

Land West of Leicester Road, Lutterworth, Leicestershire: Geophysical Survey Report

E Taylor Consulting Ltd

Date: August 2025
Prepared by: Matthew Fay
Ref: 25366

Report to: E Taylor Consulting Ltd
Report Title: Land West of Leicester Road, Lutterworth: Geophysical Survey Report

Version: V1.0
Issue Date: August 2025
Report Ref: 25366

Originated By: 
Matthew Fay
Assistant Supervisor Date: 05/08/2025

Reviewed By: 
Daniel Yates
Senior Project Officer Date: 07/08/2025

Approved By: 
Alex Schmidt
Technical Director Date: 11/08/2025

Prepared by:
 Cura Terrae Land and Nature, 4 President Building, Savile Street, Sheffield, S4 7UQ

Version	Author	Description	Date
V0.1	MF	First draft	05/08/2025
V0.2	DY	QA1	07/08/2025
V0.3	DY	Amendments following QA1	07/08/2025
V0.4	AS	QA2	11/08/2025
V1.0	AS	Issue for client comment	11/08/2025

The report and the site assessments carried out by Cura Terrae on behalf of the client in accordance with the agreed terms of contract and/or written agreement form the agreed Services. The Services were performed by Cura Terrae with the skill and care ordinarily exercised by a reasonable Environmental Consultant at the time the Services were performed. Further, and in particular, the Services were performed by Cura Terrae taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between Cura Terrae and the client.

Other than that expressly contained in the paragraph above, Cura Terrae provides no other representation or warranty whether express or implied, in relation to the services.

This report is produced exclusively for the purposes of the client. Cura Terrae is not aware of any interest of or reliance by any party other than the client in or on the services. Unless expressly provided in writing, Cura Terrae does not authorise, consent or condone any party other than the client relying upon the services provided. Any reliance on the services or any part of the services by any party other than the client is made wholly at that party's own and sole risk and Cura Terrae disclaims any liability to such parties.

This report is based on site conditions, regulatory or other legal provisions, technology or economic conditions at the time of the Service provision. These conditions can change with time and reliance on the findings of the Services under changing conditions should be reviewed. Cura Terrae accepts no responsibility for the accuracy of third-party data used in this report.

Contents

Executive Summary	4
1. Introduction	5
1.1 Project Background	5
1.2 Location, Topography and Geology	5
2. Archaeological and Historical Background	6
2.1 Introduction	6
2.2 Summary	6
3. Geophysical Survey Methodology	8
4. Mitigating Factors	9
5. Results and Interpretation	10
6. Discussion	12
7. Curation and Storage	13
8. References	14
Appendix A: Technical Information	16
Gradiometer Survey	16
Limitations	16
Instrumentation	17
Appendix B: Data Visualisation and Further Information	18
Visualisation	18
Magnetic Anomalies	18
Terminology	18
Characterisation of Anomalies & Interpretation Categories	19
Tables	
Table 1: Survey Anomalies	10

Figures

Figure 1: Site Location

Figure 2: Greyscale Plot – Field 1 and 2

Figure 3: Interpretation Plot – Field 1 and 2

Executive Summary

Cura Terrae were instructed by E Taylor Consulting Ltd to undertake an archaeological geophysical survey on land west of Leicester Road, Lutterworth, Leicestershire.

The survey produced good results throughout and confirmed the presence of a number of anomalies of tentative archaeological origin located in the south of the survey area. These anomalies may represent pit-like features in the underlying deposits. Such features may be evidence of extraction activity or waste disposal pits. However, localised geological variation or modern agricultural activity are both equally probable causes.

An additional, linear anomaly located within the centre of Field 2 has been labelled as an uncertain trend. This anomaly may be evidence of earlier activity but is only likely to represent a former boundary adjacent to the prominent ridge and furrow present across the Site survey data. Alternatively, this may indicate a modern field drain or other localised deposition of magnetically enhanced material.

All other anomalies within the dataset are believed to be modern in origin, indicating areas of increased magnetic response likely to be associated with modern activity, field drains, a service, and various quantities of magnetically enhanced material and debris within the topsoil.

1. Introduction

1.1 Project Background

1.1.1 Cura Terrae were instructed by E Taylor Consulting Ltd to undertake an archaeological geophysical survey ahead of a forthcoming planning application for development of land west of Leicester Road, Lutterworth, Leicestershire (hereafter 'the Site'). The Site is centred on National Grid Reference 454346 286483 (SP 54346 86483) (Figure 1).

1.2 Location, Topography and Geology

1.2.1 The Site is c. 4 ha in size, comprised of two fields, and is situated 350 m north of the town of Lutterworth, Leicestershire.

