magnitude surveys

# Geophysical Survey Report

# of

# Cotmoor Solar Farm

**For**

**Pegasus Planning Group Ltd**

**On Behalf Of**

**JBM Solar Project 6 Ltd**

**Magnitude Surveys Ref: MSSK544**

**July 2020**

**Unit 17, Commerce Court**

**Challenge Way**

**Bradford**

**BD4 8NW**

**01274 926020**

**info@magnitudesurveys.co.uk**

**Report By:**

Chris Nelson MA MPhil PGDip ACIfA

Marta Fortuny BA MA

**Report Approved By:**

Dr Kayt Armstrong MCIfA

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# Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 94ha area of land at Cotmoor Solar Farm. A fluxgate gradiometer survey was successfully completed across the site. The geophysical results are characterised by modern and agricultural anomalies. No features suggestive of significant archaeological features have been detected. The impact of modern activity on the results is generally limited and detected as extant metal objects and buried services. Agricultural activity includes areas of modern ploughing regimes, ridge and furrow cultivation, former field boundaries and extensive land drainage.

# Contents

# List of Figures

# 1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by Pegasus Planning Group Ltd on behalf of JBM Solar Project 6 Ltd to undertake a geophysical survey on a c. 94ha area of land at Cotmoor Solar Farm, Newark and Sherwood, Nottinghamshire (SK 6756 5225).

1.2. The geophysical survey comprised hand-pulled/quad-towed, cart-mounted, and hand-carried GNSS-positioned fluxgate gradiometer survey.

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

1.4. It was conducted in line with a Written Scheme of Investigation produced by MS (2019).

1.5. The survey conducted between 19/09/2019 and 07/10/2019.

# 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. Director Dr. Chrys Harris is a Member of CIfA, has a PhD in archaeological geophysics from the University of Bradford and is the Vice-Chair of ISAP. 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. Reporting Analyst Dr. Kayt Armstrong has a PhD in archaeological geophysics from Bournemouth University, is the Vice Conference Secretary and Editor of ISAP News for ISAP, and is the UK Management Committee representative for the COST Action SAGA.

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 is to assess the subsurface archaeological potential of the survey area.

# 4. Geographic Background

4.1. The site is located c.1.9km southwest from Southwell (Figure 1). Survey was undertaken across fourteen areas under a mixture of arable and pasture land use. The site is bounded by Oxton Road (B6386) to the north, Nottingham Road to the east, Halloughton Village to the south and Cottmoor land and Oxton Road (B686) to the west (Figure 2).

4.2. Survey considerations:

| Survey Area | Ground Conditions | Further Notes |
|---|---|---|
| 1 | The area consisted of a wheat stubble field, gently sloping down to the southwest. | The area was bounded by ditches to the north, west and southwest, and hedges and trees to the northeast, east and southeast. The field is crossed east to west by an overhead power cable towards the southeast end. A large metal pylon lies within the field. The field is crossed northeast to southwest by overhead telegraph cables towards the southeast end. A telegraph post lies within the field. |
| 2 | The area consisted of rolled arable land, gently sloping down to the northeast. | The area was bounded by a ditch to the east, and hedges and trees on all other sides. The field is crossed southeast to northwest by overhead power cables. Two large metal pylons lie within the field. |
| 3 | The area consisted of rolled arable land, gently sloping down to the southeast and northwest from a ridge towards the northwest end of the field. | The area was bounded by hedges and trees on all sides. The field is crossed east to west by overhead power cables. A large metal pylon lies within the field, and a second pylon lies just outside the field at the northwest corner. |
| 4 | This area consisted of a pastural field, gently sloping down from northwest to southeast. | This area was bounded by an electric fence on all sides. A water trough was located in the north-western corner of the area |
| 5 | This area consisted of a pastural field, gently sloping down from northwest to southeast. | This area was bounded by an electric fence on all sides. Water troughs were located in the north-western and south-western corners of the area. |
| 6 | This area consisted of a pastural field, gently sloping down from northwest to southeast. | This area was bounded by an electric fence on all sides. Overhead electricity cables crossed the north-eastern corner of the area. A water trough was located in the south-western corners of the area. |
| 7 | The area consisted of grassland used for cow pasture, gently sloping from northwest to southeast. | The area was bounded by electric fences on all sides. |
| 8 | This area consisted of a field of flat pasture. | The area was bounded by electric fences on all sides. Feeding throughs were located in the southwestern corner of the survey area. |
| 9 | The area consisted of an arable field, gently sloping down from south to north. | The area is bounded by hedges and trees on all sides. The field is crossed southeast to northwest |

