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**M5 WIDENING
(WARNDON TO STRENSHAM):
ARCHAEOLOGICAL EVALUATION**

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Report 65

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M5 WIDENING (WARNDON TO STRENSHAM): ARCHAEOLOGICAL EVALUATION

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1 Summary

Evaluation of the area of the proposed motorway widening produced evidence for two previously unknown sites. Deposits and structural features relating to medieval settlement (HWCM 10176) were sealed below ridge and furrow at Junction 7 by Crookbarrow Hill. Evidence for Bronze Age activity came from the eastern edge of the field in which a cropmark complex (HWCM 2120) was located. In addition the Roman road from Worcester to Gloucester (HWCM 1150) was located where it is crossed by the motorway at Napleton, Kempsey.

2 Introduction

Following notification by the Department of Transport of its intention to widen the current dual two-lane stretch of the M5 motorway between Junction 6 (Warndon) and Junction 8 (Strensham and M50), an archaeological assessment of the area was completed by the Archaeology Section (Woodiwiss 1990). This identified nine areas where sites of known or potential significance may be affected by the road-widening (Fig 1). A field evaluation of five of these sites was undertaken with the support of English Heritage; the remaining four, all cropmark sites, were deemed not to be unduly threatened by the proposed works.

The field evaluation comprised visits to two sites to establish whether any earthworks associated with two medieval moats extended into the areas threatened by the motorway widening. In the remaining three areas sample excavation was undertaken in order to

determine the nature and condition of any surviving deposits. Due to the nature of the proposed development, the widening of an existing stretch of motorway, the scope for preservation *in situ* was accepted to be minimal, and this is reflected in the approach to the evaluation. The purpose of the evaluation was to therefore ascertain whether full excavation would be required for any of the sites.

This report falls into five main sections (3 to 7 below). Sections 3, 4 and 5 consist of reports of the three evaluation excavations. These were: at the motorway junction adjacent to Crookbarrow Hill (HWCM 10176); at Napleton, Kempsey, where the Roman road from Worcester to Gloucester meets the motorway (HWCM 1150); and on a cropmark site in a field adjacent to the M5 at Kerswell Green (HWCM 2120). Section 6 reports the results of site visits to areas near two moated sites (HWCM 10292 and HWCM 10420), and section 7 discusses the four sites where field evaluation was not undertaken. Since the cropmarks were not illustrated in the assessment report (Woodiwiss 1990), they have been reproduced here. In each section the site descriptions are ordered from north to south.

3 Evaluation east of Crookbarrow Hill (HWCM 10176)

The evaluation area lies to the south-east of Worcester, to the east of Crookbarrow Hill (Fig 2), on both sides of the motorway. To the west it consisted of the areas of the field bounded to the north-east by the slip road

leading towards Worcester, and to the south-east by the motorway itself (SO 876523). East of the motorway evaluation took place of an area bounded to the west by the motorway and to the north by the junction slip road (SO 877521). The evaluation was designed to assess archaeological deposits within the areas threatened by the motorway widening and the construction of the new roundabout junction which will replace the current arrangement of slip roads and small roundabouts.

The soil in the evaluation area belongs to the Whimple 3 association, described as reddish fine loamy or fine silty soils over clayey soils with slowly permeable subsoils. In general these overlie deposits of drift over reddish mudstone (Ragg *et al* 1984) which can be identified as Mercian Mudstone.

Immediately north-east of Crookbarrow Hill are the 17th century buildings of Crookbarrow Farm (HWCN 964), originally a medieval moated site of which part of the moat still survives (HWCN 963). Extensive ridge and furrow (HWCN 9462), on two alignments, survives in the field to the west of the motorway in which excavation took place.

Crookbarrow Hill (HWCN 552) is a scheduled ancient monument (Here and Worc 239), but the scheduled area is restricted to the hill itself. There has been considerable speculation about the nature of the mound; it has been suggested that it is natural or partly natural; it has been compared to Silbury Hill; it has been likened both to a barrow, and also to a motte (SMR). The name 'Crookbarrow' comes from two elements: the British *crouka* and the Old English *beorg*, both meaning 'hill' (Mawer and Stenton 1927, 178). From this it can be inferred that there was a hill here in the Saxon period, and probably before. A charter of AD 980 refers to the hill (Grundy 1931, 262-3), so on both counts the theory that it was in origin a motte can be discounted. Allies (1840, 70-3) considered it to be partly natural, and 'probably an ancient British Barrow'.

No previous survey or excavation has taken place on or around Crookbarrow Hill, although a number of isolated finds have come to light. A few Roman coins are alleged to have been found in a field adjoining the south-west side of the hill (VCH 1903, 219, citing Allies), and a Neolithic scraper was found in 1886 (Spackman 1907, 8).

Two 19th century maps were consulted; an 1826 estate map (HWRO BA 438/16 r705/27; Fig 7) and the tithe award map of c 1842 (HWRO BA 1572 760.617). From these it was possible to confirm the earlier field and road alignments.

Trenches were excavated by machine on both sides of the motorway. To the east three short trenches (Trenches 5, 6 and 7) were located in a field adjacent to the motorway and the slip road approaching the southbound carriageway. To the west four longer trenches were excavated; three alongside the motorway (Trenches 2, 3 and 4) and one beside the road leading towards Worcester (Trench 1). The deposits revealed by machining were cleaned by hand, photographed, drawn and recorded according to standard Archaeology Section practice (Archaeology Section Recording System AS1 02/88, AS2 02/88, AS3 06/87, AS5 06/87, AS8 02/88). Selected deposits were then excavated and recorded individually. A 4m x 4m extension to Trench 1 was excavated in order to investigate in greater detail some of the deposits revealed by the initial machining. The field to the south, which formed part of the proposed evaluation area, was not tested. This was because it had recently been planted, and the landowner would not allow access without an arrangement for compensation for crop damage. Casual fieldwalking along a footpath across this field produced no finds earlier in date than post-medieval. The limits of the earthwork ridge and furrow within the evaluation area were sketch plotted (Fig 2).

Trenches 2-7 revealed nothing of any archaeological interest, and they were

backfilled immediately. In all cases the ground had been considerably disturbed by the original construction of the M5; in the cases of Trenches 4-7 fragments of tarmac, bitumen, concrete, limestone rubble and other modern material were found at a depth of 0.70-0.80m. Trench 1, however, produced a number of features and these were analysed and phased (matrix, Fig 3). The pottery was scanned and spot dated by Victoria Buteux. Selected soil samples were sieved and examined for plant remains by Clare de Rouffignac (Appendix 1).

3.1 Phase 1 Natural marl

Undisturbed natural compact red-brown silty clay (contexts 30 and 39) with abundant flecks of manganese occurred below the ploughsoil over the majority of the trench. This was cut by the Phase 3 features.

3.2 Phase 2 Neolithic

During machining a leaf-shaped Neolithic arrowhead (Fig 6) was recovered from the evaluation trench; however it was not in a stratified context.

3.3 Phase 3 Medieval (13th/14th century) deposits

Ten features and two layers were assigned to this phase (Fig 4). These consisted of four small shallow round or oval cuts (32, 34, 36 and 43); a wide shallow feature (44); a straight gully (38); a curving gully (26) and three shallow amorphous cut features (23, 29 and 41). In addition there were two layers (24 and 27).

Of the round or oval features, one cut (32) measured 0.20m east to west, and 0.35m north to south. It was 0.14m deep, with slightly sloping sides and a rounded base. It was filled with a grey-brown loamy clay (31) containing occasional sherds of pottery and charcoal flecks.

The second shallow cut feature (34) was apparently sub-oval in shape, although it

extended beyond the excavated area to the south-west, measuring 0.4m north-west to south-east across its width. The sides of the feature were sloping; it was 0.05m deep, and the base was flat. No finds were recovered from the fill (33).

The third of the round features (36) was partially outside the excavated area. The part revealed was semicircular in plan, 0.60m in diameter, 0.08m deep, with gently sloping sides and rounded base. The fill of this feature (35) was a moderately compact red-brown silty clay containing occasional small pebbles and charcoal flecks. There were no finds. A sample from this fill was sieved, but no plant remains were recovered.

Last of this group was a cut (43), again only partly within the excavated area. It appeared as a half oval, 0.40m north-west to south-east, with a rounded profile, and 0.9m deep. The fill of the feature was a moderately compact medium brown silty clay.

The wide shallow feature (44) belonging to this phase was c 2m wide, and 0.16m deep, with gently sloping sides. It extended beyond the trench to the north-east and the south-west, and had slightly curving sides. Its fill was a moderately compact grey-brown sandy clay loam containing rare sherds of pottery and bone, with occasional small pebbles and charcoal flecks. The pottery recovered was dated to the late 13th century.

The straight gully (38) was aligned north-east to south-west, at right angles to the trench. It was c 0.30m wide and 0.11m deep, with a flat base and sloping sides. The fill (37) was a moderately compact red-brown silty clay containing occasional small pebbles and moderate charcoal flecks; a sieved sample produced no plant remains.

The curvilinear feature (26) was located in the extension to the main trench. Its western end was aligned south-west to north-east, and it curved round to the north and east so the eastern end was aligned south-east to north-west. The width of the feature varied from

0.20m at the east to 0.30m at the west, and it was 0.07-0.10m deep. The fill of this gully was a moderately compact strong brown sandy clay loam containing rare sherds of pottery and occasional charcoal flecks.

Of the amorphous cuts, one (23) lay in the western corner of the extension trench. It consisted of a sub-oval, considerably truncated feature which extended beyond the trench to the north-west and south-west. It had shallow sloping sides and was 0.10-0.20m deep. Its fill (21) was a moderately compact red-brown silty clay with rare small pebbles, charcoal fragments, tile fragments and pottery dated to the late 13th century.

Context 29 was another shallow feature in the western corner of the trench extension. It was amorphous and rounded in shape with very gently sloping sides and a depth of between 0.08 and 0.12m. It was filled by a compact reddish-black silty clay (28) containing abundant charcoal, occasional small pebbles and a large quantity of pottery, dated to the late 13th century. A sample from this context was found to contain well preserved carbonised grain and mineralised seeds.

The final amorphous cut (41) again extended beyond the excavated trench. One side was aligned south-west to north-east, and the other from south to north, with an angle at the south. It was 0.13m deep, with sloping sides and a rounded base. Its fill (40) was a moderately compact reddish-brown loamy clay containing occasional small pebbles and charcoal flecks.

Context 24 was a layer of compact red-brown silty clay containing moderate flecks of charcoal and abundant flecks of manganese together with sherds of late 13th century pottery. The layer was cut by several pits (22, 23 and 26) and overlay 28.

Layer 27 consisted of cobbles, lias and pebbles in a matrix of grey-brown moderately compact sandy clay loam which also contained rare flecks of charcoal and sherds of late 13th century pottery.

The identified pottery was of Malvernian fabric (Hereford and Worcester County Fabric Series, Fabric 56), much of it from a single vessel. This is a straight sided cooking pot of a type dated by Vince (1977, 264, fig 2) to the late 13th century, though it may also have been current in the 14th century.

3.4 Phase 4 Later ridge and furrow

Three contexts were identified as belonging to the period during which the area was cultivated by ridge and furrow; two layers (20 and 22) and a wide shallow feature (42; Fig 5).

One layer (20) consisted of dark red-brown loamy very fine sand containing occasional flecks of charcoal and rare small pebbles. It lay in the south-western half of the trench extension. The other layer (22) lay in the northern corner of the trench extension and was of a very similar composition to 20, except that it contained no pebbles.

The shallow cut (42) was c 2m wide and aligned south-east to north-west, perpendicular to the trench. It was 0.09-0.16m deep, with gently sloping irregular sides. The fill of the feature was very mixed, consisting mainly of moderately compact orange-brown silty loam with moderate flecks of charcoal.

3.5 Phase 5 Modern topsoil and machining

Modern topsoil (46) overlay all other deposits. The machine cut was defined as context 45 (matrix, Fig 3).

3.6 Discussion

Phase 2

The earliest material from the evaluation of this area was the Neolithic arrowhead (Fig 6). This, however, was not a stratified find, so although it suggests some Neolithic activity in the area, it is not possible to relate it to any stratified archaeological deposits.

The reference to the find of a Neolithic scraper in 1886 (see above) confirms an impression that there was some activity here during the Neolithic period.

Phase 3

All the dating material from the Phase 3 deposits suggest a late 13th to 14th century date for the features excavated. Although datable finds were not recovered from all contexts assigned to the phase, the general similarity of the features as a group suggested that they should be considered together. Some of the features were truncated, and only tentative interpretations can be made of the original functions of these deposits. However, other features were well preserved, and there was some surviving vertical stratigraphy.

The four rounded features (32, 34, 36 and 43; Fig 4) can be interpreted as the bases of postholes. Whether they originally formed part of buildings on the site or had some other function, such as fence posts, cannot be ascertained on the basis of the evidence provided by a narrow trench such as this. The probable posthole 32 was sealed by the pebble and lias layer 27, which itself was overlain by the clay layer 24, indicating the survival of deposits belonging to three distinct phases of medieval activity in this part of the excavated area (Fig 4).

The linear feature (38), with a flat base, is likely to represent a beam slot. The curvilinear feature (26) was rather different from 38. It is suggested that this may represent a drainage gully rather than the remains of a structure.

The silty clay layer (24) appeared to be make-up material, essentially redeposited natural, but also containing 13th century pottery and charcoal flecks.

Although context 28 was recorded as the fill of a shallow cut (29), the fact that 28 was particularly compact suggested at the time of excavation that it might have been a surface.

The sherds of pottery which it produced were not, however, crushed and abraded as one might expect if it had been a particularly well-used surface. Another possibility is that it was trampled midden material. In relation to this context it is interesting to note that the deposits at this end of the trench extension were considerably better preserved than those in the main trench.

The cobble, pebble and lias layer (27) was probably a surface, perhaps a yard, but its relationships with the structural features on the site could not be ascertained from the evaluation.

The wide shallow feature (44) is in some respects similar to the cut (42) which has been assigned to Phase 4. However, on the basis of rather differing fills, it is possible to suggest that 44 may be the base of a pit, and that 42 represents a furrow of the later ridge and furrow. The fill of 42 was mixed, and contained only charcoal flecks, whereas the fill of 44 included some quite large sherds of pottery and also bone. Finally, the profile of the base of 44 shows it to slope down on three sides, unlike 42, which appears to be linear.

Features which could not be interpreted with any reliability included the cut feature 23 in the western corner of the trench extension, and the cut feature 41.

It is not clear whether the structural features excavated represent isolated settlement or a subsequently abandoned part of the village of Whittington. They lie about 50m from the presumed medieval road line (in use in 1826) and 90m from the moated site of Crookbarrow Farm. It is possible that the settlement was a precursor to the moated site.

Phase 4

From the dating of the deposits which survive below, it is clear that the ridge and furrow is not early in date. It may have originated in the 14th or 15th centuries. The earlier deposits would seem to have been

deliberately levelled, both by the dumping of 20, as well as by truncation; towards the north-east truncation of the earlier features appears to be greater. There are two alignments of ridge and furrow; the south-eastern limit of the surviving earthworks reflects a field boundary current in both 1826 and 1842, and not necessarily an earlier boundary.

Phase 5

The present extent of the ridge and furrow (Fig 2) can also be used to indicate the maximum potential extent of disturbance during the original construction of the motorway. It has already been noted above that this disturbance extended well beyond what could reliably be inferred from the surface evidence.

3.7 Conclusion

The results of the evaluation suggest that extensive medieval deposits and structural features of the 13th and perhaps 14th centuries survive in a good state of preservation beneath the ridge and furrow in the area to the west of the motorway at Junction 7. Although in some places these deposits are truncated, the existence of deposits such as 28 and the surface (27) indicate the potential for very good preservation. The deposit survival does appear to vary, and perhaps not in the way which would be expected; where excavated, survival was better further up the slope to the south-west than down it to the north-east. Without further excavation it is not possible to hazard any suggestions as to why this is so.

The site is significant for a number of reasons. The existence of abandoned medieval settlements under ridge and furrow may not be unusual. However, such sites will have very low visibility unless the overlying ridge and furrow has been ploughed, and in such cases the integrity of the settlement deposits is likely to be damaged. Settlement desertion in the West

Midlands has been studied by Dyer (1982), who noted a wide variety of reasons for the abandonment or contraction of villages, from c 1320 onwards. This site is certainly the first in Hereford and Worcester where a succession from rural settlement to arable farming can be stratigraphically demonstrated for the medieval period.

The medieval settlement has group value along with the moated site and the ridge and furrow field systems. Deposit survival in some parts of the site is excellent, and both artefactual and environmental remains are well preserved. Further work would be required to investigate the dating, layout and function of the settlement in more detail, and to address the question of the abandonment of occupation and the inception of agriculture.

Account should also be taken of the high possibility of finding stray artefacts of earlier periods associated with Crookbarrow Hill.

On both sides of the M5 at this point substantial areas have already been considerably disturbed by the original construction of the motorway.

The setting of the scheduled monument of Crookbarrow Hill should be considered. This site forms a well known landmark on both the M5 and the A44, and it may be possible to enhance its setting as a result of the motorway widening works.

4 Evaluation of a Roman road at Napleton, Kempsey (HWCN 1150)

The evaluation area lay to the west of the M5 in the parish of Kempsey at the point where the projected course of the Roman road (HWCN 1150) meets the motorway at SO 86334793 (Fig 8). The evaluation area includes parts of the fields to either side of the trackway (Green Lane) which was presumed to follow the course of the Roman road, together with the area of scrubby woodland where the track is cut by the M5 (Fig 9). The aim of the evaluation, apart

from to locate the road line, was to test for the presence of contemporary roadside settlement.

The soil in the evaluation area belongs to the Whimple 3 association, described as reddish fine loamy or fine silty soils over clayey soils with slowly permeable subsoils. In general these overlie deposits of drift over reddish mudstone (Ragg *et al* 1984) which can be identified as Mercian Mudstone.

The line of the Roman road at this point has not been confirmed by excavation, but has been assumed from the alignments of lanes, footpaths and field boundaries. It forms part of the road which branched from Ryknield Street to the south of Birmingham and led to Gloucester via Droitwich and Worcester (Margary 1973, 287-8). A section was excavated through it in 1960 (Fig 10) c 14km further south, at Shuthonger Common, Twynning, near Tewkesbury, where the road appeared in an aerial photograph (Sanders and Webster 1960). At this point only the base of the *agger* (the embankment upon which the road was built) survived, to a depth of 0.30m. The rest of the *agger* and the road which would have been constructed on top of it had been removed at some time in the past, presumably to improve cultivation. The *agger* base was 9.75m wide, and on either side of it were additional well-surfaced roads of hard-packed gravel; that on the west being 2.75m wide and that on the east 4.25m wide.

Two 1.5m wide trenches were excavated by machine (Fig 9); one located to the west of the patch of woodland (Trench 1) and an L-shaped trench between the woodland and the motorway. A third trench was excavated by hand in the woodland to the west of the western arm of Trench 2. A further field to the south of the areas trenched, which was included within the proposed evaluation area, was not tested, as local enquiry revealed that it had been quarried as a borrow pit during the original motorway construction (Mr Fowler pers comm).

The deposits revealed by machining were cleaned by hand, photographed, drawn and recorded according to standard Archaeology Section practice (Archaeology Section Recording System AS1 02/88, AS2 02/88, AS3 06/87, AS5 06/87, AS8 02/88). Selected deposits were then excavated and recorded individually. The Roman road section was largely excavated by machine and recorded in section.

Trench 1 revealed little that was of any archaeological interest. There were three features: a sub-square shallow cut 0.02m deep (3, filled by 2; matrix, Fig 11); a linear cut (5, filled by 4) interpreted as the cut for a land drain, and a small patch of charcoal (7) overlain by a sandy fill (6) of a cut (9). This last can be interpreted as a small fire in a small purpose-dug pit, backfilled with the same material which had been originally dug out. These all lay immediately below topsoil, and there is no reason to assume that they are anything but modern in date. A possible interpretation for the cuts 3 and 9 is that they were tree-holes. The adjacent fields to the south and west are recorded as orchards on the 1955 Ordnance Survey 6" map, suggesting that the field in which Trench 1 was situated may also have been an orchard earlier this century.

Trenches 2 and 3 located the Roman road, and together they form a section across it. The deposits revealed have been phased and a stratigraphic matrix was produced (Fig 11). Context numbers 11-56 refer to Trench 2; 101-108 to Trench 3.

4.1 Phase 1 Natural deposits

Natural deposits consisted of natural clay marl subsoil (14, 52 and 108; Fig 12), together with layer 15, which was present in patches over the red marl in the northern part of Trench 2. This was a dark yellowish brown sandy clay loam, although the colour varied from one patch to another.

4.2 Phase 2 Roman road

Two phases of the road were distinguished:

Construction and primary use

The first phase of the Roman road consists of its construction and a phase of use. The deposits associated with this are the *agger* layers (23, 33, 51 and 56) together with the two primary ditch cuts (44 and 107), and the fills of these ditches (40 and 106), along with the roadside ditch (49). The road surface itself consists of the contexts 22, 34 and 105. This description should be read in conjunction with the section drawing (Fig 12).

The primary ditch cut (44) lies to the east of the road. It is 1.70m wide and 0.3m deep with gently sloping sides and a concave base. The western ditch (107) is c 1.50m wide and 0.17m deep, with a similar profile to 44.

The ditches are filled with material (40 and 106) similar to the deposits which make up the *agger*. Context 40 consisted of yellowish brown compact sandy clay with occasional medium and rare small pebbles. The description of the fill 106 is identical, except for its light brown colour. The ditch fill to the east (40) was overlain by thin layers of *agger* (23) and primary road surface (22, 34 and 105).

The *agger* layers (23, 33, 51 and 56) consist of a compact greyish brown sandy clay with occasional small and rare medium pebbles. A spread of *agger* material (51), c 0.1m thick, extended for c 1.0m to the east of the roadside ditch (49), but there was no road surface overlying it. As this was cut by the ditch (49) it can be identified as belonging to the construction phase of the road.

The roadside ditch (49) has concave sides and base and measures 1.92m east to west and 0.50m in depth. No roadside ditch was seen on the western side of the road.

Resurfacing and secondary use

The second phase of the road was comprised of the resurfacing layers (24, 25, 26, 27, 28, 29, 30, 31, 32, 45, 46 and 50), together with the fills (47 and 48) of the roadside ditch (49). Evidence for this phase was confined to Trench 2.

The resurfacing layers were generally composed of sand or sandy clay, sometimes with occasional pebbles. They varied in colour between dark brown and strong brown. The thickness of the resurfacing layer varied from 0.10m to 0.25m. The ditch fill (47) consisted of compact yellowish red clay, and (48) of compact brown slightly sandy clay.

4.3 Phase 3 Medieval trackway (Green Lane)

Deposits relating to this phase were found in Trench 3, and consisted of a layer (104) and a surface (103; Fig 12).

Context 104 consisted of compact brown clay, lying immediately above the Roman road (105). It varied in thickness from 0.06-0.20m. The surface (103) was made up of frequent small and occasional medium pebbles in a matrix of compact brown sandy clay.

4.4 Phase 4 Deposits of medieval or modern date

The features in the northern part of Trench 2 could not be assigned to either Phase 3 or Phase 5 with any degree of certainty, since they produced no finds. These comprised a number of cut features and their fills (16, 17, 18, 19, 37, 38, 39, 41, 42 and 43), and the layer (13).

The features 19 and 42 were steep-sided linear cuts. Cut 19 was 0.32m wide, with steeply sloping sides, but not fully excavated so its base profile was not established. It was filled by a strong brown compact clay containing some gravel (18). The other cut

(42) was 0.34m side, with steeply sloping sides and a gently rounded base. Its fill (41) was compact reddish brown clay with some small pebbles.

Three other features were sub-square (17), sub-oval (38), or subcircular (43) in shape. The sub-square cut (17) measured 0.20 x 0.20m and was 0.06m deep. Its fill (16) was greyish brown sandy clay loam containing occasional small pebbles. The sub-oval cut (38) measured 0.70m x 0.45m and was 0.05m deep with an irregular base. Its fill (37) was a moderately compact strong brown sandy clay loam containing some gravel. Cut 43 was subcircular, 0.25m in diameter and 0.04m deep. Its fill (39) was a compact light brownish grey sandy silt with orange sand mottling containing frequent charcoal flecks.

The layer 13 consisted of a strong brown compact sandy loam, 0.05m in thickness, lying between the ploughsoil (12) and the natural marl (14).

4.5 Phase 5 Modern deposits

Modern deposits were present in both trenches, and consisted of topsoil (11, 101 and 102), the ploughsoil (12), a probable plough furrow and its fill (20 and 21) and a ditch cut and fill (54 and 53).

4.6 Discussion

Phase 2 Roman road

Construction and primary use

This phase itself could be subdivided into two, since deposits relating to the initial construction of the road can be distinguished from the road surface itself. The construction deposits consist of the two shallow ditches at either side of the centre of the road (44 to the east, and 107 to the west). Both are relatively shallow cuts, and cannot belong to the first phase of use of the road, since they are sealed by the road surface (22, 34 and 105). There are no earlier surfaces which could be associated with the two ditches, so it may be

suggested that they represent 'marking out' of the road line. An alternative hypothesis is that initially the road was to have been narrower and that after construction had begun it was widened.

