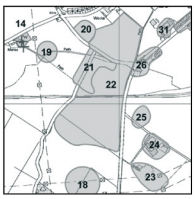
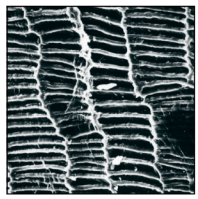
WHGC/01








WHITTINGTON HEATH GOLF CLUB, STAFFORDSHIRE

GEOPHYSICAL SURVEY

commissioned by RSK ADAS Ltd

September 2017

HEADLAND ARCHAEOLOGY

REGISTERED ORGANISATION CIfA

WHITTINGTON HEATH GOLF CLUB, STAFFORDSHIRE

GEOPHYSICAL SURVEY

commissioned by RSK ADAS Ltd

September 2017

This report adheres to the quality standard of ISO 9001:2008

PROJECT INFO:

HA Job No. **WHGC/01** / NGR **SK 1530 0750** / Parish **Whittington** / Local Authority **Staffordshire** / OASIS Ref. **headland5-296927**

PROJECT TEAM:

Project Manager **Sam Harrison** / Author **David Harrison** / Fieldwork **Aaron Rawlinson, David Harrison** / Graphics **Caroline Norrman, David Harrison, Rafael Maya-Torcelly**

Approved by **Sam Harrison** .....

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REGISTERED ORGANISATION CIfA

ASCB Accreditation Services Worldwide

ISO 9001

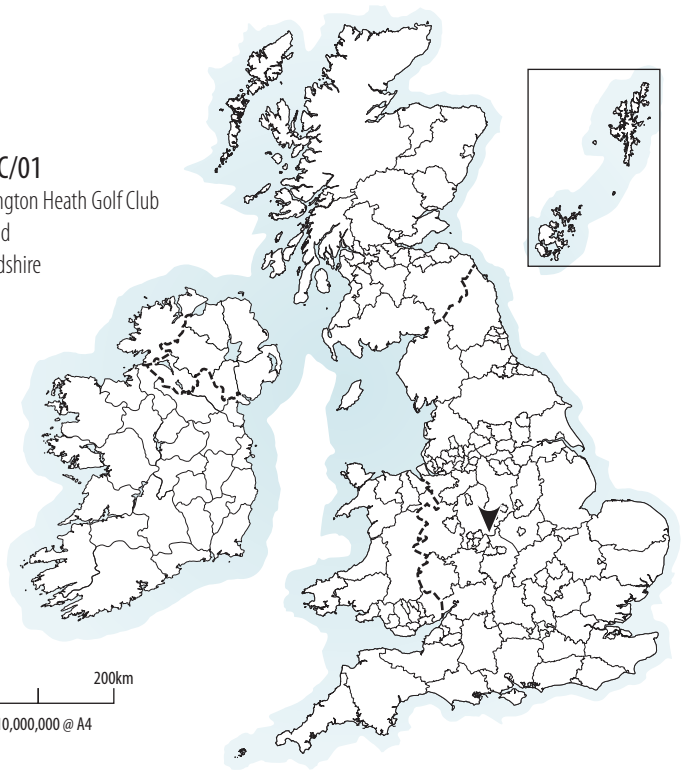
PROJECT SUMMARY

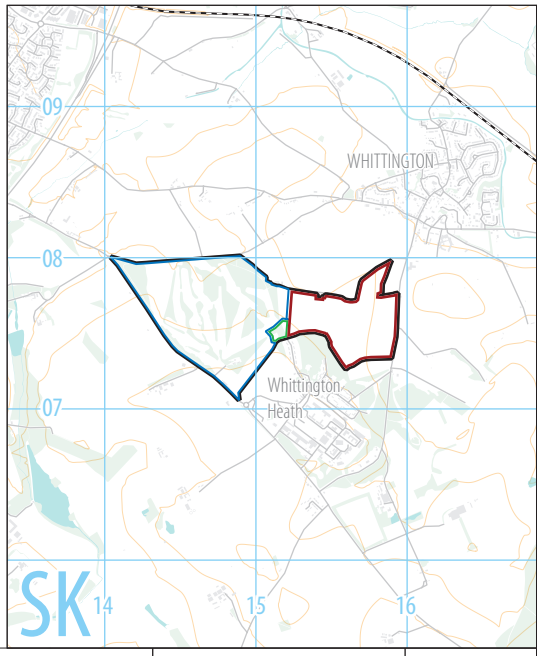
Headland Archaeology (UK) Ltd undertook a geophysical (magnetometer) survey of a 30 hectare site, east of the existing Whittington Heath Golf Course, Staffordshire, to inform future archaeological strategy in advance of the proposed reconfiguration and extension of the golf course. No anomalies of definite archaeological potential have been identified by the survey with the majority of the anomalies being due to localised variations in the depth and composition of the topsoil. A fragmented linear anomaly within the centre of the site is thought to be due to a soil-filled ditch and may be of archaeological potential, although an agricultural origin is preferred. A former pattern of field division within the site, which is depicted on early Ordnance Survey maps, has not been detected by the survey, probably as a result of subsequent agricultural erosion of the former boundaries. On the basis of the geophysical survey the archaeological potential of the site is assessed as very low.

