Land at Twyford, Melton, Leicestershire

Detailed Gradiometer Survey Report

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Document Information

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County	Leicestershire
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Planning authority	Leicestershire
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Quality Assurance

Issue	Date	Author	Approved by
1	31/08/2023	(ADT)	(PE)

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Summary

A detailed gradiometer survey was conducted over land at Land at Twyford, Melton, Leicestershire (centred on NGR 471501 310655). The project was commissioned by Laurence Associates with the aim of establishing the presence, or otherwise, and nature of detectable archaeological features in support of a planning application for the development of the site as a solar farm.

The site comprises arable fields located west of the village of Twyford and 14 km north-west of Leicester, in the county of Leicestershire, covering an area of 14.1 ha. The geophysical survey was undertaken between 23 – 25 August 2023. The gradiometer survey has been successful in detecting anomalies of possible archaeological origin in the form of a possible ring-ditch and extraction pits. In addition to these, anomalies interpreted as ridge and furrow, and modern services have also been identified.

In the northern portion of the site a small cluster of curvilinear and globular anomalies have been highlighted as a possible ditched enclosure with internal pits. These anomalies could also, however, be geological variations of related to the laying of the modern service immediately west.

The two groups of pits identified in the east and southern portions of the site are thought to be of 18th-century origin likely linked to extraction. With the eastern grouping relating to a possible pit alignment. This interpretation is further strengthened due to similar, modern, gravel pits identified to the north of the site, recorded on 18th-century OS mapping. These anomalies could also be geological in origin or related to a build-up of magnetic material as a result of modern agricultural practices.

Evidence of former agricultural practices noted as ridge and furrow has also been identified throughout the site. The curving form and broad spacing may indicate a medieval date however further investigation would be required to establish this.

The only other features identified on site relate to more recent activity and include two modern services, land drains and disturbance generated by animal feeding troughs.

Acknowledgements

Wessex Archaeology would like to thank Laurence Associates for commissioning the geophysical survey. The assistance of Ms Tasha Sibley is gratefully acknowledged in this regard.

The fieldwork was undertaken by Jake Bishop and Callum Jervis. The geophysical data was processed, interpreted, and reported on by Alastair Trace. The geophysical work was quality controlled by Patrica Edwards. The project was managed on behalf of Wessex Archaeology by Patrica Edwards.

Land at Twyford, Melton, Leicestershire

Detailed Gradiometer Survey Report

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Laurence Associates to carry out a geophysical survey at Land at Twyford, Melton, Leicestershire (centred on NGR 471501 310655) (**Figure 1**). The survey forms part of an ongoing programme of archaeological works being undertaken in support of a planning application for the development of the site as a solar farm.

1.2 Scope of document

1.2.1 This report presents a brief description of the methodology followed by the detailed survey results and the archaeological interpretation of the geophysical data.

1.3 The site

1.3.1 The site is located west of the village of Twyford and 14 km north – west of Leicester, in the county of Leicestershire.

1.3.1 The survey comprises 14.1 ha of agricultural land and is entirely bounded by agricultural fields.

1.3.2 The site is on an incline from 102 above Ordnance Datum (aOD) at the northern edge to 124 aOD at the southern edge.

1.3.3 The solid geology comprises mudstone of the Blue Lias Formation in the northern portion of the site, and Charmouth Formation to the south. The overlying superficial geological deposits across the site comprise of diamicton till from the Oadby member, with a strand of colluvium present along the field boundary between LP_001 and LP_002 (BGS 2023).

1.3.4 The soils underlying the site are likely to consist of calcareous pelosols soils of the 411d (Hanslope) association (SSEW SE Sheet 3 1983). Soils derived from such geological parent material have been shown to produce magnetic contrasts acceptable for the detection of archaeological remains through magnetometer survey.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The following historical and archaeological background has been compiled using publicly available online resources, combined with the results of Wessex Archaeology's previous investigations in the area, and in-house resources. It considers the recorded historic environment resource within a 2 km study area of the proposed development. The following

archaeological background is not exhaustive but discusses known heritage assets relevant to the interpretation of the geophysical survey data.

1.1 Summary of the archaeological resource

2.1.2 Several listed buildings have been recorded in the study area. The Church of St Andrew, 1.2 km to the east of site in the village of Twyford is the only Grade I listed building. The remaining listings are related to agricultural and residential buildings from the 16th to 18th centuries.