| | | |
|---|---|---|
| | | by overhead power cables. Two large metal pylons lie within the field. |
| 10 | The area consisted of short cereal crop stubble. The area gently sloped down towards the south. | The area was bound by trees to the south and hedges on all other sides. An environmental strip of set aside land was located along the northern boundary and was unsurveyable. |
| 11 | The area consisted of flat arable land; the eastern half of the field had been rolled and the western half of the field had been ploughed. | The area was bounded on all sides by hedges and trees. An area along the eastern edge and another area in the southwest corner were unsurveyable due to the presence of a tall maize crop. An area along the northern edge, towards the northeast corner, was unsurveyable due to the presence of a large hay pile. |
| 12 | The area consisted of short cereal crop stubble. Mostly flat with gently raised area at the field's southwestern end. | The area was bound on all sides by hedges. A metal barn was present at the northeast corner of the field and an overhead powerline was running over this corner as well. Bands of tall overgrown grass were running along the northern, western and eastern boundary of the field and were unsurveyable. |
| 13 | The area consisted of short cereal crop stubble. Mostly flat with the northern and southern edges of the field sloping gently down towards to the field boundary. | The area was bound on all sides by hedges. Overhead cables were located in the NW corner of the field on a N-S orientation. Deep tractor ruts were present in sections of the field and could not be surveyed. A farm track ran down the western boundary of the area. This track was at a higher elevation from the field and was not surveyed. |
| 14 | The area consisted of short cereal crop stubble. The area gently sloped down towards the NE. | The area was bound on the western edge by trees and by hedges on all other sides. An environmental strip of set aside land was located along the southern boundary and was not surveyed. |

4.3. The underlying geology predominately comprises mudstone, with bands of dolomitic and siltstone, from the Gunthorpe Member. No superficial deposits are recorded within the survey area (British Geological Survey, 2019).

4.4. The soils consist slightly acid loamy and clayey soils with impeded drainage across the survey area, with the exception of the western and southern edges of the site which have slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (Soilscapes, 2019).

# 5. Archaeological Background

5.1. The following section summarises the archaeological background of the site and the surrounding area (1km radius) following a search of Heritage Gateway (2019).

5.2. Neolithic activity has been recorded in the wider environs with a flint axehead (L2791) c.420m west of Area 11.

5.3. Earthworks of an unknown date (L10451) have been identified at Halloughton, c.250m south of Area 4. These include ridge and furrow, with a building platform and terraced property plots, with a hollow way, a bank and a pond also identified.

5.4. A Medieval Seal Matrix (L11082) was identified c.550m to the northwest of Area 2.

5.5. Post -medieval to modern activity has also been identified, with a wind pump that later became a well (M2901) identified c.670m southwest of Area 7, as well as Thorney Abbey Farmstead (M17670), c.140m northwest of Area 13, and Halloughton Wood Farm (M17724), a country house and farmstead, c. 520m southwest of Area 7.

# 6. Methodology

## 6.1.Data Collection

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

6.1.2. Table of survey strategies:

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

6.1.3. The magnetic data were collected using MS' bespoke hand-pulled/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 8/11/14/17/20/23/26/29/32/35/38). 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 (2019) 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 historic maps (Figure 5).

7.2.2. The fluxgate gradiometer survey has responded well to the environment of the survey area. The geophysical data is characterised by anomalies predominately related to agricultural land use. Modern interference includes large magnetic 'haloes' caused by metal electricity pylons that run approximately east-west through the southern part of the survey area (Figures 6, 9 and 12). Buried services were also identified in the northern (Figure 27) and southern (Figure 18) parts of the survey area. A large area of magnetic debris (Figure 10) likely relating to recent land use for storage of agricultural materials has been identified in the south-eastern part of the survey area.

7.2.3. No anomalies suggestive of significant archaeological features were identified.

7.2.4. Extensive areas of cultivation have been identified across the site. Those anomalies that correlate with the current ploughing regimes have been categorised as 'Agricultural (Trend)', in the centre of the survey area (Figure 16); those anomalies where the current ploughing is orientated differently than the one recorded in the magnetic data has been interpreted as 'Ridge and Furrow', in the eastern (Figures 7, 10 and 13) and northern (Figures 31 and 34) parts of the survey area. It is conceivable some of the 'Agricultural (Trend)' have a pre-modern origin to them, considering their characteristic curvature, particularly in Area 7 (Figure 19). Two curvilinear anomalies that collocate with field boundaries depicted on historic mapping have been identified in the southern part of the survey area (Figure 19). Extensive drainage features has been identified across the survey area.

7.2.5. A series of linear anomalies in the central part of the survey area, could potentially relate to cut features and appear to form a partial enclosure (Figure 15). These features have been however been classified as 'Undetermined' as they are similar to more certain drainage features nearby; because the relationship to the drainage features is unclear, an archaeological origin cannot be ruled out (Figure 16).

7.2.6. Three strongly magnetic anomalies that are typical of burnt or fired material have been identified in the south-eastern part of the survey area (Figures 10 and 13). One of these anomalies lies close to a former field boundary depicted on historic mapping, which may suggest a possible field kiln.

## 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.

# 8. Conclusions

8.1. A fluxgate gradiometer survey has successfully been undertaken across the site. The geophysical survey has detected a range of different types of anomalies of agricultural and modern origin. Modern interference mainly relates to extant metal features (electricity pylons/livestock feeders), buried services and magnetic enhancement of soils due to modern agricultural practices.