1.2.2 The survey area is bounded by trees, hedgerows and fencing on all sides. A residential area forming part of the town of Lutterworth is located beyond the southern border of the Site, with further arable land present to the north, east and west.

1.2.3 The Site lies on a west facing slope, falling from approximately 131 m above Ordnance Datum (aOD) to approximately 122 m aOD sloping down towards the west.

1.2.4 The underlying geology of the Site is recorded as Mudstone and Limestone of the Blue Lias Formation. Superficial deposits of Diamicton are also noted (British Geological Survey 2025).

2. Archaeological and Historical Background

2.1 Introduction

2.1.1 Below is a summary of archaeological and heritage data compiled from publicly available Historic Environment Records (online) within an approximate 1 km search radius of the Site. While not exhaustive, this section aims to present a summary of findings considered relevant to the interpretation of the geophysical survey data collected.

2.2 Summary

2.2.1 There are 14 Grade II Listed Buildings located within the 1 km search area, primarily consisting of post-medieval dwellings, farm buildings and commercial premises located in and around the village of Lutterworth.

2.2.2 No past archaeological work has taken place at the Site.

Prehistoric

2.2.3 A Palaeolithic scraper was located during a 1989 fieldwalking survey c. 1 km to the southeast of the survey area (HER MLE6052).

2.2.4 Fieldwalking surveys carried out c. 700 m south of the Site in 1993 and 1997 recovered numerous Neolithic and Bronze Age tools and flints, including an axe, an arrowhead, several scrapers and numerous flakes and cores (HER MLE6440). Additional finds of flints of similar date were made during the 1993 survey in areas c. 350 m and c. 400 m south of the Site, and in 1988 c. 1 km to the south-east (HER MLE7117; HER MLE6438; HER MLE2078).

2.2.5 A small area of Bronze Age occupation was later discovered c. 200 m south of the survey area during a 2011 archaeological evaluation (ADS 1580310).

Romano-British

2.2.6 Iron Age and Roman pottery was additionally located during 1993 fieldwalking c. 400 m south of the Site (HER MLE6539; HER MLE8140).

2.2.7 Several gullies and ditches, as well as a hearth or possible kiln, were recorded c. 750 m southwest of the survey area during a 2019 archaeological evaluation and subsequent 2021 mitigation.

These features are believed to denote the presence of a Roman rural settlement or farmstead in this area (HER MLE25731).

- 2.2.8 Numerous ditches and pottery sherds indicative of Roman agricultural activity were unearthed during a 2014 archaeological evaluation and 2015 mitigation at land south of Leicester Road, c. 500 m to the southeast of the Site (HER MLE21328).

Medieval

- 2.2.9 The aforementioned 1993 fieldwalking survey undertaken c. 700 m south of the survey area additionally recovered four sherds of medieval pottery (HER MLE7667).
- 2.2.10 A 2021 archaeological excavation which took place c. 750 m to the southwest of the Site recorded a medieval boundary ditch and associated 12th century pottery (HER MLE27080).
- 2.2.11 A stone mortar of medieval origin was found in a garden c. 900 m southwest of the Site (HER MLE6704).

Post Medieval/Modern

- 2.2.12 Bitteswell Hall, a 19th century country house demolished in 1928, once stood c. 1 km to the northwest of the Site (HER MLE25358).
- 2.2.13 A location c. 750 m to the northwest of the Site once formed part of an area of 19th century parkland associated with the Bitteswell estate (HER MLE25359).

3. Geophysical Survey Methodology

- 3.1.1 All survey work was completed to appropriate standards, as outlined by existing guidance (ClfA 2020a; 2020b; 2020c, 2022; and Schmidt et al. 2015).
- 3.1.2 This geophysical survey was completed using a Bartington Grad601-2 system. Readings were recorded at a resolution of 0.01 nT and data collected with a traverse interval of 1 m and a sample interval of 0.25 m.
- 3.1.3 Data was collected by traversing the survey area in 4 m increments using a hand-pushed non-magnetic cart system to achieve the best possible results.
- 3.1.4 Real Time Kinematic (RTK) differential GPS equipment (Carlson BRX7 GNSS Smart Antenna) was used to accurately determine the position of the survey equipment and survey monitor data.
- 3.1.5 The data processing was undertaken using TerraSurveyor64 software and consisted of a 'DeStripe' process. This process determines the average of the datapoints in each track and subtracts that value from all the datapoints along each survey track.
- 3.1.6 Illustrations were created using QGIS software. Interpretation of identified anomalies was achieved through analysis of anomaly patterning and increases in magnetic response and was aided by examining the available supporting information, including but not limited to Greyscale plots, Colourscale plots and XY Trace plots. The interpretations follow Cura Terrae colour coding and categorisations of anomalies and attempt, where possible, to suggest the nature of buried features.
- 3.1.7 Further details of geophysical survey methodology can be found in Appendix A.

