

BHBA/01



# LAND AT BRETCH HILL, BANBURY, OXFORDSHIRE

## GEOPHYSICAL SURVEY

commissioned by Bloor Homes

13/00444/OUT

August 2016



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project info

HA JOB NO. BHBA/01  
NGR SP 43290 40950  
PARISH Drayton  
LOCAL AUTHORITY Cherwell District Council  
OASIS REF. Headland5-258542

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 **HEADLAND  
ARCHAEOLOGY**

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## PROJECT SUMMARY

Headland Archaeology (UK) Ltd undertook a geophysical (magnetometer) survey, covering approximately 26 hectares on land on the western periphery of Banbury, Oxfordshire, to provide information on the archaeological potential of the site of a proposed housing development. The survey has identified an area of clear archaeological potential within the south of the proposed development area including a probable pit alignment and two probable barrows. The anomalies are identified within a particularly variable magnetic background and it is possible that some weaker anomalies of archaeological potential, if present, may remain masked within this background. Elsewhere, localised areas of possible archaeological potential have been identified as possible enclosures, kilns, and isolated ditches. Therefore, on the basis of the geophysical survey, the archaeological potential of the site is generally assessed as being low although a moderate to high potential is ascribed to the south and north-west of the site.

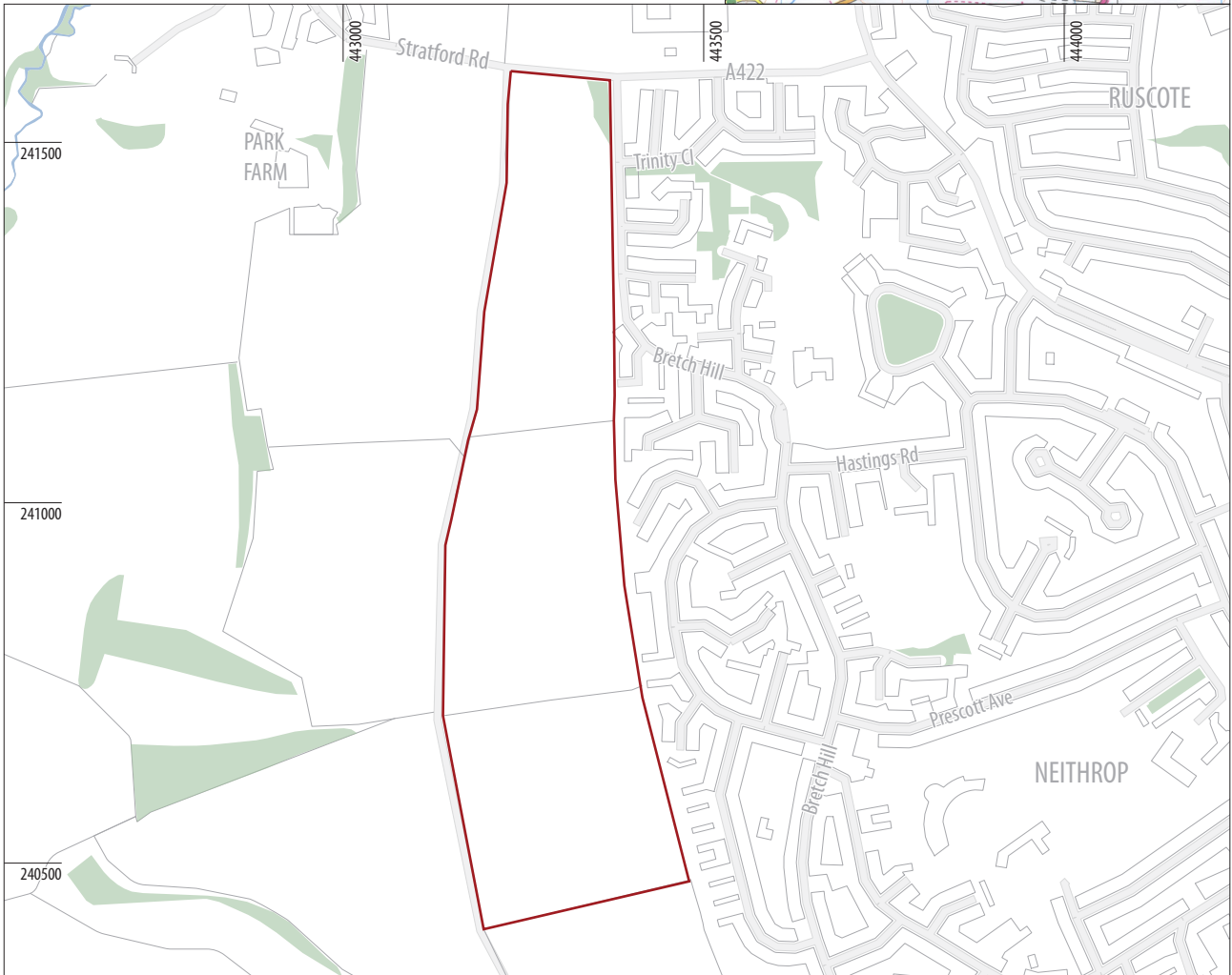
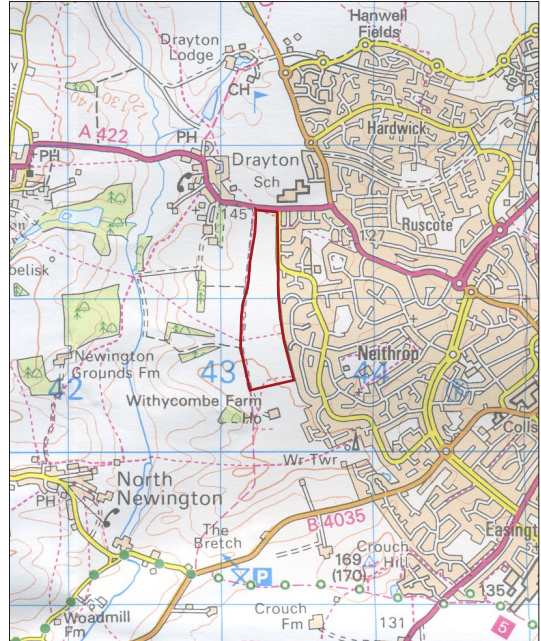
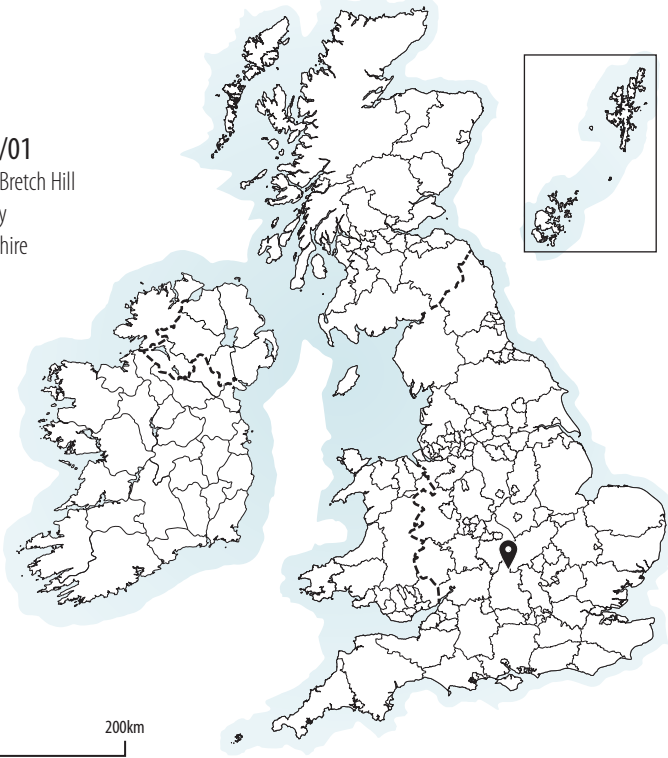
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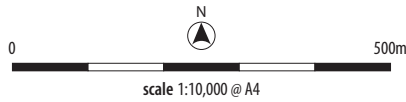
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 land at Bretch Hill  
 Banbury  
 Oxfordshire



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**KEY**  
 proposed development boundary



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# LAND AT BRETCH HILL, BANBURY, OXFORDSHIRE

## GEOPHYSICAL SURVEY

### 1 INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by Bloor Homes (The Client) to undertake a geophysical (magnetometer) survey at the site of a proposed residential development (Planning Ref. 13/00444/OUT), at Bretch Hill, on the western periphery of Banbury, Oxfordshire.

The work was undertaken in accordance with a Written Scheme of Investigation (Headland Archaeology 2016) supplied to and approved by Richard Oram, Planning Archaeologist with Oxfordshire County Council, with guidance within the National Planning Policy Framework (DCLG 2012) and in line with current best practice (English Heritage 2008).

The survey was carried out between March 29th and March 31st 2016 in order to provide information on the archaeological potential of the site.

#### 1.1 SITE LOCATION, TOPOGRAPHY AND LAND-USE

The proposed development area (PDA) comprises three rectangular fields (Field 1 – 3) which are bound to the east by Bretch Hill housing estate, to the north by Stratford Road (A422), to the west by a farm track and to the south by a boundary which is defined by a partial hedge and public footpath (see Illus 1 and Illus 2). The site is largely flat, being at 143m above Ordnance Datum, with some gentle undulation within. At the time of the survey, the fields contained a young wheat crop (see Illus 2, Illus 3 and Illus 4).

#### 1.2 GEOLOGY AND SOILS

The underlying bedrock geology comprises Marlstone Rock Formation – ferruginous limestone and ironstone, with Dyrham Formation – interbedded siltstone and mudstone, being recorded to the immediate east and west of the PDA. No superficial deposits are recorded (NERC 2016).

The soils within the PDA are classified in the Soilscape 7 association which are characterised as freely draining, slightly acid base-rich soils (Cranfield University 2016).

### 2 ARCHAEOLOGICAL BACKGROUND

An Archaeological Desk-Based Assessment (CgMs 2013) has established that no archaeological remains are recorded within the site. The site is considered to have low potential for the presence of archaeological remains from all periods except for the Roman period for which it is considered to have moderate potential. This is due to the presence of a possible Roman villa and farmstead to the west and south-west of the PDA.

### 3 AIMS, METHODOLOGY AND PRESENTATION

The main aim of the geophysical survey was to provide sufficient information to enable an assessment to be made of the impact of any proposed development on any potential sub-surface archaeological remains.

The general archaeological objectives of the geophysical survey were:

- › to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- › to therefore model the presence/absence and extent of any buried archaeological features; and
- › to prepare a report summarising the results of the survey.