2.1.3 Metal detecting in 1995 recovered a vast quantity of finds 1 km north-west from the survey area, including two silver Iron Age coins, two Iron Age brooches, over 120 Roman coins, over 20 brooches and bracelets. These finds suggest the location of a proposed Roman site.

2.1.4 A Roman findspot located 1 km northeast of the survey area was found by an agricultural contractor in 1978. A large stone was removed from an area and three abraded sherds of Roman pottery were unearthed.

2.1.5 The medieval and post-medieval historic settlement core of Twyford is located 1.2 km east of the site. The village formerly had a medieval market.

2.1.6 The line of a hollow way is visible in aerial photography from 1987 (LCC 1987), located 1 km west of the site. The road is depicted on Prior's map of Leicestershire of 1777 and is likely to have been abandoned as part of the enclosure of Barsby's open fields in the late 18th century.

2.1.7 An avenue of elms can be seen running south-east from Ashby Folville manor house, 500 m to the west of the survey area, on a 1903 map. They are thought to have succumbed to Dutch Elm disease, an aerial photograph from 1987 (LCC 1987) shows nothing remains but earthworks.

2.1.8 A footpath has been recorded on first edition Ordnance Survey (OS) mapping trending west to east across the centre of areas LP_001 and LP_002. The footpath is first recorded on mapping dating from 1888 and is last recorded in 1961. A small, rounded building has also been recorded in the southern half of LP_002 from 1888 – 1914 (NLS 2023).

2.1.9 The location of a disused gravel pit is recorded 1.4 km north-east of site, to the south-west of Thorpe Satchville. The pit is shown on late 19th century OS mapping and is finally marked as disused on a map from 1979.

1.2 Recent investigations in the immediate vicinity

2.1.10 A watching brief was undertaken by Melton Fieldworkers (1996), 1.3 km south-east of the site during the creation of a housing development at Elms Farm, Main Street, Twyford. The works recorded early medieval pottery.

2.1.11 Observation and salvage recording was implemented during the flood alleviation scheme on Gaddesby Brook in 1995 (LMAS 1995). The work, 1.3 km north – east of site, involved exposure and partial deconstruction of elements of formal gardens of Manor House. Unstratified finds included post-medieval and Roman pottery were recovered.

2.1.12 An archaeological evaluation was undertaken 1.6 km west of site, in the village of Barsby by the University of Leicester Archaeological Services in 2003 (Richards 2008). The

evaluation was in advance of a proposed development adjacent to Springwell House. The evaluation exposed two cobbled areas with dating evidence from the sixteenth to eighteenth century.

3 METHODOLOGY

3.1 Introduction

3.1.1 The geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team between 23 - 25 August 2023. Field conditions at the time of the survey were sunny. An overall coverage of 13.3 ha was achieved, with reductions in the survey area around the periphery of the site, due to overgrown areas and areas associated with fencing.

3.1.2 The methods and standards employed throughout the geophysical survey conform to that set out in the Written Scheme of Investigation (WSI) (Wessex Archaeology 2023), as well as to current best practice, and guidance outlined by the Chartered Institute for Archaeologists' (CIfA 2014) and European Archaeologiae Consilium (Schmidt *et al.* 2015).

3.2 Aims and objectives

3.2.1 The aims of the survey comprise the following:

- To determine, as far as is reasonably possible, the nature of the detectable archaeological resource within a specified area using appropriate methods and practices; and
- To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

3.2.2 In order to achieve the above aims, the objectives of the geophysical survey are:

- To conduct a geophysical survey covering as much of the specified area as possible, allowing for on-site obstructions;
- To clarify the presence/absence of anomalies of archaeological potential; and
- Where possible, to determine the general nature of any anomalies of archaeological potential.

3.3 Fieldwork methodology

3.3.1 The cart-based gradiometer system used a Carlton BRx7 instrument, which receives corrections from a network of reference stations operated by the Ordnance Survey (OS) and Carlton Geosystems. Such instruments allow positions to be determined with a precision of 0.02 m in real-time and therefore exceeds European Archaeologiae Consilium recommendations (Schmidt *et al.* 2015).

3.3.2 The detailed gradiometer survey was undertaken using four SenSys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart. Data were collected with an effective sensitivity of 0.03 nT at a rate of 10 Hz, producing intervals of 0.15 m along transects spaced 4 m apart.

