Geophysical Survey Report of

Haddon Solar, Cambridgeshire

For

Orion Heritage

On behalf of

Wessex Solar Management Limited

Magnitude Surveys Ref: MSTL809

HER Event Number: ECB6370

OASIS ID: magnitud1-411779

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Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 41.2ha area of land at Haddon, Cambridgeshire. A fluxgate gradiometer survey was successfully completed across the survey area. Possible archaeological activity has been identified in the form of isolated partial, possible enclosures and unmapped field systems. Anomalies related to historical agricultural use have been detected, including mapped former field boundaries and ridge and furrow cultivation. Modern agricultural activity has been detected as drainage features and current ploughing regimes. Anomalies relating to natural drainage and soil variations have also been identified within the survey area. The impact of modern activity on the results in generally limited to the edges of the survey area, where ferrous sources have produced areas of magnetic disturbance.

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1. Introduction

1.1. Magnitude Surveys Ltd (MS) was commissioned by Orion Heritage to undertake a geophysical survey on a c. 41.2ha area of land near Haddon, Cambridgeshire (TL 1295 9278). An area of c.1ha was not surveyed due to overgrown vegetation, waterlogged conditions and debris.

1.2. The geophysical survey comprised quad-towed, cart-mounted GNSS-positioned fluxgate gradiometer survey.

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

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

1.5. The survey commenced on 29/10/2020 and took four days to complete.

2. Quality Assurance

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

2.2. The directors of MS are involved in the cutting edge of research and the development of guidance/policy. Specifically, Dr. Chrys Harris 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 west of Haddon, Cambridgeshire (Figure 1). Survey was undertaken across multiple fields under arable land management. The survey area was bounded by arable land to the north, west and east, and by Haddon Road to the south. The A605 road separated Areas 2 and 3 (Figure 2). An area of c.1ha was not surveyed due to overgrown vegetation and waterlogging.

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	The area consisted of an arable field under rapeseed stubble. The area sloped downward into a depression in the centre of the northern part of the area and sloped downward towards the western and eastern edges in the southern part.	The area was bounded by metal wire fencing on the northern, western and southern sides, and bounded by a ditch on the eastern side. An environmental scheme strip bisected the centre of the area from east to west, with a pond located in the middle of the strip, both of which were unable to be surveyed. Several animal burrows were located along the western boundary. Metal cages were located along the eastern boundary and several scarecrows were located throughout the survey area.
2	The area consisted of an arable field under wheat stubble. The area sloped downwards into a depression in the eastern part of the area and into a flat section in the western part. The southern corner of the field was not surveyed due to overgrown vegetation.	The area was bounded on all sides by hedgerows.
3	The area consisted of an arable field under wheat and barley stubble. The area sloped gently downwards towards the east. An area of waterlogged ground in the south-western corner of the field was not surveyable.	The area was bounded on all sides by hedgerows and trees. A woodpile was located in the south-western corner of the field.

4.3. The underlying geology comprises mudstone of the Oxford Clay Formation. Superficial deposits are found across Area 1 and comprise diamicton of the Oadby Member, no superficial deposits are recorded in the remaining survey area (British Geological Survey, 2020).

4.4. The soils consist of lime-rich, loamy and clayey soils with impeded drainage (Soilscapes, 2020).

5. Archaeological Background

5.1. The following is a summary of historical mapping produced by Envirocheck (Envirocheck, 2020) and provided by Orion Heritage.

5.2. Throughout the survey area, various former field boundaries and drainage features have been identified on historical mapping between 1887 - 1993.

5.3. An extraction pit was present between 1887-1984, as evidenced on historical mapping, in a field to the west of the survey area. An inspection of the historical OS mapping has identified quarrying activity across large areas of the surrounding landscape. This is suggestive of the past and continuing presence of quarrying activity in the area.

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, GNSS-positioned system.

6.1.3.1. MS' cart 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 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 at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plots (Figure 7, 10, 13, 16). 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 agains 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 historical maps (Figure 4).