#### 3.1 MAGNETOMETER SURVEY

Magnetic survey methods rely on the ability of a variety of instruments to measure very small magnetic fields associated with buried archaeological remains. Features such as a ditch, pit or kiln can act like a small magnet, or series of magnets, that produce distortions (anomalies) in the earth's magnetic field. In mapping these slight variations, detailed plans of sites can be obtained as buried features often produce reasonably characteristic anomaly



**ILLUS 2** General view of Field 1, looking south    **ILLUS 3** General view of Field 2, looking north-east    **ILLUS 4** General view of Field 3, looking south-east

shapes and strengths (Gaffney and Gater 2003). Further information on soil magnetism and the interpretation of magnetic anomalies is provided in Appendix 1.

Within Field 1 and Field 2 survey was undertaken using four Bartington Grad601 sensors mounted at 1m intervals (1m traverse interval) onto a rigid carrying frame. The system is programmed to take readings at a frequency of 10Hz (allowing for a 10-15cm sample interval) on roaming traverses 4m apart. These readings are stored on an external weatherproof laptop and later downloaded for processing and interpretation. The system is linked to a Trimble R8s Real Time Kinetic (RTK) differential Global Positioning System (dGPS) outputting in NMEA mode to ensure a high positional accuracy for each data point.

MLGrad601 and MultiGrad601 (Geomar Software Inc.) software has been used to collect and export the data. Terrasurveyor V3.0.28.4 (DWConsulting) software has been used to process and present the data.

The remaining survey (Field 3) was carried out using standard dual sensor Bartington Grad601 instruments. Data collected with this system was processed using Geoplot 3 software. Readings were taken at 0.25m intervals on zig-zag traverses 1m apart within 30m by 30m grids, so that 3600 readings were recorded in each grid. The site grid was established using a Trimble VRS differential Global Positioning System (Trimble GeoXR model).

### 3.2 REPORTING

A general site location plan is shown in Illus 1 at a scale of 1:10,000. Illus 2 to Illus 4 are general site condition photographs. A large scale

(1:4,000) survey location plan showing the processed greyscale magnetometer data is presented in Illus 5. An overall interpretative plot is shown at the same scale in Illus 6.

Detailed data plots (greyscale and XY trace) and interpretative illustrations are presented at a scale of 1:1,250 in Illus 7 to Illus 18 inclusive.

Technical information on the equipment used, data processing and magnetic survey methodology is given in Appendix 1. Appendix 2 details the survey location information and Appendix 3 describes the composition and location of the site archive. A copy of the OASIS entry (Online Access to the Index of Archaeological Investigations) is reproduced in Appendix 4.

The survey methodology, report and any recommendations comply with the Written Scheme of Investigation (Headland Archaeology 2016) and guidelines outlined by English Heritage (David et al. 2008) and by the Chartered Institute for Archaeologists (CIfA 2014). All illustrations reproduced from Ordnance Survey (OS) mapping are with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The illustrations in this report have been produced following analysis of the data in 'raw' and processed formats and over a range of different display levels. All illustrations are presented to most suitably display and interpret the data from this site based on the experience and knowledge of management and reporting staff.

## 4 RESULTS AND DISCUSSION

The survey has detected a variable and elevated magnetic background throughout the PDA. This is largely attributed to the cumulative effects of ploughing over a magnetic ferruginous limestone bedrock which has resulted in numerous cultivation trend anomalies throughout. Against this elevated background, numerous anomalies have been identified. These are discussed below and cross-referenced to specific examples on the interpretive figures, where appropriate.

### 4.1 FERROUS ANOMALIES

Ferrous anomalies, characterised as individual 'spikes', are typically caused by ferrous (magnetic) material, either on the ground surface or in the plough-soil. Little importance is normally given to such anomalies, unless there is any supporting evidence for an archaeological interpretation, as modern ferrous debris or material is common on most sites, often being present as a consequence of manuring or tipping/infilling. Two larger 'spike' anomalies, A (see Illus 13 – Illus 18 inclusive), within the south of Field 2 and the north of Field 3 respectively, locate electricity poles (see Illus 3).

Other high magnitude areas of magnetic disturbance which are located at the perimeters of the fields are caused by ferrous material within, or close to, the adjacent field boundaries.

### 4.2 AGRICULTURAL ANOMALIES

Analysis of historical mapping indicates that the division of land within the PDA has remained largely unchanged since the publication of the first edition OS map in 1882. However, two former field boundaries have been removed in the intervening years. These manifest in the data as linear anomalies, B and C (see Illus 13 – Illus 18 inclusive) and are due to the contrast between the soil fill of the former boundary ditch and the surrounding soils.

As mentioned above the datasets are dominated by broad sinuous parallel linear anomalies generally appearing on an east-west alignment (although they are north-east/south-west in orientation within Field 3). The anomalies are characteristic of the medieval and post-medieval practice of ridge and furrow cultivation. The anomalies are caused by the contrast between the soil-filled furrows and the former ridges. A broader curvilinear anomaly, D, within the south of Field 1 (see Illus 10, Illus 11 and Illus 12), appears on the same approximate east/west alignment as the ridge and furrow anomalies to its south and may be due to a former field boundary or ploughing headland. Within the same part of Field 1, a clear north-east/south-west aligned linear anomaly, E, has been detected (see Illus 10, Illus 11 and Illus 12). The clear linear appearance of this anomaly is suggestive of a modern service, perhaps a large drain or pipe.

More closely-spaced parallel linear trends, particularly prominent throughout Field 3, are due to modern cultivation.

### 4.3 GEOLOGICAL ANOMALIES

Discrete areas of magnetic enhancement are ubiquitous across the PDA. These are thought to be caused by variations in the composition of the soils. Broader areas of magnetic background variation are

visible within the south of Field 2 as vague linear anomalies (see Illus 13 – Illus 18 inclusive). The irregular pattern to these anomalies are suggestive of localised geological variation.

## 4.4 ARCHAEOLOGICAL AND POSSIBLE ARCHAEOLOGICAL ANOMALIES

### Field 1

Within the south-west of Field 1 clear linear anomalies, F and G, are identified on a north/south orientation, perhaps locating the eastern extent of an enclosure(s) (see Illus 10, Illus 11 and Illus 12). The anomalies are divided by parallel linear anomalies, H, which may be due to an east/west aligned trackway. Interpretation is tentative, however, due to the location of the anomalies at the western PDA boundary, and whilst an archaeological interpretation is thought likely, an agricultural origin cannot be fully dismissed.

### Field 2

Towards the south-west of Field 2, two high magnitude anomalies, I and J, have been identified (see Illus 13, Illus 14 and Illus 15). The anomalies are notably higher in magnitude than the surrounding discrete anomalies and it is possible that they are due to areas of burning, perhaps kilns. However, it is notable that the anomalies are located a short distance east of a modern farm track and a broad area of magnetic disturbance. Therefore, a modern origin for these anomalies is possible.

Within the south-east of Field 2 a fragmented curvilinear anomaly, K, can be seen winding southwards from the east of Field 2 (see Illus 13 – Illus 15 inclusive). The anomaly does not correspond to any existing or historical pattern of land division or any topographical feature, and therefore an archaeological interpretation should be considered. It is possible that the anomaly is due to a soil-filled ditch, perhaps an unmapped boundary.

### Field 3

Within the west of Field 3 a clear curvilinear anomaly, L, has been identified, oblique to the recorded patterns of land division (see Illus 16, Illus 17 and Illus 18). The anomaly consists of numerous evenly-spaced pit-type responses and is probably due to a pit alignment. Immediately adjacent to the pit alignment, on its southern side, a clear fragmented circular anomaly, M, may be due to a barrow, the anomaly measuring 11m in diameter and being due to a soil-filled ditch. Discrete areas of magnetic enhancement within the interior of the anomaly may be caused by pits. A second circular anomaly, N, of the same dimensions and also interpreted as a probable barrow, has been recorded 77m to the north-east.

It should be noted, however, that magnetic background is particularly varied and elevated in Field 3 with numerous discrete anomalies of high magnitude. It is possible that this background could mask the responses from other currently unidentified archaeological remains, if present.

A clear high magnitude sinuous anomaly, O, winds through the centre of Field 3 on a north/south alignment. The anomaly is caused by the

soil-fill of a buried ditch. It is possible that it forms a continuation of the linear anomaly, K, which has been identified in Field 2 although the anomalies appear on slightly different alignments and are of different characteristics – anomaly O appearing as a continuous high magnitude anomaly.

Three fragmented east/west aligned linear anomalies (soil-filled ditches), P, Q and R, are identified within the south of Field 3 (see Illus 16, Illus 17 and Illus 18). The anomalies do not correspond to the existing or historical pattern of land division and therefore an archaeological origin cannot be dismissed. However, given their parallel and linear characteristics, it is likely that they are agricultural in origin, perhaps being due to former boundaries or ploughing headlands.

