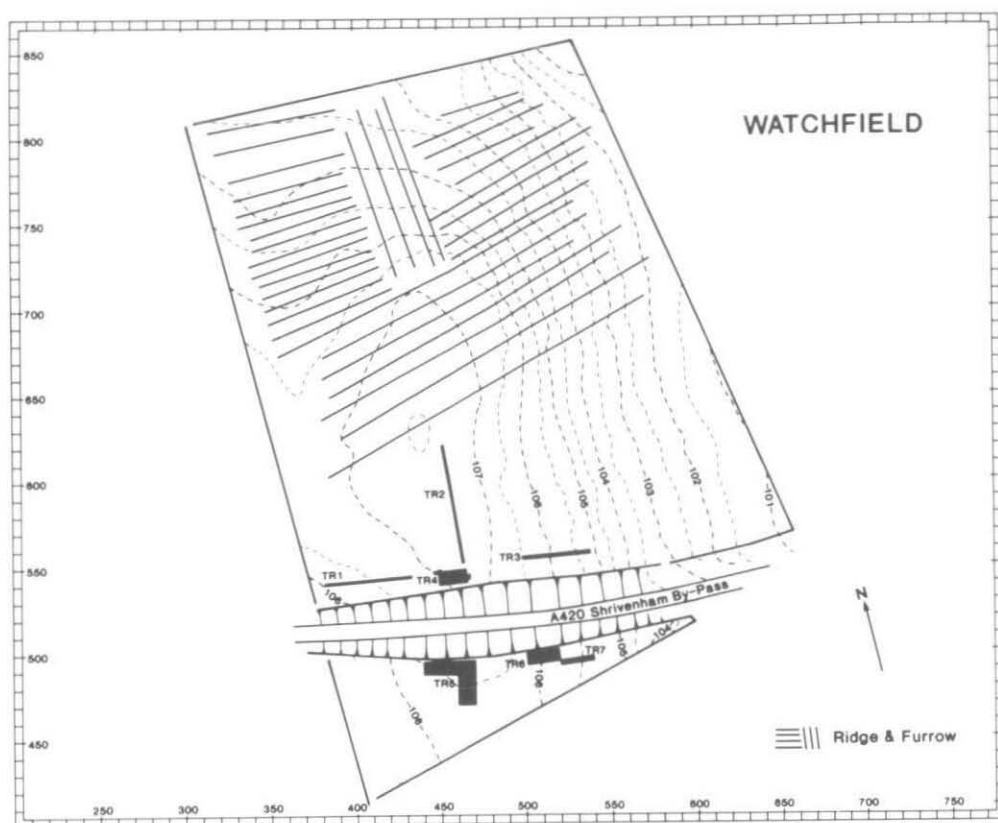


Fig. 3. Areas excavated in 1989.

The following discussion is provisional, and interpretation is partly retrospective, based on the results of the 1989 excavation as well as information available from geophysical survey alone. A full discussion and interpretation of the results of both the magnetometer survey and the resistivity survey will appear in the final report.

#### *Magnetometer Survey (Figs. 4–6)*

Readings were taken over 1 m. traverses over 30 m. grid squares with a fluxgate gradiometer, which produced a graphic print out of consecutive traces in which anomalies appear as peaks and troughs. This is reproduced in Fig. 4. Figs. 5 and 6 should be regarded as provisional interpretations only; Fig. 6, in particular, is selective, showing only major linear features and not the many pits or similar features identified by the magnetometer survey.

The large anomaly and strong linear anomalies north of the road in grid squares 10, 11, 15 and 16 very probably mark the site of the second world war direction-finding post and associated features, and the group of strong anomalies south of the road at the south edge of grid squares 32 and 33 is probably caused by another modern feature, a well. Several