The main part of the road, which lies on a depth of *agger* of up to 0.3m, appears to be 7.6m wide, although it is possible that it may have extended further to the west. The road surface (22, 34 and 105) can be traced for a further 3m to the east in Trench 2 and 6m to the west in Trench 3.

A roadside ditch (49) associated with this phase of the road was located on the eastern side, but none was found to the west. The spread of *agger* material to the east was probably related to the construction of the road and ditch.

The road appears to have consisted of no more than a pebble surface on a built-up low *agger* of sandy clay. Although some Roman roads have an *agger* of considerable height, and a foundation of large stones beneath the actual surfacing of gravel, the section revealed here should not be considered unusual. Some Roman roads were constructed of an *agger* alone, with no additional surfacing (Margary 1973, 20). The road here cannot be compared in this respect with the road recorded at Shuthonger Common (Sanders and Webster 1960), since the surface there had been ploughed away.

Resurfacing and secondary use

The eastern part of the road was resurfaced, and the eastern roadside ditch was filled during a later phase of use. The resurfacing was to a lower standard than the original build of the road, since no pebble surface was laid on top of it.

No evidence for resurfacing survives on the western side of the road.

No finds were recovered from the road construction or surfaces of either phase, or from the excavated features, and it is

therefore unlikely that there was Roman settlement in the immediate area.

was found for roadside settlement or other activity in the Roman period.

Phase 3 Medieval trackway

The medieval trackway lies over the western part of the Roman road, beneath the trackway which still survives today. It consists of a build-up of soil, upon which a thin pebble layer has been spread. The modern Green Lane has ditches on either side, probably on the same alignment as medieval roadside ditches. The surface interpreted as medieval produced no finds, but can be distinguished from the Roman road by its method of construction and by its position in the stratigraphic sequence.

Phase 4 Deposits of medieval or modern date

The features assigned to Phase 4 are those to which no secure date could be given, since they contained no datable finds. 17, 38, and 43 may have been tree holes; 19 and 42 may have been field drains. There is no reason to believe that any are of archaeological significance.

4.7 Conclusion

The results of the evaluation indicate that only part of the Roman road underlies the medieval and modern trackway, and that its course was slightly further to the east. There is no reason, however, to doubt the assumption that it was on the same alignment as the trackway and the other boundaries which suggest its continuation to the north.

Two phases of the road were distinguished: construction and primary use; and resurfacing and secondary use. In terms of its construction, the road at this point is relatively insubstantial, consisting in the primary phase of a low *agger* overlain by a gravel surface with a roadside ditch to the west. In the secondary phase, the road was resurfaced with a layer of silty sand.

No Roman finds were made, and no evidence

The road surfaces at this site were well preserved, probably because the area has been used as pasture. The length of potentially well preserved Roman road here which is threatened by the motorway widening extends to about 100m, of which about 50m will be completely destroyed. There is consequently an opportunity here to examine a greater length of road. The document *Priorities for the preservation and excavation of Romano-British sites* states: 'Where possible, lengths of road should be stripped so that there is a greater chance of finding datable artefacts, and the composition and methods of laying-down of the aggregate layers can be studied more completely; the area stripped should extend far enough on either side to include the ditches. Evidence for the preliminary surveys should always be sought...' (Society for the Promotion of Roman Studies 1985, para 4.6.1). It was only possible during the evaluation to examine a narrow strip across the road; recorded primarily in section. Without stripping a wider area the true sequence of construction, use and resurfacing cannot be ascertained.

5 Evaluation of cropmarks at Kerswell Green (HWCN 2120)

The site consists of a complex of cropmarks in a field east of Kerswell Green (centred on SO 86324668). These were first photographed by Arnold Baker in July 1956 (NMR reference SO 8646/5). They are described in the County Sites and Monuments Record as a series of interlinking and separate small enclosures and additional ditches and pits, to which no date can be ascribed on current knowledge. The cropmarks and their relationship to the motorway are shown in Figure 13.

The evaluation area lies on flat land, just within the Wick 1 soil association. This consists of deep, well drained coarse loamy and sandy soils, overlying geological deposits

of glaciofluvial or river drift (Ragg *et al* 1984).

No previous excavation has been carried out on the site, and no other information is known about it than the aerial photograph.

The evaluation trench was excavated by machine alongside the motorway, c 10m west of it (Fig 13). It was excavated in two parts, to a depth of 0.4-0.5m, into the natural sandy subsoil. Due to the extreme paucity of archaeological features, recording on this site was confined to plotting the distribution of finds along the trench. Casual fieldwalking over parts of the remainder of the field was also carried out, with useful results. The field to the south, which formed part of the proposed evaluation area, was not accessible as it had recently been planted and the landowner was consequently unwilling to allow access.

5.1 Phase 1 Natural

Natural deposits consisted of sand with some gravel, at a depth below modern ground surface of 0.4-0.6m.

Only one feature, identified as probably natural, was recorded at the site, other than ploughmarks and the remains of ridge and furrow. This was shallow, amorphous and linear. It was truncated on two sides by deep ploughmarks, and contained no finds.

5.2 Phase 2 Bronze Age finds

A small round scraper (Fig 14) made from pebble flint was found in the subsoil layer.

Five sherds of Bronze Age pottery (identified by Jane Evans) were found in the northern part of the trench. These included three undecorated joining rim sherds (Fig 14) and a small sherd of coarse fabric with cord impressed decoration (possible whipped cord maggots), perhaps from a Collared Urn. Fieldwalking in the western part of the field produced four burnt stones found close together, which may tentatively be identified

as an indication of Bronze Age or Iron Age activity.

5.3 Phase 3 Roman finds

Nine sherds of Roman pottery were recovered from the trench, of which eight were Severn Valley ware, together with one very small sherd of colour coated ware.

5.4 Phase 4 Ridge and furrow

There was slight evidence for ploughed-out ridge and furrow aligned east to west (Fig 13).

5.5 Phase 5 Modern deposits

The ploughsoil consisted of dark brown sandy loam containing occasional sherds of post-medieval pottery, brick, tile and iron slag to a depth of c 0.45m. The field has been deeply ploughed, and the ploughmarks were clearly visible in the excavated trench, regularly spaced at c 0.50m intervals. A land drain crossed the trench at 238m.

5.6 Discussion

Phase 1

The shallow amorphous linear feature can probably be interpreted as a variation in the natural sand and gravel deposits. Given that more did not survive of it, secure interpretation is difficult, particularly since it contained no finds.

Phase 2

The Bronze Age finds, though few, are sufficient to suggest the former existence of a settlement site in the area. Bronze Age artefacts are rarely found widely dispersed from the settlement or other site with which they are associated.

The pottery is of a coarse fabric and the sherds are too small for forms to be identified with any degree of certainty, although the decorated sherd (Fig 14) may be from a

Collared Urn.

The burnt stones cannot of course be dated, but burnt stones are a feature of both Bronze Age and Iron Age sites. Burnt mounds, comprised of thousands of heat-cracked stones, are a form of Bronze Age site the function of which is actively being discussed (Barfield and Hodder 1987). Four stones cannot be considered sufficient evidence for a burnt mound, but given the other evidence for Bronze Age activity, it is not implausible to suggest that they may be of the same date.

A number of other Bronze Age sites in the area are recorded on the County Sites and Monuments Record. A handled beaker with spiral ornament was found in 1934 in a gravel pit north-east of Baynhall (SO 85414764; HWCM 2119, Hawkes 1935). A small barrow cemetery on Kempsey Common consists of three barrows (HWCM 2126, 2127, 2128; centred on SO 871481), which survive as shallow earthwork ring-ditches. The cropmark complex HWCM 6029 (7.3 below) includes a possible ring-ditch only 0.6km to the south, and there are five further ring-ditches (HWCM 10362, 10408, 10409, 10410 and 10411) centred on SO 853467 to the west.

The lack of any features in the excavated trench suggests that in this area at least, the site, if present, must have been ploughed out. That any pottery had survived at all does suggest that destruction of the site was relatively recent, since the fabric is very fragile and liable to crumble.

Phase 3

No great significance should be attached to the Roman pottery present in the evaluation area. This need not necessarily be taken as indicating the close proximity of a contemporary settlement, as the presence of Roman pottery on fields as a result of manuring is well attested.

Phase 4

Only two possible medieval plough furrows survived, giving an indication of the intensity of later post-medieval cultivation in this field. The fact that some evidence has survived suggests that the area has not always been as flat as it is now. It is therefore possible that archaeological deposits may survive in parts of the field which were originally more low-lying.

Phase 5

The deep ploughing of the area, although visible in some parts of the trench, had evidently not destroyed all archaeological deposits, given that some of the ridge and furrow still remained.

5.7 Conclusion

The evaluation failed to locate any significant archaeological features within the area under threat from the construction of the motorway. It did, however, establish the presence of Bronze Age activity in the immediate area.

It can be stated that the cropmarks which were the justification for the evaluation do not extend into the threatened area, or that they have been completely removed by modern agricultural activity. No evidence to date the cropmarks was recovered.

6 Sites visited

Areas near to two known medieval moated sites were visited in order to establish whether there were any earthworks associated with them which had not been recorded on the County Sites and Monuments Record and which may be threatened by the motorway widening. The moated sites themselves, which are not scheduled, were not visited.

6.1 Field west of Norton Brickworks, Norton (HWCM 10292)

The moated site at Newlands Farm, Norton

(HWCM 7053, Fig 15) is situated at SO 871516. The County Sites and Monuments Record entry states that only the extreme south-western corner where the outflow leat takes off is still wet although the dry course may be traced round three sides. The present farmhouse is just outside the original moated area, and any surviving earthworks in the interior have been confused by later ponds.

The site visit established that the evaluation area, formerly an orchard, has recently been ploughed, and that there are no earthworks on the eastern side of the motorway where it is to be widened.

6.2 Fields south-west of Dunstall Bridge, Earls Croome (HWCM 10420)

The moated site of Dunstall House (HWCM 7052, Fig 16) is situated at SO 883428 on the eastern side of the motorway. It survives on two sides only and is described in the County Sites and Monuments Record as a reversed 'L' corner of a rectangle. HWCM 9468 consists of earthworks and ridge and furrow in the small field to the north-west of the moat and east of the motorway.

The site visit established that no earthworks exist on the western side of the motorway, an area which consists mostly of improved pasture. Since it is to be widened on the western side, the known earthworks to the east are not threatened.

7 Sites not evaluated

Four separate areas of cropmarks, for which the initial desk-top assessment was considered sufficient evaluation, include six sites registered on the County Sites and Monuments Record. Three of these are adjacent to one another and are therefore illustrated together. Where possible the photographs from which the sites have been mapped were consulted for further information.

7.1 HWCM 3589, 3590 and 9124

These three cropmarks are adjacent to Junction 6; HWCM 3589 and 3590 lying to the west of the motorway between the A449 and Warndon Lane, and 9124 to the east between the motorway and the A4538 (Fig 17). The cropmarks are not directly threatened by the motorway widening.

7.2 HWCM 6058

This cropmark (Fig 18) is centred on SO 882544. As the motorway is to be widened on the eastern side at this point, the cropmark itself is not threatened.

7.3 HWCM 6029

HWCM 6029 (Fig 19) is centred on SO 866456. At this point the motorway is to be widened to the west, on the same side as the cropmarks. There are no cropmarks in the field between HWCM 6029 and the motorway, which is partly threatened by the widening.

7.4 HWCM 9125

HWCM 9125 (Fig 20) is centred on SO 875436. Here again the motorway is to be widened on the western side, towards the cropmarks, but these are not directly threatened.

8 Conclusions

The evaluation of the area to be affected by the motorway widening revealed evidence of a previously unknown medieval settlement (HWCM 10176) close to Crookbarrow Hill. The site is well preserved and artefacts and environmental evidence survive well. The structural and other remains are sealed by ridge and furrow, and there is a potential on this site to elucidate the process of settlement desertion in the later medieval period.

There is potential at Napleton, Kempsey, for further examination of a well preserved

length of Roman road (HWCM 1150).

It was evident at two of the sites evaluated that disturbance which took place during the original motorway construction extended beyond the area of motorway itself. This took the form of a borrow pit at Kempsey, and machine disturbance and landscaping at Crookbarrow Hill. No maps of this disturbance were available to the evaluation team. Monitoring during road construction would be valuable to allow the extent of disturbance to be defined.

9 Acknowledgements

Thanks are due to the Department of Transport for information and for help in arranging site access, and to the landowners and tenants who generously allowed evaluation work on their land: Mr Fowler, Mr Newell, Mr Weston, Marston Developments, Kempsey Parish Council, the Department of Transport, Mr and Mrs McKay, and Mr Venables.

Fieldwork was carried out by Duncan Brown, James Dinn, Paul Godbehere, Clare de Rouffignac, and Nigel Topping. Illustrations are by Paul Godbehere (Fig 1), Carolyn Hunt (Figs 2, 4, 5, 6, 9, 12, 13, 14 and 16), and Rachel Edwards (Figs 3, 8, 11, 15, 17, 18, 19 and 20). The following staff of the Archaeology Section provided valuable help and advice: Victoria Buteux, Malcolm Cooper, Hal Dalwood, Jane Evans, David Guyatt, Hilary White and Simon Woodiwiss.

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Primary records consulted

1826 Map of Crookbarrow Estate (HWRO
BA 438/16 r705/27)

c 1842 Whittington Tithe Award map
(HWRO BA 1572 760.617)

11 Abbreviations

Numbers prefixed with 'HWCM' are the primary reference numbers used by the Hereford and Worcester County Sites and Monuments Record.

HWCC - Hereford and Worcester County Council

Appendix 1

The plant remains from Crookberrow Hill (HWC10176)

Clare de Rouffignac, MA GIBiol,
Environmental Archaeologist

1 Summary

Three samples from Medieval features were examined for charred plant remains. Two samples were found to contain no charred seeds, but one sample contained a number of carbonised cereal seeds, weed seeds and chaff.

2 Method

The samples were all of approximately two litres in size. As they were from clay soils it was not possible to sieve them immediately. A preliminary treatment was carried out by soaking the samples for three days in water, with the addition of a proprietary water softener to break down the clay.

The samples were then sieved, floated and sorted. The mesh sizes used were 1mm for the residues, and 1mm for the flots. The flots were sorted to recover all seeds and other plant remains, both charred and uncharred. The sorted plant remains were then examined under a low power EMT-1 light microscope to enable identification.

The seeds were identified as far as possible using the Archaeology Section comparative collection, a seed identification manual (Bergren 1981) and an illustrated site report (Griffin 1988). Comparative descriptions of charred cereal seeds and chaff were obtained from Jacomet (1987).

3 Results and discussion

(28) Layer or fill (?midden)

This sample contained a considerable quantity of well-preserved charred seeds and chaff. Two mineralised seeds were also present.

The cereal remains included *Triticum aestivum* (bread wheat), *Secale cereale* (rye), and chaff fragments. A number of other edible seeds were recovered, including *Vicia faba* (field bean) and *Pisum* sp (pea). Also present were seeds of *Anthemis cotula* (stinking mayweed). This species is a common weed of heavy cultivated ground (Lisa Moffett pers comm).

The charred plant remains probably represent waste material from a hearth or oven.

The mineralised seeds were of *Rubus fruticosus* agg (bramble) and *Ranunculus* sp (buttercup). Their presence in a sample which consisted mainly of charred plant remains is interesting. These species are common weeds of disturbed ground and were probably preserved as a result of minerals in the clay soils in which they were deposited.

(35) Fill of posthole

This sample was found not to contain any plant remains.

(37) Fill of beam slot

Again, there were no plant remains preserved in this sample.

4 Conclusions

The preservation of charred remains was good. It was possible to identify most of the seeds to species and the presence of mineralised seeds was also of interest. However, the remains were from only one sample, and it is difficult to draw any firm conclusions. Further sampling of features would enhance our knowledge of the environment and economy of the site to a far greater degree.

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Appendix 2

Archive

The archive consists of:

HWCM 10176, Crookbarrow Hill

- 26 Context records AS1
- 2 Fieldwork progress records AS2
- 3 Photographic records AS3
- 1 Matrix sheet AS7
- 9 Scale drawings
- 1 Box of finds

HWCM 1150, Kempsey, Roman road

- 61 Context records AS1
- 4 Fieldwork progress records AS2
- 2 Photographic records AS3
- 1 Matrix sheet AS7
- 6 Scale drawings
- 1 Box of finds

HWCM 2120, Kerswell Green

- 2 Fieldwork progress records AS2
- 1 Scale drawing
- 1 Box of finds

All primary records and finds are kept at:

Archaeology Section
Hereford and Worcester County Council
Tetbury Drive
Warndon
Worcester WR4 9LS

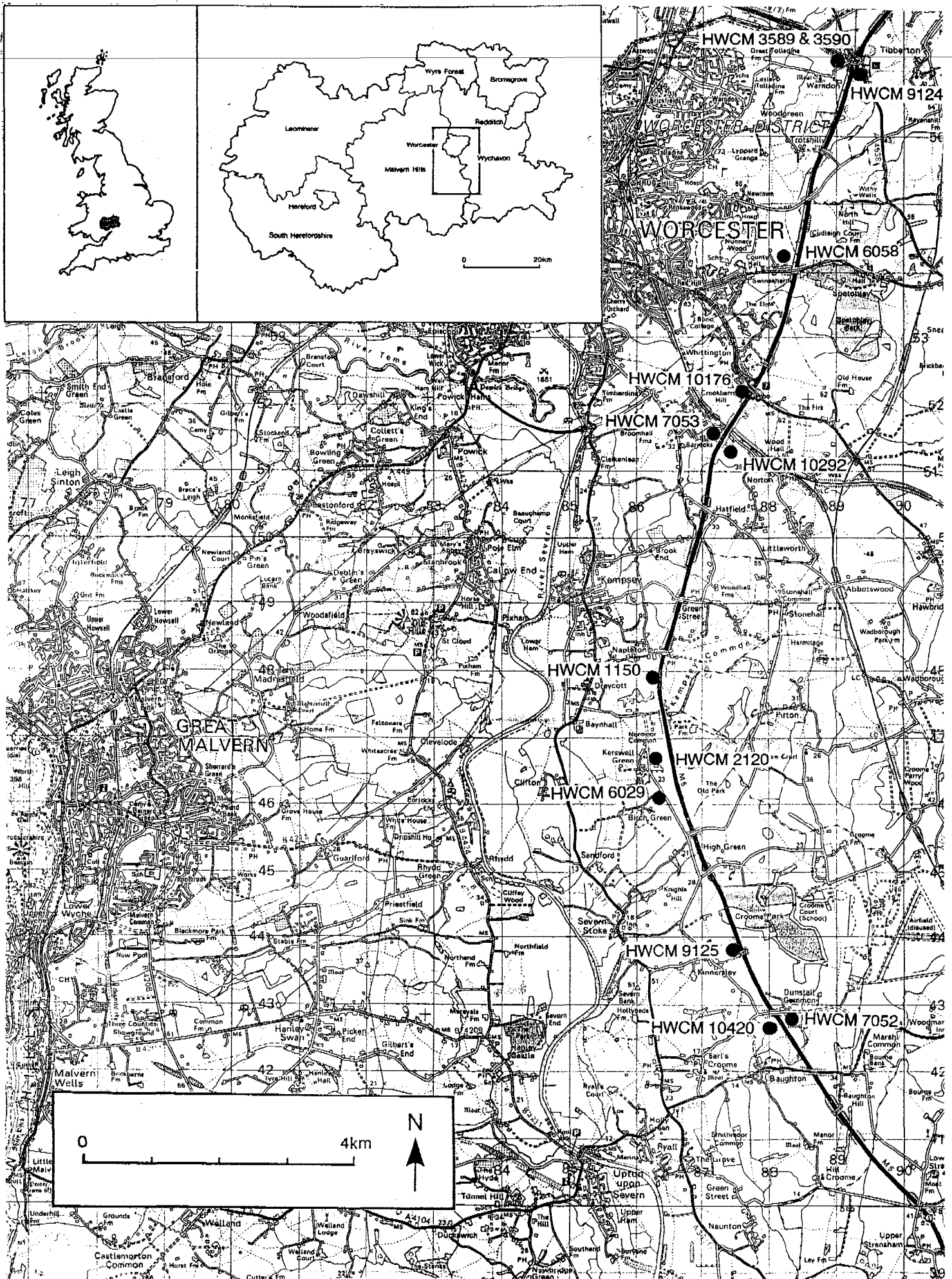
Tel Worcester (0905) 58608

A security copy of the archive has been placed at:

Hereford and Worcester County Museum
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ

