Geophysical Survey Report

of

Land at Cooks Lane, Southbourne

West Sussex

For

RPS Group

On Behalf Of

Rydon Homes

Magnitude Surveys Ref: MSSU711

OASIS ID: magnitud1-411806

HER Event Number: TBC after report sent to HER

January 2021

magnitude surveys

Unit 17, Commerce Court

Challenge Way

Bradford

BD4 8NW

01274 926020

info@magnitudesurveys.co.uk

Report By:

Lauren Beck BA

Report Approved By:

Dr Kayt Armstrong MCIfA

Issue Date:

05 January 2021

Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 11.3ha area of land at Cooks Lane, Southbourne, West Sussex. A fluxgate gradiometer survey was successfully completed across the survey area. The survey has identified two large circular ditched enclosures, likely to be prehistoric, located either side of a pair of parallel ditches, which may form a very wide trackway, or some form of rectilinear monument. The survey also identified sub-rectangular enclosures and linear anomalies which may relate to early field boundaries or later unmapped ones. A roughly oblong patch of noisy anomalies straddling the ditches immediately adjacent to one of the circular features may be a result of extraction but may equally have archaeological origins. Anomalies related to agricultural use have been detected and interpreted as field boundaries, trackways and ploughing regimes. The impact of modern activity on the results is limited to magnetic disturbance from fences at field edges and extant agricultural trackways.

Contents

List of Figures

1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by RPS Group on behalf of Rydon Homes to undertake a geophysical survey on a c.11.3ha area of land at Cooks Lane, Southbourne, West Sussex (SU 7725 0616).

1.2. The geophysical survey comprised quad-towed 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. The survey was conducted in line with a WSI produced by MS (Magnitude Surveys, 2020)

1.5. The survey commenced on 14/07/2020 and took 2 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 has a PhD in archaeological geophysics from the University of Bradford, is a Member of CIfA and is the Vice-Chair of the International Society for Archaeological Prospection (ISAP); Finnegan Pope-Carter has an MSc in archaeological geophysics and is a Fellow of the London Geological Society, as well as a member of GeoSIG (CIfA Geophysics Special Interest Group); Dr. Kayt Armstrong has a PhD in archaeological geophysics from Bournemouth University, is a Member of CIfA, the Editor of ISAP News, and is the UK Management Committee representative for the COST Action SAGA; Dr. Paul Johnson has a PhD in archaeology from the University of Southampton, 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. 300m northeast of the centre of Southbourne (Figure 1). Survey was undertaken across an arable field, which was sub-divided into smaller strips of various crops. The survey area was bounded by Cooks Lane to the south, domestic housing off Kelsey Avenue to the west and pasture to the north and east (Figure 2). An area of c.0.18ha was unsurveyable at the southern end of the survey area due to the presence of extant buildings (Figure 2).

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	The area consisted of a flat, arable field, which was subdivided into strips of different crop types.	The area was bounded to the south, east and west by hedgerows, and to the north by a grass bank. Metal fencing formed the north-western boundary. Extant farm trackways and ditches crossed the survey area, generally oriented north-south or east-west. Buildings, farm equipment and a radio mast were located within the southern end of the area.

4.3. The underlying geology comprises clay, silt and sand bedrock of the London Clay Formation. The superficial deposits of the survey area comprise River Terrace Deposits of sand, silt and clay in the east, and clay and gravel to the west (British Geological Survey, 2020).

4.4. The soils consist freely draining slightly acid loamy soils (Soilscapes, 2020).

5. Archaeological Background

5.1. The following is a summary of a Desk-Based Assessment produced by Wessex Archaeology (Wessex Archaeology Ltd, 2018) and provided by RPS Group.

5.2. Evidence for prehistoric activity in the vicinity of the survey area has been recorded in the form of a number of flint tools located c.620m to the southwest of the survey area (WA01, HER: 92) as well as worked flint located c.800m to the southeast of the survey area (WA02, HER: 1355). An archaeological evaluation c.925m to the southeast of the survey area identified evidence of Bronze Age occupation, comprising of postholes and pottery (WA03, HER: 1462). A further archaeological evaluation in the same area identified five potential roundhouses, possibly of Bronze Age to Iron Age date, along with a cluster of pits (WA05, HER: 1524). A further evaluation c.810m to the southwest of the survey area noted prehistoric remains across the site, as well as a cremation burial of Middle Bronze Age date.

5.3. Romano-British evidence in the wider environs of the survey area consists of the Roman Road (WA07, HER: 114) located c.490m to the south of the survey area, as well as various finds. These include Romano-British pottery and roofing tile located c.760m to the southwest of the survey area (WA06 HER: 82), a sestertius of Antonius Pius recorded c.950m to the southeast of the survey area (WA08), and further pottery recorded c.270m to the northwest (WA09, HER: 122).

5.4. Anglo-Saxon to early medieval activity has been recorded in the form of a pottery findspot, located c.270m to the northwest of the survey area (WA09, HER 122).