3.4 Data processing

3.4.1 Data from the survey were subjected to minimal correction processes. These comprise a 'Destripe' function (±5 nT thresholds), applied to correct for any variation between the

sensors, and an interpolation used to grid the data and discard overlaps where transects have been collected too close together.

3.4.2 Further details of the geophysical and survey equipment, methods and processing are described in **Appendix 1**.

4 GEOPHYSICAL SURVEY RESULTS AND INTERPRETATION

4.1 Introduction

4.1.1 Results are presented as a series of greyscale plots and archaeological interpretations on a scale of 1:5,000 (**Figures 2** and **3**) and 1:2,000 (**Figures 4** – **13**). The data are displayed as greyscale images at 3 nT (white) to -2 nT (black) for ease of viewing.

4.1.2 The interpretation of the datasets highlights the presence of potential archaeological anomalies, ferrous responses, burnt or fired objects, and magnetic trends (**Figure 3**). Full definitions of the interpretation terms used in this report are provided in **Appendix 2**.

4.1.3 Numerous ferrous anomalies are visible throughout the dataset. These are presumed to be modern in provenance and are not referred to, unless considered relevant to the archaeological interpretation.

4.1.4 It should be noted that small, weakly magnetised features may produce responses that are below the detection threshold of magnetometers. It may therefore be the case that more archaeological features may be present than have been identified through geophysical survey.

4.1.5 Gradiometer survey may not detect all services present on site. This report and accompanying illustrations should not be used as the sole source for service locations and appropriate equipment (e.g., CAT and Genny) should be used to confirm the location of buried services before any trenches are opened on site.

4.2 Gradiometer survey results and interpretation

4.2.1 The geophysical survey has identified several features that are likely to be associated with possible archaeological remains. These are predominantly located in the south and east of the site and are associated with pits and curvilinear ditch features.

4.2.2 A small cluster of positive curvilinear and sub-rounded anomalies have been recorded along the western limits of LP_002 at **4000** (**Figure 9**). The cluster consists of three anomalies between 1 – 2 m wide covering an area 8 m wide by 10 m long. The larger eastern anomaly is a reverse ‘C’ shape 16 m long. It is possible that the larger eastern anomaly is a ditched feature that encloses a numbers of pits of unknown date. It is also possible, however, that combined these form features, geological in origin or magnetic disturbance associated with laying the modern service, immediately west (**4008**).

4.2.3 Two groups of positive, sub-rounded, globular anomalies have been identified in the eastern portion of LP_002 at **4001** (**Figure 9**) and in the northern portion of LP_003 at **4002** (**Figure 13**). Both sets of anomalies are between 2 – 4 m wide. The anomalies at **4001** (**a** – **d**) are contained within an area 10 m wide by 60 m long, orientation north-east to south-west. Whilst those highlighted at **4002** can be split into two areas, at **a** which is 26 m wide by 20 m long, and **b** which is 15 m by 25 m long, neither of which appear to have any coherent orientation.

4.2.4 Given their size and magnetic properties, it is possible that these anomalies are representative of extraction of an unknown origin. In particular, the anomalies at **4001** could be representative of a pit alignment given their shared, north-east to south-west orientation. These pits are characteristic of quarrying and could be related to the disused gravel pits recorded on 19th-century OS mapping to the north-east of the site. However equally they

may relate to geological features such as solution hollows, later filled with magnetically enhanced material. A possible archaeological interpretation, however, cannot be ruled out entirely for these anomalies and further investigation should be undertaken to fully comprehend these features.

4.2.5 The majority of the site is dominated by multiple areas of positive, parallel, linear anomalies at **4003** – **4007** (**Fig. 5** – **13**). The average distance between lines is 6 m, with the majority curved in form. The orientations of these anomalies alternate across the site. The vast majority are orientated either east-west (**4003** - **4005**) or north-south (**4006** and **4007**). Some of the stronger anomalies at **4003** are likely to have masked the location of the former footpath marked on first edition OS mapping. These anomalies have been interpreted as areas of ridge and furrow and are thought to be medieval due to their curved form and spacing.

4.2.6 Two magnetically strong, dipolar, linear anomalies have been identified in areas LP_001 (**4008**) and LP_002 (**4009**) (**Fig. 5** and **11**). Anomaly **4008** is orientated north-east to south-west. Whilst **4009** is orientated north-west to south-east. The magnetic properties of these anomalies are indicative of modern services.

