Geophysical Survey Report

of

Land at Ellesmere Road, Shrewsbury

For

RPS

On Behalf Of

Barwood Land

Magnitude Surveys Ref: MSSJ651

April 2020

Unit 17, Commerce Court

Challenge Way

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Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 23ha area of land at Ellesmere Road, Shrewsbury. A fluxgate gradiometer survey was successfully completed across the survey area. The geophysical survey has primarily detected evidence of the prolonged agricultural utilisation of the survey area, as well as anomalies of probable and possible archaeological origin. Archaeological activity has been identified in the form of strongly enhanced linear anomalies with orthogonal characteristics, none of which form complete enclosures. Anomalies related to historic agricultural use have been detected and interpreted as multiple ridge and furrow regimes and former field boundaries. Natural variations have been identified in areas of topographic change which suggests these broad anomalies are the result of colluvial processes. The impact of modern activity on the results is particularly evident at the perimeters of the fields, due to fencing, as well as in the form of a service line, demolition rubble from small out-buildings, and alignments of ferrous anomalies which may be indicative locations of former fence lines. A single anomaly has been classified as “Undetermined” where the origin is ambiguous from the magnetic results.

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1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by RPS on behalf of Barwood Land to undertake a geophysical survey on a c. 23ha area of land at Ellesmere Lane, Shrewsbury, Shropshire (SJ 49116 14655).

1.2. The geophysical survey comprised hand-carried GNSS-positioned fluxgate gradiometer survey.

1.3. The survey was conducted in line with the current best practice guidelines produced by Historic England (David et al., 2008), the Chartered Institute for Archaeologists (CIfA, 2014) and the European Archaeological Council (Schmidt et al., 2015).

1.4. It was conducted in line with a WSI produced by MS (2020).

1.5. The survey commenced on 24/03/2020 and took four days to complete.

2. Quality Assurance

2.1. Magnitude Surveys is a Registered Organisation of the Chartered Institute for Archaeologists (CIfA), the chartered UK body for archaeologists, and a corporate member of ISAP (International Society of Archaeological Prospection).

2.2. The directors of MS are involved in the cutting edge of research and the development of guidance/policy. Specifically, Dr. Chrys Harris is the Vice-Chair of the International Society for Archaeological Prospection (ISAP); Finnegan Pope-Carter is a Fellow of the London Geological Society, as well as a member of GeoSIG (CIfA Geophysics Special Interest Group); Dr. Kayt Armstrong is the Editor of ISAP News, and is the UK Management Committee representative for the COST Action SAGA; Dr. Paul Johnson has been a member of the ISAP Management Committee since 2015, and is currently the nominated representative for the EAA Archaeological Prospection Community to the board of the European Archaeological Association.

2.3. All MS managers have relevant degree qualifications to archaeology or geophysics. All MS field and office staff have relevant archaeology or geophysics degrees and/or field experience.

3. Objectives

3.1. The objective of this geophysical survey was to assess the subsurface archaeological potential of the survey area.

4. Geographic Background

4.1. The survey area was located c. 1.5km north from Shrewsbury (Figure 1). Survey was undertaken across five fields, four of which were under pasture and the fifth in arable usage. The survey area was bounded by woodland to the north, the A528 and residential housing to the east, fields and further residential housing to the south, and a railway line to the west (Figure 2).

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	The area consisted of grassland/pasture field which sloped steeply down to the southeast corner, and a gentler slope down from north to south.	Bounded by hedgerows and trees to the north, east and south, and by a wooden fence to the west. An active railway line ran adjacent to the western boundary, this has impacted the data as increased magnetic disturbance along that boundary. A gas line marker was noted, located in the northern half of the area, the associated gas main is visible within the dataset.
2	The area consisted of grassland/pasture field which sloped from the centre of the area down to the north.	Bounded on all sides by hedgerows and trees. A gas line marker was noted, located in the southeast of the area, the associated gas main is visible within the dataset.
3	The area consisted of grassland/pasture field which sloped down from south to north.	Bounded on all sides by hedgerows and trees. A gas line marker was noted, located at the southern edge of the area, the associated gas main is visible within the dataset.
4	The area consisted of grassland/pasture field which had flat topography.	Bounded to the north and east by hedgerows and trees, and hedgerows and wire fencing to the south and to the east. A telegraph line with two poles crossed the eastern half of the area aligned northeast to southwest. A gas line marker was noted, located at the southern edge of the area, the associated gas main is visible within the dataset.
5	The area consisted of arable field under a young oil seed rape crop which sloped down from the centre of the area to the west. A pond was present in the northern half of the survey area which prevented a small section of survey.	Bounded on all sides by hedgerows and wooden fencing, buildings stood adjacent to the area in the northeast. A telegraph line with seven poles crossed the area aligned northeast to southwest. A second telegraph line with two poles in the south corner of the area also followed a northeast to southwest alignment. A gas line marker was noted, located on the northeast and west boundaries, the associated gas main is visible within the dataset.

