

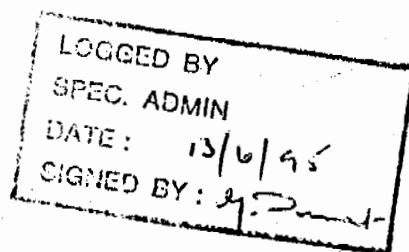


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M11 WIDENING, JUNCTIONS 8-9

STAGE 3 ARCHAEOLOGICAL ASSESSMENT

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ESSEX COUNTY COUNCIL
PLANNING DEPARTMENT
FIELD ARCHAEOLOGY GROUP

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M11 WIDENING, JUNCTIONS 8-9

STAGE 3 ARCHAEOLOGICAL ASSESSMENT

1. INTRODUCTION

This report summarises the fieldwork and related desk-based research carried out to assess the impact on archaeological remains of widening of the M11 between Junctions 8 and 9. The assessment was undertaken by the Essex County Council Field Archaeology Group for W S Atkins - East Anglia Ltd, consulting engineer to the client, the Department of Transport's Motorway Widening Unit. English Heritage and the Planning Departments of Essex and Cambridgeshire County Councils were consulted at all stages of the assessment. The work was carried out between October 1992 and January 1995 in two phases, as additional assessment was required after changes to the design of earthworks and landscaping had extended the land-take of the Scheme.

The archaeological assessment covers a 24km (15 mile) length of the M11 from Junction 8 at Bishop's Stortford to Junction 9 at Great Chesterford and includes a 1km long slip road linking Junction 9 with the A11 at Stump Cross (Fig. 1.1). A broad assessment has been made of all known archaeological and historical evidence within 0.5km of the motorway to provide a wider background to the assessment of the Scheme's impact. The study area for field investigation and impact assessment consists of the land-take of the proposed Scheme and adjacent areas of off-site landscaping and planting, with a margin of up to 20m beyond the limit of these areas. The study area, including all revisions made to it during the assessment, is delineated on drawings H2193/H/01/14050-66 prepared by W S Atkins. The assessment of the study area also takes into account the evidence of archaeological sites previously recorded on the line of the present motorway before and during its construction.

The report thus provides an assessment of the value of all known archaeological remains within the area of the Scheme against a wider archaeological background, and includes assessment both of previously known remains and those newly discovered by fieldwork. The potential impact of the widening, both directly upon those sites within the area of the Scheme and indirectly on sites outside the land-take, has been considered and appropriate mitigation measures proposed.

A series of Archaeological Constraint Maps (Figs. 4.1-4.7) show all the archaeological sites in the area of the scheme for which mitigation might be required, and the Scheduled Ancient Monuments (SAMs), sites of national importance, in the study area. A brief description of individual sites, their value, the impact upon them, and proposed mitigations, is given on Table 4.1.

This summary of the archaeological evidence from the assessment is supported by a series of technical reports which include full details of the fieldwork and related desk-based research. Copies of these are lodged in the Essex and Cambridgeshire SMRs, maintained by the respective County Council Planning Departments. The site records and finds resulting from the fieldwork are held at the Saffron Walden museum.

2. METHOD OF ASSESSMENT

2.1 Types of Impact

Widening of the motorway would have a potential impact on all archaeological remains within the area of the Scheme. Typically, archaeological deposits are sensitive to even quite shallow disturbances, and they would be affected not only by deep ground-works such as cuttings, but by other works, including embankments.

It is assumed that all construction work will follow the normal practice of preliminary stripping of topsoil by machine, resulting in unavoidable truncation of archaeological features at the interface between topsoil and the geological subsoil. Machine tracking and secondary works such as drains and service trenches would cause further disturbance. Even limited works would result in total destruction of shallow features, such as the post-holes of timber buildings, as well as significant disturbance of deeper features. This proved to be the case wherever areas which had been affected by the original construction of the motorway were recorded in the present assessment. In practice all proposed construction works, including landscaping and planting, should be considered to be destructive of archaeological remains.

Waterlogged deposits have a high archaeological value, as they contain organic remains which usually decay in other contexts. Where such deposits occur it is necessary to consider the possible effect of the Scheme on groundwater, as any significant lowering of the water-table may affect an archaeological resource.

Although not strictly part of the Scheme, off-site works such as construction compounds, borrow pits and planting schemes, would also have a potential impact on archaeological remains, as they can also involve extensive ground disturbance. The impact of off-site works should be considered when planning applications are made, and appropriate mitigations put forward.

2.2 Range of Archaeological Resources

There are no visible archaeological remains, such as standing buildings or earthworks, within the Scheme, and the archaeological resource therefore consists entirely of sites represented by subsoil features and artefacts. Alsa Wood, north of Stansted, is a remnant of ancient woodland and is designated a Site of Special Scientific Interest.

No Scheduled Ancient Monuments (SAMs) are directly affected by the Scheme, although two, the Roman villa complex at Wendens Ambo (Essex SAM 24861) and the Roman and early Saxon north cemetery at Great Chesterford (Essex SAM 74), lie immediately adjacent to the

motorway. Two other Scheduled Ancient Monuments, at Bonhunt Farm, Wicken Bonhunt (Essex SAM 141) and the Roman villa complex at Ickleton (Cambridgeshire SAM 84), lie near the motorway but do not extend up to it.

Archaeological sites along the route show evidence of typical rural stratigraphy, with features such as pits, ditches and post-holes cut into the natural strata and sealed beneath a thin cover of topsoil c. 0.3m deep. Most are on arable land and the tops of the features have been truncated by ploughing. In some cases there has been disturbance from motorway construction works.

In only very few cases do ancient land-surfaces survive, usually where gravel or cobbles have been used to make floor and yard surfaces, or roads and trackways. Stone-founded buildings have been recorded in the vicinity of the motorway only at the major Roman sites at Great Chesterford and Wendens Ambo. Buildings were usually constructed of timber, which leave only slight traces.

The best preserved archaeological remains within the area of the Scheme are in the vicinity the Wendens Ambo Roman villa, where prehistoric and Roman stratigraphy is sealed by a thick layer of hill-wash and the original land-surface may survive. A deep peat deposit in the valley floor at Wendens Ambo may be an important source of palaeo-environmental evidence, both of the natural environment of the valley and its exploitation by man.

2.3 Stages of Assessment

Introduction

The assessment was begun before the publication of a framework for the archaeological assessment of road schemes in the Design Manual for Roads and Bridges (DMRB), Vol. 11, by the Department of Transport in 1993 (DoT 1993). However, that framework was based upon the advice previously published in Planning Policy Guideline 16 (PPG 16) (DoE 1990) and it was the approach in PPG 16 of successive defined stages which was followed. Therefore, although applied retrospectively, the methodology is not only compatible with the advice given in PPG 16, but it also meets the requirements of the DMRB, Vol. 11. The stages of assessment are summarised as follows:

- * Stage 1 consists of a preliminary assessment through a desk study, to provide information for the selection of initial route options. This includes all recorded information in the study area, starting with County Sites and Monuments Records (SMRs).
- * Stage 2 consists of more detailed research and assessment of existing evidence, to refine route selection in consultation with County Archaeologists and English Heritage. It also provides a comprehensive background to subsequent field survey.

- * Stage 3 consists of field survey to identify and evaluate potential archaeological sites within the Scheme's area of impact, to enable mitigation measures to be proposed. In the present assessment this work comprised a fieldwalking survey of the Scheme as a whole, and selective geophysical survey and/or trial trenching of sites which were thought to have a high potential.

Previous archaeological work

Previous archaeological work within the study area has been sporadic and the data contained in the Essex and Cambridgeshire SMRs is largely the product of work carried out before and during the original construction of the motorway in the 1970s. Evidence of the location and nature of early settlement is therefore limited, especially for prehistoric times, although several important sites have been identified within or near the area of the Scheme.

Major excavations have been carried out on the line of the motorway at Wendens Ambo (Hodder 1982) and Great Chesterford (Evison 1994), and near to it at Wicken Bonhunt (Wade 1980). These located important prehistoric, Roman and Saxon remains, and suggested that settlement was largely confined to river valleys. Fieldwalking and trial trenching before construction of the motorway (Robertson 1975) and fieldwalking adjacent to the motorway in the Littlebury area (Williamson 1986) have suggested possible sites at other locations, but the evidence is often too limited to enable them to be interpreted confidently. However, the fieldwork carried out during the present assessment has enabled potential sites to be evaluated more systematically and in greater detail.

The extensive investigations recently undertaken at Stansted Airport, adjacent to the southern end of the Scheme, have enabled a large area of the ancient landscape to be studied in detail (Essex CC 1991; Brooks and Havis in prep.). The results of this work suggest that north-west Essex may have been more extensively settled in prehistoric and Roman times than had previously been thought. Given this evidence, and the length of the Scheme, there was a high probability that completely new prehistoric and Roman sites would be found during the assessment, especially in the Stansted area.

DMRB Stage 1

The Stage 1 desk study (Essex CC 1990) brought together all the known information in the Essex Sites and Monuments Record (SMR) for the line of the motorway between Junctions 8 and 9. This gave a brief summary of potential archaeological remains within the Scheme, and included a gazetteer of 48 known or potential sites identified from SMR information. It did not include information from any other sources. The widening as initially planned did not include works north of Junction 9, so the Stage 1 study did not cover this area, part of which lies in Cambridgeshire.

DMRB Stage 2

The Stage 2 assessment comprised a desk-based study of historical sources and reports of previous archaeological work to supplement the Stage 1 desk study of the SMR. An area extending for 500m either side of the motorway was researched to enable archaeological sites within the area of the Scheme to be understood within their wider setting. Following the proposed extension of the Scheme north of Junction 9, an additional desk study was carried out to enable this area to be assessed also.

The additional desk study for the Scheme north of Junction 9 combined both Stage 1 and Stage 2 assessment, in that it included a comprehensive ordering of SMR information, and a review of this evidence together with that from other sources.

The Stage 2 desk studies were supplemented by a study of previous aerial photographic information. All potential sites within 500m of the Scheme were studied, and rectified plots produced for sites within 200m either side of the motorway. In some cases this work identified new sites not recorded on SMRs.

DMRB Stage 3

Since the country traversed by the motorway is predominantly arable, a fieldwalking survey of ploughed land was carried out, which provided information on a large proportion of the Scheme at relatively low cost. This survey method can identify artefact concentrations which might represent archaeological sites disturbed by ploughing.

Potential sites suggested by desk study or by fieldwalking survey were assessed in detail by geophysical survey and/or trial trenches. The aim of this work was to recover further information on sites in order to determine their archaeological value, assess the impact of the Scheme on them, and to propose appropriate forms of mitigation.

The Stage 3 fieldwork enabled an adequate level of assessment to be carried out over most of the Scheme, but in several areas assessment could not be completed, either because conditions were unsuitable for fieldwalking, or because access to land to carry out trial trenching was refused.

2.4 Archaeological Fieldwork

Fieldwalking survey

Fieldwalking is a commonly used reconnaissance survey method. It can identify artefact concentrations in ploughsoil which might represent archaeological sites disturbed by ploughing. In the work described here, artefacts were collected systematically at regular intervals within an area extending to about 20m beyond the area of impact. They were then analysed by period and type (e.g. prehistoric worked flint, Roman pottery etc.) using standard deviation statistics, and the results of the analysis were plotted on maps, enabling significant concentrations to be identified for each period/artefact type. Typically, significant concentrations form a cluster of findspots with a value of two or more standard deviations from the mean, and these are taken to represent potential sites. The statistical method enables such sites to be distinguished from "background noise" due to casual scatters of material spread by manuring of fields.

Fieldwalking generally has a good success rate in identifying sites, but gives only their broad location and date. It cannot define the extent of the site precisely, as artefacts on which the analysis is based may have been moved some distance from the original findspot by repeated ploughing. Further assessment by geophysical survey and/or trial trenching is required to assess the character and extent of a suspected site.

Fieldwalking was carried out over 77% of the length of the Scheme and areas of pasture and woodland were inspected for surviving earthworks. As a result most of the Scheme has been covered by some form of survey. However, due to problems of land access and crop growth it was not possible to carry out fieldwalking within the extended land-take of several of the regraded earthworks, although in most cases survey was completed over the width of the Scheme as originally proposed in these areas.

Geophysical survey and trial trenching

Potential sites identified by desk study or fieldwalking survey, and which might require excavation, were evaluated in detail through geophysical survey and trial trenching. The aim of this work was to confirm the presence (or absence) of the site, and define in sufficient detail its extent, date, character and degree of preservation.

Geophysical survey was used in two ways. At the previously known major sites at Wicken Bonhunt and Wendens Ambo it was used to identify the focus of the site prior to the excavation of trial trenches. The geophysical results enabled trial trenches to be positioned to answer specific archaeological questions. Elsewhere, geophysical survey was used to supplement fieldwalking survey on sites where land access could not be obtained to excavate trial trenches.

Survey methods varied in detail from site to site, but the overall approach was similar for all. Magnetic susceptibility survey was used as a rapid scan method to identify archaeological "hot spots", which were then investigated in greater detail by magnetometer (gradiometer) survey. Magnetic susceptibility survey detects areas of subsoil disturbance as magnetic anomalies, and plots the degree of disturbance as a series of contours. Given favourable conditions it can identify a site focus, but cannot recognise individual archaeological features. Magnetometer survey was also used in some areas as a rapid scan method, but generally was used to obtain detailed plots of archaeological features within a site focus. In most cases the subsoils were suitable for the survey methods and reliable results were obtained.

Where geophysical survey was used in place of trial trenching, it was possible to determine whether or not the fieldwalking evidence represented a site. The layout and density of features could be plotted, but obviously no information could be obtained on their character or date.

Where possible trial trenches were excavated to evaluate a minimum sample of a suspected site. Generally, narrow trenches measuring 3 x 20-25m were opened up at roughly 50-100m intervals along the widening corridor, and sufficient trenches were investigated to establish the limits of the site up the line of the Scheme. The detailed recording and excavation of features, and the recovery of stratified artefacts, were essential to establishing the broad character and date of sites. However, it should be recognised that for most of the sites such a small proportion was investigated that only a very general understanding of them was obtained.

An exception to this is the investigation of the previously known major sites at Wicken Bonhunt and Wendens Ambo. Here the evidence of fieldwalking survey, geophysical survey and trial trenching carried out as part of the present assessment could be integrated closely with the results of previous excavation. As a result these sites are understood in more detail and more informed mitigation measures can be proposed.

2.5 Impact Assessment Criteria

Assessment of the impact of the widening must take into account both the archaeological importance of a site and the degree of the impact upon it. The mitigation proposals for individual sites, as set out in section 4.3 of the report, strike a balance between these two factors.

Archaeological importance

Criteria have been formulated to categorise the archaeological importance of a site, based upon the present state of knowledge and an estimate of the status and value of known or suspected archaeological remains. The categories are as follows:

- * National importance: Scheduled Ancient Monuments protected under the Ancient Monuments and Archaeological Areas Act, 1979 are by definition of national importance; sites of similar quality which are suitable for scheduling. Such sites represent a good or outstanding example of their type, as defined in English Heritage Monument Protection Programme criteria.
- * Regional importance: Sites whose nature and date are well defined, and which represent significant examples within the regional context.
- * Local importance: Sites which are less well defined or of low potential.
- * Negligible importance: Areas of archaeological finds or features which display minimal evidence of an archaeological site.
- * No importance: Archaeological sites or finds areas which have been recorded but have been largely or wholly destroyed, or lie outside the area of the Scheme.

Degree of impact

The degree of impact on archaeological sites is less easy to define, as in most cases the overall extent of a site is unknown. The extent of sites can be defined along the length of the widening Scheme, but it is impossible to define their extent beyond the limits of the widening unless extensive archaeological work has previously been carried out over the adjacent area. Occasionally it is possible to estimate the percentage of a site affected, but more often it is possible only to give dimensions of the area of impact, which is an unknown proportion of the whole site.

3. SUMMARY OF ARCHAEOLOGICAL RESOURCES

3.1 Introduction

This summary sets out the results of the present assessment against the background of the natural topography and previous archaeological work in the area, as known from the desk-based research. The topography and past settlement pattern along the route are shown on Fig. 3.1. Brief descriptions of archaeological sites within or immediately adjacent to the Scheme are given on Table 4.1. Their locations are shown on Figs. 4.1-4.7.

3.2 Topography, Geology and Settlement Patterns

The Scheme passes through two distinct topographical areas north and south of Elsenham, which is situated at the watershed between the river Cam and the Stansted brook, a tributary of the river Stort. To the north the Scheme follows the west side of the valley of the Cam, crossing a series of side-valleys formed by tributaries, and passing through low chalk hills capped by mixed chalky clay and brickearth deposits of the Anglian glaciation. This landscape represents a north-eastern extension of the Chiltern hills. To the south the glacial clays form a flatter landscape, dissected by tributaries flowing south-westwards into the river Stort.

Ancient settlement on or near the Scheme is known for all periods from the Neolithic (c. 4000-2000 BC) to the present, and tends to be concentrated in side-valleys of the Cam and towards either end of the Scheme. The two ends of the Scheme lie on important land routes near crossings of the Stort and Cam. Junctions 8 and 9 both overlie Roman roads, while the prehistoric Icknield Way is crossed by the motorway 2km to the north of Junction 9.

Until quite recently it was thought that settlement was sparse in north-west Essex before the intensive clearance of woodland in the medieval period. However, recent excavations at Stansted Airport have produced extensive evidence of settlement and farming in prehistoric times, at an earlier date and on a larger scale than had previously been suspected.

Further north ancient settlement appears to have been less intensive, except at Wicken Bonhunt and Wendens Ambo, where important multi-period settlement sites are located in side-valleys of the Cam. A notable feature of these valley locations is that more recent settlements of Roman, Saxon or medieval date invariably had prehistoric origins, showing that these sites have attracted settlement since the earliest times. Outside the river valleys there is very little evidence within the Scheme of settlements of any date, even for the medieval period. This is probably because the motorway avoids modern villages and market towns which were also the main medieval settlements.

At the north end of the Scheme the area of Great Chesterford is important as it controls access from the upper Cam valley to the more open country to the north. Widespread prehistoric evidence is known from the area around Great Chesterford, which developed into an important Late Iron Age and Roman centre. In the medieval period Great Chesterford was supplanted as a major centre by its neighbour, Saffron Walden.

3.3 Palaeoenvironmental Resources

A deep peaty deposit in the valley floor at Wendens Ambo (Site 29) may hold important evidence of the natural environment and its exploitation by man from the prehistoric period onwards. Organic remains which usually decay in other contexts may be preserved in waterlogged conditions.

3.4 Prehistoric Periods

Prehistoric evidence is described below as a whole, because distinct periods of cultural development can be identified only on the few sites where detailed archaeological work has been carried out. Where they can be recognised, the main periods of human activity or settlement are as follows:

Palaeolithic	before c. 10,000 BC
Mesolithic	c. 10,000-4000 BC
Neolithic	c. 4000-2000 BC
Bronze Age - Early	c. 2000-1500 BC
- Middle	c. 1500-1000 BC
- Late	c. 1000-700 BC
Iron Age - Early	c. 700-300 BC
- Middle	c. 300-100 BC
- Late	c. 100 BC-70 AD
	(overlaps Roman invasion)

Evidence of the Palaeolithic (Old Stone Age) and Mesolithic (Middle Stone Age) in north-west Essex, before permanent settlements were established, is sparse and is mainly limited to isolated findspots in the Cam valley and its tributaries. Palaeolithic flint tools have been found near the motorway at Ugley, Wicken Bonhunt, Wendens Ambo and Great Chesterford, but no Palaeolithic deposits have been identified. A Mesolithic flint tool manufacturing site has been recorded in previous excavations at Wicken Bonhunt 120m west of the motorway (Area adjacent to Site 22). Mesolithic material has also been recovered from near the motorway at Great Chesterford, Wendens Ambo, and Plegdon Quarry near Elsenham.

In the south, the excavations at Stansted Airport 0.5km east of the motorway revealed an extensive and complex later prehistoric landscape which includes settlements dating to the Late Bronze Age, and the Early, Middle and Late Iron Age. The Scheme passes through this landscape and affects a regionally important Middle

Iron Age (c. 300-100 BC) settlement (Sites 5 and 6), but other prehistoric sites affected by the Scheme in this area are of only local importance (Sites 3 and 4).

There is evidence of earlier prehistoric settlement to the north, near Elsenham, where a regionally important Neolithic/Early Bronze Age (Beaker) settlement (Site 7) lies within the Scheme near a tributary of the Stort. Similar evidence of Neolithic and Early Bronze Age settlement is known at Plegdon Quarry 3km to the north-east. Other prehistoric sites in the Elsenham area lie within the Scheme, but are considered to be of no more than local importance (Sites 9 and 12), or to have been disturbed by recent activity (Site 8). Two prehistoric findspots on the line of the Scheme north of Ugley Green are probably not significant, but further assessment is required to confirm whether or not this is the case (Sites 13 and 15).

