Geophysical Survey Report

of

Land East of Robey's Lane (Phase 2)

Tamworth, Warwickshire

For

CgMs Consulting

On Behalf Of

Hallam Land Management Ltd

Magnitude Surveys Ref: MSSK186

November 2017

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Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 54ha area of land to the east of Robey's Lane, Tamworth. A fluxgate gradiometer survey was successfully completed, and three areas of archaeological anomalies have been identified. Two of these areas are located in the centre of the site along the ridge; these have been interpreted as possible enclosures or old field boundaries. The other is located on an isolated elevation towards the western end and may potentially be associated with industrial activity. In addition to the mentioned archaeology, the geophysical results primarily reflect natural geological variations, as well as agricultural and modern activity.

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1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by CgMs Consulting (CGMS) on behalf of Hallam Land Management Ltd (HLM) to undertake a geophysical survey on a c. 54 ha area of land to the east of Robey's Lane, Tamworth, Warwickshire (SK 2465 0366).

1.2. The geophysical survey comprised a quad-towed, cart-mounted 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. The survey was undertaken in accordance with a risk assessment and method statement submitted to the LPA's archaeological advisor.

1.5. The survey commenced on 11/09/2017 and was undertaken in three different tranches due to access to land before its completion on 20/11/2017.

2. Quality Assurance

2.1. Project management, survey work, data processing and report production have been carried out by qualified and professional geophysicists to standards exceeding the current best practice (CIfA, 2014; David et al., 2008, Schmidt et al., 2015).

2.2. Magnitude Surveys is a corporate member of ISAP (International Society of Archaeological Prospection).

2.3. Director Graeme Attwood is a Member of the Chartered Institute for Archaeologists (CIfA), the chartered UK body for archaeologists, as well as the Secretary of GeoSIG, the CIfA Geophysics Special Interest Group. Director Finnegan Pope-Carter is a Fellow of the London Geological Society, the chartered UK body for geophysicists and geologists, as well as a member of GeoSIG, the CIfA Geophysics Special Interest Group. Director Chrys Harris has a PhD in archaeological geophysics from the University of Bradford and is the Vice-Chair of the International Society for Archaeological Prospection.

2.4. All MS managers have postgraduate qualifications in archaeological geophysics. All MS field staff have relevant archaeology or geophysics degrees and supervisors have at least three years' field experience.

3. Objectives

3.1. The geophysical survey aimed to assess the subsurface archaeological potential of the survey areas.

4. Geographic Background

4.1. The site is located between Glascote Heath and Polesworth, approximately 3.5 km east of the centre of Tamworth. (Figure 1). Survey was undertaken across three fields. The site was bounded by Robey's Lane to the east, Tamworth Road to the south, and further fields to the north. A construction site was present along the western boundary at the time of survey. Woodhouse Farm and Daytona Tamworth, a go kart racing track, were located within the boundary of the site and could not be surveyed. The northern half of the site comprised soft soil arable land with young crops, gently undulating downwards from the centre to the east, west and north (Figure 2).

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	Arable land. Gentle undulations across the field.	A small portion of land close to Woodhouse Farm buildings could not be surveyed due to rough terrain. The cultivation of potatoes in the area, led to the subdivision of the field survey in three different tranches.
2	Pasture land with a downwards slope from the southwest to the northeast.	A line of 5 telegraph poles crosses the area on a N-S alignment, a large pylon is situated in the west of the site. A footpath runs along the boundary of the go kart track in the west. A wooden fence bounds the area in the north and south, while hedgerows bound the east and west.
3	Flat, pasture field.	A tarmac path runs parallel to the northeast edge, with a storage container located halfway between the path and the edge. A pylon is located close to the northeast corner. The area is bounded by wire fence to the north and south, and hedges to the west and east.

4.3. The underlying geology for the northern section of Area 1 comprises Halesowen Mudstone, Siltstone and Sandstone Formation. A central band of Etruria Mudstone, Sandstone and Conglomerate Formation runs SW-NE. In the southern half Area 1 Halesowen Sandstone sedimentary bedrock is present. Thin swathes of Pennine Middle Coal Measures Formation occur in the east and west of Area 1.

In Area 2, the bedrock geology is Halesowen Mudstone, Siltstone and Sandstone with a small amount of Halesowen Sandstone sedimentary bedrock along the northern boundary. Area 3 bedrock is Halesowen formation sandstone across most of the area with a band of Halesowen Mudstone, Siltstone and Sandstone in the southeast.

Superficial deposits are largely unrecorded throughout the site, however a band composed of alluvial clay, silt, sand and gravel is present on the northwest boundary of Area 1 (British Geological Survey, 2017).

4.4. The soils for Area 1 consist of slowly permeable seasonally wet acid loamy and clayey soils, while for Areas 2 and 3 there are freely draining slightly acid loamy soils (Soilscapes, 2017).

5. Archaeological Background

5.1. The following archaeological background of the study site and its environs is summarised from a desk-based assessment (DBA) composed by CgMs Consulting (Whiteley, 2016).

5.2. Previous geophysical investigations undertake across the golf course immediately west of site identified agricultural activity in the form of former field boundaries and ridge and furrow ploughing. These features were also later identified in trial trenching; although the excavations did not identify any archaeological feature except for a few evidences of agricultural activity (Bunn, 2016; Henderson and Hayes, 2017). (HER No. MST 2235, MST 2255, MST 2259, MST 2262).