4.3. The underlying geology comprises sandstone of the Kinnerton Sandstone Formation. Superficial deposits comprising Glaciofluvial deposits of sand and gravel are present across Area 1, and most of Areas 2 and 5. A band of Till Devensian diamicton is recorded in the northwest of Area 2, as well as in the centre of Area 4, and the northeast of Area 5. A band of clay, silt and sand alluvium has been recorded in the north of Areas 3 and 4 (British Geological Survey, 2020).

4.4. The soils consist of freely draining slightly acid loamy soils across much of the survey area, with a band of loamy and clayey floodplain soils with naturally high groundwater in the northeast of Area 4 (Soilscapes, 2020).

5. Archaeological Background

5.1. The following section summarises the archaeological background of the survey area and the surrounding area (1km radius) following a search of Heritage Gateway (2020).

5.2. Evidence of prehistoric activity has been identified in the wider environs of the survey area. A bronze fibula brooch of dolphin pattern (04207) dating from the late Iron Age to Roman period has been identified c.350m north of the boundary of the survey area. Three other findspots have been identified located between c.500m and c.600 southeast of the survey area. These comprise; a flint implement (01579) possibly dating from the Neolithic; a late Bronze Age socketed bronze axe (02619); and a Neolithic ground stone axe (01582).

5.3. A Roman coin (NO. 68377) has been identified in the south of the survey area and further evidence of Roman activity has been identified in the wider environs. A geophysical survey, located c.350m southeast of the survey area, has identified a Roman enclosure with a possible associated Roman building (04713). The enclosure was later excavated and did not record this possible structure. However, the excavation has identified Roman pottery in one of the ditches. Finally, another Roman coin (01576) was found c.600m southwest of the survey area.

5.4. The survey area appears to have been under a long agricultural usage. It is located adjacent to the Ellesmere Road, one of the routeways out of the medieval town of Shrewsbury. This road was sometimes referred to as the King's Highway and ran in approximately the same location as it does today. The numerous field systems have been combined throughout the second half 19th century resulting in the current land division. An old gravel pit has also been recorded in the northeast of the survey area on the 1902 OS County Series.

6. Methodology

6.1. Data Collection

6.1.1. Geophysical prospection comprised the magnetic method as described in the following table.

6.1.2. Table of survey strategies:

Method	Instrument	Traverse Interval	Sample Interval
Magnetic	Bartington Instruments Grad-13 Digital Three-Axis Gradiometer	1m	200Hz reprojected to 0.125m

6.1.3. The magnetic data were collected using MS' bespoke hand-carried GNSS-positioned system.

6.1.3.1. MS' hand-carried system comprised 4 Bartington Instruments Grad 13 Digital Three-Axis Gradiometers. Positional referencing was through a multi-channel, multi-constellation GNSS Smart Antenna RTK GPS outputting in NMEA mode to

ensure high positional accuracy of collected measurements. The RTK GPS is accurate to 0.008m + 1ppm in the horizontal and 0.015m + 1ppm in the vertical.

6.1.3.2. Magnetic and GPS data were stored on an SD card within MS' bespoke datalogger. The datalogger was continuously synced, via an in-field Wi-Fi unit, to servers within MS' offices. This allowed for data collection, processing and visualisation to be monitored in real-time as fieldwork was ongoing.

6.1.3.3. A navigation system was integrated with the RTK GPS, which was used to guide the surveyor. Data were collected by traversing the survey area along the longest possible lines, ensuring efficient collection and processing.

6.2. Data Processing

6.2.1. Magnetic data were processed in bespoke in-house software produced by MS. Processing steps conform to Historic England's standards for "raw or minimally processed data" (see sect 4.2 in David et al., 2008: 11).

Sensor Calibration – The sensors were calibrated using a bespoke in-house algorithm, which conforms to Olsen et al. (2003).

Zero Median Traverse – The median of each sensor traverse is calculated within a specified range and subtracted from the collected data. This removes striping effects caused by small variations in sensor electronics.

Projection to a Regular Grid – Data collected using RTK GPS positioning requires a uniform grid projection to visualise data. Data are rotated to best fit an orthogonal grid projection and are resampled onto the grid using an inverse distance-weighting algorithm.

Interpolation to Square Pixels – Data are interpolated using a bicubic algorithm to increase the pixel density between sensor traverses. This produces images with square pixels for ease of visualisation.

6.3. Data Visualisation and Interpretation

6.3.1. This report presents the gradient of the sensors' total field data as greyscale images, as well as the total field data from the upper and/or lower sensors. The gradient of the sensors minimises external interferences and reduces the blown-out responses from ferrous and other high contrast material. However, the contrast of weak or ephemeral anomalies can be reduced through the process of calculating the gradient. Consequently, some features can be clearer in the respective gradient or total field datasets. Multiple greyscale images at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot (Figures 9 & 12). XY trace plots visualise the magnitude and form of the geophysical response, aiding in anomaly interpretation.