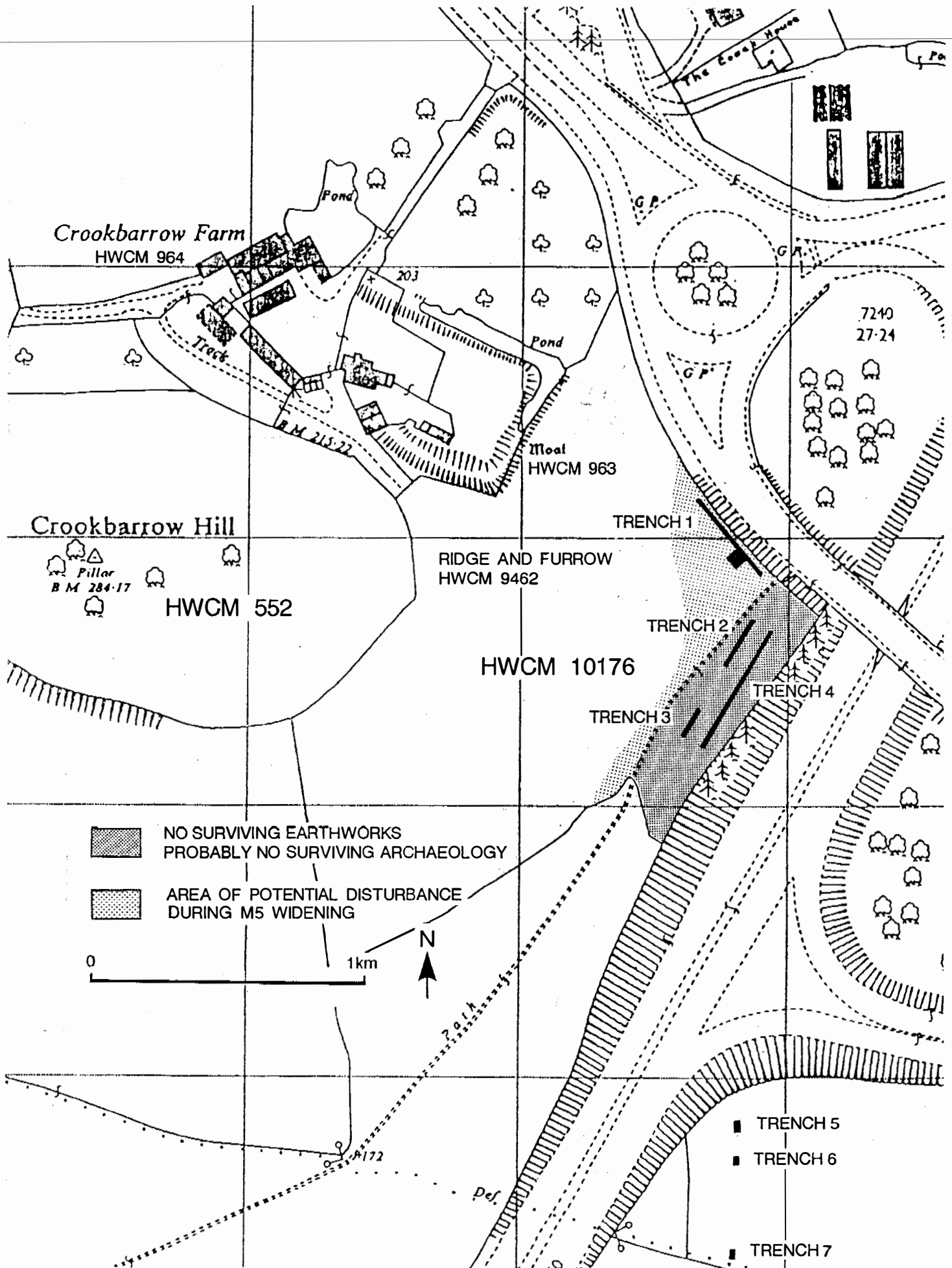
Tel Hartlebury (0299) 250416

LOCATION OF EVALUATION SITES

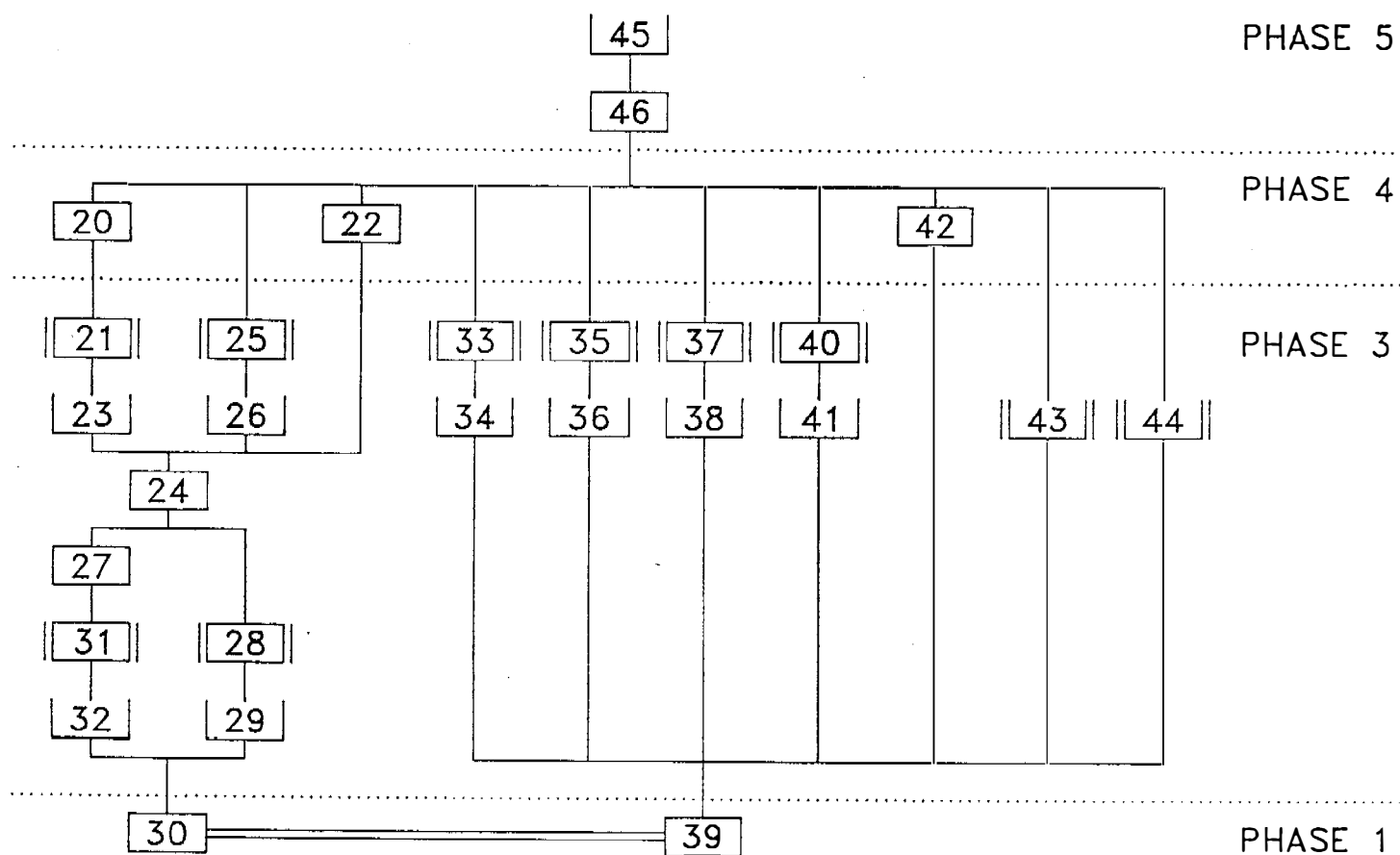


CROOKBARROW HILL HWCM 10176:
LOCATION OF EXCAVATED TRENCHES

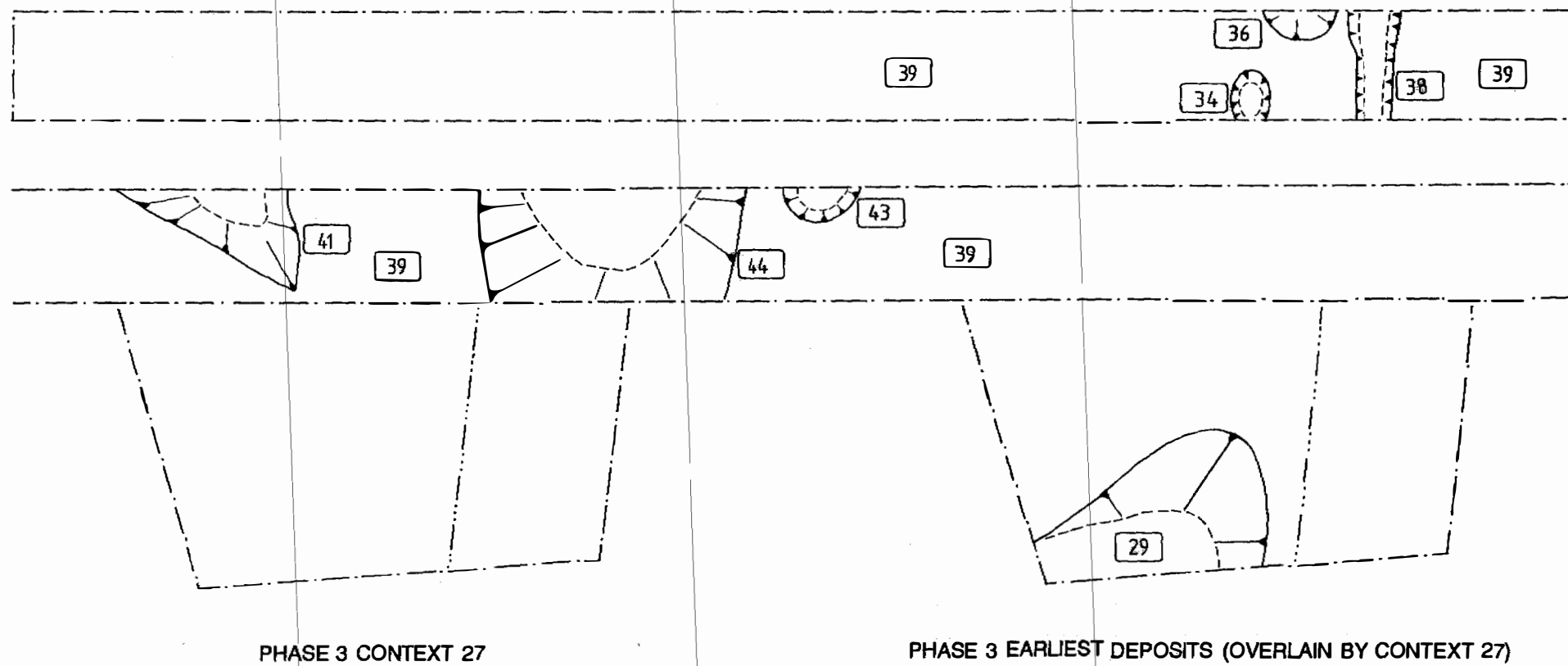
FIGURE 2



CROOKBARROW HILL, HWCM 10176: STRATIGRAPHIC MATRIX



CROOKBARROW HILL, HWCM 10176: PLAN OF PHASE 3 FEATURES



CROOKBARROW HILL, HWCN 10176: PLAN OF PHASE 4 FEATURES

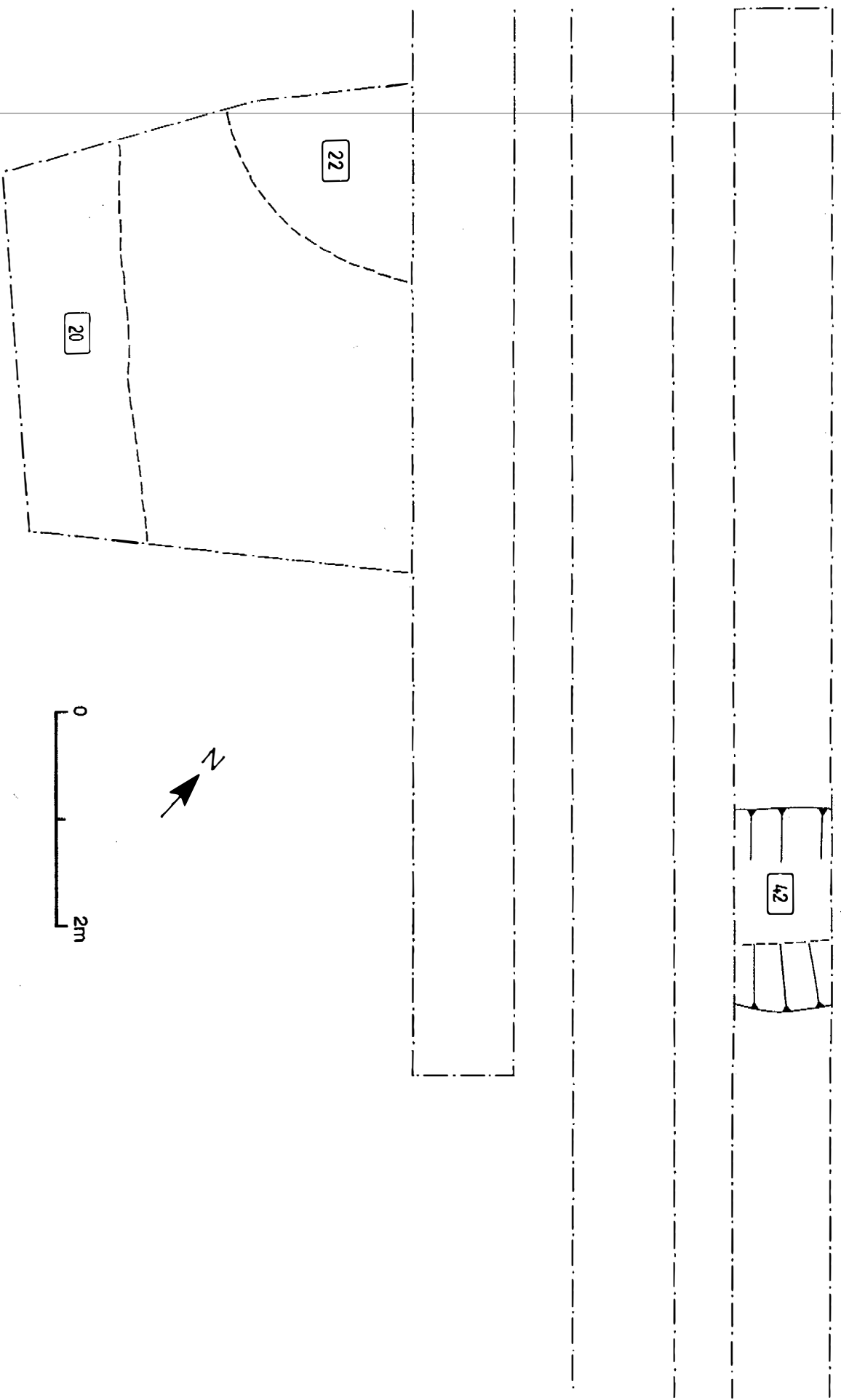
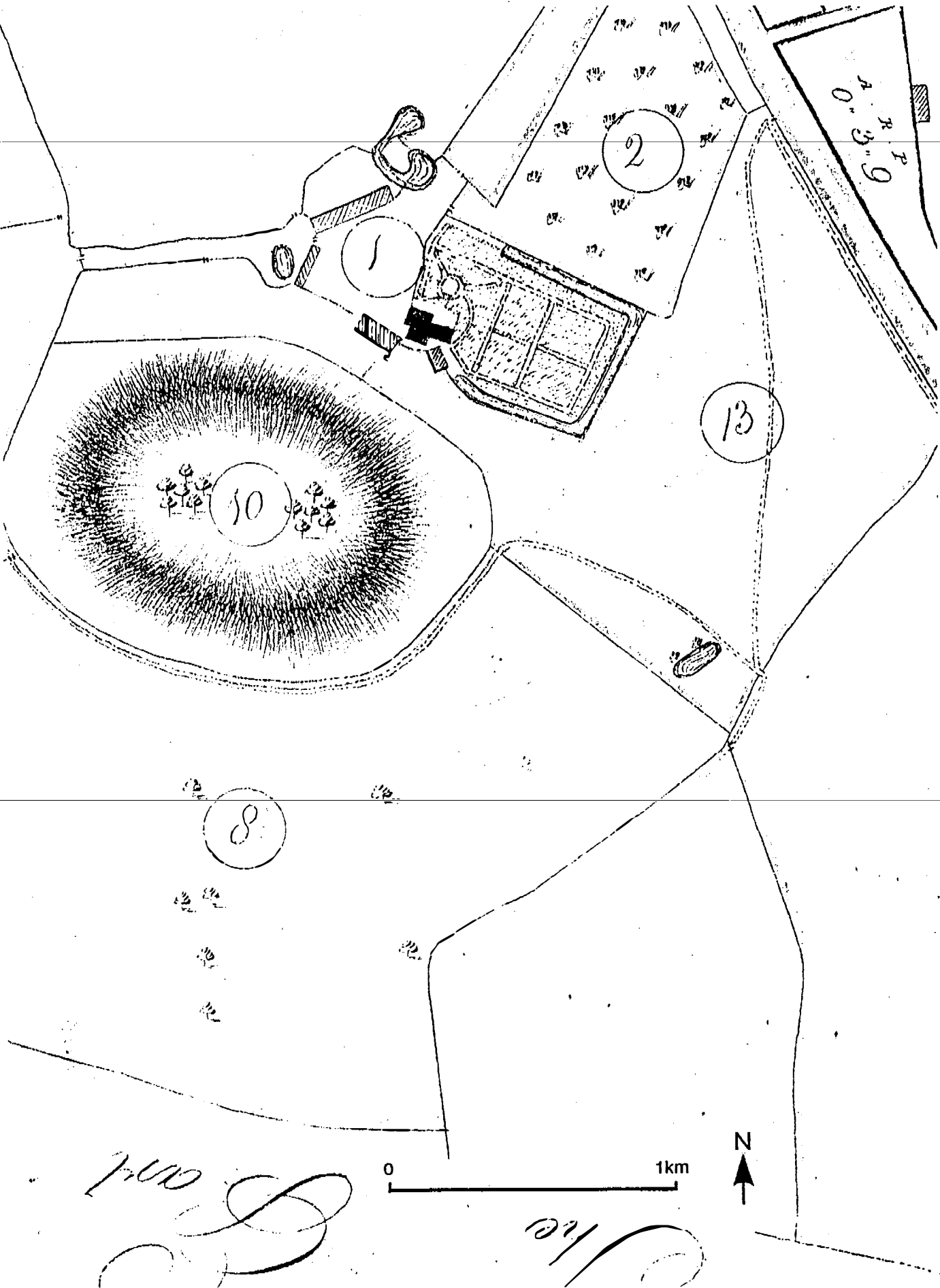
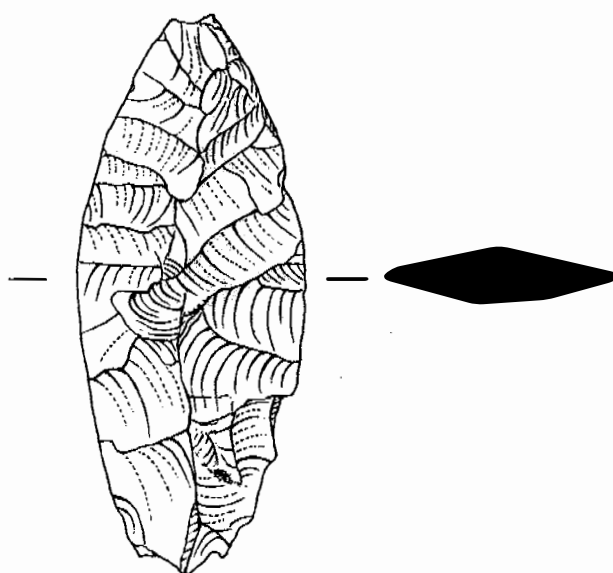


FIGURE 5

FIGURE 7

CROOKBARROW HILL, HWCM 10176: 1826 ESTATE MAP
(HWRO BA 438/16 r705/27)





CROOKBARROW HILL, HWCM 10176: NEOLITHIC ARROWHEAD
(Scale 2:1)

COPY

FIGURE 7

CROOKBARROW HILL, HWCM 10176: 1826 ESTATE MAP
(HWRO BA 438/16 r705/27)

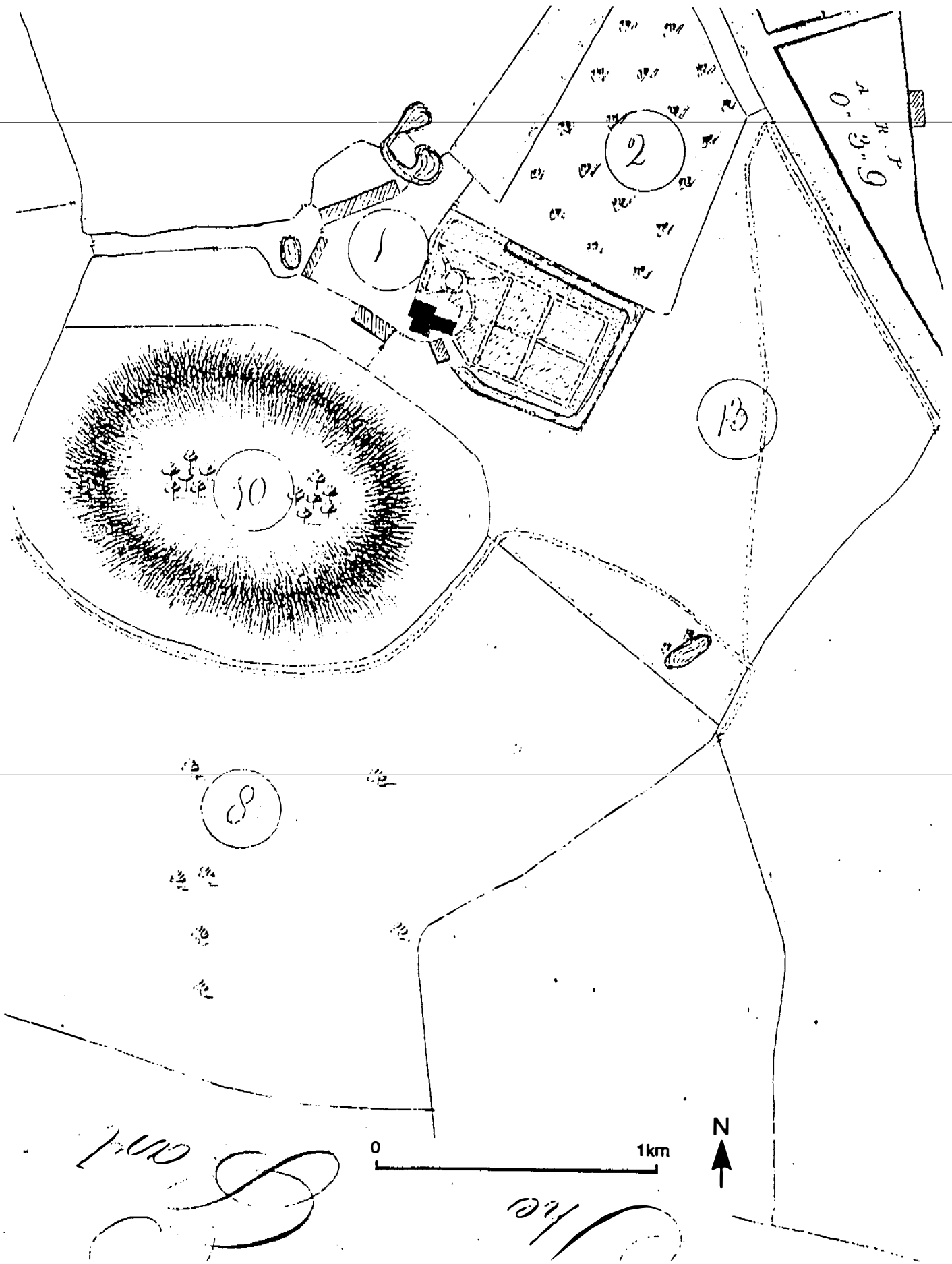
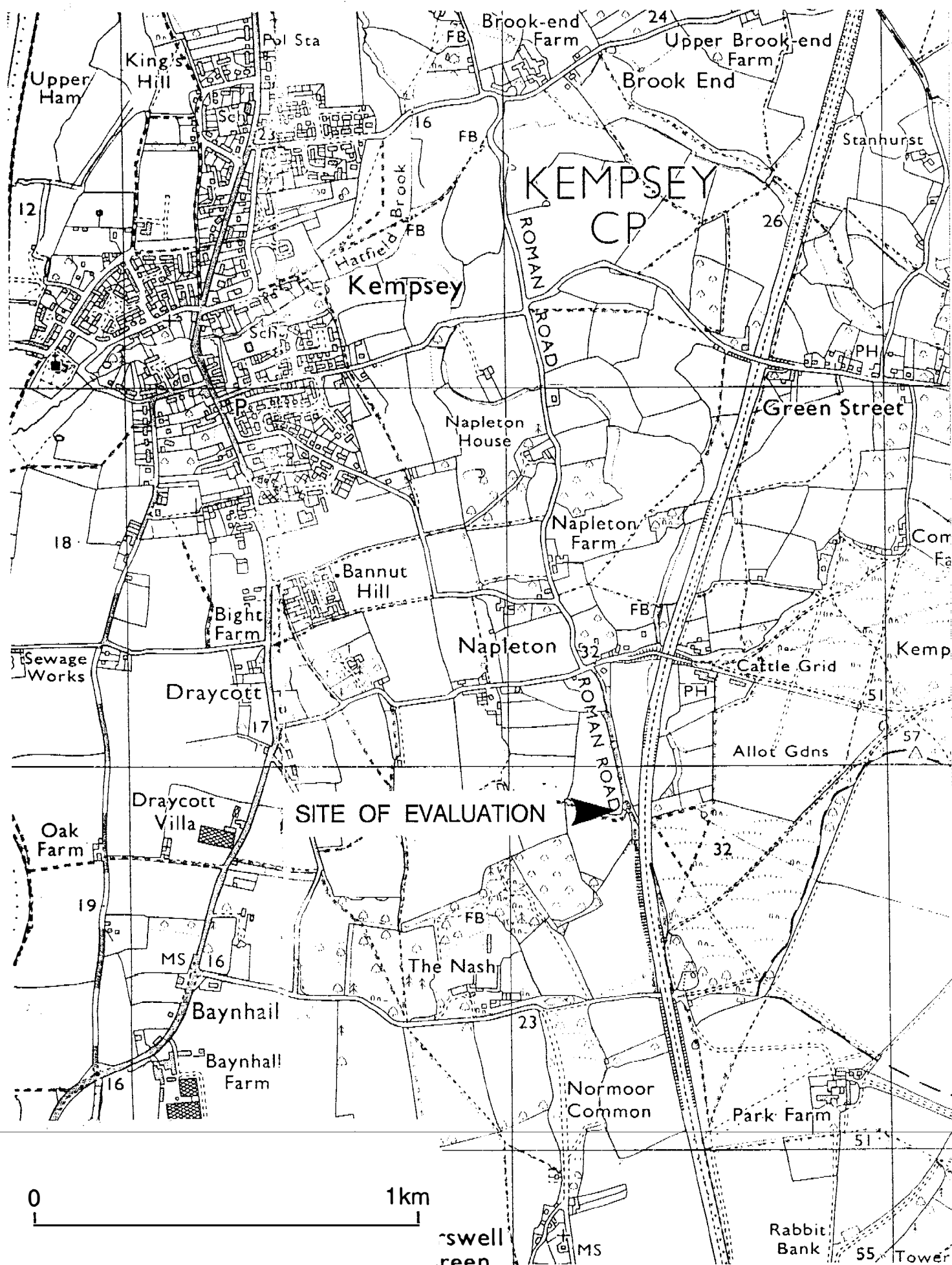
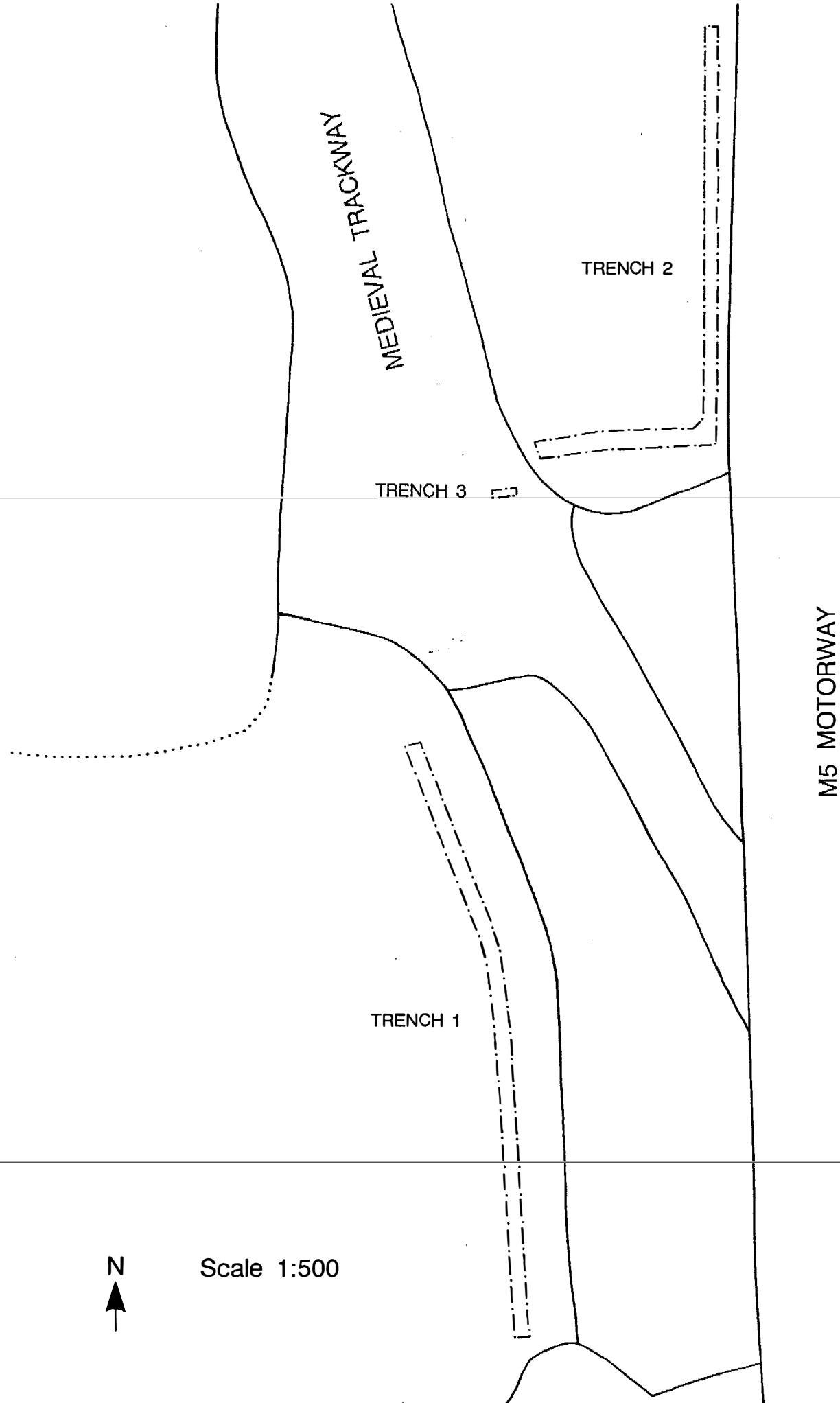