5.3. Evidence for Iron Age/Romano British activity has been recorded in the wider landscape. A fluxgate gradiometer and magnetic susceptibility survey c. 500-800m south-west of the study site detected a potential Iron Age/Romano-British field system, which included a complex of ditches and at least one enclosure (HER No. MST 22353, 22353). A Roman coin hoard is recorded as being found in Alvecote Wood at the study site's eastern boundary (HER No. MST 180, 181, 182, 183)

5.4. Medieval activity and finds have been recorded in the greater search area and mostly included building complexes (List Entry No. 1365179, 1252601, 1262207, 1020623). Metal detectorists have recorded Medieval finds 1000 m east of study site (MWA20759, MWA20763, MWA20766, MWA20773).

5.5. Industrial activity has been recorded in the greater search area, including collieries (MST15186, MWA6507), brickyards (MWA6538, MWA12238) and quarries (MWA6537).

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 quad-towed cart system.

6.1.3.1. MS' cart system was comprised of Bartington Instruments Grad 13 Digital Three-Axis Gradiometers. Positional referencing was through a Hemisphere S321 GNSS Smart Antenna RTK GPS outputting in NMEA mode to ensure high positional accuracy of collected measurements. The Hemisphere S321 GNSS Smart Antenna 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 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, come features can be clearer in the respective gradient or total field datasets. Multiple greyscales images at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot. 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 (2017) was consulted as well, to compare the results with recent land usages.

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 4).

7.2.2. The fluxgate gradiometer survey has overall responded well to the environment of the survey area. The underlying natural variations in the soil and geology have produced an enhanced magnetic background, particularly in the northern half of site. Broad swathes of natural variation sweep north-south across Area 1, while areas of "Natural (Spread)" are indicative of localised variations in the superficial geology and natural soils (see Section 4.3).

7.2.3. Modern interference is minimal across the northern half of the site, but the impact of modern activity is more evident in the southern half. This is not surprising given the recent utilisation of the fields (Google Earth, 2017) and the construction of the go kart tracks between Areas 2 and 3. A large amount of modern disturbance has been identified in Area 3, which may be an effect of cattle markets previously held in this area. Services have been detected in all survey areas, as well a pylon in the northeast has had an effect in the data.

7.2.4. In Area 1, two clusters of anomalies interpreted as possible archaeology have been identified along the natural elevation of the hill at 90m over sea level. The cluster classified as probable archaeology towards the southeastern end of Area 1 consist of well-defined enclosed anomalies. Interpretation of the cluster towards the centre of the field is less certain due to the enhanced natural background and complex intersection of many of these responses; hence, the classification of possible archaeology. However, these anomalies have also been mainly interpreted as enclosures, potentially of earlier historic origin. Both clusters of archaeological responses these features appear to respect the historic configurations of the field (Figure 4). Towards the western end of the field, a third area of possible archaeology has been identified, which is more distinct in configuration than the other areas---potentially suggesting a different use.

7.2.5. In addition to the archaeological anomalies, the geophysical results also reflect intense past and present anthropogenic use of the landscape, including former field boundaries, modern ploughing, drains, and the modern anomalies discussed above. The ambiguous anomalies identified as "Undetermined" are considered to reflect a combination of these processes.

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. Specific anomalies discussed within the text have been assigned numbers, which are emboldened within square parenthesis e.g. **[1]**.

7.3.1.2. **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.

7.3.1.3. **Ferrous (Discrete/Spread)** – Discrete ferrous-like, dipolar anomalies are likely to be the result of modern metallic disturbance on or near the ground surface. A ferrous spread refers to a concentrated deposition of these discrete, dipolar anomalies. Broad dipolar ferrous responses from modern metallic features, such as fences, gates, neighbouring buildings and services, may mask any weaker underlying archaeological anomalies should they be present.

7.3.2. Magnetic Results - Specific Anomalies

7.3.1.1. **Agricultural (Field Boundaries)** – Former field boundaries are the most recurrent agricultural feature represented in both Areas 1 and 2 [e.g. **1a** & **2a**] (Figure 4). These features are represented predominantly as straight linear anomalies, both weak and strong in magnitude. Some can be identified on historic maps (Figure 4), while others, despite not being represented on maps, respect other field boundaries, which suggests a similar origin. An exception occurs through the centre of Area 1 (e.g. **[1b])** where discrete clusters of ferrous and mixed material correspond with the locations of former field boundaries. It is likely that these features have been infilled and impacted by subsequent ploughing. A similar process appears to have occurred to a lesser extent with the former field boundary identified in Area 2, crossing the middle of the field from the southeast to the northwest [**2a**].

7.3.2.1. **Archaeology (Probable Enclosures)** – The magnetic results have revealed the presence of magnetically strong, linear, ditch-like anomalies, which together for apparent sub-rectangular enclosures or small field boundaries in the southeast of Area 1 **[1c]**. These anomalies are subdivided into two separate sub-

rectangular features of approximately 24m x 34m and 9m x 30m, as well as a sub-triangular feature of *c*. 47m x 43m towards the south-east.

7.3.2.2. **Archaeology (Possible Enclosures)** – In the centre of Area 1, numerous linear and curvilinear ditch-like anomalies were identified around **[1d]**. The two longest lines are displayed in two main axes *c*. 138m and *c*. 238m long, running south-west to north-east and south-east to north-west respectively. These axes abut shorter perpendicular linear responses, hinting at the presence of further sub-rectangular small fields, particularly evident in the northern extent of **[1e]**. The whole cluster of anomalies around **[1d]** appears to respect the limits of former field boundaries (Figure 4). This could be coincidental but does suggest a potential agricultural usage for these features.