6.3.2. Geophysical results have been interpreted using greyscale images and XY traces in a layered environment, overlaid against open street maps, satellite imagery, historic maps, LiDAR data, and soil and geology maps. Google Earth (2020) was consulted as well, to compare the results with recent land usages.

6.3.3. Geodetic position of results - All vector and raster data have been projected into OSGB36 (ESPG27700) and can be provided upon request in ESRI Shapefile (.SHP) and Geotiff (.TIF) respectively. Figures are provided with raster and vector data projected against vector mapping provided by RPS.

7. Results

7.1.Qualification

7.1.1. Geophysical results are not a map of the ground and are instead a direct measurement of subsurface properties. Detecting and mapping features requires that said features have properties that can be measured by the chosen technique(s) and that these properties have sufficient contrast with the background to be identifiable. The interpretation of any identified anomalies is inherently subjective. While the scrutiny of the results is undertaken by qualified, experienced individuals and rigorously checked for quality and consistency, it is often not possible to classify all anomaly sources. Where possible an anomaly source will be identified along with the certainty of the interpretation. The only way to improve the interpretation of results is through a process of comparing excavated results with the geophysical reports. MS actively seek feedback on their reports as well as reports of further work in order to constantly improve our knowledge and service.

7.2.Discussion

7.2.1. The geophysical results are presented in consideration with historic maps (Figure 6).

7.2.2. The fluxgate gradiometer survey has responded well to the environment of the survey area. The geophysical survey has primarily detected the historic agricultural usage of the survey area, as well as some anomalies with archaeological potential (Figure 5). Natural anomalies are limited to the southwest quadrant of the survey area and correspond with topographic changes, which indicate colluvial processes as a probable origin. Modern activity has had a greater impact within the dataset in the form of a service line crossing the north of the survey area, this produces a broad area of magnetic disturbance which obscures some nearby anomalies. Additional ferrous anomalies include perimeter fencing, and possible areas of former fencing where footings have been left in-situ.

7.2.3. Archaeological activity has been detected in the form of two strongly enhanced rectilinear anomalies with 90-degree returns; each have characteristics of sections of archaeological enclosures, however, the magnetic data shows that neither form a complete enclosure (Figure 5). Enclosures have been excavated c. 350m from the survey area dating to the Roman period (see section 5.3); however, it is not possible to identify any relationship between those excavated enclosures and the anomalies within the survey area. The rectilinear anomaly in the north has been obscured by the presence of the service line and the current field boundary, therefore making its true extent impossible to discern from the geophysical results (Figure 8). Weaker linear anomalies of possible archaeological origin in the proximity cannot be directly linked to the partial enclosure. To the south, a rectilinear anomaly with 90-degree return has been identified

with what appears to be an opening in the eastern extent, and a clear ditch terminus in the north (Figure 11). The odd configuration of this anomaly makes interpretation of its function difficult, as no western or northern boundaries have been identified. A strong, discrete anomaly has also been classed as "Possible Archaeology" due to its location in alignment with the linear opening and unusual dipolar characteristics which may indicate a burnt/ fired material.

7.2.4. Ridge and furrow cultivation has been identified across most of the survey area (Figure 5). Former field boundaries have also been detected, the majority of which correspond with boundaries recorded on historic maps. In addition, modern ploughing, repeated tractor movement and some drainage features have also been identified.

7.2.5. An area of potential former extraction has been identified close to an extant pond. The infill of a recorded former pond, and demolition rubble from recorded former buildings have also been detected (Figure 5).

7.3.Interpretation

7.3.1. General Statements

7.3.1.1. Geophysical anomalies will be discussed broadly as classification types across the survey area. Only anomalies that are distinctive or unusual will be discussed individually.

7.3.1.2. **Magnetic Disturbance** – The strong anomalies produced by extant metallic structures along the edges of the field have been classified as 'Magnetic Disturbance'. These magnetic 'haloes' will obscure the response of any weaker underlying features, should they be present, often over a greater footprint than the structure they are being caused by.

7.3.1.3. **Ferrous (Spike)** – Discrete ferrous-like, dipolar anomalies are likely to be the result of isolated modern metallic debris on or near the ground surface.

7.3.1.4. **Ferrous/Debris (Spread)** – A ferrous/debris spread refers to a concentrated deposition of discrete, dipolar ferrous anomalies and other highly magnetic material.

7.3.1.5. **Undetermined** – Anomalies are classified as Undetermined when the anomaly origin is ambiguous through the geophysical results and there is no supporting or correlative evidence to warrant a more certain classification. These anomalies are likely to be the result of geological, pedological or agricultural processes, although an archaeological origin cannot be entirely ruled out. Undetermined anomalies are generally not ferrous in nature.