FIGURE 8

KEMPSEY, ROMAN ROAD, HWCM 1150: LINE OF ROAD

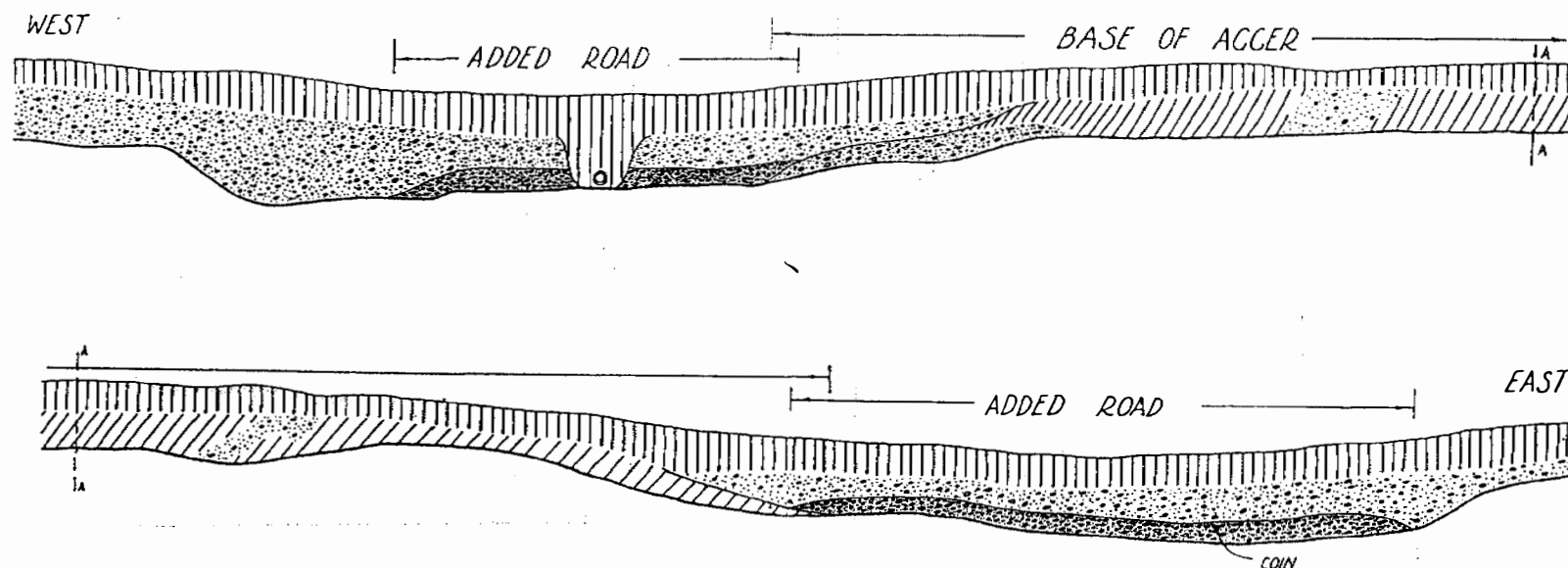




Scale 1:500

KEMPSEY, ROMAN ROAD, HWCM 1150: LOCATION OF TRENCHES

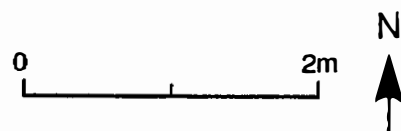
HWCM 1150: SECTION ACROSS THE ROAD AT SHUTHONGER
COMMON, TWYNING, GLOUCESTERSHIRE



A SECTION ACROSS THE ROMAN ROAD
ON SHUTHONGER COMMON, 1960.

NOTATION

HUMUS		GRAVEL
CLAY	////	SAND & GRAVEL	



FROM SANDERS AND WEBSTER 1984

KEMPSEY, ROMAN ROAD, HWCM 1150: STRATIGRAPHIC MATRIX

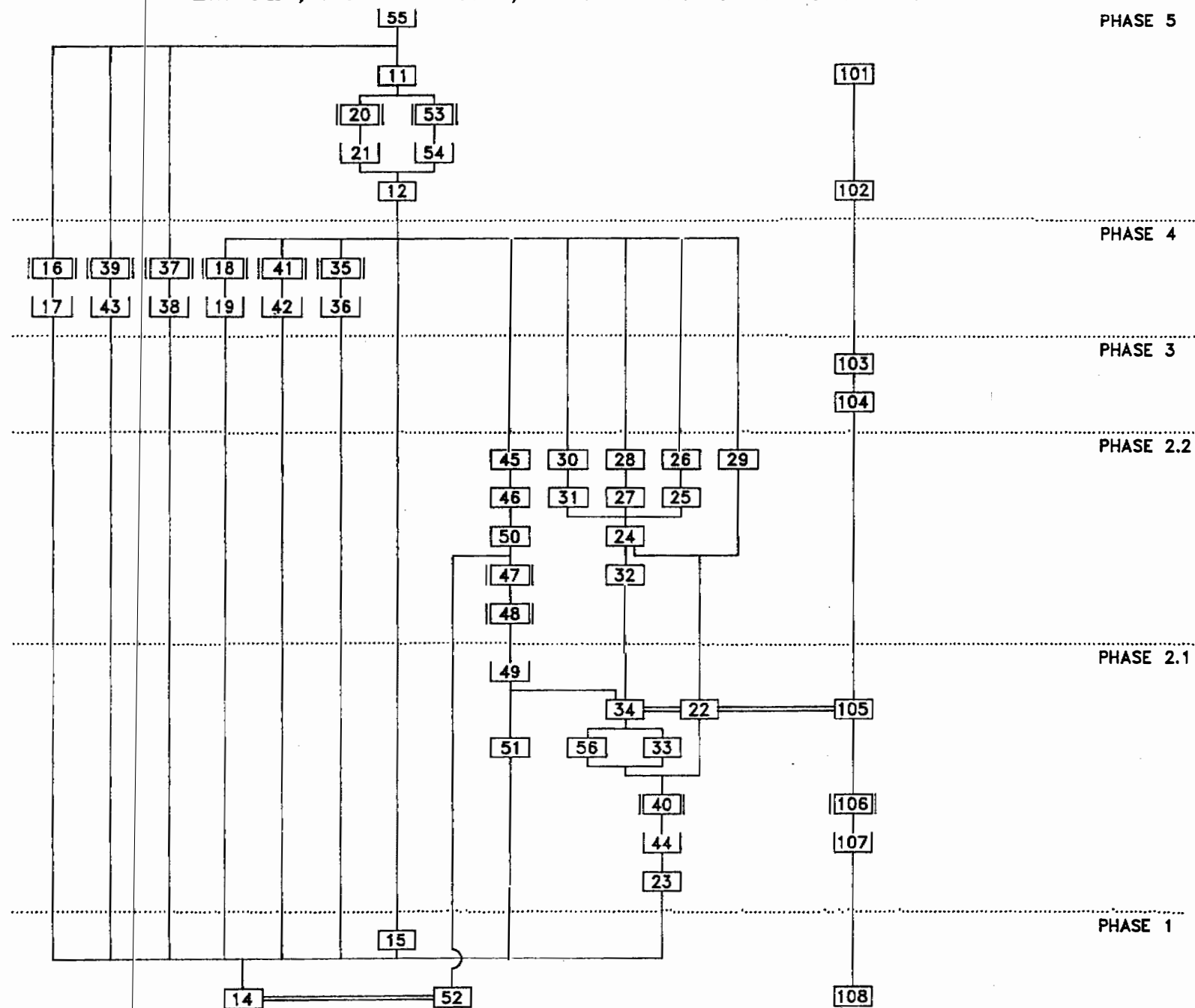


FIGURE 11

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Archaeology section at Contractor Hereford and Worcester County Council	
County Hereford + Worcester	
OS Reference S084	
Single sided ✓ Double sided A3 2 Colour 0	

M5 WIDENING (WARNDON TO STRENSHAM): ARCHAEOLOGICAL EVALUATION

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Project Officer
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Assistant Archaeological Field Officer

January 1991

Sites and Monuments Record
Monument No 10176, 1150, 2120, 10292
Activity No 29572, 29941, 29942; 10420

Archaeology Section
Hereford and Worcester County Council
Tetbury Drive, Warndon
Worcester WR4 9LS

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M5 WIDENING (WARNDON TO STRENSHAM): ARCHAEOLOGICAL EVALUATION

James Dinn, Project Officer

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1 Summary

Evaluation of the area of the proposed motorway widening produced evidence for two previously unknown sites. Deposits and structural features relating to medieval settlement (HWCM 10176) were sealed below ridge and furrow at Junction 7 by Crookbarrow Hill. Evidence for Bronze Age activity came from the eastern edge of the field in which a cropmark complex (HWCM 2120) was located. In addition the Roman road from Worcester to Gloucester (HWCM 1150) was located where it is crossed by the motorway at Napleton, Kempsey.

2 Introduction

Following notification by the Department of Transport of its intention to widen the current dual two-lane stretch of the M5 motorway between Junction 6 (Warndon) and Junction 8 (Strensham and M50), an archaeological assessment of the area was completed by the Archaeology Section (Woodiwiss 1990). This identified nine areas where sites of known or potential significance may be affected by the road-widening (Fig 1). A field evaluation of five of these sites was undertaken with the support of English Heritage; the remaining four, all cropmark sites, were deemed not to be unduly threatened by the proposed works.

The field evaluation comprised visits to two sites to establish whether any earthworks associated with two medieval moats extended into the areas threatened by the motorway widening. In the remaining three areas sample excavation was undertaken in order to

determine the nature and condition of any surviving deposits. Due to the nature of the proposed development, the widening of an existing stretch of motorway, the scope for preservation *in situ* was accepted to be minimal, and this is reflected in the approach to the evaluation. The purpose of the evaluation was to therefore ascertain whether full excavation would be required for any of the sites.

This report falls into five main sections (3 to 7 below). Sections 3, 4 and 5 consist of reports of the three evaluation excavations. These were: at the motorway junction adjacent to Crookbarrow Hill (HWCM 10176); at Napleton, Kempsey, where the Roman road from Worcester to Gloucester meets the motorway (HWCM 1150); and on a cropmark site in a field adjacent to the M5 at Kerswell Green (HWCM 2120). Section 6 reports the results of site visits to areas near two moated sites (HWCM 10292 and HWCM 10420), and section 7 discusses the four sites where field evaluation was not undertaken. Since the cropmarks were not illustrated in the assessment report (Woodiwiss 1990), they have been reproduced here. In each section the site descriptions are ordered from north to south.

3 Evaluation east of Crookbarrow Hill (HWCM 10176)

The evaluation area lies to the south-east of Worcester, to the east of Crookbarrow Hill (Fig 2), on both sides of the motorway. To the west it consisted of the areas of the field bounded to the north-east by the slip road

leading towards Worcester, and to the south-east by the motorway itself (SO 876523). East of the motorway evaluation took place of an area bounded to the west by the motorway and to the north by the junction slip road (SO 877521). The evaluation was designed to assess archaeological deposits within the areas threatened by the motorway widening and the construction of the new roundabout junction which will replace the current arrangement of slip roads and small roundabouts.

The soil in the evaluation area belongs to the Whimple 3 association, described as reddish fine loamy or fine silty soils over clayey soils with slowly permeable subsoils. In general these overlie deposits of drift over reddish mudstone (Ragg *et al* 1984) which can be identified as Mercian Mudstone.

Immediately north-east of Crookbarrow Hill are the 17th century buildings of Crookbarrow Farm (HWCM 964), originally a medieval moated site of which part of the moat still survives (HWCM 963). Extensive ridge and furrow (HWCM 9462), on two alignments, survives in the field to the west of the motorway in which excavation took place.

Crookbarrow Hill (HWCM 552) is a scheduled ancient monument (Here and Worc 239), but the scheduled area is restricted to the hill itself. There has been considerable speculation about the nature of the mound; it has been suggested that it is natural or partly natural; it has been compared to Silbury Hill; it has been likened both to a barrow, and also to a motte (SMR). The name 'Crookbarrow' comes from two elements: the British *crouka* and the Old English *beorg*, both meaning 'hill' (Mawer and Stenton 1927, 178). From this it can be inferred that there was a hill here in the Saxon period, and probably before. A charter of AD 980 refers to the hill (Grundy 1931, 262-3), so on both counts the theory that it was in origin a motte can be discounted. Allies (1840, 70-3) considered it to be partly natural, and 'probably an ancient British Barrow'.

No previous survey or excavation has taken place on or around Crookbarrow Hill, although a number of isolated finds have come to light. A few Roman coins are alleged to have been found in a field adjoining the south-west side of the hill (VCH 1903, 219, citing Allies), and a Neolithic scraper was found in 1886 (Spackman 1907, 8).

Two 19th century maps were consulted; an 1826 estate map (HWRO BA 438/16 r705/27; Fig 7) and the tithe award map of c 1842 (HWRO BA 1572 760.617). From these it was possible to confirm the earlier field and road alignments.

Trenches were excavated by machine on both sides of the motorway. To the east three short trenches (Trenches 5, 6 and 7) were located in a field adjacent to the motorway and the slip road approaching the southbound carriageway. To the west four longer trenches were excavated; three alongside the motorway (Trenches 2, 3 and 4) and one beside the road leading towards Worcester (Trench 1). The deposits revealed by machining were cleaned by hand, photographed, drawn and recorded according to standard Archaeology Section practice (Archaeology Section Recording System AS1 02/88, AS2 02/88, AS3 06/87, AS5 06/87, AS8 02/88). Selected deposits were then excavated and recorded individually. A 4m x 4m extension to Trench 1 was excavated in order to investigate in greater detail some of the deposits revealed by the initial machining. The field to the south, which formed part of the proposed evaluation area, was not tested. This was because it had recently been planted, and the landowner would not allow access without an arrangement for compensation for crop damage. Casual fieldwalking along a footpath across this field produced no finds earlier in date than post-medieval. The limits of the earthwork ridge and furrow within the evaluation area were sketch plotted (Fig 2).

Trenches 2-7 revealed nothing of any archaeological interest, and they were

backfilled immediately. In all cases the ground had been considerably disturbed by the original construction of the M5; in the cases of Trenches 4-7 fragments of tarmac, bitumen, concrete, limestone rubble and other modern material were found at a depth of 0.70-0.80m. Trench 1, however, produced a number of features and these were analysed and phased (matrix, Fig 3). The pottery was scanned and spot dated by Victoria Buteux. Selected soil samples were sieved and examined for plant remains by Clare de Rouffignac (Appendix 1).

3.1 Phase 1 Natural marl

Undisturbed natural compact red-brown silty clay (contexts 30 and 39) with abundant flecks of manganese occurred below the ploughsoil over the majority of the trench. This was cut by the Phase 3 features.

3.2 Phase 2 Neolithic

During machining a leaf-shaped Neolithic arrowhead (Fig 6) was recovered from the evaluation trench; however it was not in a stratified context.

3.3 Phase 3 Medieval (13th/14th century) deposits

Ten features and two layers were assigned to this phase (Fig 4). These consisted of four small shallow round or oval cuts (32, 34, 36 and 43); a wide shallow feature (44); a straight gully (38); a curving gully (26) and three shallow amorphous cut features (23, 29 and 41). In addition there were two layers (24 and 27).

Of the round or oval features, one cut (32) measured 0.20m east to west, and 0.35m north to south. It was 0.14m deep, with slightly sloping sides and a rounded base. It was filled with a grey-brown loamy clay (31) containing occasional sherds of pottery and charcoal flecks.

The second shallow cut feature (34) was apparently sub-oval in shape, although it

extended beyond the excavated area to the south-west, measuring 0.4m north-west to south-east across its width. The sides of the feature were sloping; it was 0.05m deep, and the base was flat. No finds were recovered from the fill (33).

The third of the round features (36) was partially outside the excavated area. The part revealed was semicircular in plan, 0.60m in diameter, 0.08m deep, with gently sloping sides and rounded base. The fill of this feature (35) was a moderately compact red-brown silty clay containing occasional small pebbles and charcoal flecks. There were no finds. A sample from this fill was sieved, but no plant remains were recovered.

Last of this group was a cut (43), again only partly within the excavated area. It appeared as a half oval, 0.40m north-west to south-east, with a rounded profile, and 0.9m deep. The fill of the feature was a moderately compact medium brown silty clay.

The wide shallow feature (44) belonging to this phase was c 2m wide, and 0.16m deep, with gently sloping sides. It extended beyond the trench to the north-east and the south-west, and had slightly curving sides. Its fill was a moderately compact grey-brown sandy clay loam containing rare sherds of pottery and bone, with occasional small pebbles and charcoal flecks. The pottery recovered was dated to the late 13th century.

The straight gully (38) was aligned north-east to south-west, at right angles to the trench. It was c 0.30m wide and 0.11m deep, with a flat base and sloping sides. The fill (37) was a moderately compact red-brown silty clay containing occasional small pebbles and moderate charcoal flecks; a sieved sample produced no plant remains.

The curvilinear feature (26) was located in the extension to the main trench. Its western end was aligned south-west to north-east, and it curved round to the north and east so the eastern end was aligned south-east to north-west. The width of the feature varied from

0.20m at the east to 0.30m at the west, and it was 0.07-0.10m deep. The fill of this gully was a moderately compact strong brown sandy clay loam containing rare sherds of pottery and occasional charcoal flecks.

Of the amorphous cuts, one (23) lay in the western corner of the extension trench. It consisted of a sub-oval, considerably truncated feature which extended beyond the trench to the north-west and south-west. It had shallow sloping sides and was 0.10-0.20m deep. Its fill (21) was a moderately compact red-brown silty clay with rare small pebbles, charcoal fragments, tile fragments and pottery dated to the late 13th century.

Context 29 was another shallow feature in the western corner of the trench extension. It was amorphous and rounded in shape with very gently sloping sides and a depth of between 0.08 and 0.12m. It was filled by a compact reddish-black silty clay (28) containing abundant charcoal, occasional small pebbles and a large quantity of pottery, dated to the late 13th century. A sample from this context was found to contain well preserved carbonised grain and mineralised seeds.

The final amorphous cut (41) again extended beyond the excavated trench. One side was aligned south-west to north-east, and the other from south to north, with an angle at the south. It was 0.13m deep, with sloping sides and a rounded base. Its fill (40) was a moderately compact reddish-brown loamy clay containing occasional small pebbles and charcoal flecks.

Context 24 was a layer of compact red-brown silty clay containing moderate flecks of charcoal and abundant flecks of manganese together with sherds of late 13th century pottery. The layer was cut by several pits (22, 23 and 26) and overlay 28.

Layer 27 consisted of cobbles, lias and pebbles in a matrix of grey-brown moderately compact sandy clay loam which also contained rare flecks of charcoal and sherds of late 13th century pottery.

The identified pottery was of Malvernian fabric (Hereford and Worcester County Fabric Series, Fabric 56), much of it from a single vessel. This is a straight sided cooking pot of a type dated by Vince (1977, 264, fig 2) to the late 13th century, though it may also have been current in the 14th century.

3.4 Phase 4 Later ridge and furrow

Three contexts were identified as belonging to the period during which the area was cultivated by ridge and furrow; two layers (20 and 22) and a wide shallow feature (42; Fig 5).

One layer (20) consisted of dark red-brown loamy very fine sand containing occasional flecks of charcoal and rare small pebbles. It lay in the south-western half of the trench extension. The other layer (22) lay in the northern corner of the trench extension and was of a very similar composition to 20, except that it contained no pebbles.

The shallow cut (42) was c 2m wide and aligned south-east to north-west, perpendicular to the trench. It was 0.09-0.16m deep, with gently sloping irregular sides. The fill of the feature was very mixed, consisting mainly of moderately compact orange-brown silty loam with moderate flecks of charcoal.

3.5 Phase 5 Modern topsoil and machining

Modern topsoil (46) overlay all other deposits. The machine cut was defined as context 45 (matrix, Fig 3).

3.6 Discussion

Phase 2

The earliest material from the evaluation of this area was the Neolithic arrowhead (Fig 6). This, however, was not a stratified find, so although it suggests some Neolithic activity in the area, it is not possible to relate it to any stratified archaeological deposits.

The reference to the find of a Neolithic scraper in 1886 (see above) confirms an impression that there was some activity here during the Neolithic period.

Phase 3

All the dating material from the Phase 3 deposits suggest a late 13th to 14th century date for the features excavated. Although datable finds were not recovered from all contexts assigned to the phase, the general similarity of the features as a group suggested that they should be considered together. Some of the features were truncated, and only tentative interpretations can be made of the original functions of these deposits. However, other features were well preserved, and there was some surviving vertical stratigraphy.

The four rounded features (32, 34, 36 and 43; Fig 4) can be interpreted as the bases of postholes. Whether they originally formed part of buildings on the site or had some other function, such as fence posts, cannot be ascertained on the basis of the evidence provided by a narrow trench such as this. The probable posthole 32 was sealed by the pebble and lias layer 27, which itself was overlain by the clay layer 24, indicating the survival of deposits belonging to three distinct phases of medieval activity in this part of the excavated area (Fig 4).

The linear feature (38), with a flat base, is likely to represent a beam slot. The curvilinear feature (26) was rather different from 38. It is suggested that this may represent a drainage gully rather than the remains of a structure.

The silty clay layer (24) appeared to be make-up material, essentially redeposited natural, but also containing 13th century pottery and charcoal flecks.

Although context 28 was recorded as the fill of a shallow cut (29), the fact that 28 was particularly compact suggested at the time of excavation that it might have been a surface.

The sherds of pottery which it produced were not, however, crushed and abraded as one might expect if it had been a particularly well-used surface. Another possibility is that it was trampled midden material. In relation to this context it is interesting to note that the deposits at this end of the trench extension were considerably better preserved than those in the main trench.

The cobble, pebble and lias layer (27) was probably a surface, perhaps a yard, but its relationships with the structural features on the site could not be ascertained from the evaluation.

The wide shallow feature (44) is in some respects similar to the cut (42) which has been assigned to Phase 4. However, on the basis of rather differing fills, it is possible to suggest that 44 may be the base of a pit, and that 42 represents a furrow of the later ridge and furrow. The fill of 42 was mixed, and contained only charcoal flecks, whereas the fill of 44 included some quite large sherds of pottery and also bone. Finally, the profile of the base of 44 shows it to slope down on three sides, unlike 42, which appears to be linear.

Features which could not be interpreted with any reliability included the cut feature 23 in the western corner of the trench extension, and the cut feature 41.

It is not clear whether the structural features excavated represent isolated settlement or a subsequently abandoned part of the village of Whittington. They lie about 50m from the presumed medieval road line (in use in 1826) and 90m from the moated site of Crookbarrow Farm. It is possible that the settlement was a precursor to the moated site.

