

A259 HASTINGS EASTERN BYPASS

ENVIRONMENTAL STATEMENT

VOLUME 2

REPORT 6

CULTURAL HERITAGE

SEPTEMBER 1994

CONTENTS		PAGE
1.0	INTRODUCTION	1
2.0	SOURCES OF INFORMATION AND CONSULTATIONS	2
3.0	TOPOGRAPHY AND SOILS	3
4.0	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	4
5.0	METHOD OF ASSESSMENT	7
6.0	DESCRIPTION, IMPACT AND MITIGATION	9
7.0	SUMMARY OF KEY ISSUES	12
8.0	REFERENCES	13

FIGURES

1	Cultural Heritage Features Key Plan	Following Page 14
2	Cultural Heritage Features	Following Page 14
3	Cultural Heritage Features	Following Page 14

APPENDICES

1	Gazetteer of Cultural Heritage Features	15
2	Walkover Survey	20
3	Archaeological Evaluation-Surface Collection Survey	23
4	Archaeological Evaluation-Geophysical Survey	32

1.0 INTRODUCTION

- 1.1 This report is the study of the cultural heritage features along the corridor of the proposed A259 Hastings Eastern Bypass. Work has been carried out in accordance with the Department of Transport's (DoT) Design Manual for Roads and Bridges (DMRB), *Volume 11 Environmental Assessment* (DoT 1993).
- 1.2 The cultural heritage is taken to mean both the physical remains of past human activity and its interaction with the landscape. This ranges from upstanding archaeological earthworks, to those which are no longer extant, for example the various ditch and pit-like features detected during the geophysical survey. Listed and other historic buildings, together with elements of the landscape such as probable Ancient Woodland, hedges and boundary ditches are also aspects of the cultural heritage.
- 1.3 This report updates, expands and supersedes all previous work undertaken for the Published Scheme. It incorporates for example, new archaeological discoveries and further historical evidence. A desktop study was carried out to set the Published Scheme within the historical background of the area. Section 2.0 outlines the sources used for research and contains a list of consultees. A general description of the topography and soils of the area is given in Section 3.0 with the archaeological and historical context of the route corridor discussed in Section 4.0. The method of assessment is set out in Section 5.0. The features of the cultural heritage likely to be affected by the Scheme are described in Section 6.0 where the impacts of the Scheme and the proposed mitigation are discussed. The key issues are summarised in Section 7.0. All identified heritage features within the study area have been mapped and listed in a gazetteer (Figures 2-3 and Appendix 1).
- 1.4 Non-intrusive archaeological field evaluation was also undertaken to detect the presence or absence of surface and subsurface features along the line of the Published Scheme. The field evaluation comprised a walkover survey, surface collection survey and geophysical survey. Each of the surveys exists as a free-standing report and these are given in Appendices 2, 3, and 4 respectively. This report, no. 6, amalgamates the results of the field evaluations with archaeological and historical knowledge from other sources. However, it should be noted that areas identified during the field evaluations have not been allocated a number in the gazetteer (Appendix 1).
- 1.5 It is appropriate to discuss the landscape history of an area in the context of archaeological and historic buildings. Historic landscape issues are therefore dealt with as part of this cultural heritage report which should be read in conjunction with the landscape and visual intrusion reports (Volume 2, Reports 4 and 7 respectively). However, it should be noted that the DMRB deals with historic landscapes under the heading of landscape rather than heritage.

2.0 **SOURCES OF INFORMATION AND CONSULTATIONS**

2.1 This report is based largely on published sources together with information from the Sites and Monuments Record (SMR) of East Sussex County Council. These data have been supplemented by the National Archaeological Record (NAR) of the Royal Commission on the Historical Monuments of England (RCHME) and the National Monuments Record (NMR) of the RCHME. The Aerial Photography Library of the RCHME and aerial photographic coverage of the route by East Sussex County Council (1987) was consulted. Historic maps, primarily first edition Ordnance Survey (OS) one and six inch maps and eighteenth and nineteenth century county maps have been examined.

2.2 The appropriate sources for Registered Parks and Gardens, Conservation Areas and battlefied sites were consulted, with no entries being found for the study area. Other material used is listed in Section 8.0.

2.3 The following groups were consulted for comments and information:

English Heritage	Ancient Monuments Inspector
East Sussex County Council	Archaeologist
Hastings Borough Council	Listed Building information
Hastings Area Archaeological Research Group	
Wealden Iron Research Group.	

3.0 **TOPOGRAPHY AND SOILS (Figures 2 - 3)**

- 3.1 The Hastings-Battle Ridge dominates the study area, situated on its southern boundary orientated north-west to south-east. The highest points of the ridge are over 150 m AOD at Batchelors Bump and the Hastings Borough Cemetery. There are a series of minor ridges enclosing narrow steep-sided valleys known as ghylls. They generally have a stream at the bottom and/ or seepage lines. These 'valleys' become less steep between Westfield and Guestling, but it remains an intricate landscape of undulating ground approximately 40 and 10 m AOD, forming the catchment of Doleham Ditch/Sailors Stream. Doleham Ditch runs northwards into a flat bottomed valley to join the River Brede outside the study area.
- 3.2 The route corridor is characterised by areas of woodland blocks within the predominantly agricultural land of irregular fields, often with shaws (a distinctive feature of the Weald), narrow strips of woodland containing mature trees, forming the divisions between fields.
- 3.3 The complex geology of the study area comprises Tunbridge Wells Sand, Wadhurst Clay and Ashdown Beds. There are tracts of Quaternary Head deposits and also alluvium in the stream valleys most notably Doleham Ditch. There is also a complex soil pattern for example there are often abrupt changes from the heavy soils of the Wadhurst Clay to free-draining areas formed on overlying sand deposits.
- 3.4 The geology and topography of this part of Sussex is significant for its influence on landuse and settlement patterns. The junctions between the sands and clays is where the greatest concentration of iron ore is located, more particularly in the clays. The heavy and impenetrable clay lands are associated with dense woodland cover which is also a contributory factor in the development of the iron industry.
- 3.5 A more detailed description of the topography etc. of the study area can be read in Section 2.0 of the landscape report (Volume 2, part 1, report 4).

4.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 4.1 It is likely that, prior to any human impact, the entire area of heavy clays, lighter sands and sandstones would have been covered in deciduous woodland. Clearance may have begun in the mesolithic, but was certainly occurring in the neolithic. The pace increased, particularly in the iron age, for areas such as the catchment of the Combe Haven (Smyth and Jennings, 1988) to the west of the scheme and on into the medieval period. Moreover, the accessibility of at least part of the area along the Brede Valley and the amenability of the lighter soils of the Tunbridge Wells Sand area to clearance and cultivation, indicate that much of the area may have been cleared at an early date. A similar pattern of land clearance and erosion may be assumed at Doleham Ditch. Geotechnical ground investigations carried out in 1992 revealed a depth of alluvium on the route line between Luckhurst Wood and Doleham Ditch between 2.10 m and 4.15 m. Prehistoric features may be concealed beneath it. Surface collection survey (Appendix 3) to the south-east of Westfield, retrieved four worked flints (5 flakes and 1 tool) which may be of late neolithic or early bronze age date but they do not indicate a specific site.
- 4.2 The development of the Wealden iron industry is a key element of the archaeological context of the study area and for the development of settlement patterns and clearance. At Westfield for example, the field element in the name means a large open area and such names in the Weald are strongly associated with iron rich areas and Roman trackways (Witney 1976). Bloomery sites (furnaces that produced iron by the direct process) of the Roman period, as well as the hammer ponds associated with the post medieval iron industry, are prevalent on the higher ground of the clays. An important Scheduled Romano-British bloomery site was discovered in Beauport Park, to the north west of the study area. The site was found in 1862; its cinder heaps covered approximately 0.8 ha and the highest part of the mound was about 15 m high. In 1870 it was opened as a quarry and the cinder used to construct roads. Romano-British items retrieved included coins of Trajan and Hadrian and also Samian pottery. A date from the early second century seems likely. The substantial buildings excavated at Beauport Park suggest that it may have been the headquarters for Romano-British iron-working. Other sites likely to be found at the junction of sand and clay are likely to be smaller and have less substantial remains. A number of proven and possible bloomery sites have been identified within the locality including site no. 47 (Figure 3). A Romano-British settlement site (no. 19, Figure 3) lies south-east of Lankhurst Farm, though there is little definitive evidence. A Roman road (no. 74, Figure 2) is reported to run to the west of Lankhurst Farm, down Stonestile Lane but evidence for this is slight.
- 4.3 Early Anglo-Saxon settlement of the area is uncertain through to the middle ages, but Guestling is a name of seventh century origin and farm names on the edge of the study area are considered to indicate early settlement (Brandon 1974). Certainly by the later Anglo-Saxon period and into the medieval period, there was substantial progressive woodland clearance. It created a network of small fields and dispersed settlement comprising a series of isolated farmsteads and cottages with some small hamlets. A possible deserted medieval settlement (no. 27, Figure 3) has been recorded south of Eastlands Farm but there is little definite evidence. Research using manorial surveys show the local road and lane

network was certainly established by the mid sixteenth century. Some of the routeways on the ridge tops may have originated at an earlier date, perhaps in the prehistoric period.

- 4.4 The archaeology of the Weald is little known; this is partly due to the prevalence of woodland and the fact that the heavy soils are not conducive to cropmarks or soilmarks. A survey of the Weald such as that undertaken by Gardiner (1990) has highlighted the need for more detailed research. The iron industry in the Roman, medieval and post medieval periods has received the most attention. Today there are few visible remains but there are many possible sites as evidenced by the number of field names from tithe maps eg Kiln Wood (no. 15, Figure 3) and Pit Field (no. 60, Figure 3). However, such fields may only be so named from their proximity to the sites of other types of kilns (which could have related to the pottery, brick or tile industry), or as in the case of Kiln Wood because the timber from the wood was used for a nearby kiln. It should be noted that the name may only be derived from distant memory of a kiln at the time that the tithe map and award were drawn up, rather than the preserve of a kiln functioning at that time.
- 4.5 The dispersed settlement pattern has, in the main, been responsible for the complex network of routeways in the area. Those mapped on figures 2 and 3 can be dated to at least the late eighteenth century (Yeakell and Gardner). This pattern remains essentially unchanged and retains its rural character, consisting of medieval and later farms and houses, with a considerable amount of probable ancient woodland and hedges which survive substantially as shown on Yeakell and Gardner's map of 1783 and on the early estate maps of 1619, 1668 and 1748. Examples of medieval houses within the area include the Abbey of Battle's formerly moated Great Maxfield (no. 43, Figure 3). A stone chimney and the parlour crosswing survive from the period of monastic ownership, the remainder having been rebuilt in the middle years of the seventeenth century (grade II* Listed). The moat at Great Maxfield has been filled in; that of the manor house of Westfield (now Church Place no. 8, Figure 2) next to the Norman church of Westfield, still survives in part. The study area is well represented by early agricultural buildings, dating mainly from the seventeenth century. Although the area was principally one of dispersed settlement, occasional small hamlets did exist. The Moor, formerly situated on the edge of Westfield Moor (alternatively known as Westfield Down) is an example of one such. Never large, the hamlet consisted of nine houses in 1748. Although now increasingly encroached upon by the modern village of Westfield, the settlement still retains five houses (nos. 9, 11 - 14, Figure 2) of pre-1750 date, which probably explains how it has preserved much of its ancient 'village' character.
- 4.6 Beauport Park at the beginning of the Published Scheme is a late eighteenth/early nineteenth century parkland. The park was created for General James Murray who was the Governor of Quebec; Beauport was the name of the French defences at Quebec. Elements of the parkland survive today, including the monument folly, much of the enclosing wall and Beauport Lodge (Listed building grade II). Much of the park now serves as a caravan park. On the opposite side of the A21 is Claremont School (Listed building grade II) which was built in the late nineteenth century. It is set within a late Victorian

garden which now forms the school grounds. A series of fishponds survive in what remains of the 'designed' element which may be hammer ponds related to the iron industry, but these are now surrounded by extensive rhododendron cover. At the opposite end of the scheme, Broomham School (Listed building grade II) was once surrounded by a parkland but only the avenue now survives.