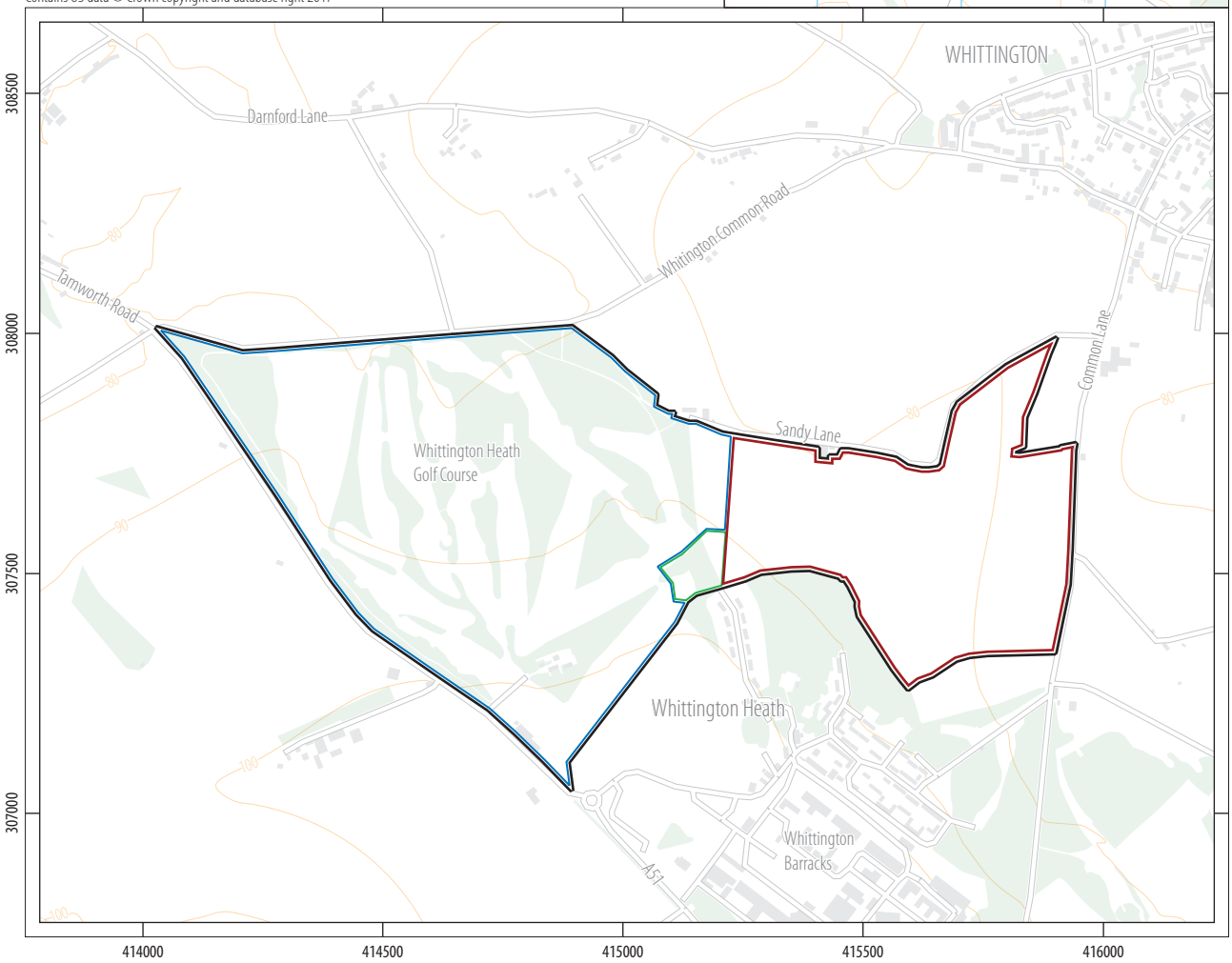
CONTENTS

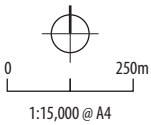
LIST OF ILLUSTRATIONS

WHGC/01
Whittington Heath Golf Club
Lichfield
Staffordshire









KEY

- proposed development area
- Area A - geophysical survey
- Area B
- Area C

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ILLUS 1 Site location

WHITTINGTON HEATH GOLF CLUB, STAFFORDSHIRE

GEOPHYSICAL SURVEY

1 INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by RSK ADAS Ltd (The Client), to undertake a geophysical (magnetometer) survey of land to the south-east of Lichfield in advance of the proposed reconfiguration and extension of Whittington Heath Golf Course. The survey was carried out in advance of the submission of a detailed planning application. The proposed development comprised three areas which were defined as Area A, B and C in the Written Scheme of Investigation (ADAS 2016). The geophysical survey was carried out on land outside of the existing golf course (Area A in the WSI). Following consultation carried out by ADAS with Ms Suzy Blake, the archaeological advisor to the local authority in September 2017 it was agreed that no further geophysical survey was required within the existing golf course (Areas B and C in the WSI).

The work was undertaken in accordance with the overarching Written Scheme of Investigation for a programme of Archaeological Work (ADAS 2016) and with a detailed Written Scheme of Investigation for Geophysical Survey (Harrison 2017). The survey was undertaken in accordance with guidance contained within the National Planning Policy Framework (DCLG 2012). All work was also undertaken in line with current best practice (Chartered Institute for Archaeologists 2014, English Heritage 2008).

The survey was carried out between March 27th and March 31st 2017 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 the existing Whittington Heath Golf Course (Area B and Area C) and two arable fields to the immediate east (Area A). Area A comprises two fields (F1–F2) within an irregularly shaped block of land, centred at SK 1530 0750 (see Illus 1), 1km south-east of Lichfield and immediately east of Whittington Heath Golf Course. It is bound to the north by Sandy Lane, to the east by Common Lane, to the south by Whittington Barracks and to the west by the existing golf course. At the time of the survey both fields were fallow with F1 containing cultivation ridges from a previous crop and F2 containing mixed grass/wheat (see Illus 2–4).

Topographically, Area A is gently undulating ranging from approximately 79m above Ordnance Datum (AOD) to the north and south and rising to 100m AOD in the south-west.

1.2 GEOLOGY AND SOILS

The underlying bedrock geology comprises pebbly (gravelly) sandstone of the Bromsgrove Sandstone Formation. No superficial deposits are recorded (NERC 2017).

The soils are classified in the Soilscape 10 association, characterised as freely draining, slightly acid sands (Cranfield University 2017).

2 ARCHAEOLOGICAL BACKGROUND

An Archaeological Desk-Based Assessment (ADAS 2015) for the PDA concluded that the site has a moderate potential to contain previously undiscovered archaeological deposits relating to the medieval and post-medieval periods, and the 19th century, and a generally low potential to contain deposits relating to all other periods.

ILLUS 2 Field 1, looking west

Analysis of historical Ordnance Survey (OS) maps shows that Area A has altered significantly since the publication of the first edition OS map in 1884 with several former field boundaries having been removed to create larger fields (see Illus 5).

3 AIMS, METHODOLOGY AND PRESENTATION

The general aim of the geophysical survey was to provide sufficient information to establish the presence/absence, character and extent of any archaeological remains within Area A. This will therefore enable an assessment to be made of the impact of the proposed development on any sub-surface archaeological remains, if present.

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

The survey was undertaken using four Bartington Grad601 sensors mounted at 1m intervals (1m traverse interval) onto a rigid carrying frame. The system was programmed to take readings at a frequency of 10Hz (allowing for a 10–15cm sample interval) on roaming traverses (swaths) 4m apart. These readings were stored on an external weatherproof laptop and later downloaded for processing and interpretation. The system was 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 was used to collect and export the data. Terrasurveyor V3.0.31.0 (DWConsulting) software was used to process and present the data.

ILLUS 3 Field 2, looking north-east

3.2 REPORTING

A general site location plan is shown in Illus 1 at a scale of 1:15,000. Illus 2–4 inclusive are site condition photographs. Illus 5 is a 1:4,000 scale survey location plan showing the GPS swath data overlying the 1888–1913 6 inch OS map.

The processed greyscale data and an overall interpretation plot are also presented at 1:3,000 on Illus 6 and Illus 7. Detailed data plots of the fully processed data (greyscale), the minimally processed data (XY traceplot) and an accompanying interpretative plot, are presented at a scale of 1:2,000 in Illus 8 to Illus 13.

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. Data processing details are presented in Appendix 4. A copy of the OASIS entry (Online Access to the Index of Archaeological Investigations) is reproduced in Appendix 5.