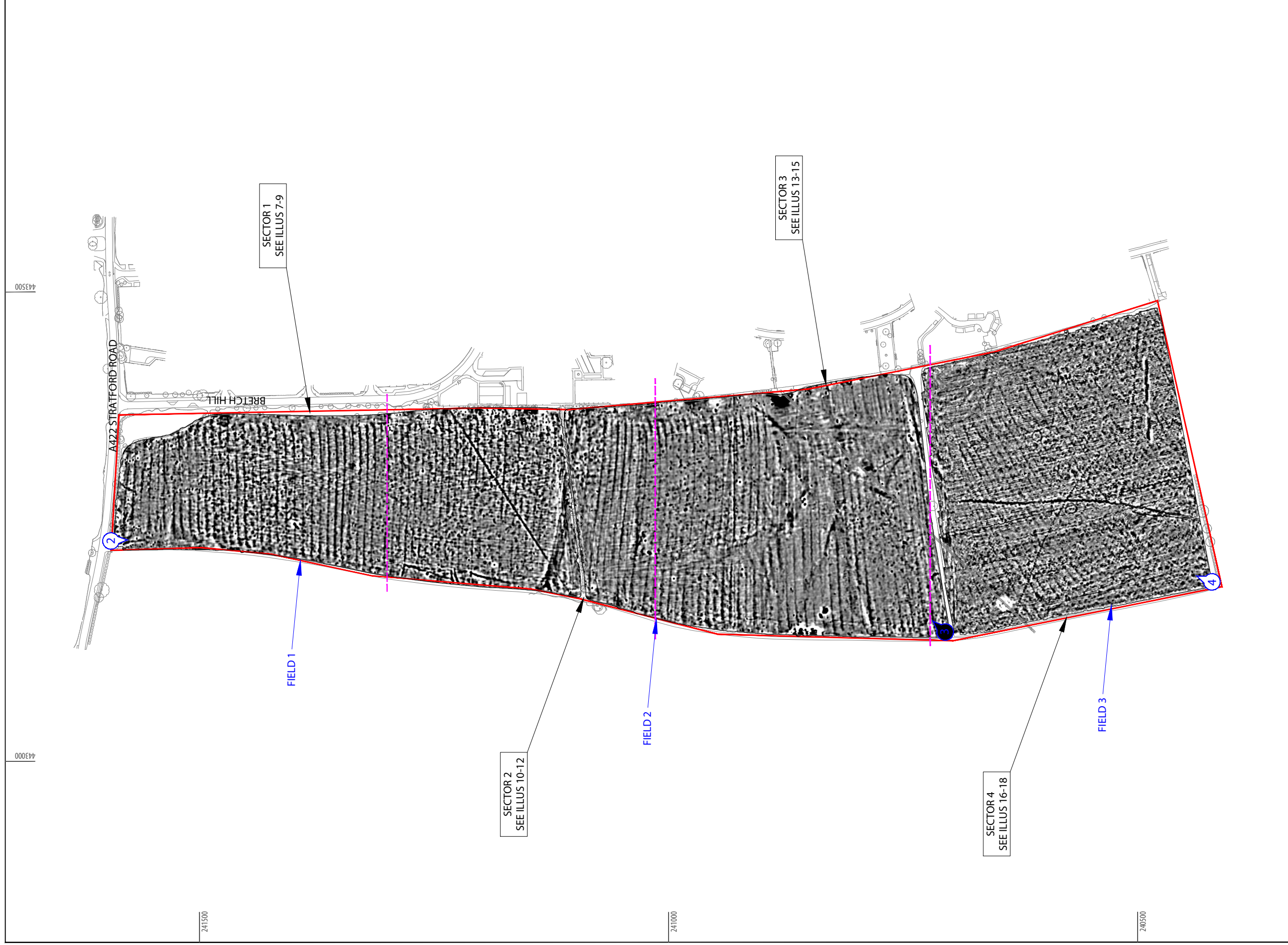
## 5 CONCLUSION

The geophysical survey has identified areas of clear archaeological potential within the south of the PDA including a probable pit alignment and two probable round barrows. The anomalies are identified against a varied and elevated magnetic background and it is possible that some weaker anomalies of archaeological potential, if present, may be masked or obscured within this background. Within the north-west of the PDA, interpretation of two possible enclosures and a possible trackway is restricted by the limits of the survey area. Nevertheless, there is sufficient clarity in the geophysical data to ascribe a moderate archaeological potential to this area. Elsewhere, isolated anomalies have been identified which may be due to kilns and unmapped boundaries (ditches).

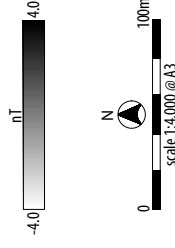
Overall, based solely on the results of the geophysical survey, the archaeological potential of Field 3 as assessed as moderate to high and generally low in Fields 1 and 2 with the exception of areas in the vicinity of the highlighted anomalies.

## 6 REFERENCES

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- Geophysical survey area
- Sector boundary
- Ⓞ Location and direction of ILLUS 2-4



PROJECT Land at Bretch Hill  
Banbury  
Oxfordshire  
(BHBVA/01)

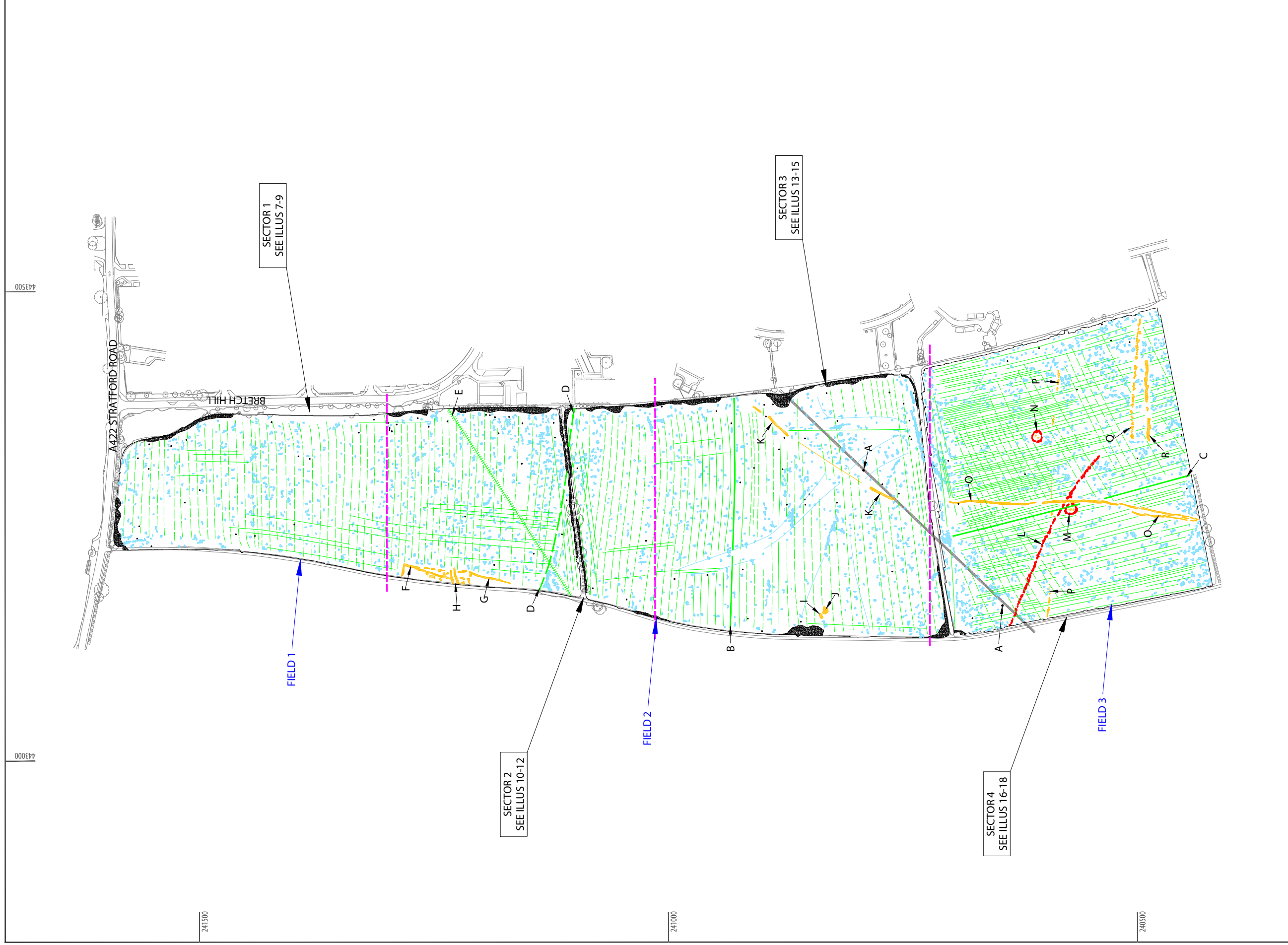
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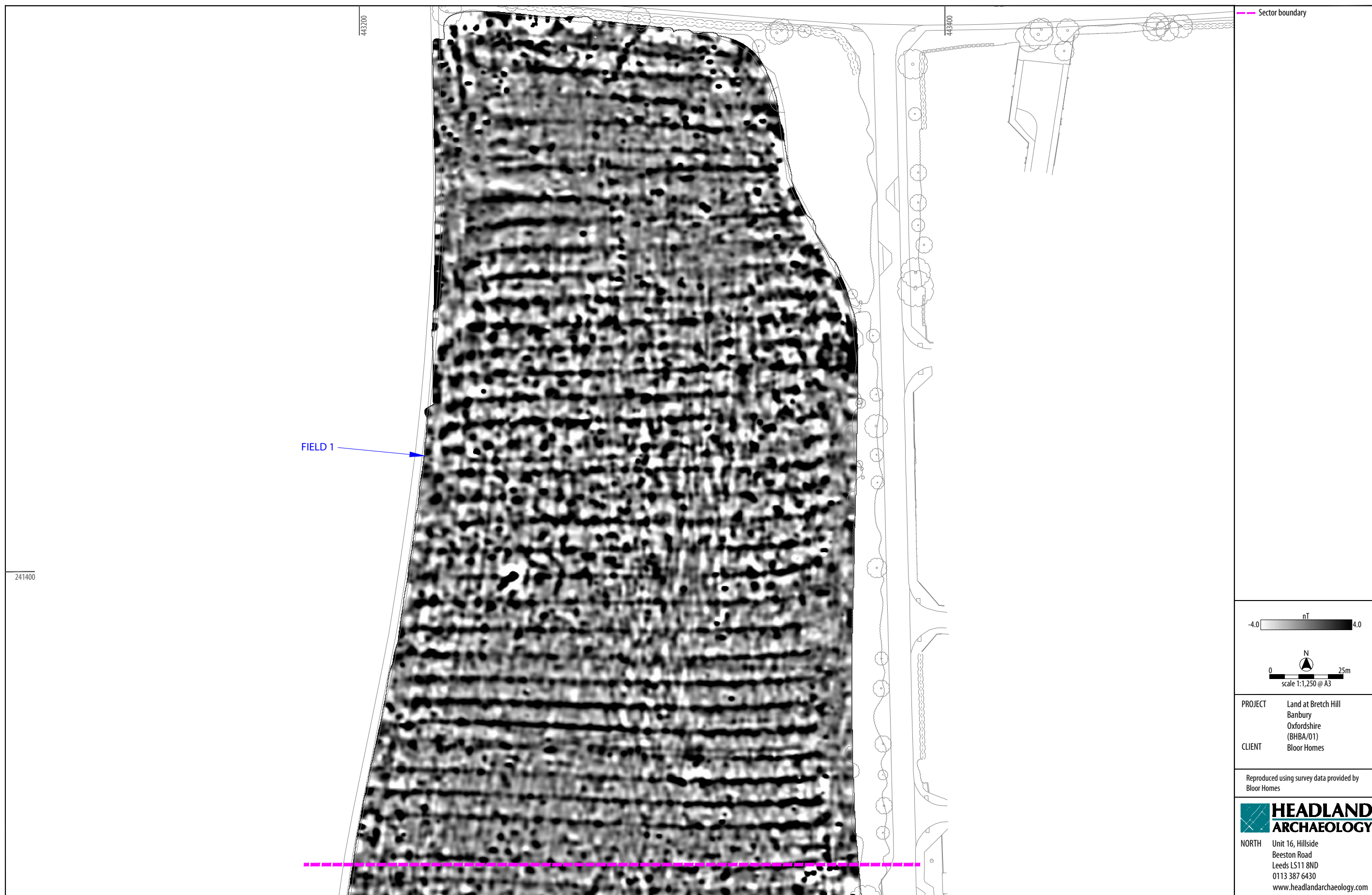
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Illus 5  
Survey location showing greyscale magnetometer data