In the central part of the Scheme there is excellent evidence of multi-period prehistoric settlement on tributaries of the Cam at Wicken Bonhunt and Wendens Ambo. Later Neolithic, Late Bronze Age and Iron Age settlement has been recorded in previous excavations at Wicken Bonhunt 120m west of the motorway (Area adjacent to Site 22). Some prehistoric material was recovered from the area of the Scheme itself (Sites 21 and 22). Neolithic evidence is known from the general area at Wendens Ambo, and Middle and Late Iron Age settlements have been recorded on the north and south sides of the valley (Sites 29 and 30). The fieldwalking survey indicates that prehistoric evidence in this central length of the Scheme is sparse outside the river valleys, and in several locations the survey results suggest that prehistoric material recovered during previous fieldwork was not significant and does not represent any sites (Sites 25, 32, 33 and 34).

Widespread prehistoric activity on the hill slopes south of Great Chesterford, near Littlebury, is known from aerial photographs. These show trackways, field systems, and numerous ring ditches indicating ploughed-out Bronze Age burial mounds. Near the hilltop a regionally important Late Bronze Age and Iron Age site, including a Late Iron Age trackway (Site 35), is on the line of the Scheme. The trackway leads to Ring Hill Camp, an Iron Age hill fort 0.6km east of the motorway, which occupies a spur commanding the upper Cam valley. To the north the Scheme crosses a second trackway which descends into the Cam valley in the direction of Great Chesterford (Site 37). A ring ditch possibly lies on the line of the Scheme in this area, although further assessment is required to confirm whether or not this is the case (Site 38). Suspected prehistoric sites on the line of the Scheme in this area have either not been confirmed by the fieldwalking survey (Site 36) or have already been disturbed by motorway construction works (Site 39).

A wide variety of prehistoric artefacts have been recovered from the gravel terrace of the Cam at Great Chesterford, but any sites on or near the motorway have already been destroyed by quarrying.

3.5 Roman Period

The motorway crosses two regionally important Roman roads. At Junction 8 it crosses Stane Street, the road from Colchester and Great Dunmow to Braughing, west of Bishop's Stortford (Site 1). At Junction 9 it crosses the road from Great Chesterford to Braughing (Site 40).

The excavations at Stansted Airport 0.5km to the east of the motorway revealed extensive evidence of Roman settlement and field systems, but no Roman evidence was identified on the line of the Scheme itself in this area. However, Roman settlements are known at regular intervals along the line of the Scheme: near Ugley Hall (Site 14); south of Newport (Site 18); at Wicken Bonhunt (Sites 21 and 22); possibly at Long Plantation, north of Newport (Site 27); and at Wendens Ambo, the site of a nationally important Roman villa (Site 29). A possible site near Quendon requires further assessment (Site 15). All of these are located in valleys or near natural springs and with the obvious exception of the Wendens Ambo villa are small farmsteads or settlements of regional or local importance.

The main villa building at Wendens Ambo (Site 29) lies 70m to the west of the motorway within a wider area designated a Scheduled Ancient Monument. Although the Scheme lies outside the scheduled area, it affects an area of enclosures and farm buildings related to the villa, with fields extending up the valley slope to the south and water meadows to the north. The villa and its farm were established on the site of an earlier Late Iron Age farmstead.

No evidence of Roman settlement was found on the line of the Scheme between Wendens Ambo and Great Chesterford, probably because the motorway crosses an exposed ridge at this point. The fieldwalking results in this area suggest that Roman material recovered during previous fieldwork was not significant and does not represent any sites (Sites 32 and 33).

At the north end of the Scheme the slip road between Junction 9 and the A11 at Stump Cross passes close to two nationally important sites, the Great Chesterford Roman fort and town, and the Ickleton Roman villa, both of which are Scheduled Ancient Monuments. The original construction of the slip road destroyed a part of the Great Chesterford scheduled area, including the north-western edge of the Roman and early Saxon north cemetery (Sites 42 and 43). The assessment identified an outlying part of the cemetery in the area of the Scheme (Site 41). However, no evidence was found in the area to the south-east of the Ickleton villa, which is situated at least 300m north-west of the Scheme.

3.6 Saxon Period

Only two Saxon sites are known on or near the Scheme, the early Saxon north cemetery at Great Chesterford, which was established at the edge of an existing Roman cemetery, and a Middle Saxon settlement and cemetery at Wicken Bonhunt. Both are nationally important sites, although only the Great Chesterford cemetery is a Scheduled Ancient Monument.

The early Saxon north cemetery at Great Chesterford has been extensively excavated (Site 43). It is dated to the 5th-7th centuries and belongs to a group of cemeteries known in the area between Great Chesterford and Cambridge. The scheduled area lies outside the scheme.

Previous excavations 120m to the west of the motorway at Wicken Bonhunt revealed evidence of a Middle Saxon settlement dated to the 7th-9th centuries, in which over 30 timber buildings were recorded, together with a cemetery to the east, extending towards the motorway. The site is one of the most completely investigated examples of its type. Documentary evidence suggests that the settlement was related to a mid/late Saxon vill and possible burh at Newport 1km to the east.

Geophysical survey and trial trenching has established that the Saxon cemetery covered the entire area between Bonhunt House and the motorway, with its south end most likely delimited by the Bonhunt Water (Site 22). The north end of the cemetery has already been destroyed (Site 23), as has its possible extension on the east side of the motorway (Site 24).

3.7 Medieval and Post-medieval Periods

The Domesday survey of 1086 suggests that by this time extensive woodland clearance had already taken place, especially along the slopes of the Cam valley and its tributaries, and that large areas of land were under cultivation. However, in the years following the Norman conquest woodland clearance was intensified by the new landlords. Although some areas of ancient woodland, notably Alsa Wood between Stansted Mountfitchet and Elsenham (Site 10), have survived, documentary sources suggest that most of the area was agricultural land by the 13th century. There is no evidence alongside the motorway of medieval ridge-and-furrow earthworks, and it would appear that medieval agricultural land has remained in arable production and none has reverted to pasture. However, the documentary sources indicate that animal husbandry also formed part of the farming economy, especially rearing and grazing of sheep for wool production.

A large number of manors are mentioned in the Domesday survey, but they are thought to have been relatively small-scale and scattered across the landscape. The medieval market towns near the Scheme, Stansted Mountfitchet, Newport and Great Chesterford, have always been small, while the principal towns in the area,

Bishop's Stortford and Saffron Walden, lie away from the motorway. Nevertheless, Saffron Walden was an important centre of the East Anglian cloth trade, and was renowned as the main English production centre of saffron dyestuffs.

Overall, the documentary and cartographic evidence suggests that the medieval landscape has changed only slowly, and even today the motorway passes through sparsely populated agricultural land. The dispersed medieval settlement pattern is still reflected in scattered settlements, and in the survival of many moated farm-houses, a typical feature of the west Essex landscape.

Very little evidence of medieval settlement has been recovered by fieldwork. The Saxon settlement at Wicken Bonhunt (Area adjacent to Site 22) was succeeded by a Norman manor, but this was abandoned in the 13th century when the manor was merged with another near the present village of Wicken Bonhunt. Although the manorial chapel of St Helen, a Scheduled Ancient Monument, has survived, it lies 100m away from the motorway. Another failed medieval settlement was suspected on the line of the Scheme to the west of Wendens Ambo, but no evidence of it has been found by fieldwork (Site 30). Possible medieval sites lie on the line of the Scheme on the outskirts of Ugley Green (Site 11), and in open country north of Wendens Ambo (Site 31).

Much of Essex was enclosed by the 16th century, but cartographic evidence shows that open field systems persisted in the north-west of the county, and that enclosure did not begin until the 17th century, only gaining momentum in the 19th century. The major changes to the landscape in post-medieval times occurred as a result of the development of country houses such as Stansted Hall and Quendon Park adjacent to the Scheme, and Audley End 1.5km to its east, involving the landscaping of parks and changes in estate management. Fieldwalking concentrations of post-medieval artefacts (Sites 17 and 19) may represent farm buildings in outlying parts of an estate. A trackway was recorded north-west of Great Chesterford during the original construction of the motorway, but is not affected by the present Scheme (Site 44). In general, the fieldwalking survey indicates that post-medieval material recovered during previous fieldwork was not significant and merely represents scatters resulting from the manuring of fields (Sites 16, 20, 25, 26, 27, 28, 32, and 33).

The London-Cambridge railway, constructed in the 1840s, led to the expansion of Bishop's Stortford, but has had only a limited effect on settlements and population in the immediate area of the Scheme. Apart from typically rural activities such as quarrying and small-scale brick/tile making there has been no industry in area. At the south end of the Scheme major changes have followed the construction of the World War II USAAF base at Stansted, and its recent conversion into London's Third Airport.

4 ARCHAEOLOGICAL IMPACT ASSESSMENT AND MITIGATION PROPOSALS

4.1 Potential Extent of Development Impact

It is the nature of any road scheme that it will have an impact on all archaeological sites on its line, but because of its narrowness the impact normally takes the form of a thin strip through a site. This is particularly true of the present Scheme, where the widening of the existing motorway is usually contained within a corridor no more than 20-30m wide, and on only one side of the motorway.

However, landscaping design involves grading of many of the earthworks to give them wider profiles, and some of them extend for 50-100m beyond the present motorway limits. These areas clearly have a much greater potential impact, especially as they often involve widening on both sides of the motorway.

The extent of archaeological sites can be defined north-south along the length of the Scheme, but it is impossible to define their extent beyond the limits of the widening unless extensive archaeological work has previously been carried out over the adjacent area. In many cases part of a site has previously been recorded, and destroyed, during the original construction of the motorway; this contains evidence which is useful in assessing the site area within the Widening Scheme.

Where an overall site area is known, the percentage area of impact can be estimated. However, in most cases it is impossible to estimate the proportion of site affected, and instead it is more practicable to give the dimensions of the area of impact upon a site. In practice the relative extent of impact will tend to vary according to the width of the widening.

Impacts beyond the limits of the scheme are not considered here, but it should be recognised that off-site planting schemes and construction compounds may have an impact on further areas of sites identified within the Scheme.

4.2 Mitigation Measures

The following types of mitigation measures are proposed:

- A **Preservation in situ.** Changes to the Scheme, either to the route or to the engineering or landscaping design, to avoid any impact on a site of national importance, where the other mitigation measures are considered inappropriate.

- B Detailed excavation and recording during the construction period but before groundworks.** Topsoil stripping to archaeological standards. Excavation and recording of all or most of the features within the area of the Scheme, with excavation of a high percentage sample of individual features. Low-intensity watching brief (see mitigation measure E for detail) for 100m beyond the limits of the excavation area to confirm the site's overall limits.
- C Sample excavation and recording during the construction period but before groundworks.** Topsoil stripping to archaeological standards. Excavation and recording of selected key groups of features within the area of the scheme, with excavation of a low percentage sample of individual features. The aim is to provide a good level of archaeological recording, but sufficient only to interpret less important archaeological evidence.
- D Intensive watching brief over a designated area during the construction period immediately after topsoil stripping by the earthworks contractor.** A provision of a maximum of 5 days should be made for any one area included within the watching brief, to enable rapid salvage excavation to be carried out if features are found.
- E Low intensity watching brief immediately after topsoil stripping by the earthworks contractor.** Details of the watching brief programme to be arranged in liason with the resident engineer.
- F Further Stage 3 assessment in advance of and during the construction period.** Provision for mitigation measures A-E to be made as appropriate:
- F1 Geophysical survey and/or trial trenching at known or suspected sites.
- F2 Geophysical survey and/or trial trenching of areas for which assessment was not possible.
- None** The area of the Scheme has been assessed and no further archaeological work is required, or there is no impact on the site.

4.3 Site-Specific Assessments and Mitigation Proposals

Introduction

All known sites within and immediately adjacent to the Scheme and on the line of the existing motorway are described below and are summarised on Table 4.1. The locations of Sites are shown on Figs. 4.1 to 4.7.

The sites listed include areas where archaeological remains have been identified by the present assessment, for which mitigation measures are proposed, and site areas which were destroyed during the construction of the motorway, but which are recorded on the SMR and were listed in the DMRB Stage 1 desk study (Essex CC 1990). Although there is obviously no impact on the sites already destroyed, they contain information which assisted the assessment of adjacent sites within the area of the Scheme through the DMRB Stage 2 desk study and the DMRB Stage 3 field survey.

In many cases a site will comprise both previously recorded remains, now destroyed, and surviving remains within the area of the Scheme. In other cases, however, the assessment did not find any further archaeological evidence, and only the pre-motorway construction evidence is described. It is suspected that many of the previous sites identified were of little or no importance. Areas which could not be assessed at this stage, and where further assessment is required, are also shown on Figs. 4.1. to 4.7.

Plans of sites where detailed assessment has been carried out are included as Figs. 4.8 to 4.18. These show areas of investigation and proposed mitigation.

Site 1. Birchanger, Junction 8 (TL 514215)

Stane Street Roman road (recorded pre-motorway construction; bisected by the motorway)

Site Description. The course of the Roman road from Great Dunmow to Braughing, west of Bishop's Stortford is followed by the A120 to the east of the motorway and the A1250 to its west. A short length of the road was recorded before construction of the motorway.

Importance. The road is of regional importance.

Impact of Scheme. The published Scheme has no impact. A length of the road was destroyed during construction of the motorway.

Fieldwork. Previous work: watching brief pre-M11 by T A Betts (Stage 1 desk study). This assessment: Stage 2 desk study.

Mitigation Proposals. None.

Site 2. Birchanger, Duck End Farm (TL 516223)

Medieval finds (west of the motorway, arable)

Site Description. Fieldwalking survey identified a slight concentration of medieval pottery 100m east of Duck End Farm, which dates back to at least the 16th century. This area was known as "Stoney Field Common", first recorded in 1311 as "Stoney Felde". The finds concentration is probably the result of the manuring of fields rather than part of the farmstead.

Importance. The site is of negligible importance.

Impact of Scheme. The published Scheme will destroy a strip 40m long by 70m wide.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 3. Stansted, Parsonage Farm Trading Estate (TL 518227)

Site Description. Possible prehistoric site (west of the motorway, arable)
Fig. 4.8

Fieldwalking survey identified a slight concentration of worked and burnt flint spread over a wide area, with more significant, but localised concentrations of flint and prehistoric pottery at the north and south ends. These suggest a possible site. Land access could not be obtained for trial trenching, but geophysical survey (magnetometer) of the main concentrations revealed only a few isolated features. Much World War II Nissen hut debris was recovered during fieldwalking, indicating modern disturbance.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 350m long by 40-70m wide across part of the site. Limited off-site planting.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 fieldwalking and geophysical surveys.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 4. Stansted, west of Stansted Airport (TL 519227)

Possible prehistoric site (east of the motorway, arable)
Fig. 4.8

Site Description. Fieldwalking survey identified a slight concentration of worked and burnt flint spread over a wide area, with a more significant concentration at its centre, suggesting a

possible site. Land access could not be obtained for further field assessment. However, the fieldwalking results suggest that this is part of Site 3 on the opposite side of the motorway, where a low intensity of features was recorded. The north end of the site was destroyed by installations for the World War II USAAF base.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 200m long by 10m wide across part of the site.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 5. Stansted, Bury Lodge Lane (TL 521234)

Middle Iron Age settlement (east of the motorway, arable)
Fig. 4.9

Site Description. Fieldwalking survey identified a significant concentration of worked and burnt flint with prehistoric pottery, forming a focus within a more general spread of material. The presence of a site was confirmed by six trial trenches, which defined its northern and southern limits. Part of a roundhouse, enclosures, and rubbish pits identify the site as part of a settlement concentrated in the area of Trenches BC, BD and BE, and extending beyond the limits of the Scheme. Middle Iron Age settlement sites are relatively rare in the region generally.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 140m long by 15m wide across a central part of the site. Part of the site was destroyed without record by construction of the motorway.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 fieldwalking survey and trial trenching.

Mitigation Proposals. Mitigations B & E - detailed excavation, with low-intensity watching brief for 100m beyond the limits of the site to both north and south.

Site 6. Stansted, Parsonage Farm (TL 52053245)

Prehistoric site (west of the motorway, arable)
Fig. 4.9

Site Description. Fieldwalking survey identified a significant, but localised concentration of worked and burnt flint with prehistoric pottery. Land access could not be obtained for further assessment by trial trenching, but the presence of a site

was confirmed by a limited geophysical survey (magnetometer). The survey plot showed an enclosure ditch and a few pits. It is likely that this represents the western edge of the Middle Iron Age settlement at Site 5 on the opposite side of the motorway.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 120m long by 25m wide across part of the site. Part of the site was destroyed without record by construction of the motorway.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 fieldwalking and geophysical surveys.

Mitigation Proposals. Mitigations B & E - detailed excavation, with low-intensity watching brief for 100m beyond the limits of the site to both north and south.

Site 7. Elsenham, west of Tye Green Farm (TL 510250)

Neolithic-Early Bronze Age settlement (east of the motorway, arable)
Fig. 4.10

Site Description. Fieldwalking identified a significant concentration of worked and burnt flint with prehistoric pottery; the worked flint concentration was very dense. The presence of a settlement site was confirmed by five trial trenches, with features concentrated in the southernmost, Trenches BG and BH. The southern limit of the site is marked by a stream, but the northern limit is uncertain. A sunken-floored structure and pits were recorded, dated to the Neolithic to Early Bronze Age. A sunken structure of similar date has previously been recorded in the Elsenham area at Plegdon Quarry 3km to the north-east. Neolithic and Early Bronze Age sites, especially those with stratified evidence of settlement, are rare in the region generally.

A chance find of Roman Samian ware vessels and fragments of bronze, possibly from a burial, have been made in the general area, but no Roman finds were recovered by fieldwalking and the findspot most likely lies outside the survey area.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 260m long by 20m wide across part of the site.

Fieldwork. Previous work: findspot pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey and trial trenching.

Mitigation Proposals. Mitigations B & E - detailed excavation, with low-intensity watching brief for 100m beyond site limits to both north and south.

Site 8. Elsenham, Old Mill Farm (TL 530258)

Prehistoric and post-medieval finds (recorded pre-motorway construction; and east of the motorway, arable)

Site Description. Fieldwalking before construction of the motorway recovered 8 pieces of worked and burnt flint and unspecified amounts of Roman and medieval pottery from a 200m length of the route. Fieldwalking survey of the widening corridor identified a slight concentration of worked and burnt flint, but this co-incided precisely with a concentration of post-medieval artefacts, suggesting more recent disturbance. No further Roman or medieval material was found.

Importance. The site is of no importance.

Impact of Scheme. The published scheme has no impact as the site has already been disturbed. The area of previous finds was destroyed by construction of the motorway. Limited off-site tree planting.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation proposals. None.

Site 9. Stansted, south of Alsa Wood (TL 529626)

Possible prehistoric site (recorded pre-motorway construction; and east of the motorway, arable)

Site Description. Fieldwalking before construction of the motorway recovered 6 pieces of worked flint and an unspecified amount of post-medieval finds from a 170m length of route. Fieldwalking survey of the widening corridor identified a slight concentration of worked and burnt flint with prehistoric pottery spread over a wide area alongside the previous fieldwalking area, and extending 130m to its south. The evidence suggests an area of prehistoric activity without any obvious focus.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 190m long by 10-20m wide. The area of previous finds was destroyed by construction of the motorway. Extensive off-site tree planting.

Fieldwork. Previous work: Fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 10. Stansted, Alsa Wood (TL 527266)

Ancient woodland (bisected by the motorway)

Site Description. Alsa Wood was first recorded in a document of 1268 as "Alsieshey" (Old English "Aelfsige", a woodland enclosure). It occupies a hilltop at the watershed of the Stansted brook and the river Cam, and at the junction of the parishes of Stansted, Elsenham and Ugley. Although encroached upon by these settlements, its relatively remote location has left the wood more intact than any other in the area, and it almost certainly predates the Domesday survey of 1086. It is bisected by the motorway, and an area of the eastern part of the wood was destroyed during motorway construction.

Importance. The wood is a Site of Special Scientific Interest, and of national importance.

Impact of Scheme. The published scheme will destroy a strip 480m long by 10-20m wide, less than 1% of the total area of the woodland.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study.

Mitigation Proposals. None. However, the woodland should be preserved against any potential off-site impacts.

Site 11. Ugley, south of Bedwell Road (TL 527629)

Possible medieval site (recorded pre-motorway construction; and west of the motorway, trees and shrubs)

Site Description. Fieldwalking before construction of the motorway recovered 4 pieces of worked and burnt flint and around 25 sherds of medieval pottery from a 230m length of route to the south-east of Homestead Farm, Ugley Green. The pottery may represent a significant concentration, although this could not be confirmed as the land was unsuitable for fieldwalking survey within the area of the Scheme. Nevertheless, the presence of a medieval site is likely.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 230m long by 10m wide across a possible site. The area of previous finds was destroyed by construction of the motorway. Limited off-site tree planting.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 12. Ugley, Hudsons Farm (TL 528275)

Prehistoric finds (west of the motorway, arable)

Site Description. Fieldwalking survey of the widening corridor identified a slight concentration of worked and burnt flint with prehistoric pottery over a small area. The evidence suggests localised prehistoric activity.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 100m long by 20m wide.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 13. Ugley, north of Hudsons Farm (TL 529276)

Prehistoric finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered 2 pieces of worked flint and an unspecified amount of medieval pottery from a 170m length of route. Fieldwalking survey within the area of the Scheme was not possible adjacent to the area of the previous finds or for a further 400m to the north, because of thick crop growth.

