Geophysical Survey Report

Land at Barkham Road, Barkham, Berkshire

HER - 00898
Land at Barkham Road,
Barkham, Berkshire
October 2024

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Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 61ha area of land at Barkham Road, Berkshire. A magnetometer survey was undertaken and anomalies of probable and possible archaeological origin were identified. Linear anomalies forming a probable enclosure were identified in the east of the survey area. This could be part of and/or associated with the scheduled monument recorded immediately outside of the survey area and described as a moated site. Internal features, possibly representing structural remains and/or pits, have been identified within the enclosure, and overlapping linear anomalies suggest multiple phases of activity within this complex. A second *focus* of possible archaeological activity was identified, possibly denoting partial enclosures. Historical agricultural activity has been identified in the form of former mapped and unmapped field boundaries. Modern agricultural activity was also recorded as drainage systems and ploughing regimes. Multiple anomalies have been identified throughout the survey area that are difficult to ascertain from the magnetic background or lack a diagnostic morphology. These have been ascribed an “undetermined” origin. Modern interference in the data is present as areas of greenwaste which may have complicated the identification of anomalies, as well as magnetic disturbance from fencing and from buried services.

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1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by RPS Consulting Ltd to undertake a geophysical survey over a c. 61ha area of pasture off Barkham Road, Barkham, Berkshire (SU 77625 66357).

1.2. The geophysical survey comprised of a quad-towed, and hand-carried GNSS-positioned fluxgate gradiometer survey. Magnetic survey is the standard primary geophysical method for archaeological applications in the UK due to its ability to detect a range of different features. The technique is particularly suited for detecting fired or magnetically enhanced features, such as ditches, pits, kilns, sunken featured buildings (SFBs) and industrial activity (David *et al*., 2008).

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, 2020) and the European Archaeological Council (Schmidt *et al.,* 2015).

1.4. It was conducted in line with a WSI produced by MS (Burton, 2024).

1.5. The survey commenced on 30/09/2024 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 for Archaeological Prospection).

2.2. The directors of MS are involved in cutting edge 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 Paul Johnson has a PhD in archaeology from the University of Southampton, is a Fellow of the Society of Antiquaries of London and a Member of CIfA, 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, field and office staff have degree qualifications relevant to archaeology or geophysics 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. 1.6km south-west of Barkham (Figure 1). A fluxgate gradiometer survey was successfully undertaken across c. 61ha under pasture. The survey area was bordered by Barkham street to the northeast and Longley Common Road to the northwest, Common field Lane to the southeast, and Princess Marina Drive to the southwest (Figure 2).

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	The survey area consisted of a pasture field slightly sloped downwards towards the west.	The survey area was bordered to the north, west and south by woodland and brook and to the south by wood and wire fencing. A metal wire trough feeding was present northeast of the survey area. There were two metal manhole covers in the middle north and west and a pond in the southwest corner of the survey area.
2	The survey area consisted of a pasture field slightly sloped downwards towards the east.	The survey area was bordered on all sides by wooden fences and trees. A metal trough was located beside the metal gate in the middle of the northern boundary.
3	The survey area consisted of an uneven, pasture field slightly sloped upwards towards the south.	The survey area was bordered on all sides by wooden and wire fences and hedgerows. Deep ruts and troughs were in the middle of the field. A water tower was in the middle of the southern boundary.
4	The survey area consisted of a flat field with long pasture.	The survey area was bordered by trees and hedgerows on all sides. There were wood and wire fences to the east, west, and south. In the northeast corner of the eastern boundary, there were wooden outbuildings and metal objects, including car wheels. Two telegraph poles were in the northeast corner of the north boundary.
5	The survey area consisted of firm ground, waterlogged parts and pasture field.	The survey area was bordered east and north by hedgerows, trees, and wire fences and in the southwest by wire fences. There were two metal gates, one in the northeast corner of the field and the other in the middle of the northwest boundary.
6	The survey area consisted of firm ground, waterlogged parts and pasture field.	The survey area was bordered northeast by wire fence, and in the southeast, south and southwest by hedgerow, trees, wood and wire fences. A pond was in southeast of the survey area.
7	The survey area consisted of a flat pasture field.	The survey area was bordered west, north, and south by hedgerows, trees, and wire fences, and in the east, it was bordered by wire fences. A brook ran along the northern border.

8	The survey area consisted of a firm, slightly sloped pasture field.	The survey area was bordered to the north, south, and west by wood and wire fences, and to the east by a chain-link fence. A brook ran along the northern border, and several metal horse tethers were located along the southern border inside the field. There was a ground roller at the southeast corner of the field.
9	The survey area consisted of a firm ground pasture field.	The survey area was bordered to the north, south, and west by wood and wire fences and to the east by a chain-link fence. A brook ran along the southern border, and several metal manholes were located along the southern border inside the field. A brook and some trees ran along the southern border.
10	The survey area consisted of a firm, flat pasture field and was partially waterlogged.	The survey area was bordered south, and west by wood and wire fences, north by chain-link fence, and an open boundary in the east. A masonry pile was in the south corner of the east boundary.

4.3. The underlying geology of the survey area comprises clay from the London clay formation across the vast majority of the survey area, with sand from the Bagshot formation being recorded in the southeast of the survey area. Superficial deposits in the survey area comprise fluvial deposits of clay, silt, and gravel (British Geological Survey, 2024).

4.4. The soils in the survey area consist of loamy and clayey soils, slightly acid and seasonally wet (Soilscapes, 2024).

5. Archaeological Background

5.1. The following is a summary of an Archaeological Desk Based Assessment produced and provided by RPS Consulting Ltd (Dicks, 2024).

5.2. A watching brief recorded a possible section of a prehistoric burnt mound located in between the boundaries of Areas 5 & 8.

5.3. Evidence for Iron age settlements has been in the surroundings of the survey area, specifically at Arborfield Garrison, c. 250m south of the survey area (Baird Road Phase 1: MWK15721 at SU 76290 65762). Trenching conducted for the Arborfield Cross Relief Road also recorded a Late Iron Age/early Roman settlement in the form of a large rectilinear enclosure ditch, several smaller ditches and internal features including small post-holes/pits and a ditch terminal. Two other Iron Age settlements were identified C. 1.1km southwest of the site, at former Whitehall Brick and Tile Works (MWK15550 to MWK15554 at SU 76551 65328) and c. 450m southeast of the survey area at Rooks Nest Farm (MRM16527, MRM16528, MRM16529 and MRM16533 at SU 7880 6588).

5.4. The Barkham Survey recovered Romano-British pottery sherds within the survey area (1 sherd: MWK15492 at SU 7739 6647 and MWK15493 at SU 77183 66339) and within the surroundings of the survey area. No evidence for settlement activity was found within the survey area.

5.5. Early Medieval pottery sherds of possible Saxon date were found on land east of Barkham street, within Area 2 (EWK28 and MWK15487 at SU 78259 66199). Two scheduled monuments from within this period are recorded, the closest being adjacent to the eastern boundary of the survey area, near the church and immediately east of Area 2 (Moated site and associated enclosure at Church Farm: SM Ref. 1013181), and the second being c. 500m southwest of the survey area (Moated site north of the Moat House: SM Ref. 1009886). The moated site at Church farm comprises a moat ditch and below ground archaeological remains.

6. Methodology

6.1. Data Collection

6.1.1. Magnetometer surveys are generally the most cost effective and suitable geophysical technique for the detection of archaeology in England. Therefore, a magnetometer survey should be the preferred geophysical technique unless its use is precluded by any specific survey objectives or the site environment. For this site, no factors precluded the recommendation of a standard magnetometer survey. Geophysical survey therefore comprised the magnetic method as described in the following section.

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

6.1.3. 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

6.1.4. The magnetic data were collected using MS' bespoke quad-towed cart system and hand-carried GNSS-positioned system.

6.1.4.1. 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.

6.1.4.2. 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.

6.1.4.3. 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 the EAC and Historic England guidelines for 'minimally enhanced data' (see Section 3.8 in Schmidt *et al.*, 2015: 33 and Section IV.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 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 of the gradient and total field at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot (Figures 9, 13, 17, 21, 25 and 29). XY trace plots visualise the magnitude and form of the geophysical response, aiding 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, historical maps, LiDAR data, and soil and geology maps. Google Earth (2024) was also consulted, to compare the results with recent land use.

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 from further work, in order to constantly improve our knowledge and service.

7.2. Discussion

7.2.1. The geophysical results are presented in combination with satellite imagery and historical maps (Figures 4 and 6).

7.2.2. The fluxgate gradiometer survey was conducted over the entirety of the survey area and anomalies of archaeological, agricultural, modern and undetermined origins were identified. Modern interference in the data is present in the form of scattered, dipolar noise likely related to greenwaste fertilisation which was detected across the majority of the survey area (Figure 3). The presence of this noise has resulted in reduced confidence in the visibility of the anomalies. Magnetic disturbance was identified along the edges of the survey area, caused by extant buildings and field boundaries, as well as within the north of the survey area produced by buried services.

7.2.3. A *focus* of probable archaeological activity has been identified within the north of Area 2 (Figures 5, 6; 27 & 28). This area of archaeological activity is characterised by curvilinear anomalies likely representative of infilled ditches which appear to form an irregular, D-shaped enclosure. Within it, strongly enhanced discrete anomalies have been detected and may be indicative of pits and structural remains. Two parallel linear anomalies were identified at the northern extent of this enclosure, with a possible further pair of parallel linear anomalies present in its eastern extent (Figures 27 & 28). These could represent a series of external boundary ditches. The proximity of this group of anomalies to a moated site recorded just outside of the survey area (see Section 5.5) suggests these could be associated with this scheduled monument, possibly representing a further moat or a different type of enclosed complex. An overlapping of linear anomalies in the south of this enclosure is also suggestive of multiple phases of activity (Figures 27 & 28). This enclosed complex is situated within an area of enhanced background which characterised the north of Area 2 (Figure 27). While it cannot be totally excluded that this may have resulted from the spreading of greenwaste in modern times, it is considered likely that this will have at least partially resulted from the scattering of material associated with the archaeological complex.

7.2.4. A second *focus* of possible archaeological activity has also been recorded within the west of Area 8 (Figures 5, 6; 27, 28). This area is largely characterised by linear anomalies possibly suggestive of partial enclosures and which appear to be concentrated both along and across a mapped field boundary. These anomalies have been categorised as "Archaeology Possible" due to their possible connection to this boundary as well as to the difficulty to discern them from the magnetically enhanced background.

7.2.5. Historical agricultural activity is evident within areas 3, 6, 8 and 9 in the form of rectilinear anomalies suggestive of former field boundaries, the majority of which correspond with boundaries visible on historical maps (Figures 3-6). Anomalies indicative of modern agricultural practices were also recorded across Areas 3, 5, 6, 7, 8 & 9 and correspond with modern ploughing regimes and drainage systems (Figures 3-6).

7.2.6. Numerous linear and curvilinear anomalies classified as "Undetermined" have been recorded within areas 1, 5, 7, 8 and 9 (Figures 4 and 6). While some of these anomalies may correspond to drains or other agricultural/modern features (i.e. Areas 3, 5, 7 & 9; Figures 3-6), others may correspond to natural variations in the background (i.e. Area 8; Figures 5-6).

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

7.3.1.3. **Ferrous/Debris (Spread)** – A ferrous/debris spread refers to a concentration of multiple discrete, dipolar anomalies usually resulting from highly magnetic material such as rubble containing ceramic building materials and ferrous rubbish.