8.2. No anomalies suggestive of significant archaeological features were identified.

8.3. Agricultural activity has been detected across the site as ridge and furrow features, former field boundaries, modern ploughing features and extensive land drainage.

8.4. Anomalies classified as 'Undetermined' may relate to a partial enclosure; however, they could also relate to agricultural activity and a firm interpretation cannot be reached. Other small but strongly magnetic anomalies are suggestive of burnt or fired material, one of which may be a field kiln due to its proximity to a former field boundary.

# 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

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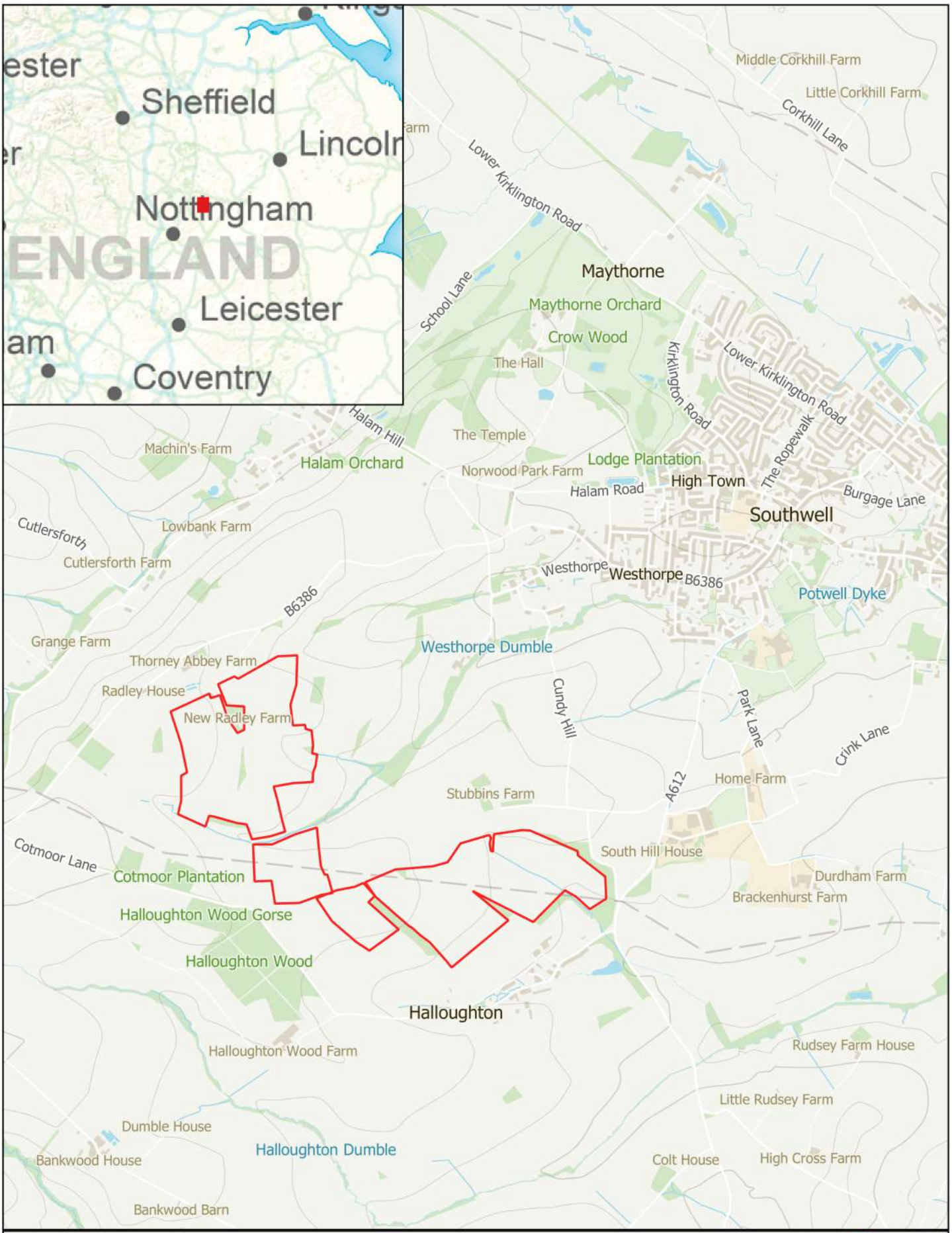
# 12. Project Metadata

| | |
|---|---|
| MS Job Code | MSSK544 |
| Project Name | Cotmoor Solar Farm |
| Client | Pegasus Planning Group |
| Grid Reference | SK 6756 5225 |
| Survey Techniques | Magnetometry |
| Survey Size (ha) | c.94ha |
| Survey Dates | Between 19/09/2019 and 07/10/2019 |
| Project Lead | Finnegan Pope-Carter BSc (Hons) MSc FGS |
| Project Officer | Julia Cantarano Ingénieur PCIfA |
| HER Event No | N/A |
| OASIS No | N/A |
| S42 Licence No | N/A |
| Report Version | 1.0 |