Importance. The site is of uncertain importance.

Impact of Scheme. The impact of the published Scheme could not be assessed. The area of previous finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study.

Mitigation Proposals. Mitigation F2 - Stage 3 assessment to be completed by geophysical survey.

Site 14. Ugley, south of Ugley Hall Farm (TL 530281 to 528292)

Roman settlement (recorded pre-motorway construction; and west of the motorway, arable)
Fig. 4.11

Site Description. Fieldwalking, trial trenching and rapid excavation before construction of the motorway identified a 2nd-4th century Roman settlement site on the line of the motorway and extending downslope to its east. Several timber buildings were recorded. The settlement was supplied by a spring which lay immediately to its north-west. Other fieldwalking finds included unspecified amounts of early medieval pottery from the site area.

Fieldwalking survey within the area of the Scheme was not possible along the west side of the Roman settlement because of thick crop growth, but three trial trenches (Q, R & S) recorded only a low density of features, confirming that the main settlement area lay to the east. Geophysical survey (magnetometer) has defined the southern limit of the site, and its northern limit is defined by the spring.

Fieldwalking survey further north identified slight concentrations of worked and burnt flint, prehistoric pottery, Roman tile, and medieval pottery. Taken together, this material appeared to form a significant concentration. Land access could not be gained for further assessment by trial trenching, but geophysical survey (magnetometer) immediately to the north of the fieldwalking area obtained negative results, and it is unlikely that any of these finds represent a site. They are more likely to represent dumping of material to consolidate a naturally wet area.

Despite the presence of medieval pottery, there is no evidence of settlement of that date nearby. The area is still known today as "Hazelmoor Common" (Old English "Haslemere", a medieval open field), first documented in the 14th century.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 250m long by 20m wide to the west of the main settlement area. A large part of the site was destroyed by construction of the motorway.

Fieldwork. previous work: fieldwalking, trial trenching and limited excavation pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey (part), geophysical survey (part) and trial trenching (part).

Mitigation Proposals. Mitigation D, - intensive watching brief.

Site 15. Ugley, North Hall Farm (TL 523303 to 522310)

Prehistoric and Roman finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered 5 pieces of worked and burnt flint and an unspecified amount of Roman pottery and tile from a 770m length of route. Trial trenching before motorway construction did not find any Roman features, but very little detail of this work has been published and the results may be unreliable. Fieldwalking survey within the area of the Scheme was not possible because the land was stubble or rough grass.

Importance. The site is of uncertain importance.

Impact of Scheme. The impact of the published Scheme could not be assessed. The area of previous finds was destroyed by construction of the motorway. Very limited off-site planting.

Fieldwork. Previous work: fieldwalking and trial trenching pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study.

Mitigation Proposals. Mitigation F2 - Stage 3 assessment to be completed by geophysical survey.

Site 16. Quendon, east of Quendon Park (TL 521314 to 522320)

Post-medieval finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered an unspecified amount of post-medieval pottery from a 600m length of route. Fieldwalking survey within the area of the Scheme identified no concentrations of finds. The finds from the previous fieldwalking probably represent manuring scatters.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme has no impact. The area of previous finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Essex CC 1990). This assessment: desk study; fieldwalking survey.

Mitigation Proposals. None.

Site 17. Newport, north of Longcroft Spring

Post-medieval finds (recorded pre-motorway construction; and west of the motorway, arable)

Site Description. Fieldwalking before construction of the motorway recovered an unspecified amount of post-medieval pottery and tile from a 500m length of route. Fieldwalking survey within the area of the Scheme identified a significant concentration of post-medieval pottery half way along this length, suggesting a possible site.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 80m long by 20m wide across part of the site. The area of previous finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 18. South of Newport (TL 519328)

Roman site (recorded pre-motorway construction; and west of the motorway, arable)
Fig. 4.12

Site Description. Fieldwalking before construction of the motorway recovered 16 sherds of Roman pottery from a 300m length of the route. Trial trenching located Roman ditches and pits towards the south of this area, indicating a site, although features had suffered from plough damage.

Fieldwalking survey within the area of the Scheme identified a significant concentration of Roman pottery and a Roman coin immediately to the west of the previous trial trenches, confirming the presence of a Roman site. Land access could not be obtained for trial trenching, but geophysical survey (magnetometer) located ditches and pits in the central area of site, and defined its northern limit. Conditions were not suitable for geophysical survey to define the southern limit of site, and it is assumed that this was at the limit of the fieldwalking concentration.

A small amount of medieval pottery, and a significant concentration of post-medieval pottery were found during fieldwalking within the area of the Scheme. A map reference to "Whole Furrow Field" suggests medieval open fields in the vicinity predating the 1840 enclosure, while the geophysical survey recorded several obviously recent field boundaries. The later pottery is probably related to agricultural disturbance of the Roman site.

Importance. The site is of regional importance.

Impact of Scheme. The published scheme will destroy a strip 280m long by 40m wide across part of the site. Part of the site was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking and trial trenching pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking and geophysical surveys.

Mitigation Proposals. Mitigations C & E - sample excavation, with low-intensity watching brief for 100m beyond the limits of the site to both north and south.

Site 19. South of Newport (TL 518331)

Possible post-medieval site (recorded pre-motorway construction; and west of the motorway, arable)

Site Description. Fieldwalking before construction of the motorway recovered a sherd of Roman pottery and unspecified amounts of post-medieval pottery, possibly from this area. A significant concentration of post-medieval pottery was found during fieldwalking within the area of the Scheme immediately to the north of Site 18. As with Site 18, the evidence may be

related to post-medieval field ditches or manuring, although there is a possibility of a farm building or other activity.

Importance. The site is of local importance at most.

Impact of Scheme. The published Scheme will destroy a strip 120m long by 20m wide across the site.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Site 20. Newport, Pond Cross underpass (TL 518331 to 514334)

Post-medieval finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered a sherd of Roman pottery and unspecified amounts of post-medieval pottery from a 500m length of the route. The bridleway which passes through the underpass may originally have been a medieval lane, and evidence of a bakehouse beside it survives in the pre-1840 field name "Great Bakehouse Shot". However, very little post-medieval material was recovered from this length of the route during fieldwalking survey of the widening corridor, and it is unlikely that a site is represented.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme has no impact. The area of previous finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 21. Wicken Bonhunt, south of Bonhunt Water (TL 513334)

Prehistoric or Roman site (recorded pre-motorway construction; and west of the motorway, arable)

Fig. 4.13

Site Description. Fieldwalking before construction of the motorway recovered a sherd of Roman pottery and unspecified amounts of medieval and post-medieval pottery, possibly from this area. Fieldwalking within the area of the Scheme could not be carried out because the land was stubble. Geophysical survey (magnetic susceptibility) identified anomalies, and a trial trench (trench V) located a prehistoric or Roman ditch (the dating is problematical). The relationship of this site with Site 22 on the north side of the Bonhunt Water is not properly understood.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 80m long by 20m wide across part of the site. The area of previous finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11. This assessment: desk study; geophysical survey; trial trenching.

Mitigation Proposals. Mitigations C & E - sample excavation, with a low-intensity watching brief beyond the southern limit of the site.

Site 22. Wicken Bonhunt, near Bonhunt Farm and St Helen's Chapel (TL 512335)

Multi-period site, especially a mid/late Saxon cemetery (recorded pre-motorway construction; and west of the motorway, arable)
Fig. 4.13-4.14

Site Description. An important multi-period site has been excavated in the area of St Helen's chapel, 120m west of the motorway. This work has revealed evidence of Palaeolithic tools, a Mesolithic flint-working industry, a later Neolithic settlement, Late Bronze Age and Iron Age features, Roman features and field boundaries, and early Saxon pottery. The most important discovery was a middle Saxon settlement consisting of at least 30 timber buildings, with a contemporary inhumation cemetery to its east, contained within a bend of the Bonhunt Water. The settlement went into decline in the late Saxon period, but was succeeded by a Norman manor centred on a timber aisled hall and the stone-built St Helen's chapel. The chapel is a Scheduled Ancient Monument (Essex SAM 141). Fieldwalking before motorway construction recovered only a sherd of Roman pottery and unspecified amounts of medieval and post-medieval pottery.

Geophysical survey (magnetic susceptibility) of the entire area between Bonhunt House and the motorway detected confused magnetic anomalies consistent with highly disturbed archaeological strata. These were weaker towards the motorway, but two trial trenches (T & U) and four test pits (W, X, Y & Z) revealed Saxon inhumation burials extending from the old line of Wicken Road in the north almost to the Bonhunt Water in the south. The burials were very dense and arranged in several layers, with almost 50 recorded in trench T alone (Fig. 4.14). It is estimated that at least 2,000 would have lain within the land-take of the Scheme as originally proposed. The cemetery is not closely dated, but was cut by a ditch containing a coin of Edward the Confessor (1042-1066), and so is an extension of the cemetery recorded to the west, around St Helen's chapel. Roman, early Saxon and medieval features were recorded in trench U to the south, near the Bonhunt Water.

The site was superficially disturbed during motorway construction, although the deep strata of the cemetery survives sealed beneath construction debris and reinstated topsoil.

The Saxon settlement was known as "Banhunta" (Old English, Bana's huntsman or hunting district), and was related to the middle/late Saxon royal vill and possible burh at Newport only 1km to the east. The manor at Bonhunt was merged with Wicken in 1237 and at about this time was abandoned.

Importance. The site is of national importance.

Impact of Scheme. The published Scheme includes modifications to the original design in the form of a retaining wall built entirely within the present motorway boundary to avoid any destruction of the site. No impact.

Fieldwork. Previous work: fieldwalking by B Hooper 1967-8; large-scale excavation by K Wade and A Rogerson 1971-3; fieldwalking and watching brief pre-M11 (Stage 1 desk study); Stage 2 desk study; Stage 3 geophysical survey, trial trenching and test pits.

Mitigation Proposals. Mitigation A - preservation *in situ*. No further action required, although the site should be preserved from any potential impacts outside the specific area of the Scheme.

Site 23. Wicken Bonhunt, north of Royston Road (TL 511336)

Saxon cemetery (motorway construction site west of the motorway)
Fig. 4.13

Site Description. Five human skeletons were recorded "c. 90m north-north-east of St Helen's chapel" before construction of the motorway slip road. Further skeletons were recorded to the north of Wicken Road in a test pit alongside the motorway. None of these is dated, but they presumably represent part of the Saxon cemetery found to the south and east. Fieldwalking of the general area before construction of the motorway recovered 2 pieces of worked flint and unspecified amounts of Roman and post-medieval pottery.

Trial trenches, one alongside the motorway (trench I) and the other two on the new line of the slip road (trenches G & H), confirm the evidence of aerial photographs, that this was a motorway construction site. In all the trenches deep deposits of disturbed modern strata (over 3m deep beside the motorway) was sealed beneath reinstated topsoil, and archaeological strata had been destroyed right across the site. The results of fieldwalking survey within the area of the Scheme have been discounted as the topsoil was imported.

Importance. The site is of no importance as no archaeological remains have survived.

Impact of Scheme. The published Scheme will have no impact as the site has already been destroyed.

Fieldwork. Previous work: fieldwalking and watching brief pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study and aerial photographs study; Stage 3 fieldwalking survey and trial trenching.

Mitigation Proposals. None.

Site 24. Wicken Bonhunt, north of Bonhunt Water (TL 513336)

Possible Saxon cemetery (motorway construction site east of motorway)
Fig. 4.13

Site Description. Three test pits (AA, AB & AC) were excavated to assess whether or not the Saxon cemetery at Site 22 extended across to the east side of the motorway. The test pits confirm the evidence of aerial photographs, that this was a motorway construction site and that archaeological strata had been destroyed right across the site. As with Site 23 disturbed modern strata (1.5m deep beside the motorway) was sealed beneath reinstated topsoil.

Importance. The site is of no importance as no archaeological remains have survived.

Impact of Scheme. The published Scheme will have no impact as the site has already been destroyed.

Fieldwork. Previous work: none. This assessment: Stage 2 desk study; Stage 3 test pits.

Mitigation Proposals. None.

Site 25. Newport, east of Eastfield Plantation (TL 510339)

Multi-period finds (recorded pre-motorway construction)

Site Description. Fieldwalking before the construction of the motorway recovered a piece of worked flint and unspecified amounts of Roman and post-medieval pottery over a 200m length of the route. Fieldwalking survey within the area of the Scheme identified no concentrations of finds and the previous finds are unlikely to have been significant.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme will have no impact.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 26. Newport, Six Corners Plantation (TL 509343)

Post-medieval finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered an unspecified amount of post-medieval pottery over 1 50m length of the route. Fieldwalking survey within the area of the Scheme identified no concentrations of finds and the previous finds are unlikely to have been significant.

Importance. The site is of no importance.

Impact of Scheme. The published scheme will have no impact.

Action taken: Fieldwalking pre-M11, Stage 1 desk study (site 26); Stage 2 desk study; Stage 3 fieldwalking.

Further action: None.

Site 27. Newport, Long Plantation (TL 509345 to 507350)

Possible Roman site (recorded pre-motorway construction; and west of the motorway, arable)

Site Description. Fieldwalking before construction of the motorway recovered 17 sherds of Roman pottery from a 220m length of route to the north of Long Plantation, and 2 sherds of Roman pottery from a 300m length of route to its south. An unspecified amount of post-medieval pottery was recovered from both areas. Fieldwalking within the area of the Scheme identified marginal concentrations of worked flint and Roman pottery to the north of Long Plantation, confirming the previous fieldwalking findspot, and suggesting a possible site. Small amounts of medieval and an extensive spread of post-medieval pottery extended from Long Plantation southwards and probably represent manuring scatters.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip 80m long by up to 60m wide across part of the site. The area of previous fieldwalking finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 28. Wendens Ambo, Duck Street (TL 507356)

Post-medieval finds (recorded pre-motorway construction)

Site Description. Duck Street, which passes under the motorway, is a medieval lane. To the east of the motorway it borders Great Bulse Farm, first documented in 1299, and houses, now demolished, are shown on a map of 1786 on its north side. However, there is no evidence of houses or farm buildings within the Scheme itself.

Fieldwalking before construction of the motorway recovered a sherd of Roman pottery and unspecified amounts of post-medieval pottery either side of Duck Street. Fieldwalking survey within the area of the Scheme recovered a spread of post-medieval material north of Duck Street, but given the absence of evidence for buildings this most likely represents a manuring scatter.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme will have no impact.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 29. Wendens Ambo, Chinnel Barn (TL 507359 to 507363)

Iron Age settlement and Roman villa (recorded pre-motorway construction; and west of the motorway, arable and pasture)
Figs. 4.15-4.16

Site Description. Previous excavations have located the Roman villa 70m to the west of the motorway and, on the line of the present motorway, a Late Iron Age settlement overlain by a sequence of Roman buildings and enclosure ditches spanning the 1st to 4th century AD. The Roman features represent a farm area adjacent to the villa. The area immediately to the west of the widening corridor is a Scheduled Ancient Monument (SAM 24861).

Fieldwalking survey within the area of the Scheme confirmed the earlier excavation results. The focus of the site was marked by a significant concentration of Roman pottery and tile extending for 100m to the south of Chinnel Barn, while lesser amounts of Roman material extending for a further 200m to the south probably represent manuring of fields. A significant concentration of worked and burnt flint was also recovered from the site focus, showing that the Roman villa complex was established on a prehistoric site. The northern extent of the site could not be defined by fieldwalking survey because the land was pasture.

Geophysical survey (magnetic susceptibility) produced evidence of relatively strong magnetic anomalies within the area of ploughed arable land to the south of Chinnel Barn, but reliable results could not be obtained in the pasture to the north. Magnetometer

survey of the arable land clearly defined a dense pattern of ditches and other features extending 120 metres south of Chinnel barn, up the valley slope. A pair of boundary ditches apparently defined the southern limit of the main site area.

Three trial trenches (J, K & L) examined a small sample of these features and confirmed that they were of Iron Age and Roman date. This work also established that the preservation of archaeological features was very good, especially toward the bottom of the valley slope, where they were sealed by a thick layer of hill-wash. As a result the Roman land surface was preserved from later plough disturbance. The trial trenching confirmed that the double ditches recorded in the geophysical survey actually did define the southern limit of the main site area. Two further trial trenches (M & N) in the pasture to the north established that the northern limit of the site focus was around 100m to the north of Chinnel Barn. The northernmost trench N contained no Iron Age or Roman features, but a waterlogged organic valley floor deposit was recorded. This may contain palaeo-environmental remains with potential for understanding the natural environment and its exploitation by man.

The site focus measures 220m north-south, containing relatively complex evidence, with a high density of features of several phases. However, the overall site area is larger, including the valley floor deposit to the north and the full extent of the prehistoric fieldwalking concentration to the south. This gives a total north-south extent of 430m.

The site is regarded as an excellent example of its type, that is an Iron Age settlement with its dwellings, stock enclosures and field systems overlain by a Roman villa and its farm area, whose development can be traced for the entire Roman period. Roman villa sites have received less attention in this region than in other parts of southern Britain. The value of the site is also enhanced by its excellent preservation.

Importance. The site is of national importance, and is adjacent to a Scheduled Ancient Monument.

Impact of Scheme. The published Scheme has no impact on the scheduled area, but will destroy a strip 430m long and 20m wide across part of the site, estimated at a maximum of 10% of the entire villa complex. Part of the site has already been destroyed by construction of the motorway.

Fieldwork. Part-excavation of the villa by R C Neville 1853, large-scale excavation pre-M11 by M G Spratling, both summarised in the Stage 1 desk study (site 20); Stage 2 desk study (site 21); Stage 3 fieldwalking and geophysical surveys, and trial trenching.

Mitigation Proposals. Mitigations B & E - detailed excavation, with low-intensity watching brief for 100m beyond the limits of the site to the south. The scheduled area to the west should be preserved against any potential impacts outside the specific area of Scheme.

Site 30. Wendens Ambo, north of Royston Road (TL 508366)

Middle Iron Age settlement (recorded pre-motorway construction; and west of the motorway, arable)
Fig. 4.16

Site Description. Aerial photographs of a D-shaped enclosure 200m west of the motorway suggested the presence of a prehistoric site in this area. Fieldwalking survey within the area of the Scheme identified a slight concentration of worked and burnt flint with prehistoric pottery. Four trial trenches were excavated, and the two southernmost (trenches E & F) identified a Middle Iron Age settlement site in the area of the fieldwalking concentration, but 200m south-east of the enclosure. The southern and northern limits of the site are suggested by a combination of fieldwalking and trial trenching evidence. It would appear that the site occupied the valley slope and did not extend to the top of the hill. Aerial photographs show that a motorway construction site has already disturbed both the north and south ends of the site, and may have destroyed the D-shaped enclosure itself.

Cartographic evidence also suggested that this was the site of Little Wendens church, now demolished, and possibly also a deserted medieval village (DMV). No evidence for either was found by fieldwork. It is considered that both lay to the east of the motorway, and that the map location is wrong.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 150m long by 20-30m wide across part of the site. Part of the site may already have been destroyed by construction of the motorway.

Fieldwork. Previous work: trial trenching by G M Knocker 1958 and also pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study and aerial photographs study; Stage 3 fieldwalking survey and trial trenching.

Mitigation Proposals. Mitigations C & E - sample excavation, with a low-intensity watching brief at the site's limits.

Site 31. Wendens Ambo, Cornwallis Hill (TL 508367 to 508372)

Possible medieval site (recorded pre-motorway construction; and west of the motorway, arable)

Site Description. Fieldwalking before construction of the motorway recovered a worked flint and an unspecified amount of medieval pottery over a 500m length of route. Fieldwalking survey within the area of the Scheme identified small amounts of worked flint and a significant, but localised concentration of medieval pottery towards the north end of the previous fieldwalking area, suggesting a possible medieval site. Fieldwalking of the regraded cutting was not possible because of thick crop growth.

Importance. The site is of local importance.

Impact of Scheme. The published Scheme will destroy a strip at least 80m long by 20m wide across part of the site, but the full impact of the scheme could not be assessed. Part of the site has already been destroyed by construction of the motorway.

Fieldwork. Previous work: aerial photography and fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study and aerial photograph study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation F2 - Stage 3 assessment to be completed by a low intensity watching brief over the area of the regraded cutting.