7.3.2. Magnetic Results - Specific Anomalies

7.3.2.1. **Probable/ Possible Archaeology –** A strongly magnetically enhanced rectilinear anomaly [**2a**] has been detected in the northwest of the survey area, Area 2 (Figure 8). This rectilinear anomaly exhibits a continuous, strongly positive magnetic signal, typical of ditch infills enhanced by anthropogenic activity (Figure 7). [**2a**] may extend south into Area 1[**1a**], however, this linear anomaly

in Area 1 has been categorised as "Possible Archaeology" due to the high level of magnetic disturbance surrounding it. Further linear anomalies to the east, in Area 5 [**5a**], may represent significantly less enhanced ditch-type features. It is possible that [**2a**, **1a** and **5a**] once formed part of a complete enclosure, however due the subsequent activity on the site, the addition of a service line and field systems this relationship is not definite.

7.3.2.2. **Probable/ Possible Archaeology** – Two further strongly magnetically enhanced linear anomalies, [**5b**], have been detected in the east of Area 5 (Figure 11). These anomalies appear to form a backwards "L" shape and have a clear opening within the eastern extent, typical of many archaeological enclosures. However, the anomalies at [**5b**] do not appear to form a complete enclosure as the western and northern edges have not been identified within the magnetic data. In addition, the northern extent of the anomaly appears to stop at a precise terminus (Figure 10). Due to this unusual configuration it is difficult to interpret the function of [**5b**], however it is considered likely to be of archaeological origin due to its strongly enhanced magnetic signal. The 2nd edition OS map (Figure 6) shows that [**5b**] does share alignment with some former field boundaries which may offer another interpretation: the projected route of [**5b**] may indicate a relationship with these former field boundaries and a possible historic origin. A strong dipolar anomaly close to [**5b**] has been interpreted as "Possible Archaeology", due to its position in alignment with the opening in [**5b**], and the unusual nature of the dipolar signal. While the majority of dipolar anomalies are considered to be modern in origin, the signal of that close to [**5b**] is inverted (Figure 10), which may indicate a non-ferrous origin, possibly related to burnt or fired material.

7.3.2.3. **Ridge and Furrow** – Multiple series of parallel linear anomalies have been detected across the survey area (Figure 5). These linear anomalies are characteristic of ridge and furrow ploughing regimes, being relatively widely spaced with between 5m-9m separation. The ploughing regimes appear to respect former and current field boundaries in the west and south, with no evidence of overlapping orientations.

7.3.2.4. **Agricultural** – A number of additional linear anomalies identified throughout Area 5, and in the south of Area 1, correspond with former field boundaries recorded on the 2nd edition OS map (Figure 6). A single unmapped former field boundary has also been detected, [**5c**], which shares similar magnetic characteristics with those recorded former field boundaries in the adjacent Area 1 (Figure 10). In the north of the survey area, in Area 4, a positive linear anomaly [**4a**] has been identified which corresponds which a recorded former footpath (Figure 6). Modern agricultural activity has been identified in the form of weak, regular closely spaced trends across Area 5, which is characteristic of modern ploughing. Negative trends at the perimeter of Area 5 are indicative of repeated tractor movements (Figure 3).

7.3.2.5. **Drainage Feature** – Two linear anomalies have been detected in the north of the survey area, Area 3 (Figure 8), both have negatively enhanced magnetic signals. This type of magnetic signal can indicate the presence of "French Drains", ditches filled with gravel used for drainage purposes.

7.3.2.6. **Industrial/ Modern (Spread)** – A cluster of anomalies has been detected to the north of an extant pond in Area 5, [**5d**] (Figure 8). The magnetic signal of these anomalies is only slightly stronger than that of the surrounding soils which could indicate a natural origin (Figure 7). However, while the cluster of anomalies itself is amorphous in shape a number of linear negative anomalies appear to cut through it (Figure 7) which is suggestive of mineral extraction activity. Less than 100m northeast historic maps (Figure 6) show an "Old Gravel Pit" indicating that the region has been utilised for extraction purposes in past.

7.3.2.7. **Ferrous/ Debris (Spread)** – Three areas containing high concentrations of small ferrous anomalies have been identified throughout Area 5, [**5e, 5f, 5g**] (Figures 8 & 11). Each of these spreads of debris corresponds with small buildings on historic maps, [**5e** & **5f**] visible on 2nd edition OS map (Figure 6), [**5g**] on 1952 OS map. Therefore, it is likely that each of these debris anomalies represents demolition rubble from the removal of the small out-buildings

7.3.2.8. **Magnetic Disturbance** – A series of discrete ferrous anomalies in a linear alignment have been identified in Area 1 and Area 4 (Figures 8 & 11). These may relate to unmapped former fence lines where some footings have been left in place after the fence was removed. In the east of Area 5 a relatively small area of magnetic disturbance has been detected, [**5h**]. correlates with the location of a former pond on 1881 OS map, magnetic signal likely relates to the backfill of this former pond.

8. Conclusions

8.1. A fluxgate gradiometer survey has successfully been undertaken across the survey area. The geophysical survey has detected a range of different types of anomalies of archaeological, agricultural, industrial and natural origin. The natural variations have had little impact on the dataset overall, with weak, broad amorphous anomalies detected in the southwest seeming to be related to changes in the topography of the area. Modern activity is present throughout the dataset, mostly concentrated at the perimeters of fields as broad ferrous anomalies related to fencing, as well as a service line which runs across the northern half of the survey area. Additional broad ferrous anomalies are present running through two of the survey areas, possibly representing unmapped former fence lines where footings have been left in place.