Phase 4

From the dating of the deposits which survive below, it is clear that the ridge and furrow is not early in date. It may have originated in the 14th or 15th centuries. The earlier deposits would seem to have been

deliberately levelled, both by the dumping of 20, as well as by truncation; towards the north-east truncation of the earlier features appears to be greater. There are two alignments of ridge and furrow; the south-eastern limit of the surviving earthworks reflects a field boundary current in both 1826 and 1842, and not necessarily an earlier boundary.

Phase 5

The present extent of the ridge and furrow (Fig 2) can also be used to indicate the maximum potential extent of disturbance during the original construction of the motorway. It has already been noted above that this disturbance extended well beyond what could reliably be inferred from the surface evidence.

3.7 Conclusion

The results of the evaluation suggest that extensive medieval deposits and structural features of the 13th and perhaps 14th centuries survive in a good state of preservation beneath the ridge and furrow in the area to the west of the motorway at Junction 7. Although in some places these deposits are truncated, the existence of deposits such as 28 and the surface (27) indicate the potential for very good preservation. The deposit survival does appear to vary, and perhaps not in the way which would be expected; where excavated, survival was better further up the slope to the south-west than down it to the north-east. Without further excavation it is not possible to hazard any suggestions as to why this is so.

The site is significant for a number of reasons. The existence of abandoned medieval settlements under ridge and furrow may not be unusual. However, such sites will have very low visibility unless the overlying ridge and furrow has been ploughed, and in such cases the integrity of the settlement deposits is likely to be damaged. Settlement desertion in the West

Midlands has been studied by Dyer (1982), who noted a wide variety of reasons for the abandonment or contraction of villages, from c 1320 onwards. This site is certainly the first in Hereford and Worcester where a succession from rural settlement to arable farming can be stratigraphically demonstrated for the medieval period.

The medieval settlement has group value along with the moated site and the ridge and furrow field systems. Deposit survival in some parts of the site is excellent, and both artefactual and environmental remains are well preserved. Further work would be required to investigate the dating, layout and function of the settlement in more detail, and to address the question of the abandonment of occupation and the inception of agriculture.

Account should also be taken of the high possibility of finding stray artefacts of earlier periods associated with Crookbarrow Hill.

On both sides of the M5 at this point substantial areas have already been considerably disturbed by the original construction of the motorway.

The setting of the scheduled monument of Crookbarrow Hill should be considered. This site forms a well known landmark on both the M5 and the A44, and it may be possible to enhance its setting as a result of the motorway widening works.

4 Evaluation of a Roman road at Napleton, Kempsey (HWCM 1150)

The evaluation area lay to the west of the M5 in the parish of Kempsey at the point where the projected course of the Roman road (HWCM 1150) meets the motorway at SO 86334793 (Fig 8). The evaluation area includes parts of the fields to either side of the trackway (Green Lane) which was presumed to follow the course of the Roman road, together with the area of scrubby woodland where the track is cut by the M5 (Fig 9). The aim of the evaluation, apart

from to locate the road line, was to test for the presence of contemporary roadside settlement.

The soil in the evaluation area belongs to the Whimple 3 association, described as reddish fine loamy or fine silty soils over clayey soils with slowly permeable subsoils. In general these overlies deposits of drift over reddish mudstone (Ragg *et al* 1984) which can be identified as Mercian Mudstone.

The line of the Roman road at this point has not been confirmed by excavation, but has been assumed from the alignments of lanes, footpaths and field boundaries. It forms part of the road which branched from Ryknield Street to the south of Birmingham and led to Gloucester via Droitwich and Worcester (Margary 1973, 287-8). A section was excavated through it in 1960 (Fig 10) c 14km further south, at Shuthonger Common, Twynning, near Tewkesbury, where the road appeared in an aerial photograph (Sanders and Webster 1960). At this point only the base of the *agger* (the embankment upon which the road was built) survived, to a depth of 0.30m. The rest of the *agger* and the road which would have been constructed on top of it had been removed at some time in the past, presumably to improve cultivation. The *agger* base was 9.75m wide, and on either side of it were additional well-surfaced roads of hard-packed gravel; that on the west being 2.75m wide and that on the east 4.25m wide.

Two 1.5m wide trenches were excavated by machine (Fig 9); one located to the west of the patch of woodland (Trench 1) and an L-shaped trench between the woodland and the motorway. A third trench was excavated by hand in the woodland to the west of the western arm of Trench 2. A further field to the south of the areas trenched, which was included within the proposed evaluation area, was not tested, as local enquiry revealed that it had been quarried as a borrow pit during the original motorway construction (Mr Fowler pers comm).

The deposits revealed by machining were cleaned by hand, photographed, drawn and recorded according to standard Archaeology Section practice (Archaeology Section Recording System AS1 02/88, AS2 02/88, AS3 06/87, AS5 06/87, AS8 02/88). Selected deposits were then excavated and recorded individually. The Roman road section was largely excavated by machine and recorded in section.

Trench 1 revealed little that was of any archaeological interest. There were three features: a sub-square shallow cut 0.02m deep (3, filled by 2; matrix, Fig 11); a linear cut (5, filled by 4) interpreted as the cut for a land drain, and a small patch of charcoal (7) overlain by a sandy fill (6) of a cut (9). This last can be interpreted as a small fire in a small purpose-dug pit, backfilled with the same material which had been originally dug out. These all lay immediately below topsoil, and there is no reason to assume that they are anything but modern in date. A possible interpretation for the cuts 3 and 9 is that they were tree-holes. The adjacent fields to the south and west are recorded as orchards on the 1955 Ordnance Survey 6" map, suggesting that the field in which Trench 1 was situated may also have been an orchard earlier this century.

Trenches 2 and 3 located the Roman road, and together they form a section across it. The deposits revealed have been phased and a stratigraphic matrix was produced (Fig 11). Context numbers 11-56 refer to Trench 2; 101-108 to Trench 3.

4.1 Phase 1 Natural deposits

Natural deposits consisted of natural clay marl subsoil (14, 52 and 108; Fig 12), together with layer 15, which was present in patches over the red marl in the northern part of Trench 2. This was a dark yellowish brown sandy clay loam, although the colour varied from one patch to another.

4.2 Phase 2 Roman road

Two phases of the road were distinguished:

Construction and primary use

The first phase of the Roman road consists of its construction and a phase of use. The deposits associated with this are the *agger* layers (23, 33, 51 and 56) together with the two primary ditch cuts (44 and 107), and the fills of these ditches (40 and 106), along with the roadside ditch (49). The road surface itself consists of the contexts 22, 34 and 105. This description should be read in conjunction with the section drawing (Fig 12).

The primary ditch cut (44) lies to the east of the road. It is 1.70m wide and 0.3m deep with gently sloping sides and a concave base. The western ditch (107) is c 1.50m wide and 0.17m deep, with a similar profile to 44.

The ditches are filled with material (40 and 106) similar to the deposits which make up the *agger*. Context 40 consisted of yellowish brown compact sandy clay with occasional medium and rare small pebbles. The description of the fill 106 is identical, except for its light brown colour. The ditch fill to the east (40) was overlain by thin layers of *agger* (23) and primary road surface (22, 34 and 105).

The *agger* layers (23, 33, 51 and 56) consist of a compact greyish brown sandy clay with occasional small and rare medium pebbles. A spread of *agger* material (51), c 0.1m thick, extended for c 1.0m to the east of the roadside ditch (49), but there was no road surface overlying it. As this was cut by the ditch (49) it can be identified as belonging to the construction phase of the road.

The roadside ditch (49) has concave sides and base and measures 1.92m east to west and 0.50m in depth. No roadside ditch was seen on the western side of the road.

Resurfacing and secondary use

The second phase of the road was comprised of the resurfacing layers (24, 25, 26, 27, 28, 29, 30, 31, 32, 45, 46 and 50), together with the fills (47 and 48) of the roadside ditch (49). Evidence for this phase was confined to Trench 2.

The resurfacing layers were generally composed of sand or sandy clay, sometimes with occasional pebbles. They varied in colour between dark brown and strong brown. The thickness of the resurfacing layer varied from 0.10m to 0.25m. The ditch fill (47) consisted of compact yellowish red clay, and (48) of compact brown slightly sandy clay.

4.3 Phase 3 Medieval trackway (Green Lane)

Deposits relating to this phase were found in Trench 3, and consisted of a layer (104) and a surface (103; Fig 12).

Context 104 consisted of compact brown clay, lying immediately above the Roman road (105). It varied in thickness from 0.06-0.20m. The surface (103) was made up of frequent small and occasional medium pebbles in a matrix of compact brown sandy clay.

4.4 Phase 4 Deposits of medieval or modern date

The features in the northern part of Trench 2 could not be assigned to either Phase 3 or Phase 5 with any degree of certainty, since they produced no finds. These comprised a number of cut features and their fills (16, 17, 18, 19, 37, 38, 39, 41, 42 and 43), and the layer (13).

The features 19 and 42 were steep-sided linear cuts. Cut 19 was 0.32m wide, with steeply sloping sides, but not fully excavated so its base profile was not established. It was filled by a strong brown compact clay containing some gravel (18). The other cut

(42) was 0.34m side, with steeply sloping sides and a gently rounded base. Its fill (41) was compact reddish brown clay with some small pebbles.

Three other features were sub-square (17), sub-oval (38), or subcircular (43) in shape. The sub-square cut (17) measured 0.20 x 0.20m and was 0.06m deep. Its fill (16) was greyish brown sandy clay loam containing occasional small pebbles. The sub-oval cut (38) measured 0.70m x 0.45m and was 0.05m deep with an irregular base. Its fill (37) was a moderately compact strong brown sandy clay loam containing some gravel. Cut 43 was subcircular, 0.25m in diameter and 0.04m deep. Its fill (39) was a compact light brownish grey sandy silt with orange sand mottling containing frequent charcoal flecks.

The layer 13 consisted of a strong brown compact sandy loam, 0.05m in thickness, lying between the ploughsoil (12) and the natural marl (14).

4.5 Phase 5 Modern deposits

Modern deposits were present in both trenches, and consisted of topsoil (11, 101 and 102), the ploughsoil (12), a probable plough furrow and its fill (20 and 21) and a ditch cut and fill (54 and 53).

4.6 Discussion

Phase 2 Roman road

Construction and primary use

This phase itself could be subdivided into two, since deposits relating to the initial construction of the road can be distinguished from the road surface itself. The construction deposits consist of the two shallow ditches at either side of the centre of the road (44 to the east, and 107 to the west). Both are relatively shallow cuts, and cannot belong to the first phase of use of the road, since they are sealed by the road surface (22, 34 and 105). There are no earlier surfaces which could be associated with the two ditches, so it may be

suggested that they represent 'marking out' of the road line. An alternative hypothesis is that initially the road was to have been narrower and that after construction had begun it was widened.

The main part of the road, which lies on a depth of *agger* of up to 0.3m, appears to be 7.6m wide, although it is possible that it may have extended further to the west. The road surface (22, 34 and 105) can be traced for a further 3m to the east in Trench 2 and 6m to the west in Trench 3.

A roadside ditch (49) associated with this phase of the road was located on the eastern side, but none was found to the west. The spread of *agger* material to the east was probably related to the construction of the road and ditch.

The road appears to have consisted of no more than a pebble surface on a built-up low *agger* of sandy clay. Although some Roman roads have an *agger* of considerable height, and a foundation of large stones beneath the actual surfacing of gravel, the section revealed here should not be considered unusual. Some Roman roads were constructed of an *agger* alone, with no additional surfacing (Margary 1973, 20). The road here cannot be compared in this respect with the road recorded at Shuthonger Common (Sanders and Webster 1960), since the surface there had been ploughed away.

Resurfacing and secondary use

The eastern part of the road was resurfaced, and the eastern roadside ditch was filled during a later phase of use. The resurfacing was to a lower standard than the original build of the road, since no pebble surface was laid on top of it.

No evidence for resurfacing survives on the western side of the road.

No finds were recovered from the road construction or surfaces of either phase, or from the excavated features, and it is

therefore unlikely that there was Roman settlement in the immediate area.

Phase 3 Medieval trackway

The medieval trackway lies over the western part of the Roman road, beneath the trackway which still survives today. It consists of a build-up of soil, upon which a thin pebble layer has been spread. The modern Green Lane has ditches on either side, probably on the same alignment as medieval roadside ditches. The surface interpreted as medieval produced no finds, but can be distinguished from the Roman road by its method of construction and by its position in the stratigraphic sequence.

Phase 4 Deposits of medieval or modern date

The features assigned to Phase 4 are those to which no secure date could be given, since they contained no datable finds. 17, 38, and 43 may have been tree holes; 19 and 42 may have been field drains. There is no reason to believe that any are of archaeological significance.

4.7 Conclusion

The results of the evaluation indicate that only part of the Roman road underlies the medieval and modern trackway, and that its course was slightly further to the east. There is no reason, however, to doubt the assumption that it was on the same alignment as the trackway and the other boundaries which suggest its continuation to the north.

Two phases of the road were distinguished: construction and primary use; and resurfacing and secondary use. In terms of its construction, the road at this point is relatively insubstantial, consisting in the primary phase of a low *agger* overlain by a gravel surface with a roadside ditch to the west. In the secondary phase, the road was resurfaced with a layer of silty sand.

No Roman finds were made, and no evidence

was found for roadside settlement or other activity in the Roman period.

The road surfaces at this site were well preserved, probably because the area has been used as pasture. The length of potentially well preserved Roman road here which is threatened by the motorway widening extends to about 100m, of which about 50m will be completely destroyed. There is consequently an opportunity here to examine a greater length of road. The document *Priorities for the preservation and excavation of Romano-British sites* states: 'Where possible, lengths of road should be stripped so that there is a greater chance of finding datable artefacts, and the composition and methods of laying-down of the aggregate layers can be studied more completely; the area stripped should extend far enough on either side to include the ditches. Evidence for the preliminary surveys should always be sought...' (Society for the Promotion of Roman Studies 1985, para 4.6.1). It was only possible during the evaluation to examine a narrow strip across the road; recorded primarily in section. Without stripping a wider area the true sequence of construction, use and resurfacing cannot be ascertained.

5 Evaluation of cropmarks at Kerswell Green (HWCN 2120)

The site consists of a complex of cropmarks in a field east of Kerswell Green (centred on SO 86324668). These were first photographed by Arnold Baker in July 1956 (NMR reference SO 8646/5). They are described in the County Sites and Monuments Record as a series of interlinking and separate small enclosures and additional ditches and pits, to which no date can be ascribed on current knowledge. The cropmarks and their relationship to the motorway are shown in Figure 13.

The evaluation area lies on flat land, just within the Wick 1 soil association. This consists of deep, well drained coarse loamy and sandy soils, overlying geological deposits

of glaciofluvial or river drift (Ragg *et al* 1984).

No previous excavation has been carried out on the site, and no other information is known about it than the aerial photograph.

The evaluation trench was excavated by machine alongside the motorway, c 10m west of it (Fig 13). It was excavated in two parts, to a depth of 0.4–0.5m, into the natural sandy subsoil. Due to the extreme paucity of archaeological features, recording on this site was confined to plotting the distribution of finds along the trench. Casual fieldwalking over parts of the remainder of the field was also carried out, with useful results. The field to the south, which formed part of the proposed evaluation area, was not accessible as it had recently been planted and the landowner was consequently unwilling to allow access.

5.1 Phase 1 Natural

Natural deposits consisted of sand with some gravel, at a depth below modern ground surface of 0.4–0.6m.

Only one feature, identified as probably natural, was recorded at the site, other than ploughmarks and the remains of ridge and furrow. This was shallow, amorphous and linear. It was truncated on two sides by deep ploughmarks, and contained no finds.

5.2 Phase 2 Bronze Age finds

A small round scraper (Fig 14) made from pebble flint was found in the subsoil layer.

Five sherds of Bronze Age pottery (identified by Jane Evans) were found in the northern part of the trench. These included three undecorated joining rim sherds (Fig 14) and a small sherd of coarse fabric with cord impressed decoration (possible whipped cord maggots), perhaps from a Collared Urn. Fieldwalking in the western part of the field produced four burnt stones found close together, which may tentatively be identified

as an indication of Bronze Age or Iron Age activity.

5.3 Phase 3 Roman finds

Nine sherds of Roman pottery were recovered from the trench, of which eight were Severn Valley ware, together with one very small sherd of colour coated ware.

5.4 Phase 4 Ridge and furrow

There was slight evidence for ploughed-out ridge and furrow aligned east to west (Fig 13).

5.5 Phase 5 Modern deposits

The ploughsoil consisted of dark brown sandy loam containing occasional sherds of post-medieval pottery, brick, tile and iron slag to a depth of c 0.45m. The field has been deeply ploughed, and the ploughmarks were clearly visible in the excavated trench, regularly spaced at c 0.50m intervals. A land drain crossed the trench at 238m.

5.6 Discussion

Phase 1

The shallow amorphous linear feature can probably be interpreted as a variation in the natural sand and gravel deposits. Given that more did not survive of it, secure interpretation is difficult, particularly since it contained no finds.

Phase 2

The Bronze Age finds, though few, are sufficient to suggest the former existence of a settlement site in the area. Bronze Age artefacts are rarely found widely dispersed from the settlement or other site with which they are associated.

The pottery is of a coarse fabric and the sherds are too small for forms to be identified with any degree of certainty, although the decorated sherd (Fig 14) may be from a

Collared Urn.

The burnt stones cannot of course be dated, but burnt stones are a feature of both Bronze Age and Iron Age sites. Burnt mounds, comprised of thousands of heat-cracked stones, are a form of Bronze Age site the function of which is actively being discussed (Barfield and Hodder 1987). Four stones cannot be considered sufficient evidence for a burnt mound, but given the other evidence for Bronze Age activity, it is not implausible to suggest that they may be of the same date.

A number of other Bronze Age sites in the area are recorded on the County Sites and Monuments Record. A handled beaker with spiral ornament was found in 1934 in a gravel pit north-east of Baynhall (SO 85414764; HWCM 2119, Hawkes 1935). A small barrow cemetery on Kempsey Common consists of three barrows (HWCM 2126, 2127, 2128; centred on SO 871481), which survive as shallow earthwork ring-ditches. The cropmark complex HWCM 6029 (7.3 below) includes a possible ring-ditch only 0.6km to the south, and there are five further ring-ditches (HWCM 10362, 10408, 10409, 10410 and 10411) centred on SO 853467 to the west.

The lack of any features in the excavated trench suggests that in this area at least, the site, if present, must have been ploughed out. That any pottery had survived at all does suggest that destruction of the site was relatively recent, since the fabric is very fragile and liable to crumble.

Phase 3

No great significance should be attached to the Roman pottery present in the evaluation area. This need not necessarily be taken as indicating the close proximity of a contemporary settlement, as the presence of Roman pottery on fields as a result of manuring is well attested.

Phase 4

Only two possible medieval plough furrows survived, giving an indication of the intensity of later post-medieval cultivation in this field. The fact that some evidence has survived suggests that the area has not always been as flat as it is now. It is therefore possible that archaeological deposits may survive in parts of the field which were originally more low-lying.

Phase 5

The deep ploughing of the area, although visible in some parts of the trench, had evidently not destroyed all archaeological deposits, given that some of the ridge and furrow still remained.

5.7 Conclusion

The evaluation failed to locate any significant archaeological features within the area under threat from the construction of the motorway. It did, however, establish the presence of Bronze Age activity in the immediate area.

It can be stated that the cropmarks which were the justification for the evaluation do not extend into the threatened area, or that they have been completely removed by modern agricultural activity. No evidence to date the cropmarks was recovered.

6 Sites visited

Areas near to two known medieval moated sites were visited in order to establish whether there were any earthworks associated with them which had not been recorded on the County Sites and Monuments Record and which may be threatened by the motorway widening. The moated sites themselves, which are not scheduled, were not visited.

6.1 Field west of Norton Brickworks, Norton (HWCM 10292)

The moated site at Newlands Farm, Norton

(HWCM 7053, Fig 15) is situated at SO 871516. The County Sites and Monuments Record entry states that only the extreme south-western corner where the outflow leat takes off is still wet although the dry course may be traced round three sides. The present farmhouse is just outside the original moated area, and any surviving earthworks in the interior have been confused by later ponds.

The site visit established that the evaluation area, formerly an orchard, has recently been ploughed, and that there are no earthworks on the eastern side of the motorway where it is to be widened.

6.2 Fields south-west of Dunstall Bridge, Earls Croome (HWCM 10420)

The moated site of Dunstall House (HWCM 7052, Fig 16) is situated at SO 883428 on the eastern side of the motorway. It survives on two sides only and is described in the County Sites and Monuments Record as a reversed 'L' corner of a rectangle. HWCM 9468 consists of earthworks and ridge and furrow in the small field to the north-west of the moat and east of the motorway.

The site visit established that no earthworks exist on the western side of the motorway, an area which consists mostly of improved pasture. Since it is to be widened on the western side, the known earthworks to the east are not threatened.

7 Sites not evaluated

Four separate areas of cropmarks, for which the initial desk-top assessment was considered sufficient evaluation, include six sites registered on the County Sites and Monuments Record. Three of these are adjacent to one another and are therefore illustrated together. Where possible the photographs from which the sites have been mapped were consulted for further information.

7.1 HWCM 3589, 3590 and 9124

These three cropmarks are adjacent to Junction 6; HWCM 3589 and 3590 lying to the west of the motorway between the A449 and Warndon Lane, and 9124 to the east between the motorway and the A4538 (Fig 17). The cropmarks are not directly threatened by the motorway widening.

7.2 HWCM 6058

This cropmark (Fig 18) is centred on SO 882544. As the motorway is to be widened on the eastern side at this point, the cropmark itself is not threatened.

7.3 HWCM 6029

HWCM 6029 (Fig 19) is centred on SO 866456. At this point the motorway is to be widened to the west, on the same side as the cropmarks. There are no cropmarks in the field between HWCM 6029 and the motorway, which is partly threatened by the widening.

7.4 HWCM 9125

HWCM 9125 (Fig 20) is centred on SO 875436. Here again the motorway is to be widened on the western side, towards the cropmarks, but these are not directly threatened.

8 Conclusions

The evaluation of the area to be affected by the motorway widening revealed evidence of a previously unknown medieval settlement (HWCM 10176) close to Crookbarrow Hill. The site is well preserved and artefacts and environmental evidence survive well. The structural and other remains are sealed by ridge and furrow, and there is a potential on this site to elucidate the process of settlement desertion in the later medieval period.

There is potential at Napleton, Kempsey, for further examination of a well preserved

length of Roman road (HWCM 1150).

It was evident at two of the sites evaluated that disturbance which took place during the original motorway construction extended beyond the area of motorway itself. This took the form of a borrow pit at Kempsey, and machine disturbance and landscaping at Crookbarrow Hill. No maps of this disturbance were available to the evaluation team. Monitoring during road construction would be valuable to allow the extent of disturbance to be defined.

9 Acknowledgements

Thanks are due to the Department of Transport for information and for help in arranging site access, and to the landowners and tenants who generously allowed evaluation work on their land: Mr Fowler, Mr Newell, Mr Weston, Marston Developments, Kempsey Parish Council, the Department of Transport, Mr and Mrs McKay, and Mr Venables.

Fieldwork was carried out by Duncan Brown, James Dinn, Paul Godbehere, Clare de Rouffignac, and Nigel Topping. Illustrations are by Paul Godbehere (Fig 1), Carolyn Hunt (Figs 2, 4, 5, 6, 9, 12, 13, 14 and 16), and Rachel Edwards (Figs 3, 8, 11, 15, 17, 18, 19 and 20). The following staff of the Archaeology Section provided valuable help and advice: Victoria Buteux, Malcolm Cooper, Hal Dalwood, Jane Evans, David Guyatt, Hilary White and Simon Woodiwiss.

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Primary records consulted

1826 Map of Crookbarrow Estate (HWRO
BA 438/16 r705/27)

c 1842 Whittington Tithe Award map
(HWRO BA 1572 760.617)

11 Abbreviations

Numbers prefixed with 'HWCM' are the primary reference numbers used by the Hereford and Worcester County Sites and Monuments Record.

HWCC - Hereford and Worcester County Council

Appendix 1

The plant remains from Crookberrow Hill (HWCM 10176)

Clare de Rouffignac, MA GIBiol,
Environmental Archaeologist

1 Summary

Three samples from Medieval features was examined for charred plant remains. Two samples were found to contain no charred seeds, but one sample contained a number of carbonised cereal seeds, weed seeds and chaff.

2 Method

The samples were all of approximately two litres in size. As they were from clay soils it was not possible to sieve them immediately. A preliminary treatment was carried out by soaking the samples for three days in water, with the addition of a proprietary water softener to break down the clay.

The samples were then sieved, floated and sorted. The mesh sizes used were 1mm for the residues, and 1mm for the flots. The flots were sorted to recover all seeds and other plant remains, both charred and uncharred. The sorted plant remains were then examined under a low power EMT-1 light microscope to enable identification.

The seeds were identified as far as possible using the Archaeology Section comparative collection, a seed identification manual (Bergren 1981) and an illustrated site report (Griffin 1988). Comparative descriptions of charred cereal seeds and chaff were obtained from Jacomet (1987).

3 Results and discussion

(28) Layer or fill (?midden)

This sample contained a considerable quantity of well-preserved charred seeds and chaff. Two mineralised seeds were also present.