7.3.2.3. **Archaeology** – Near the western edge of the Area 1, a series of strong and weak rectilinear anomalies have been detected **[1f]**. These form a sub-rectangular shape with disturbed material inside. The distinct rectilinear patterning of the anomalies indicates an anthropogenic origin, but the configuration is much different from the enclosures to the west. The proximity of an old colliery situated less than 200m to the west (Figure 4) as well as the configuration closely spaced parallel responses could suggest a potential industrial origin; although the configuration of these anomalies is too ambiguous to determine a specific function.

7.3.2.4. **Agricultural (Drainage)** – In the north-western corner of Area 1, six short anomalies are aligned perpendicular to a former field boundary which may indicate a previous drainage scheme **[1g]**. Further drainage networks have been identified across the site; a classic herringbone pattern is evident in Area 3.

7.3.2.5. **Natural** – Across Area 1 there are numerous apparent ambiguous rectilinear responses [**1h**] that have been classified as 'Natural' in origin. The responses of these anomalies are not consistent with other anthropogenic features identified on the site. The poorly defined extent and weak signal of these anomalies suggests they are more likely to be the result of natural geological changes and not archaeological activity.

7.3.2.6. **Ferrous** – A discrete area of mixed ferrous material has been detected towards the centre of Area 1 **[1i]**, which corresponds with a pond or other historic feature recorded on historic maps (Figure 4). Other ferrous responses of note include the lines of services detected in all areas.

8. Conclusions

8.1. A cart-based fluxgate gradiometer survey has been successfully undertaken across the site. Anomalies of an archaeological origin have been identified in the northern half site, against an enhanced natural magnetic background. In addition to the archaeological and natural variations, responses reflecting agricultural and modern activity have been identified as well.

8.2. Archaeological activity has been identified in the south-eastern, central, and western parts of Area 1. This is primarily evidenced in the form of ditch-like anomalies. All of them appear to form enclosure-type features. Those towards the centre and south-east of Area 1 also appear to respect the locations and alignments of former field boundaries, which may suggest some type of relationship between those two elements whether it is causal or non-causal. Nevertheless, the archaeological anomalies do not match with any previously mapped or recorded feature.

8.3. Agricultural activity has been identified as former field boundaries and field drainage. Some of these anomalies correlate with former field boundaries which are represented in historic mapping while others do not correlate with any previously identified feature.

8.4. Modern activity has primarily been identified through ferrous responses, which can be associated with overhead powerlines pylons, underground services, field fences and debris associated to field entrances and edges.

8.5. A number of anomalies have been classified as "Undetermined" and may reflect a combination of the above processes.

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 all reports to the ADS Grey Literature Library subject to any time embargo dictated by the client.

9.3. Whenever possible, MS has a policy of making data available to view in easy to use forms on its website. This can benefit the client by making all of their reports available in a single repository, while also being a useful resource for research. Should a client wish to impose a time embargo on the availability of data, this can be achieved in discussion with MS.

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

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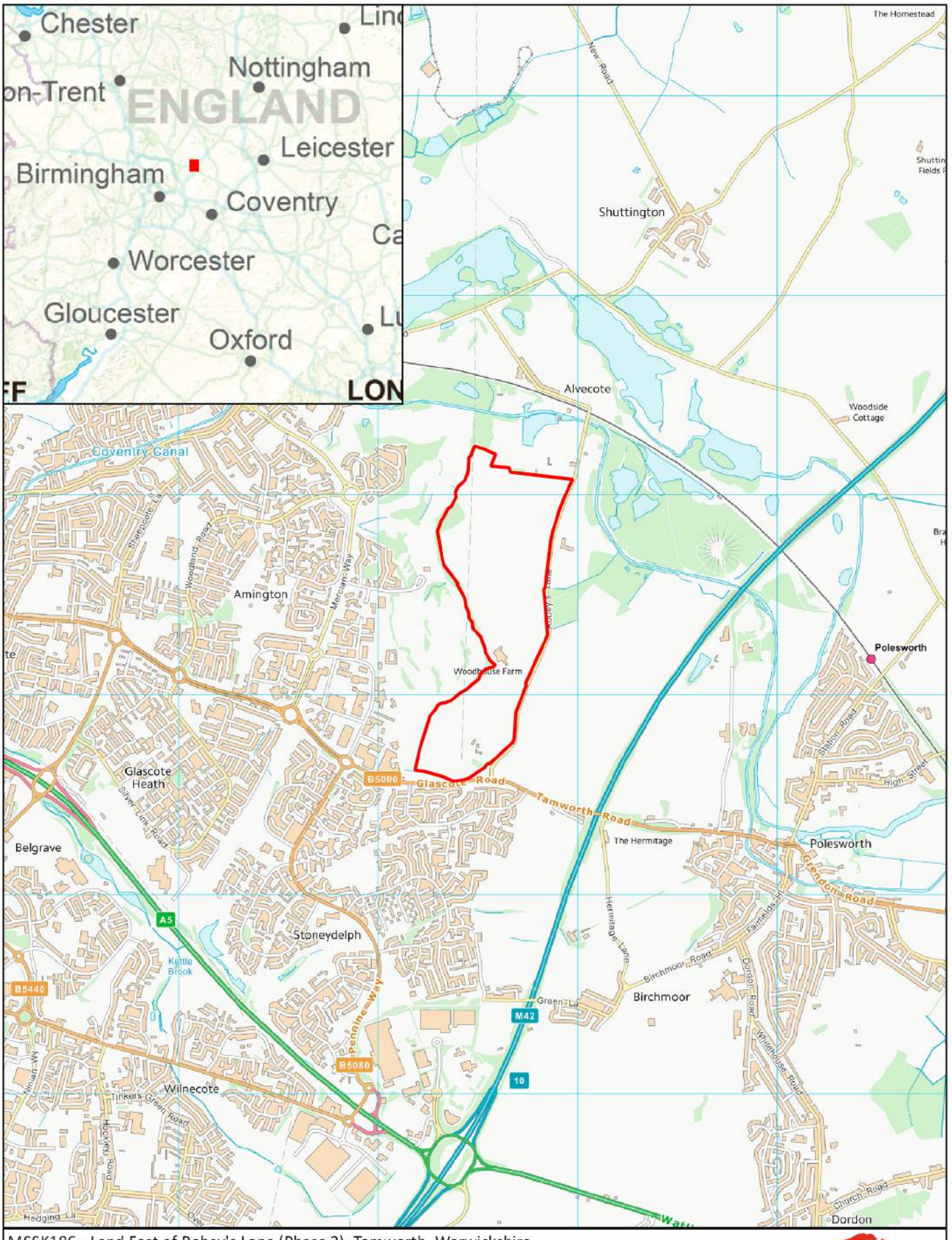