# 13. Document History

| Version | Comments | Author | Checked By | Date |
|---|---|---|---|---|
| 0.1 | First draft to line manager | CN | MF | 16 October 2019 |
| 0.2 | Comments from line manager | MF | KA | 17 October 2019 |
| 0.3 | Comments from line manager | MF | KA | 17 October 2019 |
| 1.0 | Updated Title and Client's Client Name - Issued as Final | JC | KA | 03 July 2020 |




MSSK544 - Cotmoor Solar Farm
Figure 1 - Site Location
1:25,000 @ A4


N

0 0.5 1 km

Site Boundary

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MSSK544 - Cotmoor Solar Farm
Figure 2 - Location of Survey Area
1:10,000 @ A3


Survey Extents

N

0 200 400 600 m

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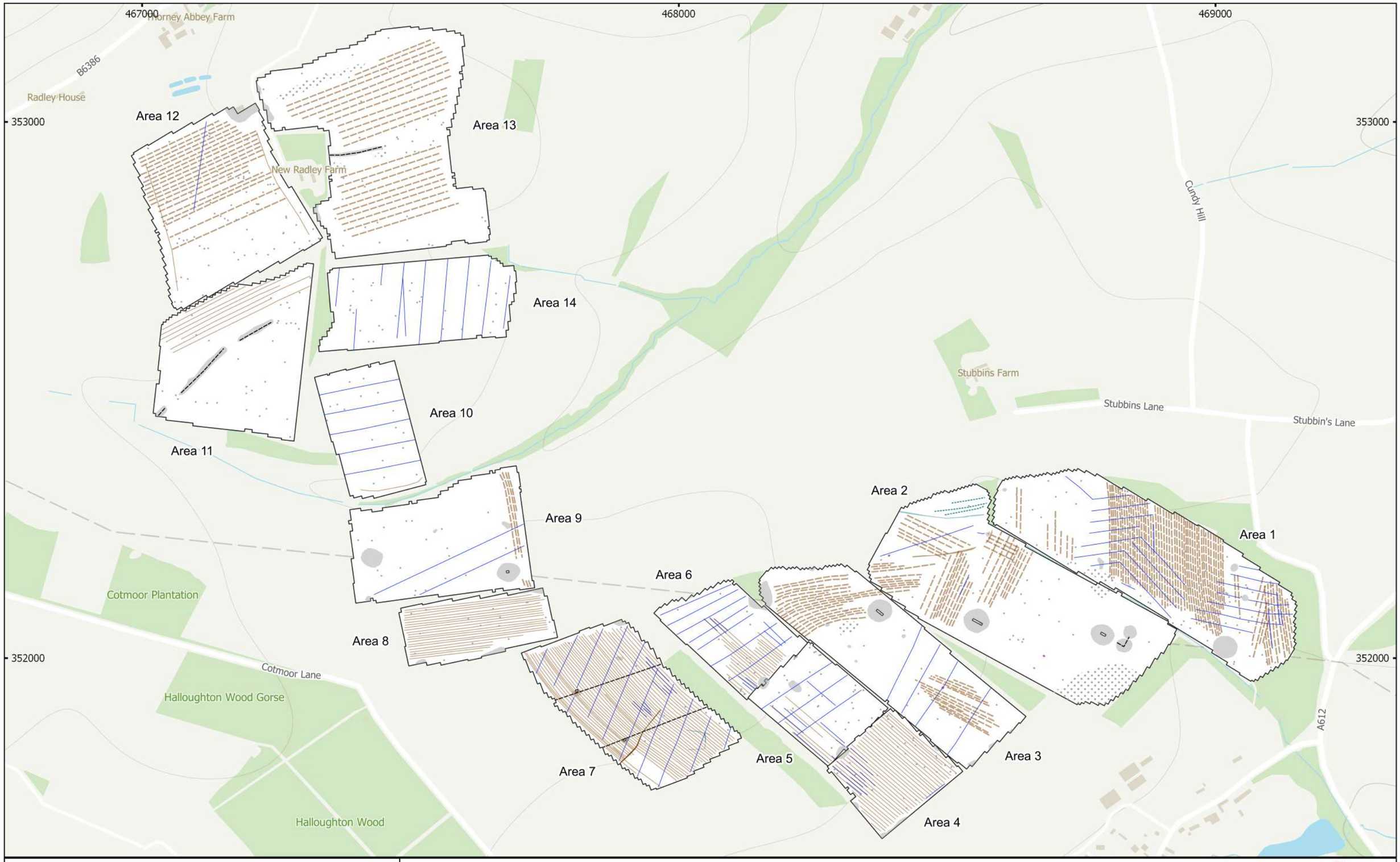
MSSK544 - Cotmoor Solar Farm
Figure 3 - Magnetic Gradient (Overview)
1:6,500 @ A3


magnitude surveys




MSSK544 - Cotmoor Solar Farm
Figure 4 - Magnetic Interpretation (Overview)
1:6,500 @ A3


