

**Archaeological Evaluation  
of Land off Habberley  
Road, Wribbenhall,  
Bewdley, Worcestershire.**

Birmingham University Field Archaeology Unit  
**Project No. 697.02**  
May 2000

**Archaeological Evaluation of Land off  
Habberley Road, Wribbenhall,  
Bewdley, Worcestershire**

NGR SO 797 760

Site Code: WSM 29225

By

Laurence Jones

Client:

David Wilson Homes Limited  
Wilson House  
12-13 Roman Way Business Centre  
Droitwich  
Worcestershire  
WR 9 9AJ

*For further information please contact:*  
Simon Boreux, Iain Ferris or Gwilym Hughes (Directors)  
Birmingham University Field Archaeology Unit  
The University of Birmingham  
Edgbaston  
Birmingham B15 2TT  
Tel: 0121 414 5513  
Fax: 0121 414 5516  
E-Mail: BUFAU@bham.ac.uk  
Web Address: <http://www.bufau.bham.ac.uk>

**Archaeological Evaluation of Land off Habberley Road, Wribbehall, near  
Bewdley, Worcestershire.  
WSM 29225**

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## **1.0 Non-technical summary**

*Seven archaeological trial trenches were excavated within an area of 3.5 hectares of pasture and garden land proposed for development at Habberley Road, Wribbenhall, near Bewdley, Worcestershire (NGR SO 7970 7600, Figs. 1 & 2). The purpose of the trenches was to test for the survival of significant archaeological remains within the area, and to provide an indication of the importance, date and extent of such remains. Previous archaeological work on the site - which comprised a desk-top assessment of existing archaeological knowledge, topographic and geophysical survey - indicated the site had been a mixture of arable or parkland since the medieval period. Earthworks including a low mound and a northwest-southeast aligned linear ditch were located and plotted and a hachure survey was produced. These earthworks were deemed to be of probably mainly low archaeological potential, perhaps early-20<sup>th</sup> century in date. However, the possibility remained that the mound was of an earlier date. The geophysical survey failed to identify any distinct clearly archaeological anomalies, however several anomalies were discernable which may have been of possible archaeological origin.*

*Four of the trial trenches were targeted on possible geophysical anomalies and the remainder on earthworks and apparently archaeologically 'blank' areas. The linear earthwork ditch proved to be of early-20<sup>th</sup> century date, probably a field boundary. Several shallow northeast-southwest aligned ditches and gullies, one of which coincided with a geophysical anomaly, were of probable post-medieval date. The only other archaeological feature recorded was a shallow undated pit. The low mound could not be adequately evaluated due to the presence of mature trees with preservation orders attached to them. However, there were no archaeological features in nearby trenches. The irregular nature of the natural sandstone bedrock here may suggest the mound could be a natural feature, perhaps a rocky outcrop. However, the possibility that the mound is of archaeological origin cannot be discounted. The mound and surrounding mature trees will be preserved in situ according to current development plans.*

## **2.0 Introduction**

This report describes the results of an archaeological evaluation by means of trial trenching of land off Habberley Road, Wribbenhall, near Bewdley, Worcestershire. The work followed a desk based assessment (BUFAU 2000b), topographic survey (BUFAU 2000c) and geophysical survey (GSB 2000) of the site. The evaluation was commissioned by David Wilson Homes Limited and was undertaken in May 2000 by Birmingham University Field Archaeology Unit in accordance with a specification prepared by BUFAU (BUFAU 2000a) based on a brief by the Planning Advisory Section Worcestershire Archaeological Service, Worcestershire County Council (WCC 2000).

The specification was approved by the Planning Advisory Section, Worcestershire Archaeological Service, Worcestershire County Council. On 9<sup>th</sup> May 2000 a site visit was made by Suzanne Hartley, of the Planning Advisory Section, for the purpose of monitoring the fieldwork.

## *2.1 Planning background*

The evaluation and the preceding programme of archaeological work was carried out in advance of proposed development of the site, all archaeological work being carried out on behalf of David Wilson Homes Limited. An application for development has been made (ref: WF/97/2000). The proposed development may affect an archaeological site registered on the County Sites and Monuments Record (WSM 29181). Worcestershire County Council was advised that further information was needed before a decision could be made on whether to grant planning permission. The information was to be obtained by means of an archaeological evaluation as required by PPG 16 (DoE 1990).

## *2.2 Site location and description*

The site is centred on NGR SO 79707600 off Habberley Road Wribbenhall, to the northeast of Bewdley (Figs. 1 and 2), across the River Severn. The site, comprising 3.5 hectares, is bounded along its south-eastern edge by Habberley Road and by Trimpley Lane in the north-east. The western and north-western sides are bounded by residential development. The site consists of a large gently undulating field under pasture and former gardens occupying the grounds of Warstone House and Springhill Farm. The underlying geology is sandstone overlain by sandy and coarse loamy soils.

## **3.0 Archaeological background**

Prior to the evaluation, which is the subject of this report, a desk-based assessment (BUFAU 2000b) of the site was carried out followed by a monument survey (BUFAU 2000c), and geophysical survey (GSB 2000).

### *3.1 Desk-based assessment*

The desk-based assessment, carried out by BUFAU, highlighted a number of archaeological features and findspots in the landscape surrounding the site (figures with WSM prefix refer to Worcestershire Sites and Monuments Record Numbers). There is evidence for activity from the Mesolithic period to the modern day. Flints from the Mesolithic period have been found (WSM 15308/9, 15311) north-west of the site near Lightmarsh Farm. Findspot 15308 produced finds of Mesolithic, Roman and Medieval date. Mesolithic flints have also been found at Hoarstone Farm, which is also to the north-west of the site, and at findspot 15300, in the same field as a Roman enclosure.

Several findspots of Roman pottery have been identified in the surrounding landscape. These were at sites all located to the north and north-west of the site (WSM 15302/5/6/8). Metal-detecting on Crundalls Lane near Hoarstone Farm produced a Roman coin from the time of Constantine (346-354 AD) and a ring (WSM 5446). WSM 15300 records the existence of a Roman enclosed settlement and two Roman ovens at Hoarstone Farm.

Several mounds have been identified in Wribbenhall and its vicinity. Only one of these (WSM 12015), located north-east of Crundalls Farm and north-west of the site, has been dated and this to the medieval period. Other mounds in the area have not been excavated or dated. Two of these (WSM 4106/7) lie south-east of Hoarstone Farm, which is situated to the north of the site. WSM 4106 is described in the SMR records as consisting of two

small mounds, possibly originally just one, about 20 feet high, the south-western end being revetted by a low wall of cut sandstone blocks. WSM 4107 is described as being small, steep-sided, about 20 feet in height, and situated on a rising outcrop of sandstone. Another undated mound (WSM 4108) lies south-west of Hoarstone Farm and is described as small and oval-shaped and sited on gradually rising natural ground. An outcrop of natural sandstone appears to be vertically-faced on the northern, eastern and southern sides of the mound. The presence of these mounds has led to the speculation that they might belong to a prehistoric barrow cemetery but this has not been proven. Equally, the mounds may be Medieval. A mound also lies east of the modern church at Wribbenhall (WSM 12650), which lies south-west of the site.

An early medieval cremation was found between these mound sites (WSM 15302), and has been carbon-dated to the period AD 663-773. This find may lend credence to the possibility of the nearby mounds being of Medieval date rather than prehistoric. Jackson, R.A. (1996) speculated that because the cremation was considered to be pagan, 'possibly contemporary, pagan burial sites may be represented by the undated mounds in the area...'

Finds of Medieval pottery have been recovered from a field (WSM 15308) to the north-west of the site.