The cereal remains included *Triticum aestivum* (bread wheat), *Secale cereale* (rye), and chaff fragments. A number of other edible seeds were recovered, including *Vicia faba* (field bean) and *Pisum* sp (pea). Also present were seeds of *Anthemis cotula* (stinking mayweed). This species is a common weed of heavy cultivated ground (Lisa Moffett pers comm).

The charred plant remains probably represent waste material from a hearth or oven.

The mineralised seeds were of *Rubus fruticosus* agg (bramble) and *Ranunculus* sp (buttercup). Their presence in a sample which consisted mainly of charred plant remains is interesting. These species are common weeds of disturbed ground and were probably preserved as a result of minerals in the clay soils in which they were deposited.

(35) Fill of posthole

This sample was found not to contain any plant remains.

(37) Fill of beam slot

Again, there were no plant remains preserved in this sample.

4 Conclusions

The preservation of charred remains was good. It was possible to identify most of the seeds to species and the presence of mineralised seeds was also of interest. However, the remains were from only one sample, and it is difficult to draw any firm conclusions. Further sampling of features would enhance our knowledge of the environment and economy of the site to a far greater degree.

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Appendix 2

Archive

The archive consists of:

HWCM 10176, Crookbarrow Hill

- 26 Context records AS1
- 2 Fieldwork progress records AS2
- 3 Photographic records AS3
- 1 Matrix sheet AS7
- 9 Scale drawings
- 1 Box of finds

HWCM 1150, Kempsey, Roman road

- 61 Context records AS1
- 4 Fieldwork progress records AS2
- 2 Photographic records AS3
- 1 Matrix sheet AS7
- 6 Scale drawings
- 1 Box of finds

HWCM 2120, Kerswell Green

- 2 Fieldwork progress records AS2
- 1 Scale drawing
- 1 Box of finds

All primary records and finds are kept at:

Archaeology Section
Hereford and Worcester County Council
Tetbury Drive
Warndon
Worcester WR4 9LS

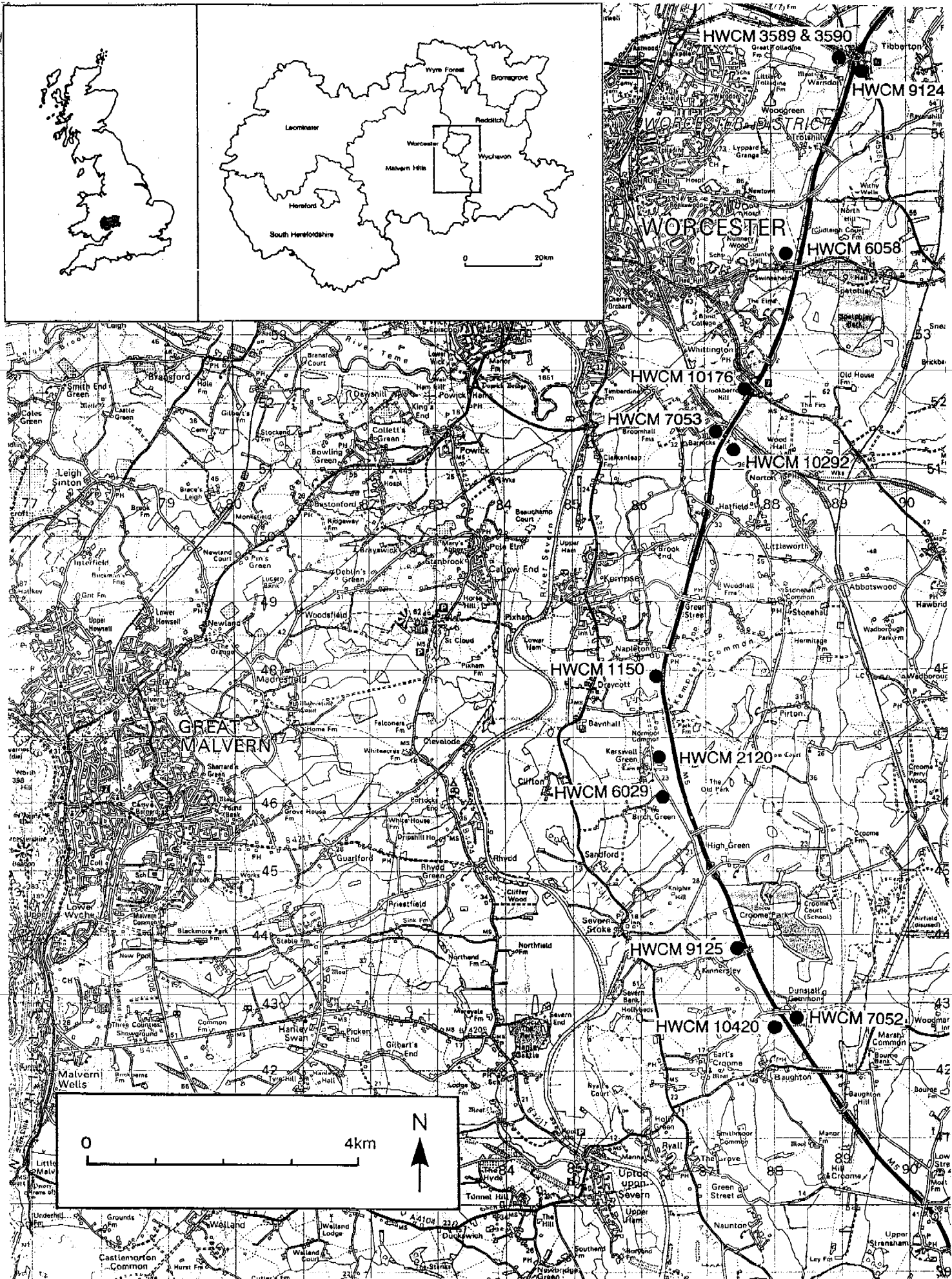
Tel Worcester (0905) 58608

A security copy of the archive has been placed at:

Hereford and Worcester County Museum
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ

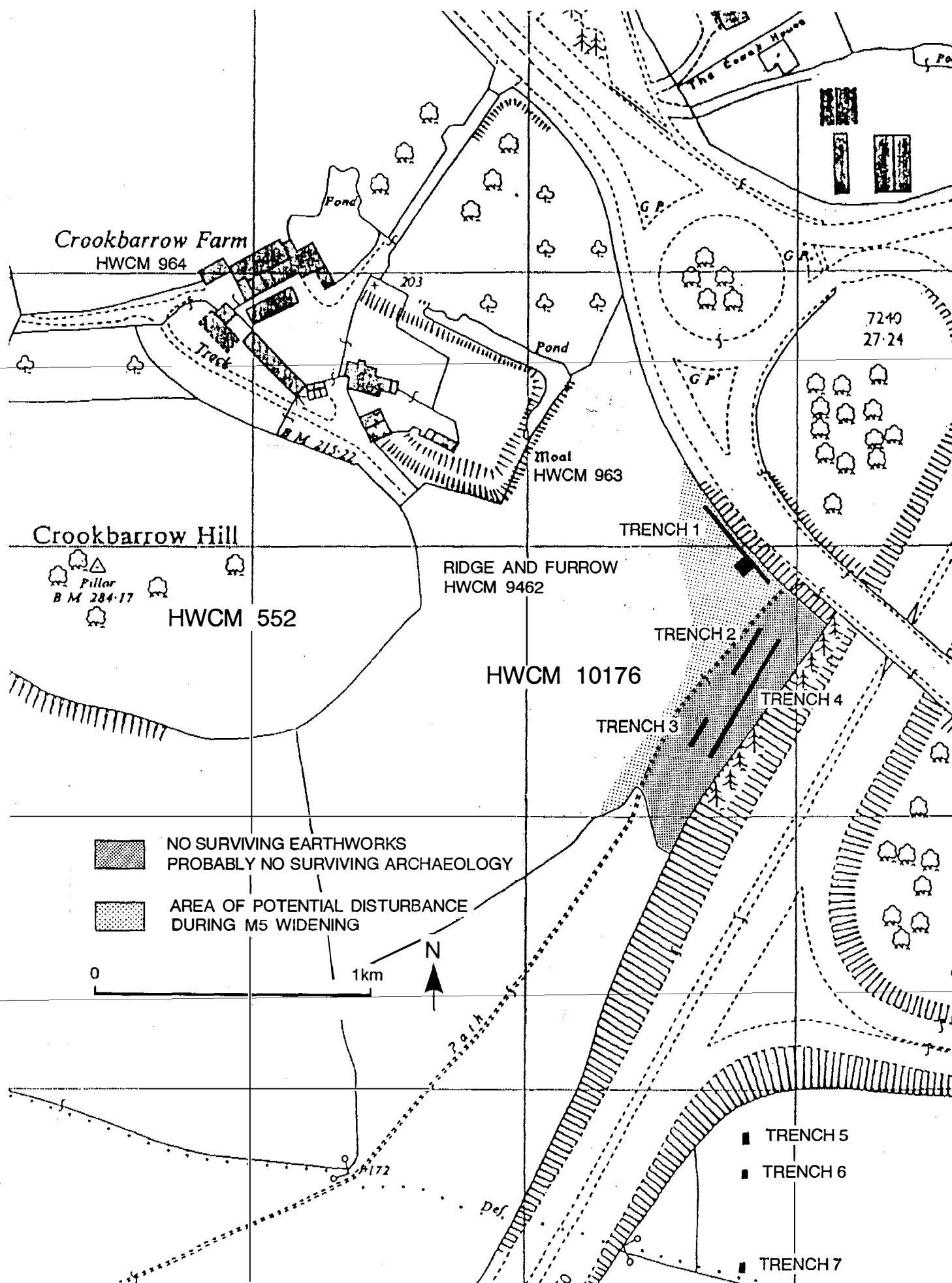
Tel Hartlebury (0299) 250416

LOCATION OF EVALUATION SITES

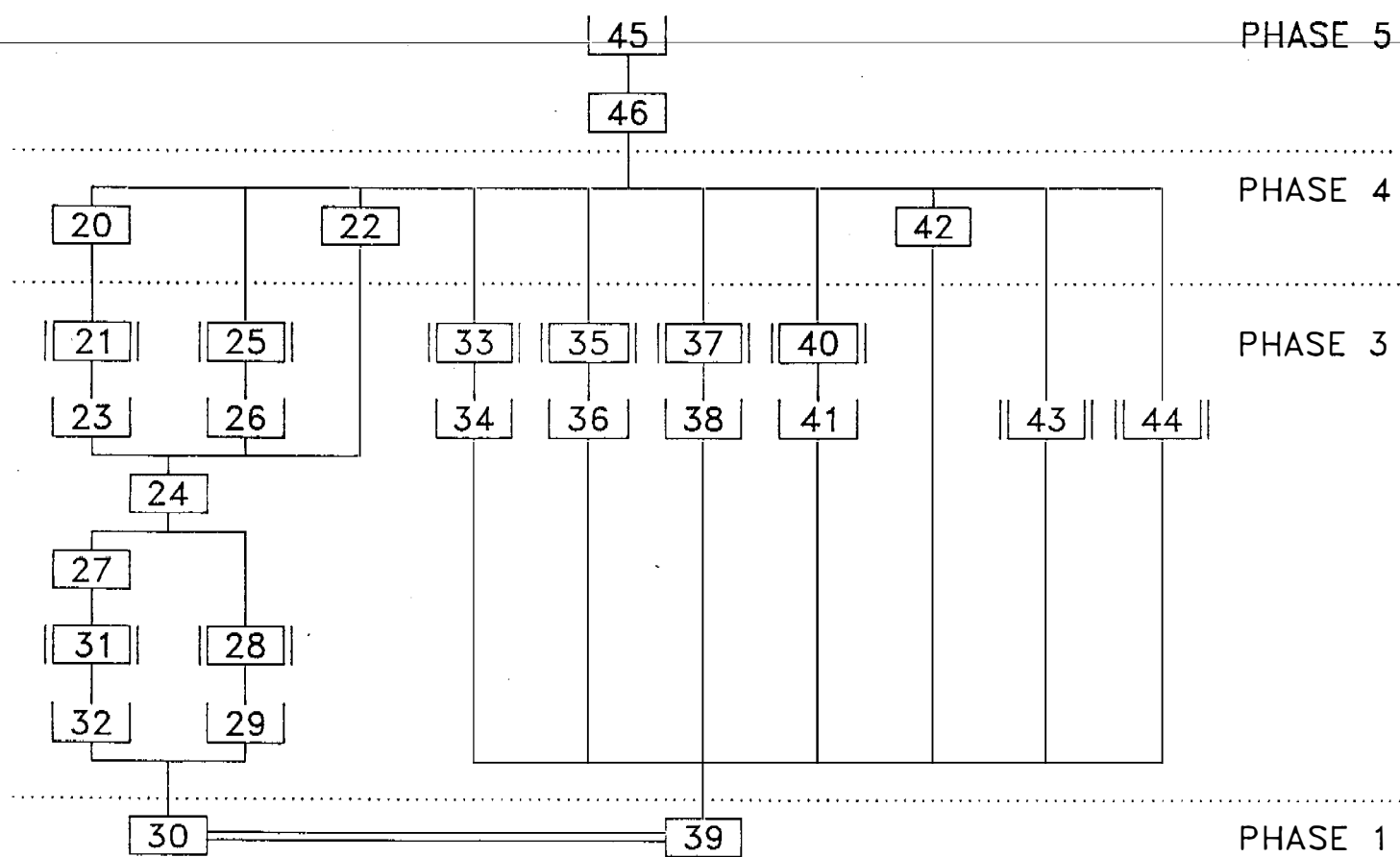


CROOKBARROW HILL HWCM 10176:
LOCATION OF EXCAVATED TRENCHES

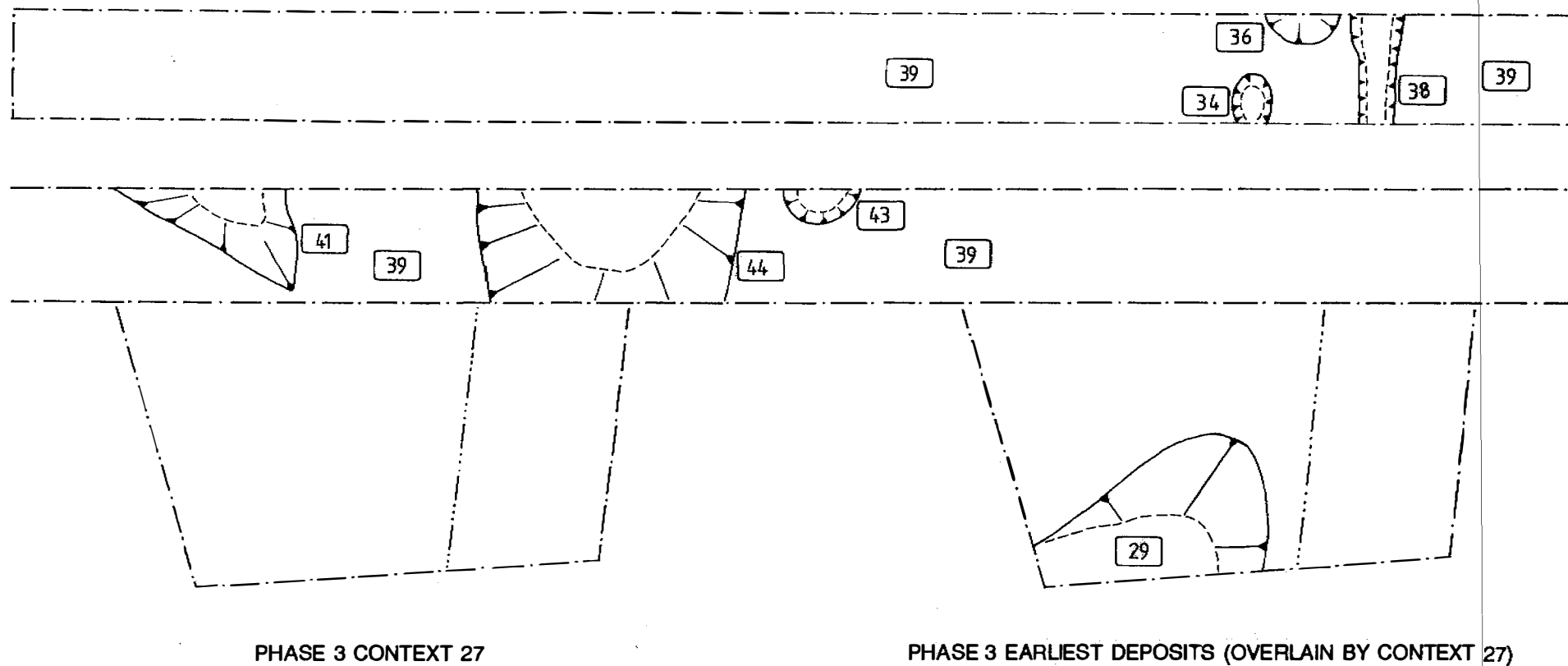
FIGURE 2



CROOKBARROW HILL, HWCM 10176: STRATIGRAPHIC MATRIX



CROOKBARROW HILL, HWCM 10176: PLAN OF PHASE 3 FEATURES



CROOKBARROW HILL, HWCM 10176: PLAN OF PHASE 4 FEATURES

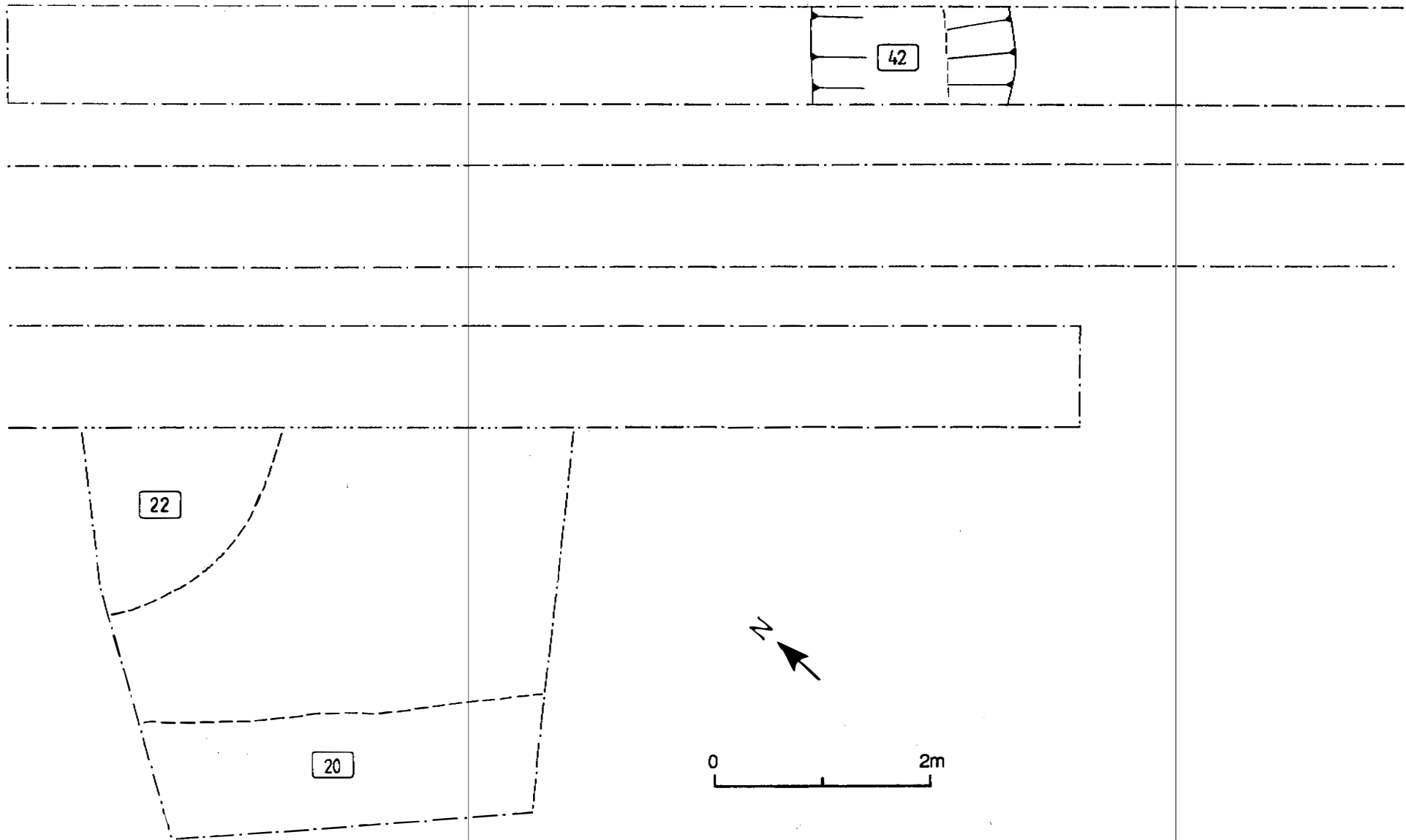
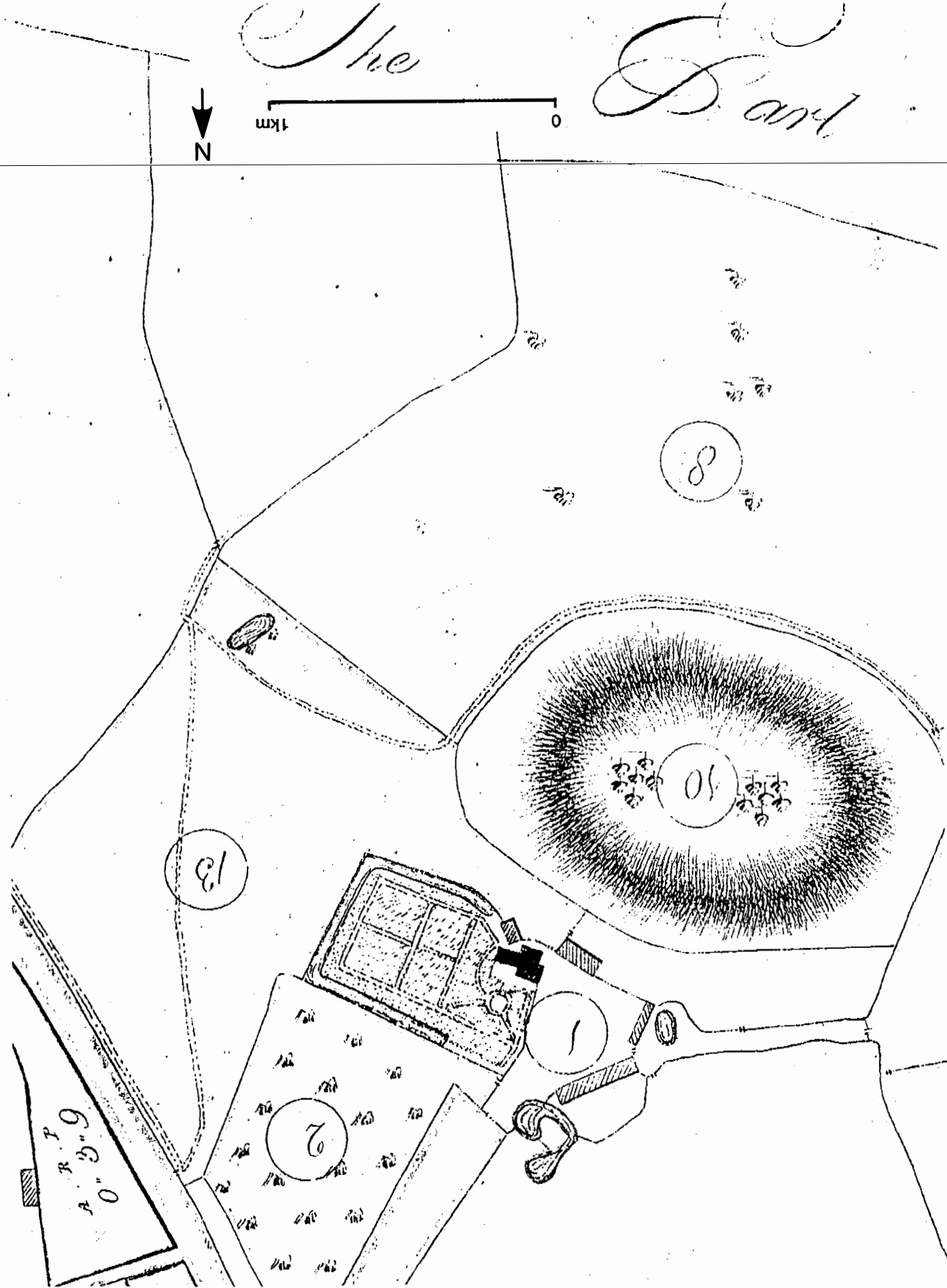
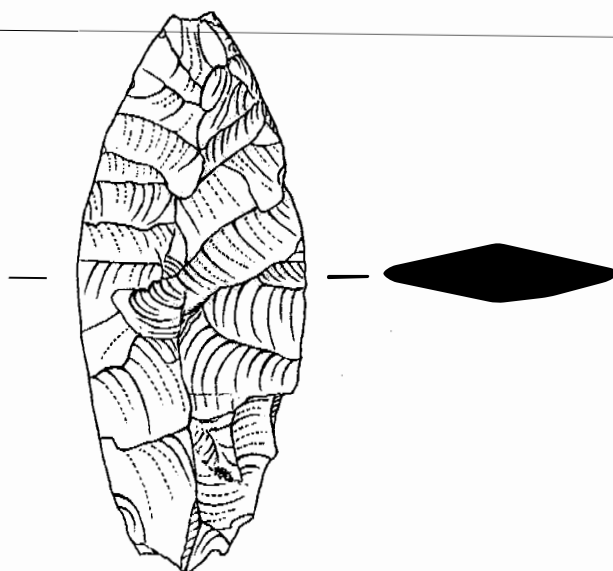