The survey methodology, report and any recommendations comply with the Written Scheme of Investigation (Harrison 2017) and guidelines outlined by Historic England (English Heritage 2008) and by the Chartered Institute for Archaeologists (CIfA 2014). All illustrations from Ordnance Survey mapping are reproduced 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 ground conditions across Area A were good and the overall quality of the data collected was good throughout.

The magnetic background only varies slightly, a likely consequence of the homogenous properties of the prevailing sandstone bedrock. Against this background numerous anomalies have been identified. Those anomalies with modern, agricultural or geological origins are discussed first followed by those anomalies with a possible archaeological cause. All anomalies are cross-referenced to specific anomalies on the interpretative drawings, where appropriate.

4.1 FERROUS AND MODERN 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

ILLUS 4 Field 3, looking south-east

interpretation, as modern ferrous debris is common on most sites, often being present as a consequence of manuring or tipping/infilling.

Magnetic disturbance around the field edges is due to ferrous material within or close to the adjacent field boundaries and is of no archaeological interest.

4.2 AGRICULTURAL ANOMALIES

Analysis of historical OS mapping indicates that numerous former field boundaries have been removed since the publication of the first edition OS map in 1884. However, only three of these boundaries manifest in the data as fragmentary linear alignments of ferrous anomalies (FB1–FB3 see Illus 8–13). These anomalies are caused by the accumulation of ferrous material either within the soil-fill of a buried ditch or along former field edges. The reason that the majority of the former boundaries have not been detected by the survey is not clear. It is possible that there is insufficient magnetic contrast in the topsoil or that the former boundaries have been almost completely removed by subsequent ploughing. The remainder of the linear trend anomalies are aligned parallel with existing field boundaries and are all considered likely to have a modern agricultural origin being due to modern cultivation and, at the field edges, to ploughing headlands.

4.3 GEOLOGICAL ANOMALIES

Numerous low magnitude discrete anomalies and faint curvilinear trends are identified across the PDA. These anomalies are due to minor variations in the depth and composition of the soils.

4.4 POSSIBLE ARCHAEOLOGICAL ANOMALIES

Within the centre of F1 a fragmented linear anomaly (D1 see Illus 11–13) is visible on a north-south alignment. The anomaly is thought to be due to a soil-filled ditch. Whilst an archaeological origin cannot be dismissed the alignment of the possible ditch, orientated towards the intersection of two footpaths and the prominent bend in Sandy Lane which bounds the north of Area A, suggests that an agricultural origin is more probable.

5 CONCLUSION

The geophysical survey has successfully evaluated the site and has identified one fragmented linear anomaly of possible archaeological potential, a possible soil-filled ditch. However, an agricultural origin is thought more likely and the potential here is assessed as low to moderate.

Elsewhere across the surveyed area the anomalies identified are consistent with recent agricultural activity and with localised minor variations in the composition of the topsoil. The majority of Area A is therefore assessed as having a very low archaeological potential.

6 REFERENCES

ADAS 2015 ***Archaeological Desk-Based Assessment: Proposed Reconfiguration and Extension, Whittington Heath Golf Course, Lichfield, Staffordshire*** [unpublished client document] ADAS, Ref PE/JL14

ADAS 2016 ***Written Scheme of Investigation for a Programme of Archaeological Works: Whittington Heath Golf Club, Lichfield*** [unpublished client document]

Chartered Institute for Archaeologists (CIfA) 2014 ***Standard and guidance for archaeological geophysical survey*** (Reading) http://www.archaeologists.net/sites/default/files/CIfAS&GGeophysics_1.pdf accessed 5 April 2017

Cranfield University 2017 ***Cranfield Soil and Agrifood Institute Soilscapes*** http://www.landis.org.uk/ accessed 5 April 2017

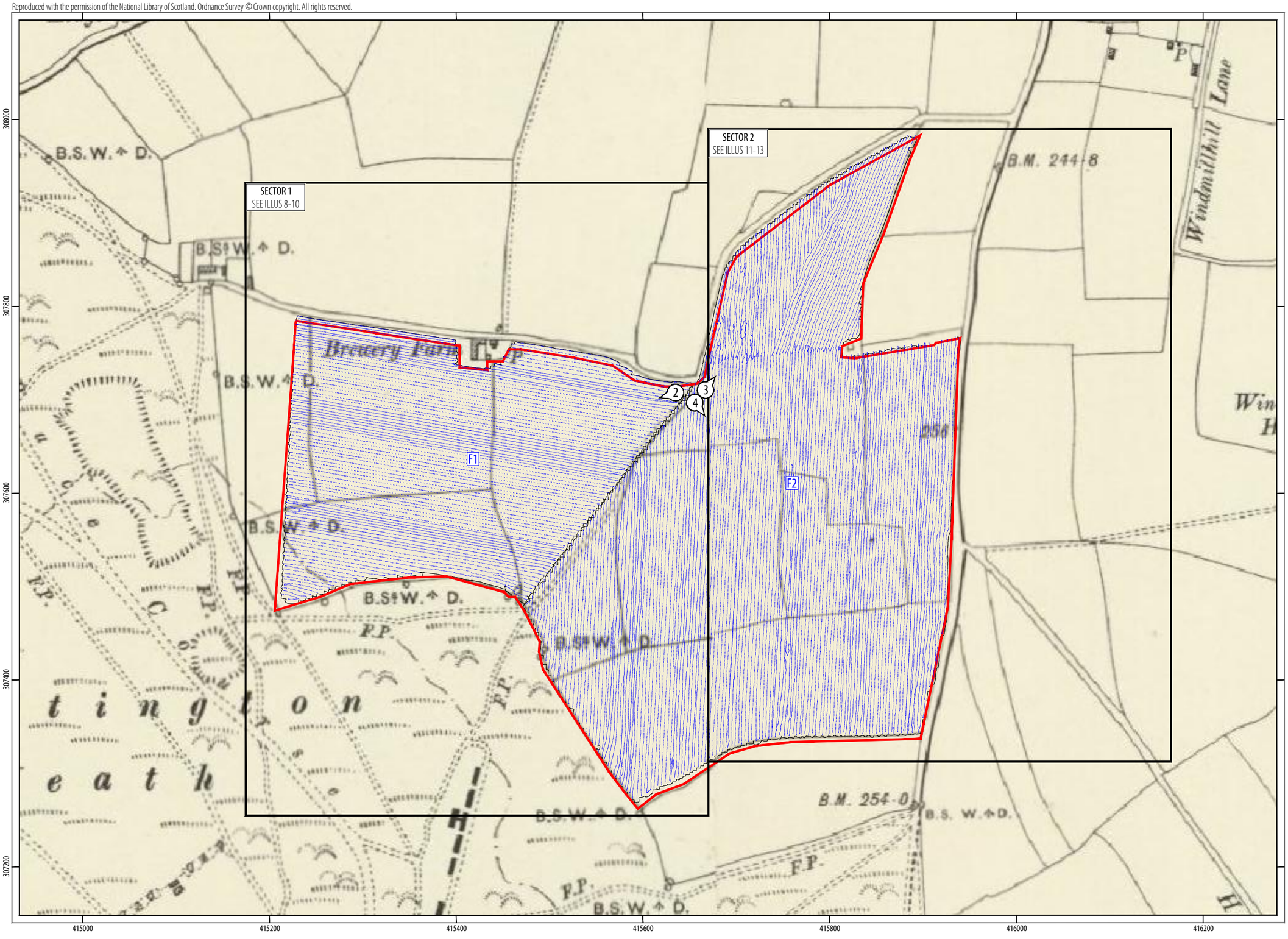
Department of Communities and Local Government (DCLG) 2012 ***National Planning Policy Framework*** https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf accessed 5 April 2017