4. Mitigating Factors

- 4.1.1 The results of geophysical survey may not reveal all potential archaeology within a survey area, and geological, agricultural, and modern features may limit the detection of weaker archaeological responses.
- 4.1.2 At the time of survey, the Site conditions were dry and firm underfoot. An area in the north of the site was omitted due to the presence of a large waste pile.
- 4.1.3 An underlying service has been identified traversing the survey area on a broadly northeast to southwest alignment across the east of Field 2. The strong magnetic response resulting from the presence of this type of feature can affected the data, potentially limiting the detection of weaker anomalies in its vicinity, if present.
- 4.1.4 Field boundaries comprised by trees, hedgerows and fencing on all sides. Where necessary, a 2 m buffer was observed along metal fences although some interference is still noted at the survey periphery. The buffer was observed to minimise the effects or magnetic interference on the survey and to help to reduce as far as is reasonably practicable any non-detection of potential buried features.

5. Results and Interpretation

5.1.1 Anomalies found within the survey data are listed in Table 1 and illustrated on Figure 3.

Table 1: Survey Anomalies

Anomaly Number	Anomaly Type	Description	Interpretation
1. Field 1, Figure 3	Possible Archaeology	Positive, sub-circular anomaly 9 m in diameter located in the southwest of Field 1.	This anomaly may represent an area of previous extraction activity or less likely a waste pit, although geological variation or modern agricultural activity are also potential causes.
2. Field 2, Figure 3	Possible Archaeology	Numerous small, positive sub-circular anomalies located across the south of Field 2.	These anomalies may represent a series of pits associated with extraction activity or waste disposal, although again localised geological variation or agricultural activity may also be the source.
3. Field 2, Figure 3	Uncertain Trend	East to west oriented, largely dipolar, linear anomaly 57 m in length, located in the centre of Field 2.	This anomaly may represent an infilled ditch feature. It is broadly parallel to trends likely to indicate earlier cultivation activity and may indicate an associated boundary feature. However, it may also be the result of a field drain or a concentration of other modern ferrous material.

Anomaly Number	Anomaly Type	Description	Interpretation
N/A Field 1 and 2, Figure 3	Ridge and Furrow	Weak positive, evenly spaced linear anomalies located across the east of Field 1 and throughout Field 2, all on a broadly east to west orientation.	These anomalies represent a regime previous cultivation and based on their morphology are likely to indicate medieval to post-medieval ridge and furrow.
N/A Field 1 and 2, Figure 3	Increased Magnetic Response	Amorphous areas of increased magnetic resonance located along the boundaries of Field 1 and in the centre of Field 2.	These anomalies refer to areas of increased magnetic response likely caused by disturbed ground conditions associated with landscaping or waste disposal.
NA Field 2, Figure 3	Land Drain	Dipolar, linear anomalies located in Field 2.	These anomalies are characteristic of modern land drains.
N/A Fields 2 and 3, Figure 3	Service	Highly magnetic, dipolar anomaly on a northeast to southwest orientation across the eastern portion of Field 2.	This anomaly represents an underlying service.
N/A Field 1 and 2, Figure 3	Ferrous Disturbance	Several, amorphous, dipolar anomalies predominantly located along the survey boundaries.	These anomalies are predominantly the result of metal fencing or other ferrous material located along or outside the survey periphery.
N/A Field 1 and 2, Figure 3	Ferrous "spike"	Numerous small, dipolar 'spike' anomalies located throughout the Site.	These anomalies represent sporadic ferrous objects and debris within the topsoil and subsoil and are likely to indicate recent or modern agricultural waste.

6. Discussion

- 6.1.1 The survey data produced good results throughout and confirmed the presence of several anomalies that may be archaeological in origin, albeit tentatively. A large, circular anomaly (1) located in the southwest of Field 1 may represent an earlier pit feature, possibly once used for mineral extraction or waste disposal. Numerous similar and much smaller anomalies (2) are noted within the south of Field 2 and may denote the presence of a cluster of similar features. All of these anomalies are, however, equally likely to be the product of localised geological variation or more recent or modern agricultural activity.
- 6.1.2 A linear dipolar anomaly (3) located in the centre of Field 2 has been marked as an uncertain trend. It is possible that this anomaly represents a partial former boundary feature as it is broadly parallel to broad trends thought to indicate ridge and furrow cultivation. This is characteristic of medieval to post-medieval cultivation and is present across the whole survey area.
- 6.1.3 All other anomalies within the dataset are likely to be modern in origin, referring to areas of increased magnetic response, field drains, a service and various quantities of ferrous “spikes” indicating material and debris in the topsoil, likely to be the result of modern agricultural activity.