Finds from the post-Medieval period have been uncovered in a field lying about 100m from the northern corner of the site (WSM 15305). Other post-medieval finds (WSM 15306, 15308/9) have been found to the north-west, in the same areas as Mesolithic and Roman findspots. Post-Medieval fishponds also exist to the south-east of Wribbenhall (WSM 8045). Most of the post-Medieval finds probably relate to the manuring of arable land.

It was thought possible that any archaeological sites associated with the finds may have continued into or impinged on the site itself.

The site appears to have been a mixture of arable or parkland since the Medieval period. Potential earthworks referred to in the Brief prepared by Worcestershire County Council (WCC 2000), including a low mound, were located during a site visit and were deemed to be of probable low archaeological potential, perhaps early- 20<sup>th</sup> century in date. However, the possibility remained that they were of an earlier date.

### *3.2 Monument Survey*

The monument survey plotted several earthworks (Fig.2) including a linear bank and ditch, thought to be of recent date and a low mound 14m x 12m and less than 0.90m high. A hachure survey of these features was produced.

### *3.3 Geophysical Survey*

A gradiometer survey of the site was carried out by GSB Prospection (GSB 2000, Fig. 2). The survey comprised an initial scan of the whole site, along traverses spaced at intervals of approximately 10m. Areas producing significant variations to the background readings were to be marked out for subsequent detailed survey. Scanning revealed high levels of background noise over much of the site. Surface obstructions such as trees and dense

vegetation limited the area available for survey. Detailed survey was undertaken over most of the accessible land in the main field.

The detailed survey failed to identify any distinct clearly archaeological anomalies. However, several short linear and pit-type anomalies and weaker trends were discernable. Lack of a coherent pattern combined with high background noise made an archaeological interpretation tentative. Natural or modern origins may be plausible alternative interpretations of these anomalies. The results of this survey are presented in a simplified version (Fig.2), showing anomalies thought most likely to be of archaeological origin. A more detailed version can be found in the GSB report (see Appendix).

## **4.0 Aims and methods**

### *4.1 Aims*

The objectives of the archaeological evaluation were to contribute to an understanding of the nature, extent, preservation and significance of archaeological remains within the area proposed for development, to permit the formulation of a mitigation strategy, if appropriate.

### *4.2 Methods*

A total of 7 machine-excavated trial trenches, 2 x 25m, 2 x 15m and 3 x 10m all 1.8m wide, were excavated. These trenches were positioned to investigate geophysical anomalies and to examine blank areas. The locations of these trenches were agreed in advance with Worcestershire County Council. The positions of the trenches were surveyed in using a Total Station EDM. The trenches were then mechanically opened using a JCB excavator fitted with a toothless ditching bucket and operating under constant archaeological supervision.

For each trench, turf and modern topsoil/overburden was removed by machine to expose the natural subsoil or bedrock surface and the uppermost horizon of archaeological deposits. The surface or deposits so exposed were hand cleaned where necessary, and a representative sample of all features present was hand-excavated.

Subsequent sample excavation was carried out by hand. Discrete archaeological features, such as pits, were half sectioned. A sufficient length of linear features, such as ditches, was excavated to determine their nature, profile and, where possible, date and function. All deposits encountered were described fully on individual *pro-forma* context and feature recording cards. A drawn record was made of all features, at scales of 1:50, 1:20 or 1:10 in plan and 1:20 or 1:10 in profile, as appropriate. A full monochrome print and colour slide photographic record was maintained throughout. Soil samples of 10, 15 and 20 litres were taken from appropriate contexts for subsequent flotation to recover charred plant remains. Finds were retained by individual context.



## 5.0 Results of Trial Trenching

### Trench 1

This trench was 25m long and 1.8m wide, aligned east-west. The trench was located to investigate three north-south aligned linear geophysical anomalies. The natural bedrock (1001) was a fractured red sandstone, rising slightly towards the middle of the trench (42.15-42.65m AOD). This was sealed by 0.40-0.70m of topsoil (1000). No archaeological features were present.

### Trench 2

The trench was 10m long and 1.8m wide, orientated northeast-southwest. The trench was positioned as near to the low mound, plotted by the previous monument survey, as possible. The mound itself and surrounding trees is to be preserved from the proposed development. The natural bedrock (2001) was a fractured red sandstone sloping to the south (44.20-45.01m AOD), disturbed to the southwest by tree roots. This was overlain by 0.50m of topsoil (2000). No archaeological features were present.

### Trench 3

This trench was 10m long and 1.8m wide, aligned northeast-southwest. The trench was positioned to investigate a linear northwest-southeast aligned geophysical anomaly. The natural bedrock (3001) was a fractured red sandstone sloping slightly to the east (43.01-43.35m AOD). This was overlain by 0.40-0.70m of topsoil (3000). No archaeological features were present.

### Trench 4 (Fig.3)

The trench was 10m long and 1.8m wide, orientated north-south. This trench was designed to investigate a linear east-west orientated geophysical anomaly. The natural bedrock (4003) was a fractured red sandstone (45.05m AOD). This was sealed by 0.30m of topsoil (4002). The topsoil was cut by an oval pit (F4) which extended beyond the north edge of the trench, 1.20m wide and 0.40m deep, with steep sides and a rounded base. It was filled with an orange sand (4001). This was overlain by an upper topsoil and turf layer, 0.20m deep (4000).

### Trench 5 (Fig.3)

This trench was 25m long and 1.8m wide, aligned north-south. The trench was located to examine an east-west aligned linear geophysical anomaly. The natural subsoil (5002) was a reddish brown sand (37.20-37.94m AOD), sloping down to the south. The subsoil was cut by several narrow northeast-southwest orientated ditches and gullies.

At the south end of the trench was a linear ditch (F5), 1.80m wide and 0.25m deep. It had a gently sloping north side and a steeply sloping south side with a rounded base and it was filled with topsoil (5000). Immediately to the north of F5 was a linear ditch (F6), 0.92m wide and 0.28m deep, with steep sides and a narrow pointed base. It was filled with a dark brown silty sand (5001). Further to the north was a linear ditch F7, 2.06m wide and 0.25m deep. It had a gently sloping south side and a steeply sloping north side with a flat base.

Two deeper linear gullies (F8 and F9) were present within F7. Gully F8 was 0.35m wide and 0.20m deep, with steep sides and a flat base. Gully F9 was 0.50m wide and 0.15m deep with steep sides and a rounded base. Both F8 and F9 were filled with yellow sands

(5005 and 5007). These gully fills were then sealed by the primary fills of ditch F7 (5004 and 5006). Both fills were brown silty sands, up to 0.22m deep. Fill 5004 contained two fragments of plain clay pipe stem and 5006 contained a fragment of post-Medieval or modern tile. These contexts were overlain by a final fill of yellowish brown silty sand (5003), 0.24m deep. The subsoil was overlain by topsoil (5000), 0.44-0.65m deep.

#### Trench 6 (Fig.4)

The trench was 15m long and 1.8m wide and was orientated northeast-southwest. It was located in a fairly 'blank' area, although it did intersect a small pit-like geophysical anomaly. The natural (6001) was a reddish brown sandy subsoil with outcrops of fractured red sandstone (42.10m AOD). This was cut by a linear gully (F1), 0.39m wide and 0.14m deep, aligned northeast-southwest. It had steep sides and a rounded base and was filled with a greyish brown silty sand (6002). This was sealed by topsoil (6000), 0.38-50m deep, containing sherds of post-Medieval and modern pottery and fragments of tile.