Site 32. Littlebury, south of Chestnut Avenue (TL 508372 to 508379)

Multi-period finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered worked and burnt flint, and Roman, medieval and post-medieval pottery over a 700m length of route. The flint was mainly recovered from the north end of this area, near Chestnut Avenue. Further fieldwalking carried out alongside the motorway by Williamson identified a possible Roman site, although this is not supported by any finds distribution statistics. Fieldwalking within the area of the Scheme recovered only very small amounts of worked and burnt flint and Roman pottery, suggesting that Williamson's finds were not significant. His identification of a Roman site is not confirmed.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme will have no impact. The area of previous fieldwalking finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 and by T Williamson 1979-82 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 33. Littlebury, between Chestnut Avenue and Littlebury Green Road (TL 507382 to 503390)

Multi-period finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered 21 pieces of worked and burnt flint, a sherd of Roman pottery, and unspecified amounts of medieval and post-medieval pottery over a 1km length of the route. Fieldwalking survey within the area of the Scheme identified very small amounts of all types of finds, but no significant concentrations.

The previous finds are unlikely to have been significant. Fieldwalking of the regraded cutting at the north end of the site area was not possible because of thick crop growth.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme will probably have no impact, although the full impact of the scheme could not be assessed. The area of previous fieldwalking finds has already been destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation proposals. Mitigation F2 - Stage 3 assessment to be completed by a low intensity watching brief over the area of the regraded cutting.

Site 34. Littlebury, north of Littlebury Green Road (TL 503391 to 503394)

Prehistoric finds (recorded pre-motorway construction)

Site Description. Fieldwalking before construction of the motorway recovered 23 worked and burnt flints and an unspecified amount of post-medieval pottery over a 300m length of the route. Fieldwalking within the area of the Scheme identified small amounts of worked flint along this strip, but not in sufficient concentrations to indicate a site. Instead, the evidence represents a peripheral spread of material extending south from Site 33.

Importance. The finds are of no importance.

Impact of Scheme. The published Scheme will have no impact. The area of previous finds was destroyed by construction of the motorway.

Fieldwork. Previous work: fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 35. Littlebury, Howe Wood (TL 502396)

Bronze Age hoard and Iron Age site (west of the motorway, arable)
Fig. 4.14

Site Description. Fieldwalking before construction of the motorway recovered 12 pieces of worked and burnt flint and unspecified amounts of medieval and post-medieval pottery over a 400m length of route. A Bronze Age hoard of socketed axe-heads and swords was found during a geological survey of the motorway

route. Trial trenching identified Early Iron Age features (revision of pottery dating now suggests a Middle Iron Age date). Subsequent fieldwalking beside the motorway by Williamson confirmed the presence of an Iron Age site.

Fieldwalking within the area of the Scheme identified a slight concentration of worked and burnt flint at the north end of the site, but only very small amounts of medieval and post-medieval pottery were recovered. The northern and southern limits of the site were established by five trial trenches (A, B, CA, CB, CC) in which Early-Middle Iron Age features and a Late Iron Age trackway were recorded. The site thus shows development over a period of time, although its main focus may lie away from the motorway.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will destroy a strip 170m long by 20m wide across part of a site. Part of the site has already been destroyed by construction of the motorway.

Fieldwork. Previous work: find of Bronze Age hoard pre-M11 by Passmore Edwards Museum geologist; fieldwalking and trial trenching pre-M11 by A E Collins; fieldwalking by T Williamson 1979-82 (Stage 1 desk study). This assessment: Stage 2 desk study; Stage 3 fieldwalking survey and trial trenching.

Mitigation Proposals. Mitigations C & E - sample excavation, with a low intensity watching brief for 100m beyond the limits of the site to both north and south.

Site 36. Littlebury, Heavy Hill (TL 502400 to 503406)

Prehistoric finds (west of the motorway, arable)

Site Description. Aerial photographs show a large number of cropmark features of probable prehistoric date in the general area. These include a group of five ring ditches, representing a ploughed-out Bronze Age barrow cemetery to the east of the motorway, and other features to the west. None lay within 200m of the motorway, however.

Fieldwalking before construction of the motorway identified a possible Bronze Age flint scatter at the south end of the area, but no significant finds were recovered, or traces of features recorded, over the rest of the area. This absence of significant evidence was confirmed by fieldwalking survey within the area of the Scheme, in which only very small amounts of worked and burnt flint were recovered.

Importance. The site is of no importance.

Impact of Scheme. The present Scheme will have no impact. The area of previous fieldwalking finds has already have been destroyed by construction of the motorway.

Fieldwork. Previous work: aerial photography and fieldwalking pre-M11 (Stage 1 desk study). This assessment: Stage 2 desk study and aerial photograph study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 37. Littlebury, Heavy Hill (TL 503407-503409)

Probably prehistoric trackway (west of the motorway, arable)

Site Description. Aerial photographs show a trackway, probably prehistoric, running south-west to north-east for a distance of at least 1km to the west of the motorway. It is represented by a pair of parallel ditches and descends the hill in the direction of the Cam valley at Little Chesterford. Its location relative to the motorway could not be plotted accurately, but it appears to have been crossed by the Scheme within the site area shown. Fieldwalking survey within the area of the Scheme identified no concentrations of finds, suggesting that the trackway was an isolated feature with no evidence of related settlement or other activity.

Importance. The site is of regional importance.

Impact of Scheme. The published Scheme will probably destroy a 20m length of the trackway somewhere within a 180m long strip.

Fieldwork. Aerial photography (Stage 1 desk study). This assessment: Stage 2 desk study, and aerial photograph study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation D - intensive watching brief.

Site 38. Littlebury, Heavy Hill (TL 504411)

Prehistoric ring-ditch (west of the motorway, arable)

Site Description. Aerial photographs show a ring ditch, representing a ploughed-out Bronze Age barrow, in the immediate vicinity of the motorway, although its position could not be plotted precisely. Fieldwalking survey within the area of the Scheme recovered only small amounts of worked and burnt flint, suggesting that the ring ditch was an isolated feature. Further assessment is required to establish whether or not the ring-ditch is located within the widening corridor.

Importance. The site is of uncertain importance.

Impact of Scheme. The impact of the published Scheme is not known as the precise location of the ring-ditch is uncertain.

Fieldwork. Previous work: aerial photography (Stage 1 desk study). This assessment: Stage 2 desk study and aerial photograph study; Stage 3 fieldwalking survey.

Mitigation Proposals. Mitigation F1 - Stage 3 assessment to be completed by geophysical survey to establish whether or not the site lies within the Scheme.

Site 39. Littlebury, Motorway Depot (TL 504414)

Early Bronze Age find (recorded pre-motorway construction)

Site Description. Watching brief work during construction of the motorway recovered Early Bronze Age Beaker pottery and worked flint from a pit, and Roman pottery from the general area. Fieldwalking survey within the area of the Scheme recovered small amounts of worked and burnt flint, and very small amounts of Roman pottery. The significance of the previous finds is uncertain, but in any case the adjacent areas of the Scheme were extensively disturbed by motorway construction works.

Importance. The site is of no importance.

Impact of Scheme. The published Scheme will have no impact as the site has already been destroyed by construction of the motorway.

Fieldwork. Previous work: watching brief pre-M11 by A E Collins (Stage 1 desk study). This assessment: Stage 2 desk study and aerial photograph study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 40. Ickleton, Junction 9 (TL 502425)

Roman roads (bisected by the motorway)

Site Description. The Roman road from Great Chesterford to Braughing, west of Bishop's Stortford is crossed by the motorway. Its alignment is well established from aerial photographs in the Great Chesterford area and it is still visible as an earthwork to the west of the motorway. The road alignment was further confirmed by a small excavation to the east of the motorway in 1977. The land was unsuitable for Stage 3 field assessment.

The recognised alignment leads from the south gate of the 1st century fort at Great Chesterford. A second alignment is postulated a little to the south of the original, branching off it to provide access to the south gate of the 4th century walled town. Its line is possibly that of the track to the south of Smock Mill House immediately to the east of the motorway.

All evidence within the area of Junction 9, even in the areas between the carriageways, was destroyed during construction of the motorway. The construction damage is concealed beneath re-instated topsoil.

Importance. The road alignments are of regional importance,

Impact of Scheme. The published Scheme will have no impact on either road alignment as there is no widening at this point. A length of both roads would have been destroyed by construction of the motorway.

Fieldwork. Previous work: aerial photography and trench excavated pre-M11 by P Dey (Stage 1 desk study). This assessment: Stage 2 additional desk study and aerial photograph study.

Mitigation Proposals. None.

Site 41. Ickleton, east bank of river Cam (TL 499432)

Roman finds (west of the motorway, arable)

Site Description. Fieldwalking on the line of the proposed Ickleton bund alongside the slip road to Stumps Cross identified a slight concentration of Roman pottery. This may be related to Roman finds made 100m to the west in the 1930s, although the character of these was not understood at the time. The site lies 200m north-west of the Roman town of Great Chesterford, at the edge of the Roman and early Saxon north cemetery (see Site 42).

Importance. The site is of regional importance.

Impact of Scheme. There was a potential impact from the Ickleton bund in the Scheme as previously proposed, but these works have now been omitted from the published Scheme. Part of the site has already been destroyed by construction of the slip road.

Fieldwork. Previous work: none. This assessment: Stage 2 additional desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None if the bund is not constructed.

Site 42. Great Chesterford, east of London-Cambridge railway (TL499433)

Roman and early Saxon cemetery (recorded pre-motorway construction)

Site Description. Roman features and Roman or Saxon inhumations were recorded by watching brief and rapid excavation during construction of the slip road to Stumps Cross and related gravel quarrying to its east. Fieldwalking could not be carried out in the adjacent area along the line of the proposed Ickleton bund because of farm sheds. The site lies 200m north-west of the Roman town of Great Chesterford, in an area first used as a gravel quarry and rubbish dump, but later taken up by the Roman and early Saxon north cemetery as this expanded to the north and west.

Importance. The site is of no importance as it has already been destroyed.

Impact of Scheme. The published Scheme will have no impact as proposals to construct the bund in this area have now been omitted from the published Scheme. A large part of the site has already been destroyed by construction of the slip road and by gravel extraction to the east.

Fieldwork. Previous work: watching briefs and rapid excavation pre-M11 by A E Collins. This assessment: Stage 2 additional desk study; Stage 3 fieldwalking survey.

Mitigation Proposals. None.

Site 43. Great Chesterford, south of sewage works (TL 501436)

Roman and early Saxon cemetery (recorded pre-motorway construction)

Site Description. Construction of the slip road to Stumps Cross destroyed part of the north-western end of the cemetery, a Scheduled Ancient Monument (SAM 74) partially excavated in 1953-5. The early Saxon cemetery consisted mainly of inhumations, with a few cremations, and was extended from the north and west sides of the existing Roman cemetery. Grave goods, chiefly jewelery and weapons, were recovered from the Saxon burials.

A watching brief before construction of the slip road revealed evidence of Roman burials and a Roman stone structure with a concrete floor, although whether this was a building or a mausoleum is unclear. Archaeological strata were traced to the north of the known area of the cemetery. Roman burials were recorded immediately to the west of the slip road in 1846 and 1993; a coin hoard was also found in the former discovery.

Fieldwalking on the line of the proposed Ickleton bund did not recover any finds. However, the cemetery was not rich in pottery, and the area has been extensively metal-detected; the cemetery may not necessarily be recognised by fieldwalking.

Importance. The site is adjacent to a Scheduled Ancient Monument, but is of no importance because no part of it lies within the Scheme.

Impact of Scheme. The published Scheme will have no impact as proposals to construct the bund in this area have now been omitted from the published Scheme. Part of the site has already been destroyed by construction of the slip road and by gravel extraction to the east.

Fieldwork. Previous work: watching brief and rapid excavation by R C Neville 1846; major excavation by V Evison 1953-5; watching briefs pre-M11 by C Couchman and by P Dey 1993. This assessment: Stage 2 additional desk study; Stage 3 fieldwalking survey.

Further action: None.

Site 44. Great Chesterford, south of Stumps Cross (TL 503439)

Medieval or post-medieval trackway (pre-motorway construction)

Site Description. Trial trenching before construction of the slip road to St Cross produced largely negative results, but two trenches identified a cobbled trackway of either medieval or post-medieval date. The area alongside the slip road has already been affected by remodelling of the Stumps Cross roundabout.

Importance. The site is of no importance as it has already been destroyed.

Impact of Scheme. The published Scheme will have no impact.

Mitigation Proposals. Previous work: trial trenching by Miss Lunt pre-M11. This assessment: Stage 2 additional desk study.

5. CONCLUSIONS

This report has assessed the impact of widening of the motorway on all known archaeological remains within the area of the Scheme between Junction 8 and Stump Cross, north of Junction 9.

The archaeology of the Scheme has been summarised within its local, regional and national setting. The character, extent and value of individual archaeological sites has then been considered in relation to the impact of the widening, as expressed in the final published version of the Scheme, and appropriate mitigation measures have been proposed. Archaeological remains recorded before construction of the motorway in the 1970s have also been included within this assessment for their information value, even though no mitigation is required.

Twenty sites have been identified upon which the Scheme would have an impact. One of these sites is worthy of preservation *in situ*. Mitigation of the impact on the other sites can be achieved through a variety of excavation and watching brief options, according to their relative archaeological importance and/or the extent of impact. In addition, one site, and nine other areas (totalling 19 hectares) require further DMRB Stage 3 assessment. The breakdown of the proposed mitigations is as follows:

A	Preservation <i>in situ</i>	1 site
B	Detailed excavation	4 sites
C	Sample excavation	4 sites
D	Intensive watching brief	11 sites
E	Low-intensity watching brief	Margins of excavations
F1	Further assessment of a suspected site	1 site
F2	Further assessment of unassessed areas	9 areas

No Scheduled Ancient Monuments are directly affected by the Scheme, although two sites of equivalent quality and considered to be of national importance have been identified, at Wicken Bonhunt and Wendens Ambo. Other nationally important sites adjacent to the Scheme, notably the Ickleton Roman villa and the Late Iron Age, Roman and early Saxon cemeteries at Great Chesterford, are not affected by it, especially as the proposed earth mounding in the Ickleton-Great Chesterford area has now been omitted from the published Scheme.

Mitigation measures have been included in the Scheme to preserve the nationally important Saxon cemetery at Bonhunt Farm, Wicken Bonhunt (Site 22). Widening will take place by means of a retaining wall built entirely within the present motorway limits to avoid disturbance of the site.

Extensive mitigation is also required where the Scheme passes along the east side of the Scheduled Ancient Monument at Wendens Ambo (Site 29). Although the villa itself is not affected,

complex and well-preserved remains of the related farm area and an earlier Iron Age farmstead will require detailed excavation over an area of up to 430 by 20m.

The three other sites which require detailed excavation are located between Stansted Airport and Elsenham. These are regionally important prehistoric settlement sites dating to the Middle Iron Age (Sites 5 and 6) and the Neolithic-Early Bronze Age (Site 7). However, the impact on them is more limited than at Wendens Ambo and the excavation areas are smaller.

The same is true of the four sites which require sample excavation: a Roman site south of Newport (Site 18); a prehistoric and/or Roman site at Bonhunt Farm, Wicken Bonhunt (Site 21); a Middle Iron Age site north of Wendens Ambo (Site 30); and a Bronze Age and Iron Age site at Howe Wood, Littlebury (Site 35). These are again sites of regional importance, but the archaeological evidence is of lesser quality, and less intensive excavation techniques are required.

Eleven sites require an intensive watching brief, with provision for limited rapid excavation. They are generally considered to be of no more than local importance, and the archaeological evidence is not of sufficient quality to justify controlled excavation. Often they are sites identified by fieldwalking survey, but where the artefact concentrations were slight or marginal.

An exception is the Roman settlement site near Ugley Hall (Site 14). This is considered to be of regional importance, but trial trenching and geophysical survey showed that the density of archaeological features was low; it was concluded that the Scheme passes through the fringe of the site only, and that an intensive watching brief would be sufficient. Similarly, geophysical survey of Site 3, thought possibly to be an important prehistoric site, produced mainly negative results and an intensive watching brief is considered sufficient mitigation.

Low-intensity watching briefs are required for a distance of 100m beyond the north and south limits of the eight sites for which excavation is required. This mitigation would act as a safety net for recording any isolated, but significant features outside the main site focus.

Although every effort was made to assess the entire land-take of the Scheme assessment was not possible in some areas, either because land access was refused or because the condition of the land was unsuitable for fieldwalking survey. In such cases Stage 3 assessment needs to be completed before the construction programme to allow decisions to be made on mitigation measures as appropriate. It is proposed that geophysical survey is the most appropriate and cost-effective method, as it can provide results in advance without damaging land and incurring compensation costs. Any sites for which mitigation might be required can be investigated further, as is considered appropriate, at an early stage of the construction period.

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TABLE 4.1: SUMMARY OF ARCHAEOLOGICAL SITES, IMPACT ASSESSMENT AND PROPOSED MITIGATION

Site No.	Description of Site	Arch Value	Impact after Mitigation	Mitigation
1	Stane Street Roman Road: a short length recorded and destroyed by construction of M11.	Reg.	None. No impact because no widening at this point.	None
2	Slight medieval artefact concentration consistent with manure scatter.	Neg.	Loss of part of the site due to widening of a strip 40m long by 70m wide.	None
3	Prehistoric site: artefact concentrations: a few features mapped from geophysical survey.	Local	Loss of part of site due to widening of a strip 300m long by up to 70m wide.	D
4	Prehistoric site: artefact concentration.	Local	Loss of small area of site due to widening of a strip 220m long by 10m wide.	D
5	Prehistoric settlement: artefact concentration; including a structure known from trial trenching	Reg.	Loss of small but central area of site due to widening of a strip 140m long by up to 15m wide	B, E
6	Prehistoric settlement, probably western part of site 5: artefact concentration; enclosure ditches and other features mapped from geophysical survey	Reg.	Loss of small area of west of site due to widening of a strip 100m long by 25m wide.	B, E
7	Prehistoric settlement: artefact concentration: features including a structure, known from trial trenching.	Reg.	Loss of small but important area of site due to widening of a strip 240m long by 20m wide.	B, E
8	Slight prehistoric artefact concentration but with post medieval disturbance. Adjacent to area of artefacts of all periods destroyed by construction of M11.	None	None. Site has already been disturbed.	None
9	Slight prehistoric artefact concentration. Adjacent to area of prehistoric and post-medieval artefacts destroyed by construction of the M11.	Local	Loss of site due to widening of a strip 200m long by 20m wide.	D
10	Alsa wood SSSI: ancient woodland. pre-Domesday survey (AD 1086).	Nat.	Loss of less than 10% of wood due to widening of a strip 480m long by 10-20m wide.	None
11	Probable medieval site. Adjacent to area of medieval artefact concentration destroyed by construction of M11.	Local	Loss of small area of site due to widening of a strip 200m long by 10m wide.	D

no longer
SSSI

Key to table

Archaeological Value of Site
 Nat. National importance
 Reg. Regional importance
 Local Local importance
 Neg. Negligible importance
 None No importance

Mitigation
 A Preservation *in situ*
 B Detailed excavation and recording during construction period, including low intensity watching brief at edge of excavation
 C Sample excavation and recording during construction, including low intensity watching brief at edge of excavation area
 D Intensive watching brief during construction at known or suspected sites.
 E Low intensity watching brief during construction at known or suspected sites
 F Further Stage 3 archaeological assessment, with provision for A to E as appropriate
 F1 Trial trenching and /or geophysical survey at known or suspected sites.
 F2 Geophysical survey of areas not hitherto assessed

Site No.	Description of Site	Arch Value	Impact after Mitigation	Mitigation
12	Slight prehistoric artefact concentration.	Local	Loss of site due to widening of a strip 100m long by 20m wide.	D
13	Area of Prehistoric and post-medieval artefacts destroyed by construction of the M11. Area of widening could not be assessed	Uncertain	Impact of widening could not be assessed because of crop.	F2
14	W edge of Roman settlement: Low density of features known from trial trenching and mapped from geophysical survey. Adjacent to salvage excavation of main settlement area to east. destroyed by construction of M11.	Reg.	Loss of small area of site due to widening of a strip 250m long by 20m wide.	D
15	Area of prehistoric and Roman artefacts destroyed by construction of M11. Area of widening could not be assessed.	Uncertain	Impact of widening could not be assessed because of crop.	F2
16	Area of post-medieval artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in area of widening.	None	None. No site found in area of widening.	None
17	Post-medieval artefact concentration. Adjacent to area of post-medieval artefacts destroyed by construction of M11.	Local	Loss of small area of site due to widening of a strip 80m long by 20m wide.	D
18	Roman settlement: artefact concentration; features mapped from geophysical survey; also post-medieval artefact concentration. Adjacent to area of Roman artefacts and features known from trial trenching. destroyed by construction of M11.	Reg.	Loss of small area of site due to widening of a strip 240m long by up to 40m wide.	C, E
19	Post-medieval artefact concentration. Adjacent to area of post-medieval artefacts destroyed by construction of M11.	Local	Loss of small area of site due to widening of a strip 120m long by 10m wide.	D
20	Area of post-medieval artefacts destroyed by M11. Fieldwalking identified no artefact concentrations in the area of widening.	None	None. No site found in area of widening.	None
21	Prehistoric or Roman site: geophysical anomalies; ditch known from trial trenching. Adjacent to area of artefacts from all periods destroyed by construction of M11.	Reg.	Loss of small area of site due to widening of a strip 80m long by 20m long.	C, E