- 4.7 The expansion of Hastings from a small fishing port to a seaside resort began in the eighteenth century and accelerated with the building of estates of town houses for gentry and the development of St Leonards in the 1820s. The arrival of the railway promoted much more rapid expansion.

5.0 METHOD OF ASSESSMENT

5.1 Resources Potentially Affected

5.1.1 The cultural heritage resources considered fall into three main categories:

- archaeological remains (including palaeo-environmental deposits)
- historic buildings
- the survival of historic landscape features

5.2 Types of Impact

5.2.1 The permanent and temporary landtake for the Published Scheme, associated structures, landscape mounding and the construction of these may result in damage to, or loss of archaeological remains and deposits, physical loss to the setting of buildings and to the physical coherence of the historic landscape. These impacts can be suffered directly or indirectly. Areas of contractors' compound, construction traffic routes and borrow pits can also represent a potential impact on cultural heritage features.

5.3 Types of Mitigation Considered

5.3.1 The assessment has taken account of the mitigation proposals included in the design of the Scheme. Further mitigation measures include both general strategies and site specific measures designed to avoid, reduce or offset the residual effects of the Scheme. These are set out in the impact assessment in Section 6.0. They include archaeological and architectural investigations or recording and comments on where the landscape measures would be sympathetic to the survival of the landscape pattern.

5.3.2 For the archaeological record, a programme of evaluation has been implemented in consultation with English Heritage and East Sussex County Council Archaeologist. Non-intrusive fieldwork has been undertaken, where access has been permitted, in order to give a better understanding of the potential scale of destruction. A programme of trial-trenching, test-pitting and hand-augered boreholes will be carried out in order to identify the nature, extent and quality of survival of remains identified by non-intrusive survey and to examine (access agreements permitting) areas not previously surveyed. Excavation would be carried out prior to construction allowing the appropriate level of recording. An archaeologist would also be present at key phases of construction in areas of potential interest.

5.3.3 Specific landscaping measures have been proposed where considered appropriate, to reduce the impact on the setting of historic and Listed buildings. Any historic buildings to be demolished would be surveyed at an appropriate level, in consultation with English Heritage. Mitigation measures relating to the (historic) landscape and buildings are discussed in detail in Volume 1. Measures include re-

establishment of hedgerows and false cuttings.

5.4 Detailed Assessment Method

- 5.4.1 A corridor considerably wider than the actual area of proposed landtake has been studied. This provides information on the context of features directly affected and allows indirect impacts to be assessed.
- 5.4.2 The importance of archaeological sites, historic buildings and landscape features varies considerably. The starting point for evaluating cultural heritage features has been to consider their statutory or non-statutory status (Scheduled Ancient Monuments for example). In the case of Listed buildings their grades must be the main basis of evaluation.
- 5.4.3 The importance of cultural heritage features can be defined by use of the non-statutory criteria for the Scheduling of Ancient Monuments (as extended for English Heritage Monuments Protection Programme), taking into account for example the rarity, condition and significance of the feature, resulting in a grading of national importance, regional/county, local or uncertain importance. There is no standard scale against which the severity of impacts on the cultural heritage may be judged. The severity of a given level of landtake or visual intrusion would vary with the type of feature. For the purposes of this study the severity of impacts is graded as high, moderate, or uncertain. High impacts are judged to be those which clearly breach national and local policy guidance or which otherwise would substantially detract from the cultural heritage interest of the area.
- 5.4.4 The Department of the Environment guidelines for listing and grading historic buildings were referred to where necessary. The setting of historic buildings affected by visual intrusion has been assessed with reference to the features which contribute to, or detract from, its historic character. The effects of the Scheme in terms of intruding on views of and from the building and its wider setting were also considered in line with the method set out in the Visual Impacts report (Volume 2, Report 10).
- 5.4.5 The assessment of the importance of features affected by the proposals has been made firstly by general reference to these guidelines and secondly on professional judgement.

6.0 DESCRIPTION, IMPACT AND MITIGATION

- 6.1 Cultural heritage features which would be affected by the proposed route are discussed from west to east. They have been divided into three categories: archaeology, historic buildings, historic landscape. Some features may appear in more than one grouping as there is often more than one association.

Archaeology

- 6.1.2 At the start of the scheme are two features (discovered during the walkover survey, Appendix 2) which may relate to the iron industry. The first is a pond and an area of mounds which are likely to be of human origin. Although these features are undated it is possible that they relate to the post medieval period (no. 38). Landtake for the road would destroy them. Above a large pond against the current embankment for the A21 is a man-made curving terrace approximately 45 m across (no. 39). Its location close to the stream makes it a possible post medieval iron-working site. The site lies on the edge of proposed earthworks and it is probable that the site would be damaged by earthmoving activity. This would be a high impact on remains of local importance. It is proposed to hand trench the terrace to verify its nature extent and quality of survival of remains in advance of road construction.
- 6.1.2 Within the grounds of Claremont School are a group of fishponds (no. 68) the southern edge of which would be encroached upon. It is possible that they were medieval/post medieval hammer ponds, originally used in the iron making process, but no associated features were located. The road would be a moderate impact on features of local importance which form part of the contemporary garden landscape of Claremont School. Mitigation of this impact would be as that set out in paragraph 5.3.
- 6.1.3 To the south of Westfield where Stonestile Lane would be diverted to Three Oaks Lane, the embankment here would overlie an area of alluvium located during geotechnical ground investigations. It is possible that archaeological features lie undetected beneath it. An area of made ground was also identified by test-pitting north of Lankhurst Farm. Both these areas would require further investigations (see 5.1.4). The Published Scheme would be an uncertain risk on possible archaeological remains. A Roman road (no. 74) is reported south of The Moor. The route may sever part of its line and represents a low risk to this linear feature.
- 6.1.4 West of Luckhurst Wood the road would be in a shallow cutting and would go through Pit Field (no. 31). Depressions are still visible today just 20 m south of the scheme and they may be the remnants of extraction of ore for the iron industry, or the digging of clay for kilns; a number now contain ponds. The geology here is on the boundary between the clay and sand, a common location of iron ore. The scheme would be a low risk to these features of local importance.

6.1.5 Along the line of the proposed road deposits of alluvium were identified between Luckhurst Wood and Oak Wood to Doleham Ditch. Archaeological features may be concealed within; the scheme therefore represents an unknown risk on possible archaeological remains where there is significant landtake. At Doleham Ditch the Published Scheme would be on embankment and would not disturb alluvial deposits.

6.1.6 Where the scheme severs North Wood bloomery cinder (no. 72) was found in a stream bed during a walkover survey. Further into the wood to the north are the sites of two undated bloomeries (nos. 47 and 48). It is possible that a bloomery site exists on the line of the route. The road would be a low to moderate risk on a feature of probable local importance. Mitigation proposed is as set out in paragraph 5.3.

Historic Buildings

6.1.7 The Published Scheme would have a high impact on the setting of Harrow Lodge (no. 69), an historic building of late nineteenth century date built in the style of Claremont, possibly by Shaw. The route would be an embankment about 100 m south of the Lodge. Landscaping measures are proposed to reduce the impact by the summer of the fifteenth year after opening.

6.1.8 The group of Listed and historic buildings within the historic hamlet known as The Moor (nos. 9 - 14) would be affected by the Published Scheme. Old Beams (no. 12 late sixteenth century) and Old Moor House (no. 13 seventeenth century or earlier) are both grade II Listed timber-framed buildings; the road and side road alterations would have a moderate and low impact respectively on their rural setting. The remaining grade II buildings and historic structures would suffer a low impact. Despite no ground floor views from these properties the southern approach to this hamlet would be affected by the need to cross the Published Scheme, thus altering their setting within the landscape. Landscape measures are proposed to reduce the impact of the scheme and the impact would be reduced by the summer, fifteen years after opening. It is during the construction process that these properties would be affected the most.

6.1.9 Lankhurst Farmhouse (a grade II timber-framed building no. 18) and associated structures would be over 250 m away from the scheme and the impact on its setting would be low.

6.1.10 The Published Scheme would have a moderate impact on the setting of Copshall Farmhouse and a substantial impact on its barn (nos. 62 - 63) both of which are grade II Listed buildings. The roundabout would be approximately 100 m from these properties and would be lit. Although by the summer fifteen years after opening the visual impact would be reduced, the impact on the setting would remain as moderate. These properties would now have roads on the sides.

- 6.1.11 Broomham School (Listed building grade II), built in the sixteenth century, enlarged in the eighteenth, but subsequently reduced in size. The impact on this property would be moderate. It would look directly onto the roundabout junction with the current A259. The landscape measures would, by the fifteenth year after opening, greatly reduce this impact.

Historic Landscape

- 6.1.12 The scheme would sever Baldslow Wood (no. 1) to the east of Kent Street. The wood is identified as possible ancient woodland by the Nature Conservancy Council (NCC, now English Nature). There is no mitigation possible beyond landscape measures already proposed.
- 6.1.13 Luckhurst Wood and Oak Wood are also listed as probable ancient woodland and the Published Scheme would encroach upon the boundaries of these woods as it passed between them.
- 6.1.14 Another piece of probable ancient woodland to be affected by the route would be North Wood (no. 49), a narrow strip of woodland towards the end of the proposed road. Approximately 0.55 ha would be removed.
- 6.1.15 The landscape through which the route would pass has been little changed since at least the seventeenth and eighteenth centuries, with many fields shapes, hedgelines and woodlands surviving from that period. Routeways which also survive from this period would be diverted and realigned. The Published Scheme would cut across these features; constituting a high localised impact on a combination of landscape features. Where practicable field boundaries, hedgerows, woodland and roads would be reinstated along their original line.