English Heritage 2008 ***Geophysical Survey in Archaeological Field Evaluation: Research and Professional Services Guidelines*** (2nd edn) http://content.historicengland.org.uk/images-books/publications/geophysical-survey-in-archaeological-field-evaluation/geophysics-guidelines.pdf accessed 5 April 2017

Gaffney C & Gater J 2003 ***Revealing the Buried Past: Geophysics for Archaeologists*** Stroud

Harrison S 2017 ***Land north of Whittington Heath, Lichfield, Staffordshire: Written Scheme of Investigation for Geophysical Survey*** [unpublished client document] Headland Archaeology, Ref WHGC/01

Natural Environment Research Council (NERC) 2017 ***British Geological Survey*** http://www.bgs.ac.uk/ accessed 22 March 2017



geophysical survey area (Area A)
GPS swaths
location and direction of ILLUS 2-4

N
0 100m
scale 1:4,000 @ A3

PROJECT WHGC/01
Whittington Heath Golf Club
Area A
Lichfield
Staffordshire
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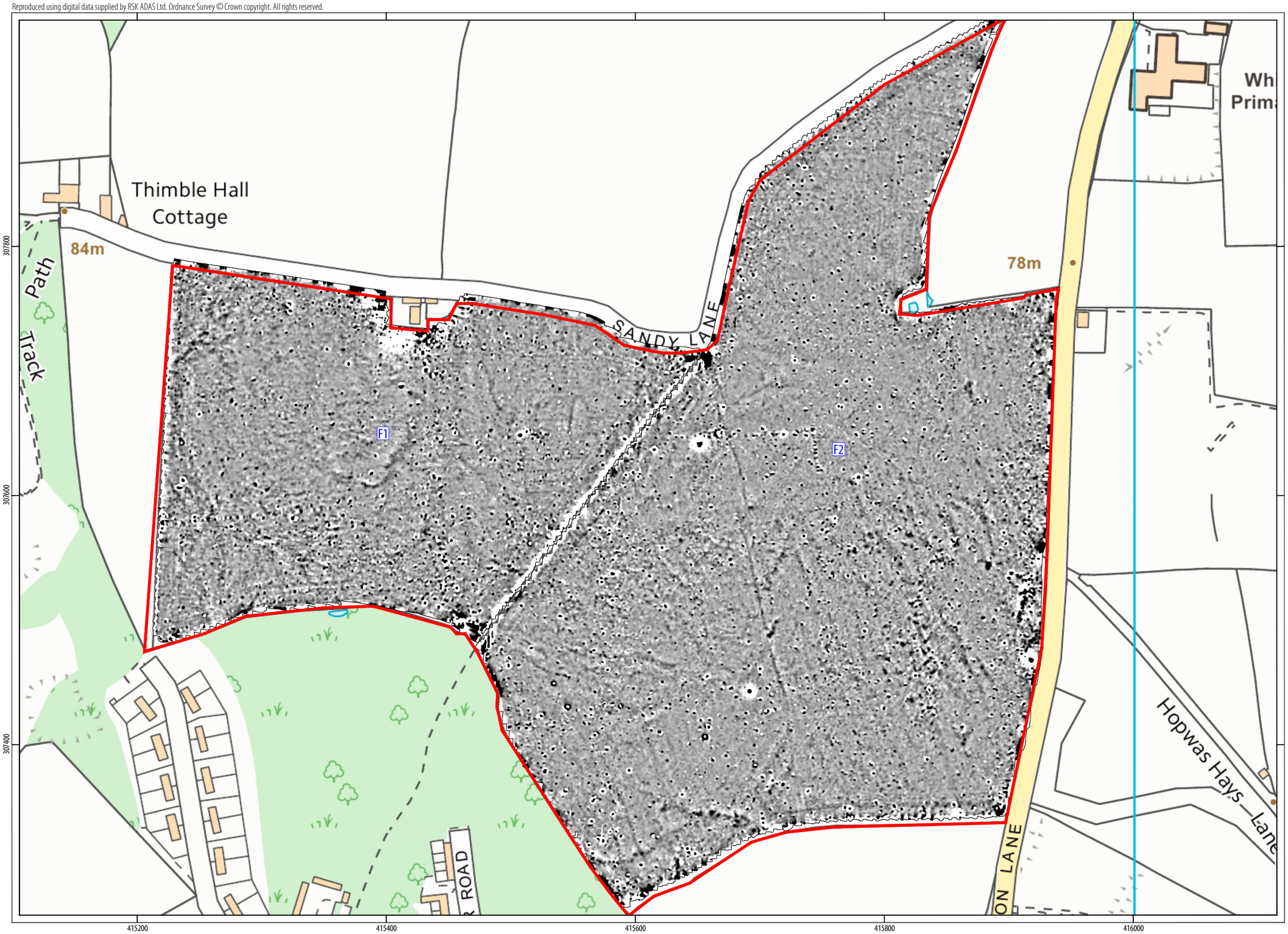
ILLUS 5 Survey location overlying 1888-1913 6 inch OS map and showing GPS swaths



geophysical survey area (Area A)