#### Trench 7 (Fig.4)

This trench was 15m long and 1.8m wide and was aligned northeast-southwest. It was located to examine a slight bank and ditch earthwork plotted by the previous monument survey. The natural (7005) was a fractured red sandstone with reddish brown sandy subsoil (42.71m AOD). This was cut by a linear ditch (F2), 0.80m wide and 0.22m deep, aligned northeast-southwest. It had steep sides and a rounded base and was filled with a greyish brown silty sand (7002). Ditch F2 was on a similar alignment and had a similar fill to gully F1, Trench 6. This was sealed by topsoil (7001), 0.25-0.40m deep, containing Modern pottery and bottle glass.

Ditch F2 and topsoil layer 7001 were cut by a linear ditch (F3), 2.45m wide and 1.00m deep, orientated northwest-southeast. It had steep sides and a rounded base and was filled with a reddish brown sand (7004), 0.65m deep, containing fragments of sandstone and modern pottery, tile, glass and an iron nail. This was sealed by a final fill of dark brown sandy silt (7003), 0.35m deep, containing modern pottery. This was overlain by an upper topsoil and turf layer (7000), 0.15m deep.

### **6.0 The finds**

The only finds recovered not of modern date were two clay pipe stem fragments (5004, F8; Trench 5) possibly of 18<sup>th</sup>-19<sup>th</sup> century date and a sherd of possible 17<sup>th</sup>-century pottery (6000, Trench 6) from the topsoil.

Trench	Context	Feature	Spot Date	Pottery (No.)	Flint (No.)	Glass (No.)	Clay Pipe (No.)	Iron (No.)	Other (No.)
5	5004	F8	Post-Med				2		
5	5006	F9	Post-Med/ Modern		1				
6	6000		Modern	7	3				
7	7001		Modern	2		1			
7	7003	F3	Modern	5					
7	7004	F3	Modern	81	1	2		1	6

**Table 1: Finds Quantification**

## 7.0 Discussion

The evaluation identified several linear ditches and gullies and a pit. With the possible exception of Ditch F7, Trench 5 these features did not correspond with the slight geophysical anomalies tentatively identified as possibly of archaeological origin. No archaeological evidence of these anomalies was found. It is likely that the geophysical anomalies reflect variations in the underlying geology of the site rather than the presence of archaeological features.

The pit (F4, Trench 4) at the north end of the site which was cut through the lower topsoil is likely to be of modern date. The ditch (F3, Trench 7) associated with the northwest-southeast aligned linear earthwork was shown to be of modern, probably early-20<sup>th</sup> century date, possibly a field boundary.

An earlier northeast-southwest aligned ditch (F1, Trench 6 and F2, Trench 7) at right-angles to F3 was undated, although post-Medieval pottery was recovered from the topsoil above F2. To the south linear gullies associated with another northeast-southwest orientated ditch (F7, Trench 5) were of post-Medieval date. Two similarly aligned ditches (F5 and F6, Trench 5) to the south were undated, although ditch F5 was filled with topsoil presumably of post-Medieval/ modern origin. These linear ditches and gullies are of uncertain function, possibly post-Medieval boundaries and/ or hedge-lines.

No evidence of archaeological features was identified in Trench 2 close to the low mound. As it was not possible to excavate a trench across the mound the possibility remains that it could be of archaeological origin. An alternative interpretation is that the mound may be an outcrop of sandstone bedrock.

## 8.0 Assessment of Significance

The archaeological features investigated during the evaluation within the proposed development site are considered of low archaeological significance. However, it is

possible that the low mound mentioned above, to be preserved as part of the proposed development, may be archaeological importance.

## **9.0 Acknowledgements**

The fieldwork was supervised by Laurence Jones and was carried out with the assistance of Erica Macey, Edward Newton and Howell Roberts. The illustrations were prepared by John Halsted, Mark Breedon and Howell Roberts. The project was managed and the report edited by Iain Ferris. The project was monitored by Suzanne Hartley and Mike Glyde of the Planning Advisory Section, County Archaeological Service, Worcestershire County Council.

## **10.0 References**

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- Jackson, R.A. *et al.* 1996 'Archaeology on the Trimpley to Blackstone Aqueduct,' in *Transactions of the Worcestershire Archaeological Society*, Third Series, Vol.15, 1996, 93-126
- WCC 2000 *Brief for a programme of Archaeological Work at Land off Habberley Road, Bewdley, Worcestershire*. Planning Advisory Section, Worcestershire Archaeological Service, Worcestershire County Council