8.2. Two foci of probable archaeological activity have been detected in the north and east of the survey area. Both are comprised of anomalies with rectilinear characteristics, indicative of ditches seemingly backfilled with anthropogenically enhanced materials, however, neither anomaly forms a complete enclosure. The anomaly in the east has an opening to the east and a clear terminus in the north. In the north, a rectilinear anomaly has been detected abutting a current field boundary. Close to the northern archaeological activity anomalies with much weaker magnetic signals or that have been masked by adjacent magnetic disturbance have been

classified as “Possible Archaeology”. A strong, discrete anomaly in the east has also been classed as “Possible Archaeology” due to its unusual dipolar characteristics which may indicate a burnt/ fired material.

8.3. Agricultural activity has been detected in the form of ridge and furrow ploughing regimes, former field boundaries, both recorded on historic maps and un-recorded. Possible drainage features have been identified to the north. Modern ploughing regimes have been detected within the largest field of the survey area, as well as evidence of repeated tractor movement at the edges of the field.

8.4. Industrial activity has been detected in the form of a possible extraction pit which is only slightly more enhanced than the surround soils.

8.5. Anomalies indicative of spreads of ferrous debris have been detected along the routes of three of the recorded former field boundaries. This debris corresponds with the location of former small buildings recorded on historic maps and likely represents demolition rubble. The infill of a former pond has also been detected.

9. Archiving

9.1. MS maintains an in-house digital archive, which is based on Schmidt and Ernenwein (2013). This stores the collected measurements, minimally processed data, georeferenced and un-georeferenced images, XY traces and a copy of the final report.

9.2. MS contributes reports to the ADS Grey Literature Library upon permission from the client, subject to the any dictated time embargoes.

10. Copyright

10.1. Copyright and the intellectual property pertaining to all reports, figures, and datasets produced by Magnitude Services Ltd. is retained by MS. The client is given full licence to use such material for their own purposes. Permission must be sought by any third party wishing to use or reproduce any IP owned by MS.

11. References

British Geological Survey, 2020. Geology of Britain. [Shrewsbury, Shropshire]. [http://mapapps.bgs.ac.uk/geologyofbritain/home.html/]. [Accessed 26/03/2020].

Chartered Institute for Archaeologists, 2014. Standards and guidance for archaeological geophysical survey. CIfA.

David, A., Linford, N., Linford, P. and Martin, L., 2008. Geophysical survey in archaeological field evaluation: research and professional services guidelines (2nd edition). Historic England.

Google Earth, 2020. Google Earth Pro V 7.1.7.2606.

Heritage Gateway, 2020. [Shrewsbury, Shropshire].[https://www.heritagegateway.org.uk/Gateway/] [Accessed 27/04/2020].

Magnitude Surveys, 2020. Written Scheme of Investigation for a Geophysical Survey of Land at Ellesmere Road, Shrewsbury. Unpublished.

Olsen, N., Toffner-Clausen, L., Sabaka, T.J., Brauer, P., Merayo, J.M.G., Jorgensen, J.L., Leger, J.M., Nielsen, O.V., Primdahl, F., and Risbo, T., 2003. Calibration of the Orsted vector magnetometer. *Earth Planets Space* 55: 11-18.

Schmidt, A. and Ernenwein, E., 2013. Guide to good practice: geophysical data in archaeology. 2nd ed., Oxbow Books, Oxford.

Schmidt, A., Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A. and Fassbinder, J., 2015. Guidelines for the use of geophysics in archaeology: questions to ask and points to consider. EAC Guidelines 2. European Archaeological Council: Belgium.

Soilscapes, 2020. [Shrewsbury, Shropshire]. Cranfield University, National Soil Resources Institute [http://landis.org.uk]. [Accessed 26/03/2020].

12. Project Metadata

MS Job Code	MSSJ651
Project Name	Land at Ellesmere Road, Shrewsbury
Client	RPS
Grid Reference	SJ 49116 14655
Survey Techniques	Magnetometry
Survey Size (ha)	23ha (Magnetometry)
Survey Dates	2020-03-24 to 2020-03-27
Project Manager	Dr Paul S. Johnson BA MA PhD
Project Officer	Leanne Swinbank, BA ACIfA
HER Event No	N/A
OASIS No	Update if relevant or N/A
S42 Licence No	N/A
Report Version	1.0

13. Document History

Version	Comments	Author	Checked By	Date
0.1	Initial draft for Project Officer to Review	LS	MF	27 April 2020
0.2	Incorporation of Project Officer comments. Checked by Project Manager.	LS	PSJ	29 April 2020
1.0	Client's comments incorporated, issued as final.	LS	LS	30 April 2020

MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 1 - Site Location
1:25,000 @ A4

Site Boundary

N

0 0.5 1 km

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MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 2 - Location of Survey Areas
1:5,000 @ A3