7.3.1.4. **Magnetic Disturbance** – The strong anomalies produced by extant metallic structures, typically including fencing, pylons, vehicles and service pipes, have been classified as 'Magnetic Disturbance'. These magnetic 'haloes' will obscure weaker anomalies relating to nearby features, should they be present, often over a greater footprint than the structure causing them.

7.3.1.5. **Undetermined** – Anomalies are classified as Undetermined when the origin of the geophysical anomaly is ambiguous and there is no supporting contextual evidence to justify 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 distinct from those caused by ferrous sources.

7.3.2. Magnetic Results - Specific Anomalies

7.3.2.1. **Archaeology Probable (Strong/Weak/Spread)** – A series of linear and curvilinear anomalies have been detected within the northern half of Area 2 (**[2a]**, Figures 27-29).

These are suggestive of probable infilled ditches and appear to form an irregular, D-shaped enclosure. Its northernmost side is characterised by two parallel linear anomalies and further parallel linear anomalies are recorded in its eastern side (Figures 27-28). These could represent a system of external ditches delimiting the complex. The proximity of anomalies **[2a]** to a moated site recorded immediately outside of the survey area (see Section 5.5) suggests these could be associated with this scheduled monument, possibly representing a further moat or a different type of enclosed complex. Furthermore, slightly weaker linear anomalies **[2b]** were identified in the south of this complex (Figures 27-29). These appear to overlap **[2a]**, suggesting multiple phases of activity. Anomalies **[2a]** appear to delimit a series of strongly enhanced discrete anomalies: while the larger, more irregular ones, in the centre of the enclosure, are particularly enhanced and may correspond to structural remains and/or rubble, a series of sub-round discrete anomalies (between c. 2-4m in diameter) aligned along the eastern border of the enclosure may represent pits instead. Anomalies **[2a & 2b]** are located in an area characterised by an enhanced magnetic background. It is considered likely that this will at least partially have resulted from the scattering of materials associated with anomalies **[2a & 2b]**.

7.3.2.2. **Archaeology Possible (Weak)** – Weakly and strongly enhanced linear anomalies have been recorded within the west of Area 8 [**8a**] and they appear to be concentrated both along and across a mapped field boundary present in that portion of the survey area (Figures 27-29). Although the shape and strengths of these anomalies are potentially suggestive of partial rectangular and curvilinear enclosures they lay within an area of magnetic enhancement, resulting from modern agricultural practices. Due to the partial obscuring of these anomalies a more confident categorisation cannot be ascribed.

7.3.2.3. **Agricultural (Strong and Weak)** – Linear anomalies, forming rectilinear assemblages and exhibiting a range of magnetic strengths have been recorded within Areas 3, 6, 8 and 9 (Figures 7-9; 15-16; 19-20; 23-24; 27-28). These largely correspond to former field boundaries and a trackway depicted in historical maps (Figures 4 and 6).

7.3.2.4. **Agricultural (Trend)** – Strongly and weakly enhanced linear anomalies running in parallel alignments have been recorded within areas 3, 5, 6, 8 and 9, a representative sample of which have been interpreted (Figures 7-30). The shape and strengths of these anomalies are typical of modern ploughing regimes, the majority of which correspond with what visible on recent satellite imagery.

7.3.2.5. **Drainage Systems** – Multiple linear anomalies on differing alignments were detected within areas 3, 5 and 7 and interpreted as drainage features (Figures 8, 12, 16, 20, 24). These anomalies display two main differing magnetic signals. Parallel weakly dipolar, linear anomalies are typical of ceramic drains and strong linear anomalies are suggestive of steel or metal pipe drainage systems.

7.3.2.6. **Undetermined (Strong and Weak)** – Strongly and weakly enhanced, linear and curvilinear anomalies have been recorded within areas 1, 5, 7, 8 and 9 (Figures 7-30). While some of these anomalies may correspond to drains or other

agricultural/modern features (i.e. Areas 3, 5, 7 & 9), others may correspond to natural variations in the background (i.e. Area 8).

8. Conclusions

8.1. A fluxgate gradiometer survey was completed across the survey area and anomalies of probable and possible archaeological origin alongside anomalies of agricultural, modern and undetermined origins have been identified. The survey identified a scatter of green waste across the majority of the survey area which has complicated the identification of the anomalies. Modern interference was also identified around the perimeter of the survey area, produced by extant buildings and fencing, and within the north of the survey area, caused by buried services.

8.2. A *focus* of probable archaeological activity was recorded in the north of Area 2, comprised of linear anomalies forming an irregular enclosure with possibly two double-ditched sides. It is possible this could be associated with the scheduled monument located to the immediate east of Area 2 and described as "Moated site and associated enclosure at Church Farm". Within the enclosure, internal features, possibly representing structural remains and/or pits, have been identified. Overlapping linear anomalies recorded at the southern end of the enclosure may suggest multiple phases of activity within this enclosed complex. This complex lies within an area of enhanced background and, while it cannot be excluded that this may have resulted from the spreading of greenwaste, it is possible that this may have least partially have been caused by the scattering of archaeological materials from this area.

8.3. A *focus* of possible archaeological activity was recorded in Area 8, possibly comprising partial enclosures. These anomalies are difficult to discern from the enhanced magnetic background and a more tentative interpretation has therefore been ascribed to them.

8.4. Historical agricultural activity has been recorded as former mapped and unmapped field boundaries across Areas3, 6, 8 and 9. Modern agricultural activity was identified within the data as ploughing regimes and drainage systems detected in Areas 3, 5, 6, 7, 8 & 9.

8.5. Anomalies of an undetermined origin have been identified throughout the survey area. While some of these may correspond to drains or other agricultural/modern features, others may correspond to natural variations in the background.

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 any dictated time embargoes.

10. Copyright

10.1. Copyright and 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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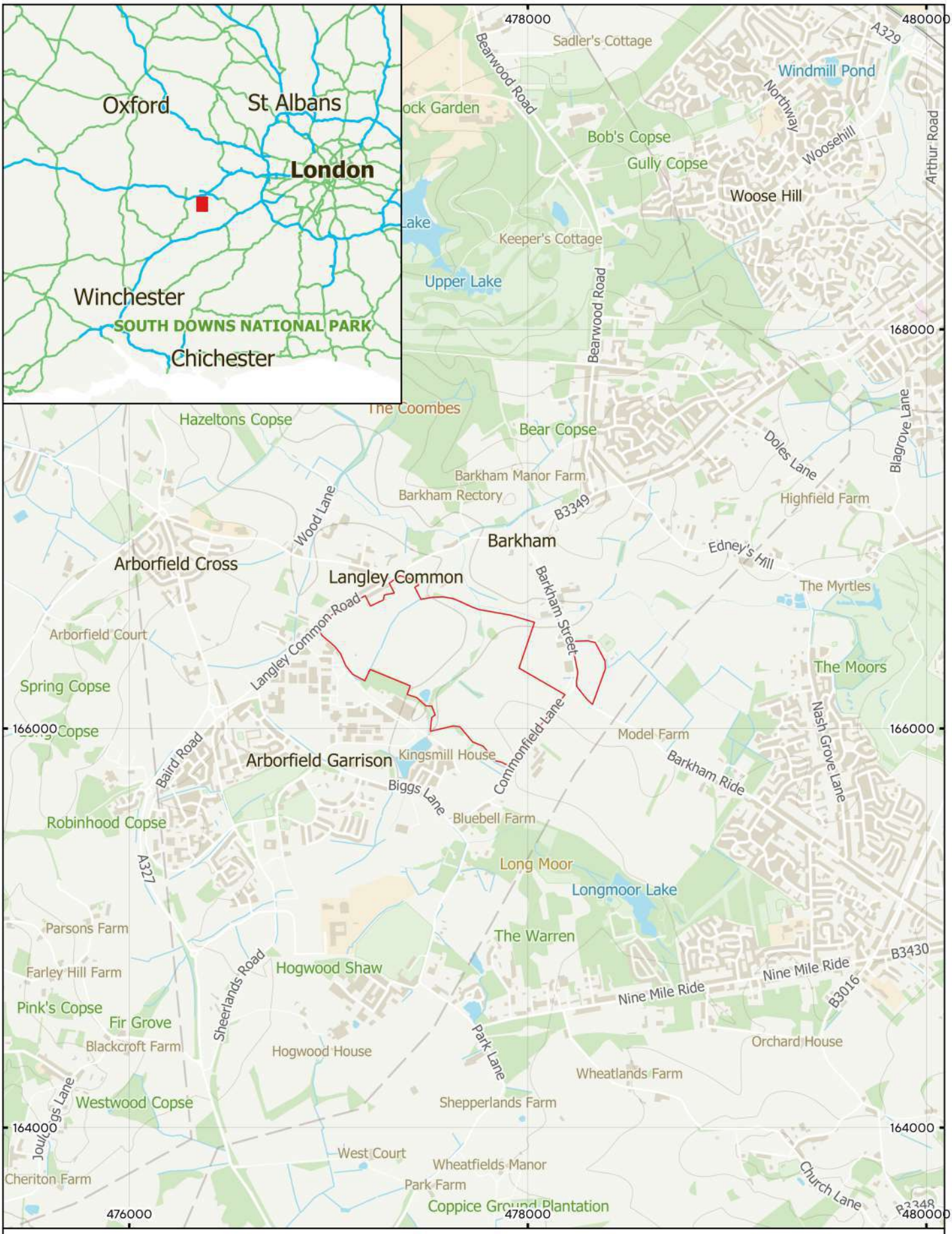
12. Project Metadata

MS Job Code	MSSU1879
Project Name	Land at Barkham Road
Client	RPS Group Ltd
Grid Reference	SU 77625 66357
Survey Techniques	Magnetometry
Survey Size (ha)	61ha (Magnetometry)
Survey Dates	2024-09-30 to 2024-10-03
Project Lead	Isabella Carli BA MA ACIfA
Project Officer	Isabella Carli BA MA ACIfA
HER Event No	TBC
OASIS No	TBC
S42 Licence No	N/A
Report Version	0.3

13. Document History

Version	Comments	Author	Checked By	Date
0.1	Initial draft for Project Lead to Review	DW, HS, CY	IC	12 October 2024
0.2	Comments from Project Lead	IC	FPC	15 October 2024
0.3	Comments from Director	IC	FPC	15 October 2024



MSSU1879 - Land at Barkham Road, Berkshire
Figure 1 - Geophysical Survey Location
1:25,000 @ A4
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Survey Extent

0 0.5 1 km

MSSU1879 - Land at Barkham Road, Berkshire
Figure 2 - Geophysical Survey Areas
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Survey Extent

Magnitude Surveys

0 50 100 150 200 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 3 - Magnetic Total Field (Lower Sensor) Overview (North)
1:3,000 @ A3
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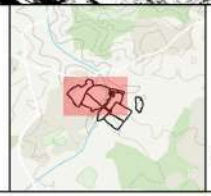
48,997 nT 49,005