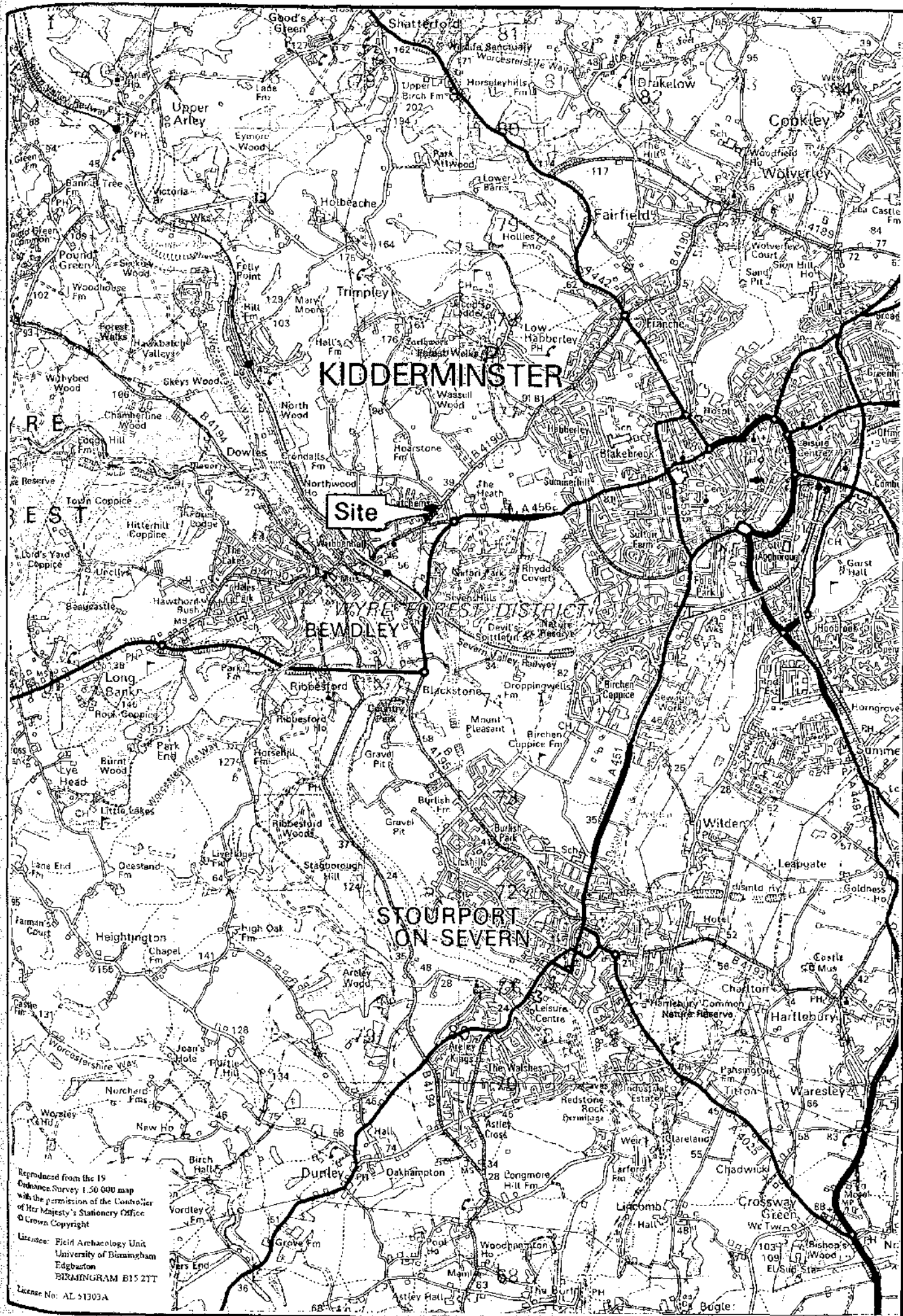


Fig.1

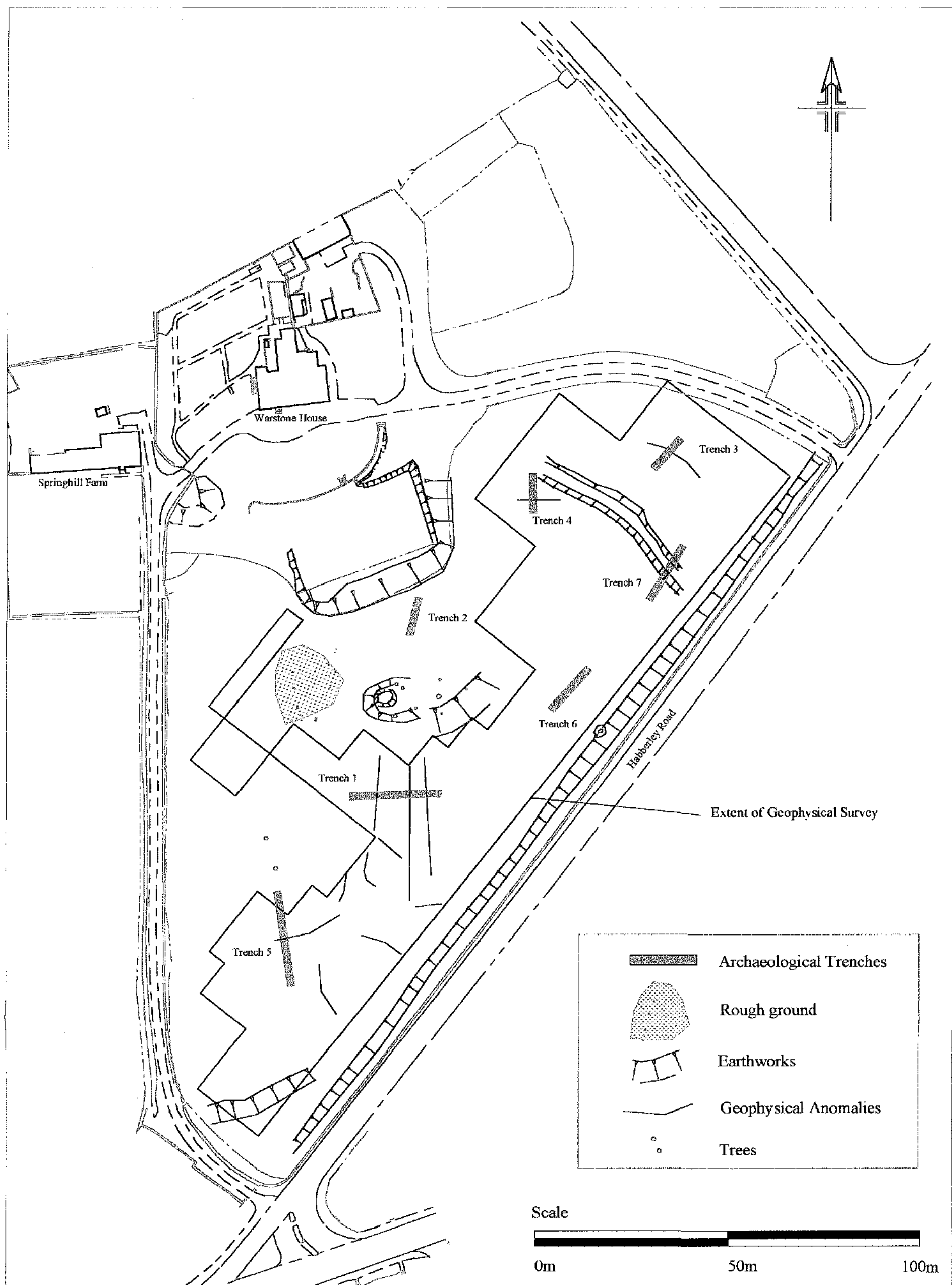
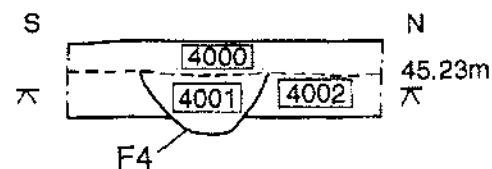
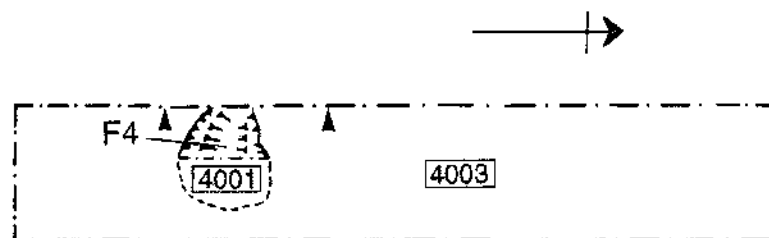
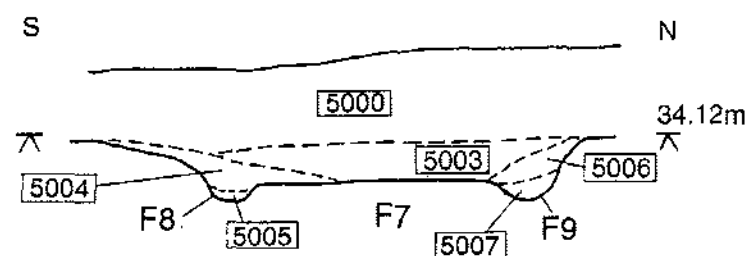
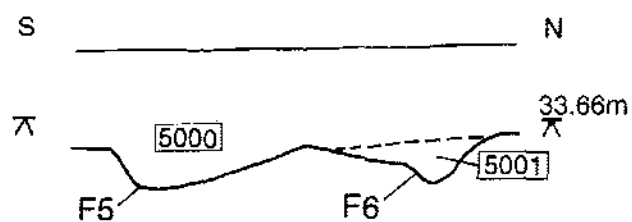
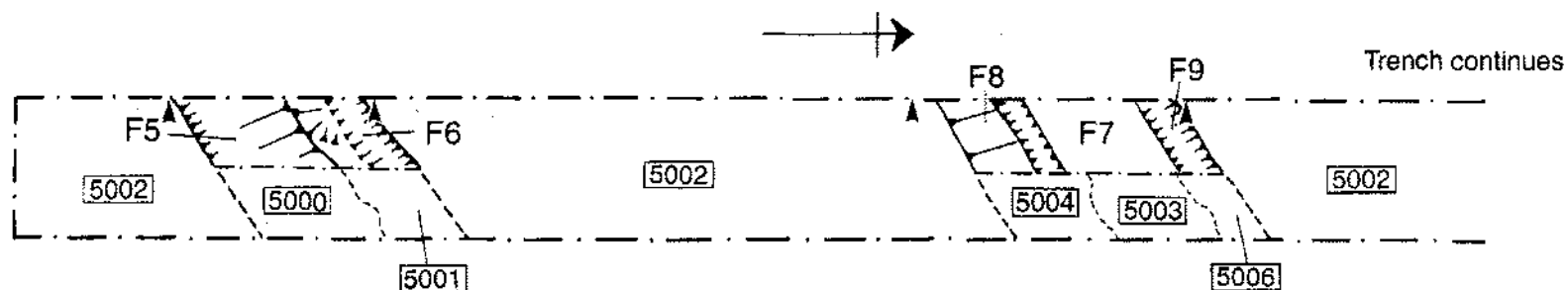