Key to table

Archaeological Value of Site	
Nat.	National importance
Reg.	Regional importance
Local	Local importance
Neg.	Negligible importance
None	No importance

Mitigation	
A	Preservation <i>in situ</i>
B	Detailed excavation and recording during construction period, including low intensity watching brief at edge of excavation
C	Sample excavation and recording during construction, including low intensity watching brief at edge of excavation area
D	Intensive watching brief during construction at known or suspected sites.
E	Low intensity watching brief during construction at known or suspected sites
F	Further Stage 3 archaeological assessment, with provision for A to E as appropriate
F1	Trial trenching and/or geophysical survey at known or suspected sites.
F2	Geophysical survey of areas not hitherto assessed

Site No.	Description of Site	Arch Value	Impact after Mitigation	Mitigation
22	Multi-period site, but principally a Saxon cemetery: geophysical anomalies; Saxon inhumations and other Roman, Saxon and medieval features known from trenching, but no structures. Prehistoric, Saxon and medieval settlements known from major excavation in the area of St. Helens Chapel. The chapel only is Scheduled (SAM 141).	Nat.	None. No impact as widening restricted to existing motorway corridor by means of retaining wall.	A
23	North end of Saxon cemetery at Site 22 known from watching brief pre-M11; aerial photographs and trial trenching show total destruction by M11 construction site.	None	None. Site has been totally destroyed <i>lost</i>	None
24	Possible east end of Saxon cemetery at Site 22: aerial photographs and trial trenching show total destruction by M11 construction site.	None	None. Site has been totally destroyed	None
25	Area of Roman and post-medieval artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in area of widening.	None	None. No site found in the widening area.	None
26	Area of post-medieval artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in area of widening.	None	None. No site found in area of widening.	None
27	Slight Roman artefact concentration. Adjacent to area of Roman and post-medieval artefacts destroyed by construction of M11.	Local	Loss of part of site due to widening of a strip 80m long by up to 60m wide.	D
28	Area of post-medieval artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in the area of widening.	None.	None. No site found in area of widening.	None

Key to table

Archaeological Value of Site	
Nat.	National importance
Reg.	Regional importance
Local	Local importance
Neg.	Negligible importance
None	No importance

Mitigation	
A	Preservation <i>in situ</i>
B	Detailed excavation and recording during construction period, including low intensity watching brief at edge of excavation
C	Sample excavation and recording during construction, including low intensity watching brief at edge of excavation area
D	Intensive watching brief during construction at known or suspected sites.
E	Low intensity watching brief during construction at known or suspected sites
F	Further Stage 3 archaeological assessment, with provision for A to E as appropriate
F1	Trial trenching and /or geophysical survey at known or suspected sites.
F2	Geophysical survey of areas not hitherto assessed

Site No.	Description of Site	Arch Value	Impact after Mitigation	Mitigation
29	Prehistoric and Roman settlement, part of Roman villa complex (SAM 24861); prehistoric and Roman artefact concentration: enclosures and other features mapped from geophysical survey; features confirmed by trial trenching; valley floor peat deposits identified in north. Adjacent to major excavation of prehistoric and Roman settlement areas destroyed by construction of M11. Villa lies 70m west of M11.	Nat.	Loss of part of the site, estimated at 10% of the villa complex, due to widening of a strip 520m long by 20m wide immediately to the east of the scheduled area.	B, E
30	Prehistoric settlement: slight artefact concentration: features including possible structures, known from trial trenching. An enclosure and other features area known from aerial photographs 200m to the NW. The suspected church and deserted medieval village were not located.	Reg.	Loss of small area of site due to widening of a strip 200m long by up to 30 m wide.	C, E
31	Slight medieval artefact concentration. Adjacent to area of medieval artefacts destroyed by construction of M11.	Local	Loss of small area of site due to widening of a strip 60m long by 20m wide. Full impact could not be assessed for regrading of cutting (both W and E sides) because of crop.	D, F2
32	Area of multi-period artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in area of widening.	None	None. No site found in area of widening.	None
33	Area of multi-period artefacts destroyed by construction of M11.	None?	None over most of the area of widening. Full impact could not be assessed for regrading of cutting at N end of area (both W and E sides) because of crop.	F2
34	Area of prehistoric artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in area of widening.	None	None. No site found in area of widening.	None

Key to table

Archaeological Value of Site		Mitigation	
Nat.	National importance	A	Preservation <i>in situ</i>
Reg.	Regional importance	B	Detailed excavation and recording during construction period, including low intensity watching brief at edge of excavation
Local	Local importance	C	Sample excavation and recording during construction, including low intensity watching brief at edge of excavation area
Neg.	Negligible importance	D	Intensive watching brief during construction at known or suspected sites.
None	No importance	E	Low intensity watching brief during construction at known or suspected sites.
		F	Further Stage 3 archaeological assessment, with provision for A to E as appropriate
		F1	Trial trenching and /or geophysical survey at known or suspected sites.
		F2	Geophysical survey of areas not hither to assessed

Site No.	Description of Site	Arch Value	Impact after Mitigation	Mitigation
35	Prehistoric site: slight artefact concentration; features of several phases and a trackway area known from trial trenching. Adjacent to a Bronze Age hoard, and an area of Prehistoric artefacts and features known from trial trenching, destroyed by construction of the M11.	Reg.	Loss of small area of the site, due to widening of a strip 180m long by 20m wide.	C, E
36	An area of prehistoric artefacts destroyed by construction of M11. Fieldwalking identified no artefact concentrations in area of widening. Aerial photographic evidence identifies features over 100m away from M11.	None	None. No site found in area of widening.	None
37	Prehistoric trackway visible in aerial photographs. Fieldwalking identified no artefact concentrations, and settlement or other activity beside the trackway is unlikely.	Reg.	Loss of 20m length of linear feature visible over c. 1km.	D
38	Prehistoric ring ditch visible in aerial photographs: in vicinity of motorway but precise location could not be plotted.	Uncertain	Further assessment to determine whether or not ring ditch is area of widening, to be followed by decision on form of mitigation, if any.	F1
39	Prehistoric artefacts and features destroyed by construction of M11.	None	None. Site has been destroyed.	None
40	Roman roads, leading SW from Great Chesterford Roman fort and town, known from aerial photographs and trenching outside the area of widening.	Reg.	None. No impact because no widening at this point.	None
41	Edge of Roman and early Saxon cemetery to NW of Great Chesterford. Slight Roman artefact concentration.	Reg.	Impact from bund in original scheme but these works now omitted.	None if no bund
42	Edge of Roman and early Saxon cemetery to NW of Great Chesterford. Skeletons and other features recorded and destroyed.	None	None. No impact because no widening at this point.	None

Key to table

Archaeological Value of Site	
Nat.	National importance
Reg.	Regional importance
Local	Local importance
Neg.	Negligible importance
None	No importance

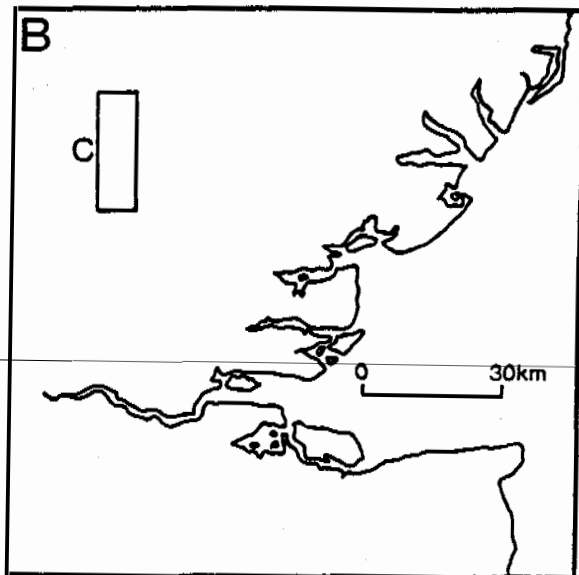
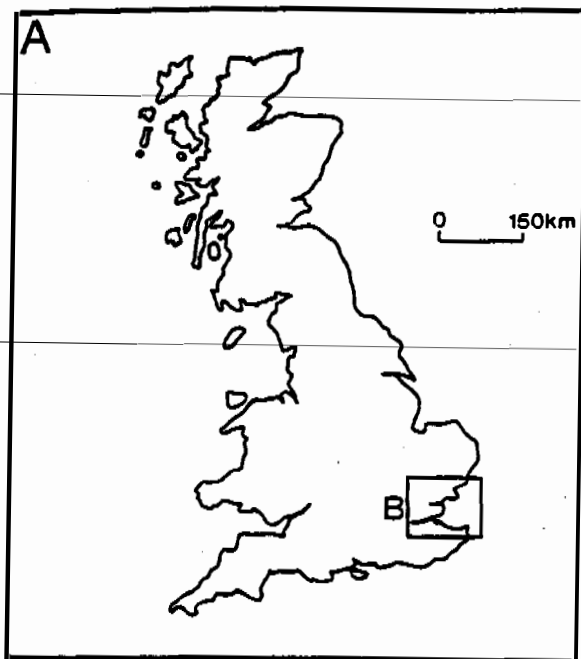
Mitigation

A	Preservation <i>in situ</i>
B	Detailed excavation and recording during construction period, including low intensity watching brief at edge of excavation
C	Sample excavation and recording during construction, including low intensity watching brief at edge of excavation area
D	Intensive watching brief during construction at known or suspected sites.
E	Low intensity watching brief during construction at known or suspected sites
F	Further Stage 3 archaeological assessment, with provision for A to E as appropriate
F1	Trial trenching and/or geophysical survey at known or suspected sites.
F2	Geophysical survey of areas not hitherto assessed

Site No.	Description of Site	Arch Value	Impact after Mitigation	Mitigation
43	NW edge of Roman and early Saxon cemetery (adjacent to SAM 74): no artefact concentrations; major excavation of cemetery under M11 slip road and to east: Roman burial and features recorded and destroyed during construction of M11.	None	None. No impact because no widening at this point.	None
44	Medieval or post-medieval trackway known from trial trenching, destroyed by construction of M11	None	None. No impact because no widening at this point.	None
45	Roman road running NNE; known from aerial photographs and trenching outside the area of widening. (300. of road lies within SAM 74).	None	None. No impact because no widening at this point.	None

Key to table

Archaeological Value of Site		Mitigation	
Nat.	National importance	A	Preservation <i>in situ</i>
Reg.	Regional importance	B	Detailed excavation and recording during construction period, including low intensity watching brief at edge of excavation
Local	Local importance	C	Sample excavation and recording during construction, including low intensity watching brief at edge of excavation area
Neg.	Negligible importance	D	Intensive watching brief during construction at known or suspected sites.
None	No importance	E	Low intensity watching brief during construction at known or suspected sites
		F	Further Stage 3 archaeological assessment, with provision for A to E as appropriate
		F1	Trial trenching and/or geophysical survey at known or suspected sites.
		F2	Geophysical survey of areas not hitherto assessed



M11 WIDENING (Junct. 8-9)

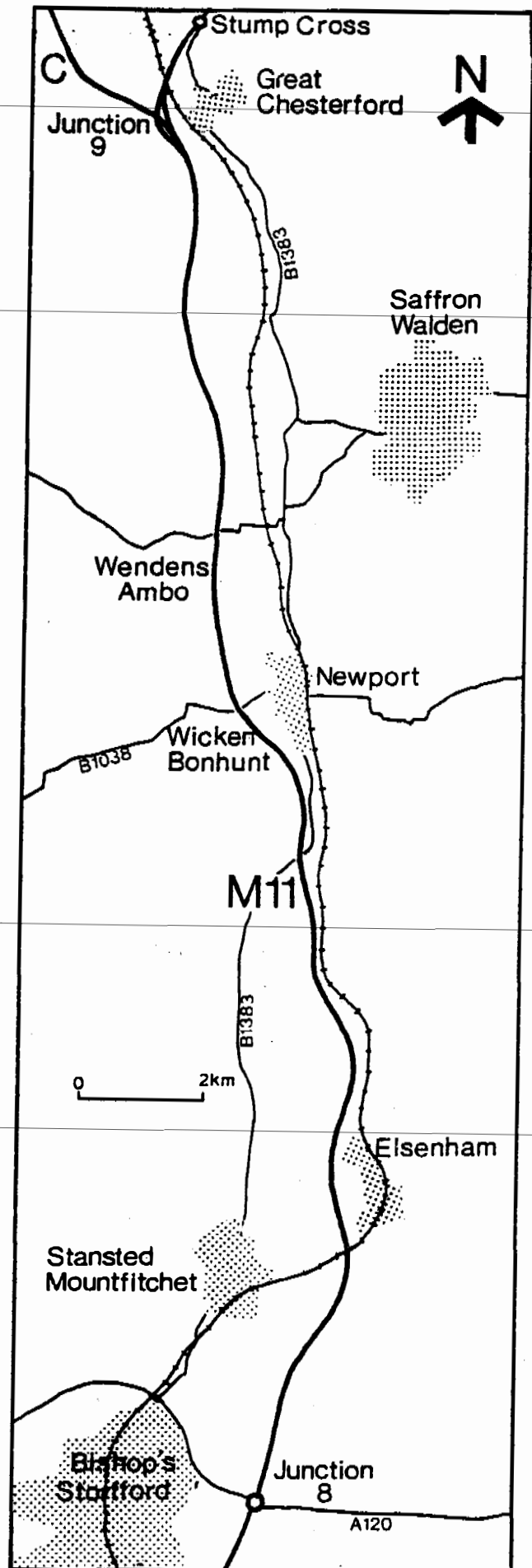


Fig 1.1 Location Map

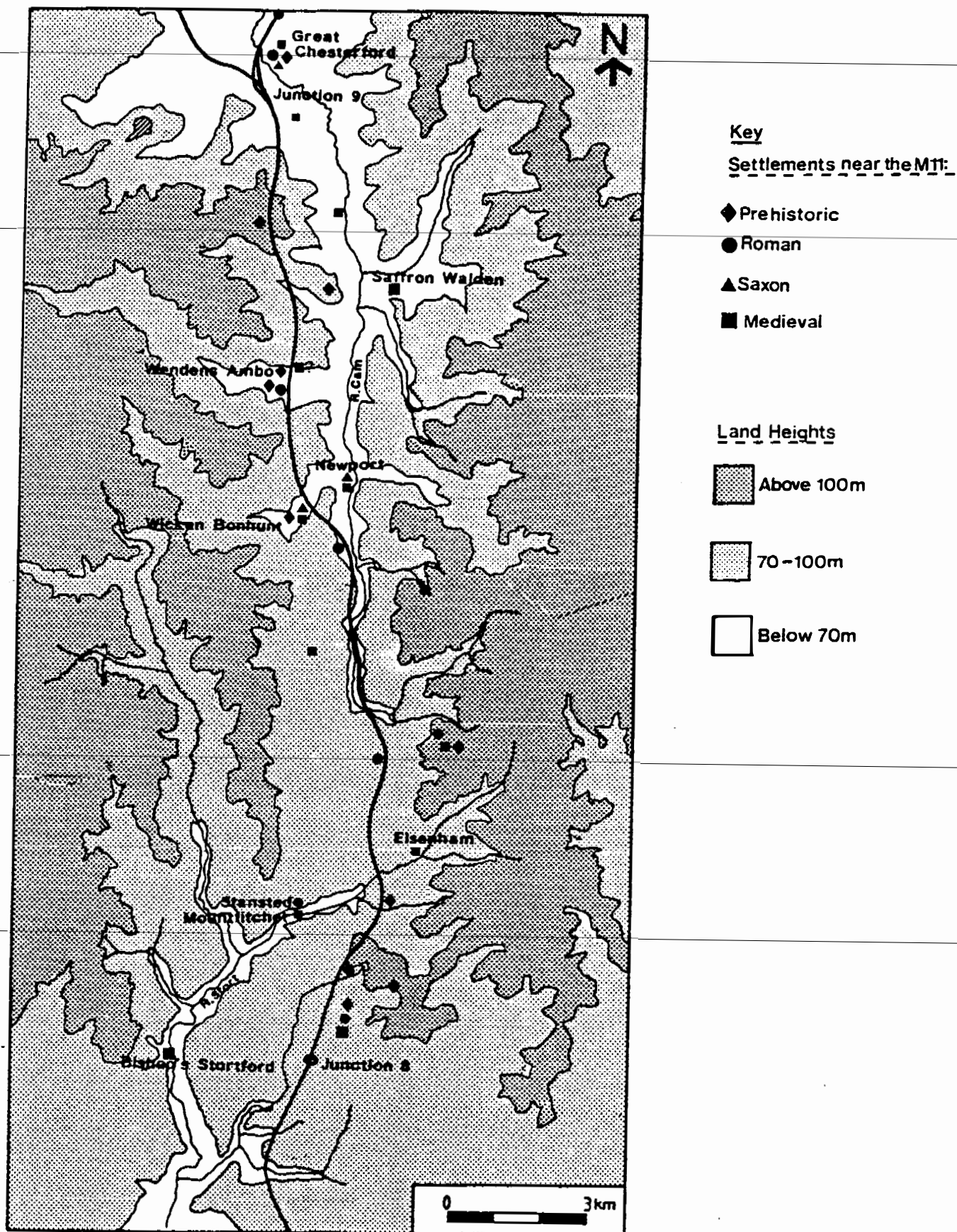
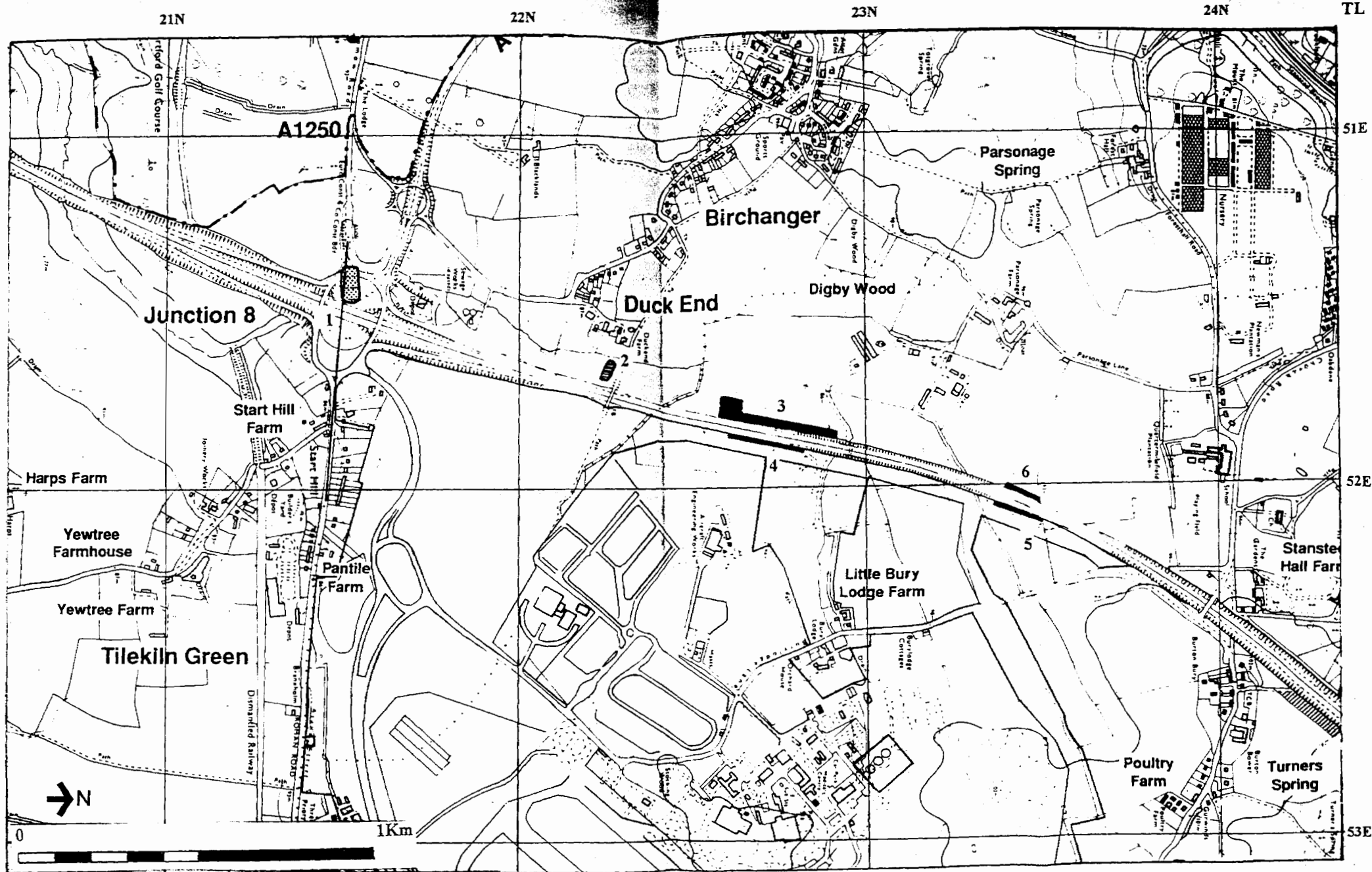