7.0 SUMMARY OF KEY ISSUES

- 7.1 The Published Scheme would have an impact on archaeological sites of unknown potential, but mitigation proposals should reduce this risk. There is still the likelihood of the discovery of archaeological features which have been masked by alluvium. The area has in general a moderate potential for the existence of iron-working sites of Roman through to post medieval date.
- 7.2 A number of Listed and historic buildings would suffer an impact on their settings, most notably the houses within the small hamlet known as The Moor, also Harrow Lodge, Copshall Farmhouse and barn. Landscaping measures are proposed but it would be a number of years before vegetation is adequately established to obscure views. Proposed mounds would have a limited effect on these properties.
- 7.3 The mitigation available to lessen the impact of a new linear feature to a landscape pattern which is over 200 years old, includes re-establishing the pattern where possible by planting. However, until vegetation on the proposed earthworks has matured, the proposed route would be highly visible locally within the landscape.

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Map of the demesne lands of Westfield Moor (1619). East Sussex Record Office (ESRO) A23006

Map of the manor of Coghurst, Guestling (1668). ESRO AMS 5840

Map of Southings Farm, Westfield (1748). ESRO A2844

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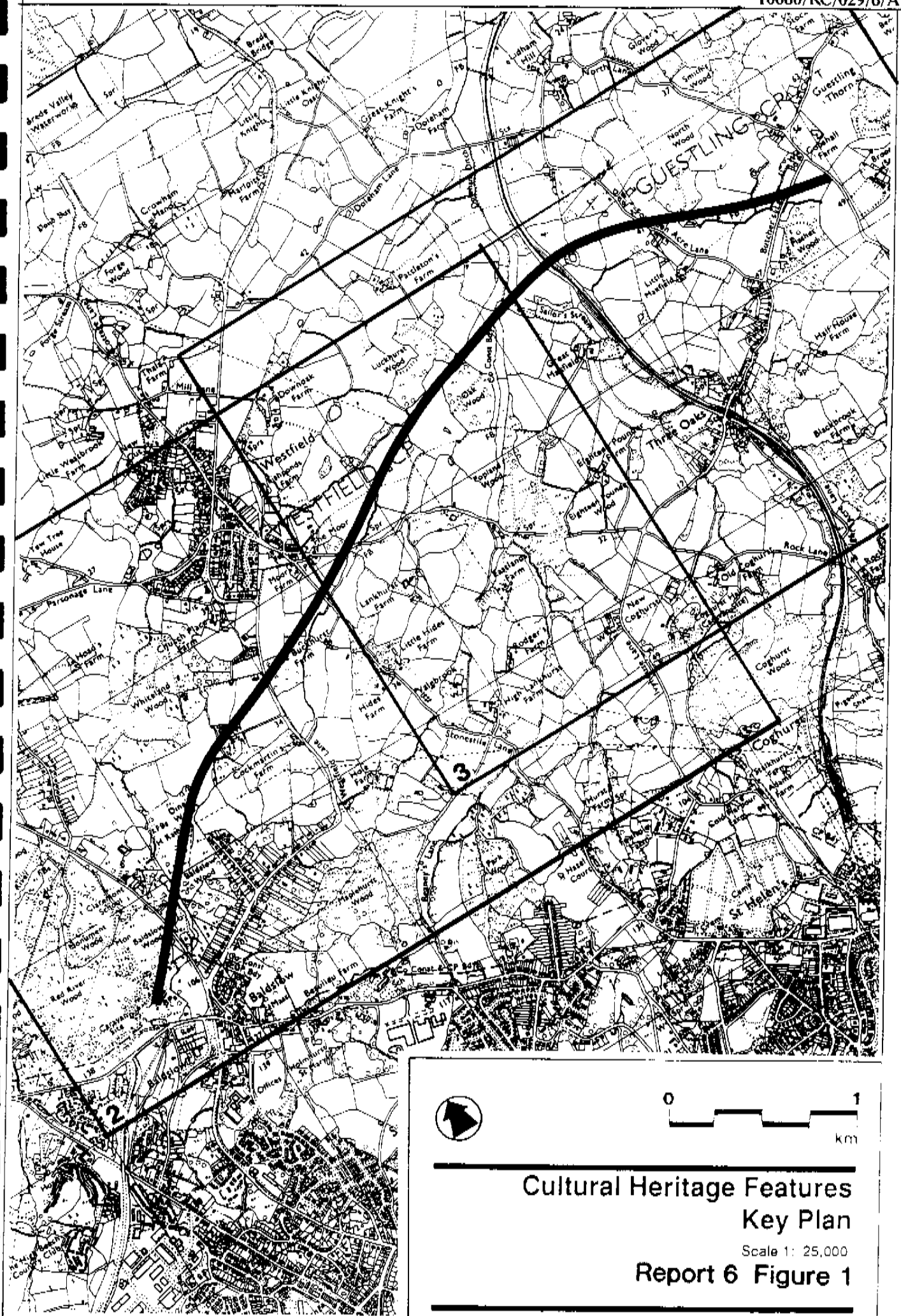
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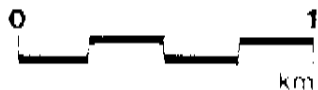
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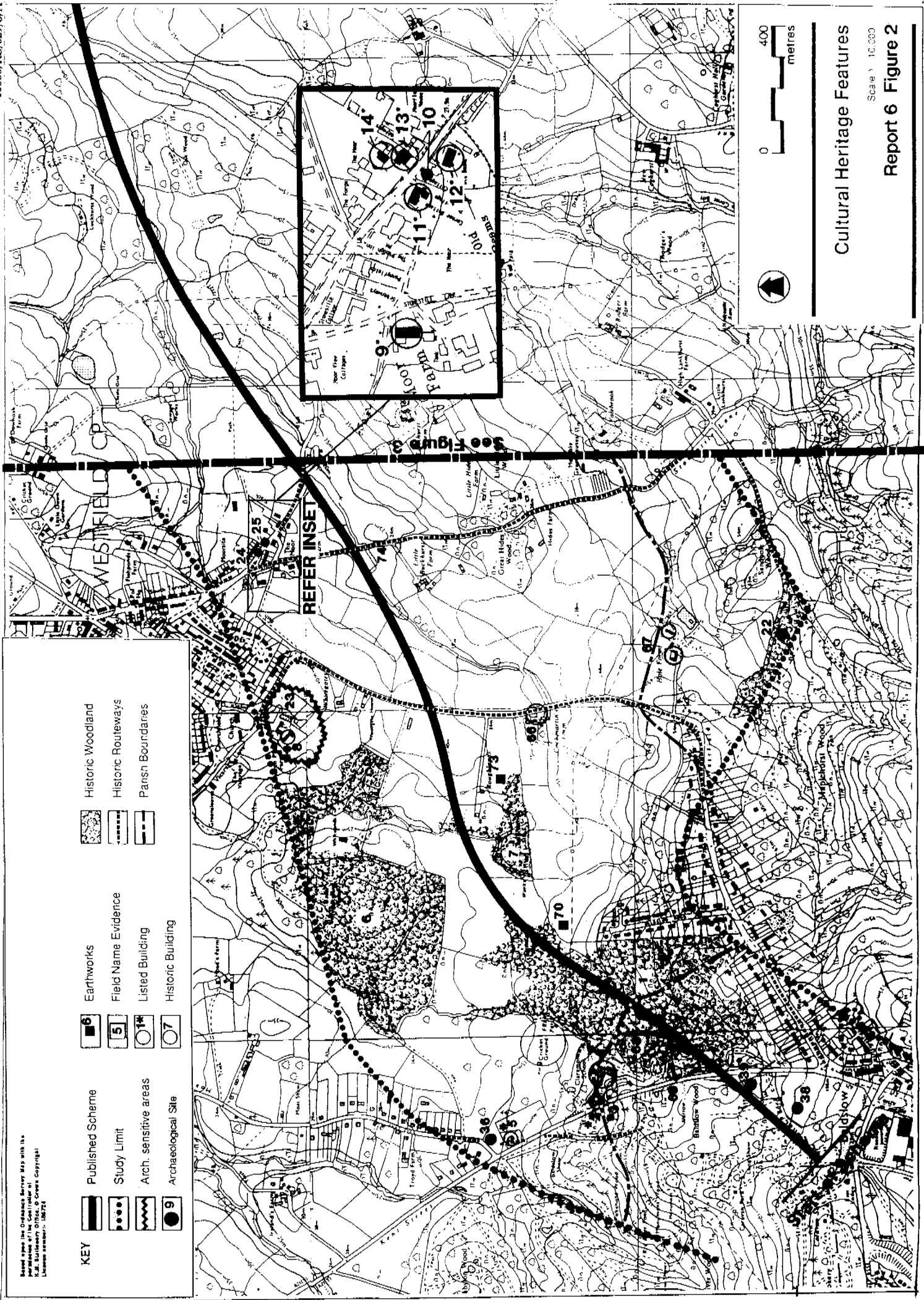




**Cultural Heritage Features
Key Plan**












Scale 1: 25,000

Report 6 Figure 1



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KEY

- | | | | | | |
|---|-----------------------|---|---------------------|---|--------------------|
|  | Published Scheme |  | Earthworks |  | Historic Woodland |
|  | Study Limit |  | Field Name Evidence |  | Historic Routeways |
|  | Atch. sensitive areas |  | Listed Building |  | Parish Boundaries |
|  | Archaeological Site |  | Historic Building | | |