nT
-1.0
2.0

N
0
50m
scale 1:3,000 @ A3

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Area A
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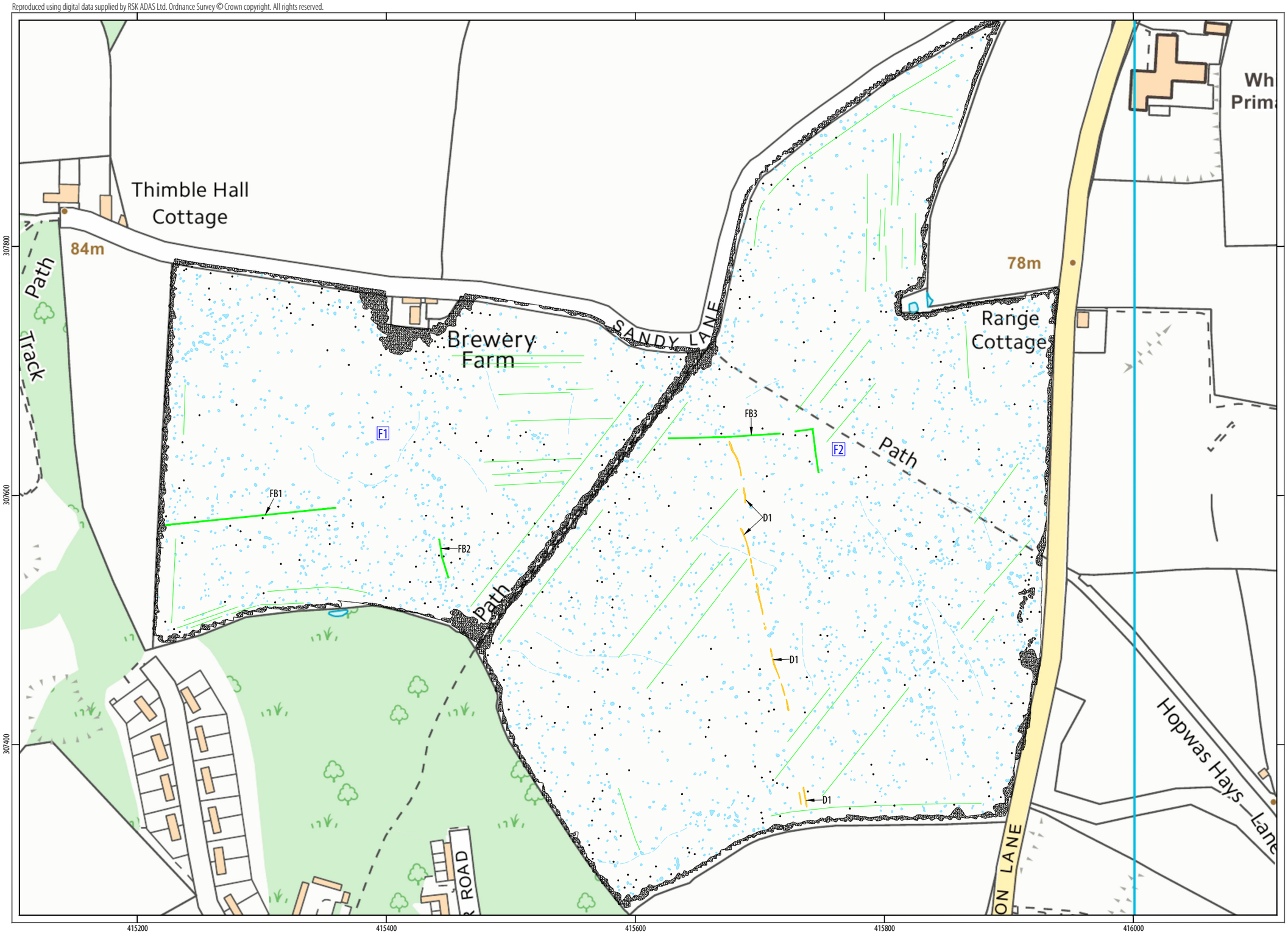
ILLUS 6 Overall processed greyscale magnetometer data



TYPE OF ANOMALY	INTERPRETATION
dipolar isolated	ferrous material
magnetic disturbance	ferrous material
linear trend	agricultural
linear	former field boundary
linear trend	geology
magnetic enhancement	geology
magnetic enhancement	archaeology?

ABBREVIATIONS

D ditch

FB former boundary

N

0 50m

scale 1:3,000 @ A3

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Area A
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ILLUS 7 Overall interpretation of magnetometer data

Thimble Hall Cottage

SANDY LANE

F1

F2

ROAD

307800

307600

307400

415200

415400

415600

-1.0 nT 2.0

N

0 50m

scale 1:2,000 @ A3

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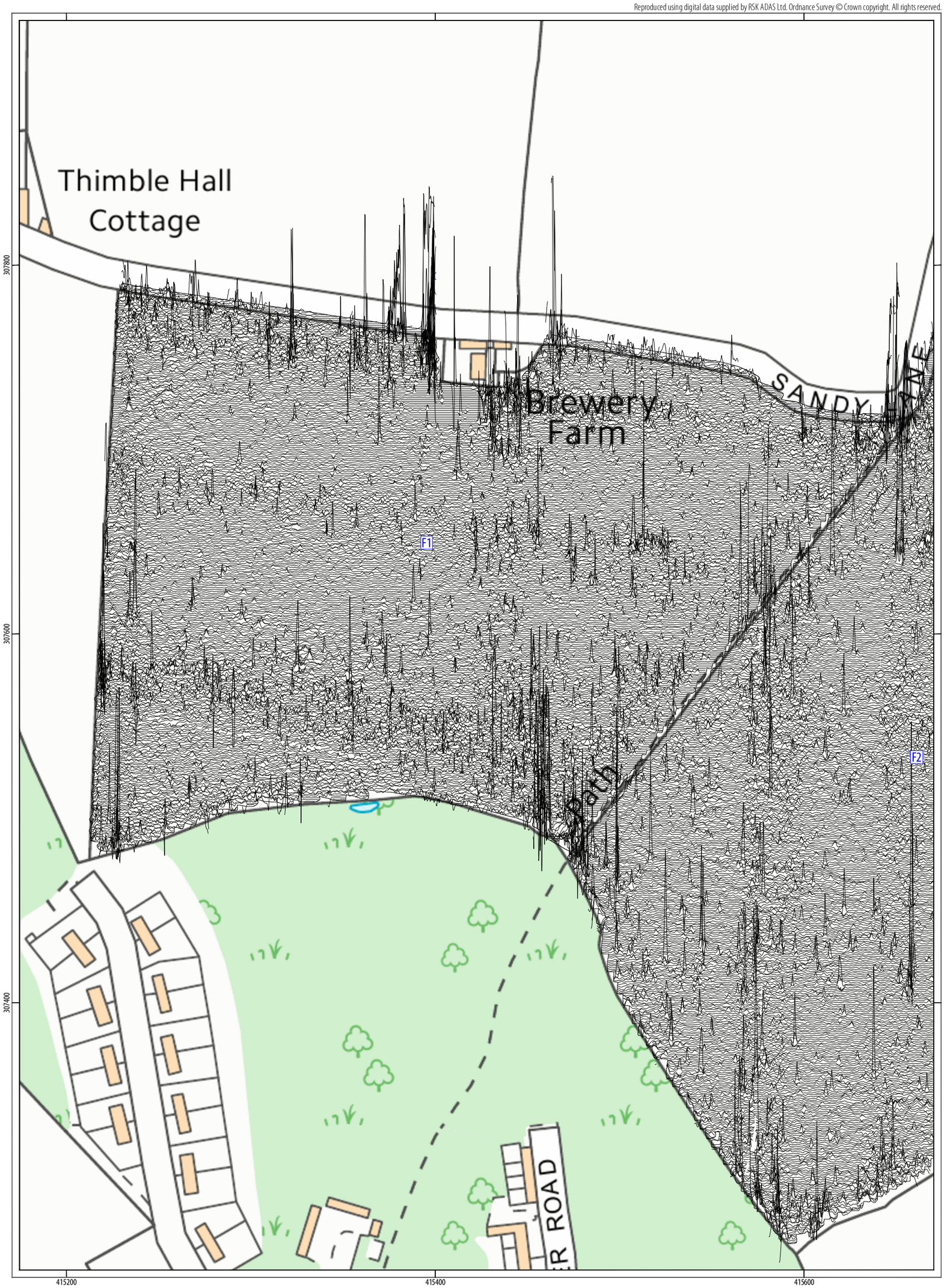
ILLUS 8 Processed greyscale magnetometer data; Sector 1