7. Curation and Storage

- 7.1.1 The archive will be prepared in accordance with national guidelines (ClfA 2020b). The integrity of the primary field record will be preserved. Security copies will be maintained where appropriate. Digital records of the geophysical survey and its collected data will be held by Cura Terrae
- 7.1.2 An OASIS form has been created on the results of the works under the following reference number curaterr1-535934. Following approval of the report, a pdf version of the final version will be submitted within three months to the Archaeology Data Service via the OASIS form.

8. References

Aspinal, A., Gaffney, C. and Schmidt, A. (2008). *Magnetometry for Archaeologists*. Plymouth: Altamira Press

British Geological Survey. (2024). *Geology of Britain Viewer*. Available at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Chartered Institute for Archaeology (CIfA) (2020a). *Standard and guidance for archaeological geophysical survey*. Reading: Chartered Institute for Archaeologists. Available at <https://www.archaeologists.net/codes/cifa>

Chartered Institute for Archaeologists (CIfA) (2020b). *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*. Available at <https://www.archaeologists.net/codes/cifa>

Chartered Institute for Archaeologists (CIfA). (2020c). *Standard and Guidance for the collection, documentation, conservation, and research of archaeological materials*. Available at <https://www.archaeologists.net/codes/cifa>

Chartered Institute for Archaeologists (CIfA) (2022). *Code of Conduct: professional ethics in archaeology*. Available at <https://www.archaeologists.net/codes/cifa>

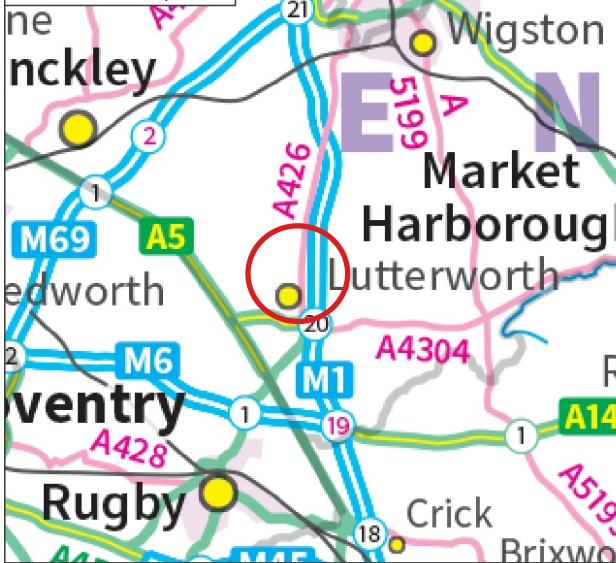
Cura Terrae (2025). *Land West of Leicester Road, Lutterworth, Leicestershire, Written Scheme of Investigation for Geophysical Survey*. Unpublished client report.

Konieczek, G. (2025). *Pers. Comm.* Email January 2025.

Gaffney, C. and Gater, J. (2003). *Revealing the Buried Past*. Stroud: Tempus Publishing

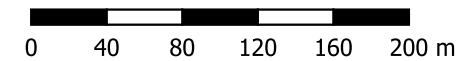
Schmidt, A., Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A. and Fassbinder, J. (2015). *EAC Guidelines for the use of Geophysics in Archaeology*. Namur: Europae Archaeologia Consilium (EAC)