7.2.2. The fluxgate gradiometer survey has responded well to the environment of the survey area, with a relatively quiet magnetic background that has allowed for the detection of weak anomalies of possible archaeological origin and anomalies identified as possible extraction. Modern interference is limited to the edges of the survey area. Weak anomalies have been identified following the topographical variations of the survey area, which likely relate to natural drainage processes. Additionally, the soils within the survey area have caused natural variations in the dataset but this is limited to Area 2.

7.2.3. Anomalies of possible archaeological origin have been detected across the survey area, concentrated in the southern end of the survey area. These anomalies in the southern part of the survey area appear to relate to earlier possible field systems and potential enclosures, whereas the anomalies in the northern part of the survey area are isolated and appear to form partial enclosures (Figure 4).

7.2.4. Former field boundaries have been identified across the survey area and have been classified as such using OS historical mapping, 1945 aerial photographs and recent satellite imagery (Figure 4; Section 5.2). Several ridge and furrow regimes have been detected across the survey area, some of which overlap in different orientations, suggesting different phases of cultivation in some areas. The majority of the regimes appear to be aligned with and potentially associated with former field boundaries.

7.2.5. Possible extraction activity has been identified across the survey area, notably concentrated in the north-eastern part of the site in Area 3. Evidence for historical extraction and quarrying activity has also been identified in the surrounding area using satellite imagery and historical mapping (Section 5.3) which has reinforced the interpretation of the detected anomalies as likely relating to isolated extraction pits of varying size.

7.2.6. Anomalies classified as ‘Undetermined’ have also been detected within the survey area. It is likely that the anomalies relate to either natural drainage where they are perpendicular to the slope, or modern activity in the case of the stronger anomalies located in the western corner of Area 2.

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. **Possible Archaeology (Strong and Weak)** - Various linear and rectilinear strong and weak anomalies have been detected in the eastern part of Area 1 (Figure 15). A weak curvilinear anomaly [**1a**] running from north to south spans c. 416m. This anomaly connects to several smaller strong linear and discrete pit-like anomalies in the north-eastern corner of Area 1. A curvilinear anomaly [**1d**] has been detected in the south of Area 1, measuring c. 198m in length. The various weak anomalies detected across Area 1 are suggestive of archaeological activity in the area, most likely relating to a former field system. Three rectilinear anomalies [**1c, 1b, 1h**] have also been detected in the eastern end of Area 1 (Figures 14 & 17). The morphology and magnetic signal of these rectilinear anomalies is suggestive of a cut feature such as a ditch. They are smaller in scale and have been interpretated as isolated partial enclosures, rather than part of a larger field system.

7.3.2.2. **Possible Archaeology (Weak)** – Two weak rectilinear anomalies have been detected in the southern end of Area 1 [**1e, 1f**] (Figure 15). These anomalies have been identified adjacent to ridge and furrow regimes running from north to south, which suggests that these could indicate related unmapped former field boundaries. Further rectilinear and linear features [**3a, 2a**] have been detected in Areas 2 and 3 (Figure 9). The largest of which, [**3a**], measures c.

48x44m and surrounds smaller weak linear anomalies. The rectilinear anomaly in Area 2 [**2a**] measures c. 20m in length from north to south. These anomalies in Areas 2 and 3, share a similar signal strength to anomalies identified as possible archaeology and their shape in plan would also suggest a possible anthropogenic origin.

7.3.2.3. **Possible Extraction** - Multiple subcircular and linear anomalies have been detected across the survey area, with Area 3 containing a concentration of these anomalies (Figures 6, 9, 14, 17). The anomalies range from c. 3-34m in length. These positive amorphous anomalies exhibit a signal and shape suggestive of possible extraction. Although there is no known historical evidence for extraction within the survey area, investigations of satellite imagery and historical mapping (Section 5.3) of the surrounding landscape has indicated the presence of historical extraction activity in fields to the west of the survey area. Therefore, it is plausible that these anomalies represent possible extraction.