5.5. A map regression has shown that since the medieval period, the survey area has remained largely under agricultural use, with some variations in field arrangements and field boundaries.

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 and hand-carried, GNSS-positioned system.

6.1.3.1. MS' cart and hand-carried system was comprised of 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. 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. Multiple greyscale images at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot (Figures 7 & 10). 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 OS Open Data.

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 satellite imagery and historic maps (Figure 4).

7.2.2. The fluxgate gradiometer survey has responded well to the environment of the survey area. The geophysical survey has primarily detected two foci of archaeological activity, as well as agricultural activity. Modern interference is limited to magnetic haloes at field edges and extant agricultural trackways within the survey area. Natural variations have been identified as a scattering of discrete anomalies across the survey area which likely relate to the variation in texture and composition of the sand and gravels (see Section 4.3).

7.2.3. Archaeological activity has been identified in both the northern and southern ends of the survey area, potentially indicating at least two phases, or foci, of activity. In the northern end, one complete and one partial circular anomaly have been identified along with a possible wide ditched trackway or rectilinear monument crossing the area between them. The large size of these features and lack of anomalies indicative of domestic activity has led to an interpretation of these as two large, circular ditched features of potential prehistoric origin, with no sign of settlement activity. The presence of further prehistoric activity within 1km of the survey area further supports this interpretation (see Section 5.2). A possible pit and linear anomaly have been identified within the northern circular anomaly, though it is not clear whether these are related to one another. A concentrated group of six potential pits was also identified at the eastern end of the possible trackway, though beyond the proximity to other identified features, a further relationship has not been established. Further possible archaeological activity has been identified crossing the potential trackway or rectilinear monument. The anomaly is suggestive of shallow extraction activity, which is a possibility due to the recorded geology of the area (clay, sand and gravels). However, no extraction activity has been identified in the vicinity of the survey area on available

historic mapping, and the proximity to the identified probable archaeological features suggests that these could instead relate to archaeological activity.

7.2.4. In the southern end of the survey area a series of sub-rectangular enclosures and linear anomalies have been identified which appear to follow a slightly different alignment to the mapped field divisions within the area (Figure 4). These may relate to early agricultural activity within the area in the form of field boundaries and small enclosures, though it is unclear whether these predate the mapped boundaries or existed as later unmapped, short-term subdivisions. Further anomalies of possible archaeological origin were identified, including a small possible partial circular anomaly and several potential pit features across the survey area. These anomalies may relate to the other identified archaeological features, though it is equally possible that they relate to agricultural activity.

7.2.5. Agricultural activity has been identified across the survey area in the form of both extant and former field boundaries, as well as extant trackways, ploughing trends and drainage features.

7.2.6. Some anomalies of undetermined origins were identified within the survey area, these have been detected as either strong discrete anomalies suggestive of isolated pits, or isolated linear anomalies with no clear relationship with identified features. These anomalies likely relate to anthropogenic activity, though a specific interpretation has not been possible within the scope of the survey.

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 Archaeology (Circular)** – In the northern end of the survey area, two weak, circular anomalies have been detected [**1a & 1b**] (Figure 6). The anomalies measures c.38m in diameter and exhibit a broad magnetic signal indicative of a wide, cut ditch feature. The southern anomaly [**1b**] is recorded up to the magnetic disturbance at the field edge, where it may continue. Evidence for potential internal features has been identified in the form of a possible pit and a short linear feature within the northernmost anomaly [**1a**], though it is not clear whether these anomalies directly relate to the outer anomaly. The lack of evidence of domestic features, such as roundhouse features, has led to the conclusion that these are unlikely to be related to domestic activity. A such, the circular anomalies [**1a & 1b**] have been interpreted as likely representing non-domestic prehistoric activity, though the particularly large size would be unusual for a barrow, which also suggests they may not be funerary in nature either.

7.3.2.2. **Probable Archaeology (Linear/Curvilinear)** – Also located within the northern end of the survey area, a series of weak linear and curvilinear anomalies have been detected crossing the full width of the area [**1c**] (Figure 6). The anomalies form a series of parallel, segmented linear features, aligned northeast-southwest, covering a length of c.156m across the survey area, and defining an area c30m across. These appear to be related to the two circular ditched features [**1a & 1b**] due to their proximity, particularly to the northern section of [**1b**], and due to their position across the gap between the two circular features. Two further orientations were identified within [**1c**], a right-angled return northward at the western end, and a northwest-southeast alignment at the eastern end. The linear anomalies [**1c**] could indicate a wide ditched trackway or rectilinear monument of c.30m in width, connecting the two circular features [**1a & 2b**] and appearing to lead beyond the survey area at either end.

7.3.2.3. **Probable/Possible Archaeology (Pits)** – Further activity potentially related to the circular features [**1a & 1b**] and possible trackway or rectilinear monument [**1c**] has been identified as a concentration of eight strongly positive, discrete anomalies [**1d**] at the eastern end of [**1c**] (Figure 6). The anomalies are indicative of a group of possible pits covering an area of c.8m x c.9m.