Scale: 1:400,000



Key

 Site Boundary



Marrons Planning
 Land West of Leicester Road,
 Lutterworth, Leicestershire

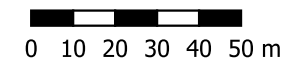
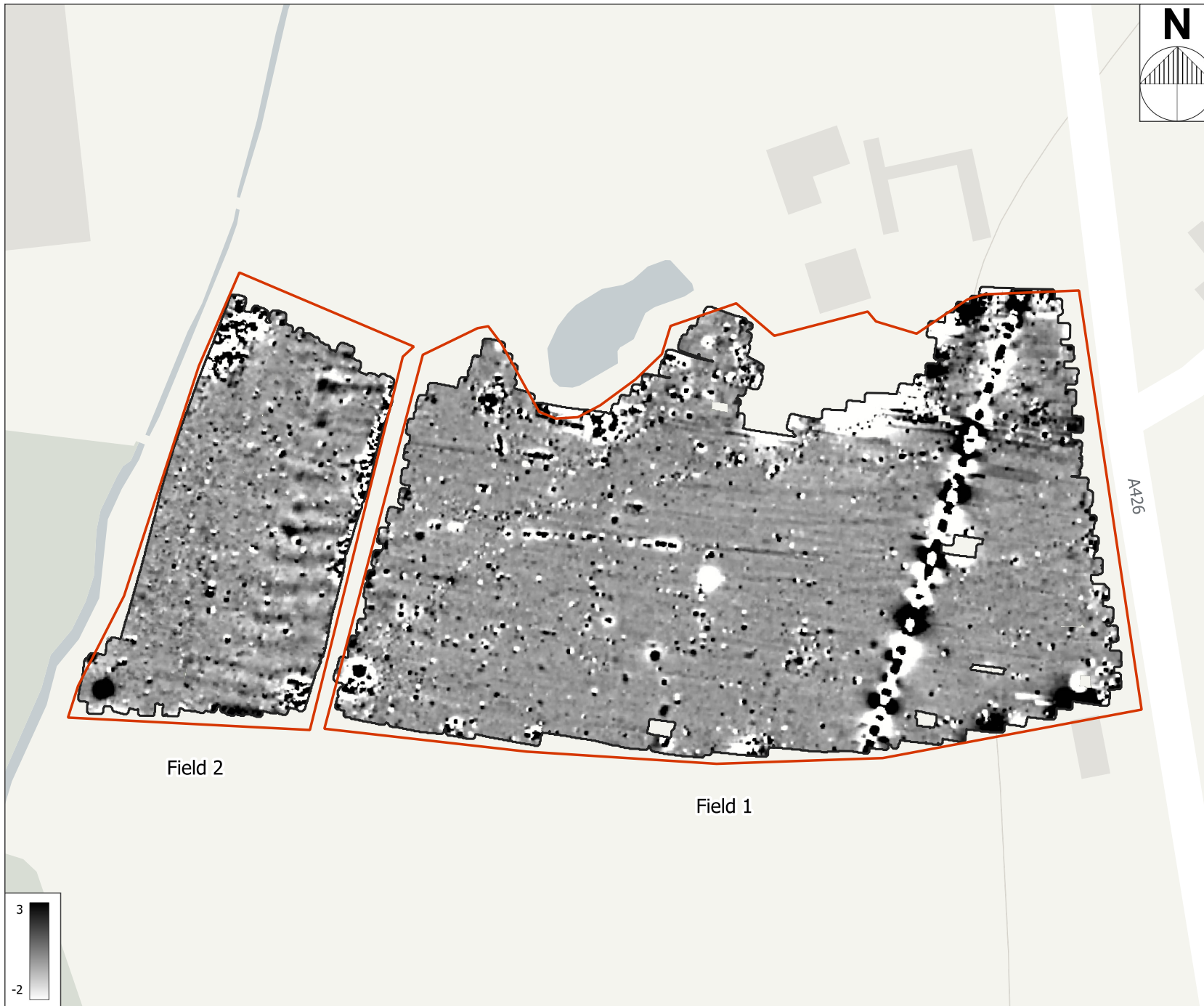
Figure 1
 Site Location

Rev	Date	Drawn by	Checked by
A	07.08.25	PFP	-

Site centred on: SP 54345 86470

Key

- Site Boundary
- Survey Extent



Marrons Planning
 Land West of Leicester Road,
 Lutterworth, Leicestershire

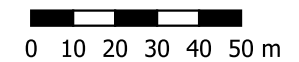
Figure 2
 Grayscale Plot - Fields 1 and 2

Rev	Date	Drawn by	Checked by
A	07.08.25	PFP	-

Site centred on: SP 54345 86470

Key

- Site Boundary
- Survey Extent
- Possible Archaeology
- Uncertain Trend
- Ridge & Furrow
- Land Drain
- Service
- Ferrous spike
- Ferrous Disturbance
- Increased Magnetic Response