7.3.2.4. **Agricultural –** Six linear and curvilinear anomalies have been recorded across the survey area, which have been identified as former field boundaries through historical OS mapping, 1945 aerial photography and recent satellite imagery (Figure 4).

7.3.2.5. **Ridge and Furrow** – Several series of parallel linear and curvilinear anomalies have been detected across the survey area. The anomalies are particularly concentrated in Area 1 and to a lesser extent in the eastern end of Area 3 (Figure 4). Some of these anomalies cross one another and appear to be perpendicular to anomalies identified as being of possible archaeological origin [**1e** & **1f**] (Figure 12). This may support the interpretation of [**1e** & **1f**] as unmapped earlier fields.

7.3.2.6. **Drainage Features** - Extensive drainage systems have been identified across the entire survey area (Figure 4). These systems broadly follow the natural undulations of the survey area.

7.3.2.7. **Natural (Weak)** - Sinuous linear anomalies have been detected in the north-western corner of Area 1 (Figure 12). These features are in an east to west orientation and follow the contours of the survey area towards the west. Therefore, these anomalies have been identified as relating to colluvial activity.

7.3.2.8. **Natural (Zone)** - Areas of enhanced magnetic signal have been detected in Area 2 (Figure 6). These are likely related to natural variations in the subsurface soil deposits of the area (Section 4.4).

7.3.2.9. **Agricultural (Trend) –** Weak, closely-spaced, parallel linear anomalies have been detected in Areas 2 and 3 which follow modern ploughing directions.

7.3.2.10. **Undetermined (Strong and Weak)** – Strong and weak linear and discreate anomalies [**2b**] have been identified in the west of Area 2 (Figure 6). These anomalies are characteristic of pit and ditch features; however, they are

isolated from anomalies classified as possible archaeology and may relate to recent or historical agricultural activity. Whilst this makes an archaeological origin unlikely, it cannot be ruled out completely. Four linear anomalies [**1g**] in the north-western corner of Area 1, the longest measuring c. 86m in length, have been detected. The anomalies are straighter and have defined edges in comparison with the surrounding natural anomalies and drainage features. Whilst these anomalies are most likely drainage features as they follow the slope contours of the area, their signal strength and shape are not typical of drainage. These anomalies have therefore been identified as undetermined, as an archaeological origin cannot be ruled out.

8. Conclusions

8.1. A fluxgate gradiometer survey has successfully been undertaken across the survey area, with an area of c.1ha not surveyed due to unsuitable ground conditions. The geophysical survey has detected a range of different types of anomalies that are of a possible archaeological, natural, agricultural, and extraction origin. The relatively quiet magnetic background of the survey area has allowed for the detection of both weak and strong anomalies. Modern interference is limited to the field edges and recorded as magnetic disturbance produced by ferrous sources and buried services.

8.2. Several anomalies have been identified as having possible archaeological origins across the survey area. These have been interpreted as potentially indicating earlier land subdivision and partial possible enclosures. The presence of possible extraction activity has also been identified across the survey area, concentrated in the north-eastern part of the survey area, with evidence for extraction surrounding the survey area supporting the interpretation of these anomalies.

8.3. Historical agricultural activity has been detected across the survey area in the form of extensive ridge and furrow regimes, in various directions, some of which respect the also detected former field boundaries. Overlapping ridge and furrow regimes have been identified, which suggests multiple phases of agricultural activity in the southern field of the survey area. The proximity and alignment of these overlapping regimes to anomalies interpreted as possible archaeology also suggests a potential relationship. Modern agricultural ploughing regimes and drainage features, have also been detected across the survey area.

8.4. Further anomalies were detected that could represent potential archaeological features but due to the lack of archaeological context in their locations and the potential for these relating to agricultural activity, they could not be confidently interpreted and have been classified as ‘Undetermined’.