Fig 3.1 Topography Map

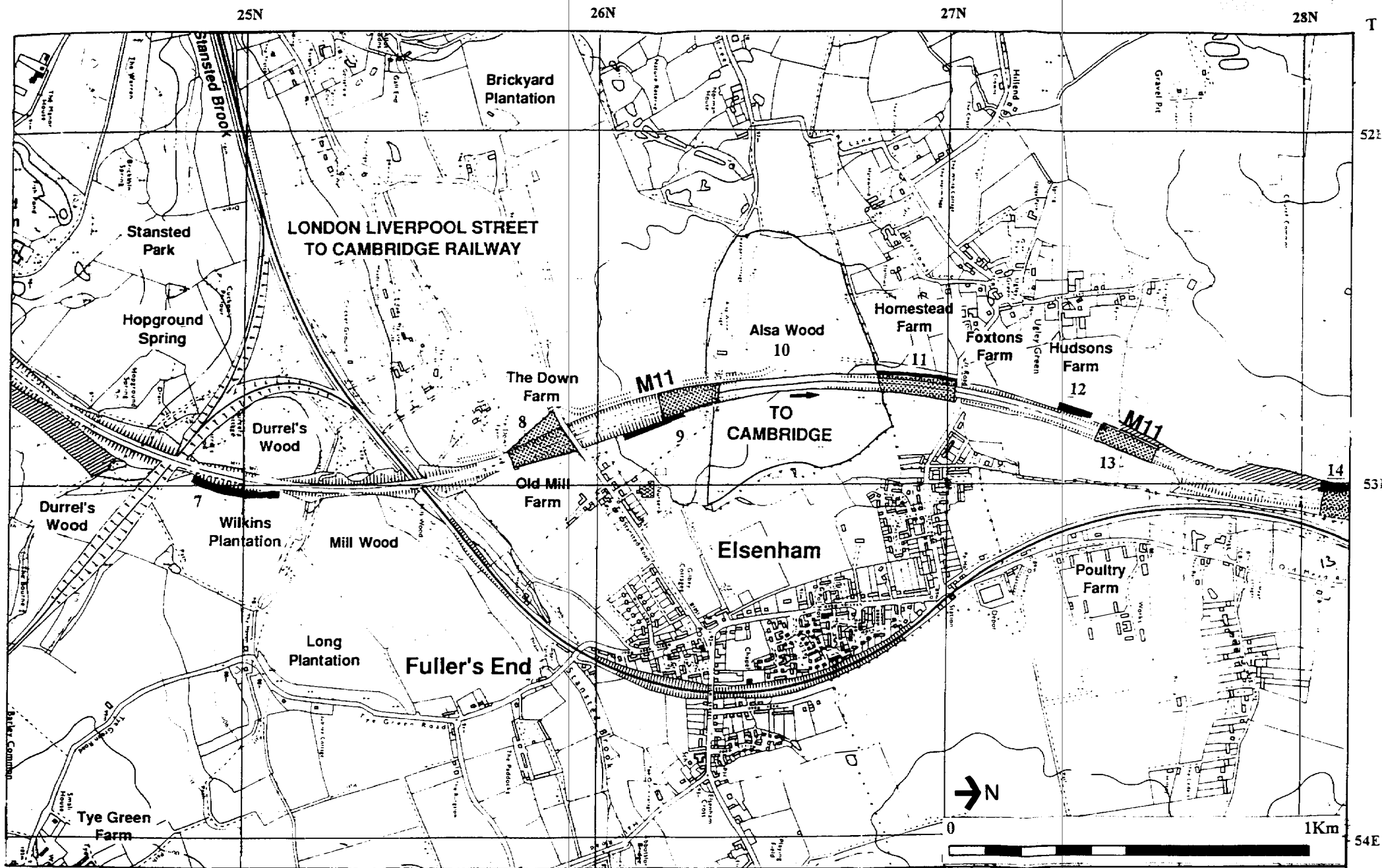


- Site of Proposed Mitigation
- Site identified prior to motorway construction which does not require mitigation
- Site identified by ECC FAG which does not require mitigation
- Site requiring further DMRB Stage 3 assessment
- Unassessed area requiring DMRB Stage 3 assessment

**M11 WIDENING, JUNCTIONS 8-9
ARCHAEOLOGICAL CONSTRAINT MAP**

ORIGINAL AT A3

Fig 4.1 Sites 1 - 6

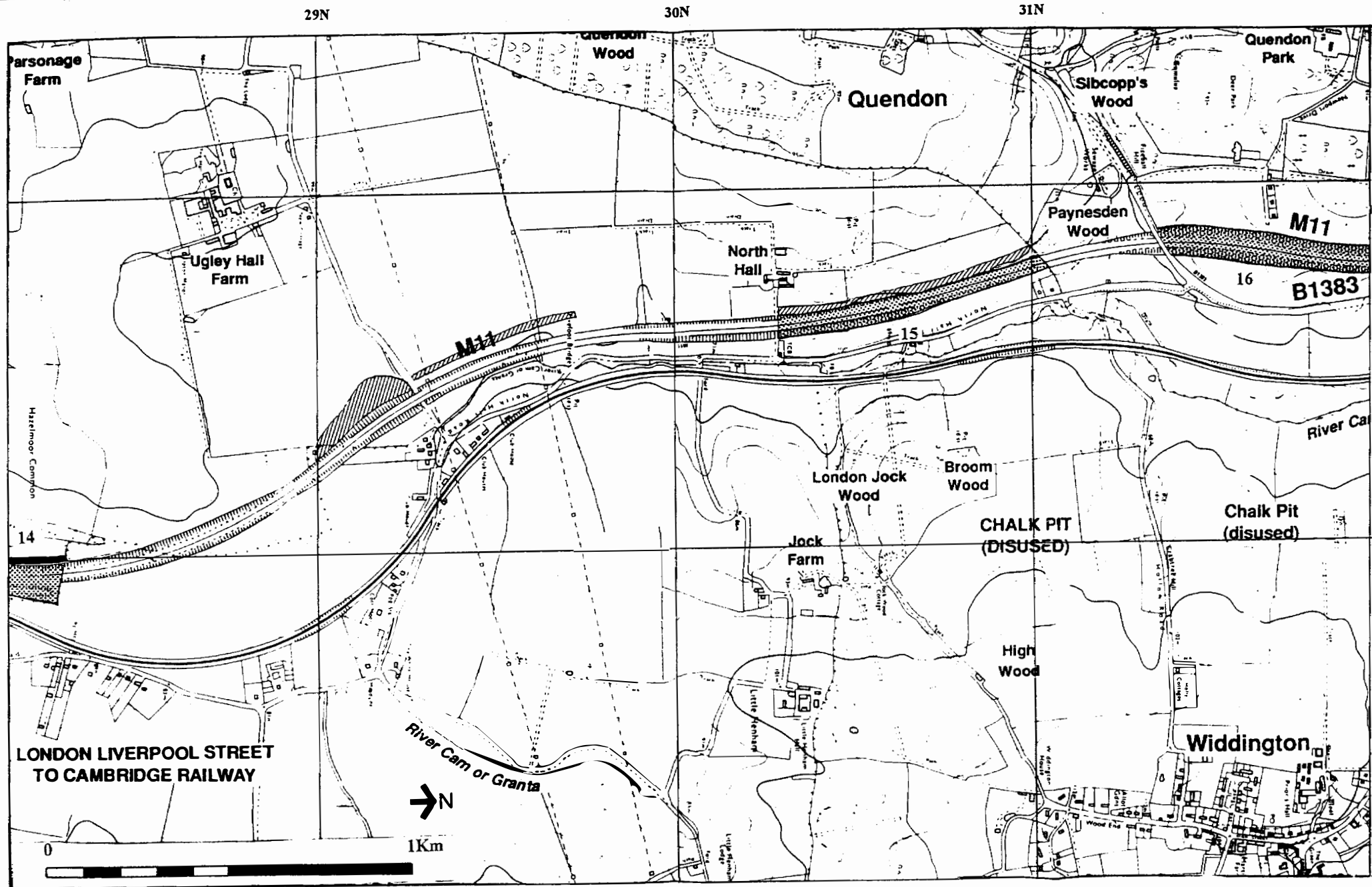


- Site of Proposed Mitigation
- Site identified prior to motorway construction which does not require mitigation
- Site identified by ECC FAG which does not require mitigation
- Site requiring further DMRB Stage 3 assessment
- Unassessed area requiring DMRB Stage 3 assessment

ORIGINAL AT A3

M11 WIDENING , JUNCTIONS 8-9 ARCHAEOLOGICAL CONSTRAINT MAP

Fig 4.2 Sites 7 - 14



- Site of Proposed Mitigation
- Site identified prior to motorway construction which does not require mitigation
- Site identified by ECC FAG which does not require mitigation
- Site requiring further DMRB Stage 3 assessment
- Unprocessed area requiring DMRB Stage 3 assessment

ORIGINAL AT A3

M11 WIDENING, JUNCTIONS 8-9
ARCHAEOLOGICAL CONSTRAINT MAP

Fig 4.3 Sites 14 - 16

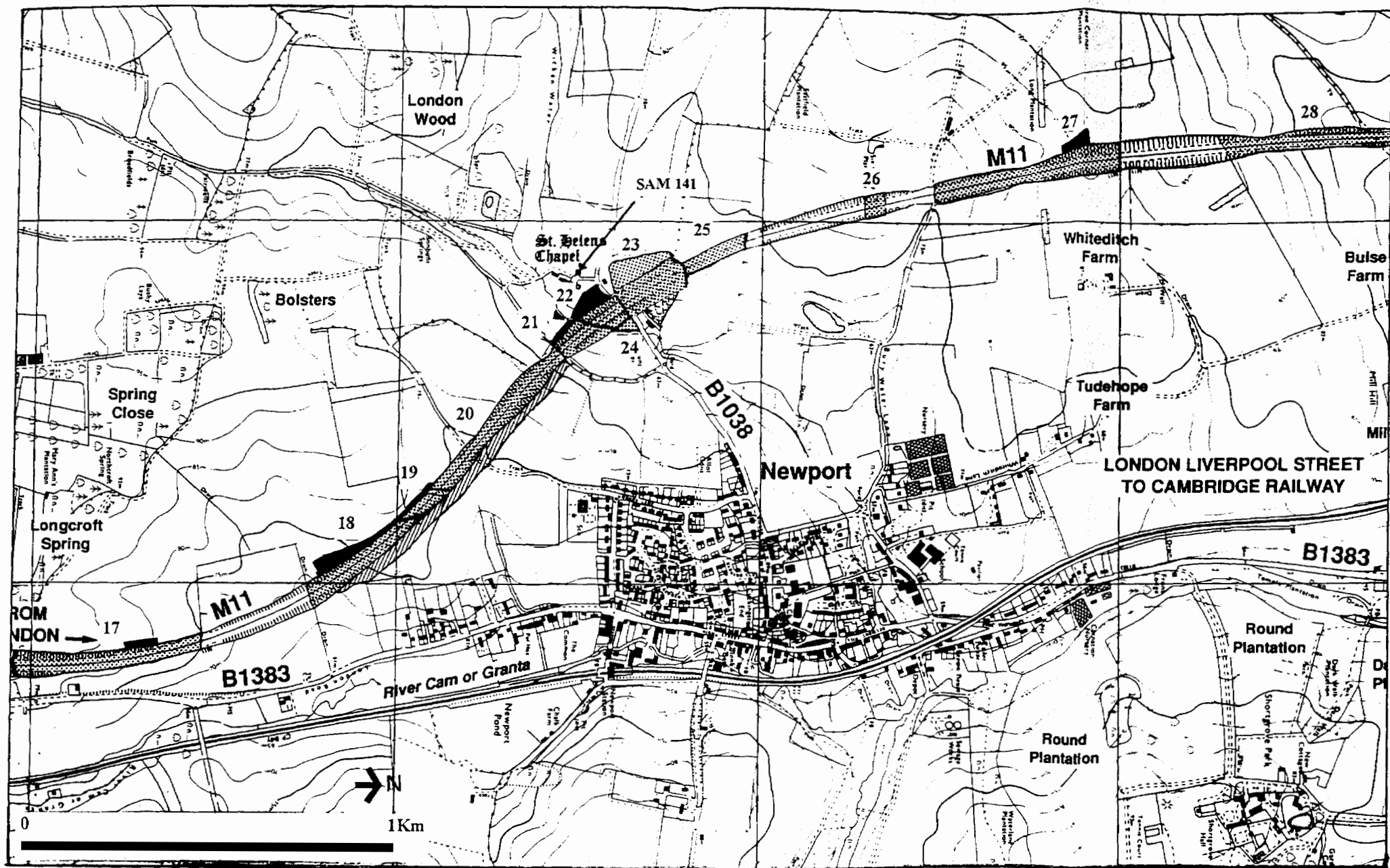
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33N

34N

35N

TL



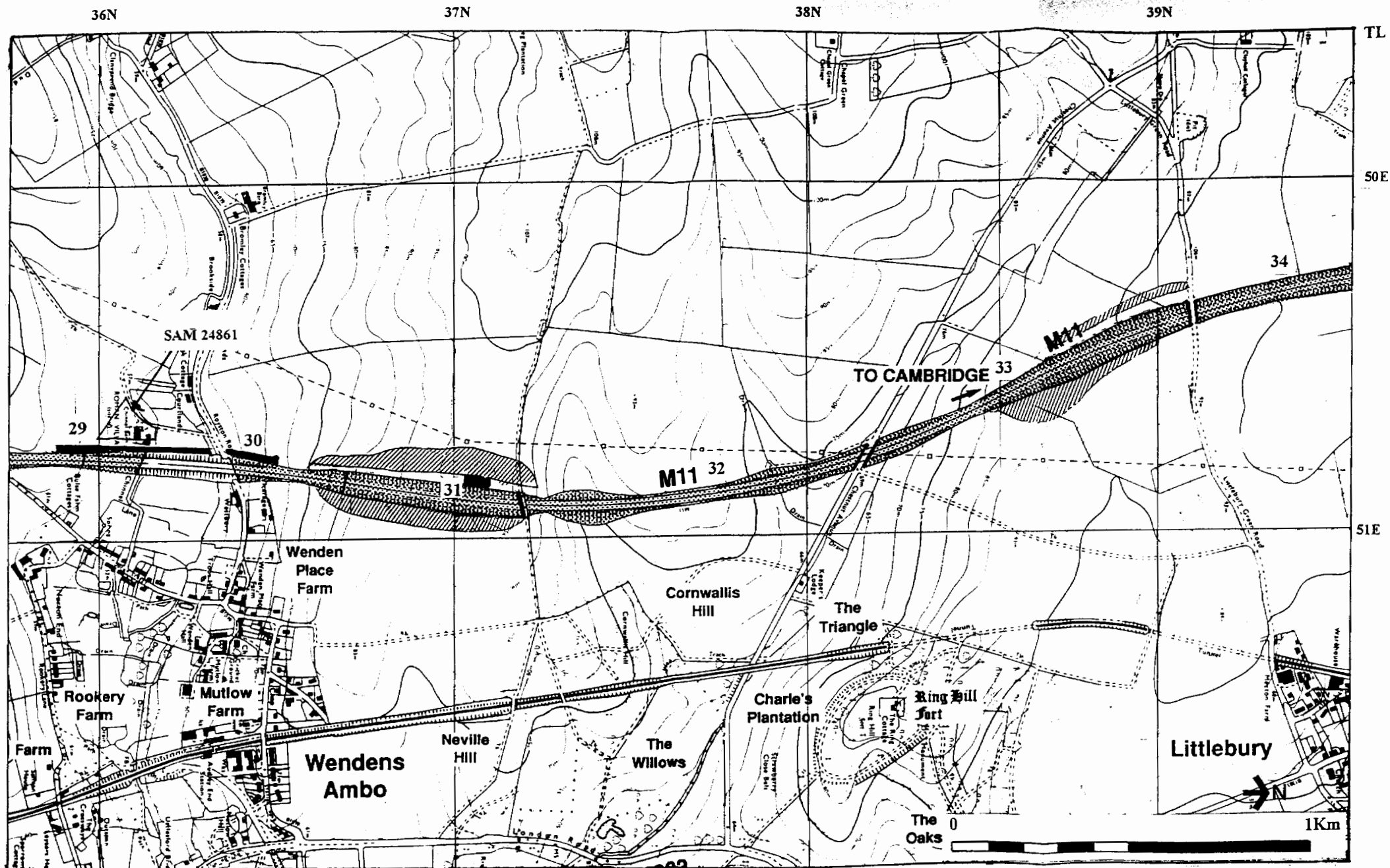
- Site of Proposed Mitigation
- Site identified prior to motorway construction which does not require mitigation
- Site identified by ECC FAG which does not require mitigation
- Site requiring further DMRB Stage 3 assessment
- Unassessed area requiring DMRB Stage 3 assessment

SAM = Scheduled Ancient Monument

ORIGINAL AT A3

M11 WIDENING, JUNCTIONS 8-9
ARCHAEOLOGICAL CONSTRAINT MAP

Fig 4.4 Sites 17 - 28



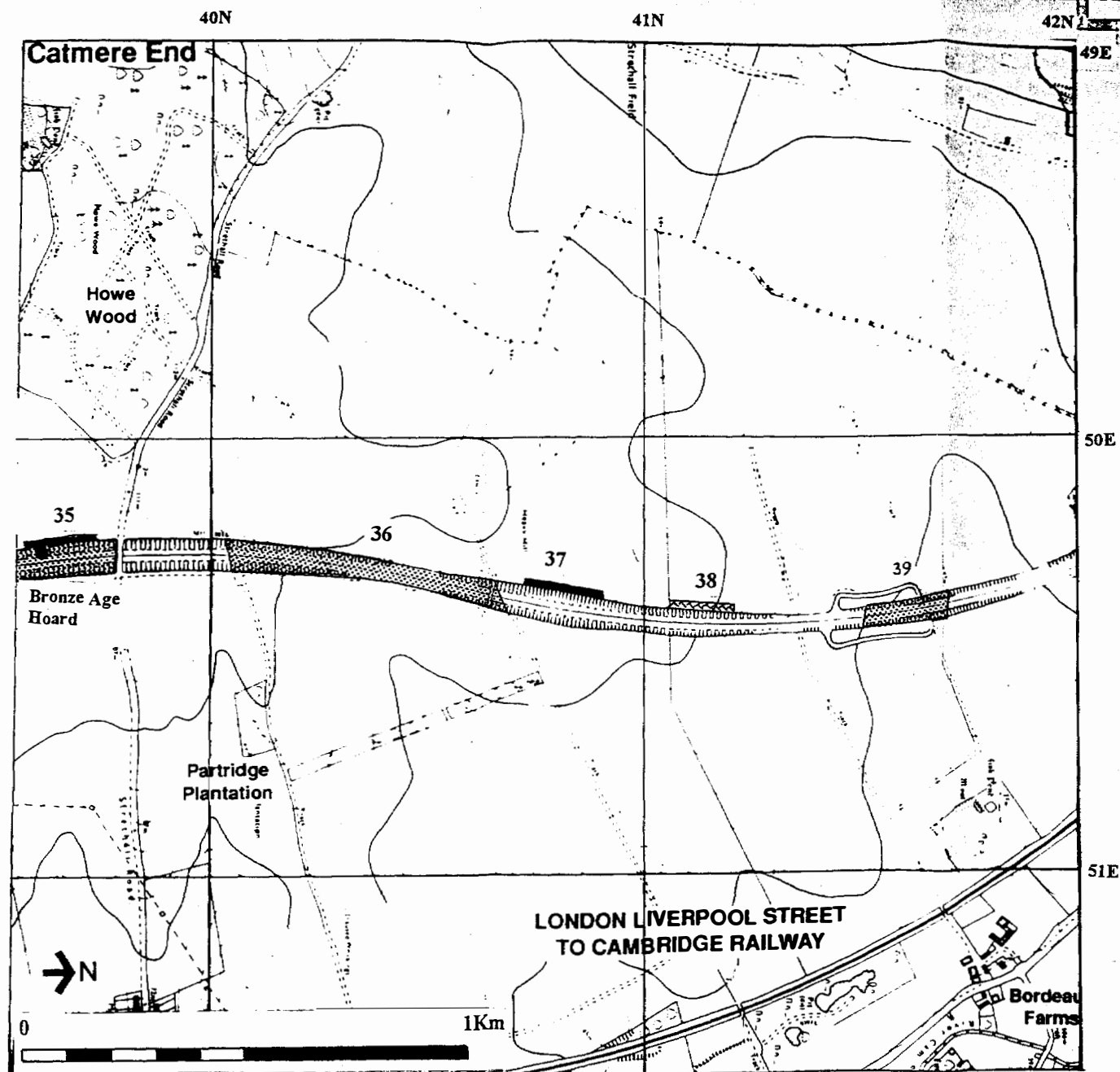
- Site of Proposed Mitigation
- Site identified prior to motorway construction which does not require mitigation
- Site identified by ECC FAG which does not require mitigation
- Site requiring further DMRB Stage 3 assessment
- Unassessed area requiring DMRB Stage 3 assessment