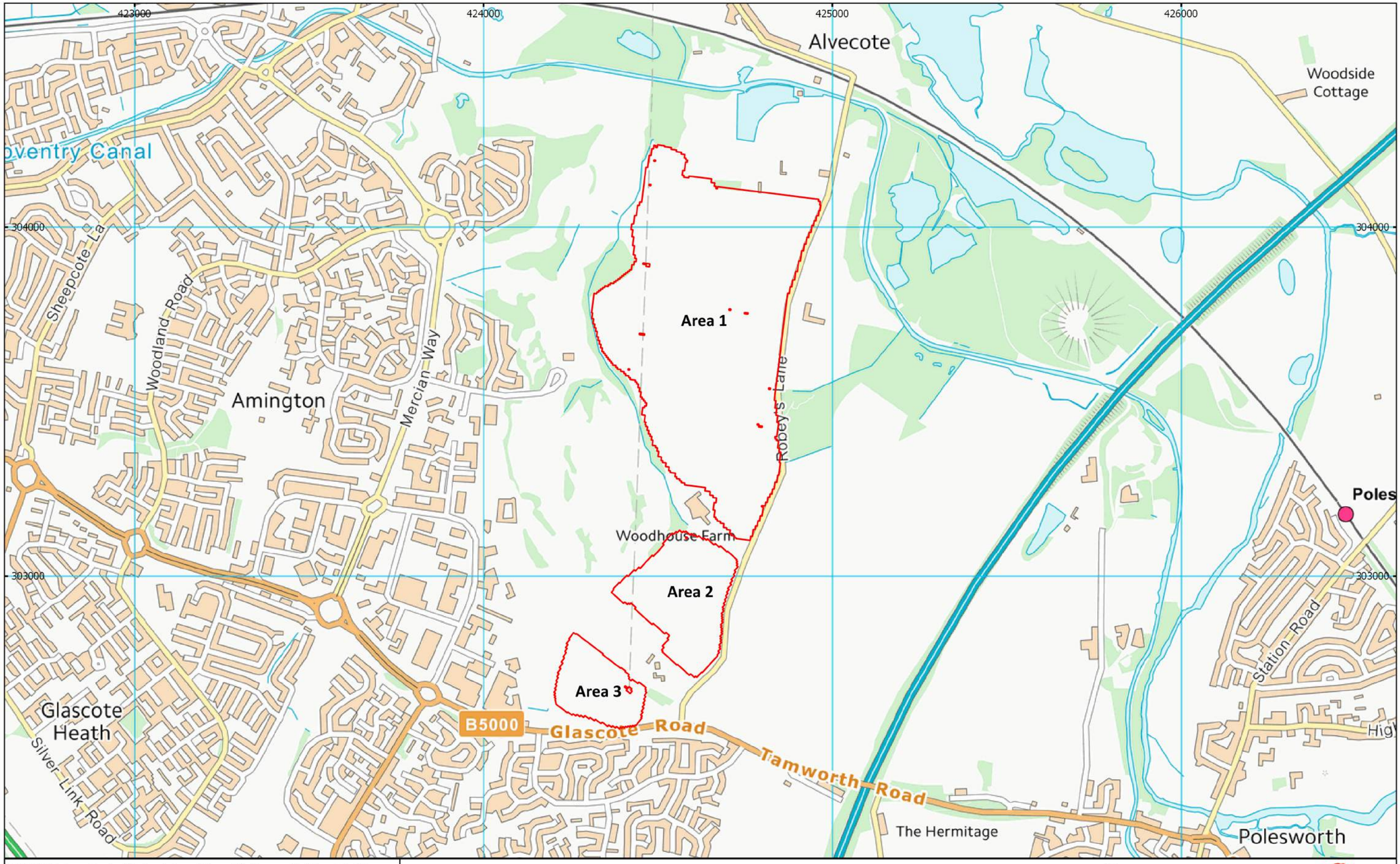
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 1 - Site Location
1 : 25,000 @ A4