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

Beck, L., 2020. Written Scheme of Investigation for a Geophysical Survey of Haddon Solar, Cambridgeshire. Magnetic Surveys Ltd.

British Geological Survey, 2020. Geology of Britain. [Haddon, Cambridgeshire]http://mapapps.bgs.ac.uk/geologyofbritain/home.html/]. [Accessed 10/11/2020].

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.

Envirocheck, 2020. Historical Mapping. Envriocheck: Landmark Information Group.

Google Earth, 2020. Google Earth Pro V 7.1.7.2606.

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.

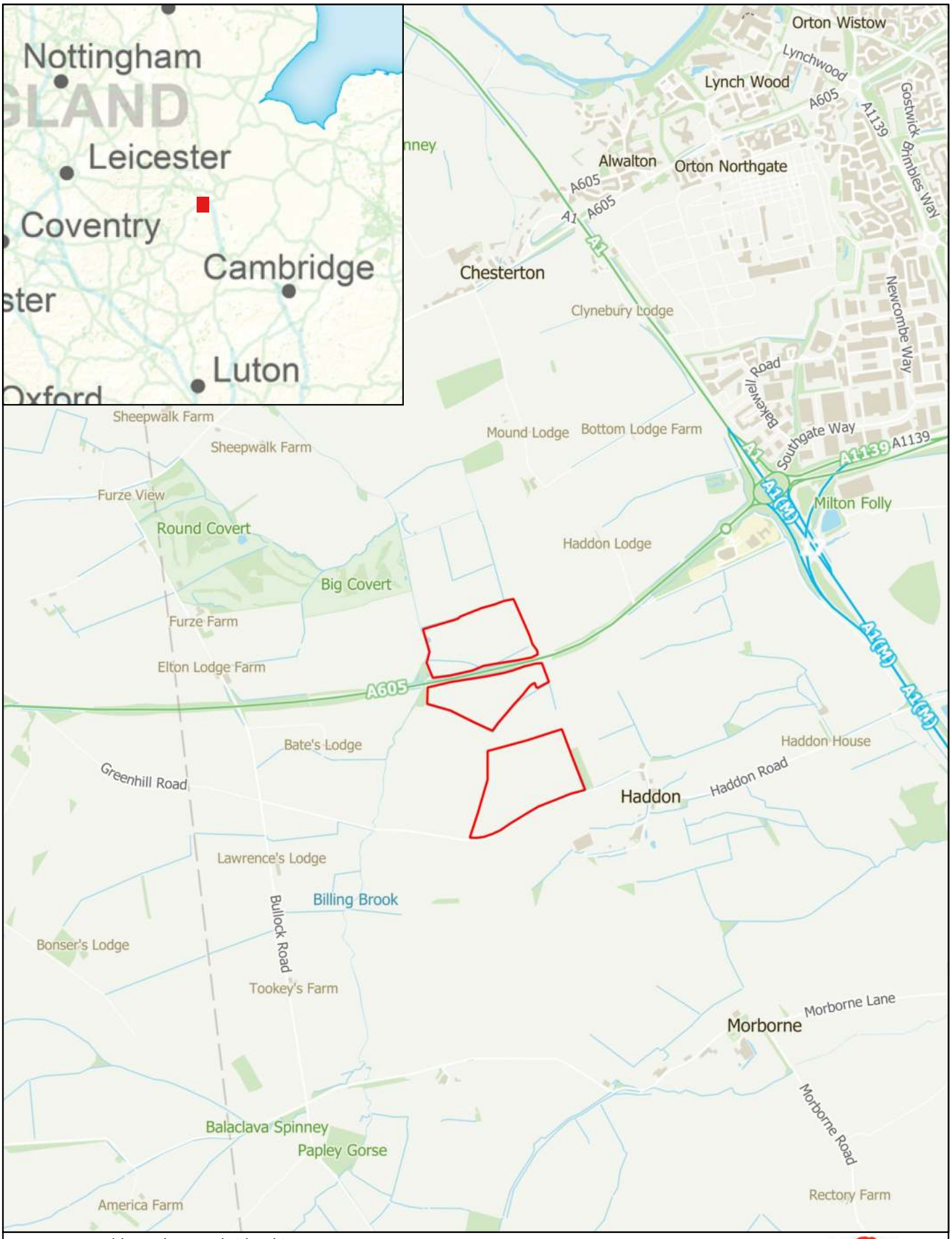
Soilscapes, 2020. [Haddon, Cambridgeshire]. Cranfield University, National Soil Resources Institute [http://landis.org.uk]. [Accessed 10/11/2020].