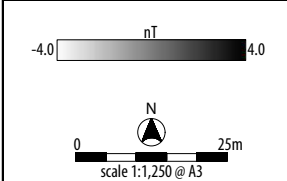


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PROJECT		CLIENT	
443000		443500	
241500		241000	
240500		240000	
TYPE OF ANOMALY Dipolar Isolated Magnetic Disturbance Linear Trend Linear Trend Linear Trend Linear Trend Linear		INTERPRETATION Ferrous Material Ferrous Material Ridge and Furrow Agricultural Field Drain Former Field Boundary	
TYPE OF ANOMALY Linear Linear Magnetic Enhancement Linear Magnetic Enhancement Magnetic Enhancement		INTERPRETATION Former Field Boundary? Geological variation Geology Archaeology? Archaeology?	
- Sector boundary		scale 1:4,000 @A3 0 100m	

Illus 6  
Overall interpretation of magnetometer data



— Sector boundary



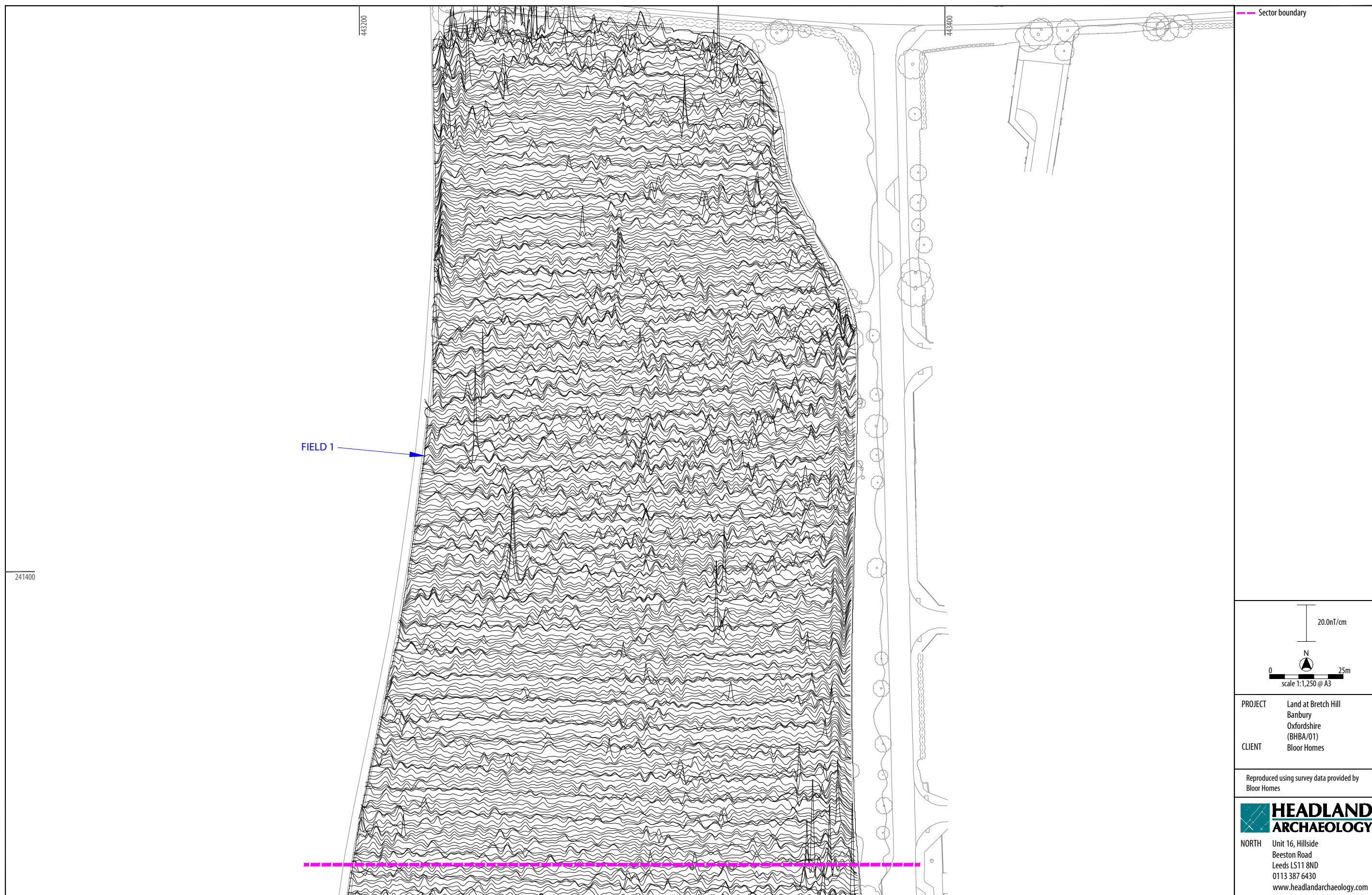
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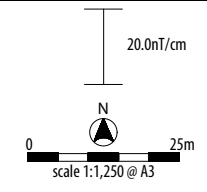
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Illus 7  
Processed greyscale magnetometer data; Sector 1



— Sector boundary

FIELD 1



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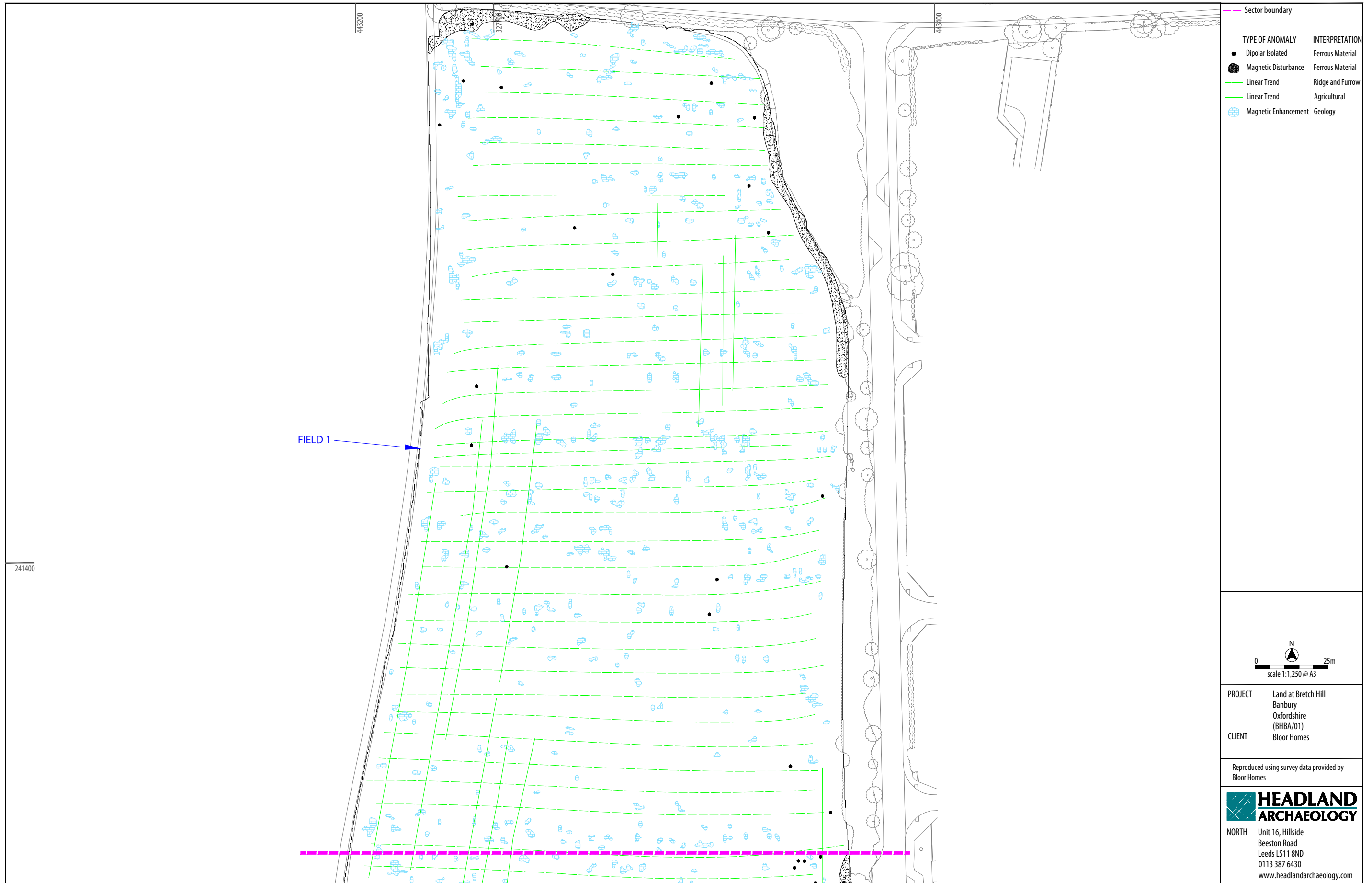
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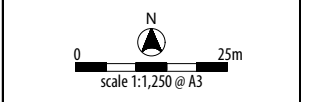
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Illus 8  
XY trace plot of magnetometer data; Sector 1





TYPE OF ANOMALY	INTERPRETATION
● Dipolar Isolated	Ferrous Material
● Magnetic Disturbance	Ferrous Material
— Linear Trend	Ridge and Furrow
— Linear Trend	Agricultural
■ Magnetic Enhancement	Geology