Site Boundary

N

0 0.5 1 km

magnitude surveys



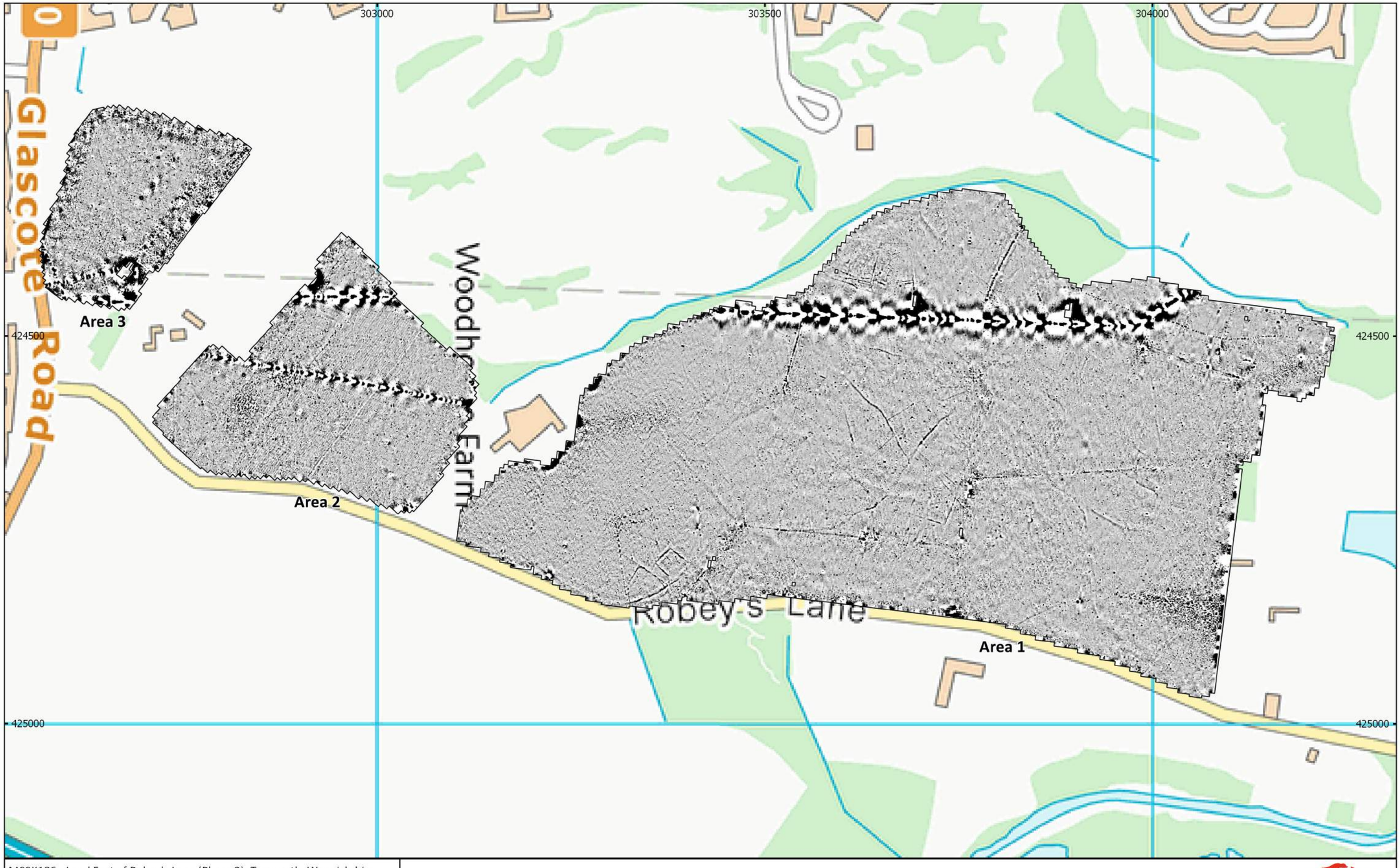
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 2 - Location of Survey Areas
1:10000 @ A3

Survey Extent

N

0 200 400 600 m

magnitude surveys



MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 3 - Magnetic Gradient - Overview
1:4500 @ A3

303000
303500
304000
424500
425000
Area 1
Area 2
Area 3
1a
1b
1c
1d
1e
1f
1g
1h
1i
2a
Amington Colliery
Brickfield Barn
Wood House
Alvecote Wood
Alvecote Priory on Site of Priory
Old Sand Pit
Brick Works
Old Quarry
R. D. By.
B.M.352·4
B.M.362·9
B.M.370·1
368
364
300
264
269·3

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 4 - Magnetic Interpretation Over Historic Mapping - Overview
1:4500 @ A3

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

- Agricultural (Strong)
- Agricultural (Weak)
- Agricultural (Spread)
- Agricultural (Trend)
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Archaeology Possible (Spread)
- Natural (Strong)
- Natural (Weak)
- Natural (Spread)
- Natural (Trend)
- Ferrous (Dipolar)
- Ferrous (Spread)/Magnetic Disturbance
- Service
- Drainage Feature
- Undetermined (Strong)
- Undetermined (Weak)
- Undetermined (Trend)

N

0 100 200 300 m

magnitude surveys

424400
424600
424800
425000
304200
304000
303800
Area 1

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 5 - Magnetic Gradient
1:2000 @ A3

-1 nT 2

N

0 50 100 150 m

magnitude surveys

424400
424600
424800
425000
304200
304000
303800
Area 1

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 6 - Magnetic Total Field (Upper Sensor)
1:2000 @ A3