SAM = Scheduled Ancient Monument

M11 WIDENING, JUNCTIONS 8-9
ARCHAEOLOGICAL CONSTRAINT MAP

ORIGINAL AT A3

Fig 4.5 Sites 29 - 34

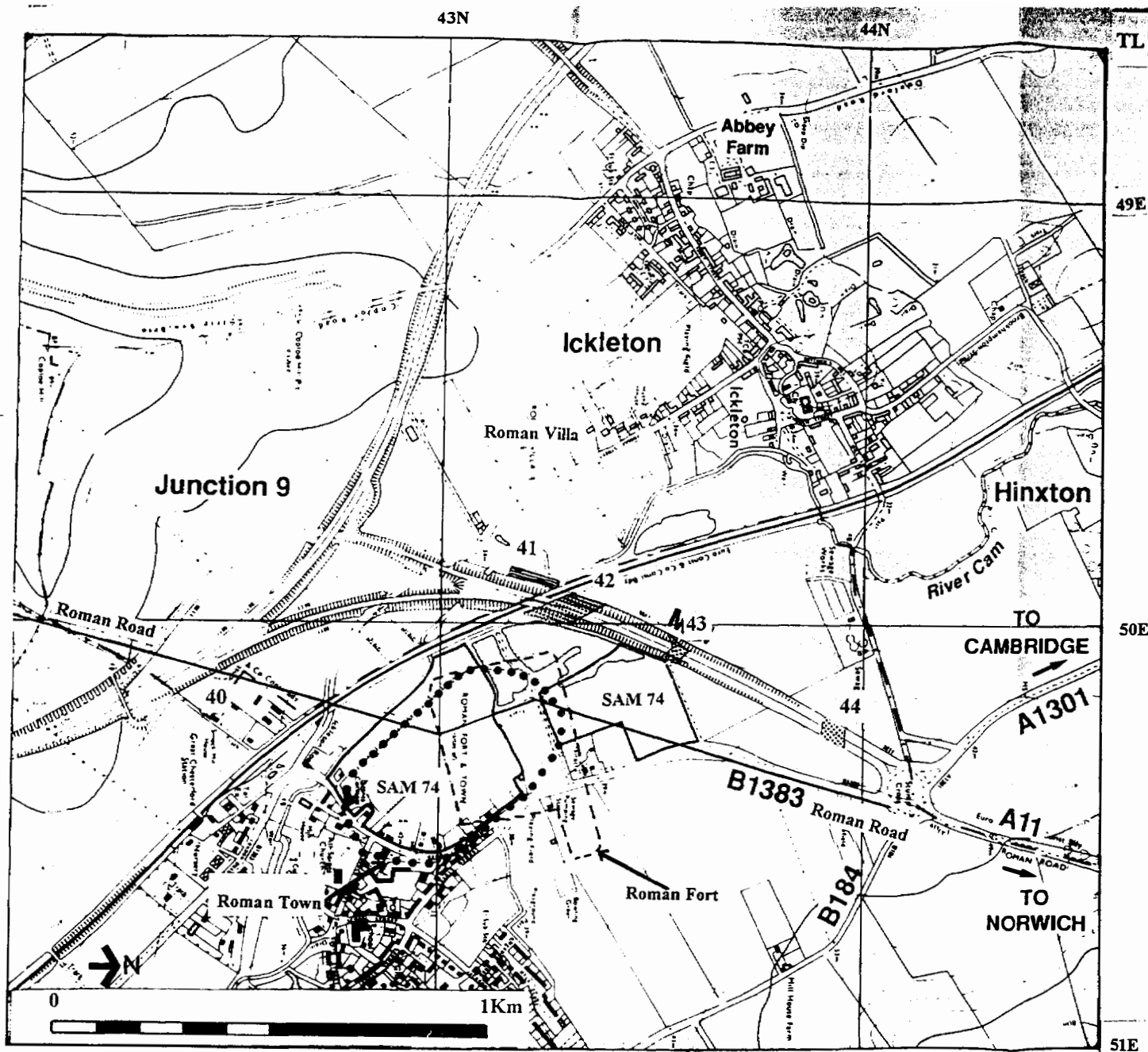









- Site of Proposed Mitigation
- Site identified prior to motorway construction which does not require mitigation
- Site identified by ECC FAG which does not require mitigation
- Site requiring further DMRB Stage 3 assessment
- Unassessed area requiring DMRB Stage 3 assessment

ORIGINAL AT A3

**M11 WIDENING, JUNCTIONS 8-9
ARCHAEOLOGICAL CONSTRAINT MAP**

Fig 4.6 Sites 35 - 39



- | | |
|--|--|
|  Site of Proposed Mitigation | SAM = Scheduled Ancient Monument |
|  Site identified prior to motorway construction which does not require mitigation |  Roman Fort |
|  Site identified by ECC FAG which does not require mitigation |  Roman Town |
|  Site requiring further DMRB Stage 3 assessment | |
|  Unassessed area requiring DMRB Stage 3 assessment | |

**M11 WIDENING, JUNCTIONS 8-9
ARCHAEOLOGICAL CONSTRAINT MAP**

ORIGINAL AT A3

Fig 4.7 Sites 40 - 44

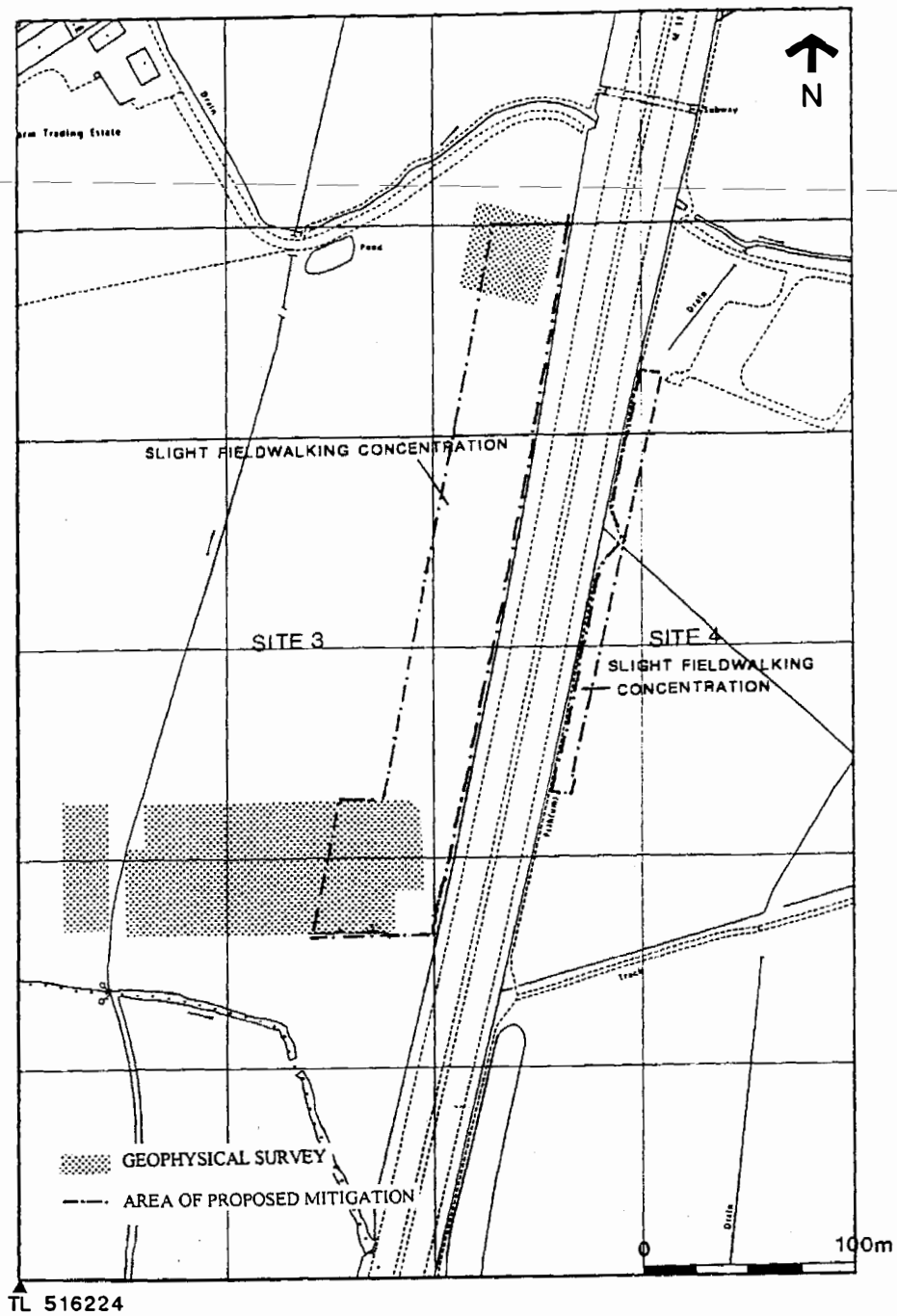
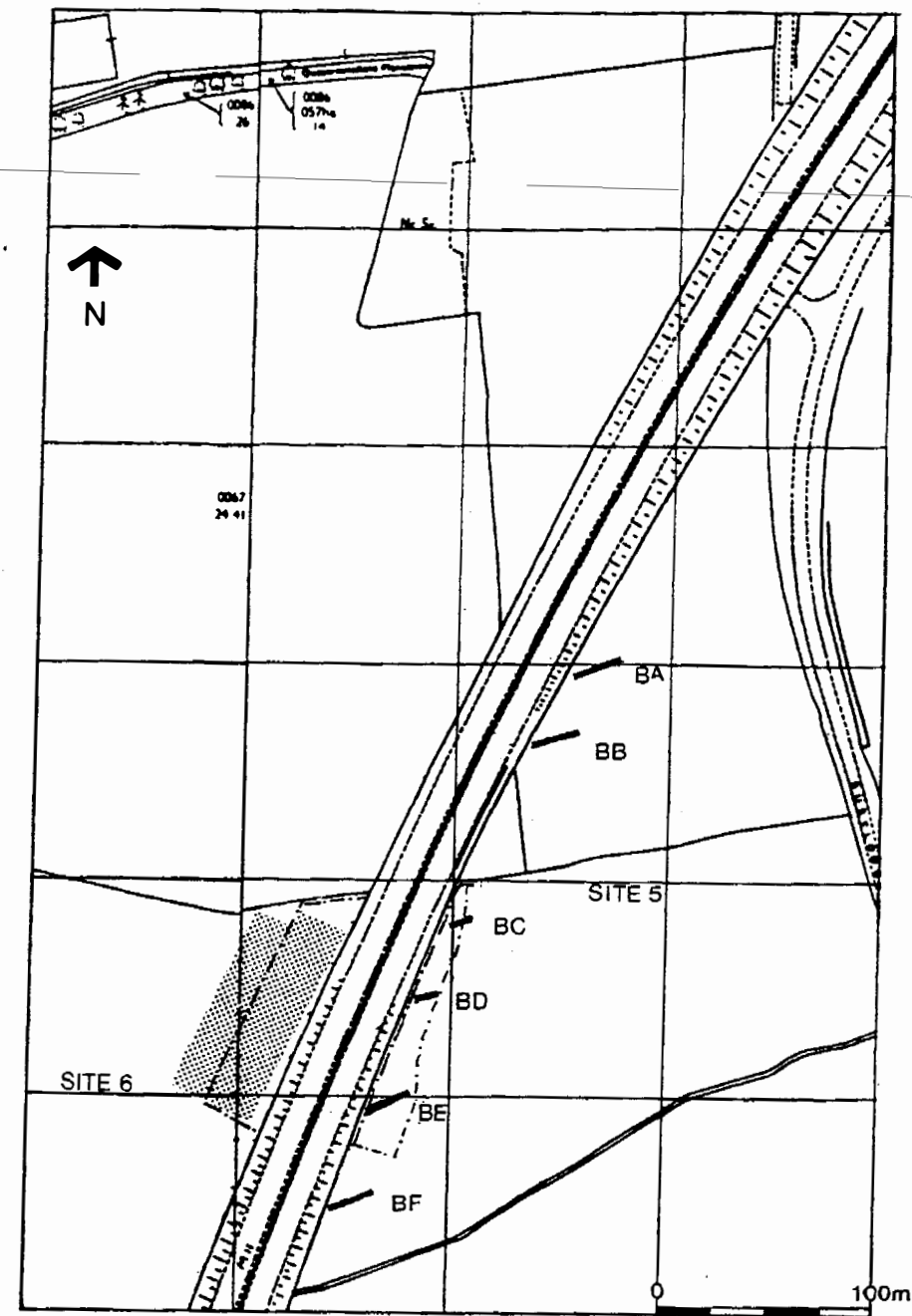





Fig 4.8 Sites 3 & 4



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Fig 4.9 Sites 5 & 6

-  GEOPHYSICAL SURVEY
-  TRENCH LOCATION
-  AREA OF PROPOSED MITIGATION

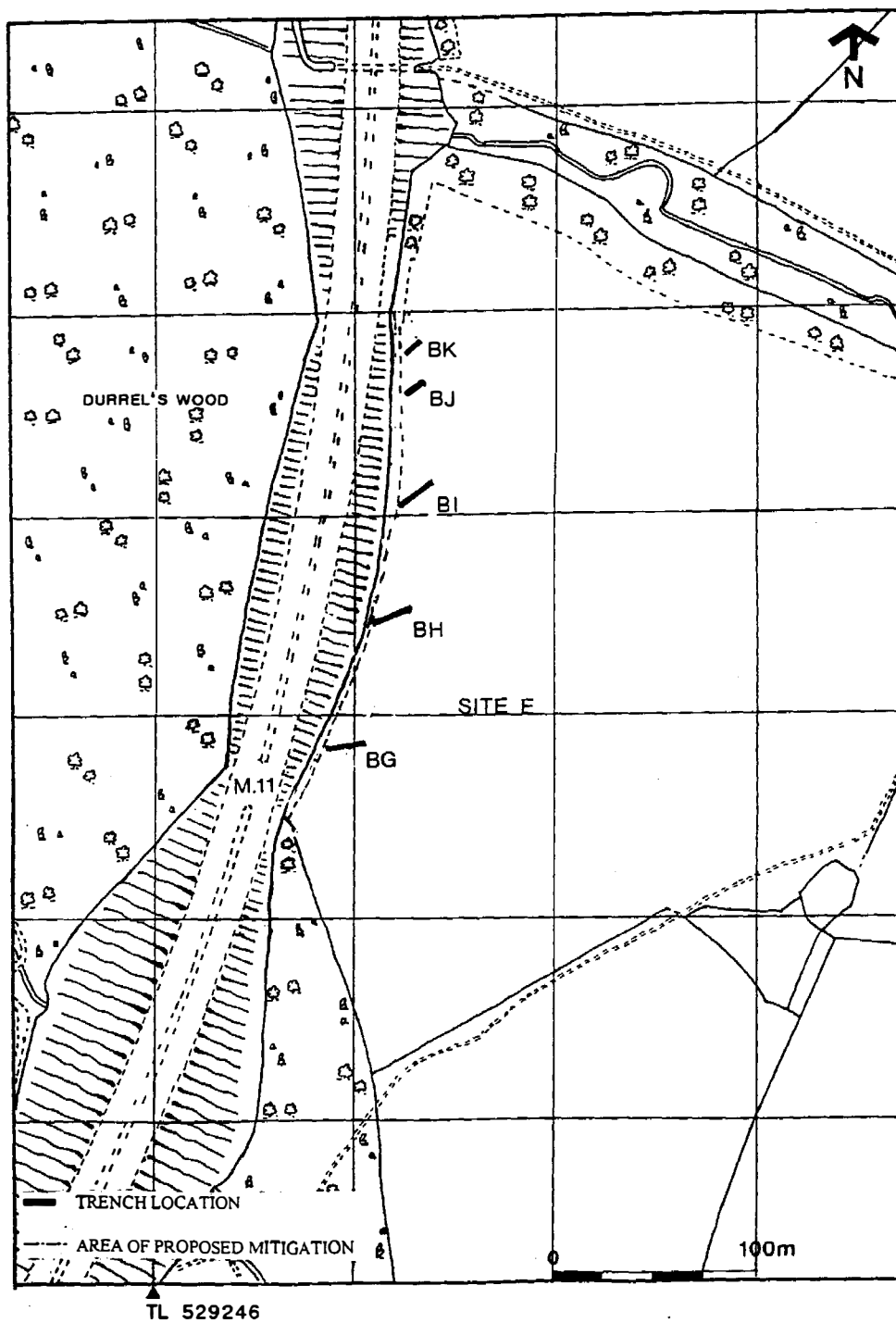
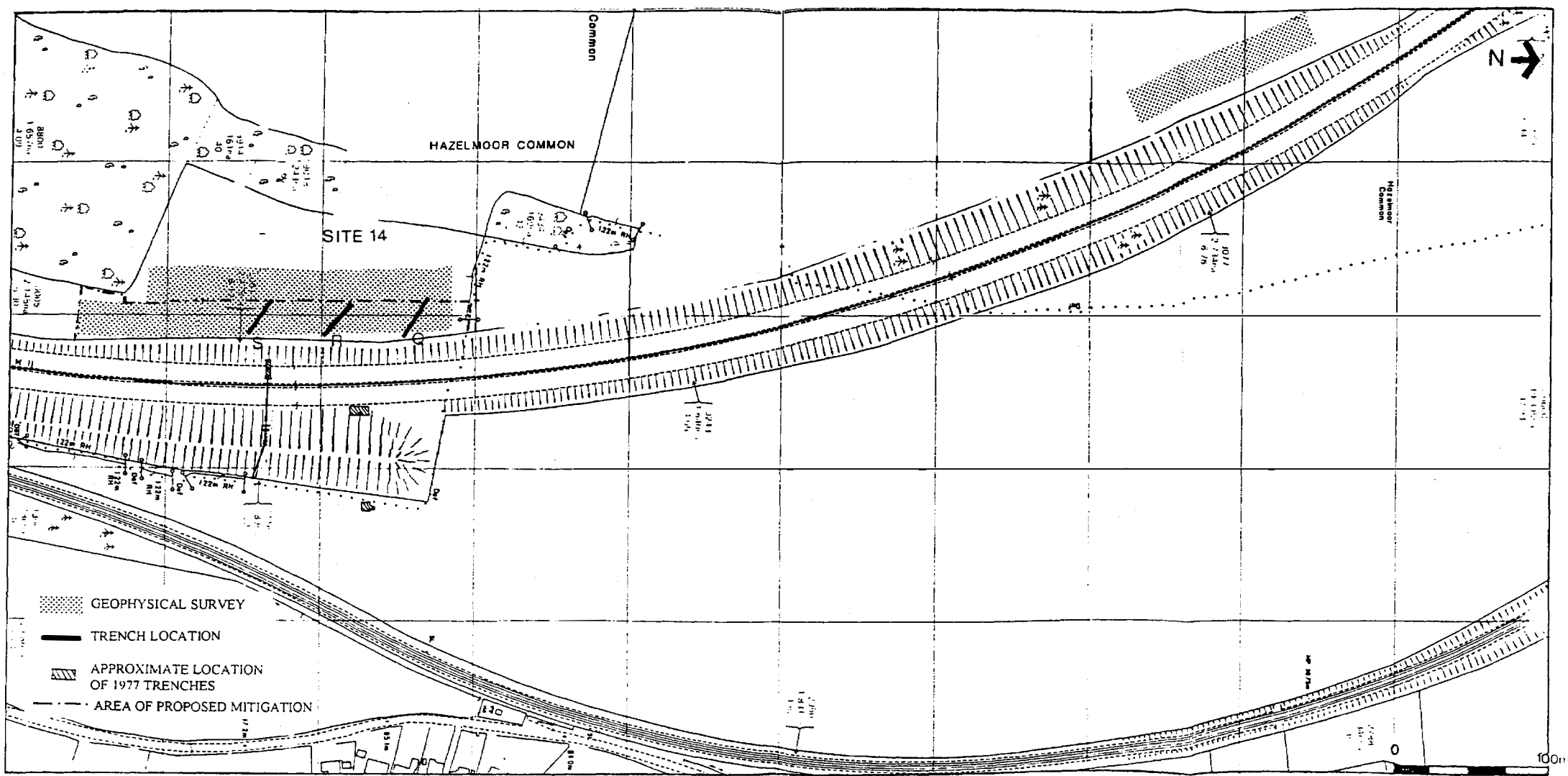