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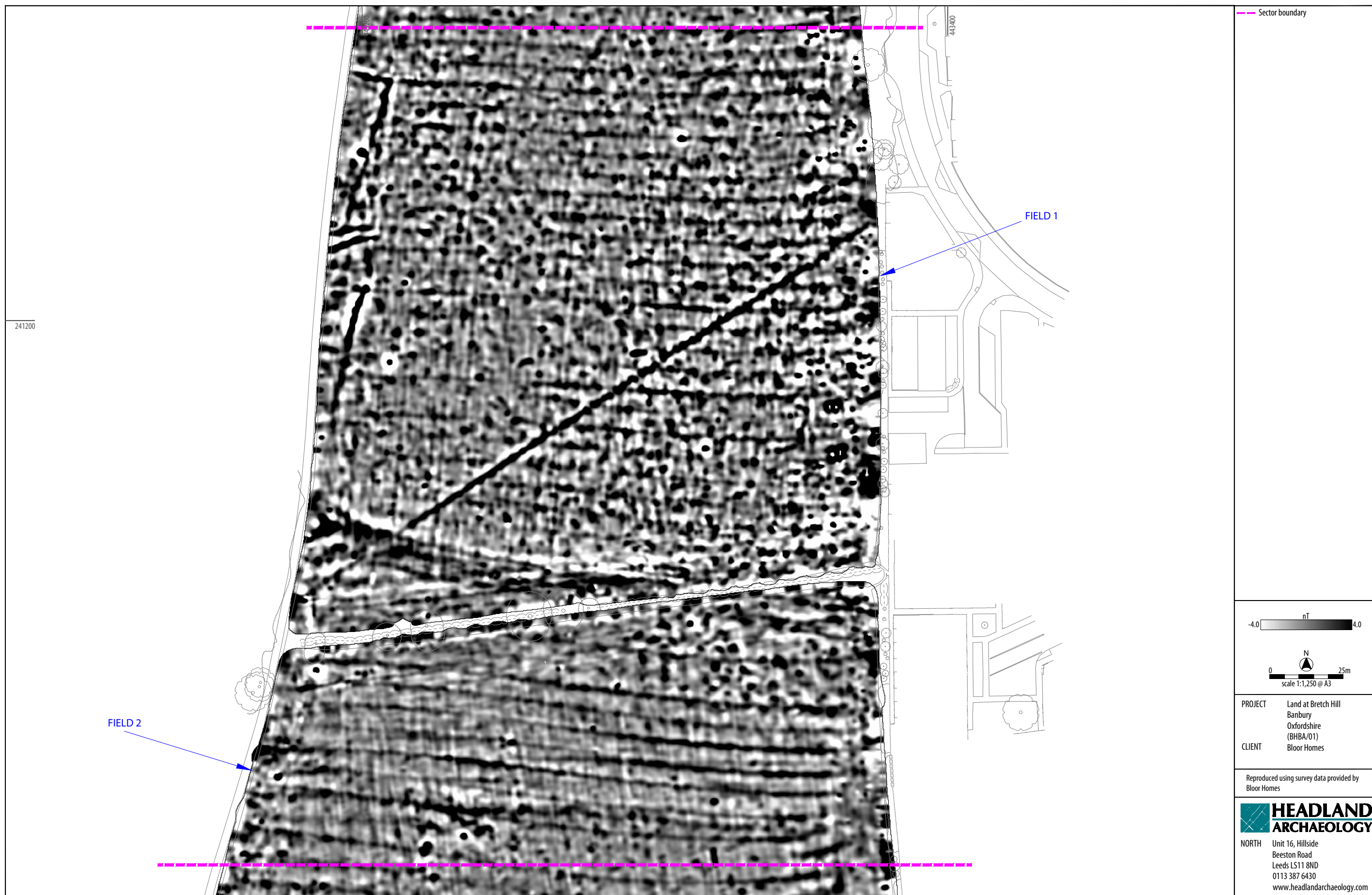
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Illus 9  
Interpretation of magnetometer data; Sector 1



Illus 10  
Processed greyscale magnetometer data; Sector 2

--- Sector boundary

FIELD 1

FIELD 2

443700

241200

4.0 nT

0 25m

scale 1:1,250 @ A3

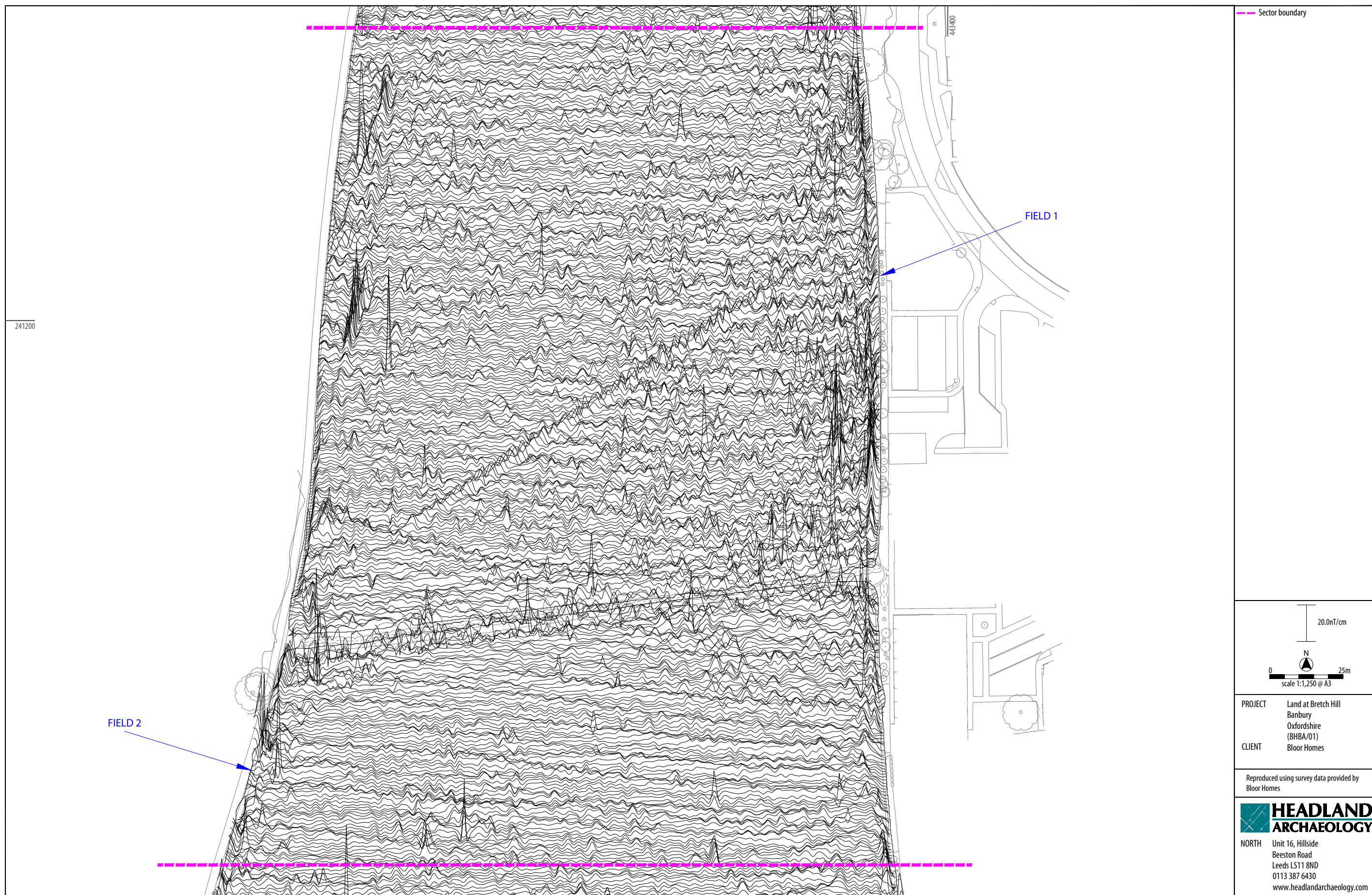
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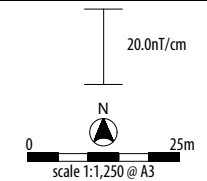
--- Sector boundary

FIELD 1

FIELD 2

241200

443400



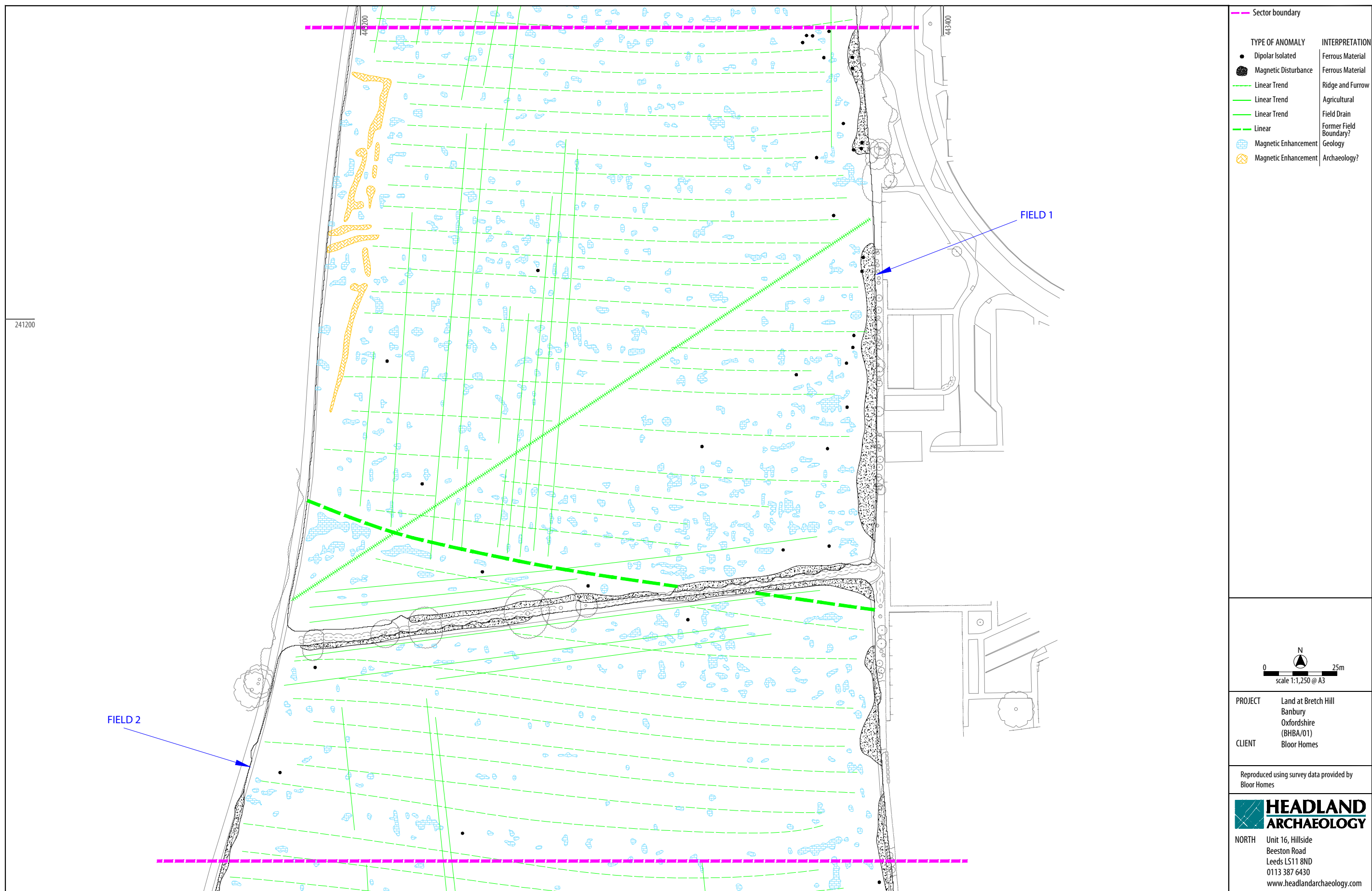
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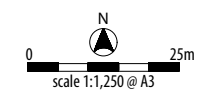
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Illus 11  
XY trace plot of magnetometer data; Sector 2



TYPE OF ANOMALY	INTERPRETATION
● Dipolar Isolated	Ferrous Material
● Magnetic Disturbance	Ferrous Material
— Linear Trend	Ridge and Furrow
— Linear Trend	Agricultural
— Linear Trend	Field Drain
— Linear	Former Field Boundary?
■ Magnetic Enhancement	Geology
■ Magnetic Enhancement	Archaeology?