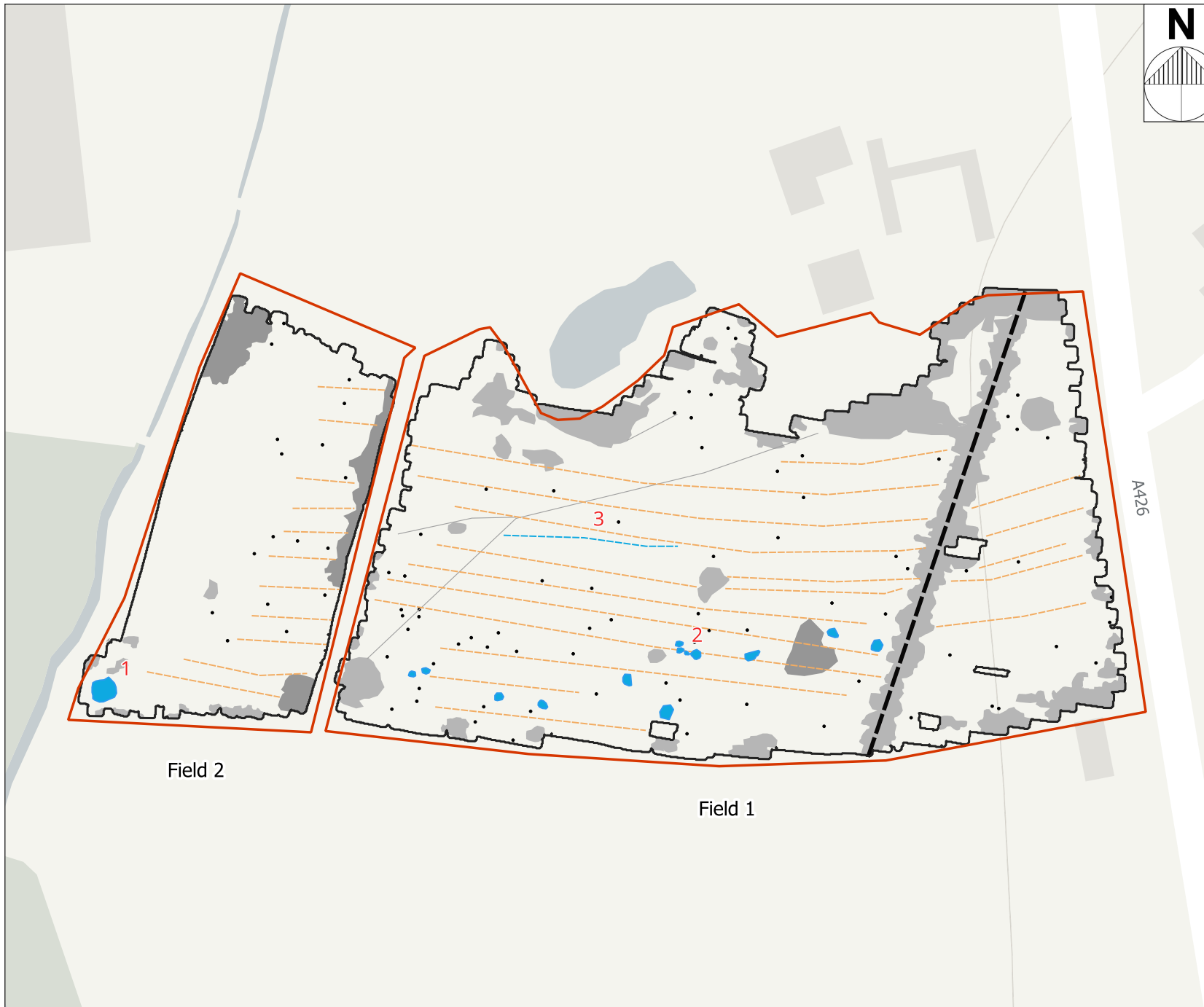


Marrons Planning
 Land West of Leicester Road,
 Lutterworth, Leicestershire

Figure 3
 Interpretation Plot - Fields 1 and 2

A	07.08.25	PFP	-
Rev	Date	Drawn by	Checked by

Site centred on: SP 54345 86470



Appendix A: Technical Information

Gradiometer Survey

Magnetic surveys measure distortions of variable strength in the earth's magnetic field caused by magnetic fields associated with buried features (Gaffney and Gater 2003, 36) that have either remnant or induced magnetic properties (Aspinal *et al.* 2008, 21–26). Human activity and inhabitation often alter the magnetic properties of materials (Aspinal *et al.* 2008, 21) resulting in the ability for numerous archaeological features to be detected through magnetic surveys.

Intensive burning or heating can also result in materials attaining a thermoremanent magnetisation; examples of which include kilns, ovens, heaths, and brick structures (Aspinal *et al.* 2008, 27; Gaffney and Gater, 2003, 37). However, there is also no way to always confidently assert from the results of Gradiometer surveys alone, whether burned material is in situ or has been redeposited within, for example, a refuse pit.

When topsoil-rich with iron oxides, fills a man-made depression in the subsoil, it creates an infilled feature, such as a pit or ditch, with a higher magnetic susceptibility compared to the surrounding soil (Aspinal *et al.* 2008, 37–41; Gaffney and Gater 2003, 22–26). Magnetic surveys can also detect features with a lower magnetically susceptibility than the surrounding soil, an example of which is a stone wall.