12. Project Metadata

MS Job Code	MSTL809
Project Name	Geophysical Survey Report of Haddon, Cambridgeshire
Client	Orion Heritage
Grid Reference	TL 12947 92777
Survey Techniques	Magnetometry
Survey Size (ha)	41.2ha
Survey Dates	2020-10-30 to 2020-11-02
Project Lead	Lauren Beck BA
Project Officer	Lauren Beck BA
HER Event No	ECB6370
OASIS No	magnitud1-411779
S42 Licence No	N/A
Report Version	1.0

13. Document History

Version	Comments	Author	Checked By	Date
0.1	Initial draft for Project Lead to Review	LT	WR	13 November 2020
0.2	Draft for Director Approval	LT	FPC	13 November 2020
0.3	Corrections from Director. Draft to Client.	LB	PSJ	17 November 2020
1.0	Issued as Final	LB	PSJ	05 January 2021



MSTL809 - Haddon Solar, Cambridgeshire
Figure 1 - Site Location
1:25,000 @ A4

Survey Boundary

N

0 0.5 1 km

magnitude surveys

294000
512000
513000
514000
294000
293000
293000
Elton Furze
Big Covert
Haddon Lodge
Peterborough Motorway Services
Area 3
A605
Area 2
Area 1
Bate's Lodge
Bullock Road
Greenhill Road
Haddon
Haddon Road
St Mary's Church
Lawrence's Lodge

MSTL809 - Haddon Solar, Cambridgeshire
Figure 2 - Location of Survey Areas
1:7,000 @ A3

Survey Extent
Unsurveyable

N
0 150 300 450 m

magnitude surveys

Area 1

Area 3

A605

Area 2

MSTL809 - Haddon Solar, Cambridgeshire
Figure 3 - Magnetic Total Field (Lower Sensor)
1:3,000 @ A3

48,997 nT 49,005

N

0 50 100 150 m

magnitude surveys

Area 1

Area 2

Area 3

MSTL809 - Haddon Solar, Cambridgeshire
Figure 4 - Magnetic Interpretation Over Historical Maps and Satellite Imagery
1:3,000 @ A3

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

N

0 50 100 150 m

magnitude surveys

293200
293400
293600
512400
512400
512600
512600
Area 2
Area 3
A605

MSTL809 - Haddon Solar, Cambridgeshire
Figure 5 - Magnetic Gradient (Areas 2 and 3 (West))
1:1,500 @ A3

-1 nT 2

A605

N

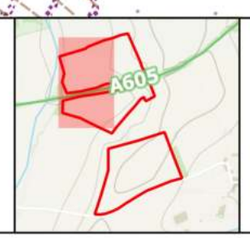
0 40 80 120 m

magnitude surveys

293200
293400
293600
512400
512600
Area 2
Area 3
2b
3a
A605

MSTL809 - Haddon Solar, Cambridgeshire
Figure 6 - Magnetic Interpretation (Areas 2 and 3 (West))
1:1,500 @ A3

Archaeology Possible (Weak)
Agricultural (Strong)
Agricultural (Weak)
Possible Extraction
Natural (Zone)
Magnetic Disturbance
Ferrous/Debris (Spread)
Undetermined (Strong)
Undetermined (Weak)
Agricultural (Trend)
Data Artefact
Ridge and Furrow (Trend)
Drainage Feature
Ferrous (Spike)