PROJECT Land at Bretch Hill  
Banbury  
Oxfordshire  
(BHBA/01)

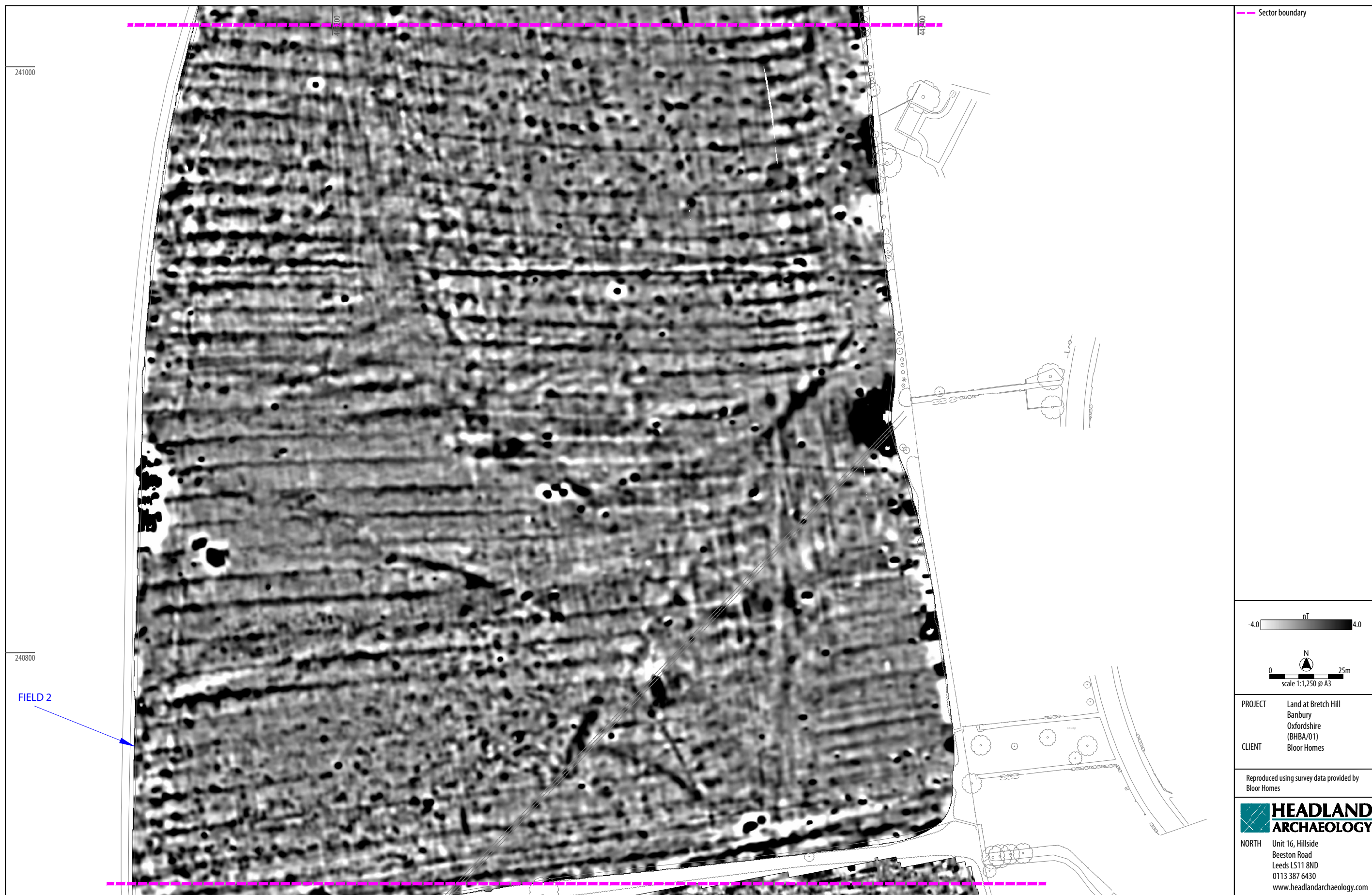
CLIENT Bloor Homes

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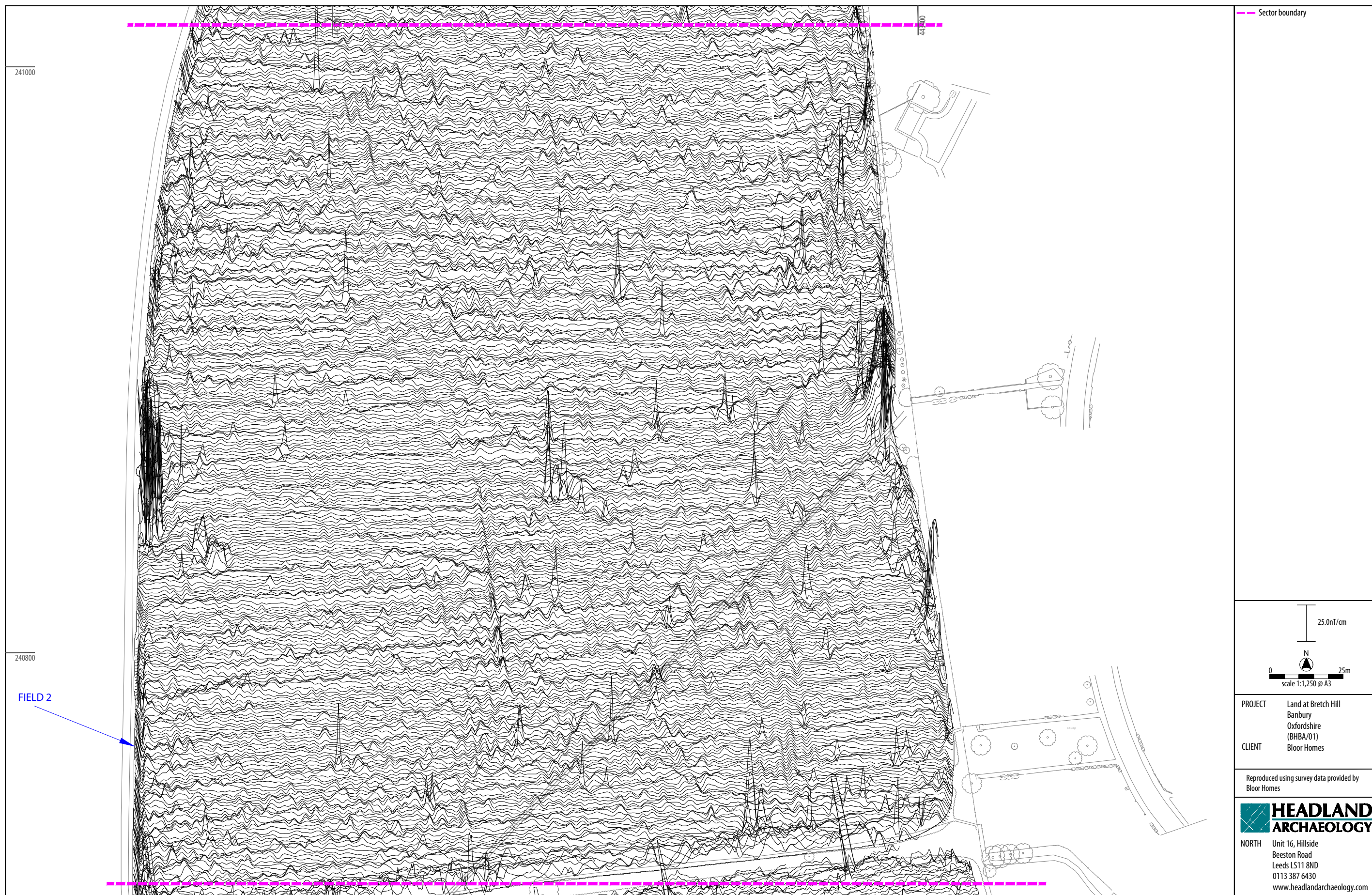
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Illus 12  
Interpretation of magnetometer data; Sector 2



Illus 13  
Processed greyscale magnetometer data; Sector 3

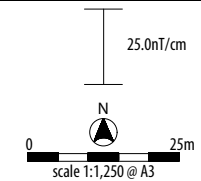


--- Sector boundary

241000

240800

FIELD 2



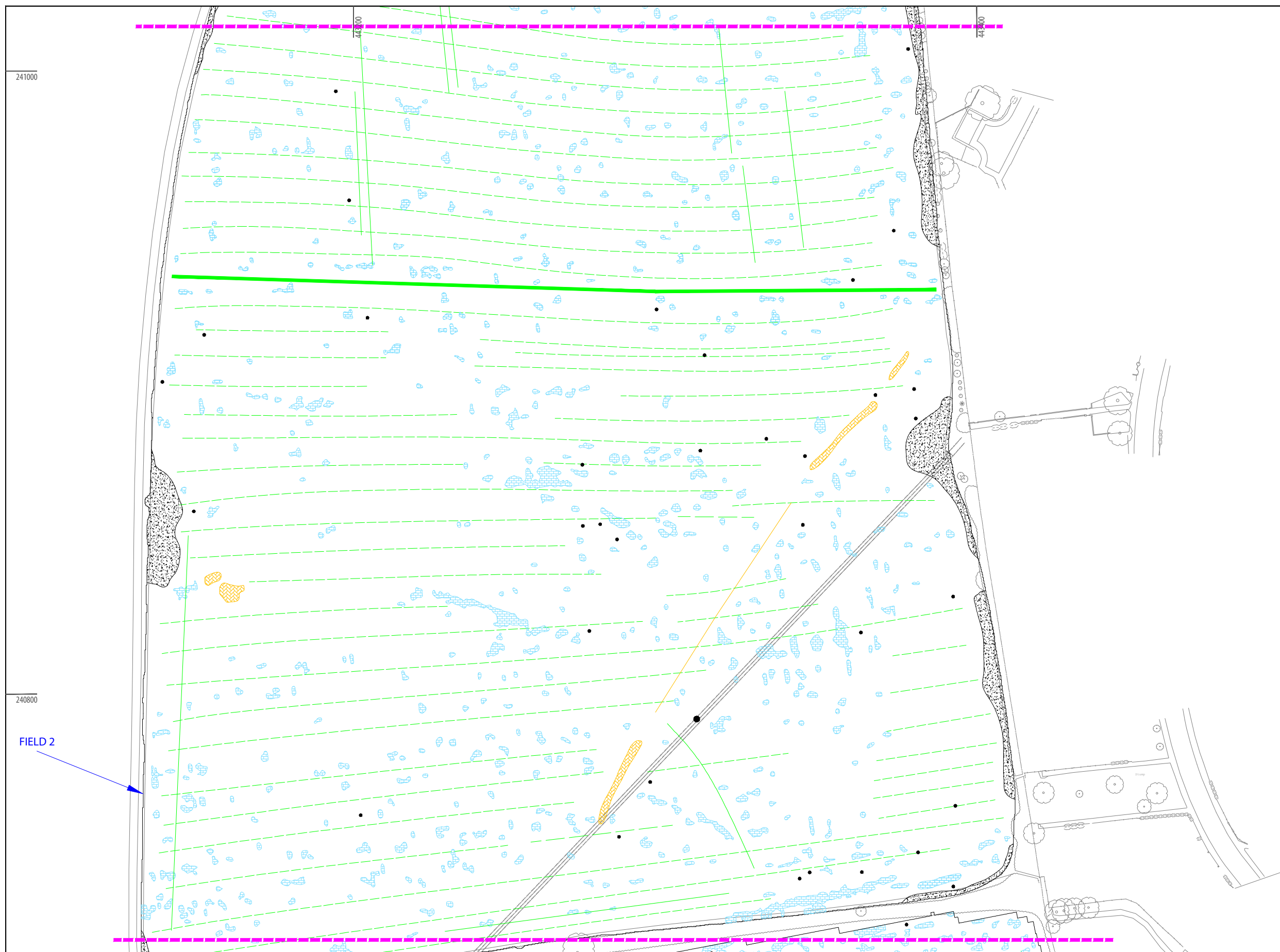
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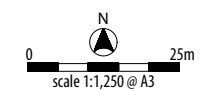
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Illus 14  
XY trace plot of magnetometer data; Sector 3