Survey Extent

N

0 100 200 300 m

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Area 1

Area 2

Area 3

Area 4

Area 5

MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 3 - Magnetic Gradient (Overview)
1:2,500 @ A3

Contains mapping provided by the client

-1 nT 2

0 50 100 150 m

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MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 4 - Magnetic Total Field (Lower Sensor) (Overview)
1:2,500 @ A3

Contains mapping provided by the client

48,997 nT 49,005

N

0 50 100 150 m

magnitude surveys

MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 5 - Magnetic Interpretation (Overview)
1:2,500 @ A3

Contains mapping provided by the client

- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Agricultural (Strong)
- Agricultural (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Natural (Weak)
- Undetermined (Weak)
- Industrial/Modern (Spread)
- Agricultural (Trend)
- Service
- Ridge and Furrow (Trend)
- Drainage Feature

0 50 100 150 m

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MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 6 - Magnetic Interpretation Over Historic Maps 1:3,500 @ A3

Contains historic maps: Ordnance Survey, 6" 2nd edition c. 1882-1913 © National Library of Scotland

Archaeology Probable (Strong)
Archaeology Probable (Weak)
Archaeology Possible (Strong)
Archaeology Possible (Weak)
Agricultural (Strong)
Agricultural (Weak)
Magnetic Disturbance
Ferrous/Debris (Spread)
Natural (Weak)
Undetermined (Weak)
Industrial/Modern (Spread)
Agricultural (Trend)
Service
Ridge and Furrow (Trend)
Drainage Feature

N

0 50 100 150 m

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Area 1

Area 2

Area 3

Area 4

Area 5

MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 7 - Magnetic Gradient (North)
1:1,500 @ A3

Contains mapping provided by the client

-1 nT 2

N

0 50 100 150 m

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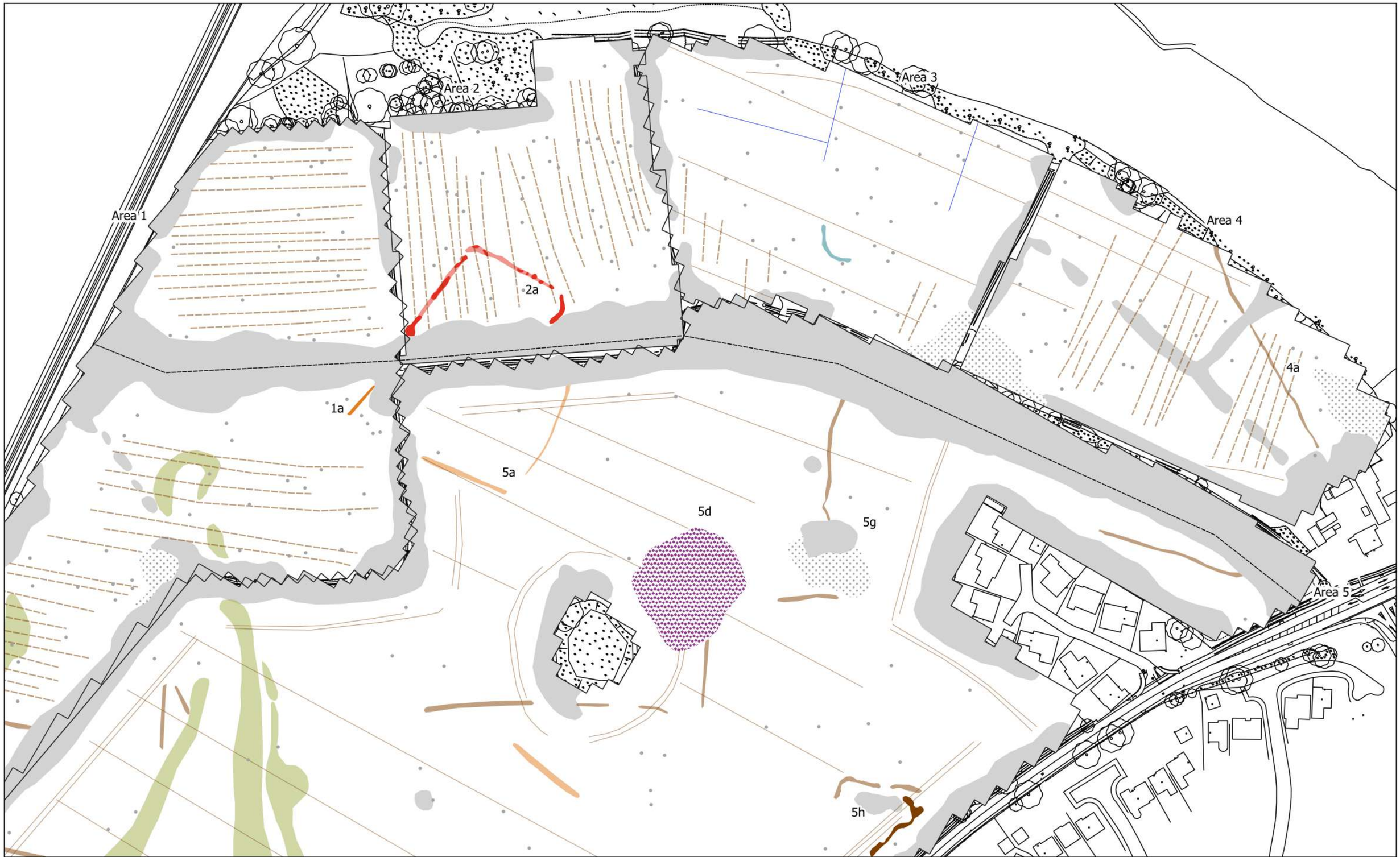


MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 8 - Magnetic Interpretation (North)
1:1,500 @ A3

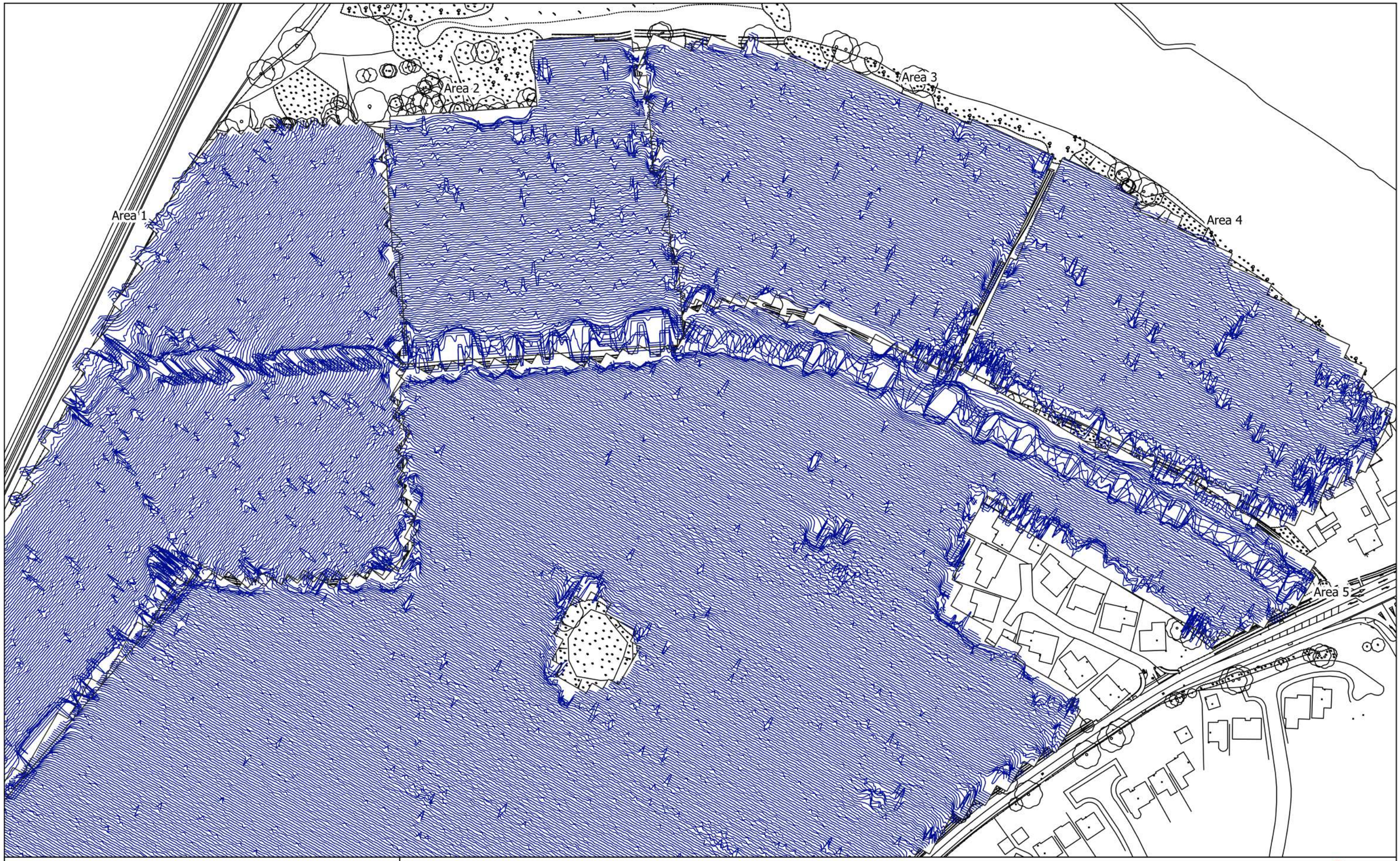
Contains mapping provided by the client

- Agricultural (Strong)
- Agricultural (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Natural (Weak)
- Undetermined (Weak)
- Industrial/Modern (Spread)
- Agricultural (Trend)
- Service
- Ridge and Furrow (Trend)
- Drainage Feature
- interpretation_point