Cultural Heritage Features

Scale 1:10,000

Report 6 Figure 2

See Figure 3

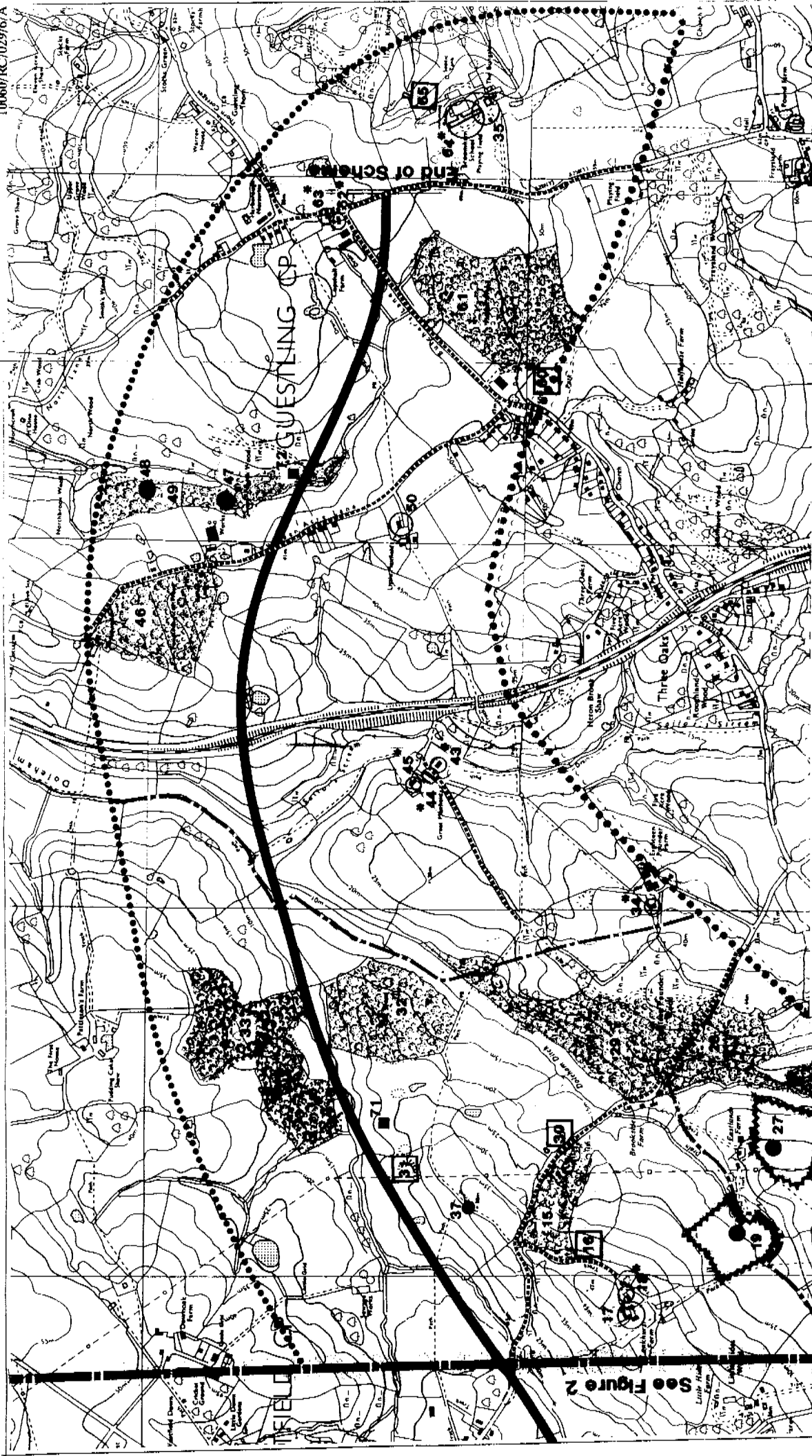
REFER INSET

WESTFIELD

WILSON

WILSON

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KEY		Cultural Heritage Features	
	Published Scheme		Historic Woodland
	Study Limit		Historic Routeways
	Arch. sensitive areas		Parish Boundaries
	Archaeological site		Earthworks
	6		Field Name Evidence
	5		Listed Building
	7		Historic Building

APPENDIX 1

GAZETTEER OF CULTURAL HERITAGE FEATURES

APPENDIX 1

GAZETTEER OF CULTURAL HERITAGE FEATURES

KEY:

A	Archaeological Item
HB	Historic Building
L	Historic Landscape Feature
ASA	Archaeologically Sensitive Area
DMV	Deserted Medieval Village
II & II*	Listed Building Grades
C17	Seventeenth century
1st ed 6"	First edition six inch map: Ordnance Survey 1870
NCC	Nature Conservancy Council: East Sussex Inventory of Ancient Woodland (Provisional) 1988
ROHAS	Rape of Hastings Architectural Survey

No	NGR (all TQ)	Type	Parish	Description	Grade
001	80151400	L	Westfield	Baldslow Wood: prob ancient wood.	NCC
002	79791413	HB	Westfield	Former stables at Claremont School; built 1878-9 of red brick.	II
003	79801409	HB	Westfield	Former Lodge at Claremont School; as above.	II
004	79881411	HB	Westfield	Claremont School, Ebden's Hill; red brick, tudor style built 1878-9.	II
005	79671438	HB	Westfield	Moat Cottage, Kent Street; C17, brick, tile hung, thatched roof. A cottage shown on site on 1619 estate map.	II
006	80351480	L	Westfield	Whitelands Wood; prob ancient wood.	NCC
007	80601435	L	Westfield	Roughlands Wood; prob ancient woodland.	-
008	80921505	HB	Westfield	Church Place Farm, Vicarage Lane; early C18 red brick house built on site of former manor house (ROHAS) remains of medieval moat.	II & ASA
009	81441510	HB	Westfield	Moor Farmhouse, The Moor; prob. C17 or earlier, updated in C18. A house shown on site in 1619.	II
010	81551506	HB	Westfield	Site of now rebuilt historic dwelling, shown on estate plan of 1748.	-

011	81541508	HB	Westfield	Corner Cottage and The Cottage, The Moor; surviving end bay of late C16 house, with added 2-bay front range of c 1700 (ROHAS).	II
012	81571506	HB	Westfield	Old Beams, The Moor; 3-bay house of c 1600 with additions c 1700. Timber framing still exposed externally (ROHAS).	II
013	81581509	HB	Westfield	Old Moor House, The Moor; 4-bay "L" plan house of early C17 with timber framing still exposed externally (ROHAS).	II
014	81551513	HB	Westfield	House adjoining Old Moor House; C18 redbrick and weather boarded. A house shown on this site on estate map of 1748.	II
015	82201490	L/A	Westfield	Kiln Wood - prob ancient woodland; name also implies kiln site.	NCC
016	82071484	A	Westfield	Kiln Field - name on Westfield tithe.	-
017	81881470	HB	Westfield	Group of three farm buildings of Lankhurst Farmhouse shown on 1st ed 6"; none of surviving buildings are of any great antiquity.	-
018	81941471	HB	Westfield	Lankhurst Farmhouse; Crosswinged house of C18, incorporating one C17 wall (ROHAS).	II
019	82101441	A	Westfield	Romano British settlement within county designated ASA no. 322.	ASA
020	81831409	HB	Westfield	Valebrook, Stonetile Lane; late C18.	II
021	81971390	HB	Westfield	High Lankhurst Farmhouse; C18 red brick.	II
022	811135	L	Westfield	Tip of Maplehurst Wood, prob ancient woodland.	NCC
023	8096 1508	HB	Westfield	Barn at Church Place Farm; 5-bay timber framed barn of c 1600 (ROHAS)	ASA
024	8149 1514	A	Westfield	At The Moor, site of destroyed historic dwelling shown on estate plan of 1748.	-
025	8152 1513	A	Westfield	At The Moor, site of now rebuilt historic dwelling shown on plan of 1748.	-
026	825140	L	Westfield & Guestling	Roger's Wood possibly historic horseshoe shaped woodland.	-
027	824143	A	Westfield	Probable DMV within ASA no. 323.	ASA
028	826144	L	Westfield & Guestling	Eight Acre Wood - prob ancient woodland.	NCC
029	826148	L	Westfield & Guestling	Eighteen Pounder and Popland Woods, prob ancient woodland.	NCC

030	82381488	A	Westfield	Kiln Field - name on Westfield Tithe.	-
031	82261529	A	Westfield	Pit Field - name on Westfield Tithe.	-
032	827154	L	Westfield	Oak Wood - prob ancient woodland.	NCC
033	826157	L	Westfield	Luckhurst Wood - prob ancient woodland.	NCC
034	83011465	HB	Guestling	Eighteen Pounder Farmhouse; L-shaped early C19, brick and weather boarded.	II
035	8518 1513	HB	Guestling	Barn at Broomham School, early C18 rebuilt using frame of C15 barn. Now in use as part of school (ROHAS)	-
036	7968 1444	A	Westfield	Cottage shown on now vacant site on 1619 estate plan.	-
037	8218 1515	A	Westfield	Westfield barn shown on site on estate plan of 1619.	-
038	7976 1352	A	Westfield	Small ponds and uneven mounds of ? workings	-
039	7982 1366	A	Westfield	Terrace c 45 m across cut into slope possible post medieval iron working site.	-
043	83391521	HB	Guestling	Great Maxfield, Rock Lane. Former moated mansion owned by Battle Abbey. 4-bay crosswing of c 1500 survives with earlier stone chimney (ROHAS).	II*
044	83371523	HB	Guestling	1,2 & 3 Oast Cottages, Great Maxfield; C19, converted from two oasthouses and granary.	II
045	83351528	HB	Guestling	Barn at Great Maxfield. Large 5-bay, aisled timber framed barn of c 1700. Now converted to a dwelling (ROHAS).	II
046	838160	L	Guestling	Fourteen Acre Wood prob ancient wood.	NCC
047	84121580	A	Guestling	Site of bloomery(s), undated, in North Wood, possibly same as No. 48.	-
048	84201600	A	Guestling	Site of bloomery(s), undated, in North Wood, possibly same as No. 47.	-
049	841159	L	Guestling	North Wood - prob ancient woodland.	NCC
050	84051533	HB	Guestling	Little Maxfield Farmhouse; C17 or earlier. Timber framed, now brick underbuilt and weatherclad above.	II
060	84461490	L	Guestling	Pit Field - name on Guestling Tithe.	-
061	847151	L	Guestling	Plasht Wood - prob ancient woodland.	NCC
062	84881551	HB	Guestling	Barn at Copshall Fm; single aisled, 6-bay barn, rebuilt in c 1600 (ROHAS). Now converted into a house.	II

063	84901554	HB	Guestling	Copshall Farmhouse; mid to late C17, 3-bay farmhouse retaining its thatched roof.	II
064	85151515	HB	Guestling	Broomham School. Large stone and brick gentry house of C16 and later. Seat of Ashburnhams of Guestling (ROHAS).	II
065	852150	L	Guestling	Field name evidence for Park, presumably at Broomham.	-
066	80981430	HB	Westfield	Cockmartin's Farm; house, barn and building shown on estate map of 1748. Present buildings give no indication of great antiquity.	-
067	81201389	HB	Westfield	Hole Farm; house, 2 barns and buildings shown on 1619 estate map. Present buildings appear to be of no great antiquity.	-
068	79911399	A	Westfield	Fishponds in grounds of Claremont.	-
069	79871389	HB	Westfield	Harrow Lodge; built in style of Claremont, possibly by Shaw.	-
070	80321420	A	Westfield	Boundary ditch by E edge of Dines Wood.	-
071	82401525	A	Westfield	Depressions ? Clay or ore diggings. See also Site 31.	-
072	84201565	A	Guestling	Bloomery cinder in stream bed.	-
073	80791444 80991447	A	Westfield	Two possible lynchets.	-
074	81451508 81651400	A	Westfield	Conjectured line of Roman Road	-

APPENDIX 2

WALKOVER SURVEY

APPENDIX 2

WALKOVER SURVEY

1.0 INTRODUCTION

- 1.1 A walkover survey of the proposed route of the A259 Hastings Eastern Bypass was made between the 8th and 9th of October 1992. The route started at Claremont School, near Baldslow, and ended at Copshall Farm, Guestling Thorn.
- 1.2 Access to inspect the land was granted by all landowners/tenants who were approached except for the owner of Moor Farm, Westfield and the owners of Harrow Lodge and Pinehurst on the A229 south of Claremont School. In such cases, though the line of the proposed route could not be physically traversed, the land in question was observed from neighbouring fields and public rights of way.
- 1.3 All fields under pasture were viewed and the majority physically traversed. In some cases difficulty or prohibition of access made actual traverse impossible or very inconvenient, but these cases were rare. Ploughed fields were inspected, though areas of standing crops were not traversed. Woods were inspected as access allowed though progress was often severely impeded by dense undergrowth.