4.2.7 Evidence of modern land drains (**Figure 9**) have also been identified via their linear form and weak speckled magnetic properties. They are predominantly located in the north-east of the site aligned on a NNW – SSE orientation.

4.2.8 Two isolated areas of increased magnetic response have been highlighted in the southern portion of LP_002 at **4010** (**Figure 9**). These strong magnetic responses corelate with the location of animal feeding troughs still located on site.

5 DISCUSSION

5.1 Results

5.1.1 The detailed gradiometer survey has been successful in detecting anomalies of possible archaeological origin in the form of a possible ring-ditch and extraction pits. In addition to these, anomalies interpreted as ridge and furrow, and modern services have also been identified.

5.1.2 In the northern portion of the site a small cluster of curvilinear and sub-rounded anomalies have been highlighted as a series of pit enclosed by a ditched enclosure of unknown date. These features could also, however, be geological in origin or interpreted as magnetic disturbance related to the laying of the modern service immediately west.

5.1.3 The two groups of pits identified in the eastern and southern portions of the site are thought to be likely linked with possible extraction of an unknown origin. With the eastern grouping relating to a possible pit alignment. They may be related to similar, modern, gravel pits identified to the north of the site, recorded on 18th-century OS mapping. It is also possible, however, that these anomalies are geological in origin.

5.1.4 Evidence of former agricultural practices noted as ridge and furrow has also been identified throughout the site. The curving form and broad spacing may indicate a medieval date however further investigation would be required to establish this.

5.1.5 The only other features identified on site relate to more recent activity and include two modern services, land drains and disturbance generated by animal feeding troughs.

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British Geological Survey online viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed September 2023)

Google Earth website http://earth.google.com (accessed September 2023)

Historic England (HE) https://historicengland.org.uk (accessed September 2023)

Heritage Gateway website https://www.heritagegateway.org.uk/gateway/ (accessed September 2023)

National Library of Scotland (NLS) https://maps.nls.uk/geo/explore/ (accessed September 2023)

APPENDICES

Appendix 1: Survey equipment and data processing

CART-BASED GRADIOMETER SURVEY

The magnetic data for this project will be acquired using a non-magnetic cart fitted with four SenSys FGM650/3 magnetic gradiometers. The instrument has four sensor assemblies fixed horizontally 1 m apart allowing four traverses to be recorded simultaneously. Each sensor contains two fluxgate magnetometers arranged vertically with a 0.6 m separation and measures the difference between the vertical components of the total magnetic field within each sensor array. This arrangement of magnetometers suppresses any diurnal or low frequency effects.

The gradiometers have an effective resolution of ±8 µT over ±1000 nT range. All of the data will be then relayed to a CS35 tablet, running the MONMX program, which is used to record the survey data from the array of FMG650/3 probes at a rate of 100 Hz. The program also receives measurements from a GPS system, which is fixed to the cart at a measured distance from the sensors, providing real time locational data for each data point.

The cart-based system relies upon accurate GPS location data which is collected using a Carlton BRx7 system. This receives corrections from a network of reference stations operated by the Ordnance Survey and Carlton Geosystems, allowing positions to be determined with a precision of 0.02 m in real-time and therefore exceed the level of accuracy recommended by European Archaeologiae Consilium (Schmidt *et al.* 2015).

Post-processing

The magnetic data collected during the detail survey are downloaded from the cart system for processing and analysis using both commercial and in-house software. This software allows for both the data and the images to be processed in order to enhance the results for analysis; however, it should be noted that minimal data processing is conducted so as not to distort the anomalies.

The cart-based system generally requires a lesser amount of post-processing than the handheld Bartington Grad 601-2 fluxgate gradiometer instrument. This is largely because mounting the gradiometers on the cart reduces the occurrence of operator error, caused by inconsistent walking speeds and deviation in traverse position due to varying ground cover and topography.

Typical data and image processing steps may include:

- Destripe – Applying a smooth function to remove differences caused by directional effects inherent in the magnetometer;
- Despike – Filtering isolated data points that exceed the mean by a specified amount to reduce the appearance of dominant anomalous readings (generally only used for earth resistance data).

Typical displays of the data used during processing and analysis:

- Greyscale – Presents the data in plan view using a greyscale to indicate the relative strength of the signal at each measurement point. These plots can be produced in colour to highlight certain features but generally greyscale plots are used during analysis of the data.
- XY Plot – Presents the data as a trace or graph line for each traverse. Each traverse is displaced down the image to produce a stacked profile effect. This type of image is useful as it shows the full range of individual anomalies. (XY plots are available on request)

Appendix 2: Geophysical interpretation

GRADIOMETER

The interpretation methodology used by Wessex Archaeology separates the anomalies into four main categories: archaeological, modern, agricultural, and uncertain or geological origin.