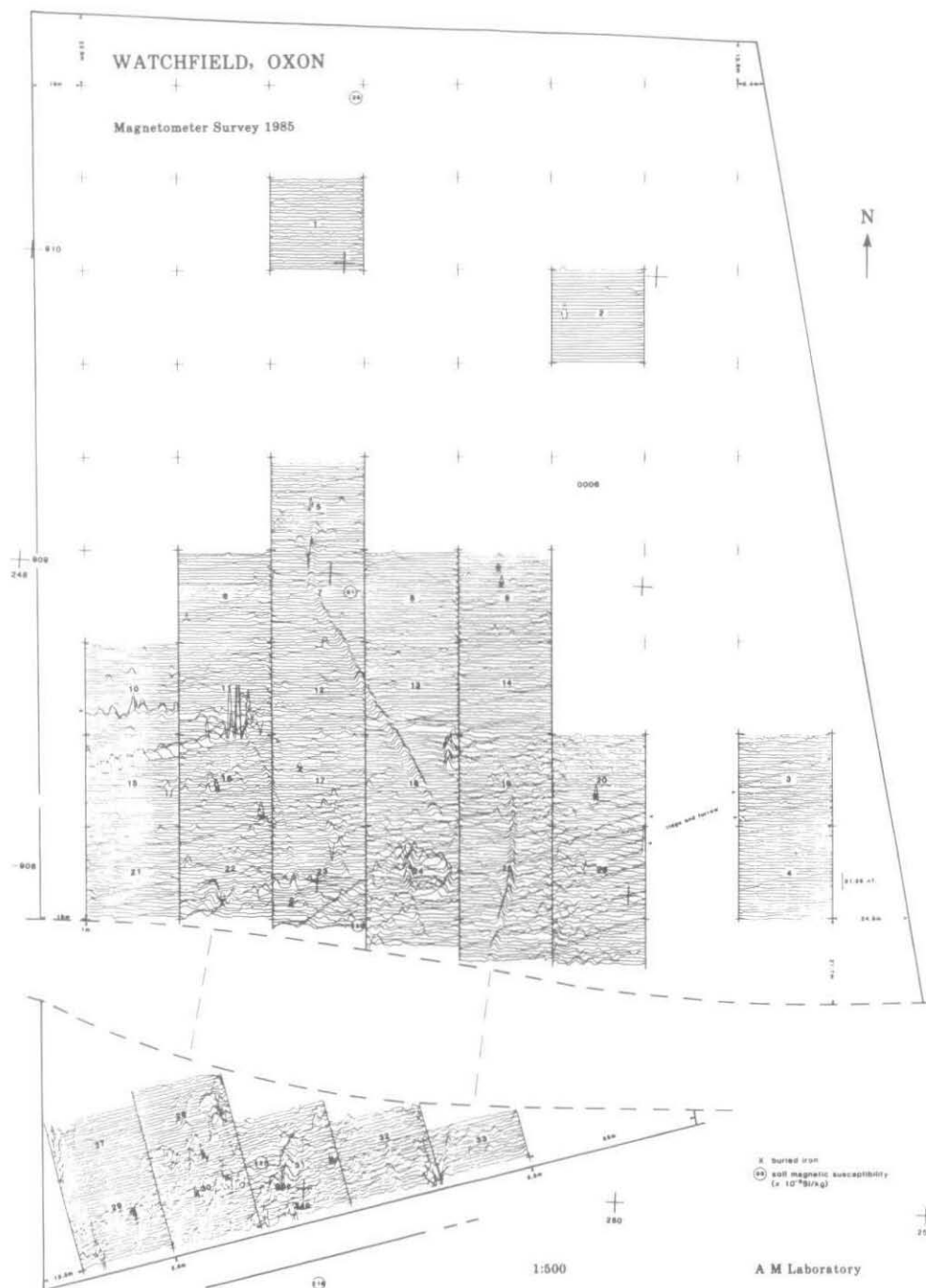


Fig. 4. Magnetometer survey, 1985.