Fig. 2 - Trench location and extent of Geophysical survey

# TRENCH 4



# TRENCH 5

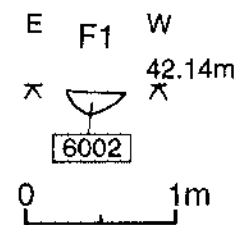
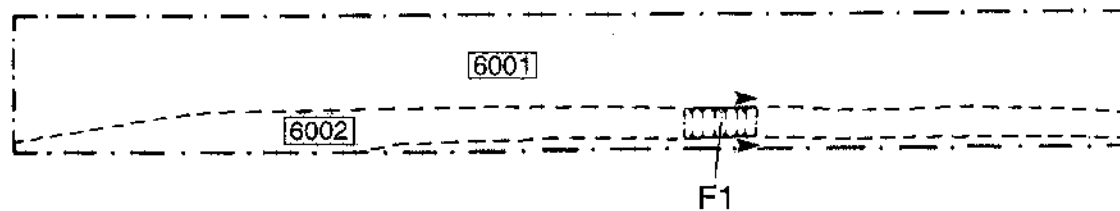


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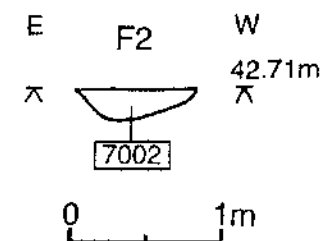
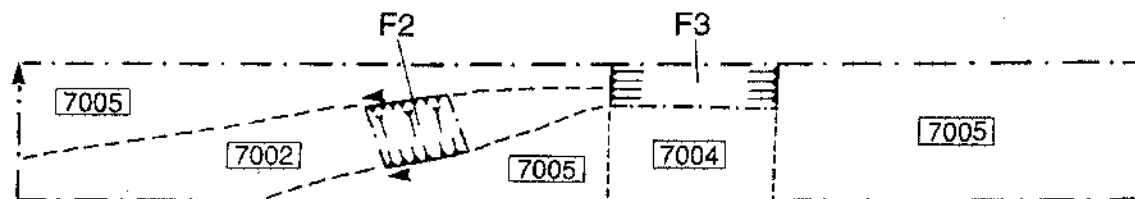
PLANS 0 4m

Fig.3

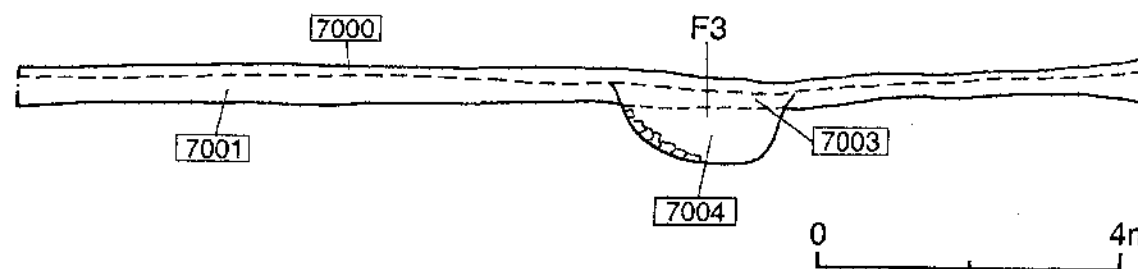
TRENCH 6



TRENCH 7



SW  
X



NE  
43.78m  
X



PLANS 0 4m

Fig.4



## *Appendix: Geophysical Survey*

**GSB**  
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Fax: (01274) 830212  
E-mail:  
[GSBPROSPECTION@cs.com](mailto:GSBPROSPECTION@cs.com)

**GEOPHYSICAL SURVEY  
REPORT 2000/46**

**Habberley Road  
BEWDLEY**

Client:

**B.U.F.A.U.**



## SITE SUMMARY SHEET

2000 / 46 Habberley Road, Bewdley

NGR: SO 7970 7600

### Location, topography and geology

The site is situated alongside Habberley Road on the eastern outskirts of Bewdley, approximately 2km west of Kidderminster, Worcestershire. The evaluation area occupies the grounds of Warstone House and Springhill Farm and comprises one large, gently undulating rough pasture field with areas of trees and dense vegetation, together with several smaller areas of former garden and paddock. The soils of the site comprise well drained sandy and coarse loamy soils over sandstone (SSIW, 1983).

### Archaeology

A number of spot finds and sites are noted within a 1km radius of the evaluation area varying in date from prehistoric to post-medieval periods. A low earthwork crosses the eastern part of the site, possibly indicating a former field boundary or hollow way. No other finds/sites are known to exist within the application area.

### Aims of Survey

Scanning and detailed gradiometry were undertaken with the aim of locating any archaeological features which may exist within the evaluation area. The work forms part of a wider assessment being carried out by *Birmingham University Field Archaeology Unit (BUFAU)* in advance of a proposed housing development.

### Summary of Results \*

Scanning revealed generally high levels of background noise across much of the site. No discrete archaeological type anomalies were observed, but several broad areas of increased response were noted as potential targets.

Several short linear/pit-type responses and weak trends have been detected by the detailed survey. However, the elevated background fluctuation and the lack of any coherent pattern to the anomalies makes an archaeological interpretation tentative. Natural or modern origins should also be considered.

\* It is essential that this summary is read in conjunction with the detailed results of the survey.

**SURVEY RESULTS**

2000 / 46 Habberley Road, Bewdley

**1. Survey Area**

- 1.1 All the accessible areas of the site were investigated by scanning and a thin of detailed survey was undertaken. The location of the survey areas is given in Figure 1 at a scale of 1:2000.
- 1.2 The survey grids were set out by *GSB Prospection* and tied in to existing field boundaries and station points (established by *BURAU*) using an EDM. Detailed tie in information has been lodged with the client.

**2. Display**

- 2.1 Figure 2 presents a greyscale of the whole detailed survey area, superimposed on a digital map at a scale of 1:1250. A summary interpretation at the same scale is provided in Figure 3.
- 2.2 The data are displayed as XY traces, dot density plots and digitised interpretations at 1:500 (Figures 4-7). For display at this scale, the survey area has been subdivided (Areas A and B).
- 2.3 The display formats referred to above are discussed in the *Technical Information* section at the end of the text and a complete list of figures precedes the diagrams.

**3. General Considerations - Complicating factors**

- 3.1 A proportion of the evaluation area was inaccessible due to the presence of trees and bushes. Elsewhere, thick clumps of weeds and nettles made it difficult to maintain the gradiometer in a vertical position (thereby producing spurious noise). While scanning was extended into these areas as far as possible, the ground cover effectively precluded detailed survey.

**4. Results of Scanning**

- 4.1 With gradiometers in scanning mode, the evaluation area was examined along traverses spaced at intervals of approximately 10m. During this operation, fluctuations in magnetic signal were observed on the instruments display panel. Any significant variations were investigated more closely to determine their likely origin and those anomalies considered to have archaeological potential were marked with cones for detailed recorded survey.
- 4.2 Relatively high levels of background fluctuation were encountered in the main field, particularly in the southern and eastern portions of the field. Some of the responses were clearly ferrous in nature, while the origin of others, particularly on the north-eastern boundary, were of uncertain origin and therefore targeted for detailed survey.
- 4.3 The smaller field in the north-eastern corner of the site was relatively quiet magnetically, with no archaeological targets identified.
- 4.4 The terraced lawns immediately to the south of Winstone House produced numerous small-scale ferrous responses. These can be attributed, in part, to the landscaping of the ground. No archaeological type anomalies were observed.