2.0 RESULTS

- 2.1 Six areas of possible archaeological interest were detected:
- a) Baldslow Wood: the smaller of the two fishponds (no. 68) recorded from the 1:2500 engineers map (TQ 79901379) measures approximately 13x8 m. Access to the pond was denied by the landowner, though observation from the grounds of Claremont School would suggest that it remains largely clear of vegetational cover.
 - b) Dines Wood: about 75 m length of north-east/south-west aligned field boundary was recorded close to the eastern edge of Dines Wood (TQ 80321420). Traces of a low bank (no. 70) were detected to the north-west. This linear earthwork presumably represents the former eastern most extent of Baldslow Wood.
 - c) West of Oak Wood: a series of irregular depressions, measuring between 3 m and 7 m in width, were noted to the immediate west and north-west of the two recorded ponds. Unfortunately, as complete access to the field was denied by the landowner, the full nature and extent of these depressions remain unknown, though they may represent clay/ore diggings.

APPENDIX 3
ARCHAEOLOGICAL EVALUATION
SURFACE COLLECTION SURVEY

September 1994

CONTENTS		Page
1.0	INTRODUCTION	25
2.0	METHOD	26
3.0	RESULTS	28
4.0	SUMMARY	31

FIGURES

A3/1	Artefact Scatters: Location of fields surveyed	Following Page 31
A3/2	Field: 511: Artefact scatters	Following Page 31

1.0 INTRODUCTION

1.1 The surface collection survey was conducted by the Oxford Archaeological Unit during November 1992, and was commissioned by Chris Blandford Associates (CBA) on behalf of the Department of Transport. This formed part of the study being carried out to assess the impact on the cultural heritage of the proposed A259 Hastings Eastern Bypass on the archaeological landscape.

1.2 Surface collection survey, recording the presence or absence of archaeological material within areas of arable, is an established technique used to identify unknown archaeological sites, to define areas of archaeological potential and to interpret past patterns of human settlement activity.

2.0 METHOD

- 2.1 The method used for the surface collection survey followed the basic premise that all arable areas of landtake should be subject to survey using a systematic linear transect sampling method to a standard specification.
- 2.2 Transects were set out from 1:2500 scale drawings (EN 10060-PN 162) of the Published Scheme by measuring from fixed points on field boundaries.
- 2.3 The survey was based on a corridor approximately 80 m wide, 40 m either side of the centre line of the proposed road. Artefacts were collected by walking 20 m units along transects set 20 m apart.
- 2.4 A field log book and a series of field record sheets were kept to record variations within and between each land parcel. These recorded the following:
- a) Land parcel number.
 - b) Soil/crop conditions.
 - c) Ground surface visibility conditions.
 - d) Slope/topography.
 - e) Lighting /weather conditions.
 - f) Length of transects and number of units walked.
 - g) Time of day and date.
 - h) Initial interpretation/summary of finds.

2.5 Collection Strategy

- 2.5.1 The collection strategy was designed to be inclusive rather than exclusive, ie for most object categories total recovery was aimed at, irrespective of the date of the material in question. This was intended to avoid problems caused by fieldworkers exercising objective bias against certain types of object or against objects thought to be of recent date. For example, subjective assessment of date and consequent 'on the spot' discard in the field could have resulted in imbalances in the recovered quantities of categories such as tile and pottery.
- 2.5.2 The major artefact categories collected and recorded were pottery (post medieval), baked clay/daub, fire-cracked flint, worked flint, glass, metal objects, slag and other smelting waste related material, marine shell and coal/charcoal.

2.5.3 The only items which were not recovered, or which if recovered were not subsequently recorded, were twentieth century plastic, bakerlite and asbestos, large metal objects derived from modern agricultural machinery, and post medieval brick and tile where this material occurred in large quantities. In the latter case, representative samples were kept and a note made in the field of the presence and location of dense scatters of such material.

2.6 Conditions

2.6.1 The majority of land available for study was pasture or set aside and therefore unsuitable for this method of survey. In some arable fields the advanced state of the crop also meant that surface artefact collection could not be undertaken.

2.6.2 Three property owners were approached for access for the surface collection survey. Access was denied to all but one of the properties. A total of 91, 20 m collection units were surveyed.

2.6.3 Surface visibility was good with at least 80% of soil being visible. Land parcels with a visibility of less than 25% (ie areas of leaf crop or set aside) were not surveyed.

3.0 RESULTS

3.1 Artefacts Retrieved

3.1.1 All the finds recovered (with the exception of those classes of post medieval/modern material mentioned above), were recorded on a computerised database in broad object categories. The finds were dated where possible, but many items, such as tile and some pottery, were found in such small fragments that they were not closely datable and consequently have been recorded as being of 'uncertain' age. The computerised data was used to provide lists of artefact types by period and formed the basis for a series of finds distribution plots for each of the land parcels surveyed during the project.

3.1.2 The principal finds categories in terms of quantity were brick/tile, slag and other smelting waste related materials and fire-cracked flint. Full analysis, however, tended to concentrate on those groups, such as pottery and worked flint, which were likely to provide chronological information. Certain other classes of object which might have contained a range of closely datable objects consisted mainly post medieval material.

3.2 Worked Flint

3.2.1 Of the 28 pieces of worked flint that were recovered only six were intentionally worked, and consisted of five flakes and one tool. The raw material consisted of good quality flint exhibiting some degree of incipient cortication varying from heavy to a light milky clouding of the flint.

3.2.2 The dating of the collection is problematical as there were few diagnostic pieces and dating based on knapping technology is difficult for unstratified, abraded material. A late Neolithic or early Bronze Age is considered a reasonable date for the assemblage.

3.3 Fire-cracked Flint

3.3.1 Fifty four pieces of fire-cracked flint were recovered from the field survey. Such material, being the by-product of direct and prolonged heat, such as that produced by a kiln, furnace or bonfire and not from more general activities such as stubble burning, is a good indicator of past settlement or industrial activities, especially, in the latter case, when it is associated with slag or other metallurgical waste products.

3.4 Pottery

3.4.1 Forty six sherds of pottery were recovered from the survey. All recorded fragments were of post medieval date and may represent dispersed manuring scatters.

3.5 Tile and Brick

3.5.1 One hundred and forty three fragments of tile were recorded, most of which could not be dated with precision. A few pieces could be assigned a Roman date from their fabric, although this assumption was not supported by the evidence of characteristic forms (such as tegulae and box flue tiles) or by surface artefact associations.

3.5.2 The majority of the assemblage is presumably of post medieval date. A detailed analysis of fabric type would probably have permitted a more accurate estimate of numbers by period, but this was not possible within the time constraints of the project.

3.6 Other Finds

3.6.1 Organics and other intrinsically undatable artefacts included, slag and other metallurgically related waste material (107 lumps), coal (four lumps) and marine shell (13 pieces). All recorded glass fragments were of post medieval date. Metal objects were either post medieval or undatable, consisting, in the main, of corroded iron and bolt fragments.

3.7 Artefact Scatters

3.7.1 The distribution of artefacts was studied for evidence of concentrations which may indicate the presence of archaeological sites. The principal categories of material used were those which occurred in large quantities and were susceptible to sub-division by period. These materials were worked flint, pottery and, to a lesser extent, brick/tile and slag.

3.7.2 The criteria which distinguish a significant concentration of artefacts, implying a site, and a random scatter, implying material spread through later agricultural activities, such as manuring, are difficult to define and vary depending on the material and period of the scatter in question. In the case of pottery, such factors as the relative density of material surrounding a 'scatter', the extent and compactness of the spread and (where applicable) the association of the material with other artefact categories of the same period, or with material of other periods (eg a close association between Iron Age and early Roman sites) were considered.

3.7.3 The results, nevertheless involve an element of subjectivity dependent upon the type of material in question. Worked flint, for example, survives relatively well in ploughsoil, though it can become heavily abraded. Prehistoric pottery, however, being less fired than Roman or medieval examples, will not survive well in disturbed ploughsoils and will therefore appear, if at all, in very small quantities. In contrast fire-cracked flint and slag related materials will survive and remain identifiable even when broken down by ploughing.