TYPE OF ANOMALY	INTERPRETATION
● Dipolar Isolated	Ferrous Material
● Magnetic Disturbance	Ferrous Material
--- Linear Trend	Ridge and Furrow
--- Linear Trend	Agricultural
--- Linear Trend	Field Drain
--- Linear	Former Field Boundary
● Magnetic Enhancement	Geology
--- Linear	Archaeology?
▨ Magnetic Enhancement	Archaeology?



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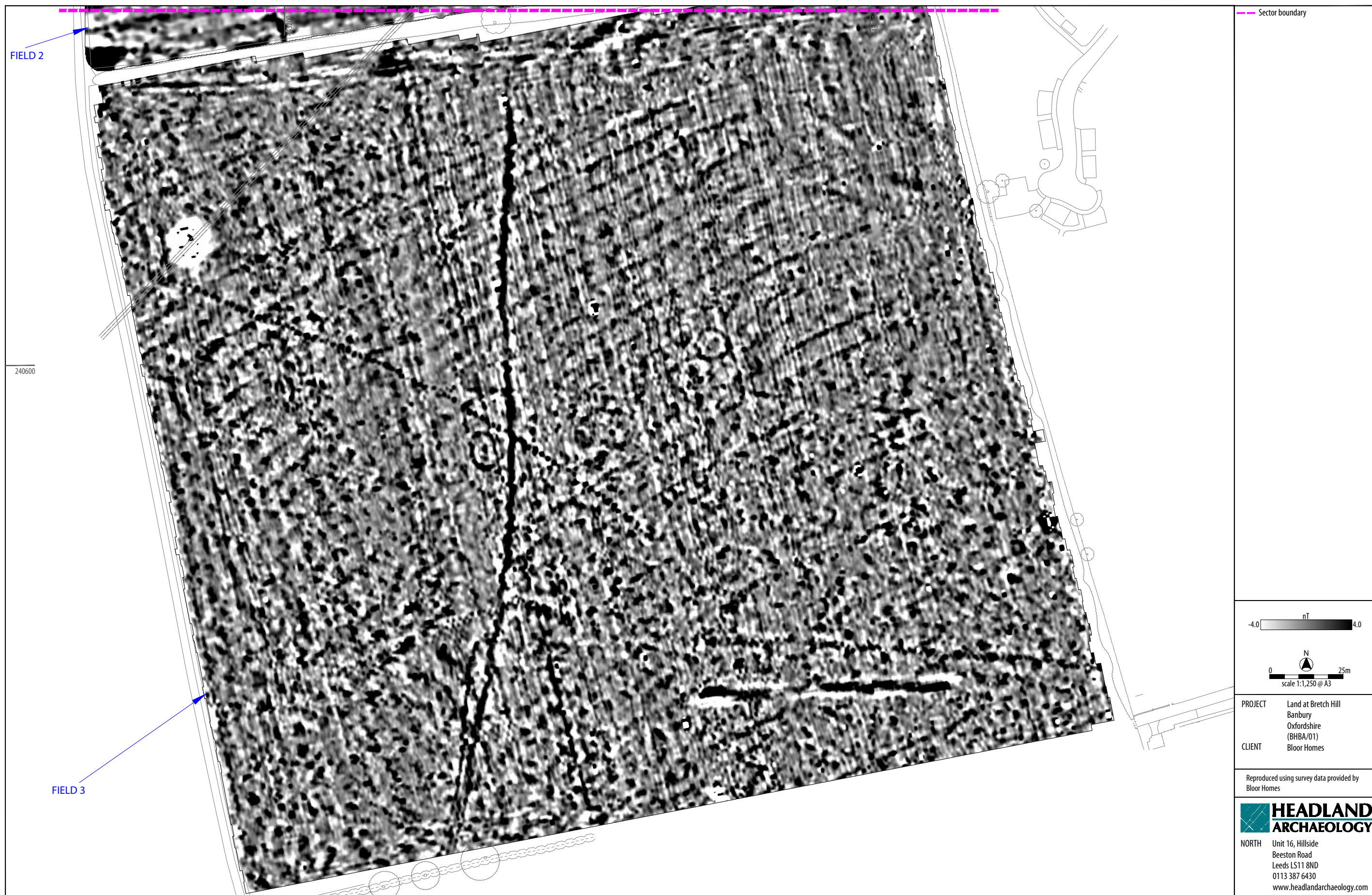
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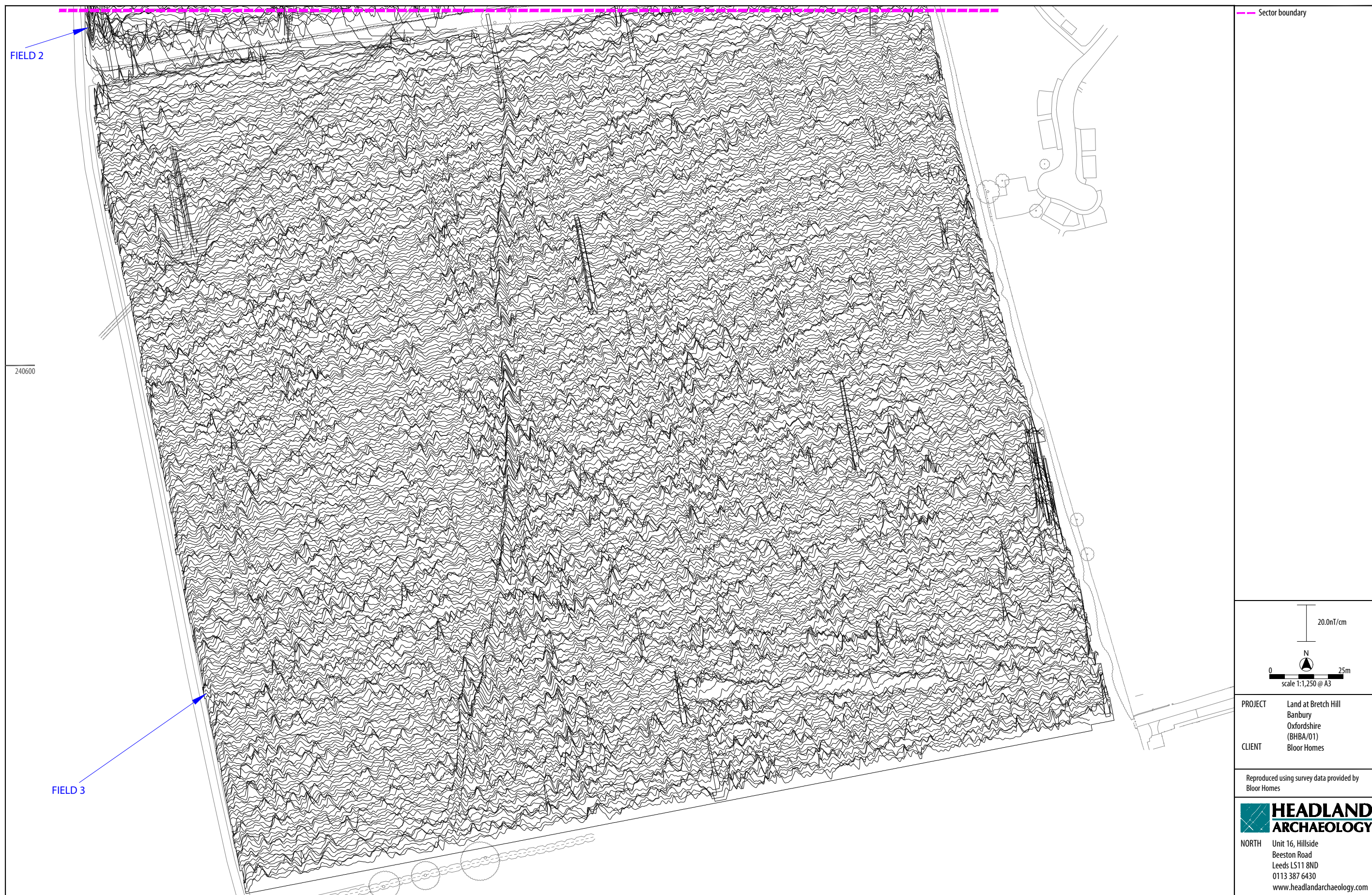
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Illus 15  
Interpretation of magnetometer data; Sector 3