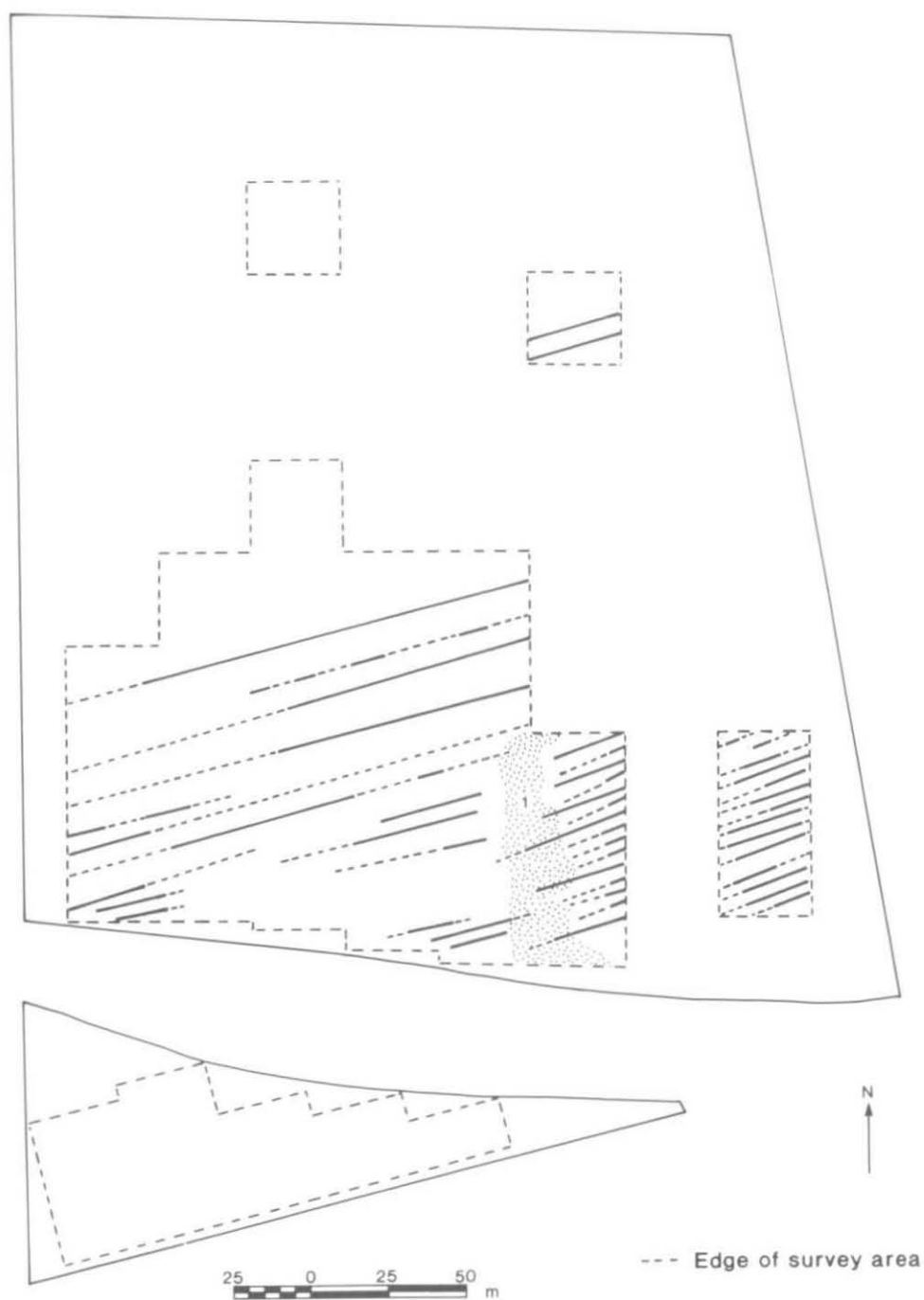


Fig. 5. Plough marks and possible headland identified by magnetometer survey.