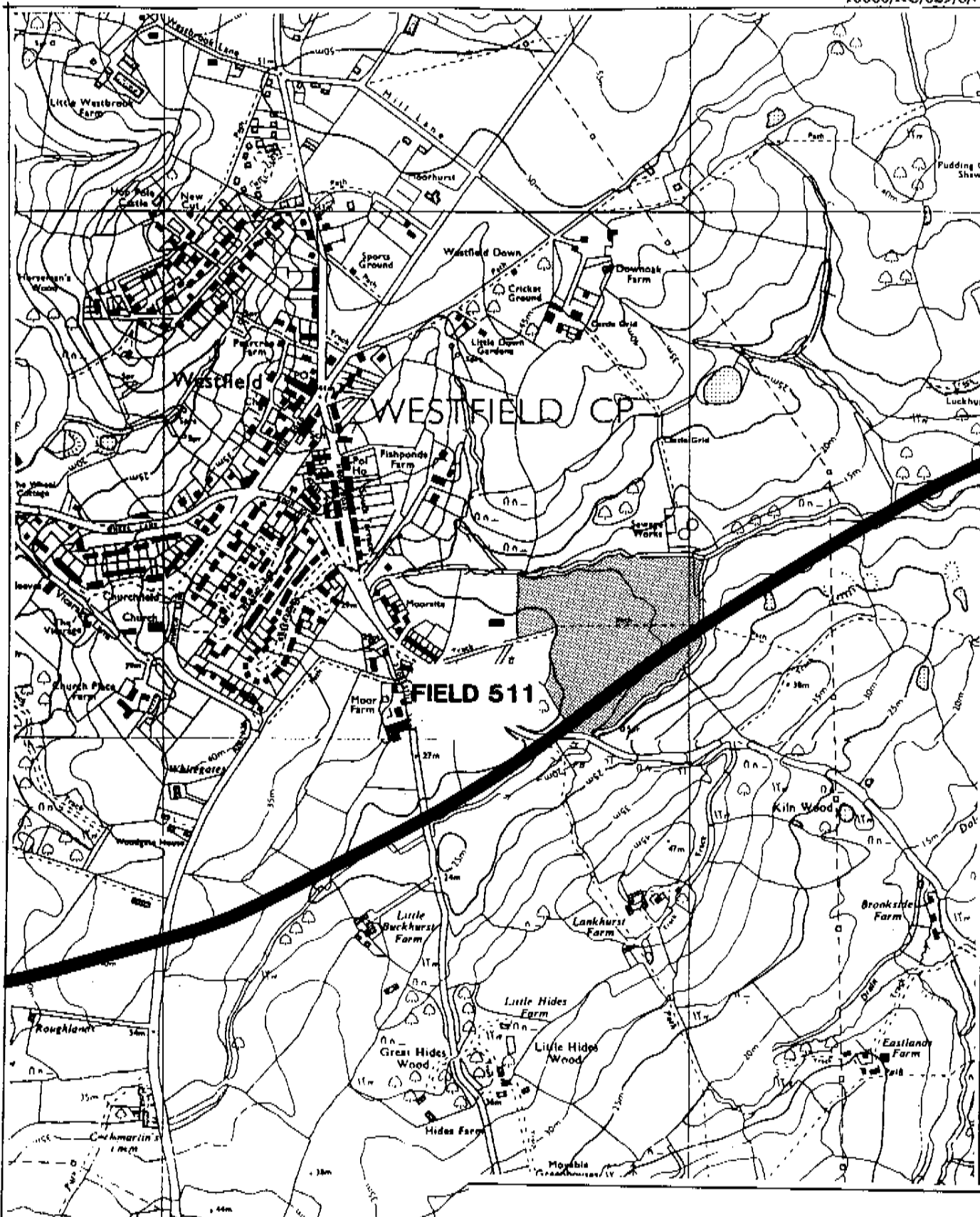
3.8 Sites Located

3.8.1 The area covered by the field survey and the extent of recorded artefactual clustering are shown on figures A3/1 - A3/2. The 'confidence' rating indicates a judgement of the confidence that clusters represent distinct concentrations of potential archaeological significance ranging from 1 (high) to 3 (low).

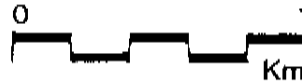
3.8.2 **Field 511:** High density scattering of slag (107 lumps) apparently clustering at the south eastern margins of the surveyed area and medium density scattering of fire-cracked flint (54 pieces) apparently clustering at the south western margins of the surveyed area. A diffuse scattering of post medieval pottery (46 sherds) was also recorded. Together these may indicate the former presence of a post medieval iron working site within the vicinity of the proposed road. A confidence rating of 2 is considered appropriate for the potential significance of these scatters.

4.0 **SUMMARY**

- 4.1 This site is not likely to represent a major constraint on the proposed bypass, but further evaluation of the nature, extent and quality of survival of remains should be carried out prior to construction. Areas of negative evidence may also require trenching to verify the absence of archaeological features.
- 4.2 Other areas of cultivated land were intended to be surveyed, but due to denial of access and the advance state of the crop in some cases, this was not possible. These areas should be evaluated when either access is negotiated or after the next harvest.



Based upon the Ordnance Survey Map with the permission of the Controller of H.M. Stationary Office. © Crown Copyright Licence number:- 186724



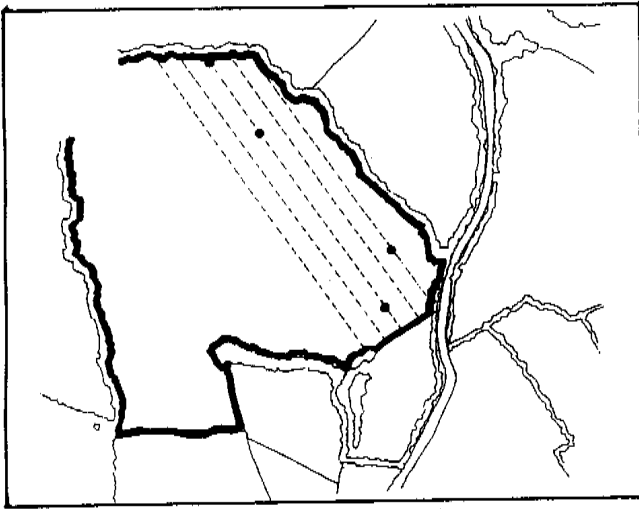
KEY  Field surveyed

 Line of Published Scheme

**Artefact Scatters:
Location of Field Surveyed**

Scale 1: 25,000

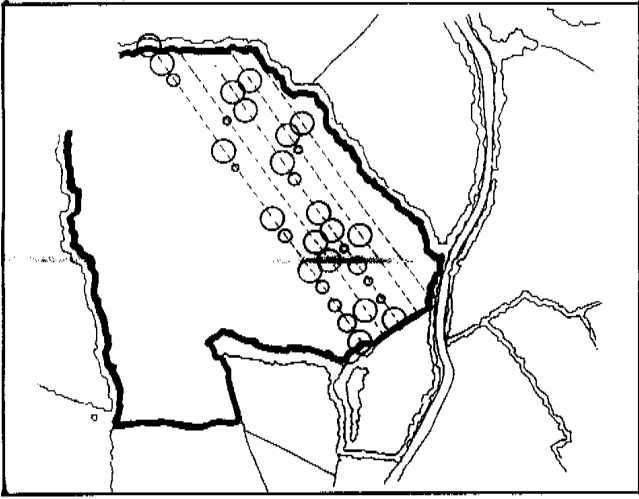
Report 6. Figure A3/1.



KEY

WORKED FLINT

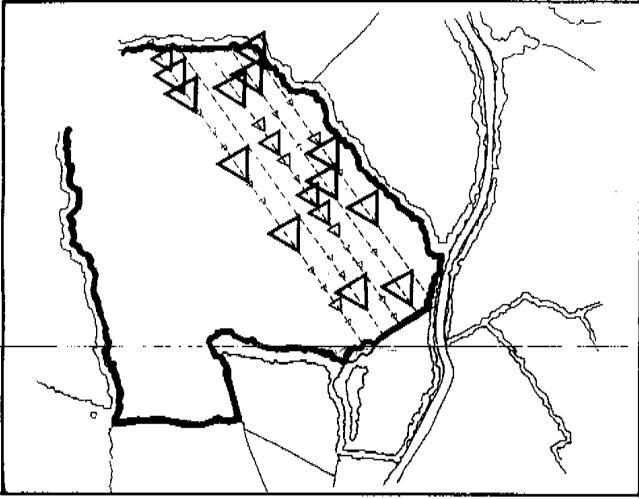
- 1 Piece •
- 2 Pieces ●
- 3 Pieces ●●
- 4 Pieces ●●●



KEY

BURNT FLINT

- 1 Piece ○
- 2 Pieces ○○
- 3 Pieces ○○○
- 4 Pieces ○○○○



KEY

SLAG

- 1 Piece △
- 2 Pieces △△
- 3 Pieces △△△
- 4 Pieces △△△△



Field 511:
Artefact Scatters
 Scale 1: 5,000
 Report 6. Figure A3/2

APPENDIX 4

ARCHAEOLOGICAL EVALUATION

GEOPHYSICAL SURVEY

September 1994

CONTENTS		Page
1.0	INTRODUCTION	34
2.0	METHOD	35
3.0	RESULTS	36
4.0	SUMMARY	38
 ANNEX A: TECHNICAL INFORMATION		 39
 FIGURES		
A4/1	Geophysical Survey Results: Key Plan	Following Page 38
A4/2 -A4/4	Geophysical Survey Results	Following Page 38

1.0 INTRODUCTION

1.1 A geophysical evaluation survey was undertaken by Geophysical Surveys of Bradford in November 1992, commissioned by Chris Blandford Associates (CBA) on behalf of the Department of Transport. This formed part of the study to assess the likely impact of the proposed A259 Hastings Eastern Bypass on the cultural heritage. The desktop report indicated activity of a varied archaeological nature and date.

1.2 Geophysical survey is a recognised non intrusive archaeological evaluation technique, and geophysical methods such as gradiometry are particularly suited to pasture where traditional archaeological prospection techniques are inappropriate. It was anticipated that the magnetic data would help identify individual features of archaeological interest along the proposed route.

2.0 METHOD

- 2.1 Magnetic readings were logged at 0.5 m intervals along one axis in 1 m traverses giving 800 readings per 20 m x 20 m grid, unless otherwise stated.
- 2.2 The location of individual transects surveyed can be seen in figures A4/2-4. The results of each transect are discussed from west to east within each figure. It should be noted that the numbering of transects are not consecutive from west to east. Numbers were allocated to individual landowners and where more than one transect was undertaken within a landowner area, a letter was added to the number; eg 89A and 89B.
- 2.3 The figures only illustrate anomalies of possible archaeological significance. The more detailed result plots from which these are derived are not included here but a copy of the archive has been deposited with the County Archaeologist.
- 2.4 Some areas were visited but were found to be unsuitable for gradiometer survey. Where appropriate the details of these areas are given in the text.

3.0 RESULTS

3.1 The results from each area have been displayed in dot density and X-Y formats within the archive. The display formats are discussed in Annex A. Both the data displays and the relevant interpretation diagrams for each transect were produced at a scale of 1:500 to allow exact measurements to be obtained and are lodged in the archive.

3.2 General Considerations

3.2.1 Ground conditions varied considerably along the route of the road and, where appropriate, are mentioned in the discussion of results. In some areas the magnetic response was dominated by modern ferrous material. This disrupted any archaeological response, although archaeological features may still be found intact, even though they cannot be detected using a gradiometer.

3.2.2 The gradiometer survey corridor was 20 m wide. Interpreting the data from such a narrow survey area is difficult, as it is often hard to identify a true background upon which anomalous readings can be identified. Therefore, the interpretation of many anomalies has to be tentative. In this report, unless noted otherwise, the linear anomalies are thought to be the result of ditch type features.

3.3 Analysis of Results

Results are discussed by transect from west to east and are divided by figure number. Individual transect numbers are not sequential. Transect numbers appear in bold.

3.3.1 *Figure A4/2*

56: The data from this small survey, in a field that was overgrown with grass and weeds, was dominated by ferrous responses. This was the product of a buried pipe and other ferrous debris. Although some possible archaeological anomalies have been identified, it is likely that they are also associated with ferrous material, conceivably buried at some depth.

3.3.2 *Figure A4/3*

89A: No anomalies of archaeological interest were noted in this transect.

89B: The data set in this transect was very quiet. However, a couple of weak anomalies of some archaeological potential were identified.

89C: This data set contained some anomalies of possible archaeological interest. However, the most obvious anomalies were associated with former agricultural practices. Occasional ferrous anomalies were also present.