Limitations

Poor results can be due to several factors including, but not limited to, short lived archaeological occupation and land use, or sites with minimal cut or built features. Results can also be limited in areas where the natural geology is of a similar composition to the fills of cut archaeological features such as ditches, or where soils are naturally deficient in iron compounds. Poor results can also be caused by areas with soils overlying naturally magnetically enhanced geological deposits, which can produce strong or variable responses limiting the detection of earlier archaeological features.

Overlying layers, such as demolition rubble or layers of made ground such as during landscaping works, can also limit the detection of earlier archaeological features. The presence of above ground structures within, or in the near vicinity of, the survey area as well as underground services containing ferrous material such as pipelines or electricity cables can distort survey results, further limiting the detection of earlier archaeological features.

Particularly uneven or locally variable elevation in topography can increase the data processing required, and/or distort results beyond the capabilities of processing. It is also possible in areas containing dramatic topographical changes that natural weathering, such as hill wash, often in combination with intensive modern ploughing or other natural geological deposits, will reduce the topsoil on slopes and towards the peaks of hills and possibly destroy or truncate potential archaeological features as a result.

Conversely features at the bottom of slopes may be covered by a greater layer of topsoil or other deposits, and so if buried features are present, they appear faint or are entirely limited in their detection.

Over-processing of data can also obscure, remove or artificially enhance or create anomalies, especially if there are on the same orientation as the direction of data collection. Consequently, where possible, attempts are made to ensure data is not collected on the same orientation as known potential features and that data quality is sufficient to minimise the required data processing.

Instrumentation

Bartington Grad601-2

The Bartington 601-2 is a single axis, vertical component fluxgate gradiometer comprising a data logger battery cassette and two sensors. The sensors are mounted on a rigid carrying frame; each sensor contains two fluxgate magnetometers with 1 m vertical separation.

The difference in the magnetic field between the two fluxgates in each sensor is measured in nano Tesla (nT). The gradiometer data is recorded with a range of ± 100 nT. It should be noted that the actual resolution is limited because of potential internal instrumental noise. The gradiometers are calibrated at the start of every day and recalibrated whenever necessary.

This system records four lines of data on each traverse, with traverses walked in a zig-zag pattern until all the survey area is covered.

Appendix B: Data Visualisation and Further Information

Visualisation

The survey data collected was used to produce a series of images to demonstrate the results of surveys. These are outlined below:

- Greyscale plot – This method visualises the survey data as a shaded drawing, with highest readings showing as black, running through different shades to lowest showing as white. Plotting parameters can be adjusted to aid interpretation of geophysical survey data.
- XY Trace plot – This is an alternative method of data visualisation, plotting the magnitude of responses on a scaled XY trace. The stronger the response, the sharper the rise in the trace. This type of plot can be used to differentiate the origin of an anomaly and is best used in conjunction with an alternative method of interpretation.
- Interpretation plot – Through detailed analysis, anomalies have been interpreted and possible features identified. Interpretation drawings are used to show potential features and to reinforce and clarify the written interpretation of the data. Anomalies have been characterised using the terminology detailed in the following section and have been assigned colour coding, which is outlined in keys on figures associated with this report.

Magnetic Anomalies

Different anomalies can represent different features created by human occupation, agricultural or modern activity, or natural pedological and/or geological changes in the substrata.

Anomalies interpreted as ‘stronger’ are considered more likely to be of the interpreted characterisation; whereas a ‘weaker’ categorisation represents a more tentative interpretation applied to those anomalies with lesser increases in magnetic response or if the anomaly has incomplete patterning or irregular form. The strength and size of anomalies can vary depending on the magnetic properties of the feature, the magnetic susceptibility of the soil, the depth at which the feature is buried, and the state of preservation.

Terminology

- Anomaly - Any outstanding high or low magnetic response forming a particular shape or covering a specific area within the survey results.
- Feature - A man-made or naturally created object, material or deposit that has been detected through the site investigation works and has sufficient characteristics or supporting evidence for positive identification.

- Magnetic Susceptibility - The ability of a buried feature to be magnetically induced when a magnetic field is applied.
- Magnetic Response - The strength of the changes in magnetic values caused by a buried feature with either a greater or lesser ability to be magnetised compared with the soil around it. Anomalies are considered to either have strong/weak or positive/negative response. The strength of magnetic response (along with patterning) can be essential in determining the nature of a buried feature, but it should be noted that the size or strength of the magnetic response does not always correlate with the size of the buried feature.
- Morphology - The shape or form of an individual anomaly.
- Thermoremanence - The affect caused when a material has been magnetically altered through a process of heating. Thermoremanent magnetisation occurs when an object or material is heated passed the Curie Point and acquires a permanent magnetisation that is associated with the magnetic field that they cooled within (Gaffney and Gater 2003, 37).