48997 nT 49005

N

0 50 100 150 m

magnitude surveys

424400
424600
424800
425000
304200
304000
303800
1a
1g
1a
1a
1b
1b
Area 1

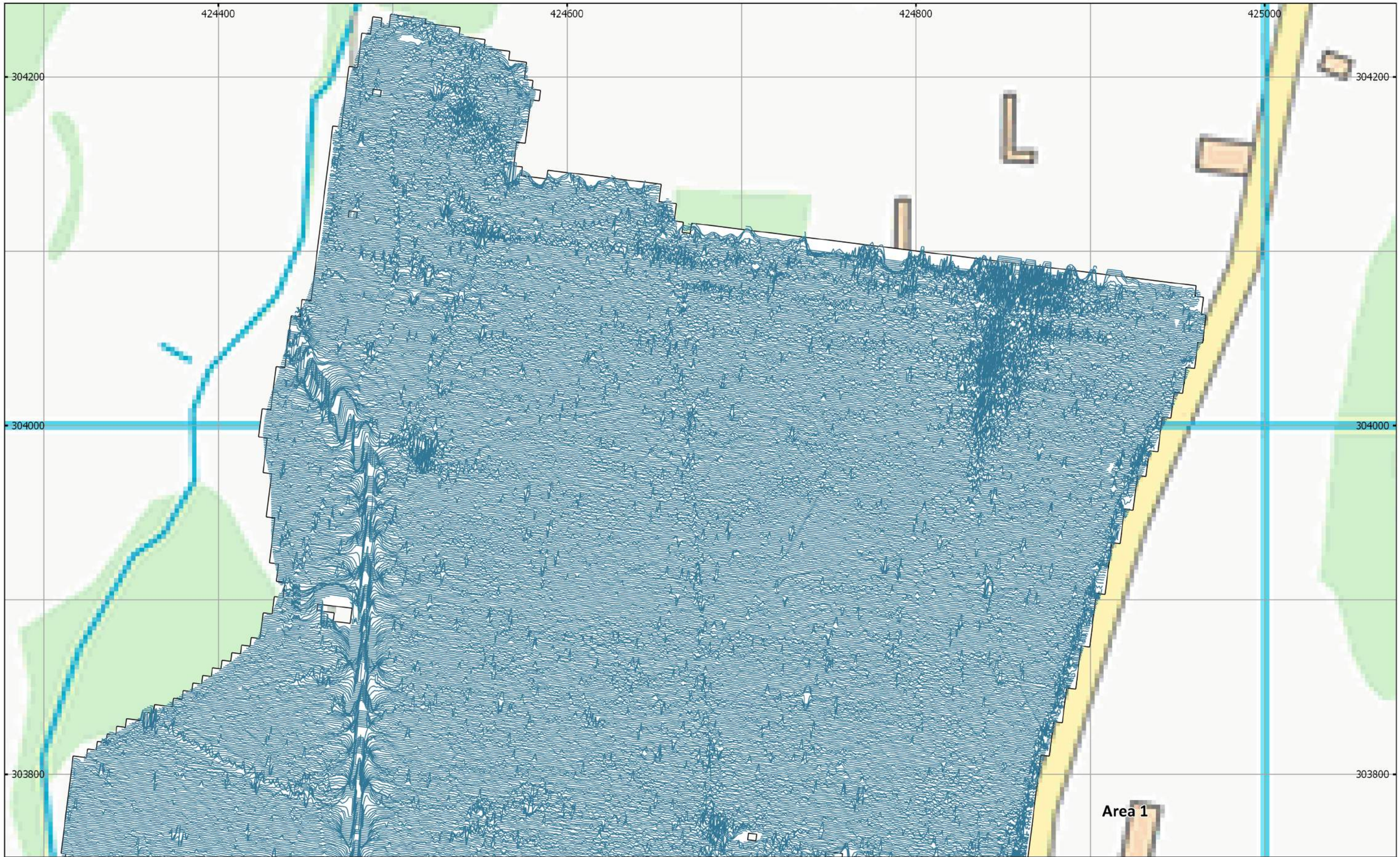
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 7 - Magnetic Interpretation
1:2000 @ A3

- Agricultural (Strong)
- Agricultural (Weak)
- Agricultural (Spread)
- Agricultural (Trend)
- Natural (Strong)
- Natural (Weak)
- Natural (Spread)
- Natural (Trend)
- Ferrous (Dipolar)
- Ferrous (Spread)/Magnetic Disturbance
- Service
- Drainage Feature
- Undetermined (Strong)
- Undetermined (Weak)
- Undetermined (Trend)

N

0 50 100 150 m

magnitude surveys



MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 8 - XY Trace Plot
40nT/cm at 1:2000 @ A3

N

0 50 100 150 m

magnitude surveys

424400
424600
424800
425000
303800
303600
303400
Area 1
Robey's Lane
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 9 - Magnetic Gradient
1:2000 @ A3

-1 nT 2
N
0 50 100 150 m
magnitude surveys

424400
424600
424800
425000
303800
303600
303400
Area 1
Robey's Lane
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 10 - Magnetic Total Field (Upper Sensor)
1:2000 @ A3

48997 nT 49005
N
0 50 100 150 m
magnitude surveys

424400
424600
424800
425000
303800
303600
303400
1a
1b
1b
1e
1f
1d
1i
1a
1a
1h
1a
1c
Area 1
Robeys Lane