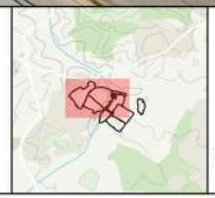


Magnitude Surveys

0 30 60 90 120 m

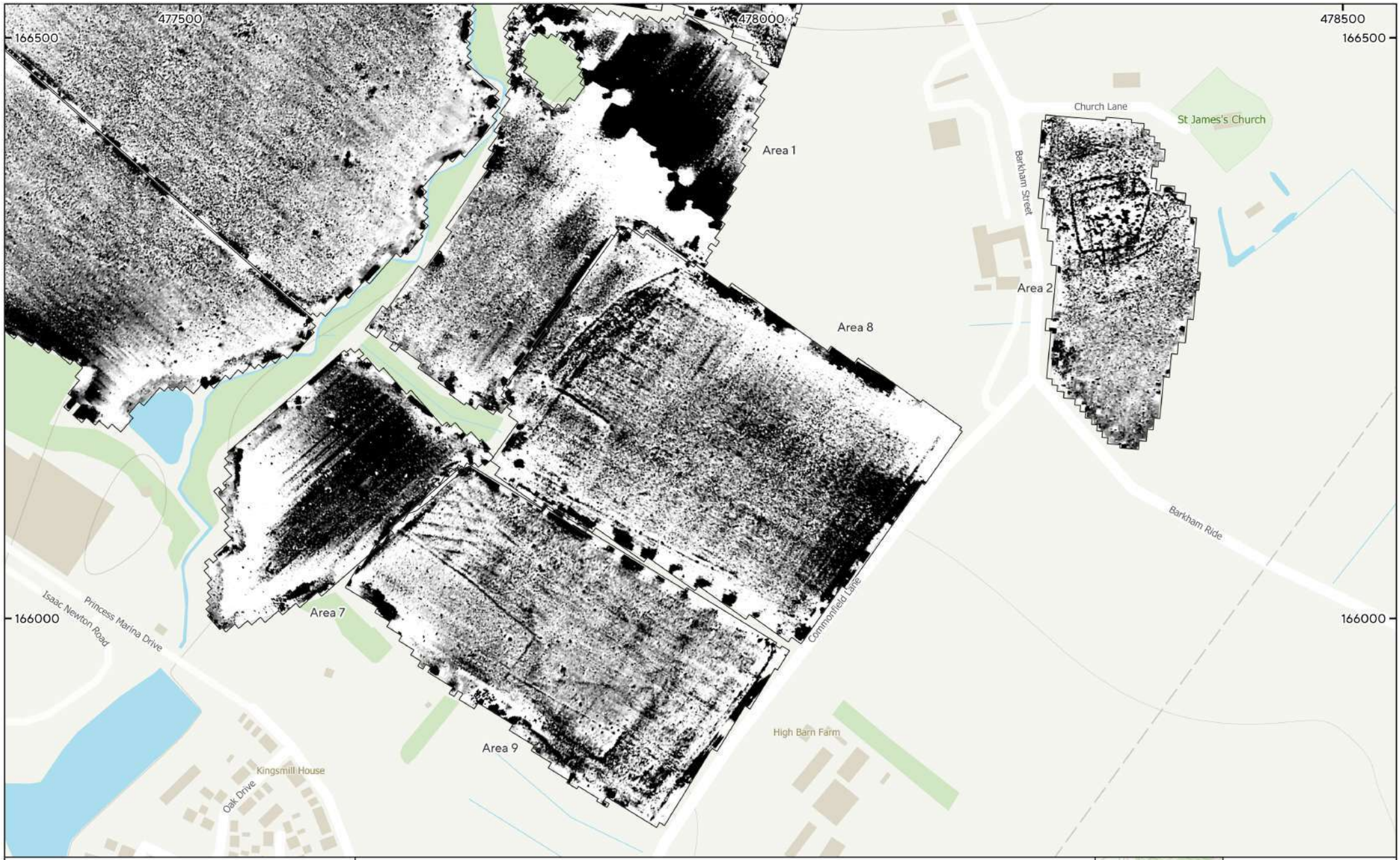
MSSU1879 - Land at Barkham Road, Berkshire
Figure 4 - Magnetic Interpretation Over Historical Mapping and Satellite Imagery Overview (North)
1:3,000 @ A3
Contains historical mapping © CLS Data 2024: Ordnance Survey, 6" 2nd edition c. 1882-1913
Contains satellite imagery © Bing Satellite 2024

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



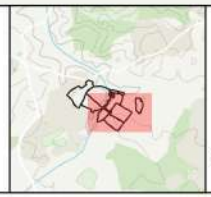
Magnitude Surveys

0 30 60 90 120 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 5 - Magnetic Total Field (Lower Sensor) Overview (South)
1:3,000 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024

48,997 nT 49,005

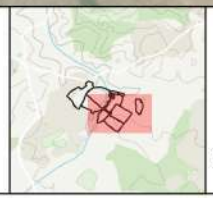


Magnitude Surveys

0 30 60 90 120 m

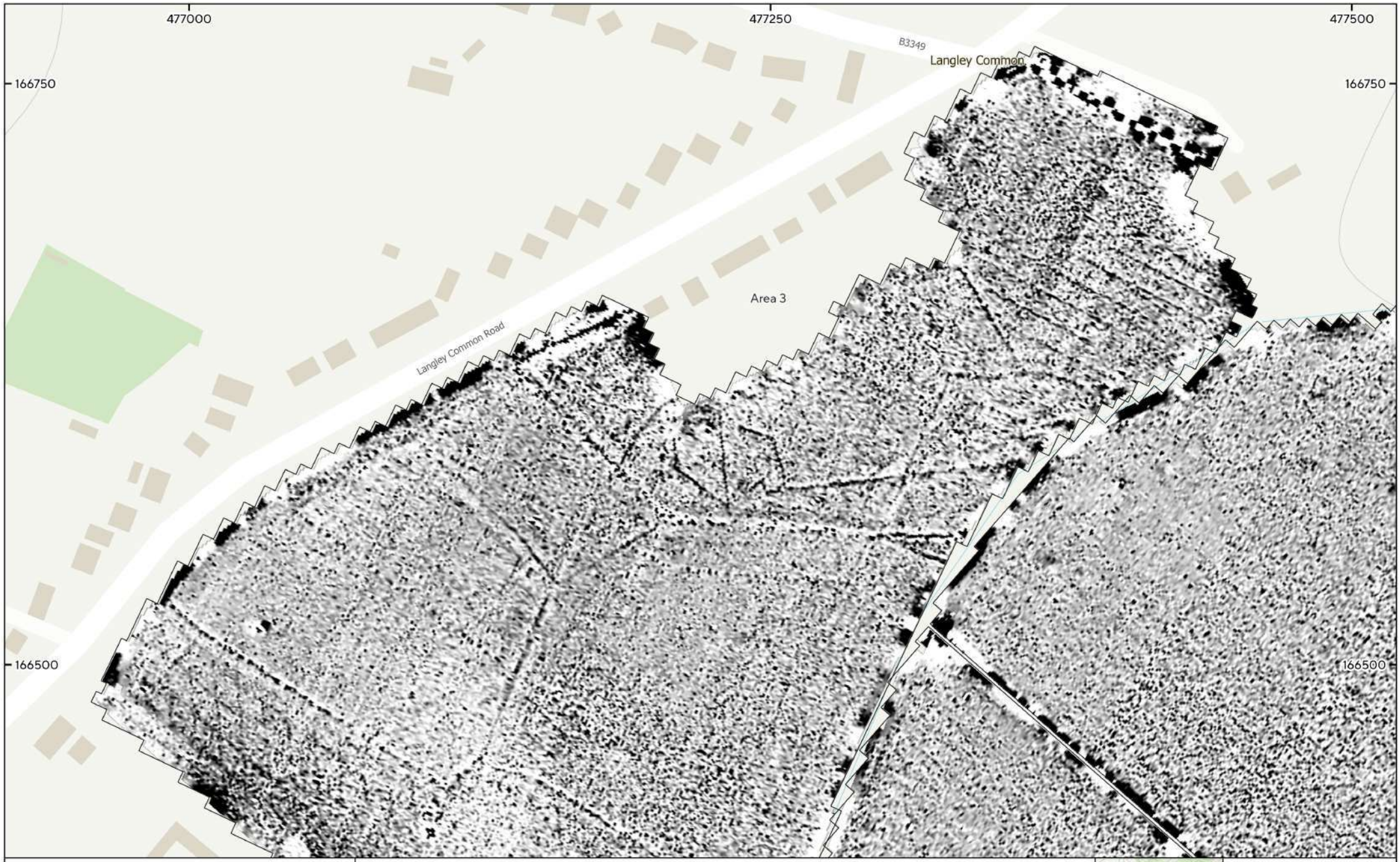
MSSU1879 - Land at Barkham Road, Berkshire
Figure 6 - Magnetic Interpretation Over Historical Mapping and Satellite Imagery Overview (South)
1:3,000 @ A3
Contains historical mapping © CLS Data 2024: Ordnance Survey, 6" 2nd edition c. 1882-1913
Contains satellite imagery © Bing Satellite 2024

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



Magnitude Surveys

0 30 60 90 120 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 7 - Magnetic Gradient (Areas 3 & 5)
1:1,500 @ A3
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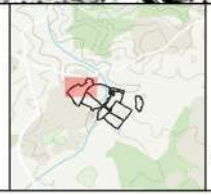
Contains Ordnance Survey data © Crown Copyright and database right 2024

-1 nT 2



Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 8 - Magnetic Interpretation (Areas 3 & 5)
1:1,500 @ A3
© Magnitude Surveys 2024
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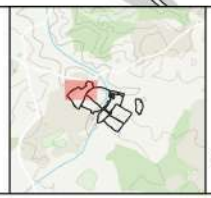
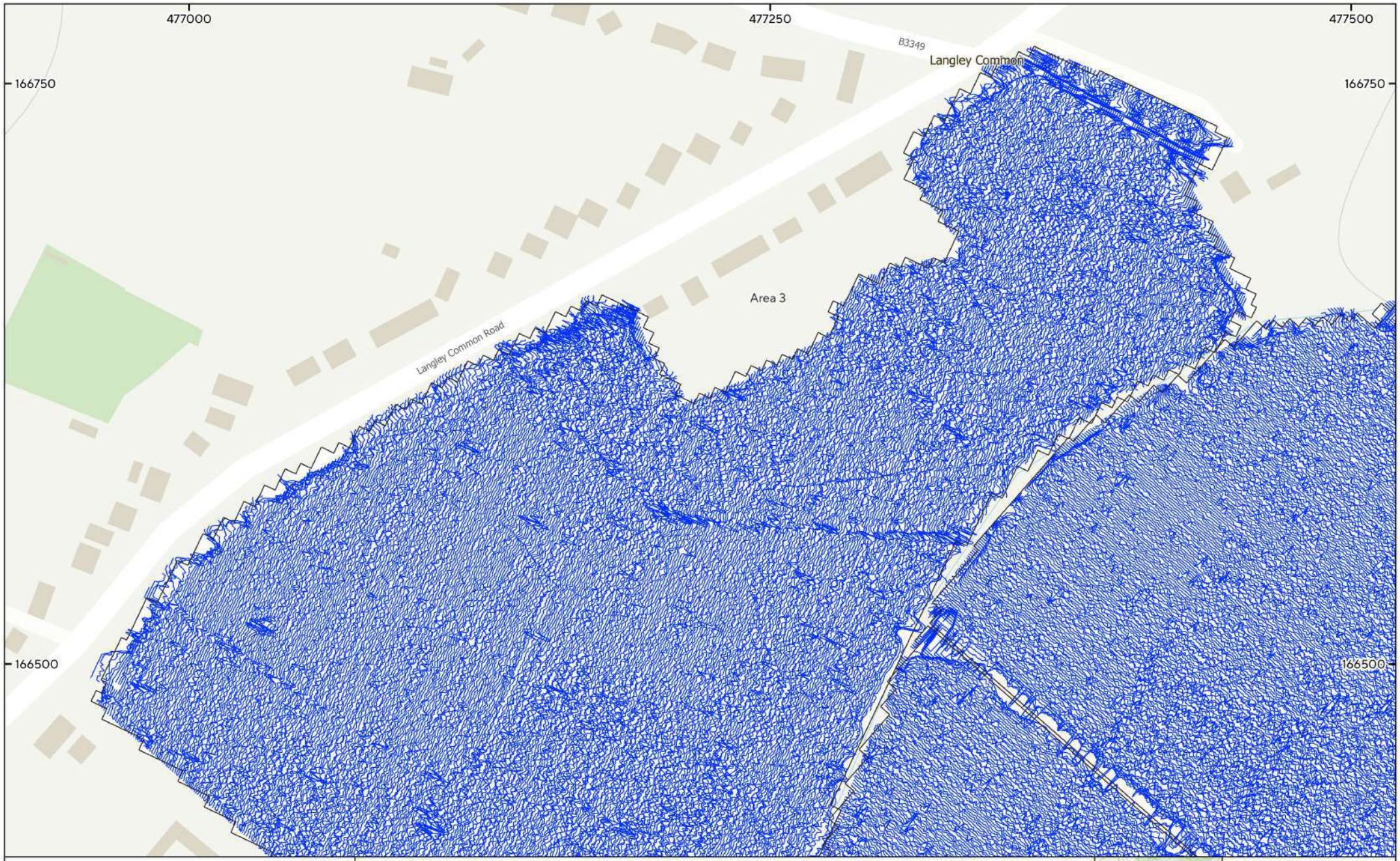
Agricultural (Strong)
Agricultural (Weak)
Undetermined (Strong)
Undetermined (Weak)
Magnetic Disturbance
Agricultural (Trend)
Service
Drainage Feature
Ferrous (Spike)