Characterisation of Anomalies & Interpretation Categories

Archaeological or Historical Anomalies

- Archaeology – Linear, rectilinear, or curvilinear anomalies with a positive and/or negative magnetic response, composed of a patterning or shape that is suggestive of a buried archaeological feature. These are often indicative of structural remains or infilled cut features such as ditches. The strength of the anomaly signal can be suggestive of the properties of the feature. Negative linear anomalies represent upstanding or infilled features that are less magnetically susceptible than background readings, for example structures such as a ditch-bank, or a cut ditch containing a fill composed of a non-igneous stone material. Bipolar linear anomalies considered to be of an archaeological nature are indicative of material with a high magnetic susceptibility, such as a brick wall. Isolated anomalies or anomalies with a more amorphous form possibly represent infilled features or thermomagnetic features such as areas of heating/burning of an archaeological origin. Unless associated with conclusively identified archaeological remains, such as linear anomalies, absolute identification of positive responses can be problematic as it is often not possible to decipher if they are of an archaeological, modern, or agricultural origin. Consequently, isolated positive responses such as those indicating pit-features, are not always shown within the Interpretation plot(s) unless composed of a broad form or belonging to a series of isolated positive responses. Bipolar responses considered likely to be of an archaeological origin are also interpreted as isolated anomaly (archaeology). These are considered to relate to material with a very strong magnetic susceptibility or thermoremanent magnetisation.
- Possible archaeology – This categorisation is applied where anomalies are weaker or more diffuse in response, resulting in a less certain origin. It is possible that these belong to archaeological features but given their weaker responses or incomplete patterning it is equally plausible that they relate to other sources, such as agricultural features or natural soil formations or geological variations.
- Former Boundary - Linear anomalies, sub/irregular-rectilinear anomalies either with positive or negative magnetic responses, that correspond with the location of former field boundaries, ponds or buildings recorded on historic maps, Aerial photos and/or LiDAR coverage of the site.

- Ridge and Furrow - Broadly spaced linear anomalies or trends that are likely to be indicative of earlier forms of agricultural practice, such as ridge and furrow. These often correspond with the location of earthworks visible on the ground during the survey, or can be identified on aerial or LiDAR survey imagery.

Strongly Magnetic / Bipolar / Dipolar

- Modern Service – Highly magnetic, typically dipolar linear anomalies with an stronger area of variably decreasing ferrous response depending on the vicinity of the survey instrumentation to the buried or extant feature.
- Increased magnetic response – Isolated bipolar responses of a typically modern nature that are likely to relate to buried ferrous material, building debris, or objects, such as magnetically enhanced agricultural debris. If a trend is noted in the alignment or spacing of isolated bipolar responses, it is possible that they are indicative of ferrous fittings or connectors used on buried non-magnetic buried utilities, although occasionally an archaeological origin cannot be ruled out. Also, areas of increased magnetic response denote areas of disturbance containing a high concentration of dipolar or bipolar responses. These are generally considered to be caused by modern debris in the topsoil, including agricultural ‘green waste’. It is also possible that the disturbance is in part also caused by isolated archaeological material or geological or pedological changes in the substrata.
- Ferrous disturbance - Areas of magnetic disturbance, often along the edges of survey areas, or surrounding Modern Services caused by highly ferrous material such as standing metal structures like fencing and buildings. Modern Agricultural Anomalies.

Modern Agricultural

- Agricultural Trend - Ploughing trend tends to be regularly spaced linear anomalies, often with a narrower spacing, that conform with ploughing regime at the time of survey, or a recent regime recorded on aerial photos of the site. The response and distribution of land drains varies depending on the composition of the land drain and associated ditch or channel. Consequently, land drains can be composed of weak / strong positive / negative magnetic responses and are identified as a product of either their variance in magnetic values or positioning compared with regularly spaced linear anomalies considered to relate to modern ploughing. Land drains can be located within former agricultural regimes, such as ridge and furrow.
- Land drain – Weakly positive, and/or dipolar, regularly broadly spaced linear trends in a typically parallel or ‘herringbone’ formation. These are generally modern in origin, although earlier post-medieval ceramic drains are often plausible but cannot be determined.
- Uncertain Trend – Generally positive, although sometimes negative, isolated and weak linear or curvilinear trends. This category is applied where multiple origins can be asserted to a barely detected anomaly.