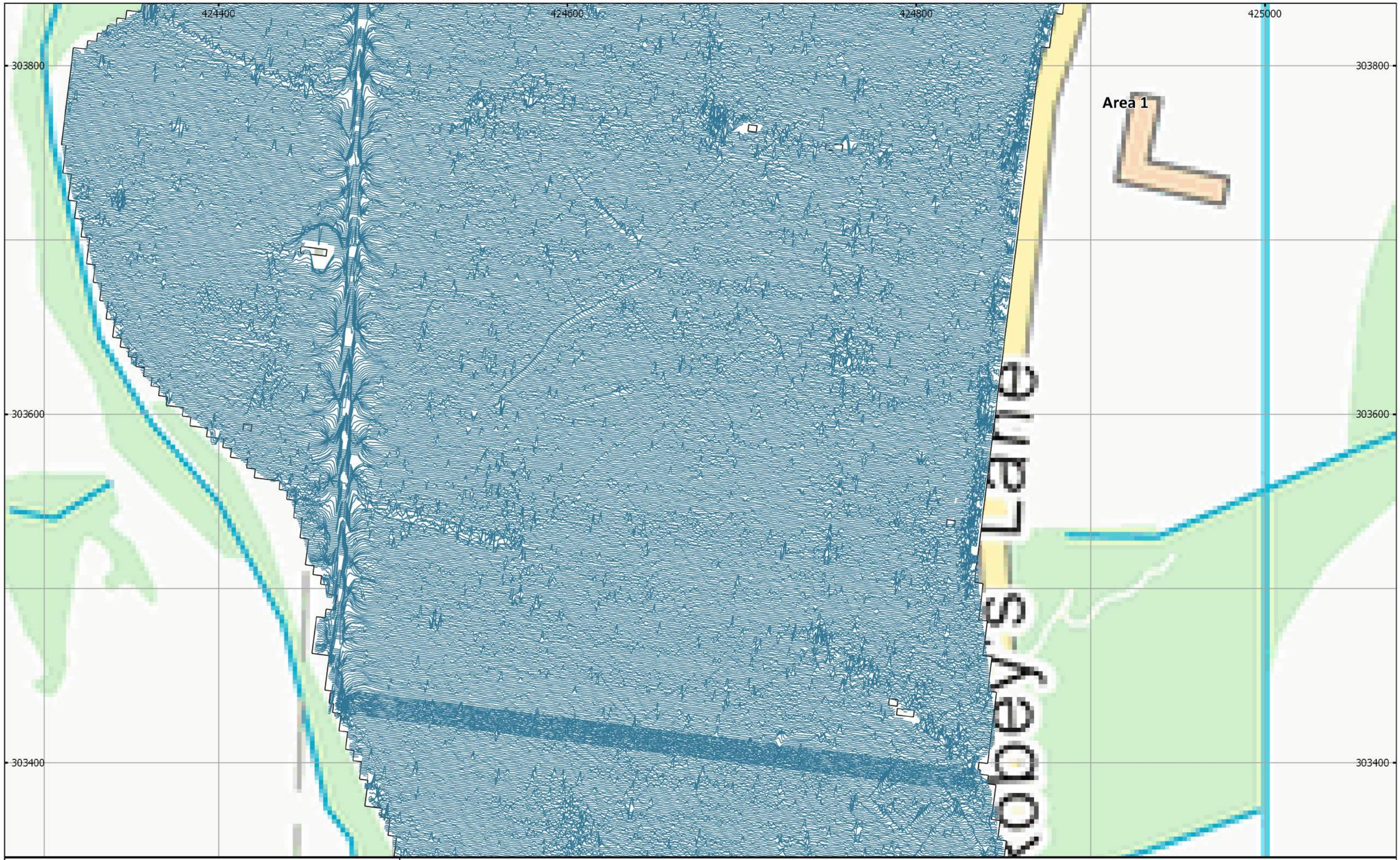
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 11 - Magnetic Interpretation
1:2000 @ A3

- Agricultural (Strong)
- Agricultural (Weak)
- Agricultural (Spread)
- Agricultural (Trend)
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Archaeology Possible (Spread)
- Natural (Strong)
- Natural (Weak)
- Natural (Spread)
- Natural (Trend)
- Ferrous (Dipolar)
- Ferrous (Spread)/Magnetic Disturbance
- Service
- Drainage Feature
- Undetermined (Strong)
- Undetermined (Weak)
- Undetermined (Trend)

N

0 50 100 150 m

magnitude surveys



MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 12 - XY Trace Plot
40nT/cm at 1:2000 @ A3