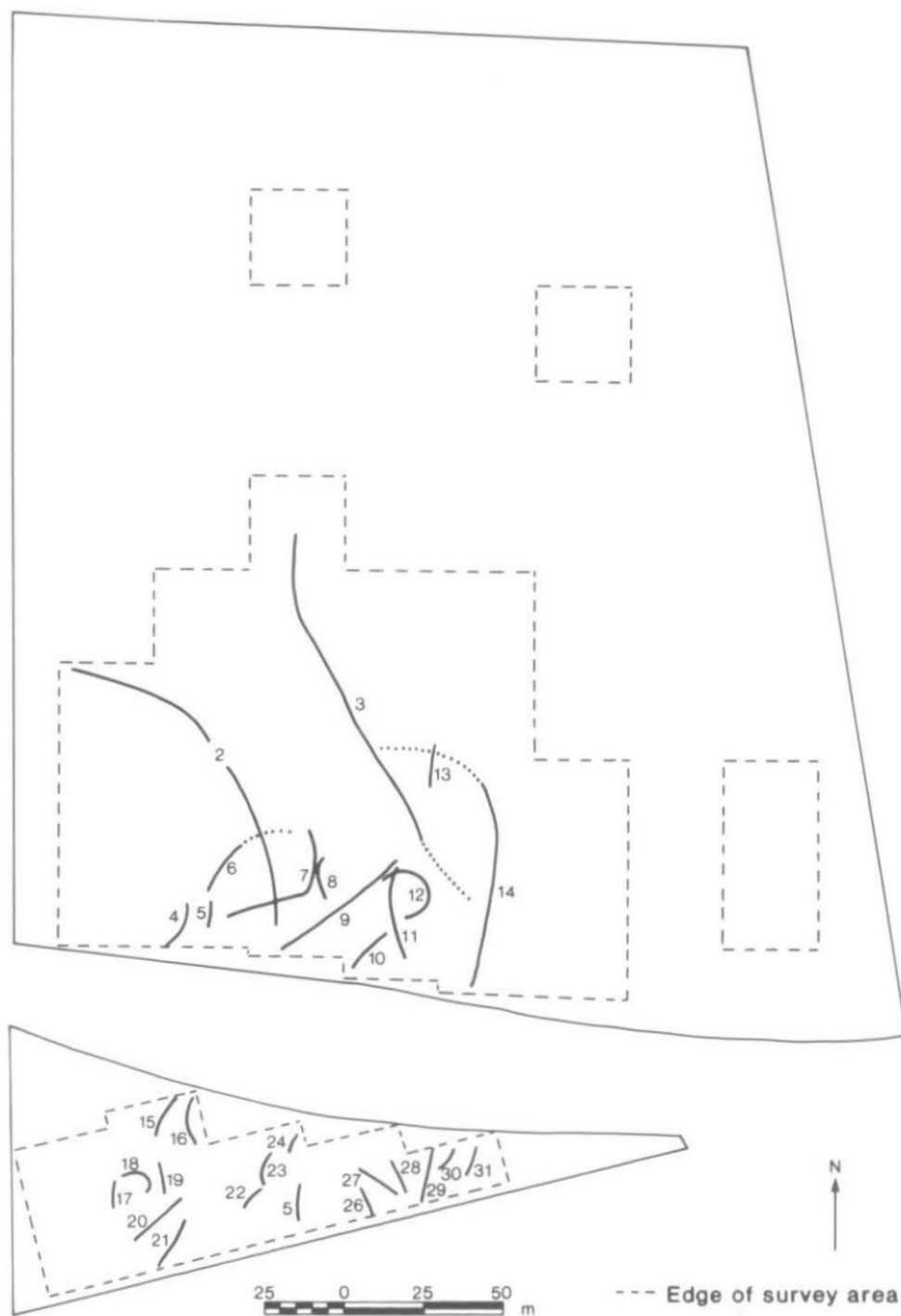


Fig. 6. Prehistoric and probable prehistoric features detected by magnetometer survey.



sharp peaks, marked 'X', probably indicate buried metal. This need not be ancient, and the peaks are unlikely to have been caused by Anglo-Saxon grave goods as they occur outside the known area of the cemetery.

Traces of levelled ridge-and-furrow are apparent over most of the survey area north of the road (Fig. 5). The absence of ridge-and-furrow south of the road is more apparent than real. Here the magnetometer traverses are along the line of the ploughing, and so the peaks do not show; resistivity survey and excavation both confirmed ridge-and-furrow south of the road. Where excavated in 1989, the lines of peaks on the magnetometer plot corresponded with the furrows of the levelled ridge-and-furrow. At the north of the area surveyed, however, upstanding ridge-and-furrow survives, and the most northerly line of peaks on the magnetometer plot of the main area, and those in grid square 2, coincide precisely with the optically-surveyed lines of ridges. This suggests that where upstanding ridge-and-furrow survives, the bulk of magnetically susceptible soil may be concentrated in the ridges, whereas the bulk of magnetically-susceptible soil may be concentrated in the furrows where ridge-and-furrow has been levelled by later cultivation. Two patterns of ploughing can be distinguished: one in which the furrows are c.5 m. apart; the other, on a slightly different alignment, with furrows 10–12 m. apart. The narrower ridge-and-furrow shows clearly in grid squares 3, 4, 20 and 26, but can be detected only intermittently further west, where it appears to be overlain by the broader ridge-and-furrow, which would therefore appear to be later; excavation in 1989 appeared to confirm this. Feature 1, identified during excavation in 1989 as an accumulation of heavy stony soil, may be the remains of a headland or field boundary associated with this later ridge-and-furrow.