Agricultural (Strong)
Agricultural (Weak)
Undetermined (Strong)
Undetermined (Weak)
Burnt/Fired Material
Magnetic Disturbance
Ferrous/Debris (Spread)
Agricultural (Trend)
Ridge and Furrow (Trend)
Undetermined (Trend)
Service
Drainage Feature
Ferrous Spike

N

0 150 300 450 m

magnitude surveys

MSSK544 - Cotmoor Solar Farm
Figure 5 - Magnetic Interpretation Over Historic Maps (Overview)
1:6,500 @ A3

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

Agricultural (Strong)
Agricultural (Weak)
Undetermined (Strong)
Undetermined (Weak)
Burnt/Fired Material
Magnetic Disturbance
Ferrous/Debris (Spread)
Agricultural (Trend)
Ridge and Furrow (Trend)
Undetermined (Trend)
Service
Drainage Feature
Ferrous Spike

N

0 150 300 450 m

magnitude surveys

468800
468900
469000
469100
469200
352100
352400
352300
352200
352000
351900
Area 1
Area 2

MSSK544 - Cotmoor Solar Farm
Figure 6 - Magnetic Gradient (Eastern Area (East))
1:1,500 @ A3


-1 nT 2

0 25 50 75 m

N

magnitude surveys

468800
468900
469000
469100
469200
352100
352400
352300
352200
352000
351900
Area 1
Area 2

MSSK544 - Cotmoor Solar Farm
Figure 7 - Magnetic Interpretation (Eastern Area (East))
1:1,500 @ A3


- Agricultural (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Weak)
- Burnt/Fired Material
- Undetermined (Trend)
- Service
- Ridge and Furrow (Trend)
- Drainage Feature
- Ferrous Spike

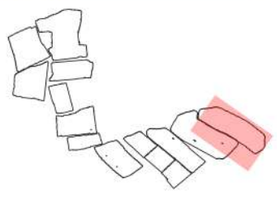
N

0 25 50 75 m

magnitude surveys

468800
468900
469000
469100
469200
352100
352400
352300
352200
352000
351900
Area 1
Area 2

MSSK544 - Cotmoor Solar Farm
Figure 8 - XY Trace Plot (Eastern Area (East))
30nT/cm at 1:1,500 @ A3

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0 25 50 75 m

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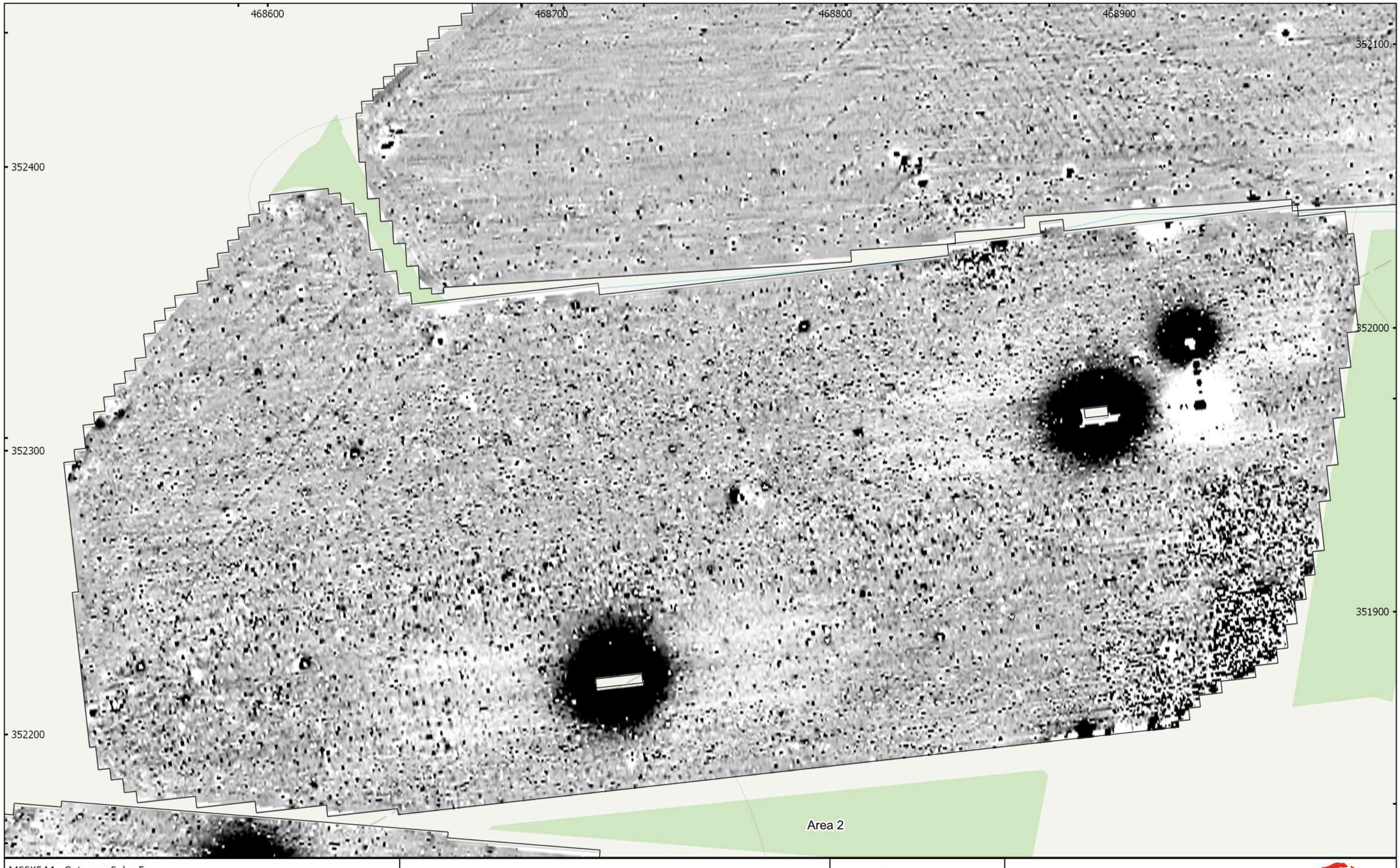
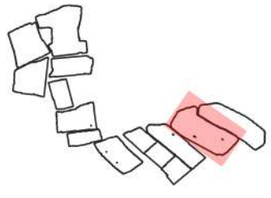