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 9 - XY Trace Plot (Areas 3 & 5)
30nT/cm at 1:1,500 @ A3
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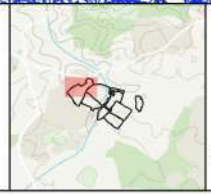
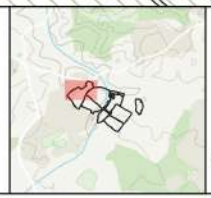
Contains Ordnance Survey data © Crown Copyright and database right 2024



Magnitude Surveys

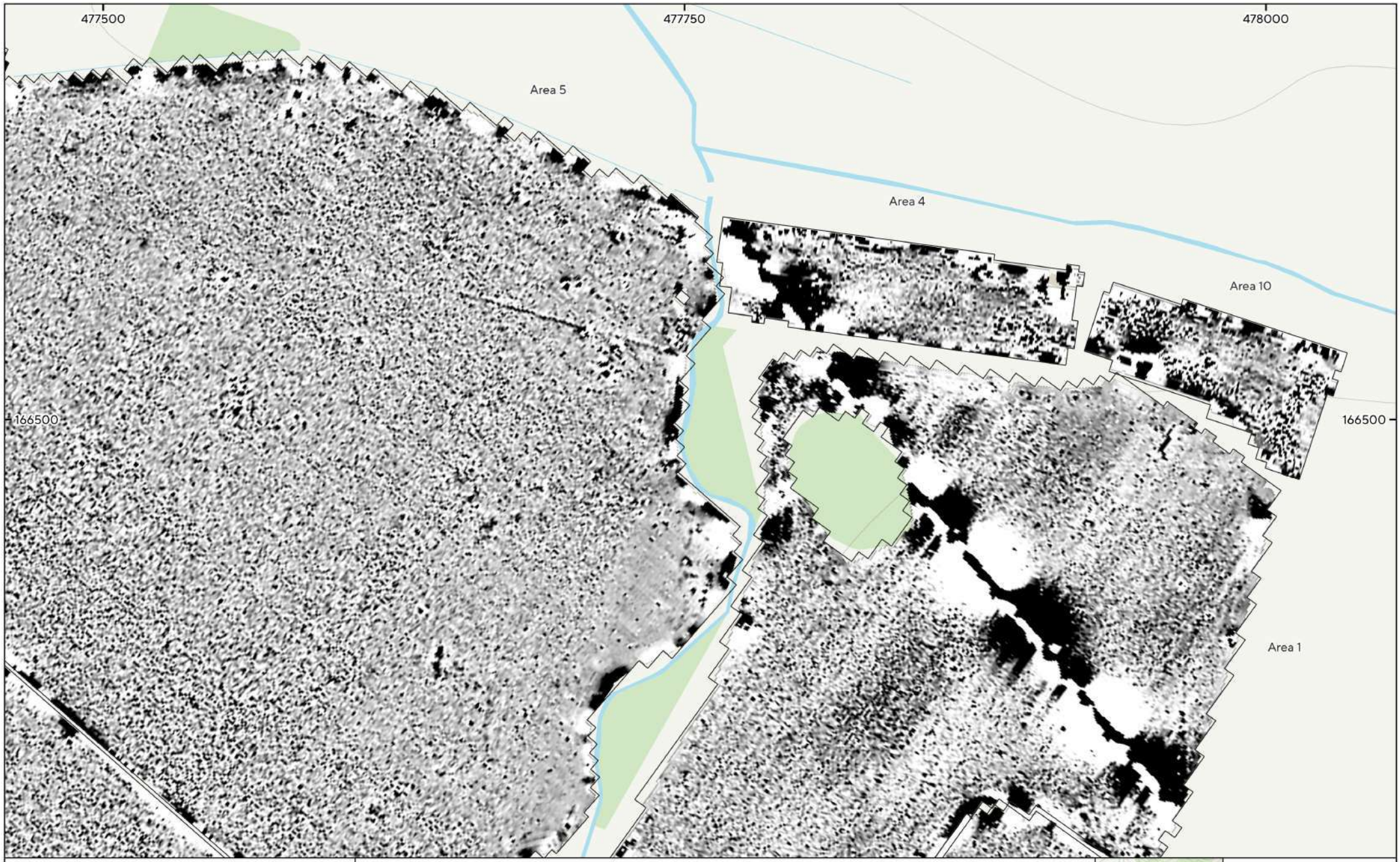
0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 10 - GNSS Plot (Areas 3 & 5)
1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 11 - Magnetic Gradient (Areas 1, 4, 5 & 10)
1:1,500 @ A3
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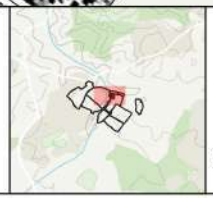
Contains Ordnance Survey data © Crown Copyright and database right 2024

-1 nT 2



Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 12 - Magnetic Interpretation (Areas 1, 4, 5 & 10)
1:1,500 @ A3
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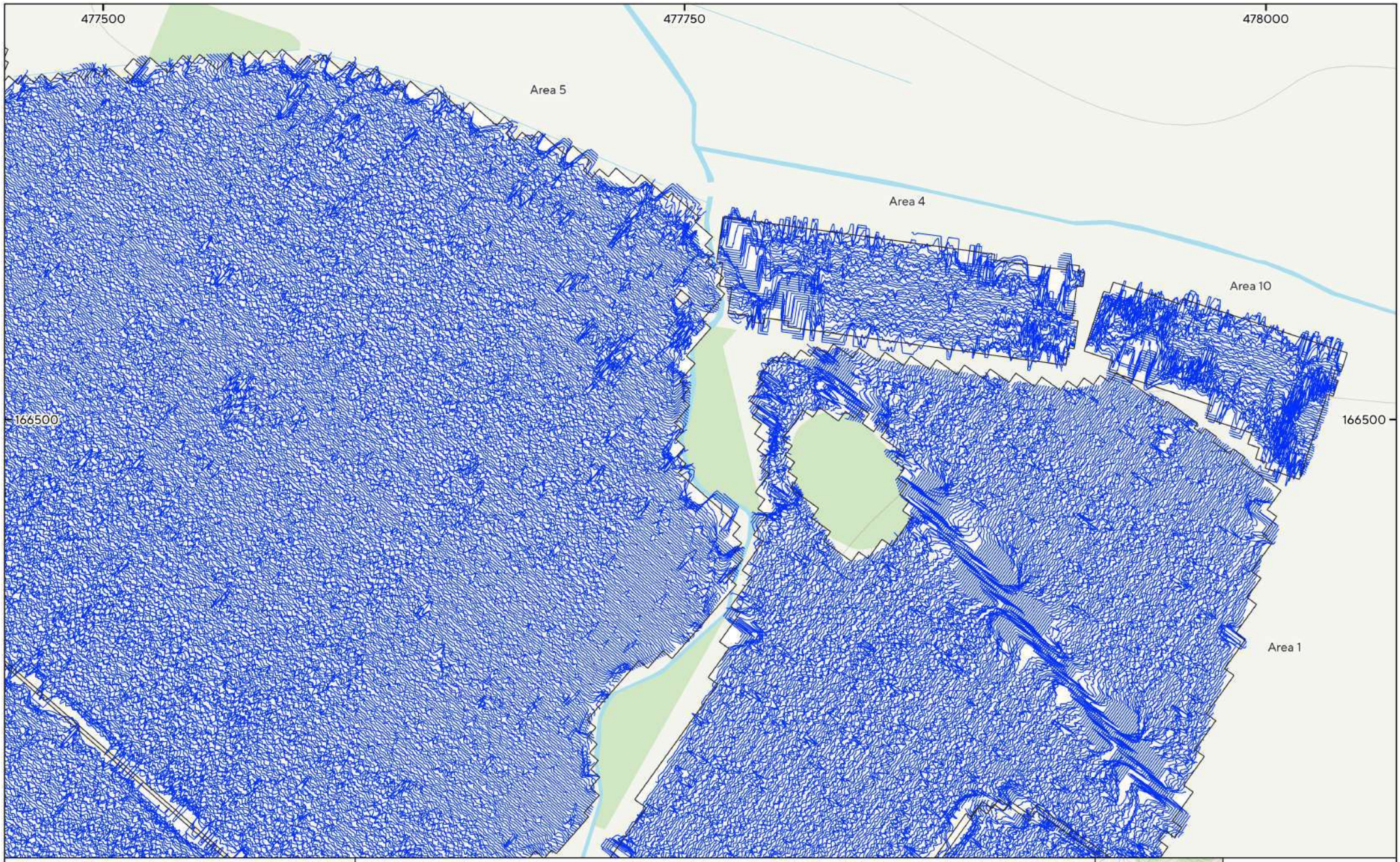
Natural (Spread)
Undetermined (Strong)
Undetermined (Weak)
Magnetic Disturbance
Ferrous/Debris (Spread)
Agricultural (Trend)
Service
Drainage Feature
Ferrous (Spike)