7.3.2.4. **Possible Archaeology (Spread)** – In the northern end of the survey area, crossing the possible trackway or linear monument [**1c**], a weak amorphous anomaly [**1h**] has been detected (Figure 6). The defined limits of this anomaly are suggestive of possible shallow extraction activity of unknown purpose. The concentration of strongly positive discrete anomalies within the bounds of [**1h**] may also indicate an infill of magnetically enhanced material. No nearby extraction activity has been identified on available historic mapping; however, the local geology of clay, silt, sand and gravels indicates that extraction would

not be unexpected (see Section 4.3). It is also possible that these anomalies relate to archaeological activity, especially considering the proximity to the circular anomalies [**1a & 1b**] and the potential relationship with the wide trackway or rectilinear monument [**1c**].

7.3.2.5. **Probable/Possible Archaeology (Enclosures)** – In the southern end of the survey area a series of partial sub-rectangular enclosures have been detected [**1e & 1f**] (Figure 9). The weak, linear and curvilinear anomalies appear to form at least two partial enclosures, with a third possible enclosure [**1f**] identified c.73m north of [**1e**] within one of the extant agricultural trackways (Figure 4). The northern end of these anomalies exhibited a weaker magnetic signal and were less clearly defined, and so have been classified as "Possible Archaeology". The southernmost anomalies [**1e**] appear to append one another, with further segmented linear anomalies leading away to the northwest. The similarities of this alignment to former field boundaries is suggestive of a potential relationship with earlier mapped field systems within the area, in the form of small enclosures measuring c.16m x 26m, though these features may also relate to earlier activity.

7.3.2.6. **Possible Archaeology (Linear/Curvilinear)** – Across the survey area, further linear and curvilinear anomalies have been identified which may relate to archaeological activity (Figures 6 & 9). One of these is a weak curvilinear anomaly [**1g**], that is suggestive of a circular feature measuring c. 7.8m in diameter. The relatively isolated location of this anomaly (c.100m south of the southernmost circular ditch feature [**1b**]) as well as the weak magnetic signal has contributed to a classification of "Possible Archaeology". The anomaly may relate to more recent agricultural activity. Further linear and curvilinear anomalies within the southern end of the survey area follow a similar alignment to the more confidently identified enclosures [**1e**] but do not form clear features and may instead relate to the similarly aligned agricultural features.

7.3.2.7. **Possible Archaeology (Pits)** – Across the survey area, several strongly positive discrete anomalies have been detected [**1i**] (Figures 6 & 9). These have been identified as linear or curvilinear alignments of between two and six discrete anomalies, appearing to form linear arrangements of up to c.11m in length. The anomalies are either smaller in size than the possible pit group [**1d**], or located further away from the probable archaeological features, which has led to the interpretation of potential pits of possible archaeological origin.

7.3.2.8. **Agricultural (Strong & Weak)** – Across the survey area, several anomalies have been detected in the locations and orientations of both former and extant field boundaries, as well as agricultural trackways (Figure 4). These anomalies vary in magnetic signal, with weakly positive linear anomalies and strongly dipolar linear anomalies indicating ditch features with infills of differing strengths of magnetic material, as well as weakly negative linear anomalies which can indicate compressed earth that would be associated with trackways.

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, extraction-related and agricultural origin. The underlying geological deposits have contributed to the quiet enhancement of the magnetic data, with superficial variations producing a scattering of discrete anomalies across the survey area. Modern interference is limited to disturbance related to the telecommunications mast located within the survey area, and to magnetic haloes from fences at field edges and extant agricultural trackways.

8.2. Archaeological activity has been identified in the form of one complete and one partial circular ditch feature, with a wide ditched trackway or linear monument crossing the area between them. One of the circular anomalies may contain interior features, though no evidence characteristic of domestic activity was identified. A group of six pits and an anomaly suggestive of extraction activity were also identified within the bounds of the potential trackway or linear monument.

8.3. In the southern end of the survey area, a series of possible sub-rectangular enclosures have been identified. Due to the similarities in orientation to mapped field boundaries, these have been interpreted to relate to either an earlier series of field divisions or to later unmapped divisions.

8.4. Possible extraction activity has been detected across part of the potential trackway or linear monument at the northern end of the survey area. No other extraction activity has been identified on historic mapping in the vicinity of the survey area, though the local geology indicates that extraction could have occurred. This spread of anomalies and slightly noisy data has been interpreted as a possible archaeological spread, because the activity (extraction or otherwise) may relate to the construction of the circular and linear ditched features at this location.

8.5. Former and extant field boundaries have been detected across the survey area, as well as agricultural trackways and ploughing regimes. Some anomalies of undetermined origins have been identified which likely relate to anthropogenic activity, though the exact source is unclear.

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. [Chichester, Hampshire]. [http://mapapps.bgs.ac.uk/geologyofbritain/home.html/]. [Accessed 16/07/2020].

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.