FIGURE 5



CROOKBARROW HILL, HWCN 10176: 1826 ESTATE MAP
(HWRO BA 438/16 r705/27)

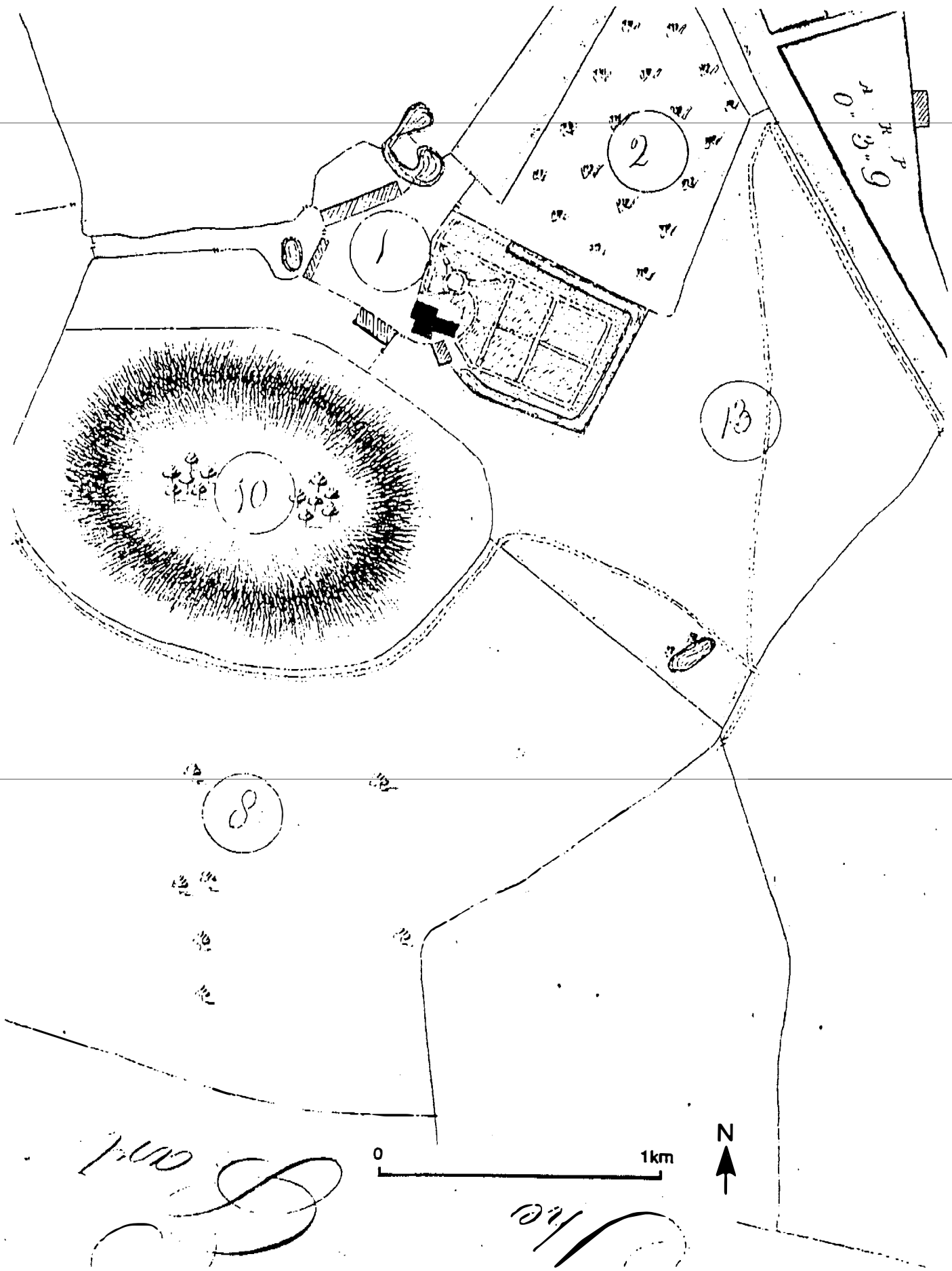


CROOKBARROW HILL, HWCM 10176: NEOLITHIC ARROWHEAD
(Scale 2:1)

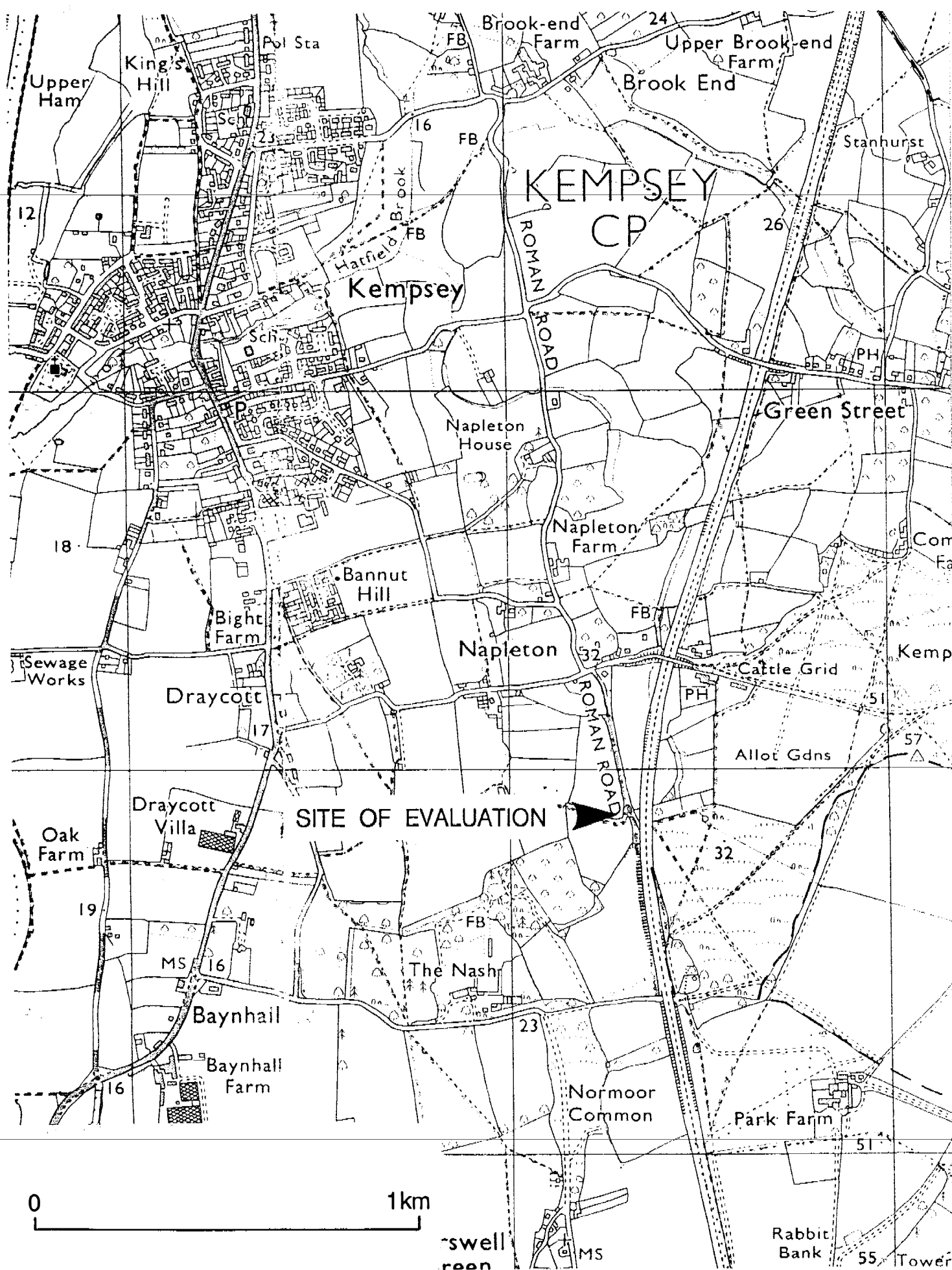
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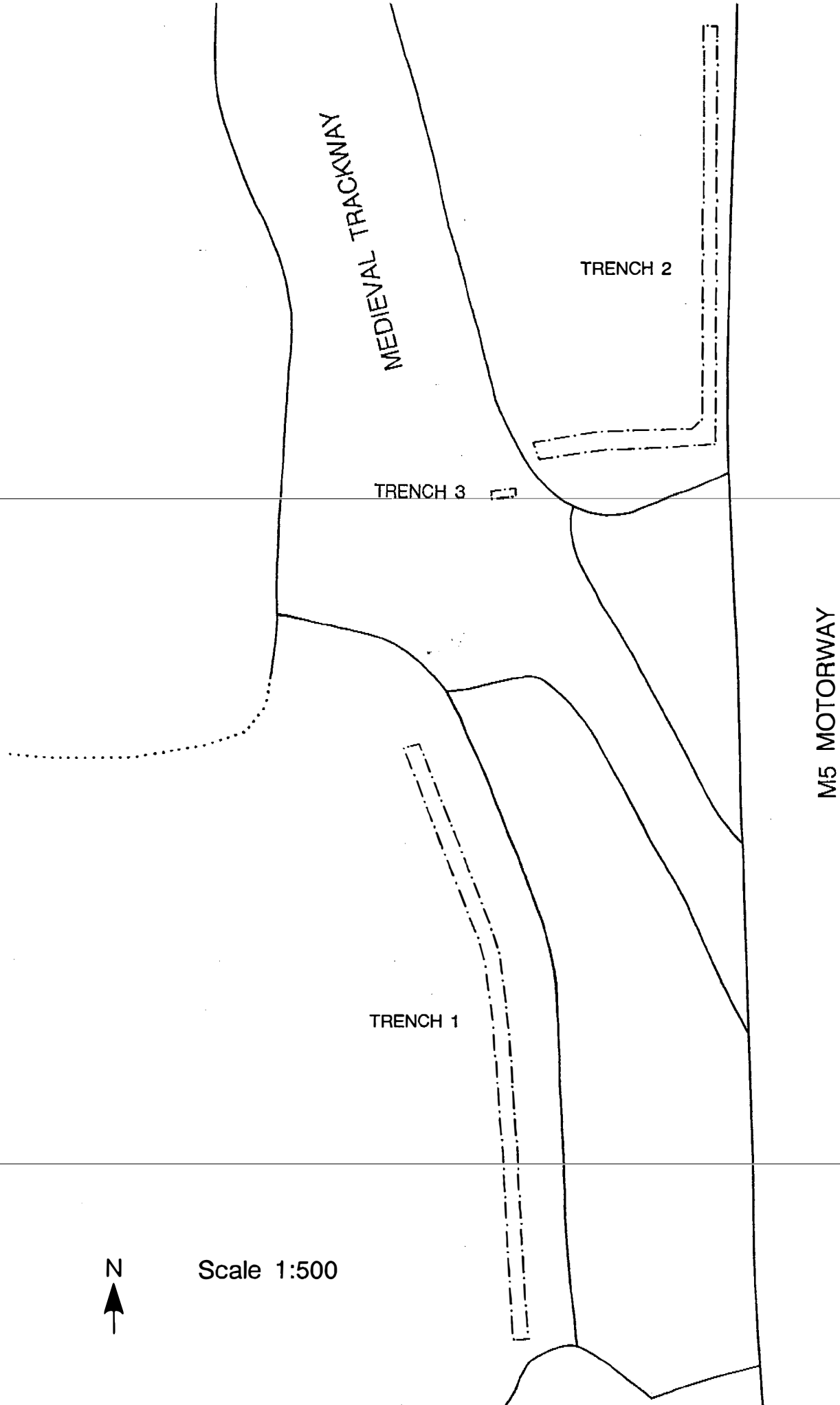
FIGURE 7

CROOKBARROW HILL, HWCM 10176: 1826 ESTATE MAP
(HWRO BA 438/16 r705/27)



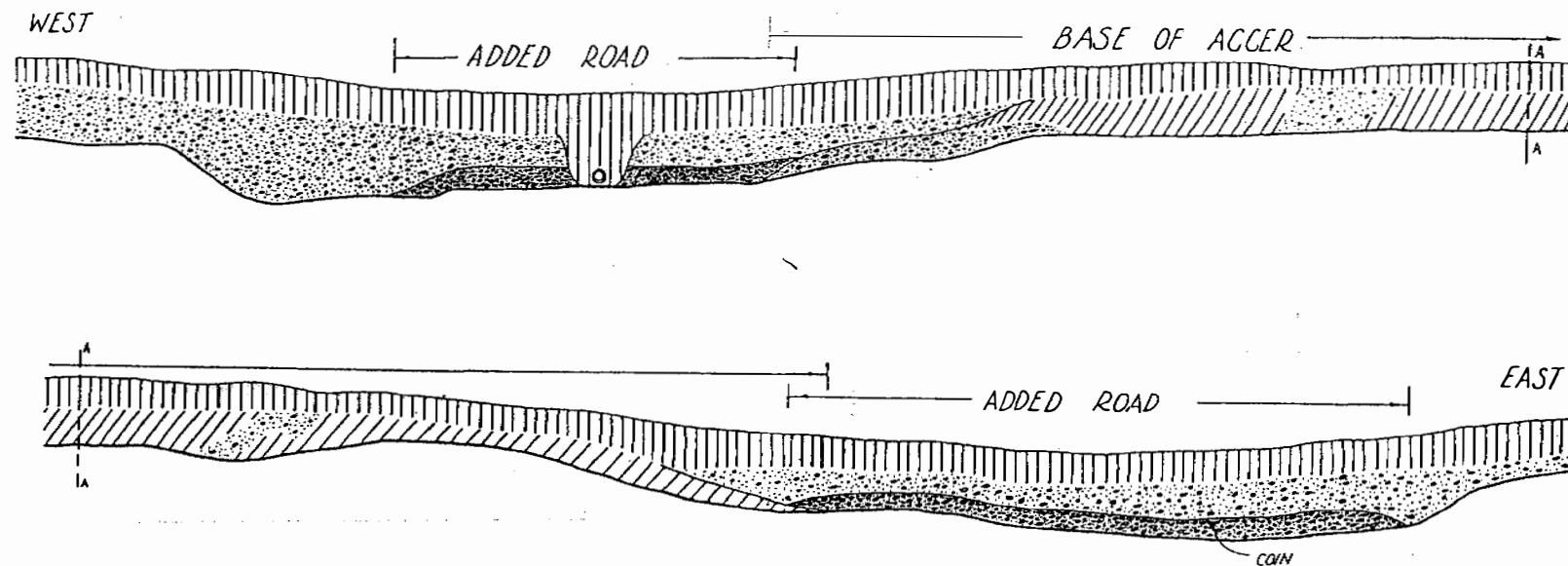
KEMPSEY, ROMAN ROAD, HWCM 1150: LINE OF ROAD





KEMPSEY, ROMAN ROAD, HWCM 1150: LOCATION OF TRENCHES

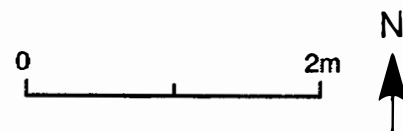
HWCM 1150: SECTION ACROSS THE ROAD AT SHUTHONGER
COMMON, TWYNING, GLOUCESTERSHIRE



A SECTION ACROSS THE ROMAN ROAD
ON SHUTHONGER COMMON, 1960.

NOTATION

HUMUS		GRAVEL	▨
CLAY	▤▥▦	SAND & GRAVEL	▩



FROM SANDERS AND WEBSTER 1984

KEMPSEY, ROMAN ROAD, HWCM 1150: STRATIGRAPHIC MATRIX

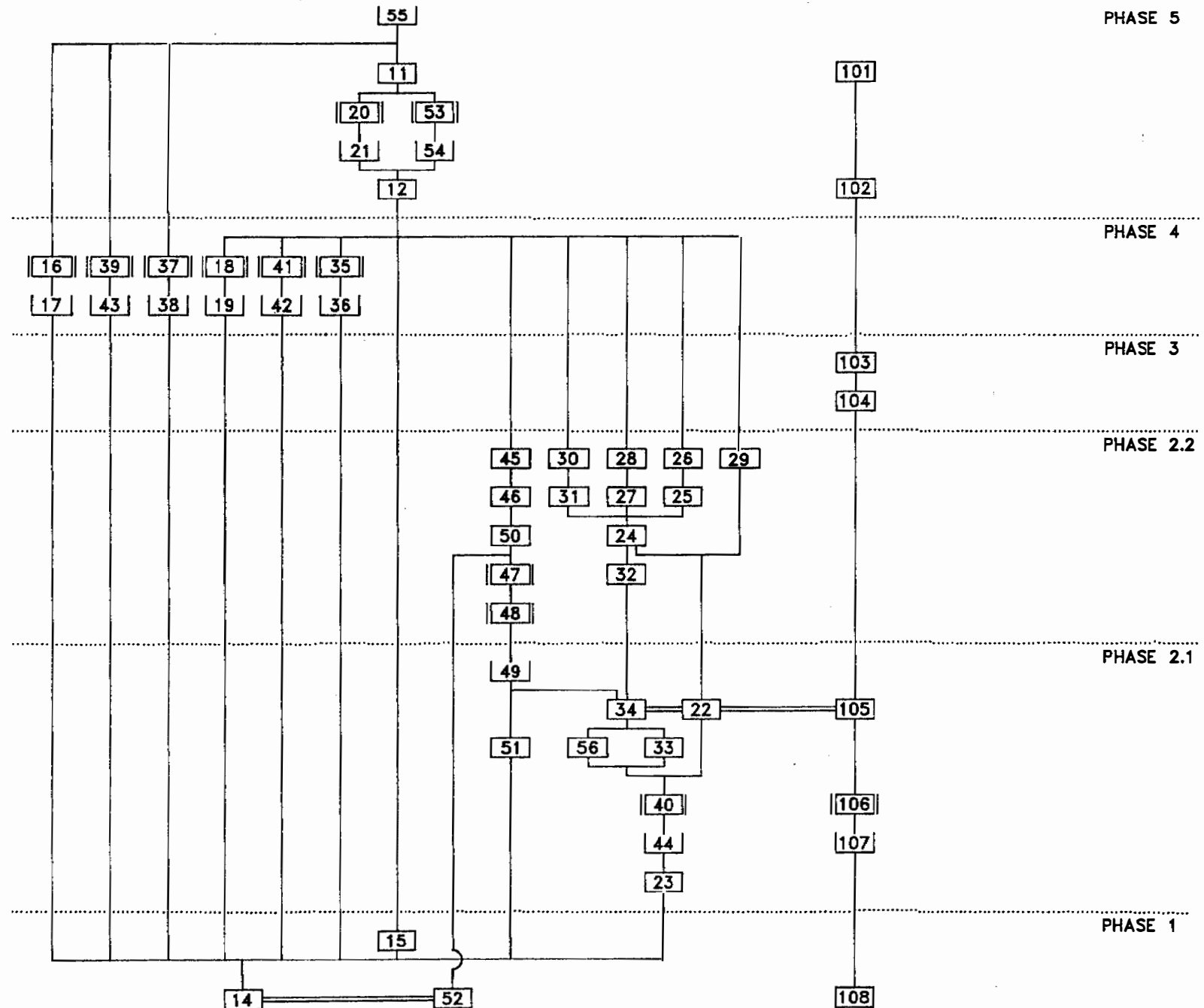
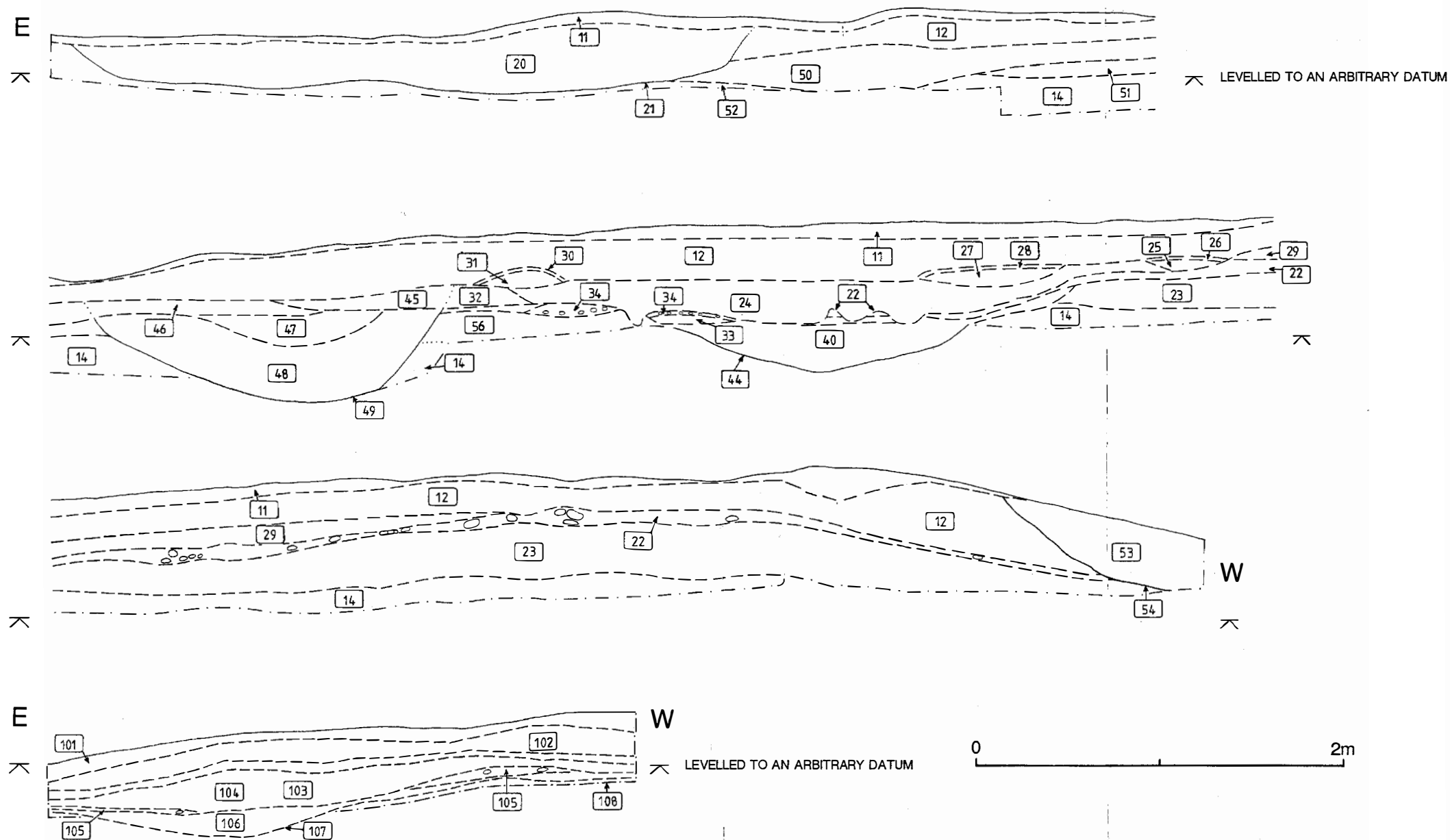