25.0nT/cm

N

0 50m

scale 1:2,000 @ A3

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Area A
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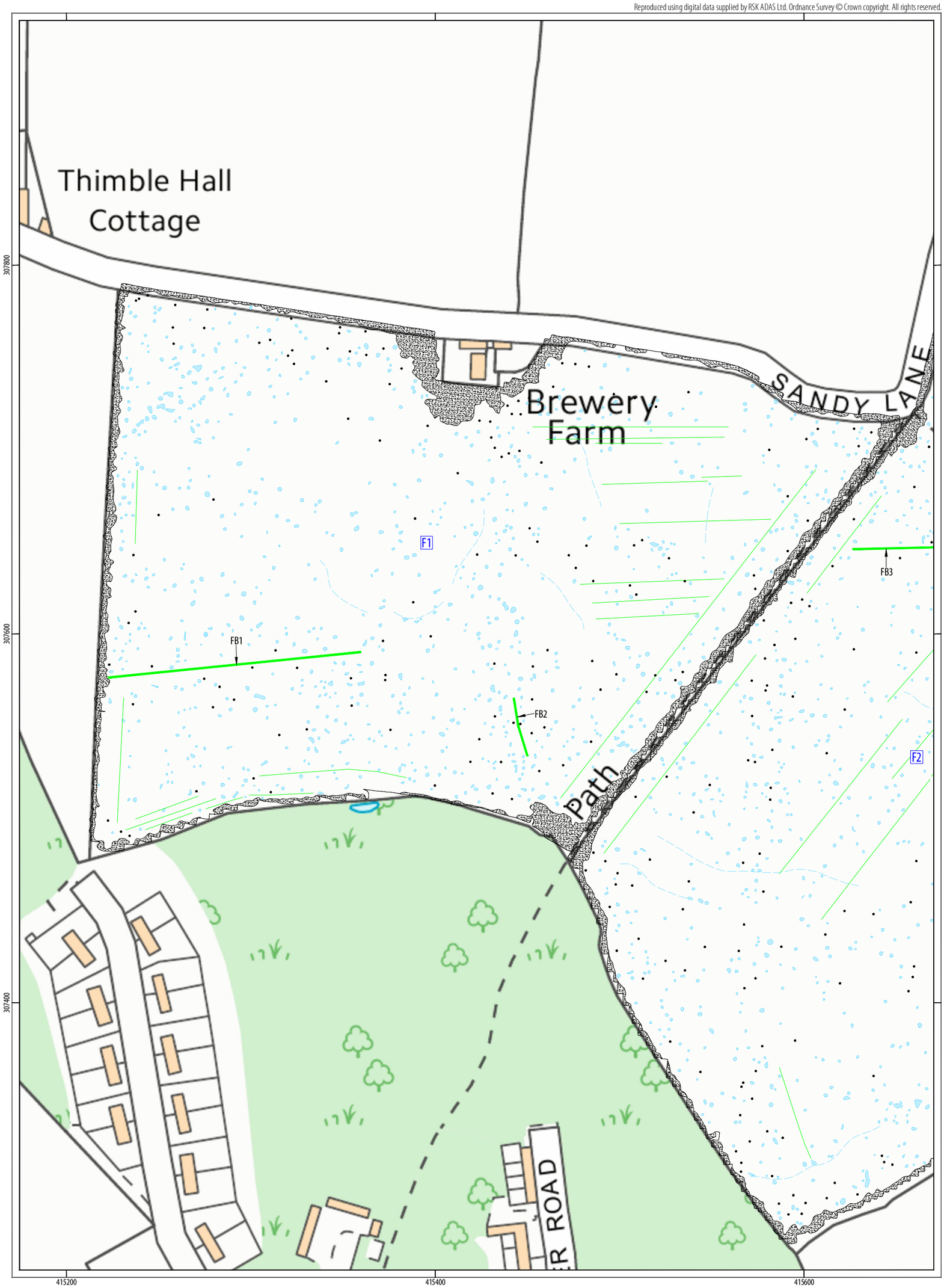
ILLUS 9 XY trace plot of minimally processed magnetometer data; Sector 1



TYPE OF ANOMALY	INTERPRETATION
dipolar isolated	ferrous material
magnetic disturbance	ferrous material
linear trend	agricultural
linear	former field boundary
linear trend	geology
magnetic enhancement	geology

ABBREVIATIONS

FB former boundary

N

0 50m

scale 1:2,000 @ A3

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Area A
Lichfield
Staffordshire