Magnitude Surveys

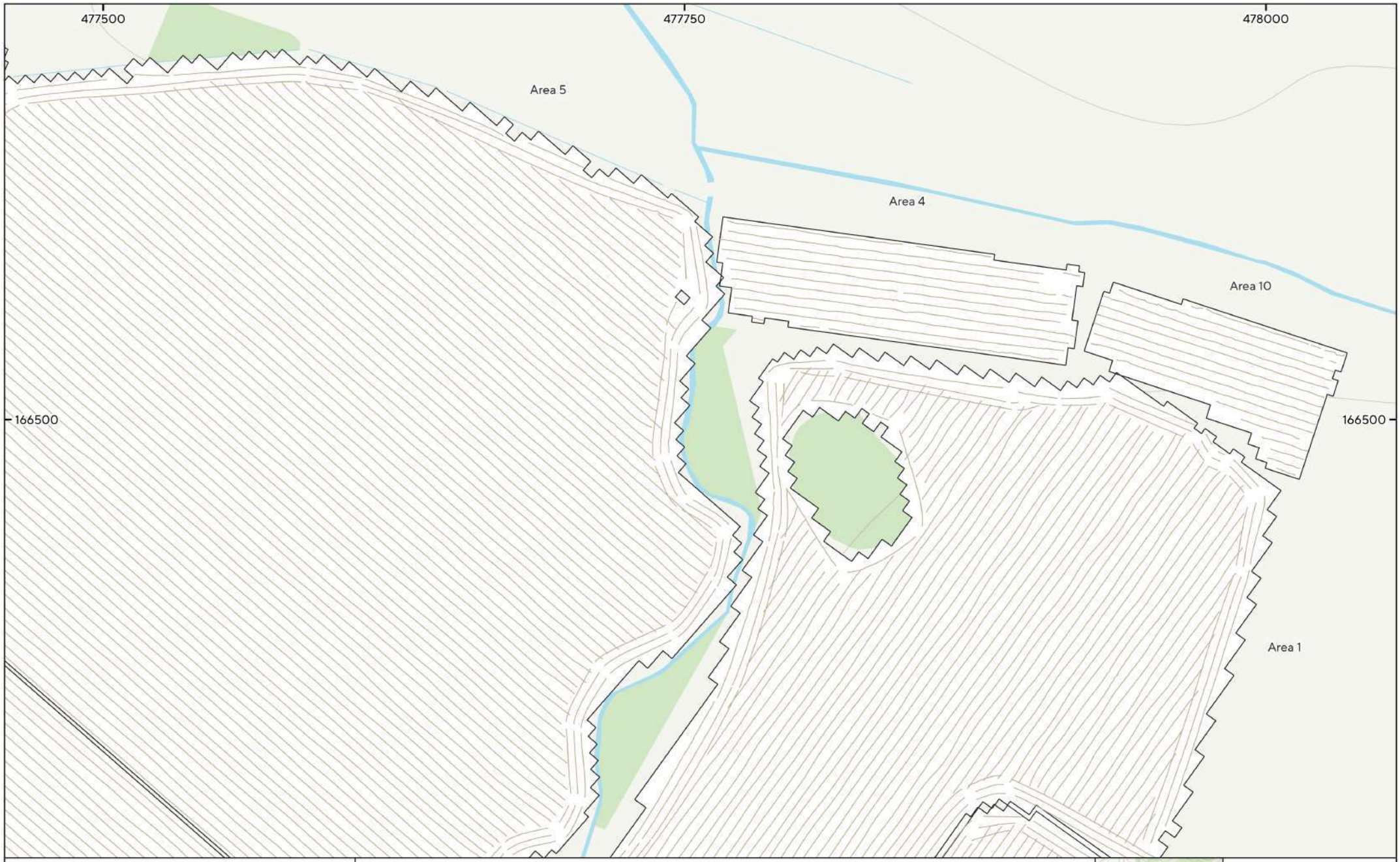
0 20 40 60 m



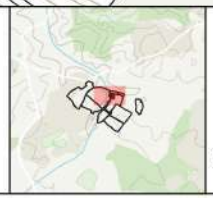
MSSU1879 - Land at Barkham Road, Berkshire
Figure 13 - XY Trace Plot (Areas 1, 4, 5 & 10)
30nT/cm at 1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024

Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 14 - GNSS Plot (Areas 1, 4, 5 & 10)
1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024

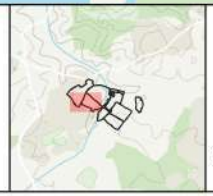


Magnitude Surveys

0 20 40 60 m

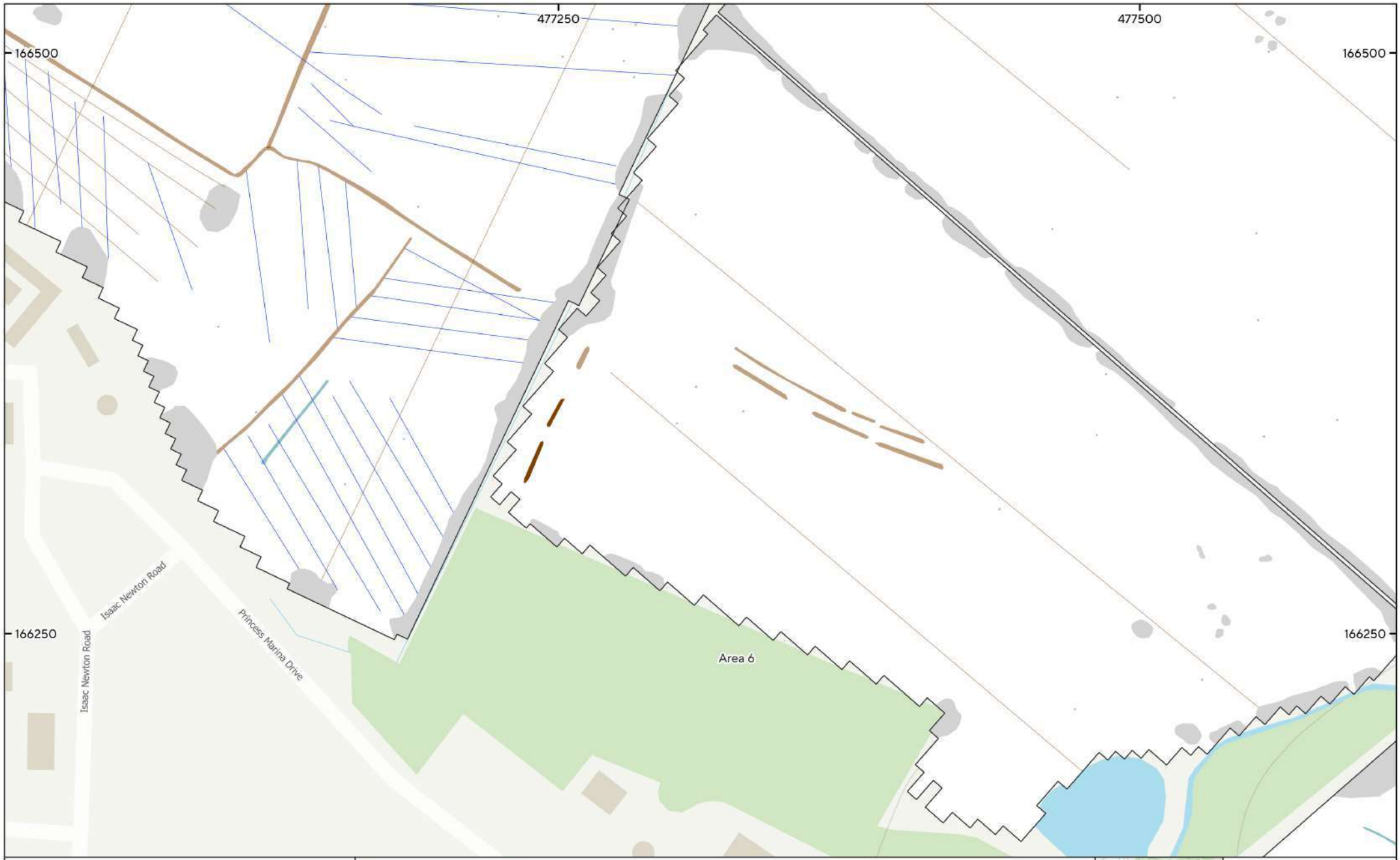
MSSU1879 - Land at Barkham Road, Berkshire
Figure 15 - Magnetic Gradient (Areas 3 & 6)
1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024

-1 nT 2



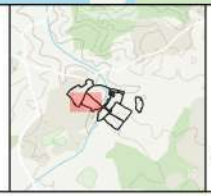
Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 16 - Magnetic Interpretation (Areas 3 & 6)
1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024

Agricultural (Strong)
Agricultural (Weak)
Undetermined (Weak)
Magnetic Disturbance
Agricultural (Trend)
Drainage Feature
Ferrous (Spike)



Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 17 - XY Trace Plot (Areas 3 & 6)
30nT/cm at 1:1,500 @ A3
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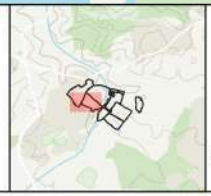
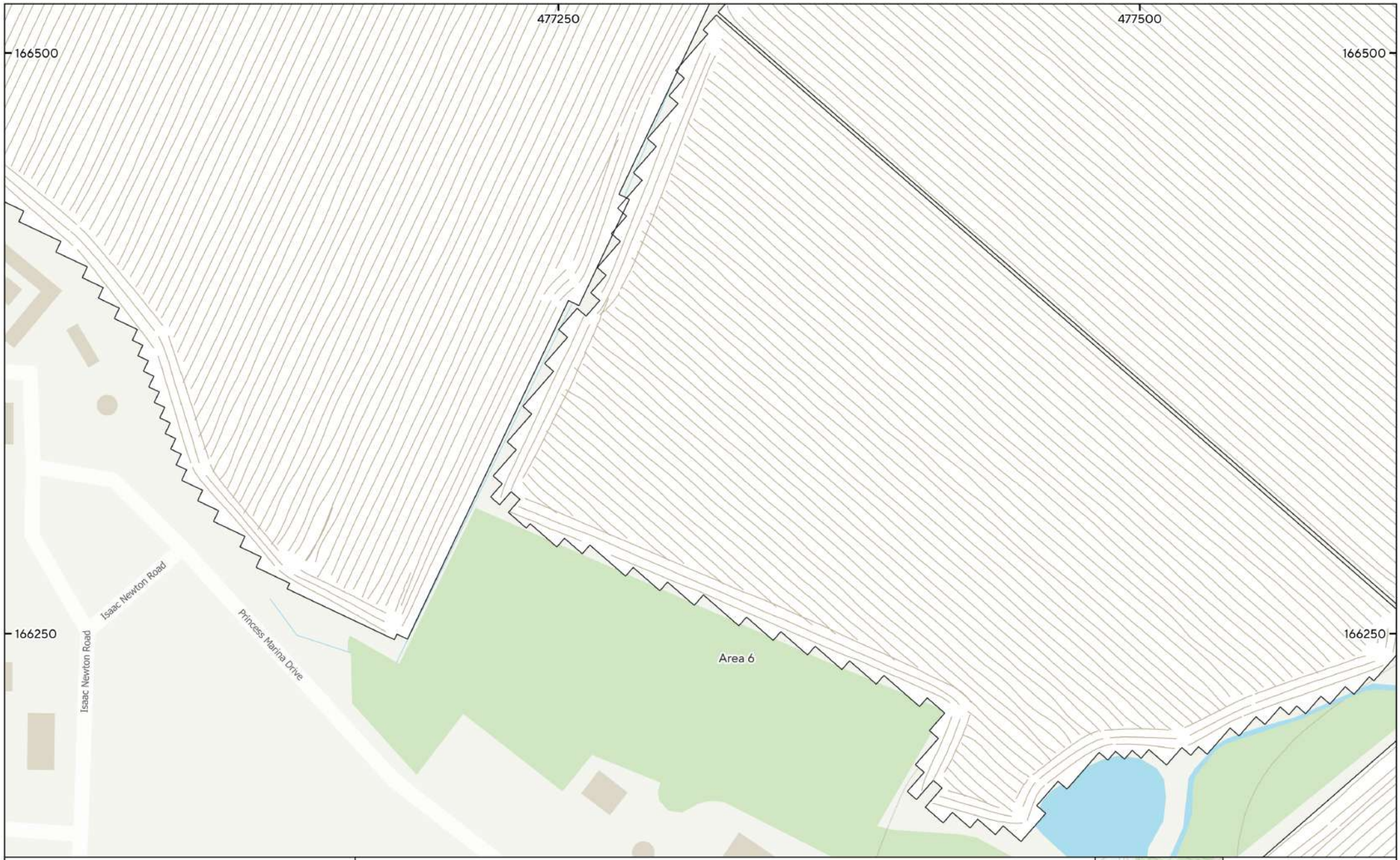
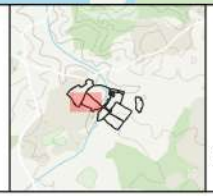