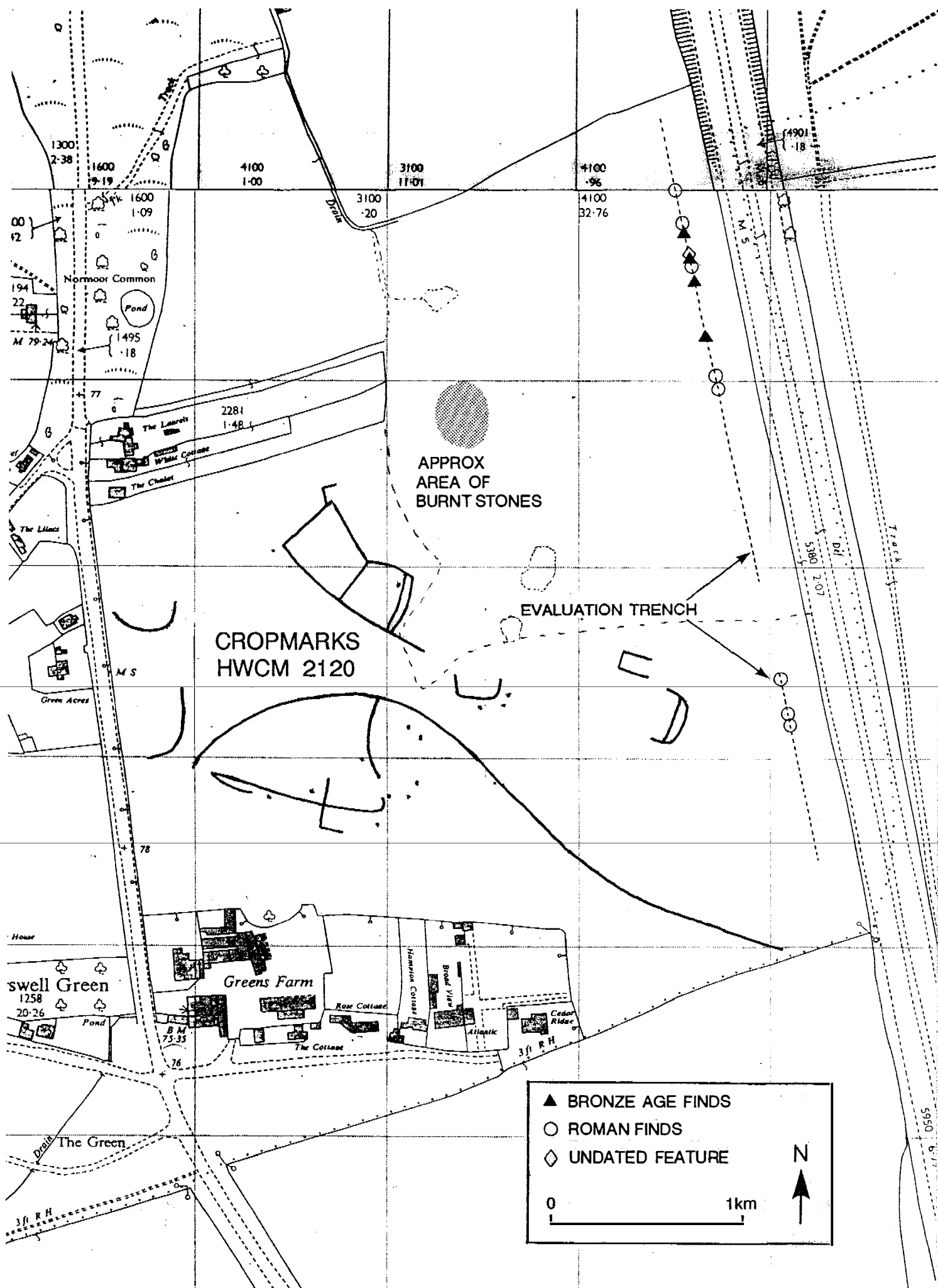
FIGURE 11

KEMPSEY, ROMAN ROAD, HWCM 1150: NORTH-FACING SECTION OF TRENCHES 2 AND 3

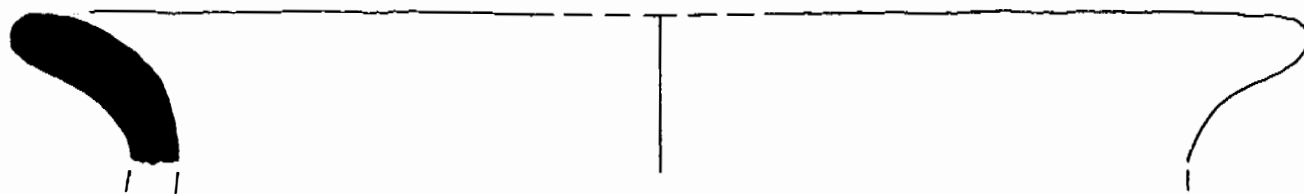


KERSWELL GREEN, HWCM 2120: LOCATION OF CROPMARKS, EVALUATION TRENCH AND FINDSPOTS

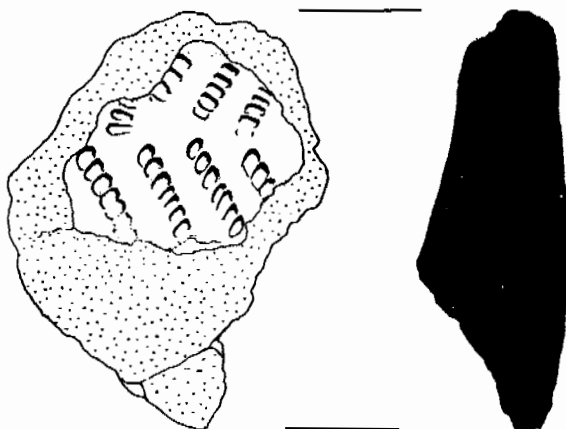
FIGURE 13



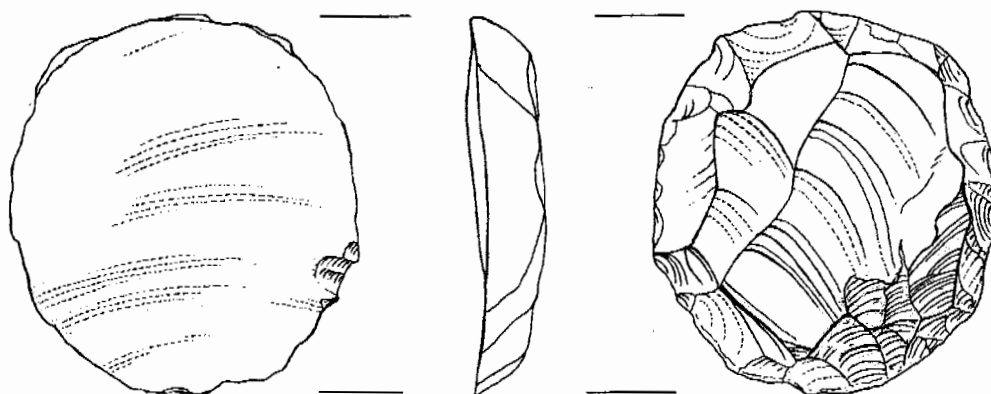
KERSWELL GREEN, HWCN 2120: BRONZE AGE FINDS



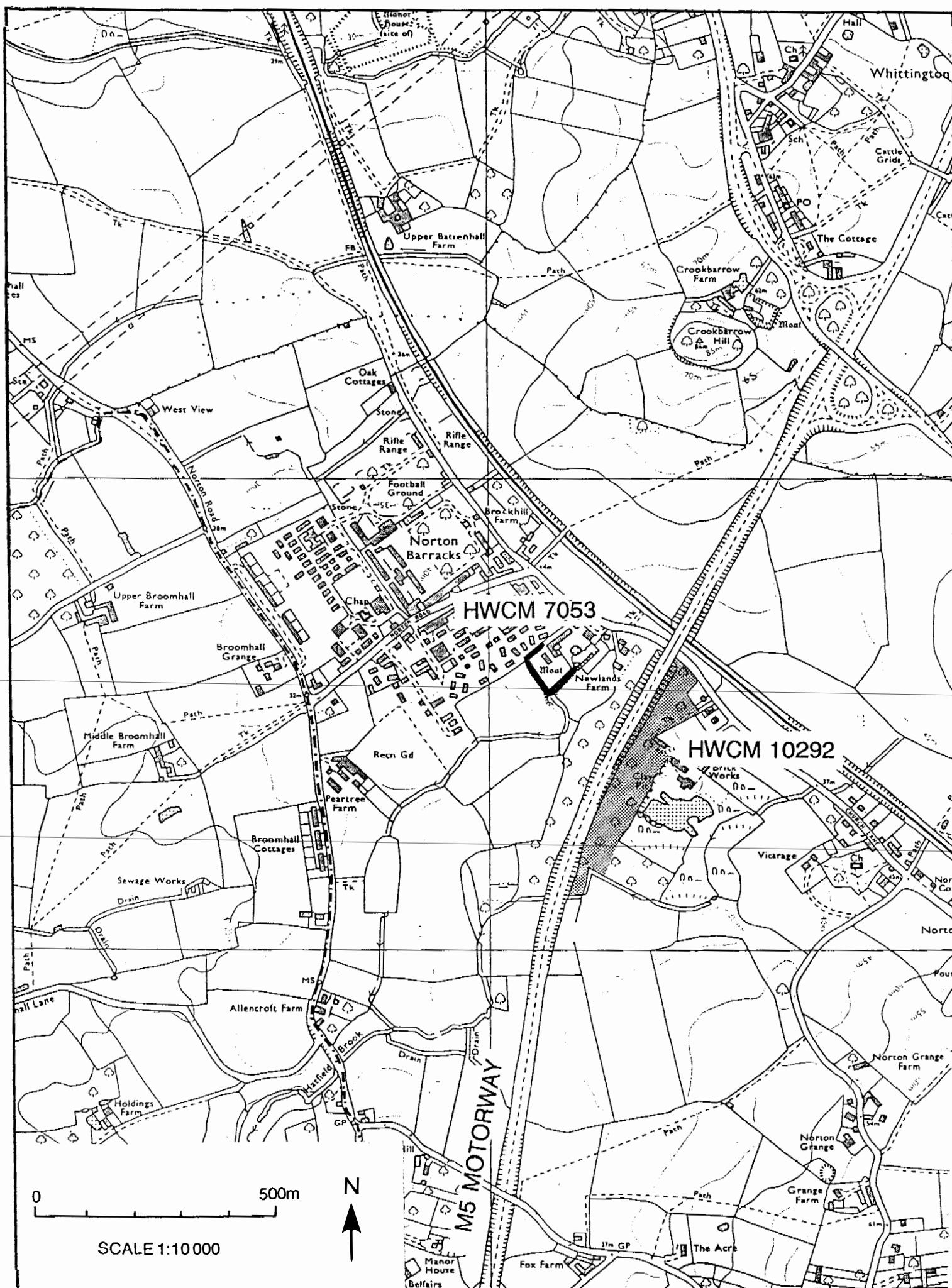
RIM SHERD (Scale 1:1)

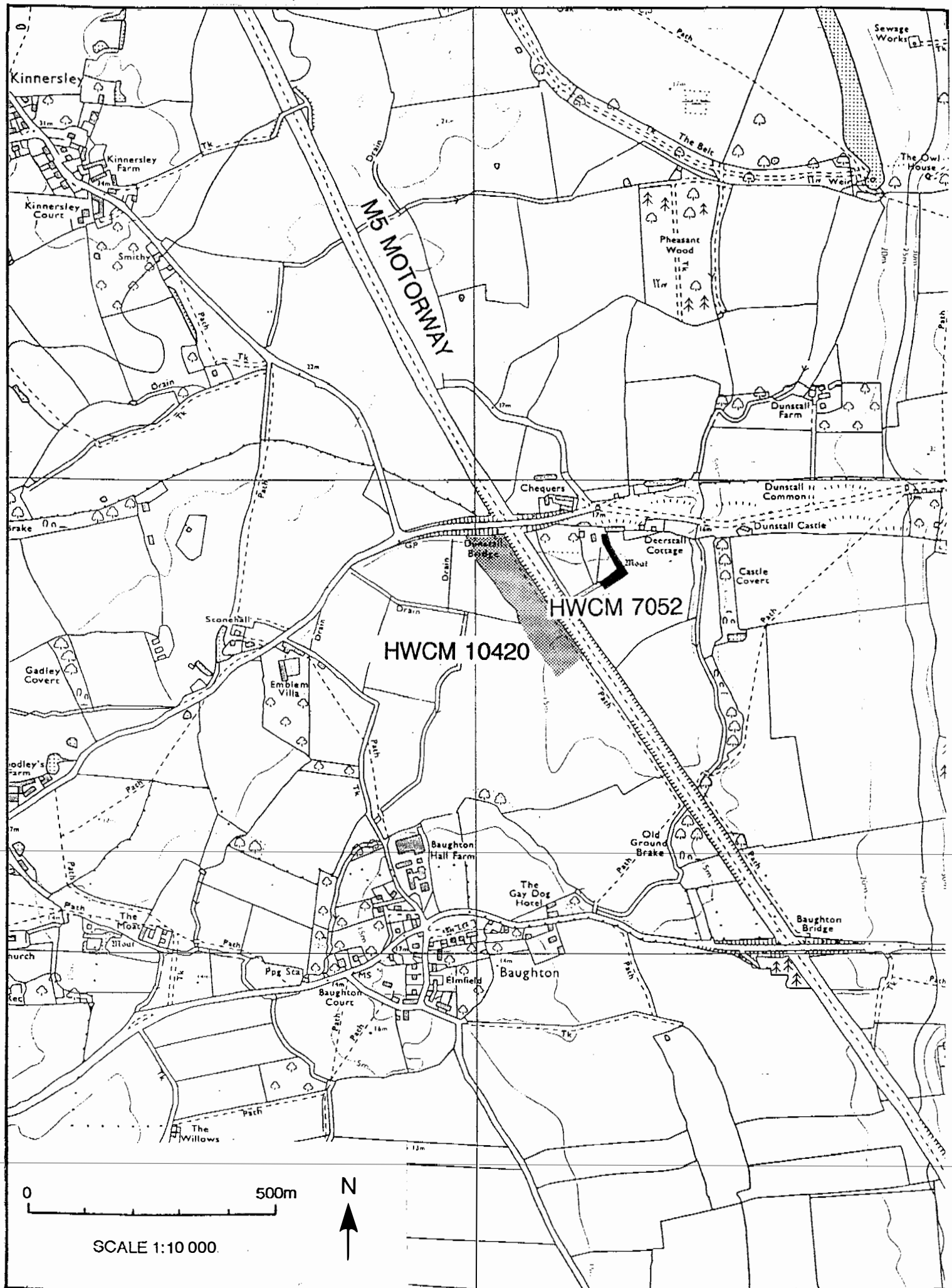


CORD-IMPRESSED DECORATED SHERD (Scale 2:1)

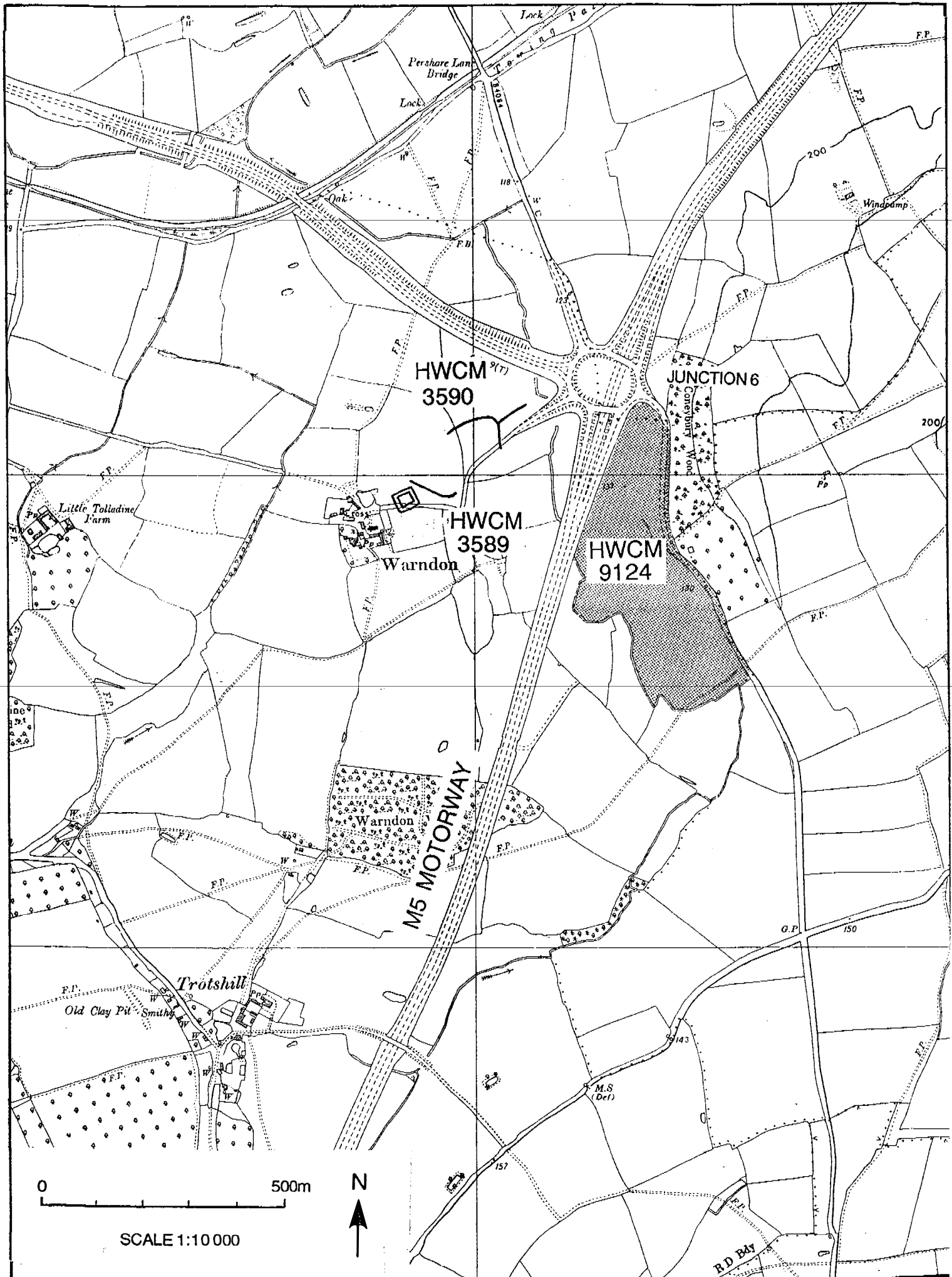


FLINT SCRAPER (Scale 2:1)

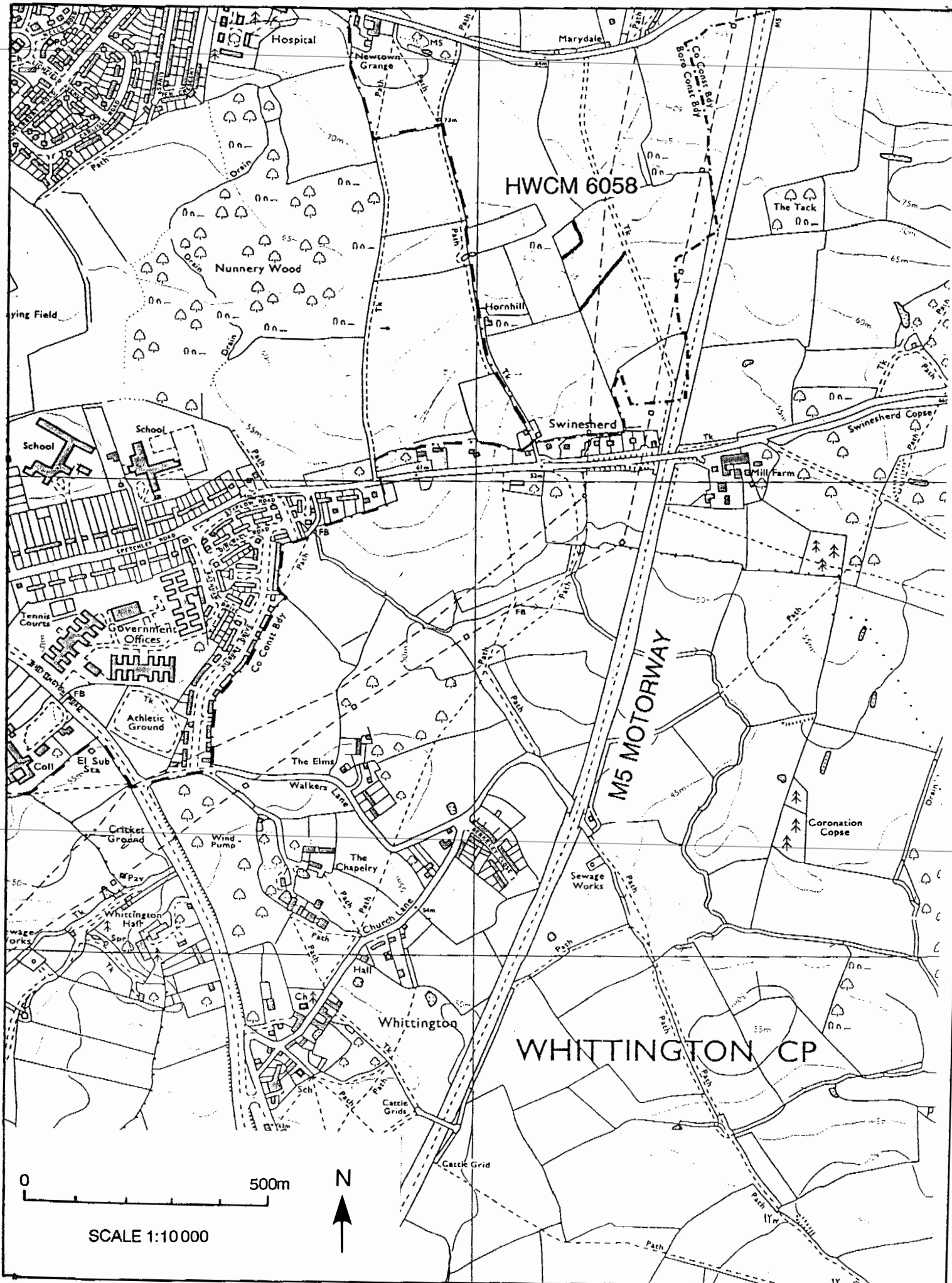




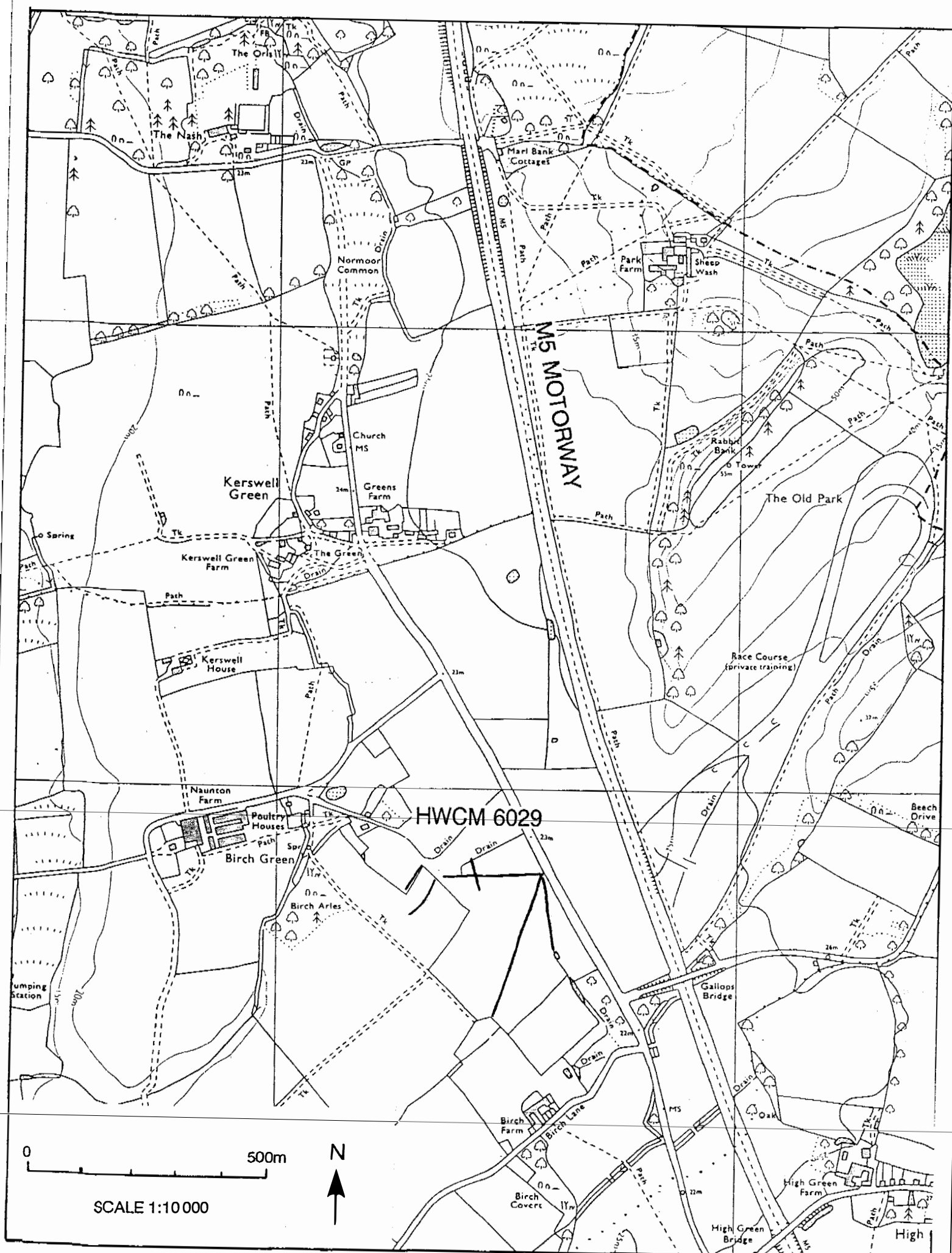
CROPMARK SITES, HWCM 3589, 3590 AND 9124



CROPMARK SITE, HWCM 6058



CROPMARK SITE, HWCM 6029



CROPMARK SITE, HWCN 9125

FIGURE 2C