Prehistoric activity is represented by many small anomalies, probably caused by pits, and by a number of major anomalies which can only indicate ditches or other substantial features (Fig. 6). When plotted, these resemble a multi-period cropmark palimpsest, and it is clear that they are not all contemporary. The location of several features was confirmed in 1989, and two, Features 9 and 16, were sectioned; both proved to be ditches. Feature 29 is very probably the continuation of Feature 14, and it is possible that this is a boundary ditch to the Iron Age settlement, but as yet any detailed interpretation of the complex must remain speculative. It does seem likely, however, that the archaeology continues south of the area surveyed, into fields currently under cultivation.

#### *Resistivity Survey (Fig. 7)*

Readings were taken at 0.50 m. intervals over 10 m. grid squares. The numerical data was processed using the 'Geoplot' graphics programme, and is presented here in dot-density format. This is an 'inverse' print in which low readings, indicating negative features, are represented by areas of high dot density.

Details not apparent from the magnetometer survey were revealed. Furrows of the broad ridge-and-furrow are clear, also linear and curvilinear anomalies, almost certainly ditches. Extensive resistivity survey would certainly produce an accurate plot of major features, but excavation showed that the readings given by shallower features might easily be misinterpreted and that many features, including graves and shallow ditches, had not registered at all.

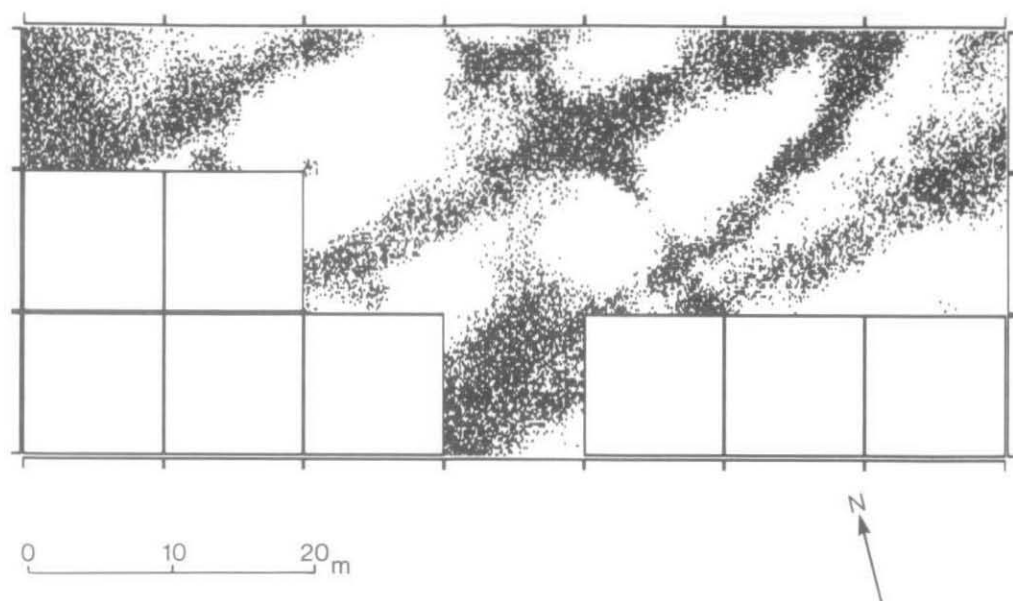


Fig. 7. Resistivity survey, 1988.

#### EXCAVATION, 1989

After test excavation of a small area entirely by hand, a total of 1900 sq. m. was machine-stripped to the base of the ploughsoil, cleaned to define the archaeological features, and planned; selected features were then excavated. An over-riding priority was to limit disturbance of the archaeological levels to the minimum compatible with the aims of excavation; no features were excavated in Trenches 1, 2 and 3, and in Trench 7 only a plough furrow, which masked earlier features, was excavated. The combination of narrow trial trenches and more extensive open areas was adopted in the hope of defining the limits of the cemetery, and assessing preservation over as wide an area as possible, while also allowing larger areas to be sampled and the results of geophysical survey to be tested in detail. The depth of ploughsoil varied considerably over the area investigated. Plough furrows had disturbed the archaeological levels in all trenches, but downslope to the south and east, especially south of the road, the accumulated greater depth of ploughsoil appears to have protected the archaeology to some extent. On the crest of the ridge, however, the archaeology would be very vulnerable to modern ploughing.