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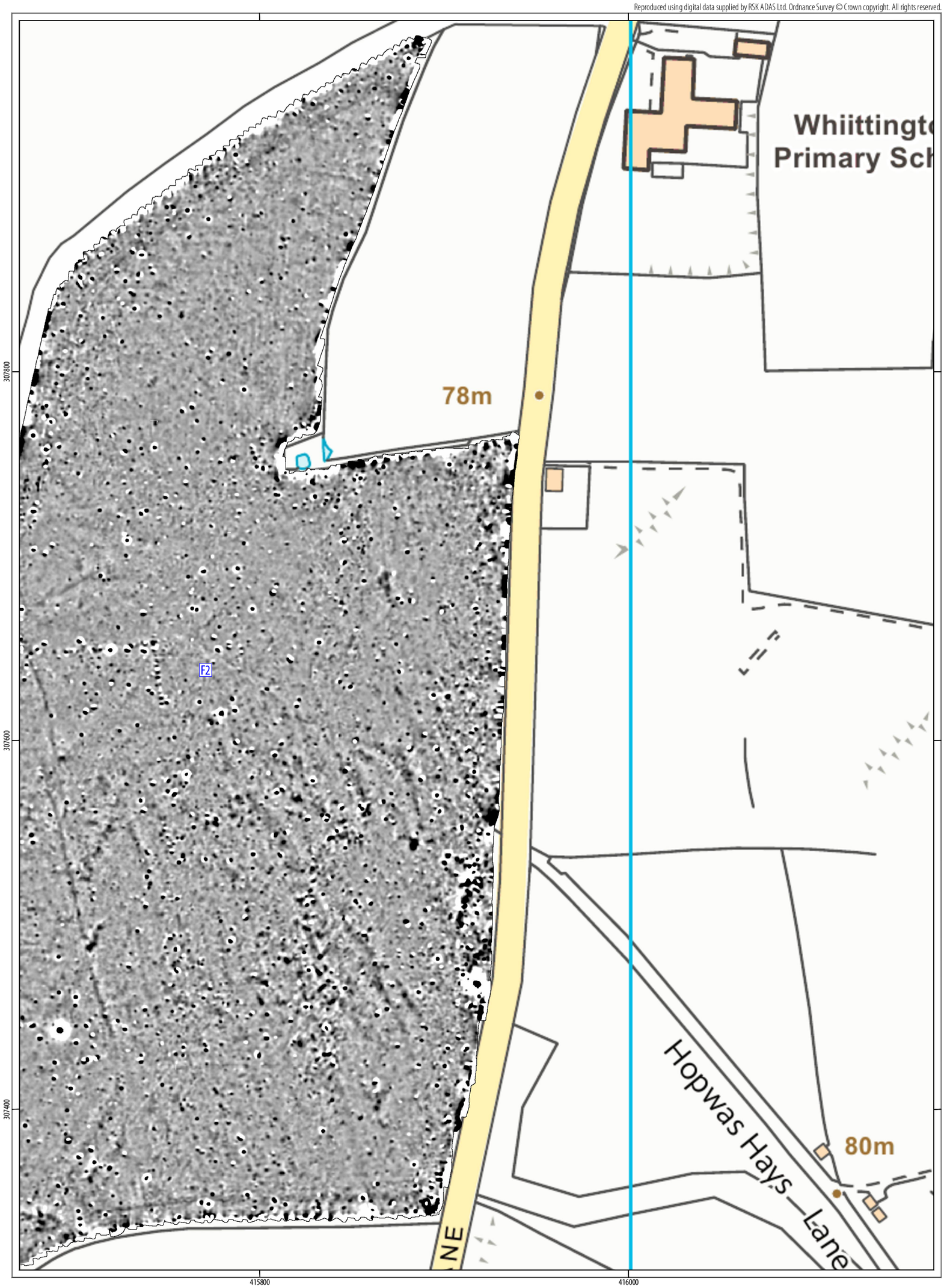
ILLUS 10 Interpretation of magnetometer data; Sector 1



-1.0 nT 2.0

N

0 50m

scale 1:2,000 @ A3

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Area A
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Staffordshire

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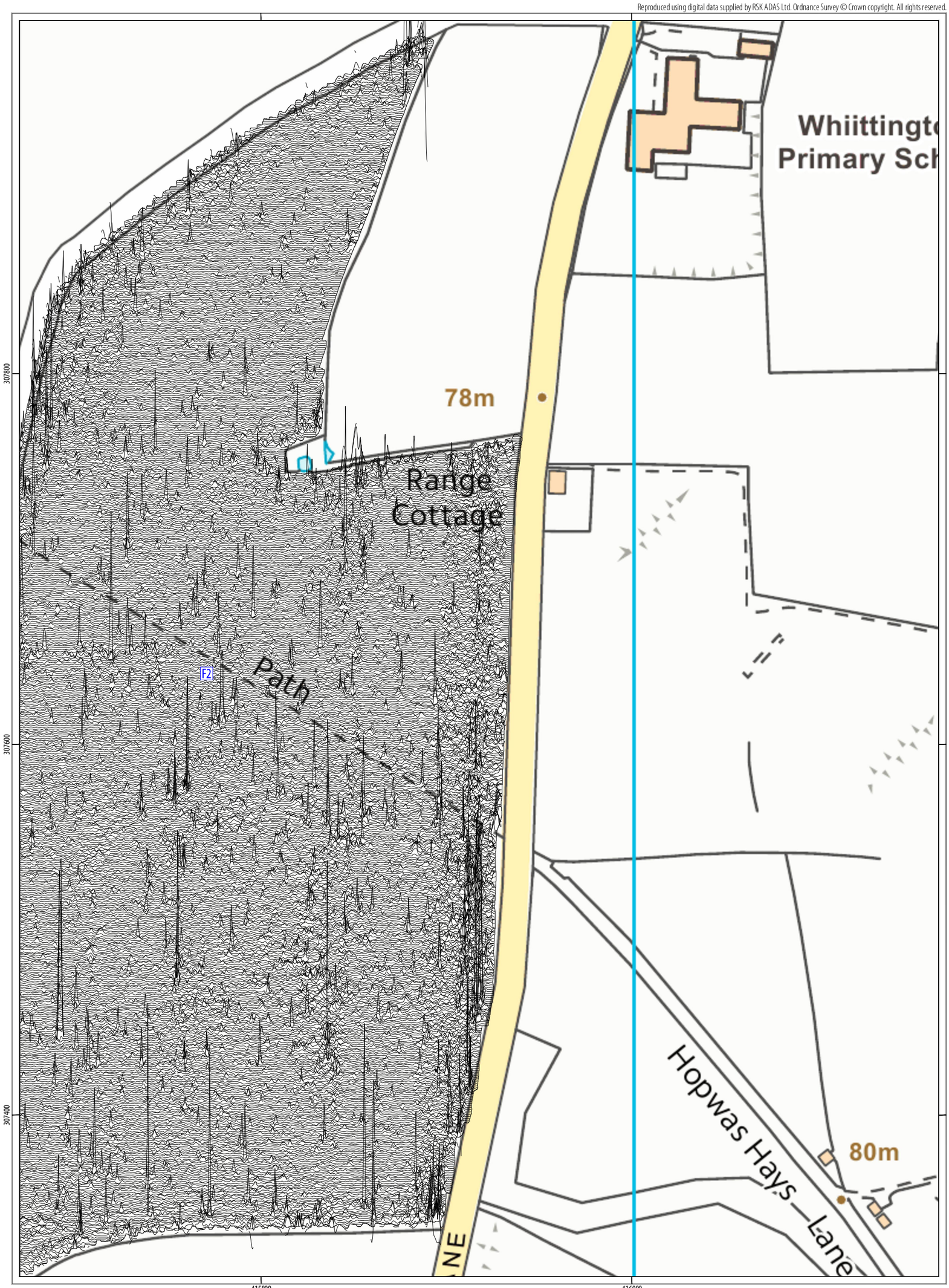
ILLUS 11 Processed greyscale magnetometer data; Sector 2