N

0 40 80 120 m

magnitude surveys

293200
293400
293600
512400
512400
512600
512600
Area 2
Area 3
A605

MSTL809 - Haddon Solar, Cambridgeshire
Figure 7 - XY Trace Plot (Areas 2 and 3 (West))
30nT/cm at 1:1,500 @ A3

N

0 40 80 120 m

magnitude surveys

293200
293400
293600
512800
512800
A605
Area 2
Area 3
513000
513000

MSTL809 - Haddon Solar, Cambridgeshire
Figure 8 - Magnetic Gradient (Areas 2 and 3 (East))
1:1,500 @ A3

-1 nT 2

A605

N

0 40 80 120 m

magnitude surveys

293200
293400
293600
512800
513000
A605
2a
3a
Area 2
Area 3

MSTL809 - Haddon Solar, Cambridgeshire
Figure 9 - Magnetic Interpretation (Areas 2 and 3 (East))
1:1,500 @ A3

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

N

0 40 80 120 m

magnitude surveys

293200
293400
293600
512800
512800
A605
Area 2
Area 3
513000
513000

MSTL809 - Haddon Solar, Cambridgeshire
Figure 10 - XY Trace Plot (Areas 2 and 3 (East))
30nT/cm at 1:1,500 @ A3

N

0 40 80 120 m

magnitude surveys

292600
292800
293000
512600
512600
Area 1
512800
512800
MSTL809 - Haddon Solar, Cambridgeshire
Figure 11 - Magnetic Gradient (Area 1 (West))
1:1,500 @ A3

-1
nT
2
A605
N
0
40
80
120 m
magnitude surveys

292600
292800
293000
512600
512600
512800
512800
Area 1
1g
1h
1f
1e
MSTL809 - Haddon Solar, Cambridgeshire
Figure 12 - Magnetic Interpretation (Area 1 (West))
1:1,500 @ A3

Archaeology Possible (Weak)
Agricultural (Strong)
Agricultural (Weak)
Possible Extraction
Natural (Weak)
Magnetic Disturbance
Undetermined (Weak)
Agricultural (Trend)
Data Artefact
Service
Ridge and Furrow (Trend)
Drainage Feature
Ferrous (Spike)
A605
N
0
40
80
120 m
magnitude surveys

292600
292800
293000
512600
512600
Area 1
512800
512800
A605
N
0
40
80
120 m
magnitude surveys
MSTL809 - Haddon Solar, Cambridgeshire
Figure 13 - XY Trace Plot (Area 1 (West))
30nT/cm at 1:1,500 @ A3

292600
292800
293000
513000
513000
513200
513200
Area 1
A605
-1
nT
2
0
40
80
120 m
N
MSTL809 - Haddon Solar, Cambridgeshire
Figure 14 - Magnetic Gradient (Area 1 (East))
1:1,500 @ A3

magnitude surveys

292600
292800
293000
513000
513200
1f
1e
1d
1a
1b
1c
Area 1
A605

MSTL809 - Haddon Solar, Cambridgeshire
Figure 15 - Magnetic Interpretation (Area 1 (East))
1:1,500 @ A3

Archaeology Possible (Strong)
Archaeology Possible (Weak)
Agricultural (Strong)
Agricultural (Weak)
Possible Extraction
Magnetic Disturbance
Ferrous/Debris (Spread)
Agricultural (Trend)
Data Artefact
Service
Ridge and Furrow (Trend)
Drainage Feature
Ferrous (Spike)

N
0
40
80
120 m

magnitude surveys

292600
292800
293000
513000
513000
Area 1
513200
513200

MSTL809 - Haddon Solar, Cambridgeshire
Figure 16 - XY Trace Plot (Area 1 (East))
30nT/cm at 1:1,500 @ A3

N

0 40 80 120 m

magnitude surveys