The archaeological category is used for features when the form, nature, and pattern of the anomaly are indicative of archaeological remains. Further sources of information such as aerial photographs may also have been incorporated in providing the final interpretation. This category is further sub-divided into two groups, implying a decreasing level of confidence:

- Archaeology – used when there is a clear geophysical response and anthropogenic pattern.
- Possible archaeology – used for features which give a response but which form no discernible pattern or trend.

The modern category is used for anomalies that are presumed to be relatively modern in date:

- Ferrous – used for responses caused by ferrous material. These anomalies are likely to be of modern origin.
- Modern service – used for responses considered relating to cables and pipes; most are composed of ferrous/ceramic material although services made from non-magnetic material can sometimes be observed.

The agricultural category is used for the following:

- Former field boundaries – used for ditch sections that correspond to the position of boundaries marked on earlier mapping.
- Agricultural ditches – used for ditch sections that are aligned parallel to existing boundaries and former field boundaries that are not considered to be of archaeological significance.
- Ridge and furrow – used for broad and diffuse linear anomalies that are considered to indicate areas of former ridge and furrow.
- Ploughing – used for well-defined narrow linear responses, usually aligned parallel to existing field boundaries.
- Drainage – used to define the course of ceramic field drains that are visible in the data as a series of repeating bipolar (black and white) responses.

The uncertain origin/geological category is used for features when the form, nature and pattern of the anomaly are not sufficient to warrant a classification as an archaeological feature. This category is further sub-divided into:

- Increased magnetic response – used for areas dominated by indistinct anomalies which may have some archaeological potential.
- Trend – used for low amplitude or indistinct linear anomalies.

Superficial geology – used for diffuse edged spreads considered to relate to shallow geological deposits. They can be distinguished as areas of positive, negative, or broad bipolar (positive and negative) anomalies.

Appendix 3 OASIS form

OASIS Summary for wessexar1-518958

OASIS ID (UID)	wessexar1-518958
Project Name	Geophysical Survey at Land at Twyford, Melton, Leicestershire
Sitename	Land at Twyford, Melton, Leicestershire
Sitecode	284720
Project Identifier(s)	Land at Twyford, Melton, Leicestershire
Activity type	Geophysical Survey, MAGNETOMETRY SURVEY
Planning Id	
Reason For Investigation	Planning requirement
Organisation Responsible for work	Wessex Archaeology
Project Dates	23-Aug-2023 - 25-Aug-2023
Location	Land at Twyford, Melton, Leicestershire NGR : SK 71501 10655 LL : 52.68887342998061, -0.943616591257536 12 Fig : 471501,310655
Administrative Areas	Country : England County : Leicestershire District : Melton Parish : Twyford and Thorpe
Project Methodology	The geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team between 23-25/08/2023. Field conditions at the time of the survey were sunny. An overall coverage of 13.3 ha was achieved, as there were reductions in the survey area around the periphery of the site, due to overgrown areas and areas associated with fencing. The methods and standards employed throughout the geophysical survey conform to that set out in the Written Scheme of Investigation (WSI) (Wessex Archaeology 2023), as well as to current best practice, and guidance outlined by the Chartered Institute for Archaeologists' (CIfA 2014) and European Archaeologiae Consilium (Schmidt et al. 2015).

Project Results	The detailed gradiometer survey has been successful in detecting anomalies of possible archaeological origin in the form of a possible ring-ditch and extraction pits. In addition to these, anomalies interpreted as ridge and furrow, and modern services have also been identified. In the northern portion of the site a small cluster of curvilinear and globular anomalies have been highlighted as an assortment of ditches and pits. It is possible that the larger curvilinear anomaly to the east represents the external limits of a small ring-ditch. Whilst the smaller, more globular anomalies immediately west, relate to internal pits. These anomalies could also, however, be geological, related to the laying of the modern service immediately west. The two groups of pits identified in the east and southern portions of the site are thought to be of Romano-British origin likely linked to extraction. With the eastern grouping relating to a possible pit alignment. It is also possible, however, that these anomalies are geological in origin or related to a build-up of magnetic material as a result of modern agricultural practices. These extraction pits could also be related to similar, modern, gravel pits identified to the north of the site, recorded on 18th-century OS mapping. Evidence of medieval ridge and furrow has also been identified with the survey, in addition to modern services and land drains. Disturbance generated by cattle grids on site has also been recorded in the east.
Keywords	
Funder	Private individual
HER	Leicestershire HER - unRev - STANDARD
Person Responsible for work	T Richardson
HER Identifiers	
Archives	