Fig. 4.10 Site 7



ORIGINAL AT A3

Fig 4.11 Site 14

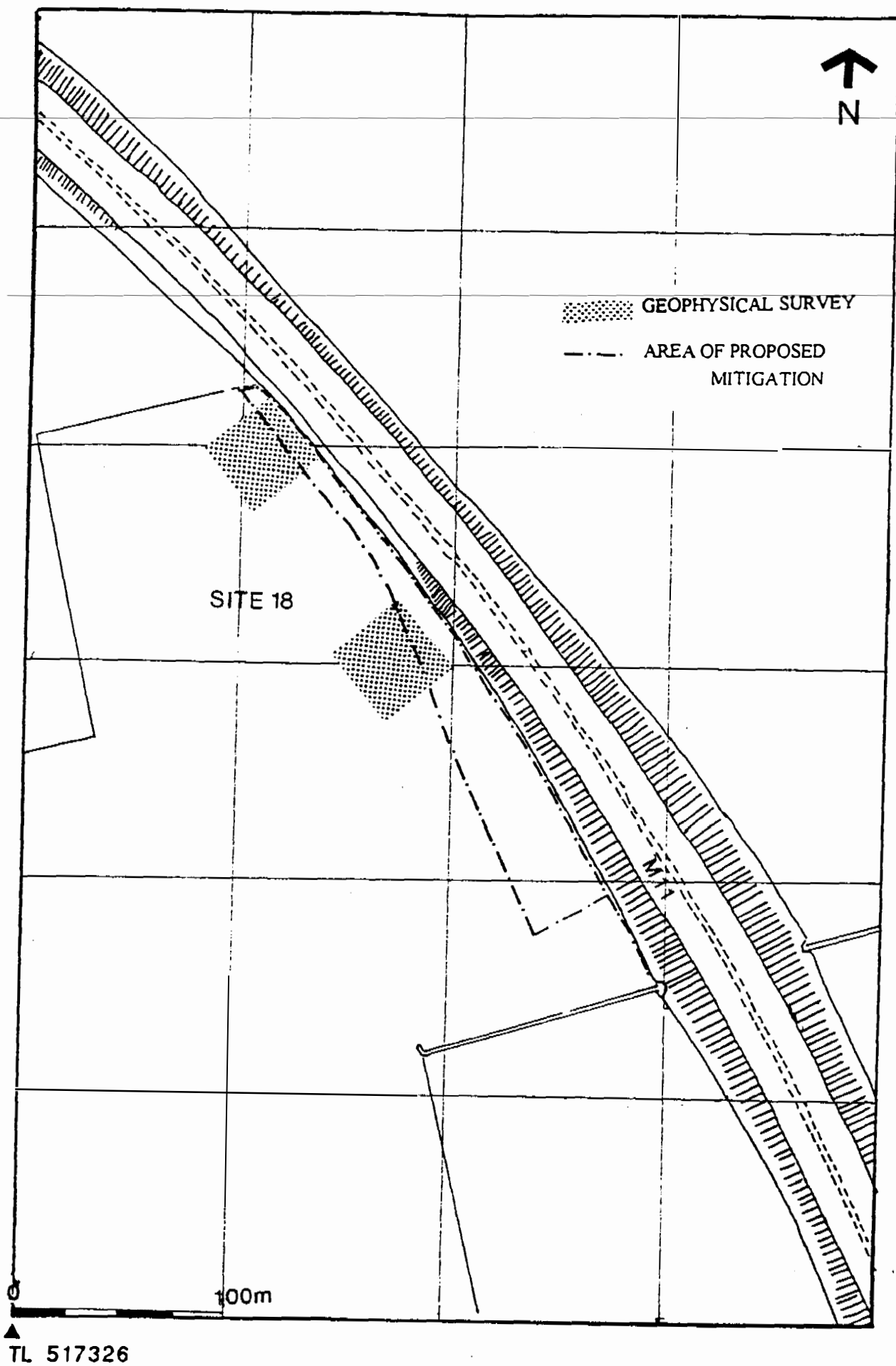


Fig 4.12 Site 18

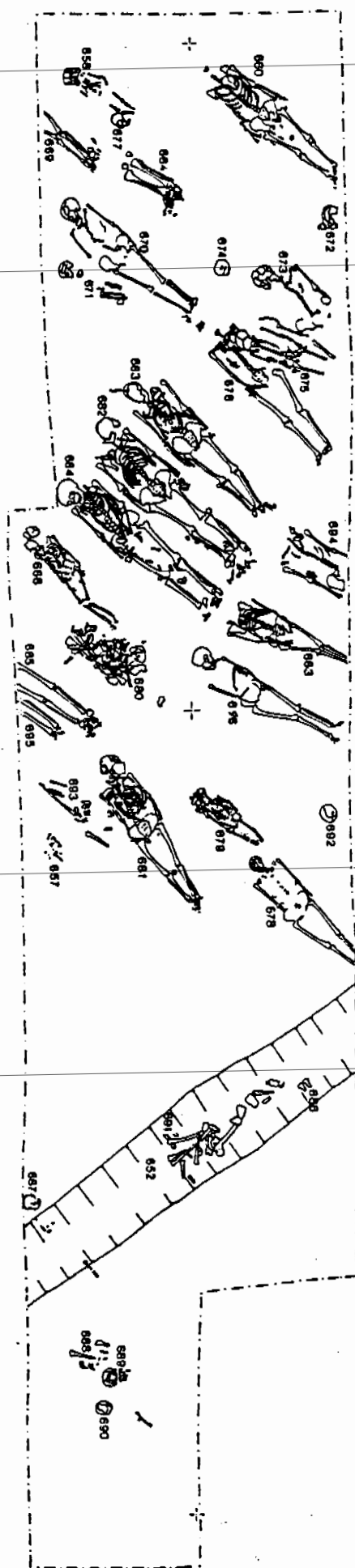
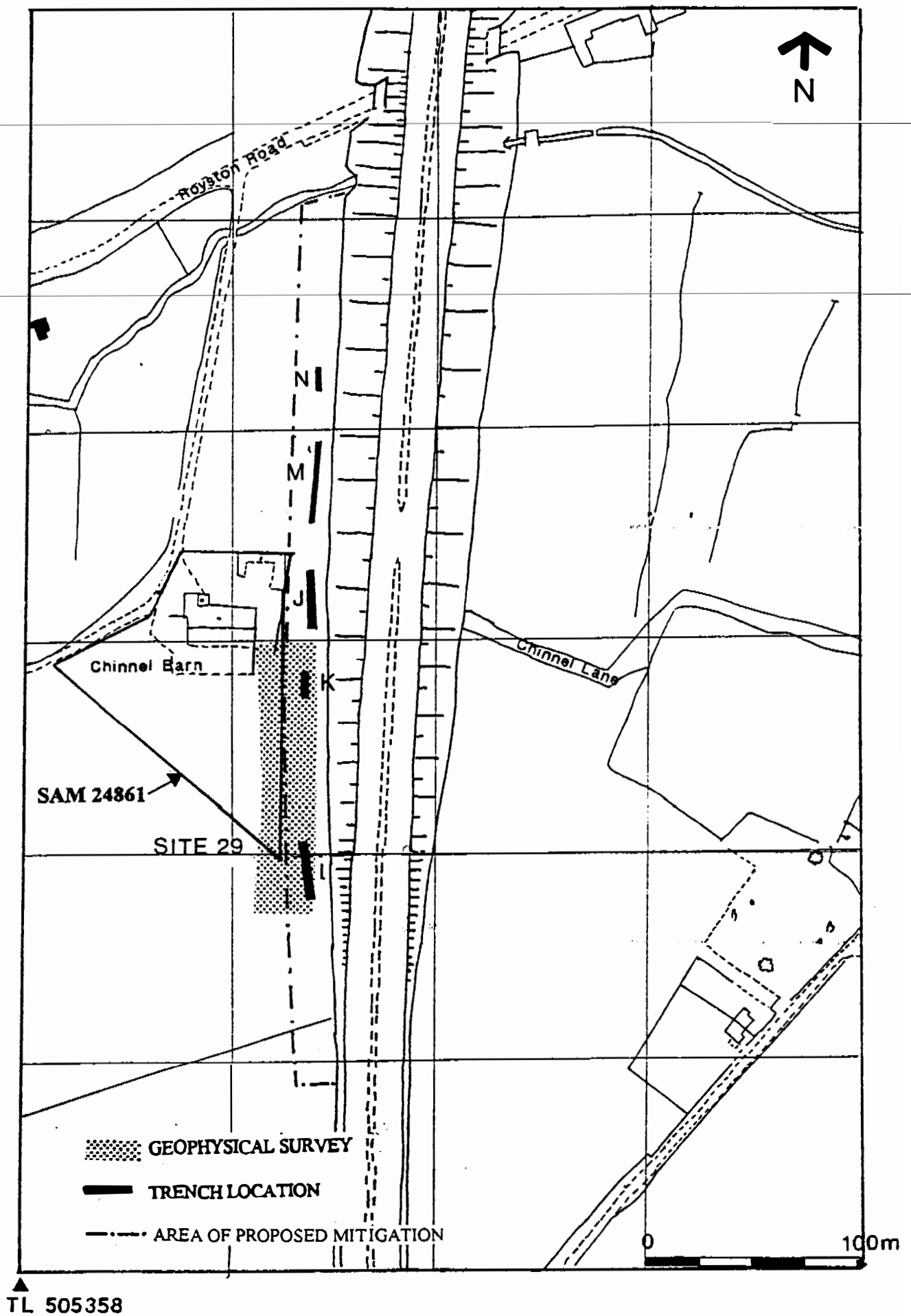
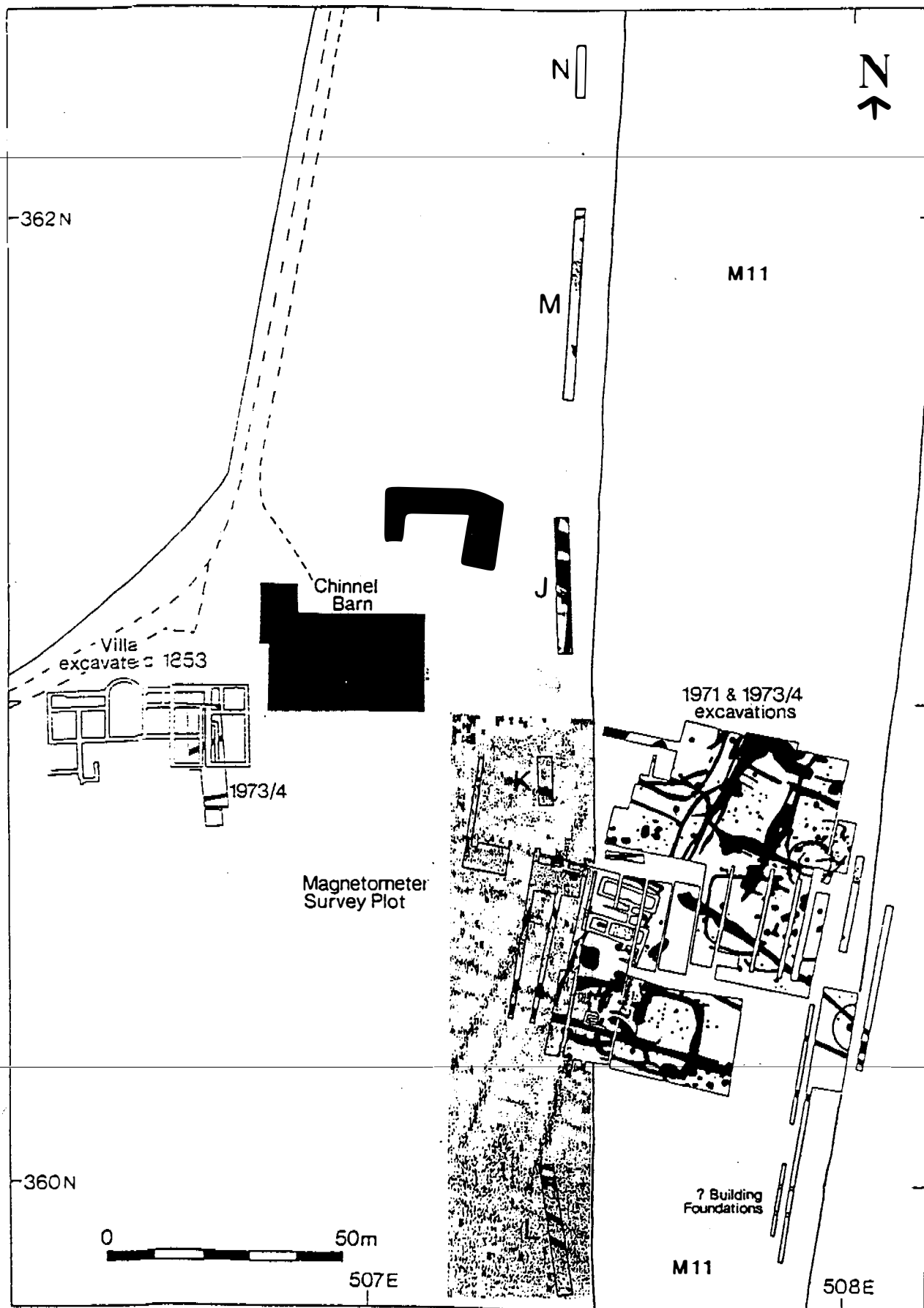


Fig 4.14 Site 22, Plan of Trench T





See Fig. 15 for SAM boundary and Area of Proposed Mitigation

Fig 4.16 Site 29, Plan of Magnetometer Plot and Excavated Areas

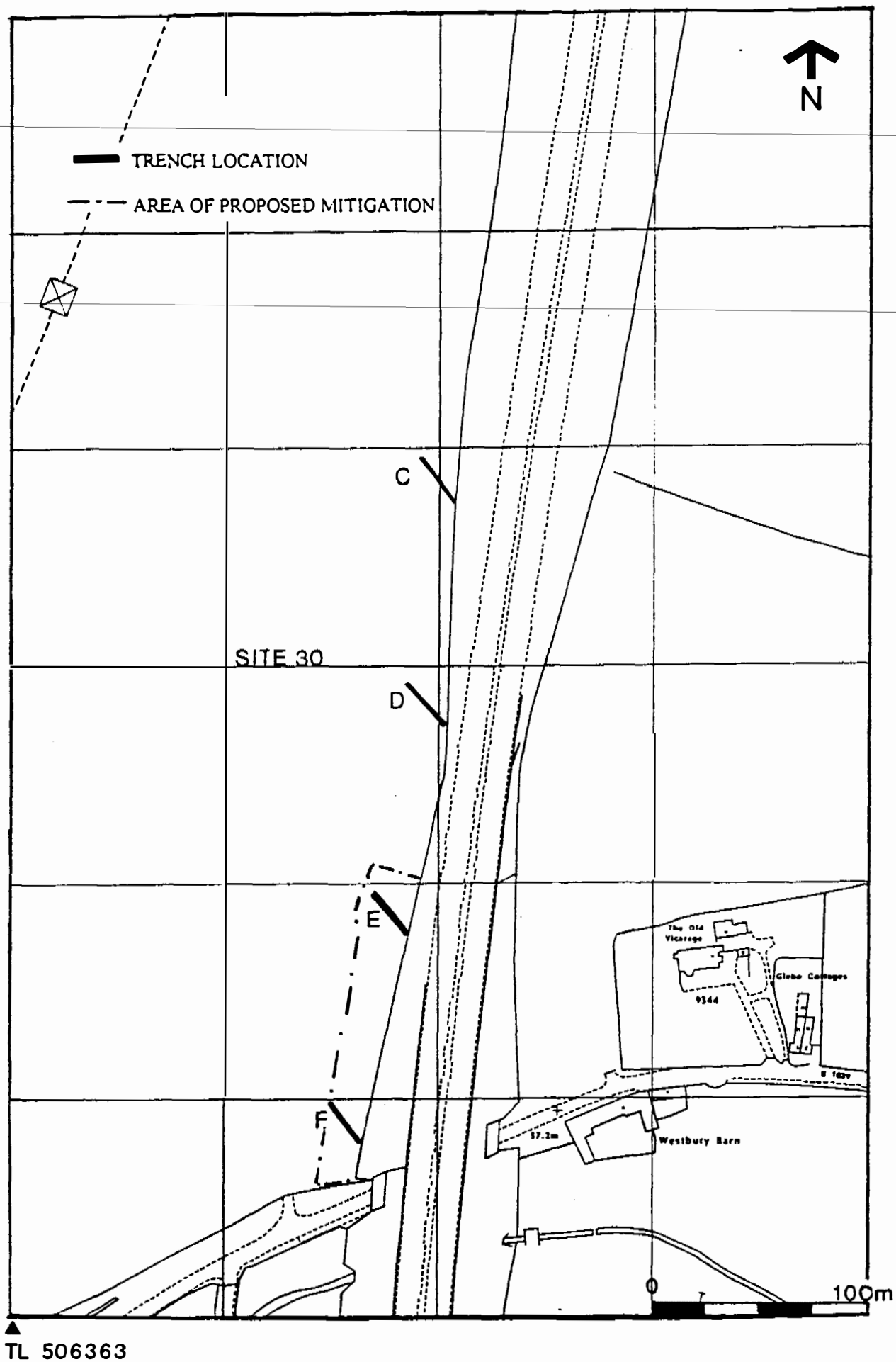
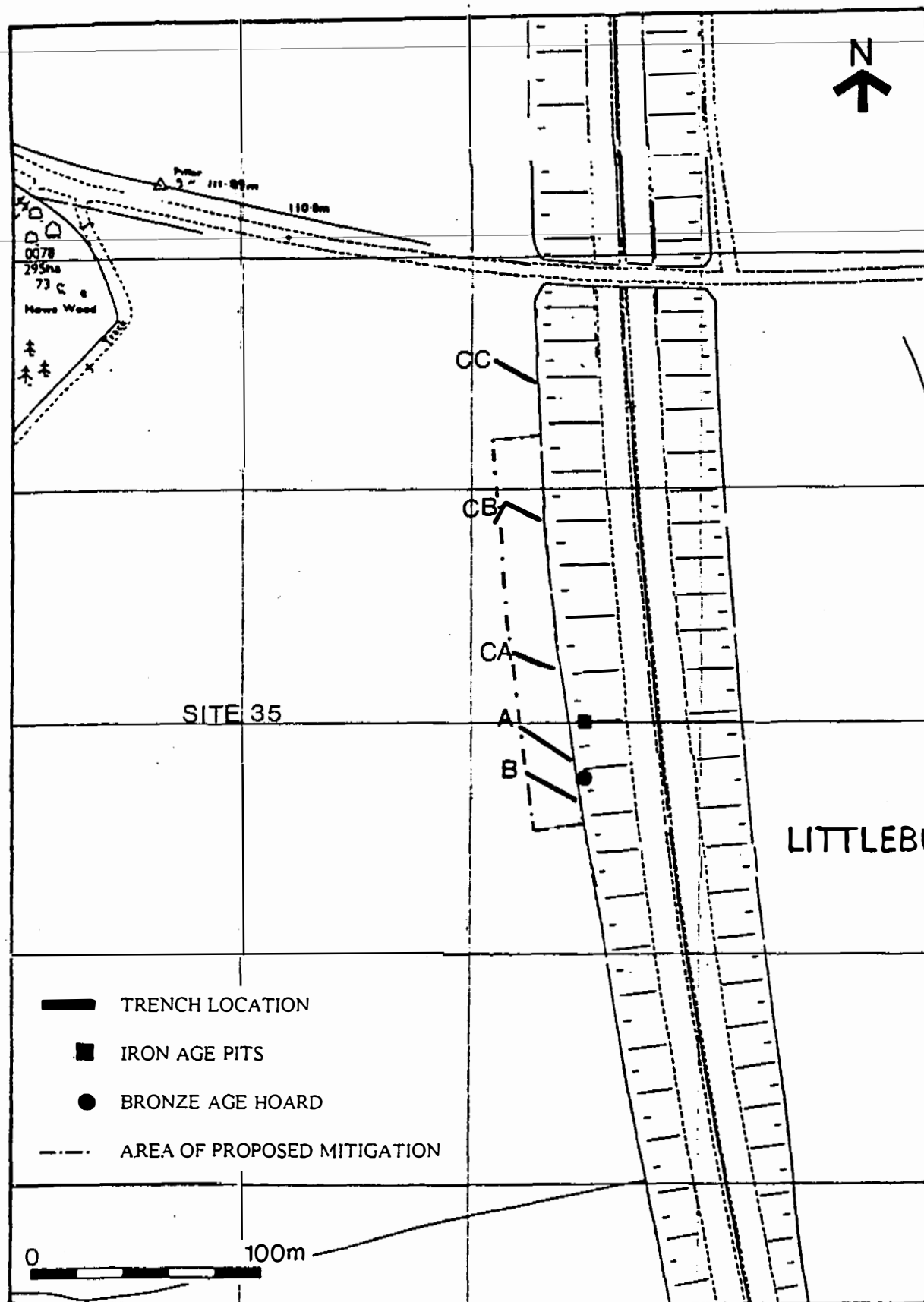


Fig 4.17 Site 30



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Fig 4.18 Site 35