N

0 50 100 150 m

magnitude surveys



M5SJ651 - Land at Ellesmere Road, Shrewsbury
Figure 9 - XY Trace Plot (North)
90nT/cm at 1:1,500 @ A3

Contains mapping provided by the client

N

0 50 100 150 m

magnitude surveys

Area 1

Area 5

MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 10 - Magnetic Gradient (South)
1:1,500 @ A3

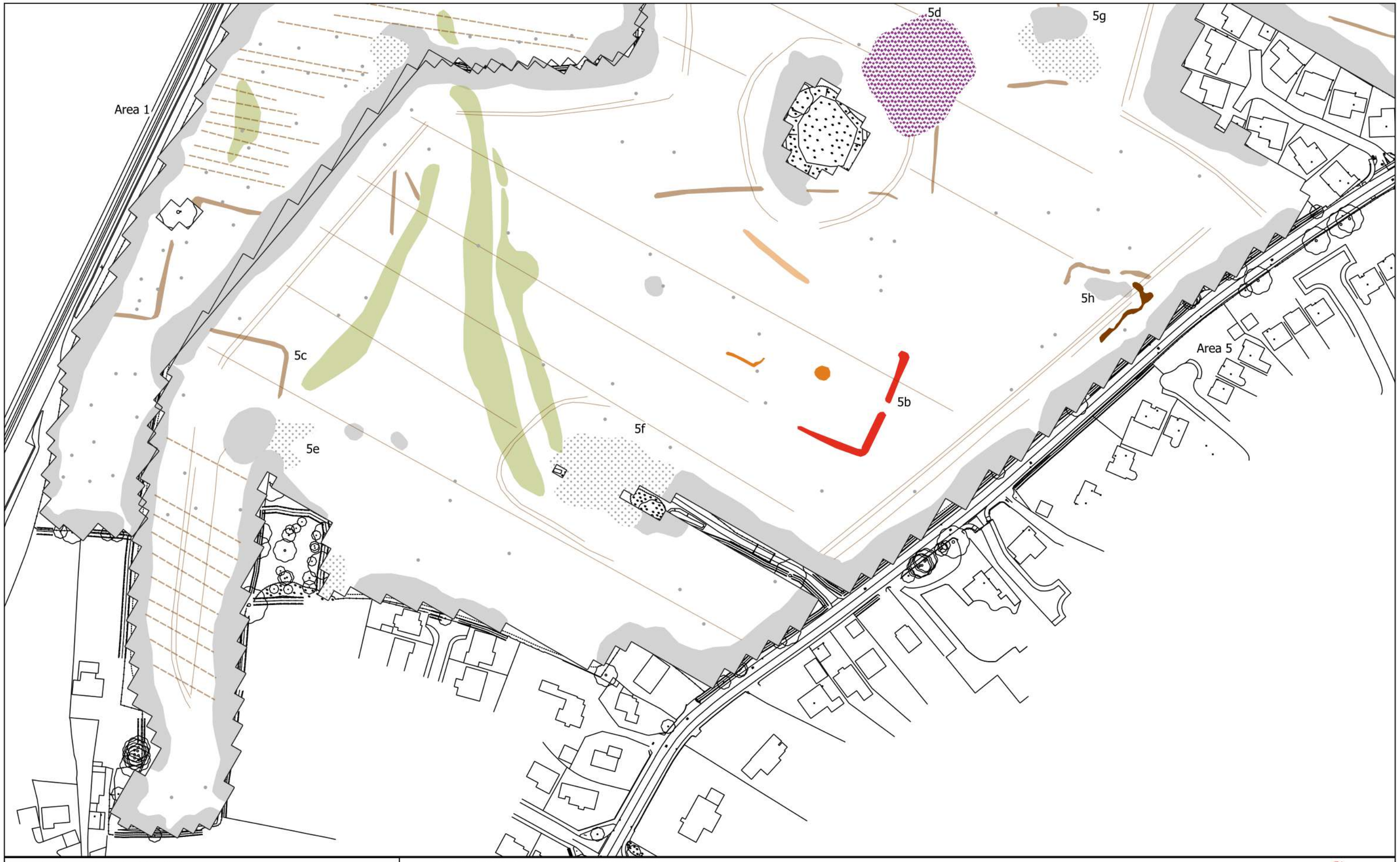
Contains mapping provided by the client

-1 nT 2

N

0 50 100 150 m

magnitude surveys



MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 11 - Magnetic Interpretation (South)
1:1,500 @ A3

Contains mapping provided by the client

- Agricultural (Strong)
- Agricultural (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Archaeology Probable (Strong)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Natural (Weak)
- Industrial/Modern (Spread)
- Agricultural (Trend)
- Service
- Ridge and Furrow (Trend)
- interpretation_point

N

0 50 100 150 m

magnitude surveys

Area 1

Area 5

MSSJ651 - Land at Ellesmere Road, Shrewsbury
Figure 12 - XY Trace Plot (South)
90nT/cm at 1:1,500 @ A3

Contains mapping provided by the client

N

0 50 100 150 m

magnitude surveys