Illus 16  
Processed greyscale magnetometer data; Sector 4



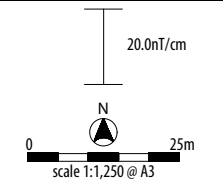


— Sector boundary

FIELD 2

240600

FIELD 3



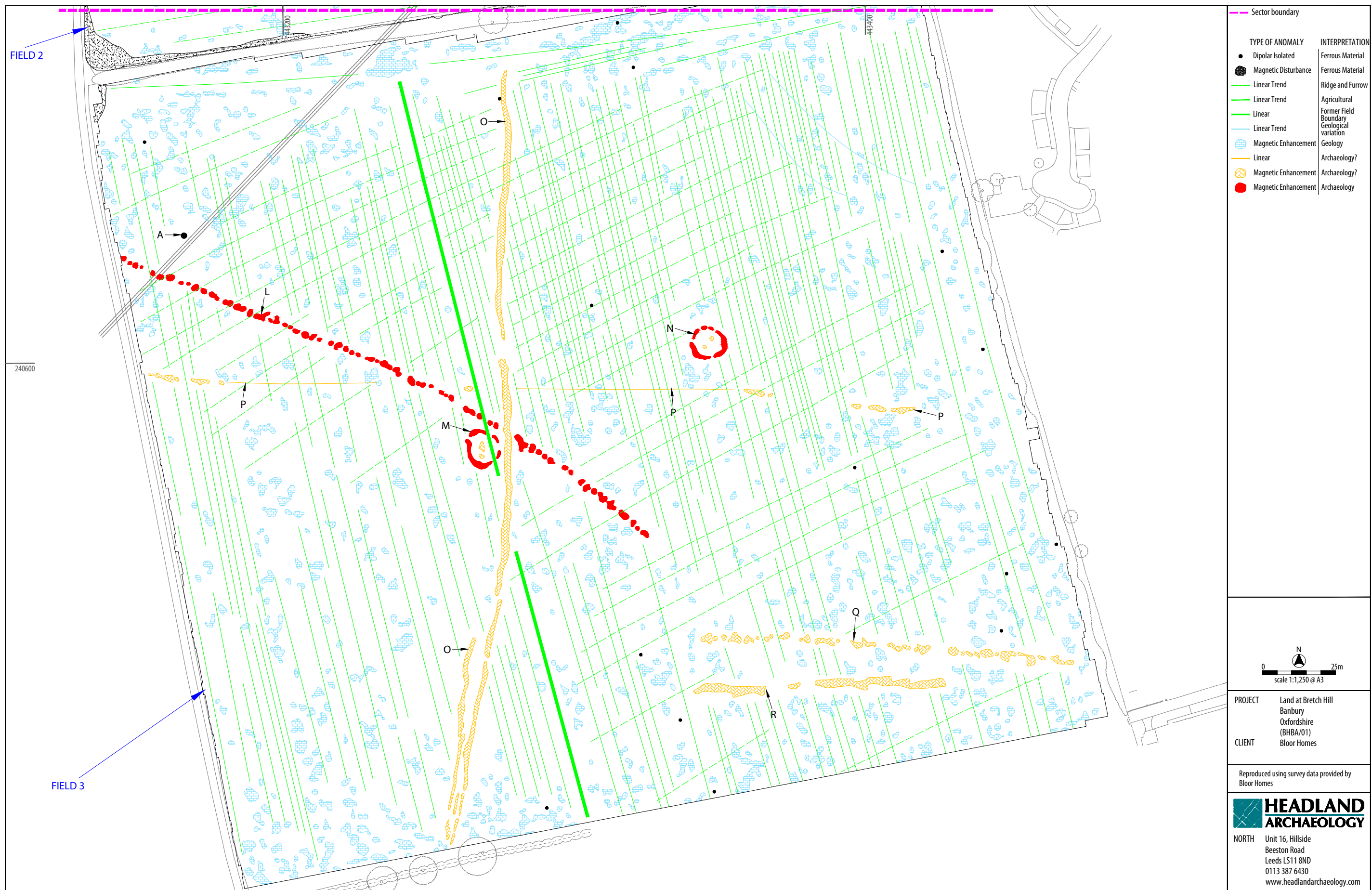
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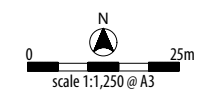
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Illus 17  
XY trace plot of magnetometer data; Sector 4



TYPE OF ANOMALY	INTERPRETATION
● Dipolar Isolated	Ferrous Material
● Magnetic Disturbance	Ferrous Material
--- Linear Trend	Ridge and Furrow
— Linear Trend	Agricultural Former Field Boundary
— Linear	Geological variation
— Linear Trend	Geology
● Magnetic Enhancement	Archaeology?
— Linear	Archaeology?
■ Magnetic Enhancement	Archaeology?
● Magnetic Enhancement	Archaeology



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Illus 18 Interpretation of magnetometer data; Sector 4

## 7 APPENDICES

### APPENDIX 1 MAGNETOMETER SURVEY

#### Magnetic susceptibility and soil magnetism

Iron makes up about 6% of the earth's crust and is mostly present in soils and rocks as minerals such as maghaemite and haematite. These minerals have a weak, measurable magnetic property termed magnetic susceptibility. Human activities can redistribute these minerals and change (enhance) others into more magnetic forms so that by measuring the magnetic susceptibility of the topsoil, areas where human occupation or settlement has occurred can be identified by virtue of the attendant increase (enhancement) in magnetic susceptibility. If the enhanced material subsequently comes to fill features, such as ditches or pits, localised isolated and linear magnetic anomalies can result whose presence can be detected by a magnetometer (fluxgate gradiometer).

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected.

The magnetic susceptibility of a soil can also be enhanced by the application of heat. This effect can lead to the detection of features such as hearths, kilns or areas of burning.

#### Types of magnetic anomaly

In the majority of instances anomalies are termed 'positive'. This means that they have a positive magnetic value relative to the magnetic background on any given site. However some features can manifest themselves as 'negative' anomalies that, conversely, means that the response is negative relative to the mean magnetic background.

Where it is not possible to give a probable cause of an observed anomaly a '?' is appended.

It should be noted that anomalies interpreted as modern in origin might be caused by features

that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.

The types of response mentioned above can be divided into five main categories that are used in the graphical interpretation of the magnetic data:

#### *Isolated dipolar anomalies (iron spikes)*

These responses are typically caused by ferrous material either on the surface or in the topsoil. They cause a rapid variation in the magnetic response giving a characteristic 'spiky' trace. Although ferrous archaeological artefacts could produce this type of response, unless there is supporting evidence for an archaeological interpretation, little emphasis is normally given to such anomalies, as modern ferrous objects are common on rural sites, often being present as a consequence of manuring.

#### *Areas of magnetic disturbance*

These responses can have several causes often being associated with burnt material, such as slag waste or brick rubble or other strongly magnetised/fired material. Ferrous structures such as pylons, mesh or barbed wire fencing and buried pipes can also cause the same disturbed response. A modern origin is usually assumed unless there is other supporting information.

#### *Linear trend*

This is usually a weak or broad linear anomaly of unknown cause or date. These anomalies are often caused by agricultural activity, either ploughing or land drains being a common cause.

#### *Areas of magnetic enhancement/positive isolated anomalies*

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response (sometimes only visible on an XY trace plot) on two or three successive traverses. In neither instance is there the intense dipolar response characteristic exhibited by an area of magnetic disturbance or of an 'iron spike' anomaly (see above). These anomalies can be caused by infilled discrete archaeological features such as pits or post-holes or by kilns. They can also be caused by pedological variations or by natural infilled features on certain geologies. Ferrous material in the subsoil can also give a similar response. It can often therefore be very difficult to establish an anthropogenic origin without intrusive investigation or other supporting information.

#### *Linear and curvilinear anomalies*

Such anomalies have a variety of origins. They may be caused by agricultural practice (recent ploughing trends, earlier ridge and furrow regimes or land drains), natural geomorphological features such as palaeochannels or by infilled archaeological ditches.

## APPENDIX 2 SURVEY LOCATION INFORMATION

An initial survey base station was established using a Trimble VRS differential Global Positioning System (dGPS). The magnetometer data was georeferenced using a Trimble RTK differential Global Positioning System (Trimble R8s model).

Temporary sight markers were laid out using a Trimble VRS differential Global Positioning System (Trimble R8s model) to guide the operator and ensure full coverage. The accuracy of this dGPS equipment is better than 0.01m.

The survey data were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if coordinates are measured off hard copies of the mapping rather than using the digital coordinates.

Headland Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party.

## APPENDIX 3 GEOPHYSICAL SURVEY ARCHIVE

The geophysical archive comprises:-

- › an archive disk containing the raw data in XYZ format, a raster image of each greyscale plot with associate world file, and a PDF of the report

The project will be archived in-house in accordance with recent good practice guidelines ([http://guides.archaeologydataservice.ac.uk/g2gp/Geophysics\\_3](http://guides.archaeologydataservice.ac.uk/g2gp/Geophysics_3)). The data will be stored in an indexed archive and migrated to new formats when necessary.

## APPENDIX 4 OASIS DATA COLLECTION FORM: ENGLAND

OASIS ID: headland5-258542

PROJECT DETAILS	
Project name	Land at Bretch Hill, Banbury Oxfordshire
Short description of the project	Headland Archaeology (UK) Ltd undertook a geophysical (magnetometer) survey, covering approximately 26 hectares on land on the western periphery of Banbury, Oxfordshire, to provide information on the archaeological potential of the site of a proposed housing development. The survey has identified an area of clear archaeological potential within the south of the proposed development area including a probable pit alignment and two probable barrows. The anomalies are identified within a particularly variable magnetic background and it is possible that some weaker anomalies of archaeological potential, if present, may remain masked within this background. Elsewhere, localised areas of possible archaeological potential have been identified as possible enclosures, kilns, and isolated ditches. Therefore, on the basis of the geophysical survey, the archaeological potential of the site is generally assessed as being low although a moderate to high potential is ascribed to the south and north-west of the site.
Project dates	Start: 29-03-2016 End: 31-03-2016
Previous/future work	Not known / Not known
Any associated project reference codes	BHBA/01 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	N/A None
Monument type	N/A None
Significant Finds	N/A None
Significant Finds	N/A None
Methods & techniques	"Geophysical Survey"
Development type	Housing estate
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Not known / Not recorded
Solid geology (other)	Marlstone Rock Formation
Drift geology	Unknown
Techniques	Magnetometry
PROJECT LOCATION	
Country	England
Site location	OXFORDSHIRE CHERWELL DRAYTON Land at Bretch Hill, Banbury
Postcode	OX160NZ
Study area	26 Hectares
Site coordinates	SP 443290 240950 51.913184064648 -1.355461209192 51 54 47 N 001 21 19 W Point
Lat/Long Datum (other)	52.065239/-1.369925
Height OD / Depth	Min: 143m Max: 143m

PROJECT CREATORS

Name of Organisation	Headland Archaeology
Project brief originator	Consultant
Project design originator	Headland Archaeology
Project director/manager	Harrison, S
Project supervisor	Harrison, D
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Bloor Homes

PROJECT ARCHIVES

Physical Archive Exists?	No
Digital Archive recipient	In house
Digital Contents	"other"
Digital Media available	"Geophysics"
Paper Archive Exists?	No

PROJECT BIBLIOGRAPHY 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Land at Bretch Hill, Banbury Oxfordshire
Author(s)/Editor(s)	David Harrison
Other bibliographic details	BHBA/01
Date	2016
Issuer or publisher	Headland Archaeology
Place of issue or publication	Edinburgh
Description	A4 glued report
Entered by	Sam Harrison (sam.harrison@headlandarchaeology.com)
Entered on	25 July 2016





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