- 4.5 Severe magnetic disturbance was encountered in the garden to the north of Springhill Farm. This was produced by a caravan, garden furniture and other surface obstructions, and will have masked any responses from archaeological features, if present.
- 4.6 The remaining accessible areas (south of Springhill Farm and north-west of Warstone House) yielded numerous small-scale ferrous responses but no anomalies of archaeological potential.

## 5. Results of Detailed Survey

- 5.1 Detailed survey was undertaken in the main field and extended as far as practicable into all the accessible areas.
- 5.2 The levels of background noise are clearly visible, particularly in the X-Y traces and this has made it difficult to define and interpret anomalies of potential interest.
- 5.3 A number of pit-type anomalies and short linear responses have been highlighted as possibly archaeological; however, the lack of any clear pattern to them makes it difficult to formulate a precise interpretation. Many of these responses could equally be the product of natural variations in the soil/subsoil or more deeply buried ferrous debris.
- 5.4 Several linear and curving trends are noted. These could be archaeological, but the poor definition of the responses makes this interpretation tentative.
- 5.5 A linear ferrous anomaly extending across the northern half of the survey area has been produced by a pipe, while the ferrous noise along the eastern edge of the survey block is attributed to another pipe lying outside the survey area. The anomalies labelled (A) on the interpretation diagram reflect manhole covers.
- 5.6 A number of other ferrous anomalies have been highlighted, the majority of which are relatively small-scale. These are all assigned a modern origin, reflecting either surface or buried ferrous debris.

## 6. Conclusions

- 6.1 Scanning revealed generally high levels of background noise across much of the site, making it difficult to pinpoint individual anomalies of interest. Surface obstructions (trees and tall weeds) limited the area available for survey. As a result of these two factors, detailed survey was undertaken across most of the accessible land in the main field.
- 6.2 No clearly archaeological anomalies have been identified by the detailed survey. A number of short linear/pit type responses and weaker trends have been highlighted, but the elevated background noise and the lack of any coherent pattern to the anomalies makes an archaeological interpretation tentative. Natural or modern origins should also be considered.

Project Co-ordinator: C Stephens  
 Project Assistants: J Nicholls & A Shuckles

Date of Survey: 8th & 9th May 2000  
 Date of Report: 19th May 2000

### References:

SSEW 1985. *Soils of England and Wales. Sheet 3, Midland and Western England*. Soil Survey of England and Wales.

## TECHNICAL INFORMATION

The following is a description of the equipment and display formats used in **GSB Prospection (GSB)** 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 **GSB**.

*All survey reports are prepared and submitted on the basis that whilst they are based on a thorough survey of the site, no responsibility is accepted for any errors or omissions.*

### Instrumentation

#### (a) Fluxgate Gradiometer - Geoscan FM36

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. Readings are normally logged at 0.5m intervals along traverses 1.0m apart.

#### (b) Resistance Meter - Geoscan RM15

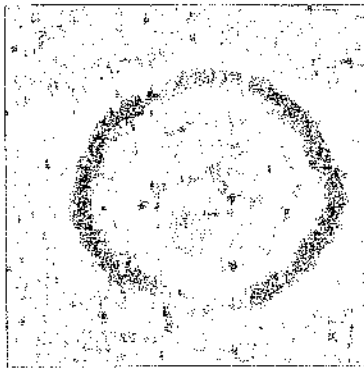
This measures the electrical resistance of the earth, using a system of four electrodes (two current and two potential.) Depending on the arrangement of these electrodes an exact measurement of a specific volume of earth may be acquired. This resistance value may then be used to calculate the earth resistivity. 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". In area survey readings are typically logged at 1.0m x 1.0m intervals.

#### (c) Magnetic Susceptibility

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 badge. For the latter 20g soil samples are collected in the field. Sampling intervals vary widely but are often at the 10m or 20m level.

## Display Options

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.



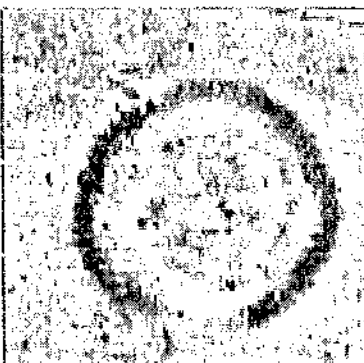
### (a) Dot Density

In this display minimum and maximum cut-off levels are chosen. Any value that is below the minimum will appear white, whilst any value above the maximum will be black. Values that lie between these two cut-off levels are depicted with a specified number of dots depending on their relative position between the two levels. Assessing a lower than normal reading involves the use of an inverse plot that 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. However, this display is favoured for producing plans of sites, where positioning of the anomalies and features is important.



### (b) XY Plot

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. The 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. The display may also be changed by altering the horizontal viewing angle and the angle above the plane. The output may be either colour or black and white.



### (c) Greyscale

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. 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, greyscales tend to be more informative.

## Terms commonly used in the graphical interpretation of gradiometer data

### **itch / Pit**

This category is used only when other evidence is available that supports a clear archaeological interpretation e.g. cropmarks or excavation.

### **archaeology**

This term is used when the form, nature and pattern of the response is clearly archaeological but where no supporting evidence exists. These anomalies, whilst considered anthropogenic, could be of any age. If a more precise archaeological interpretation is possible then it will be indicated in the accompanying text.

### **Archaeology**

The interpretation of such anomalies is often tentative, with the anomalies exhibiting either weak signal strength or forming incomplete archaeological patterns. They may be the result of variable soil depth, plough damage or even aliasing as a result of data collection orientation.

### **reas of Increased Magnetic Response**

These responses show no visual indications on the ground surface and are considered to have some archaeological potential.

### **Industrial**

Strong magnetic anomalies, that due to their shape and form or the context in which they are found, suggest the presence of kilns, ovens, corn dryers, metal-working areas or hearths. It should be noted that in many instances modern ferrous material can produce similar magnetic anomalies.

### **Natural**

These responses form clear patterns in geographical zones where natural variations are known to produce significant magnetic distortions e.g. palaeochannels or magnetic gravels.

### **Natural**

These are anomalies that are likely to be natural in origin i.e. geological or pedological.

### **ridge and Furrow**

These are regular and broad linear anomalies that are presumed to be the result of ancient cultivation. In some cases the response may be the result of modern activity.

### **Ploughing Trend**

These are isolated or grouped linear responses. They are normally narrow and are presumed modern when aligned to current field boundaries or following present ploughing.

### **Trend**

This is usually an ill-defined, weak or isolated linear anomaly of unknown cause or date.

### **reas of Magnetic Disturbance**

These responses are commonly found in places where modern ferrous or fired materials are present e.g. brick rubble. They are presumed to be modern.

### **Ferrous Response**

This type of response is associated with ferrous material and may result from small items in the topsoil. Large buried objects such as pipes or above ground features such as fence lines or pylons. Ferrous responses are usually regarded as modern. Individual burnt stones, fired bricks or igneous rocks can produce responses similar to ferrous material.