Report generated on: 08 Sep 2023, 12:57

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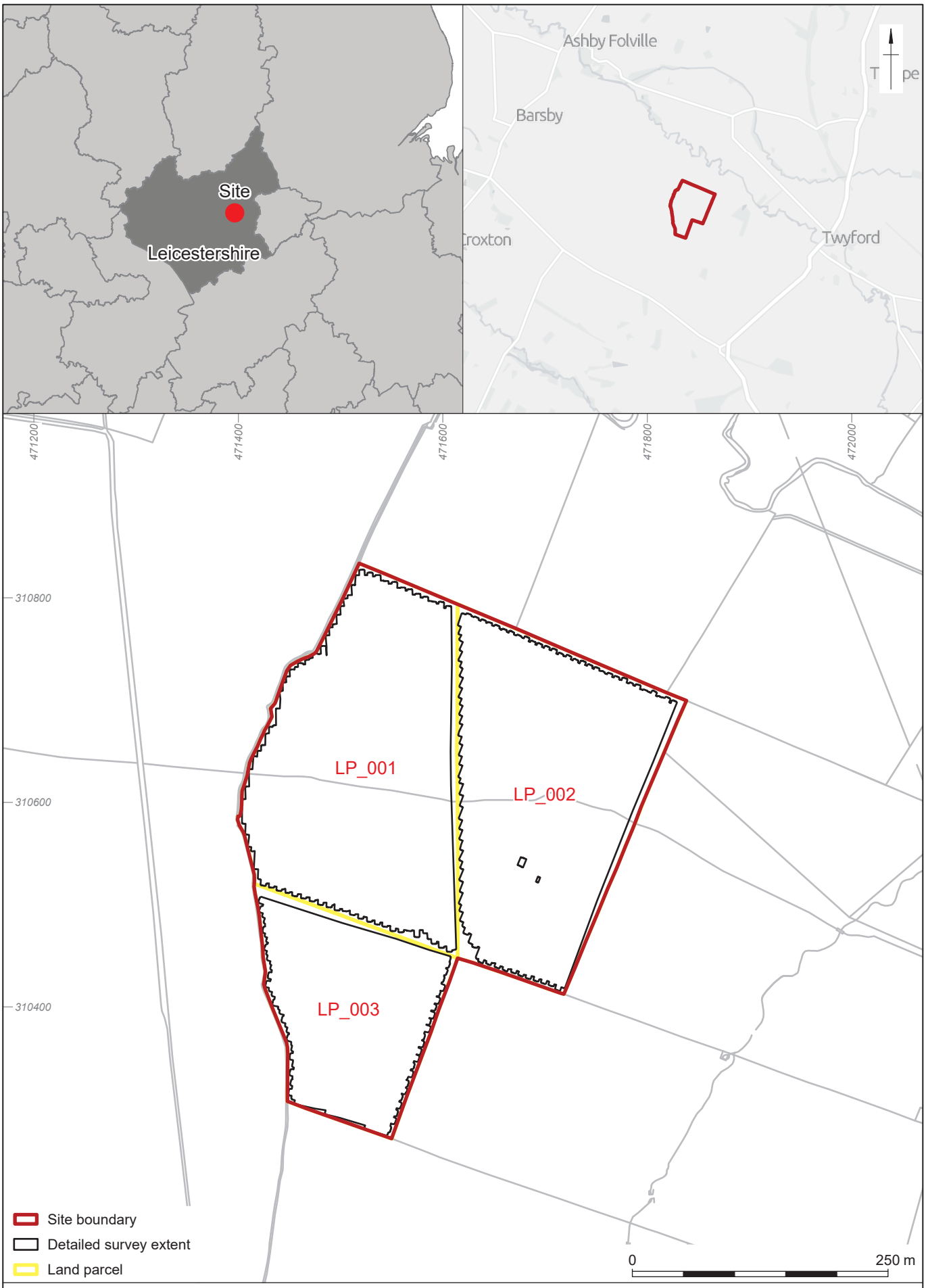