Magnitude Surveys

0 20 40 60 m

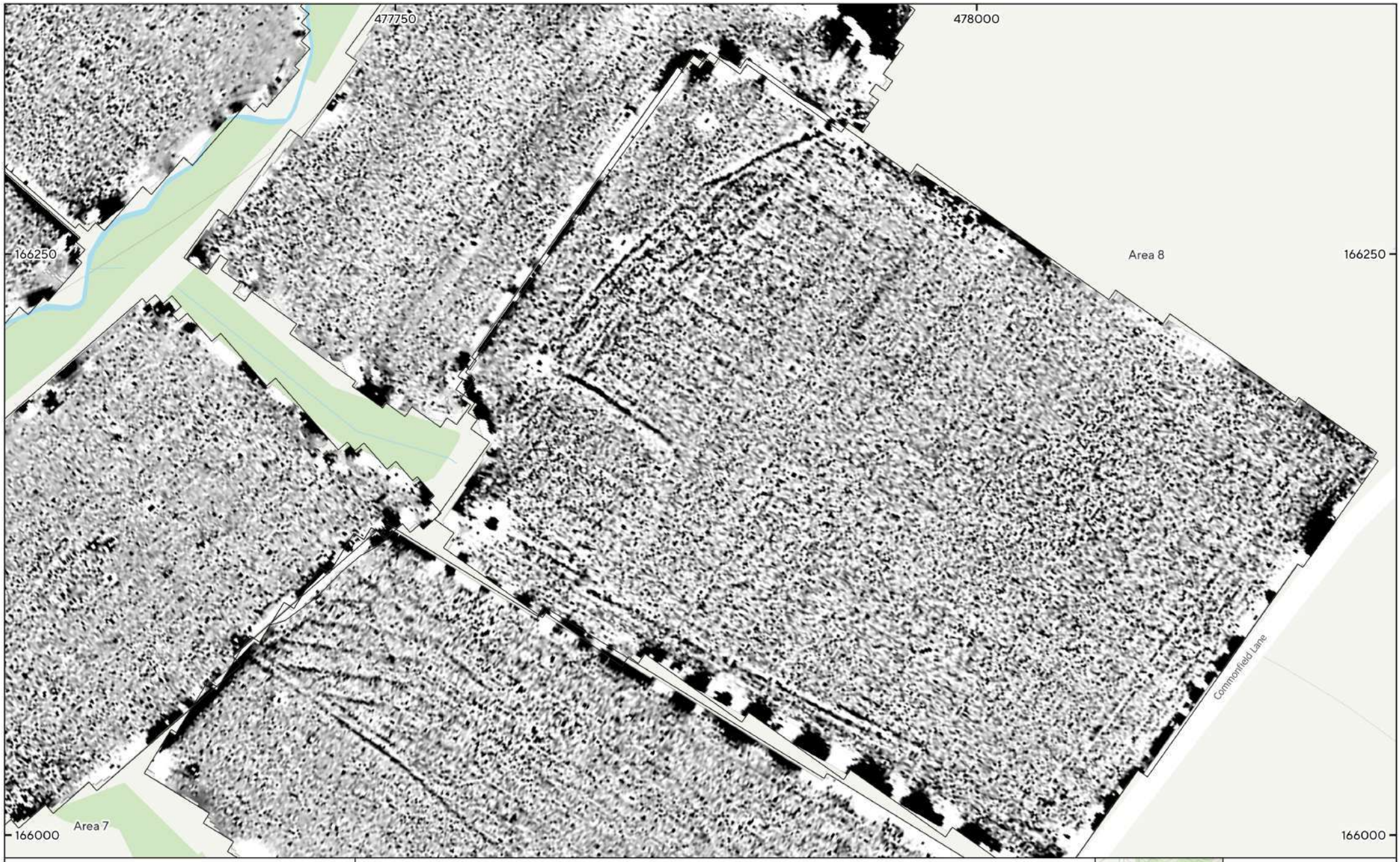


MSSU1879 - Land at Barkham Road, Berkshire
Figure 18 - GNSS Plot (Areas 3 & 6)
1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 19 - Magnetic Gradient (Areas 1, 7, 8 & 9)
1:1,500 @ A3
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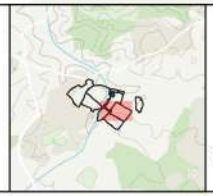
-1 nT 2



Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 20 - Magnetic Interpretation (Areas 1, 7, 8 & 9)
1:1,500 @ A3
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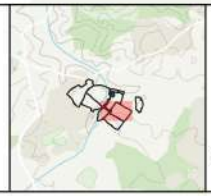
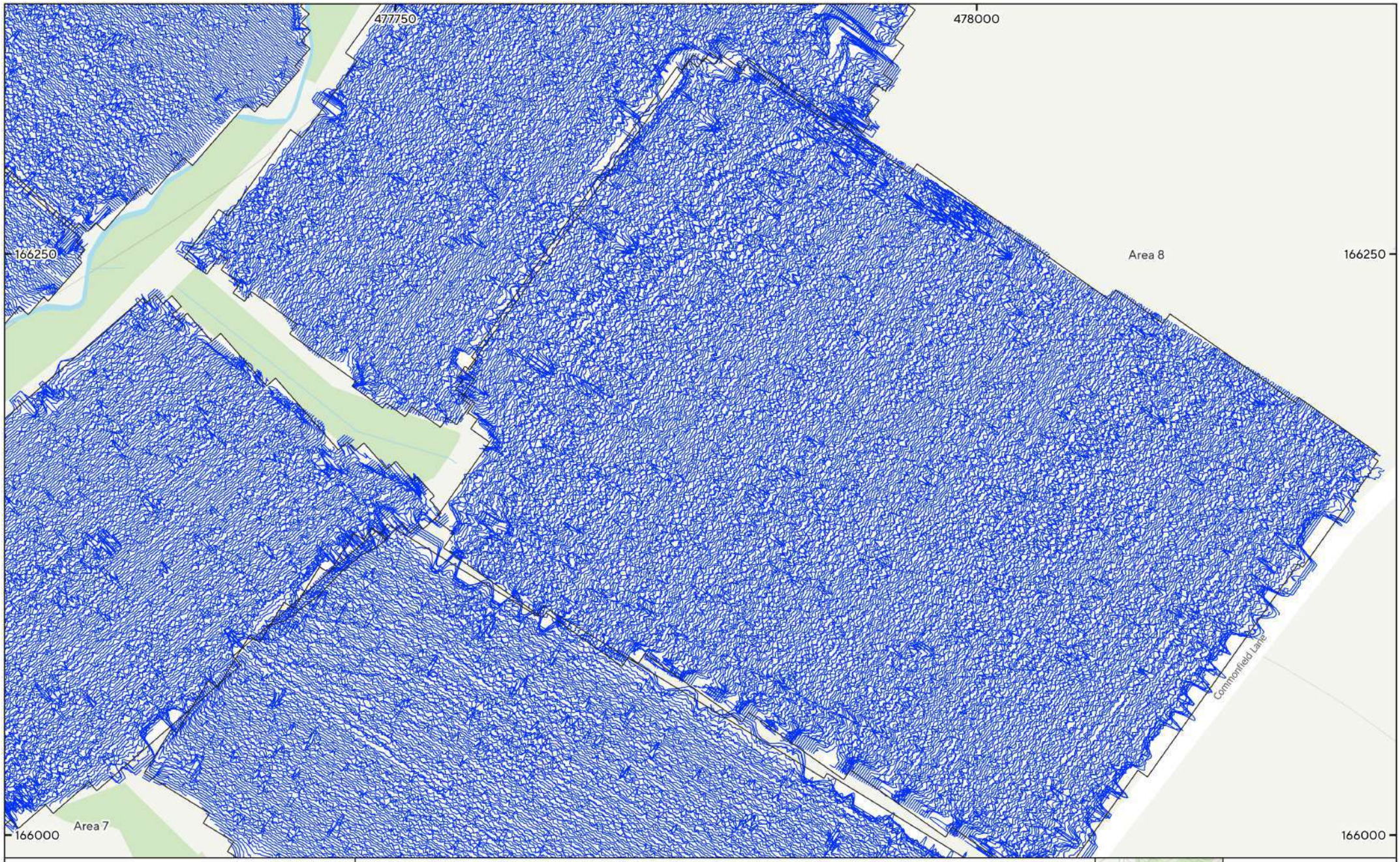
Contains Ordnance Survey data © Crown Copyright and database right 2024

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



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 21 - XY Trace Plot (Areas 1, 7, 8 & 9)
30nT/cm at 1:1,500 @ A3
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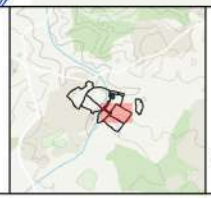
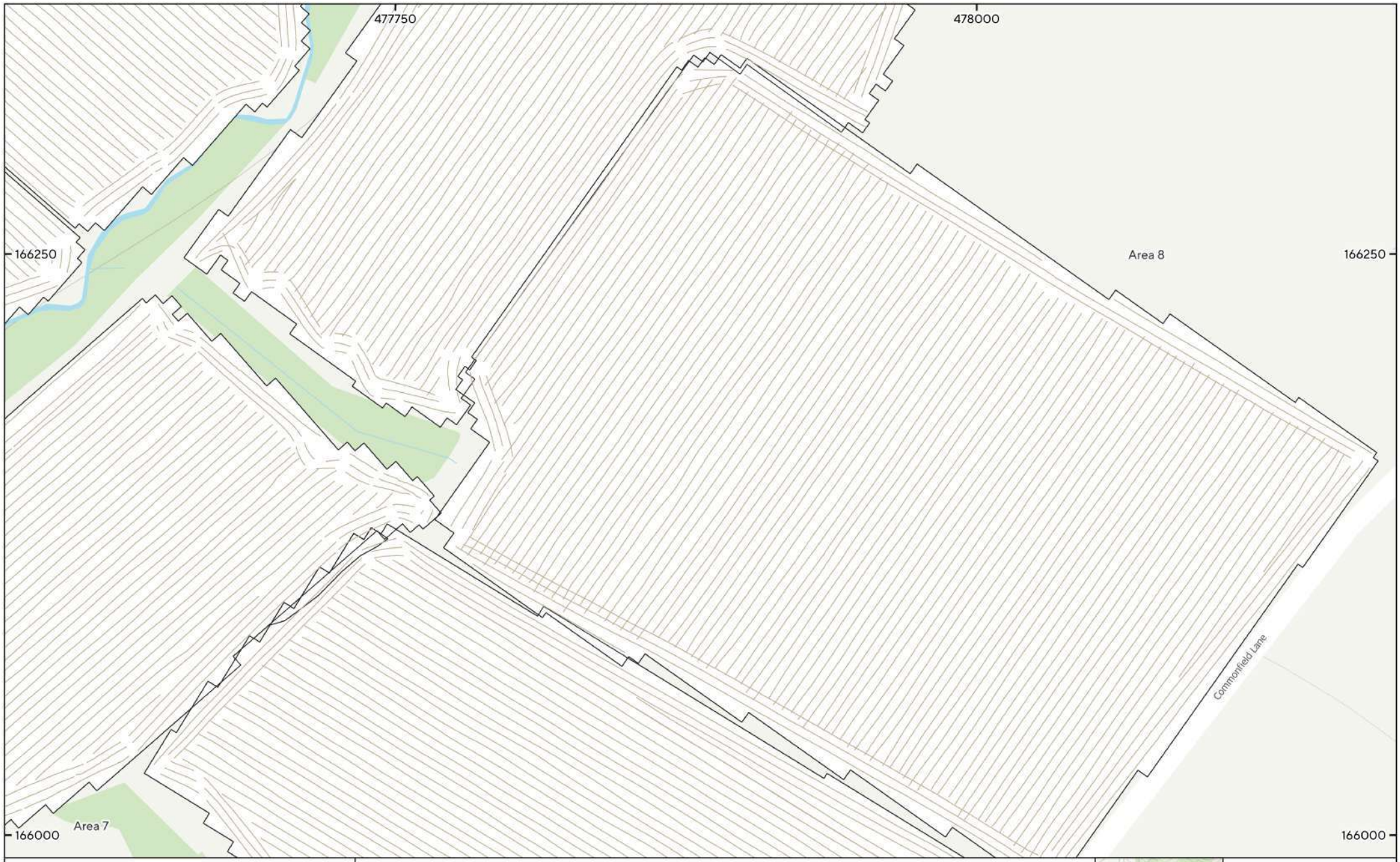
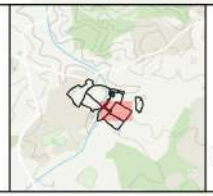