<b>List of Figures</b>
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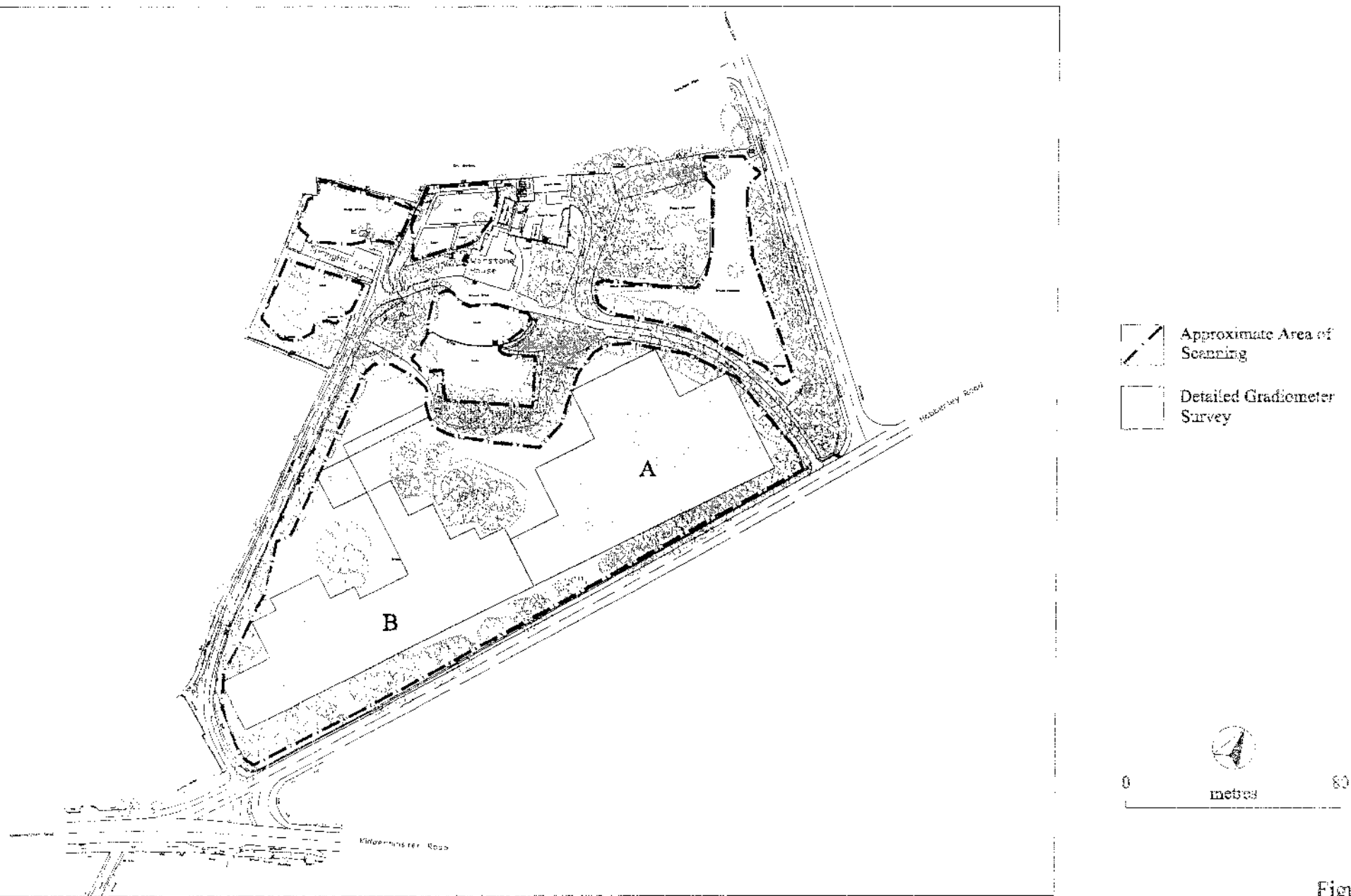
Figure 1	Location of Survey Areas	1:2000
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GSB PROSPECTION

PROJECT: 2000/46 BEWDLEY

TITLE: Location of Survey Areas

Based on a plan provided by BOFAL



PROJECT: 2000/46 BEWDLEY

Based on a plan provided by BUREAU.



Figure 2

PROJECT: 2000/46 BEWDLEY

TITLE: Summary Interpretation

Based on a plan provided by D. R. A. C.