Magnitude Surveys, 2020. Written Scheme of Investigation For a Geophysical Survey of Land at Cooks Lane, Southbourne, Chichester. Magnitude Surveys Ltd. MSSU711.

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. [Chichester, Hampshire]. Cranfield University, National Soil Resources Institute [http://landis.org.uk]. [Accessed 16/07/2020].

Wessex Archaeology Ltd, 2018. Cooks Lane, Southbourne, Chichester Archaeological Desk-Based Assessment. Ref: 203790.1.

12. Project Metadata

MS Job Code	MSSU711
Project Name	Land at Cooks Lane, Southbourne
Client	RPS Group
Grid Reference	SU 7725 0616
Survey Techniques	Magnetometry
Survey Size (ha)	11.3
Survey Dates	2020-07-014 to 2020-07-15
Project Lead	Lauren Beck BA
Project Officer	Lauren Beck BA
HER Event No	TBC after report sent to HER
OASIS No	magnitud1-411806
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	LB	JC	20 July 2020
0.2	Draft for Director to Review	LB	KA	21 July 2020
0.3	Draft for Director Approval	LB	KA	21 July 2020
1.0	Issued as Final	LB	KA	05 January 2021

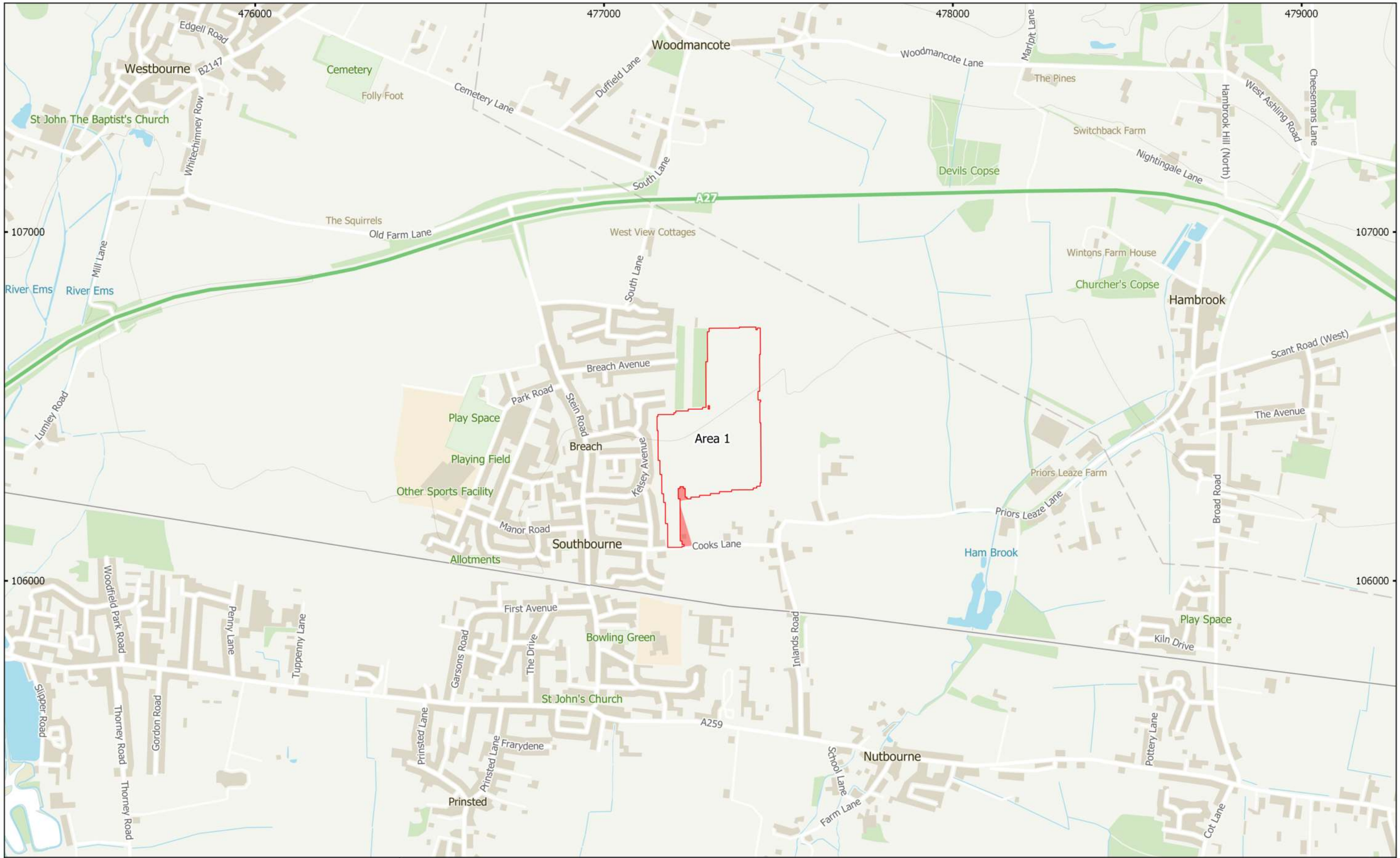
MSSU711 - Land at Cooks Lane, Southbourne
Figure 1 - Site Location
1:25,000 @ A4