The Anglo-Saxon cemetery extends north and south of the area investigated in 1983 (Fig. 8). Seventeen graves were identified, of which 14 (containing 15 bodies) were excavated. They included two infant burials, two superimposed inhumations and the double burial of a woman and very young infant; grave goods can all be dated to the 6th century A.D. Two urned cremations were also excavated. All the inhumations were orientated south-north except the infant burials, which were west-east. Some inhumations and both cremations had been severely damaged by ploughing. An unknown number of shallow burials, and some of those in the path of the deeper plough furrows, must have been ploughed-out in the past, and it is very likely that some of the damage



Fig. 8. Location of human burials excavated or recorded in 1983 and 1989.

attributed in 1983 to earth-moving machinery had been caused by ploughing. Deeper burials, however, survived intact below even the deepest furrows.

Trench 5 clearly located the western and southern edges of the cemetery, and the lack of burials in Trench 6 suggests that it was beyond the eastern margins of the cemetery proper, a conclusion supported by the positions of the easternmost grave found in 1983 and the single burial identified in Trench 3. No other evidence survived to suggest that the infant's grave and two cremations excavated in Trench 6 were part of a larger focus of burials, but other cremations may have been destroyed by ploughing. The number of Anglo-Saxon sherds in the ploughsoil may clarify this, and may possibly indicate whether or not there were originally cremations in the other areas investigated. North of the road, no graves were found in Trenches 1 and 2. A single grave, cut by a plough furrow, was identified at the west end of Trench 3, but was not excavated. Trench 4 appears to straddle the western limit of the cemetery. Two inhumations extended under the north balk, and were not excavated. One was very shallow and had been disturbed by ploughing; the other was deeper, and was identified by the top of the skull, exposed at the base of the ploughsoil. A third inhumation, also very shallow and, as it transpired, largely destroyed by ploughing, was excavated at the eastern end of the trench. It is possible that

there were originally more burials in the area of Trench 4, now ploughed-out, but the survival of a near-intact infant burial at the base of the ploughsoil in the centre of the trench argues against the complete destruction of a large number of burials here.

If the absence of graves in Trench 2 genuinely reflects the northern limits of the cemetery, the available evidence suggests that it covered *c.*0.36 ha. Extrapolating from the observed density of burials in Trench 5, this would suggest that there were originally *c.*360 graves, of which as many as half may have been in the area destroyed in 1983.

Two further inhumations, both of juveniles, were excavated at the southern end of Trench 5, away from the early Anglo-Saxon burials, and it seems likely that they lie at the northern edge of another cemetery. Both graves were deep and regularly cut, in contrast to the shallower early Anglo-Saxon inhumations, and there was some evidence that the bodies may have been confined. No grave goods were recovered, nor any other direct dating evidence, but bone from one of the inhumations has been submitted for radiocarbon dating.

Iron Age pottery was found in the ploughsoil from all the trenches, and features attributed to the Iron Age settlement occurred in all areas investigated except the northern end of Trench 2. Excavated features included shallow pits and postholes, and the ditch of what appears to be a sub-rectangular enclosure *c.*17 m. long was sectioned in Trench 5, where it cut the fill of a deeper Iron Age ditch, almost certainly Feature 16 on the magnetometer plot. Soilmarks of other ovoid or sub-rectangular enclosures were observed and recorded during road construction in 1983 by members of Shrivenham Local History Society. Stone-packed postholes with clear post-pipes excavated in the south-west corner of Trench 6 described an arc with a radius of *c.*5 m. and very probably belong to a post-ring house, the rest of which is outside the excavated area. Probable Iron Age features identified, but not excavated, in Trenches 1, 2 and 7 correspond to Features 4, 14, 29, 30 and 31 on the magnetometer plot. Charcoal from one Iron Age pit has been radiocarbon-dated to 460–230 B.C. at the 68% confidence level.<sup>5</sup>

The Iron Age features and later burials cut a buried soil, truncated by medieval and later ploughing, which survives to depths of up to 0.15 m. over the natural. Other prehistoric features, some of which show clearly as anomalies on the geophysical surveys, were barely visible against this horizon, or were completely masked by it. Feature 9 on the magnetometer plot was defined in Trench 4 only with the greatest difficulty. When sectioned, however, it proved to be a V-sectioned ditch 1.8 m. wide and over 1.5 m. deep. A little extremely friable pottery which has been thermoluminescence-dated to  $3400 \pm 1075$  B.C.<sup>6</sup> was recovered from this feature, but no later prehistoric material. It is possible, therefore, that the buried soil represents an episode of ploughing or cultivation which post-dates the earliest recognised prehistoric features, which the available evidence suggests are Neolithic.