25.0nT/cm

N

0 50m

scale 1:2,000 @ A3

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Area A
Lichfield
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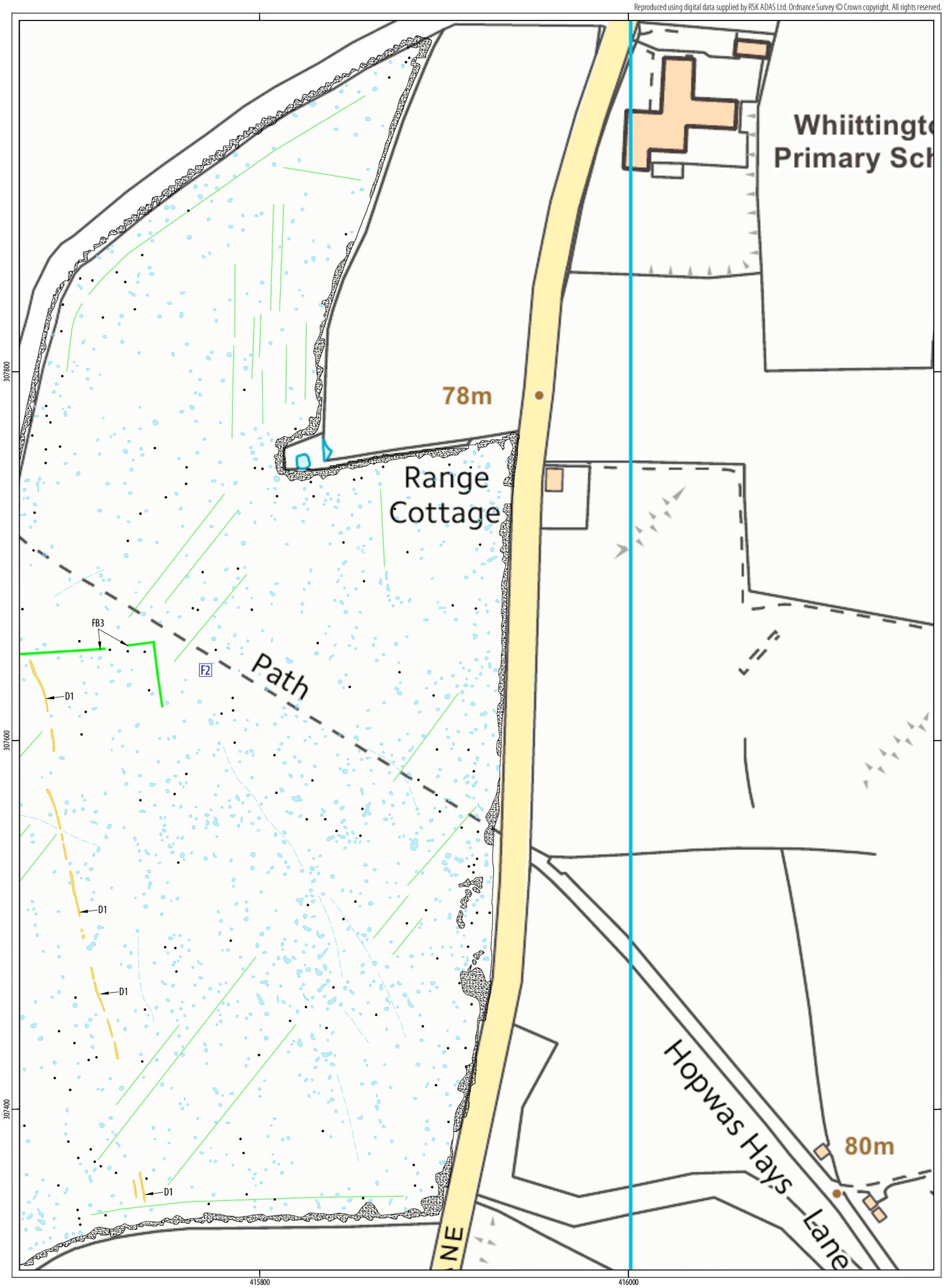
ILLUS 12 XY trace plot of minimally processed magnetometer data; Sector 2



TYPE OF ANOMALY	INTERPRETATION
dipolar isolated	ferrous material
magnetic disturbance	ferrous material
linear trend	agricultural
linear	former field boundary
linear trend	geology
magnetic enhancement	geology

TYPE OF ANOMALY	INTERPRETATION
magnetic enhancement	archaeology?

ABBREVIATIONS

D	ditch
FB	former boundary

N

0 50m

scale 1:2,000 @ A3

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Whittington Heath Golf Club
Area A
Lichfield
Staffordshire

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ILLUS 13 Interpretation of magnetometer data; Sector 2

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). The data will be stored in an indexed archive and migrated to new formats when necessary.

APPENDIX 4 DATA PROCESSING

The gradiometer data has been presented in this report in processed greyscale and minimally processed XY trace plot format.

Data collected using RTK GPS-based methods cannot be produced without minimal processing of the data. The minimally processed data has been interpolated to project the data onto a regular grid and de-striped to correct for slight variations in instrument calibration drift and any other artificial data.

A high pass filter has been applied to the greyscale plots to remove low frequency anomalies (relating to survey tracks and modern agricultural features) in order to maximise the clarity and interpretability of the archaeological anomalies.

The data has also been clipped to remove extreme values and to improve data contrast.

APPENDIX 5 OASIS DATA COLLECTION FORM: ENGLAND

OASIS ID: headland5-296927

PROJECT DETAILS	
Project name	Whittington Heath Golf Club
Short description of the project	Headland Archaeology (UK) Ltd undertook a geophysical (magnetometer) survey of a 30 hectare site, east of the existing Whittington Heath Golf Course, Staffordshire, to inform future archaeological strategy in advance of the proposed reconfiguration and extension of the golf course. No anomalies of definite archaeological potential have been identified by the survey with the majority of the anomalies being due to localised variations in the depth and composition of the topsoil. A fragmented linear anomaly within the centre of the site is thought to be due to a soil-filled ditch and may be of archaeological potential, although an agricultural origin is preferred. A former pattern of field division within the site, which is depicted on early Ordnance Survey maps, has not been detected by the survey, probably as a result of subsequent agricultural erosion of the former boundaries. On the basis of the geophysical survey the archaeological potential of the site is assessed as very low.
Project dates	Start: 27-03-2017 End: 31-03-2017
Previous/future work	Not known / Not known
Any associated project reference codes	WHGC-01 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 4 - Character Undetermined
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	Golf course
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Pre-application
Solid geology (other)	Bromsgrove Sandstone Formation
Drift geology (other)	None
Techniques	Magnetometry

PROJECT LOCATION	
Country	England
Site location	STAFFORDSHIRE LICHFIELD WHITTINGTON Whittington Heath Golf Course
Study area	30 Hectares
Site coordinates	SK 1530 0750 52.664652164184 -1.773744401577 52 39 52 N 001 46 25 W Point

PROJECT CREATORS	
Name of Organisation	Headland Archaeology
Project brief originator	RSK ADAS
Project design originator	Headland Archaeology
Project director/manager	Harrison, S
Project supervisor	Harrison, D

Type of sponsor/funding body	Developer
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	In house
Digital Contents	"Survey"
Digital Media available	"Geophysics","Survey"
Paper Archive Exists?	No

PROJECT BIBLIOGRAPHY 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Whittington Heath Golf Club, Staffordshire; Geophysical Survey
Author(s)/Editor(s)	Harrison, D.
Date	2017
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Place of issue or publication	Leeds
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Entered by	David Harrison (david.harrison@headlandarchaeology.com)
Entered on	27 September 2017

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