Site Boundary

N

0 0.5 1 km

magnitude surveys



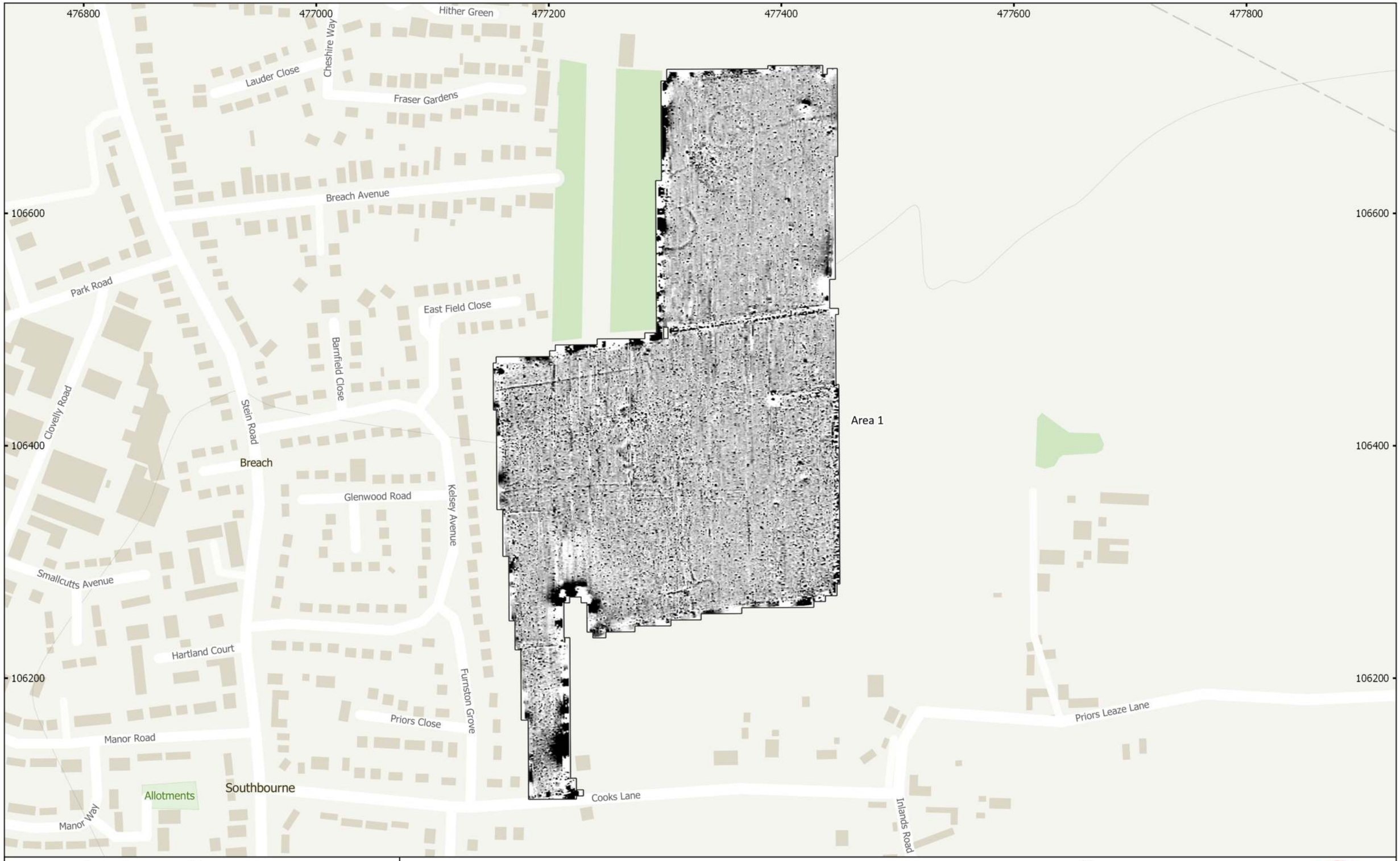
MSSU711 - Land at Cooks Lane, Southbourne
Figure 2 - Location of Survey Area
1:10,000 @ A3

Survey Extent
Unsurveyable

N

0 250 500 750 m

magnitude surveys



MSSU711 - Land at Cooks Lane, Southbourne
Figure 3 - Magnetic Gradient (Overview)
1:3,000 @ A3

-1 nT 2

N

0 50 100 150 m

magnitude surveys

476800 477000 477200 477400 477600 477800

106600 106400 106200

Area 1

MSSU711 - Land at Cooks Lane, Southbourne
Figure 4 - Magnetic Interpretation Over Historic Maps and Satellite Imagery (Overview)
1:3,000 @ A3

- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Archaeology Possible (Spread)
- Agricultural (Strong)
- Agricultural (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Strong)
- Undetermined (Weak)
- Agricultural (Trend)
- Drainage Feature
- Ferrous (Spike)