Magnitude Surveys

0 20 40 60 m

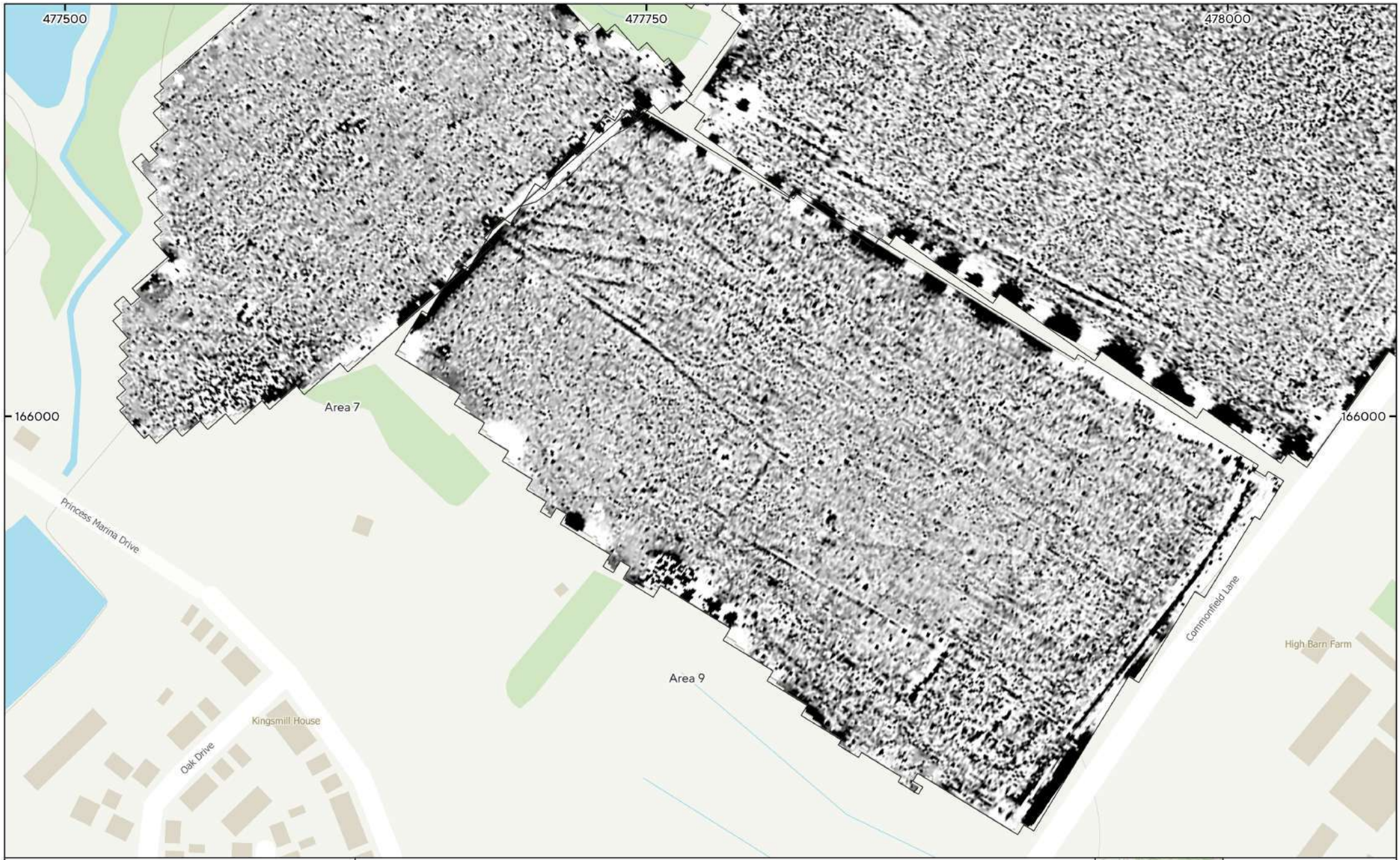


MSSU1879 - Land at Barkham Road, Berkshire
Figure 22 - GNSS Plot (Areas 1, 7, 8 & 9)
1:1,500 @ A3
© Magnitude Surveys 2024
Contains Ordnance Survey data © Crown Copyright and database right 2024



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 23 - Magnetic Gradient (Areas 7, 8 & 9)
1:1,500 @ A3
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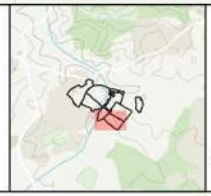
-1 nT 2



Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 24 - Magnetic Interpretation (Areas 7, 8 & 9)
1:1,500 @ A3
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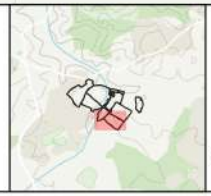
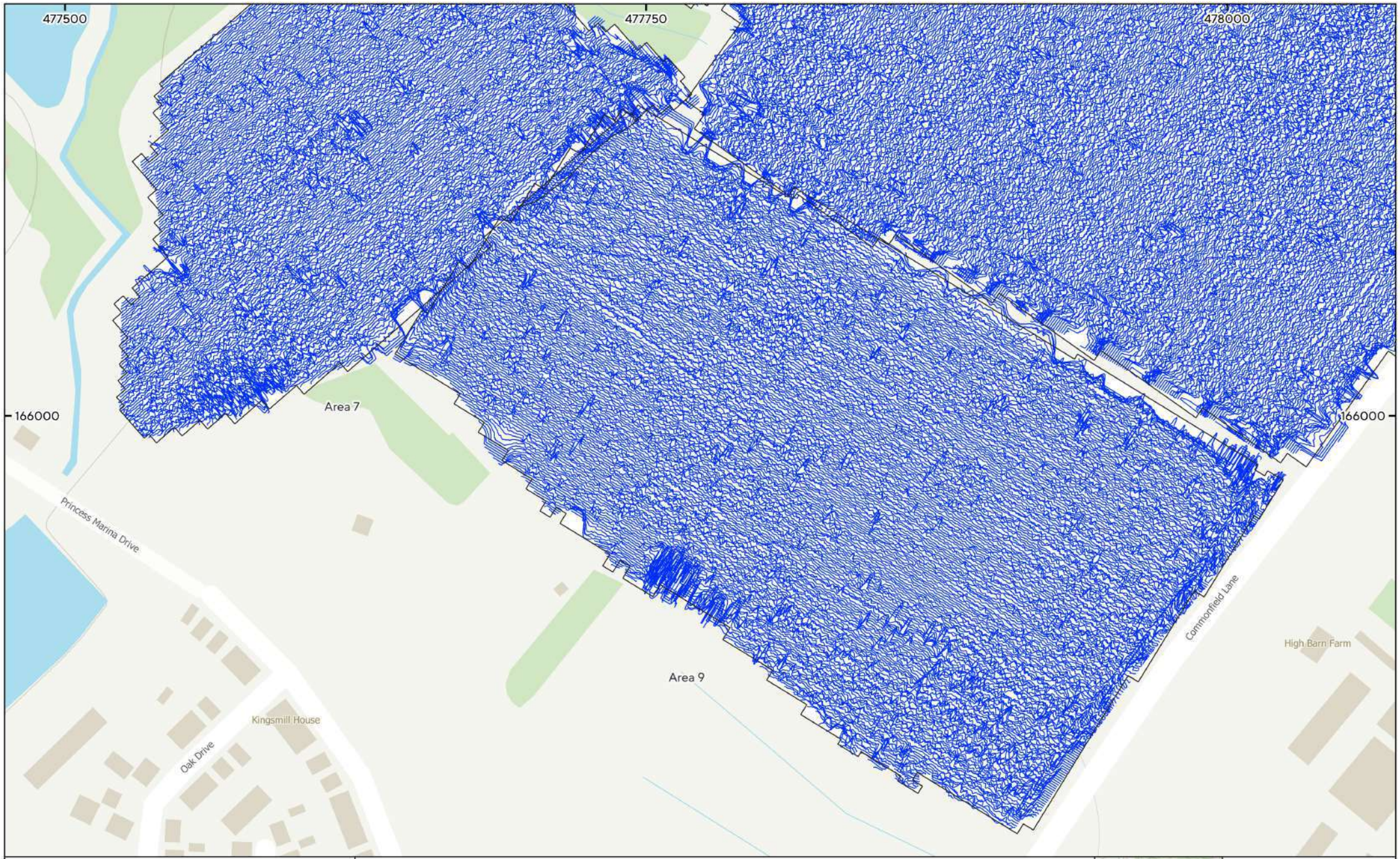
- Agricultural (Strong)
- Agricultural (Weak)
- Undetermined (Strong)
- Undetermined (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Agricultural (Trend)
- Service
- Drainage Feature
- Ferrous (Spike)



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 25 - XY Trace Plot (Areas 7, 8 & 9)
30nT/cm at 1:1,500 @ A3
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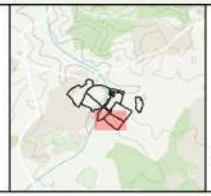

Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 26 - GNSS Plot (Areas 7, 8 & 9)
1:1,500 @ A3
© Magnitude Surveys 2024
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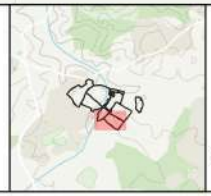