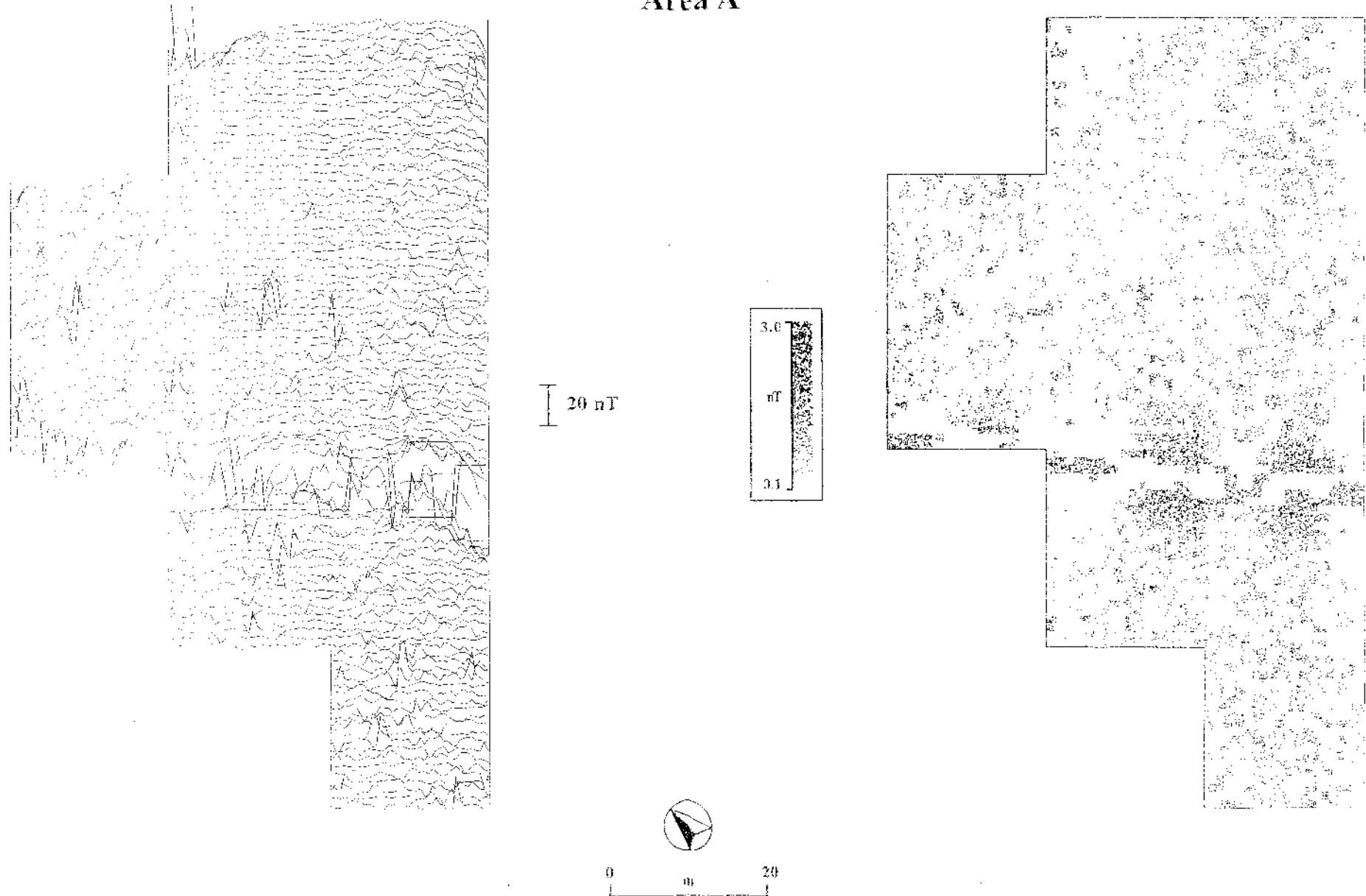
	Archaeology
	Trend
	Ferrous



Figure 3

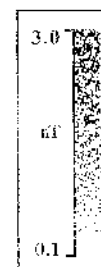
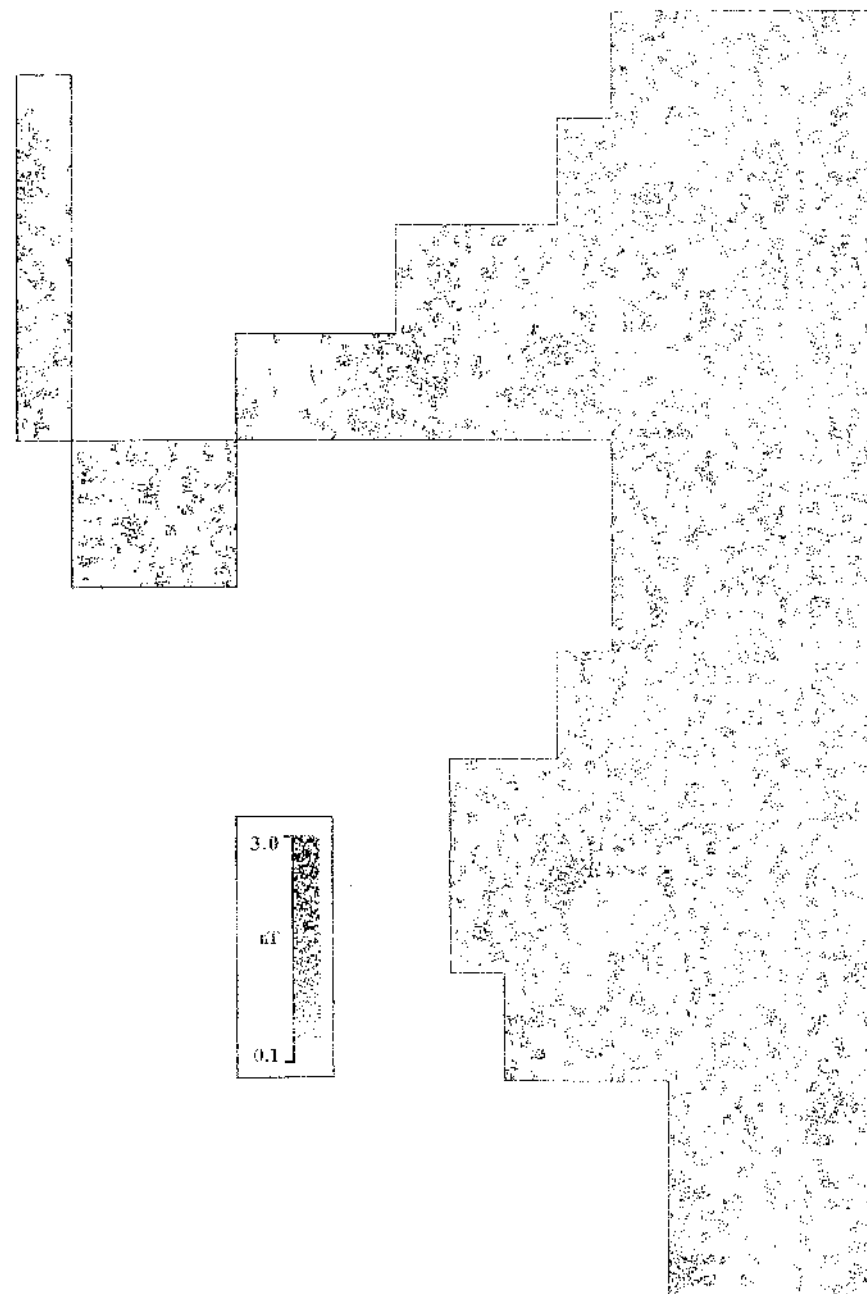
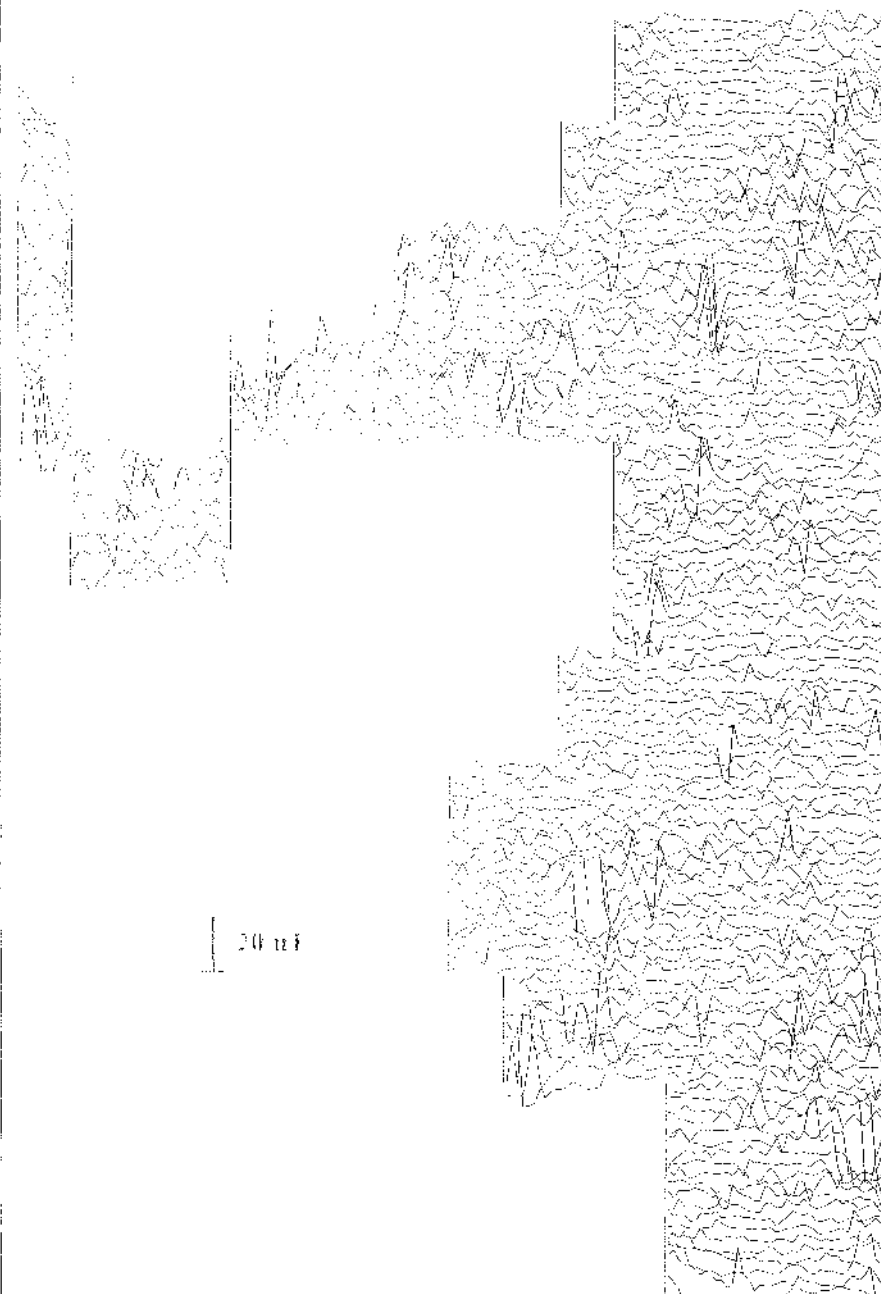
# BEWDLEY Area A



# REWDLEY Area A



# BEWDLEY Area B



# BEWDLEY Area B



0 m 20