3.3.3 *Figure A4/4*

105: A few weak anomalies of possible archaeological interest have been noted in this data set. The data was generally quiet with the occasional ferrous type response.

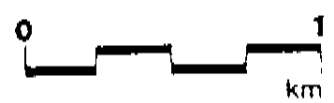
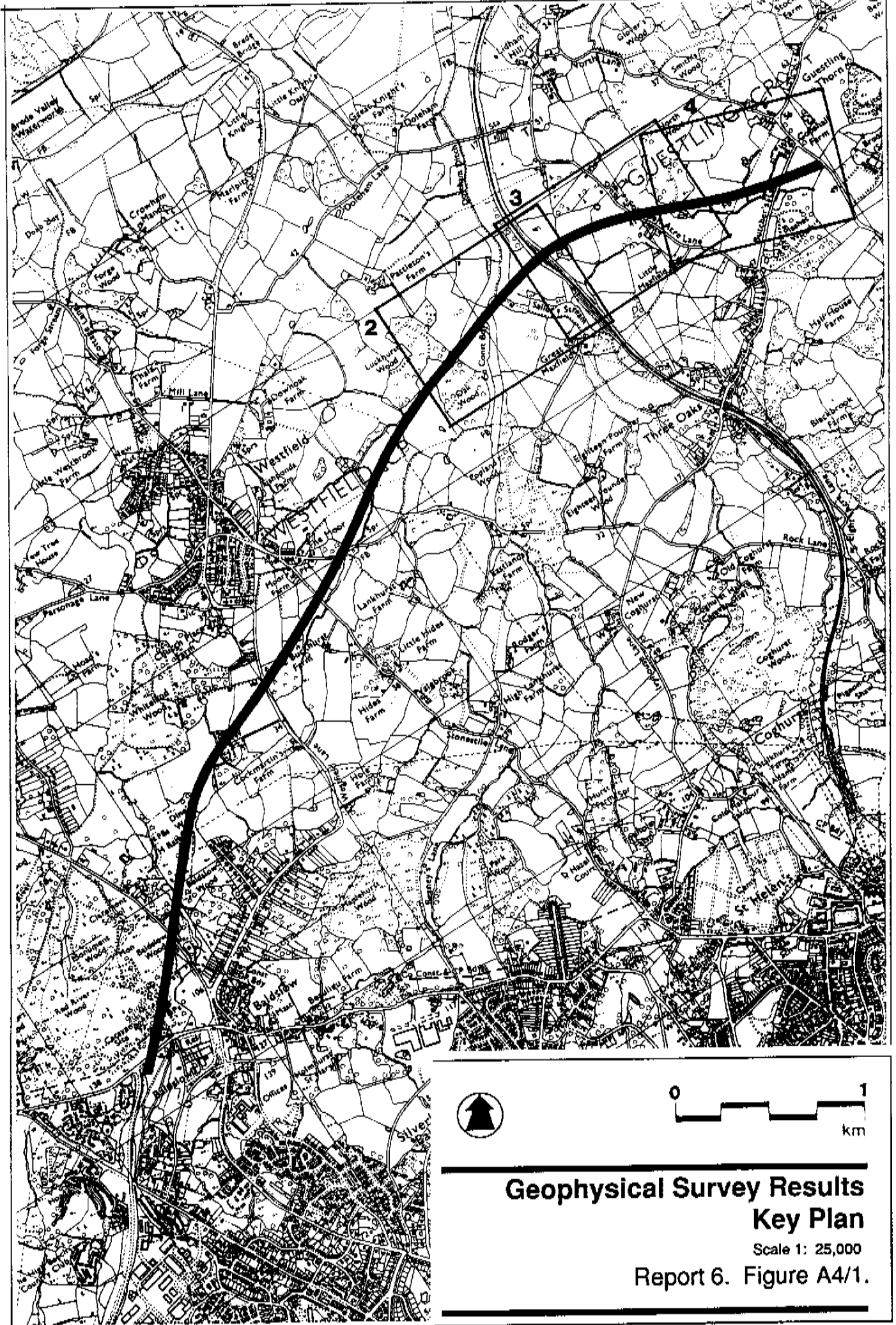
87A: This area was magnetically quiet. A minor area of disturbance can be seen in the eastern part of the survey. It is thought that this is likely to be due to dumping of magnetic material.

87B: This small survey area, 40 m in length, provided evidence for a number of archaeological anomalies. It is suggested that a series of ditches are present in this area.

4.0 SUMMARY

4.1 Although no areas containing dense concentrations of archaeological type anomalies have been surveyed, a few anomalies of archaeological potential have been noted. In particular transects 89B, 89C and 87B demonstrate anomalies which could be interpreted as ditches and pits.

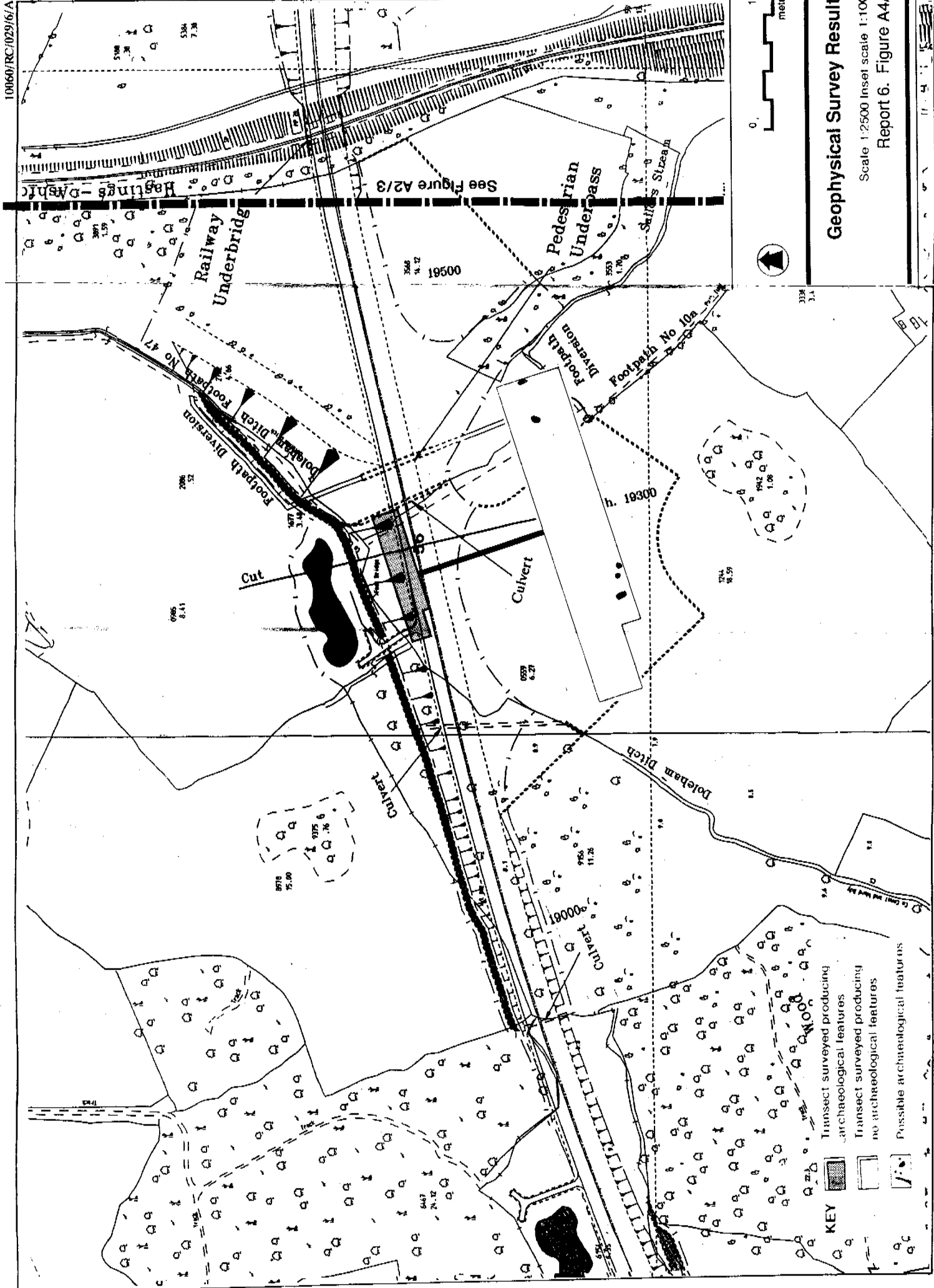
4.2 These features are not likely to represent a major constraint on the proposed bypass, but further evaluation of the nature, extent and quality of survival of remains should be carried out prior to construction, particularly when this information is added to that revealed in the desktop study and other field evaluation techniques.