MSSK544 - Cotmoor Solar Farm
Figure 9 - Magnetic Gradient (Eastern Area (Central East))
1:1,500 @ A3


-1 nT 2



N

0 25 50 75 m

magnitude surveys

468600
468700
468800
468900
352100
352400
352000
352300
351900
352200
Area 2

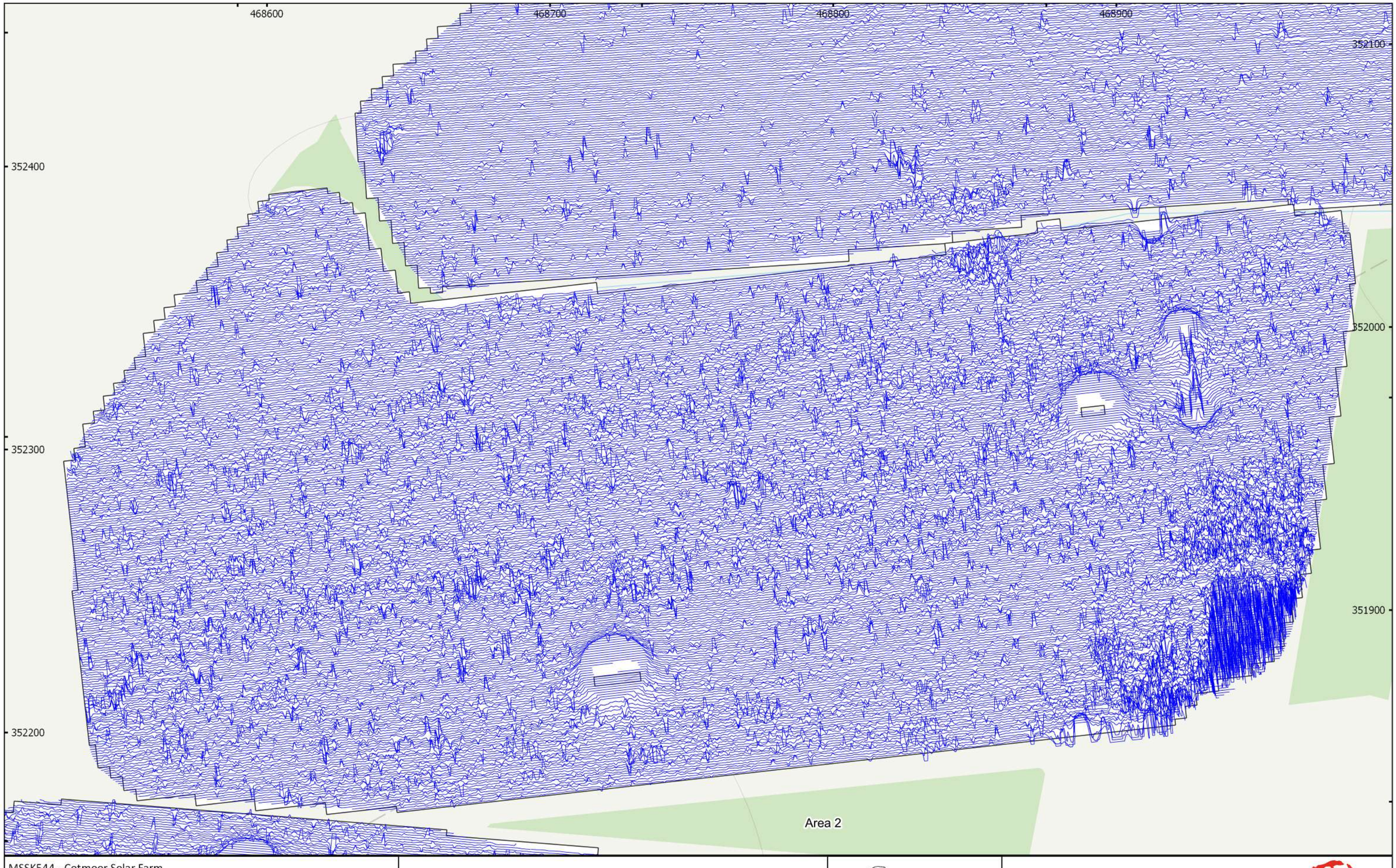
MSSK544 - Cotmoor Solar Farm
Figure 10 - Magnetic Interpretation (Eastern Area (Central East))
1:1,500 @ A3