N

0 50 100 150 m

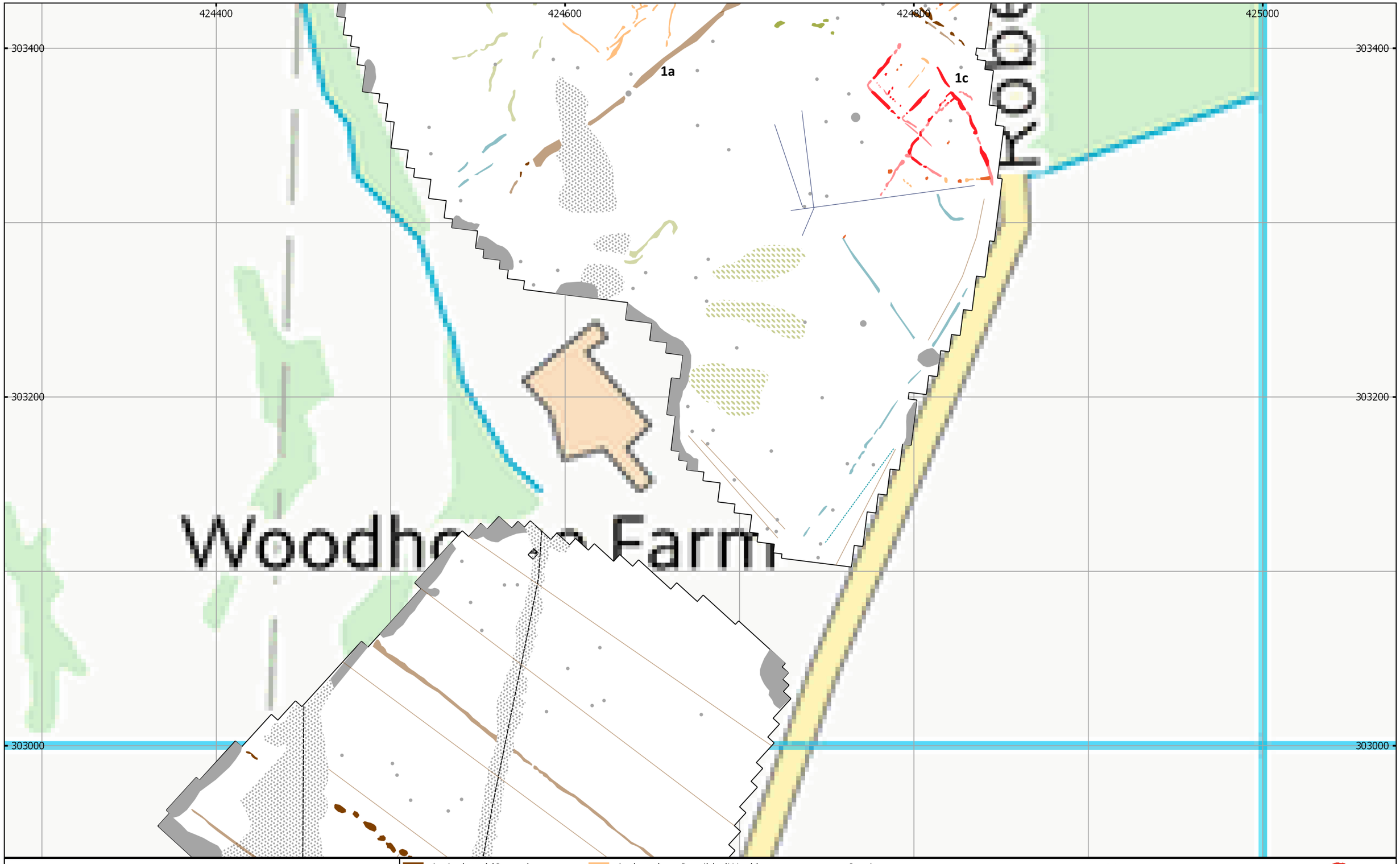
magnitude surveys

424400
424600
424600
425000
303400
303400
303200
303200
303000
303000
Woodhouse Farm
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 13 - Magnetic Gradient
1:2000 @ A3

-1 nT 2
N
0 50 100 150 m
magnitude surveys

424400
424600
424800
425000
303400
303200
303000
Woodhouse Farm
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 14 - Magnetic Total Field (Upper Sensor)
1:2000 @ A3

48997 nT 49005
N
0 50 100 150 m
magnitude surveys



MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 15 - Magnetic Interpretation
1:2000 @ A3

- Agricultural (Strong)
- Agricultural (Weak)
- Agricultural (Trend)
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Natural (Strong)
- Natural (Weak)
- Natural (Spread)
- Ferrous (Dipolar)
- Ferrous (Spread)/Magnetic Disturbance
- Service
- Drainage Feature
- Undetermined (Weak)
- Undetermined (Trend)

N

0 50 100 150 m

magnitude surveys

424400
424600
424800
425000
303400
303200
303000
Woodhouse Farm
MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 16 - XY Trace Plot
40nT/cm at 1:2000 @ A3

N
0
50
100
150 m
magnitude surveys

424200
424400
424600
424800
303000
302800
302600
Area 2
Area 3
Road

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 17 - Magnetic Gradient
1:2000 @ A3

-1 nT 2

N

0 50 100 150 m

magnitude surveys

424200
424400
424600
424800
303000
302800
302600
Area 2
Area 3
Road

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 18 - Magnetic Total Field (Upper Sensor)
1:2000 @ A3

48997 nT 49005

N

0 50 100 150 m

magnitude surveys

424200
424400
424600
424800
303000
302800
302600
Area 2
2a
Area 3
Road

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 19 - Magnetic Interpretation
1:2000 @ A3

Agricultural (Strong)
Agricultural (Weak)
Agricultural (Trend)
Ferrous (Dipolar)
Ferrous (Spread)/Magnetic Disturbance
Service
Drainage Feature
Undetermined (Strong)
Undetermined (Weak)
Undetermined (Trend)

N

0 50 100 150 m

magnitude surveys

424200
424400
424600
424800
303000
302800
302600
Area 2
Area 3
Road

MSSK186 - Land East of Robey's Lane (Phase 2), Tamworth, Warwickshire
Figure 20 - XY Trace Plot
40nT/cm at 1:2000 @ A3

N
0
50
100
150 m

magnitude surveys