N

0 50 100 150 m

magnitude surveys

477200
477400
477600
106600
106600
106400
106400
Fraser Gardens
Breach Avenue
East Field Close
East Field Close
Barnfield Close
Kelsey Avenue
Area 1

MSSU711 - Land at Cooks Lane, Southbourne
Figure 5 - Magnetic Gradient (North)
1:1,500 @ A3

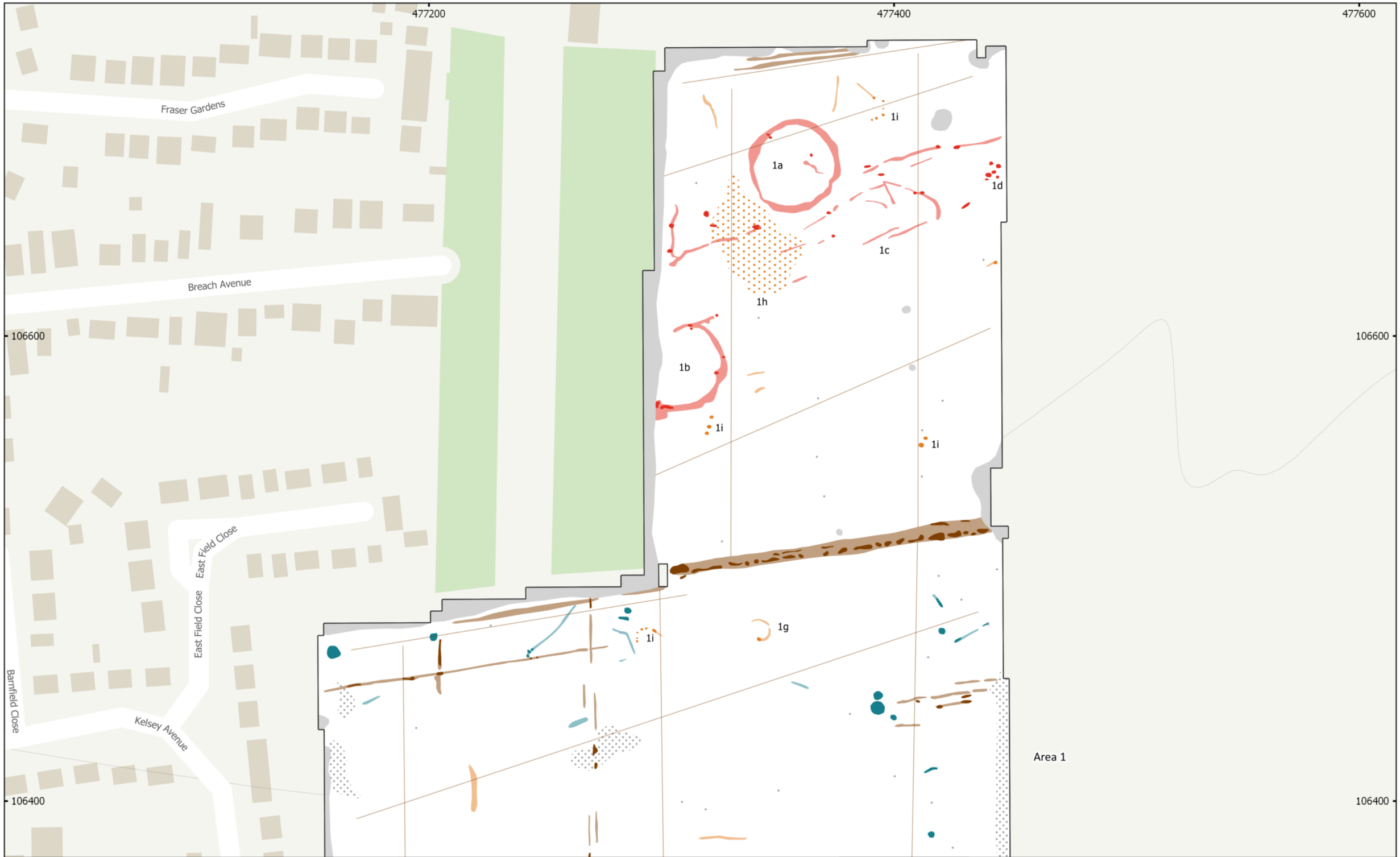
-1 nT 2

Cooks Lane

N

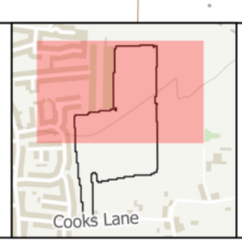
0 40 80 120 m

magnitude surveys



MSSU711 - Land at Cooks Lane, Southbourne
Figure 6 - Magnetic Interpretation (North)
1:1,500 @ A3