- Agricultural (Weak)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Weak)
- Burnt/Fired Material
- Undetermined (Trend)
- Service
- Ridge and Furrow (Trend)
- Drainage Feature
- Ferrous Spike

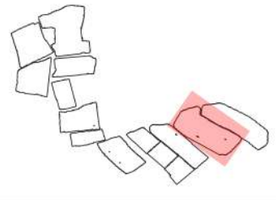
N

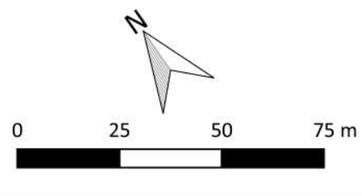
0 25 50 75 m

magnitude surveys




MSSK544 - Cotmoor Solar Farm
Figure 11 - XY Trace Plot (Eastern Area (Central East))
30nT/cm at 1:1,500 @ A3




magnitude surveys

8200
468300
468400
468500
468600
Area 2
351900
352200
Area 3
351800
352100
351700
Area 6
352000
Area 5

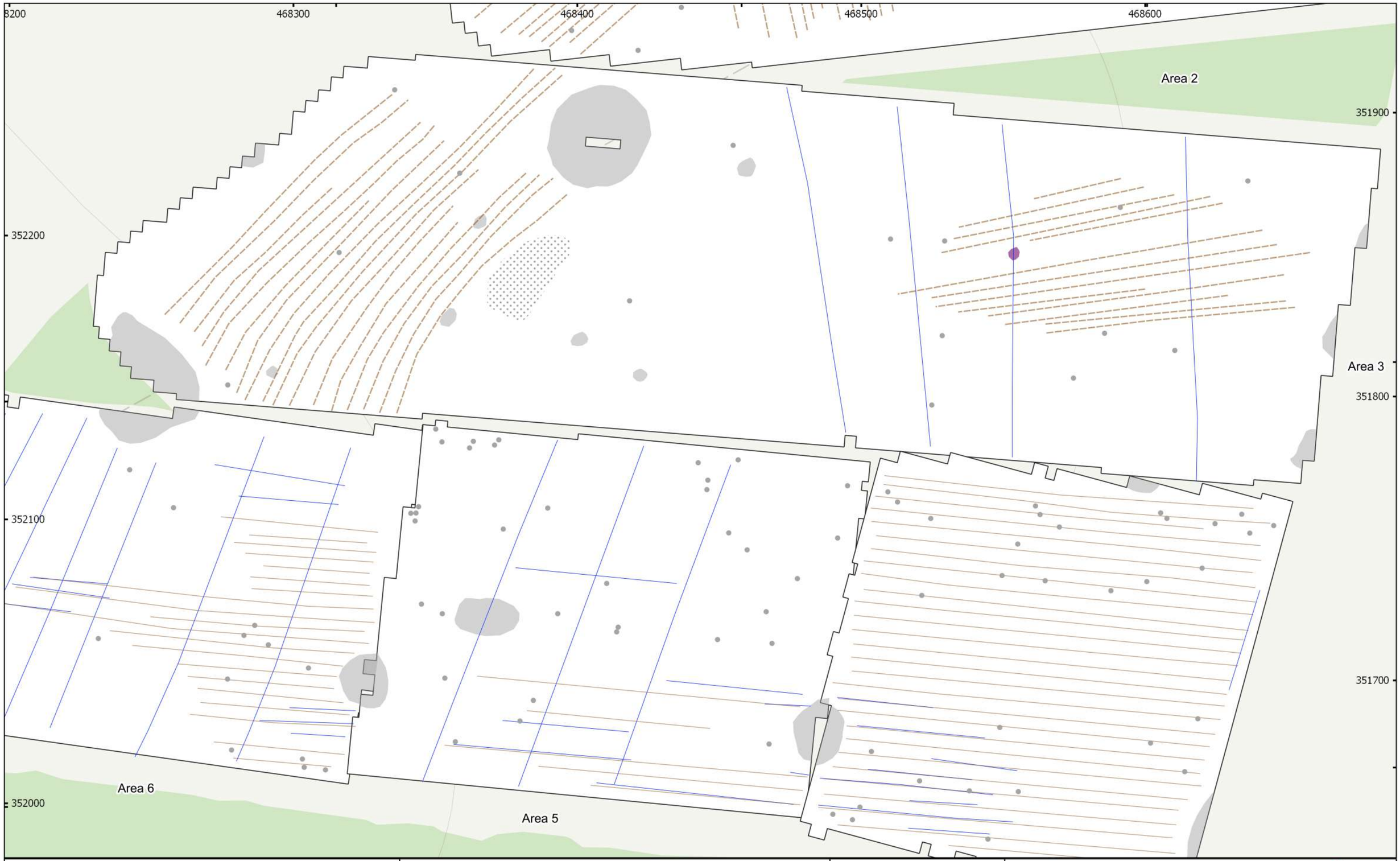
MSSK544 - Cotmoor Solar Farm
Figure 12 - Magnetic Gradient (Eastern Area (Cental West))
1:1,500 @ A3