Magnitude Surveys

0 20 40 60 m

MSSU1879 - Land at Barkham Road, Berkshire
Figure 27 - Magnetic Gradient (Areas 1, 2 & 8)
1:1,500 @ A3
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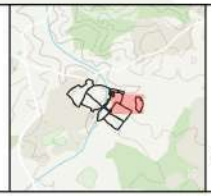
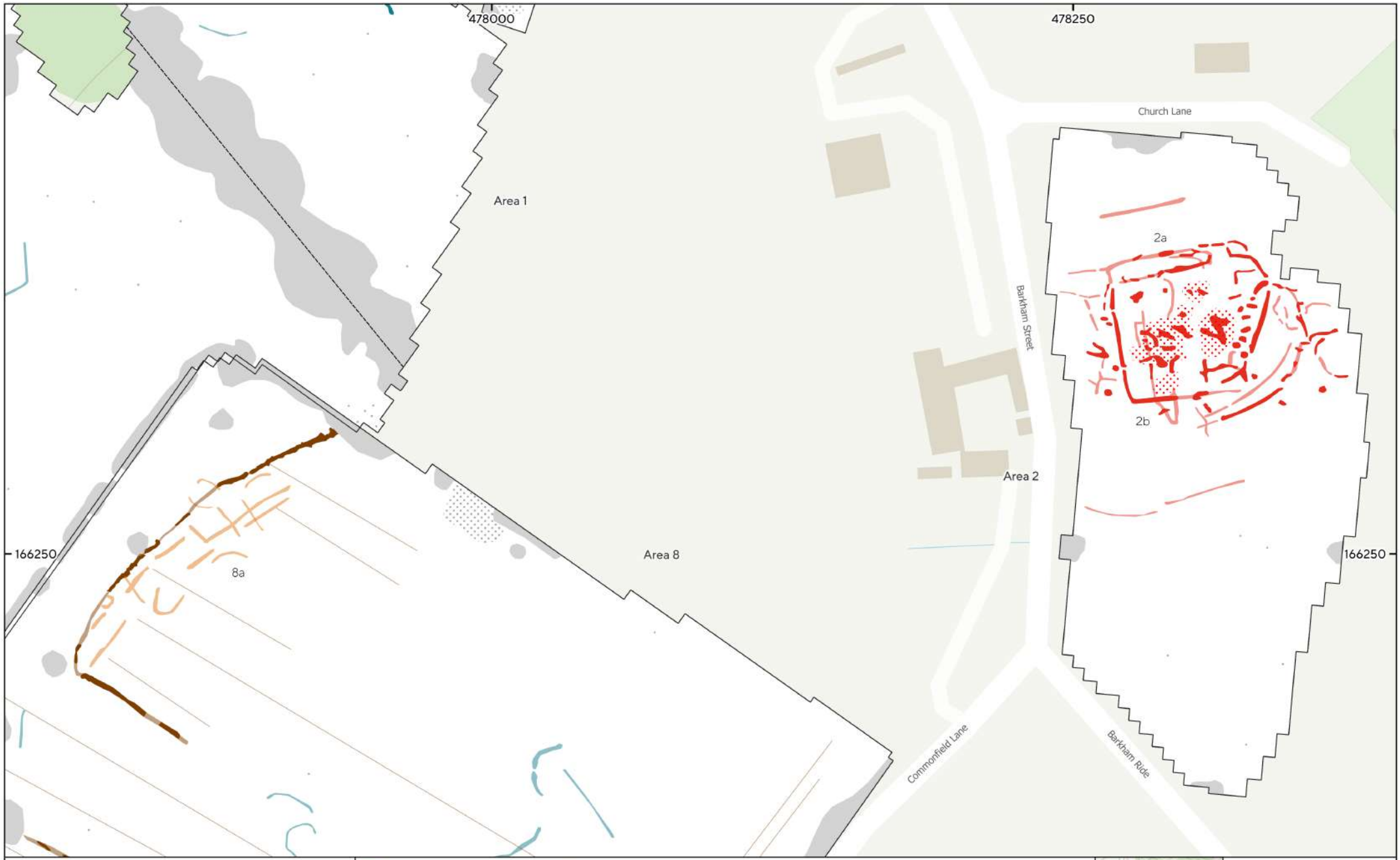
-1 nT 2



Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 28 - Magnetic Interpretation (Areas 1, 2 & 8)
1:1,500 @ A3
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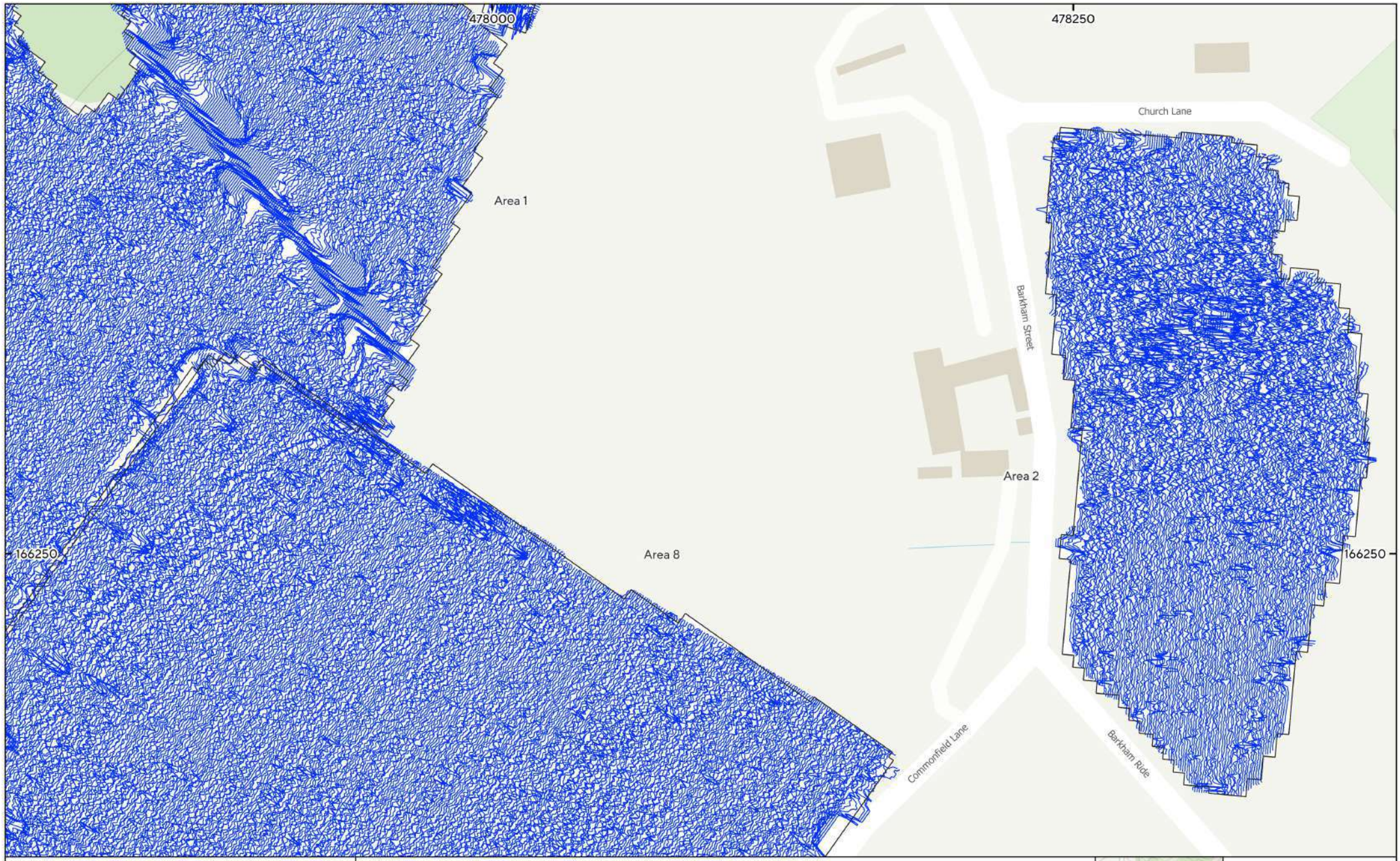
- Archaeology Probable (Strong)
- Archaeology Probable (Weak)
- Archaeology Probable (Spread)
- Archaeology Possible (Weak)
- Agricultural (Strong)
- Agricultural (Weak)
- Undetermined (Strong)
- Undetermined (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Agricultural (Trend)
- Service
- Ferrous (Spike)

Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 29 - XY Trace Plot (Areas 1, 2 & 8)
30nT/cm at 1:1,500 @ A3
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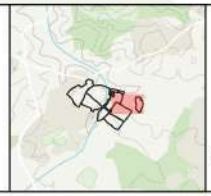
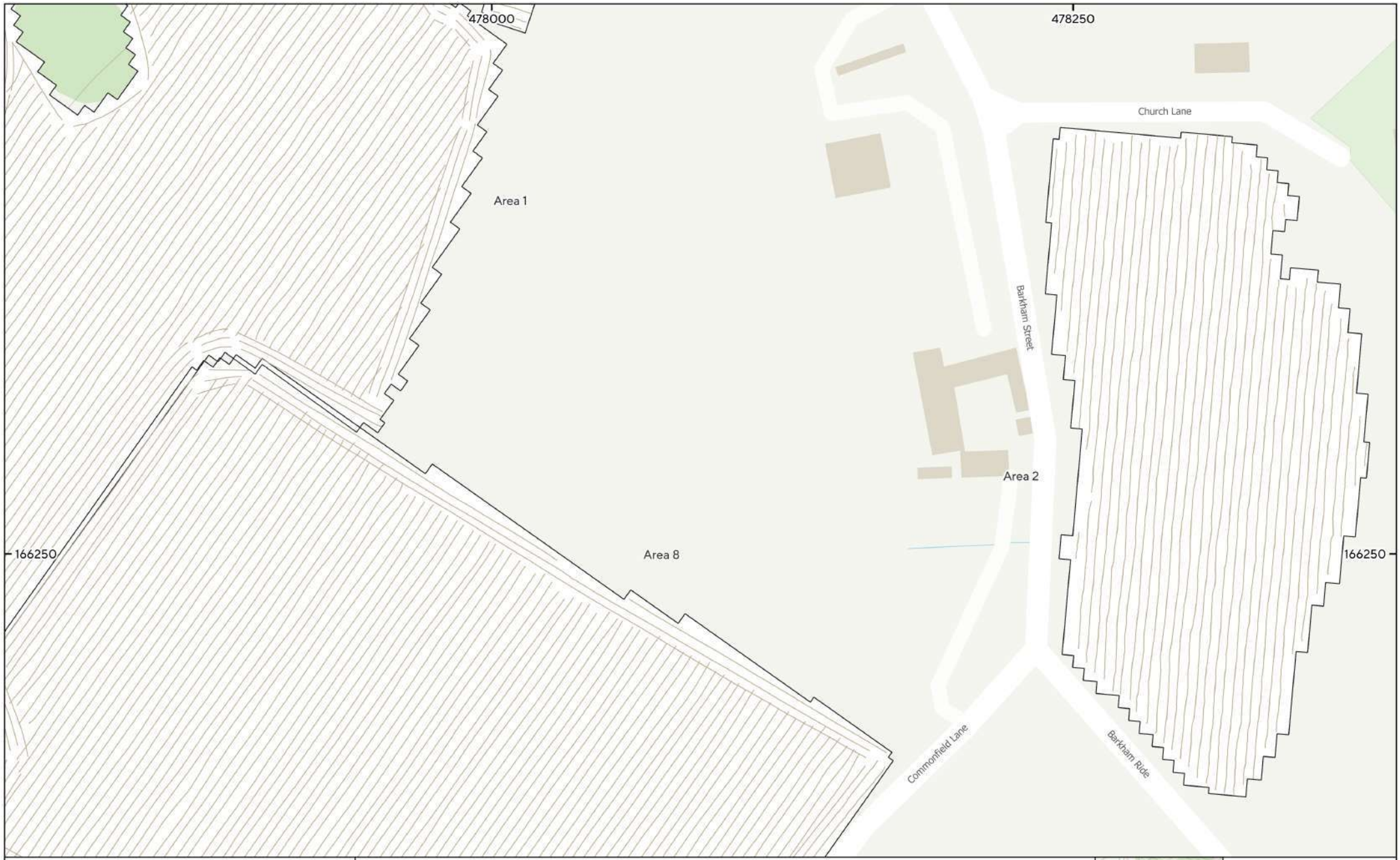


Magnitude Surveys

0 20 40 60 m



MSSU1879 - Land at Barkham Road, Berkshire
Figure 30 - GNSS Plot (Areas 1, 2 & 8)
1:1,500 @ A3
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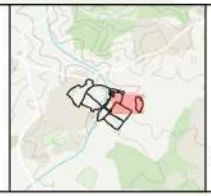

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0 20 40 60 m

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