One hundred and two worked flints were recovered (Fig. 9). None was from a primary context, and the majority was from the modern ploughsoil. The assemblage has been examined by Dr Robin Holgate, who considers that the quantity and range of implements and debitage indicate a late Mesolithic short-stay camp and late Neolithic–early Bronze Age occupation.

Flotation samples and faunal remains from the prehistoric features are being processed at Durham University.

<sup>5</sup> HAR-10242.

<sup>6</sup> DUR89TL138-1AS.

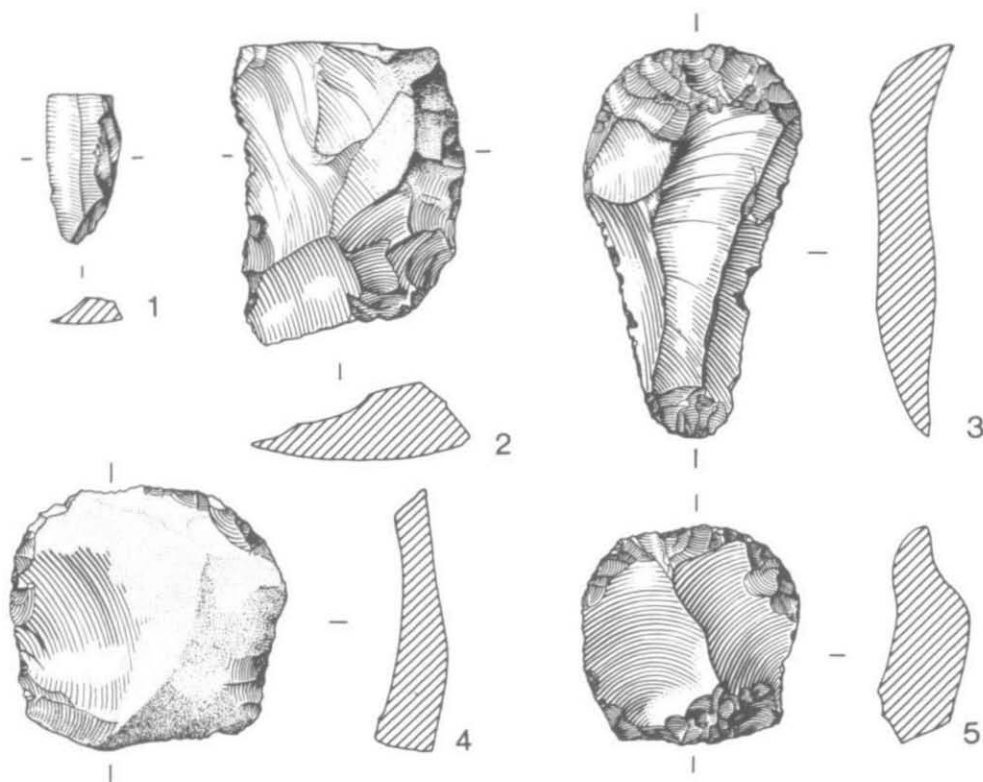


Fig. 9. Late Mesolithic (1) and late Neolithic-early Bronze Age (2-5) flint from the 1989 excavation. 1: microlith; 2: backed knife fragment; 3-5: scrapers. Scale 1:1.

## CONCLUSIONS

Excavation has shown that the sequence of activity is more complex than could have been predicted from the material excavated in 1983 and the results of geophysical survey. Neither magnetometer nor resistivity survey was able to identify graves, but geophysics proved invaluable in confirming the existence of substantial features which might not have been immediately recognised during excavation. The recognition of pre-Iron Age features complicates any detailed analysis of the palimpsest of features revealed by the magnetometer survey, and both the probable second cemetery and the earlier prehistoric material pose particular problems of interpretation which only large-scale excavation is likely to resolve in detail. It seems clear, however, that the ridge was not occupied continuously throughout prehistory, but was abandoned and re-occupied periodically, presumably as changing circumstances made it more or less attractive for settlement. The archaeology is well-preserved on the whole, but there is some plough-damage of long standing, and a considerable area, including what remains of the Anglo-Saxon cemetery, would be extremely vulnerable to any change in land use.

## ACKNOWLEDGEMENTS

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