-1 nT 2

N

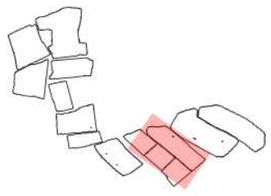
0 25 50 75 m

magnitude surveys




MSSK544 - Cotmoor Solar Farm
Figure 13 - Magnetic Interpretation (Eastern Area (Cental West))
1:1,500 @ A3


- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Strong)
- Undetermined (Weak)
- Burnt/Fired Material
- Agricultural (Trend)
- Service
- Ridge and Furrow (Trend)
- Drainage Feature
- Ferrous Spike



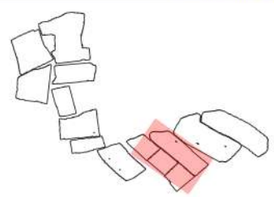
N

0 25 50 75 m

magnitude surveys

8200
468300
468400
468500
468600
Area 2
351900
352200
Area 3
351800
352100
351700
Area 6
352000
Area 5

MSSK544 - Cotmoor Solar Farm
Figure 14 - XY Trace Plot (Eastern Area (Cental West))
30nT/cm at 1:1,500 @ A3

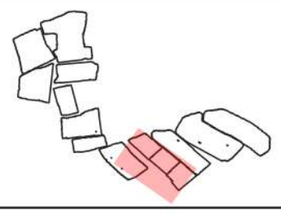
N

0 25 50 75 m

magnitude surveys


MSSK544 - Cotmoor Solar Farm
Figure 15 - Magnetic Gradient (Eastern Area (West))
1:1,500 @ A3


-1 nT 2



N

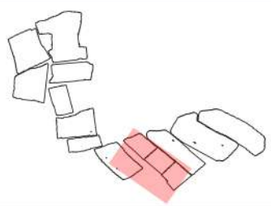
0 25 50 75 m

magnitude surveys

468100
468200
468300
468400
468500
352100
352000
351900
351800
351700
351600
Area 6
Area 5
Area 4
Area 7

MSSK544 - Cotmoor Solar Farm
Figure 16 - Magnetic Interpretation (Eastern Area (West))
1:1,500 @ A3


- Agricultural (Strong)
- Magnetic Disturbance
- Ferrous/Debris (Spread)
- Undetermined (Strong)
- Undetermined (Weak)
- Agricultural (Trend)
- Service
- Ridge and Furrow (Trend)
- Drainage Feature
- Ferrous Spike

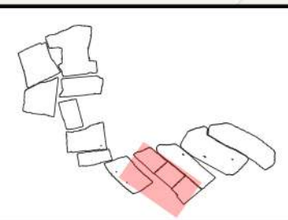


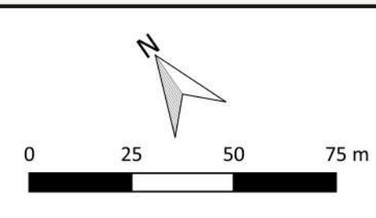
N

0 25 50 75 m

magnitude surveys


MSSK544 - Cotmoor Solar Farm
Figure 17 - XY Trace Plot (Eastern Area (West))
30nT/cm at 1:1,500 @ A3

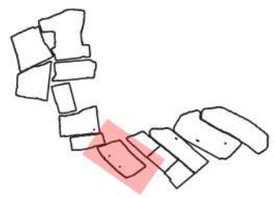



magnitude surveys

467800
467900
468000
468100
468200
351900
352200
Area 6
Area 5
351800
Area 8
352100
Area 7
351700
352000

MSSK544 - Cotmoor Solar Farm
Figure 18 - Magnetic Gradient (Central Area (South))
1:1,500 @ A3


-1 nT 2



N

0 25 50 75 m

magnitude surveys

467800
467900
468000
468100
468200
351900
352200
Area 6
Area 5
Area 8
351800
352100
Area 7
351700
352000

MSSK544 - Cotmoor Solar Farm
Figure 19 - Magnetic Interpretation (Central Area (South))
1:1,500 @ A3


Agricultural (Strong)
Magnetic Disturbance
Undetermined (Strong)
Undetermined (Weak)
Agricultural (Trend)
Service
Ridge and Furrow (Trend)
Drainage Feature
Ferrous Spike

N
0 25 50 75 m

magnitude surveys