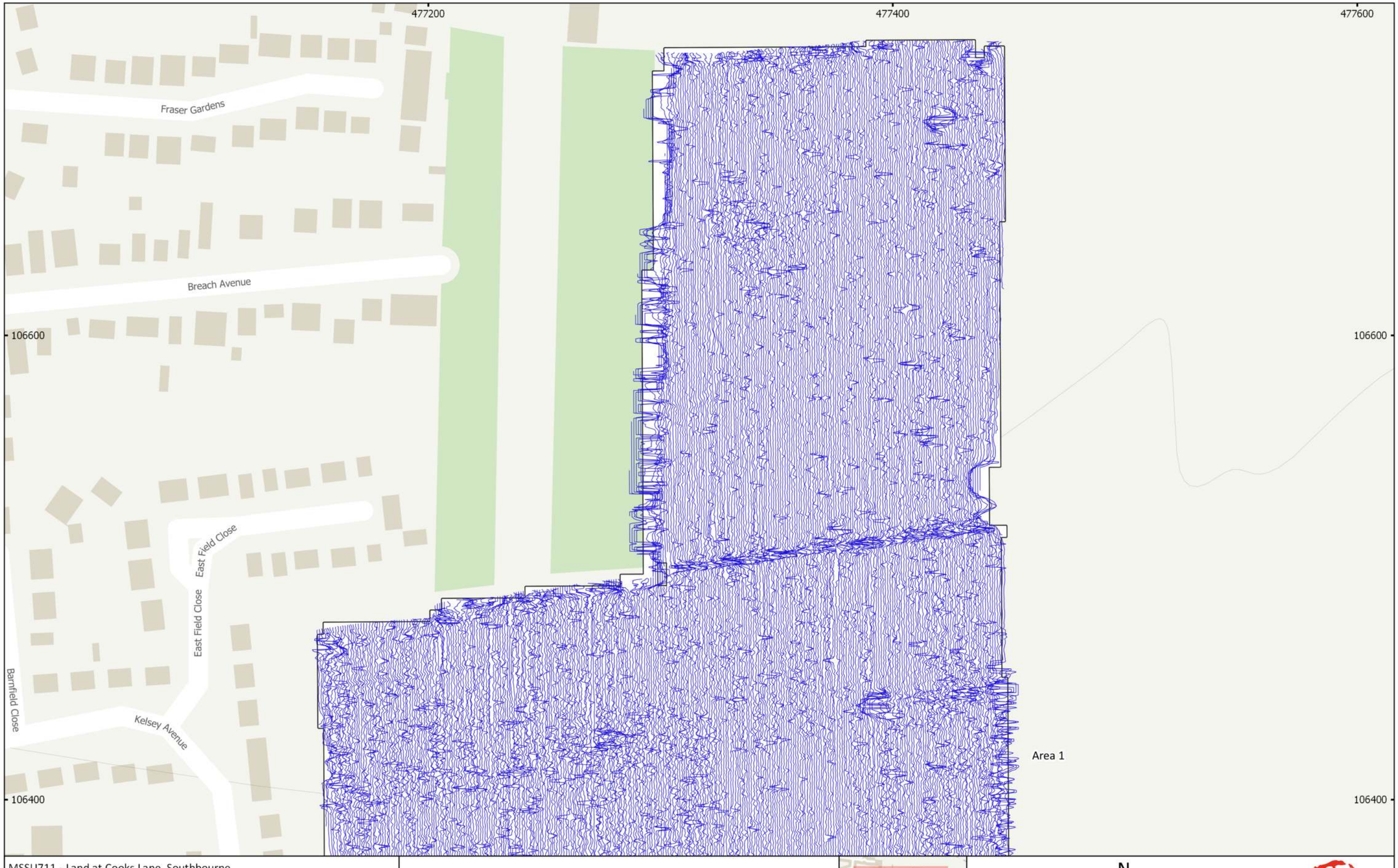
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Archaeology Possible (Spread)
- Agricultural (Strong)
- Agricultural (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Strong)
- Undetermined (Weak)
- Agricultural (Trend)
- Ferrous (Spike)



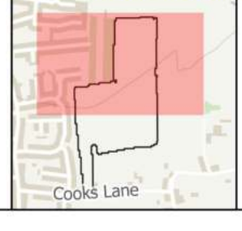
N

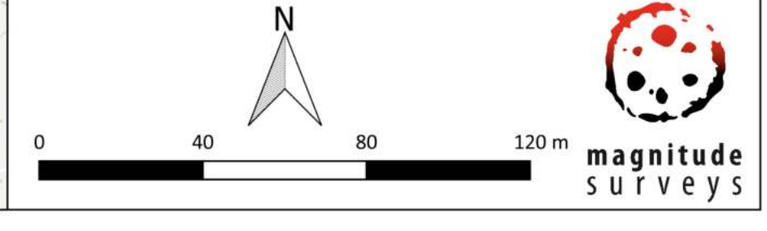
0 40 80 120 m

magnitude surveys



MSSU711 - Land at Cooks Lane, Southbourne
Figure 7 - XY Trace Plot (North)
30nT/cm at 1:1,500 @ A3