Geophysical Survey Results Key Plan

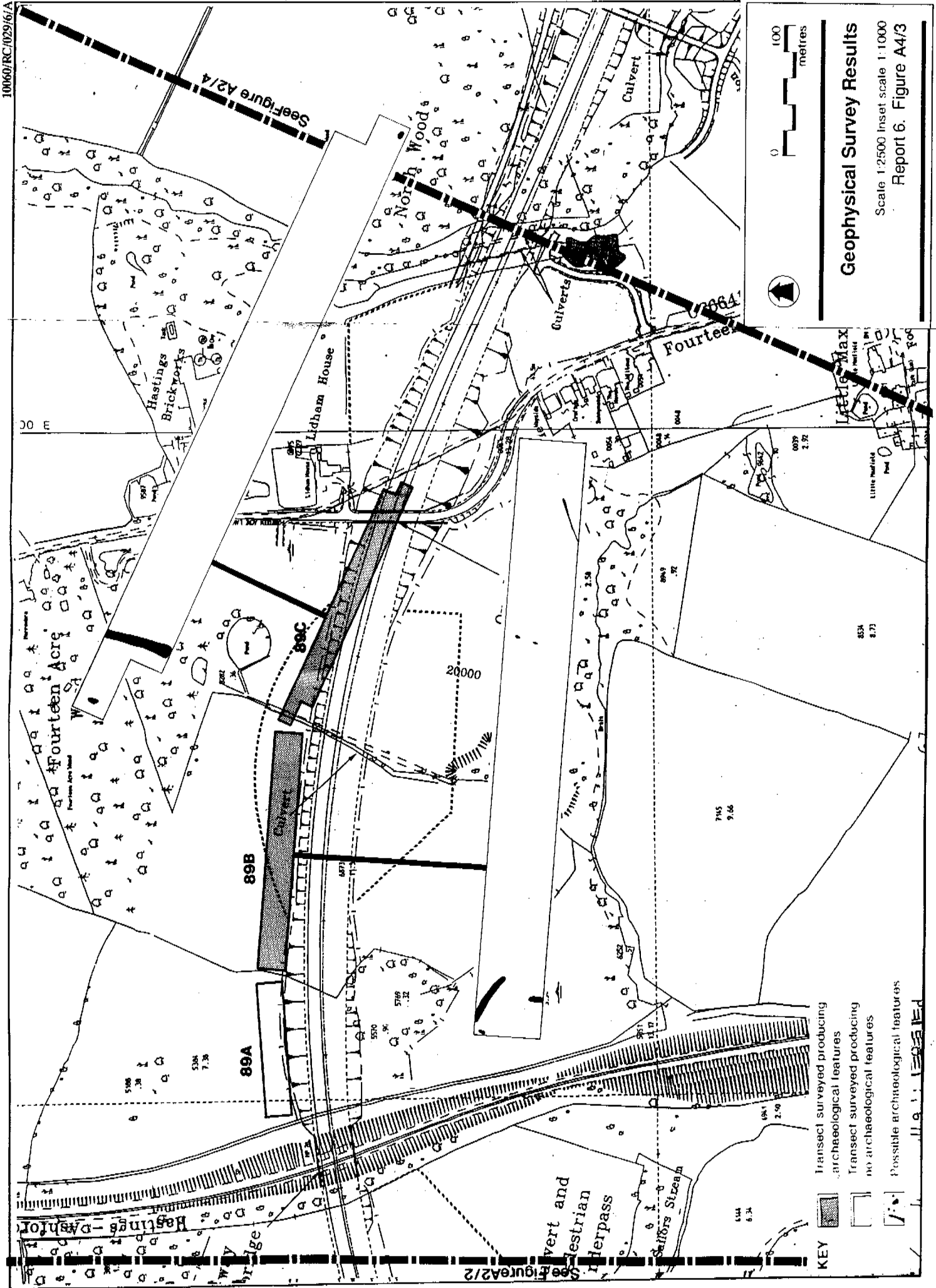
Scale 1: 25,000

Report 6. Figure A4/1.



Geophysical Survey Results
 Scale 1:2500 inset scale 1:1000
 Report 6, Figure A4/2

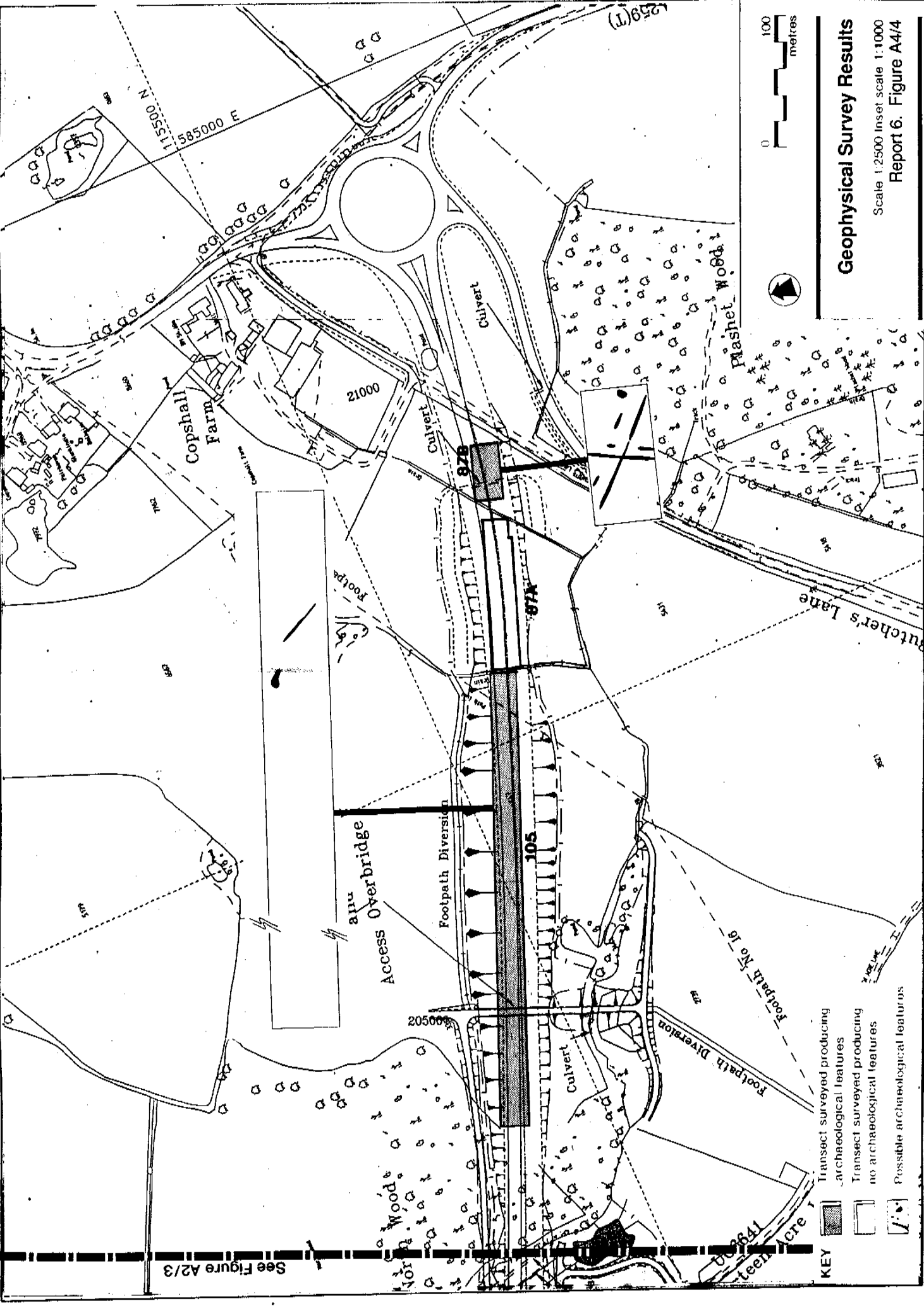
- KEY**
- Transsect surveyed producing archaeological features
 - Transsect surveyed producing no archaeological features
 - Possible archaeological features






Geophysical Survey Results
 Scale 1:2500 Inset scale 1:1000
 Report 6. Figure A4/3

- KEY**
- Transect surveyed producing archaeological features
 - Transect surveyed producing no archaeological features
 - Possible archaeological features

Fig. 1.1. 10060/RC/029/6/A



Geophysical Survey Results
 Scale 1:2500 Inset scale 1:1000
 Report 6. Figure A4/4

- KEY**
-  Transect surveyed producing archaeological features
 -  Transect surveyed producing no archaeological features
 -  Possible archaeological features

1.0 **TECHNICAL INFORMATION**

1.1 The following is a description of the equipment and display formats used in Geophysical Surveys of Bradford reports. It should be emphasised that whilst all of the display options are regularly used, the diagrams produced in the final reports are the most suitable to illustrate the data from each site. The choice of diagrams results from the experience and knowledge of the staff of Geophysical Surveys of Bradford.

1.2 **Instrumentation**

Fluxgate Gradiometer - Geoscan FM36

1.2.1 This instrument comprises of two fluxgates mounted vertically apart, at a distance of 500mm. The gradiometer is carried by hand, with the bottom sensor approximately 100-300mm from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is conventionally measured in nanoTesla (nT) or gamma. The fluxgate gradiometer suppresses any diurnal or regional effects. Generally features up to one metre deep may be detected by this method.

Resistance Meter - Geoscan RM4 or RM15

1.2.2 This measures the electrical resistance of the earth, using a system of four electrodes (two current and two potential.) Depending on the arrangement of these electrodes an exact measurement of a specific volume of earth may be acquired. This resistance value may then be used to calculate the earth resistivity. The "Twin Probe" arrangement involves the pairing of electrodes (one current and one potential) with one pair remaining in a fixed position, whilst the other measures the resistance variations across a fixed grid. The resistance is measured in Ohms and the calculated resistivity is in Ohm-metres. The resistance method as used for area survey has a depth resolution of approximately 0.75m, although the nature of the overburden and underlying geology will cause variations in this generality. The technique can be adapted to sample greater depths of earth and can therefore be used to produce vertical "pseudo sections".

Magnetic Susceptibility

1.2.3 Variations in the magnetic susceptibility of subsoils and topsoils occur naturally, but greater enhanced susceptibility can also be a product of increased human/anthropogenic activity. This phenomenon of susceptibility enhancement can therefore be used to provide information about the "level of archaeological activity" associated with a site. It can also be used in a predictive manner to ascertain

the suitability of a site for a magnetic survey. The instrument employed for measuring this phenomenon is either a field coil or a laboratory based susceptibility bridge. For the latter 50g soil samples are collected in the field.

1.3 Display Options

- 1.3.1 The following is a description of the display options used. Unless specifically mentioned in the text, it may be assumed that no filtering or smoothing has been used to enhance the data. For any particular report a limited number of display modes may be used.

X-Y Plot

- 1.3.2 This involves a line representation of the data. Each successive row of data is equally incremented in the Y axis, to produce a stacked profile effect. This display may incorporate a hidden-line removal algorithm, which blocks out lines behind the major peaks and can aid interpretation. Advantages of this type of display are that it allows the full range of the data to be viewed and shows the shape of the individual anomalies. Results are produced on a flatbed plotter.

Dot-Density

- 1.3.3 In this display, minimum and maximum cut-off levels are chosen. Any value that is below the minimum cut-off value will appear white, whilst any value above the maximum cut-off value will appear black. Any value that lies between these two cut-off levels will have a specified number of dots depending on the relative position between the two levels. The focus of the display may be changed using different levels and a contrast factor (C.F.). Usually the C.F. = 1, producing a linear scale between the cut-off levels. Assessing a lower than normal reading involves the use of an inverse plot. This plot simply reverses the minimum and maximum values, resulting in the lower values being presented by more dots. In either representation, each reading is allocated a unique area dependent on its position on the survey grid, within which numbers of dots are randomly placed. The main limitation of this display method is that multiple plots have to be produced in order to view the whole range of the data. It is also difficult to gauge the true strength of any anomaly without looking at the raw data values. This display is much favoured for producing plans of sites, where positioning of the anomalies and features is important.

Contour

- 1.3.4 This display joins data points of an equal value by a contour line. Displays are generated on the computer screen or plotted directly on a flatbed plotter / inkjet printer.

3-D Mesh

- 1.3.5 This display joins the data values in both the X and Y axis. The display may be changed by altering the horizontal viewing angle and the angle above the plane. The output may be either colour or black and white. A hidden line option is occasionally used (see 1.4.2 above).

Grey-Scale

- 1.3.6 This format divides a given range of readings into a set number of classes. These classes have a predefined arrangement of dots or shade of grey, the intensity increasing with value. This gives an appearance of a toned or grey scale.
- 1.3.7 Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. While colour plots can look impressive and can be used to highlight certain anomalies, grey-scales tend to be more informative.