7000

477200

477400

Area 1

106400

106400

Glenwood Road

Overton Road

Kelsey Avenue

106200

106200

Furnston Grove

Priors Close

Priors Leaze Lane

Cooks Lane

MSSU711 - Land at Cooks Lane, Southbourne
Figure 8 - Magnetic Gradient (South)
1:1,500 @ A3

-1 nT 2

Cooks Lane

N

0 40 80 120 m

magnitude surveys

7000
477200
477400
Area 1
106400
106400
Glenwood Road
Overton Road
Kelsey Avenue
1i
1f
1e
106200
106200
Furnston Grove
Priors Close
Priors Leaze Lane
Cooks Lane

MSSU711 - Land at Cooks Lane, Southbourne
Figure 9 - Magnetic Interpretation (South)
1:1,500 @ A3

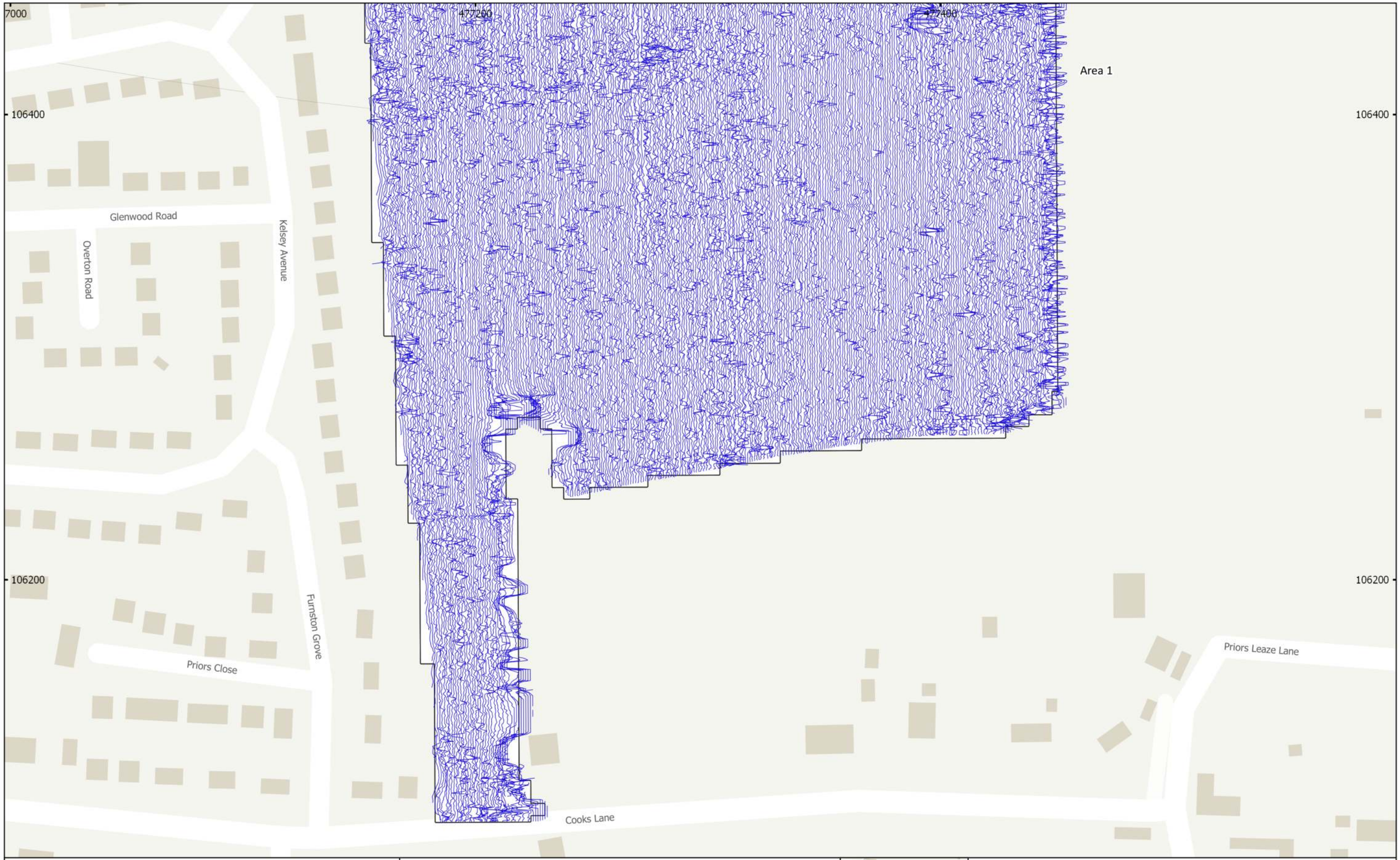
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Agricultural (Strong)
- Agricultural (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Strong)
- Undetermined (Weak)
- Agricultural (Trend)
- Drainage Feature
- Ferrous (Spike)

Cooks Lane

N

0 40 80 120 m

magnitude surveys



MSSU711 - Land at Cooks Lane, Southbourne
Figure 10 - XY Trace Plot (South)
30nT/cm at 1:1,500 @ A3