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Figure 1: Site location and survey extents

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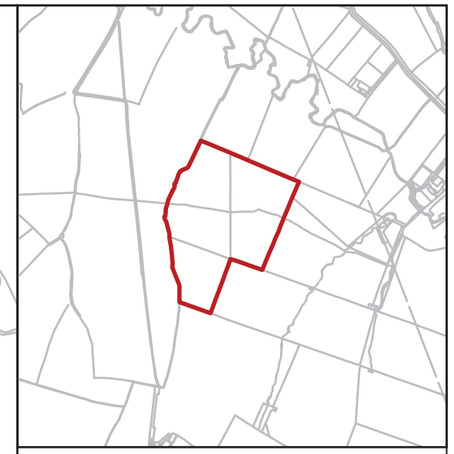
471000
471500
472000
311000
310500
310000

Figure 4
Figure 8
Figure 6
Figure 10
Figure 12



Site boundary
Detailed survey extent

-2 nT
3 nT

0
250 m

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Figure 2: Detailed gradiometer survey results: overall greyscale plots (-2nT to 3nT)

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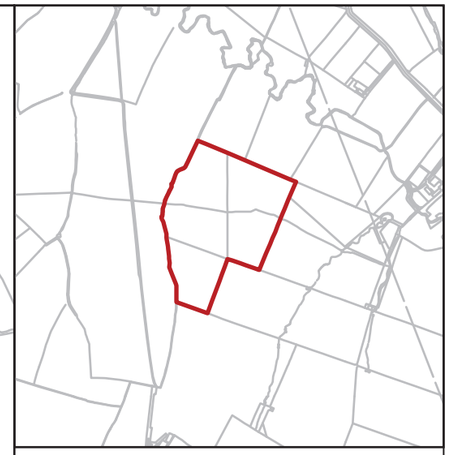
471000
471500
472000
311000
310500
310000

Figure 5
Figure 9
Figure 7
Figure 11
Figure 13



- Site boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Geology
- Geomorphology
- Historic cultivation
- Modern service
- Increased response
- Ferrous
- Agricultural feature
- Drain
- Trend

0 250 m

Date: 30/08/2023	Created by: ADT
Scale: 1:5,000	Revision: 0

Figure 3: Detailed gradiometer survey results: overall interpretation

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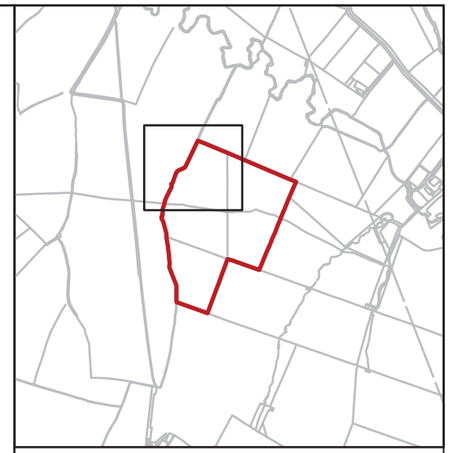
471500

471600

310800

310700



Site boundary

Detailed survey extent

-2 nT

3 nT

0

50 m

Date: 30/08/2023	Created by: ADT
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Figure 4: Detailed gradiometer survey results: greyscale plot (LP_001)

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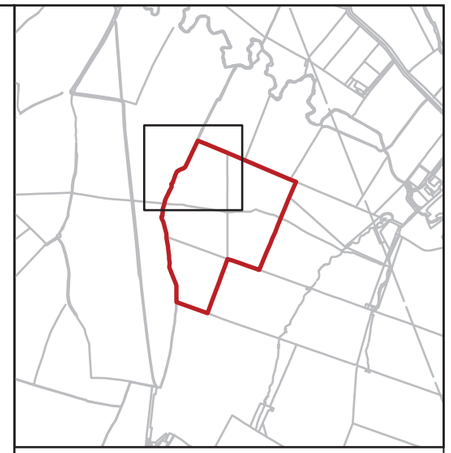
4008

4000



Site boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Geology
Geomorphology
Historic cultivation
Modern service
Increased response
Ferrous
Agricultural feature
Drain
Trend

0 50 m

Date: 06/09/2023 | Created by: ADT

Scale: 1:2000 | Revision: 0

Figure 5: Detailed gradiometer survey results: interpretation (LP_001)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

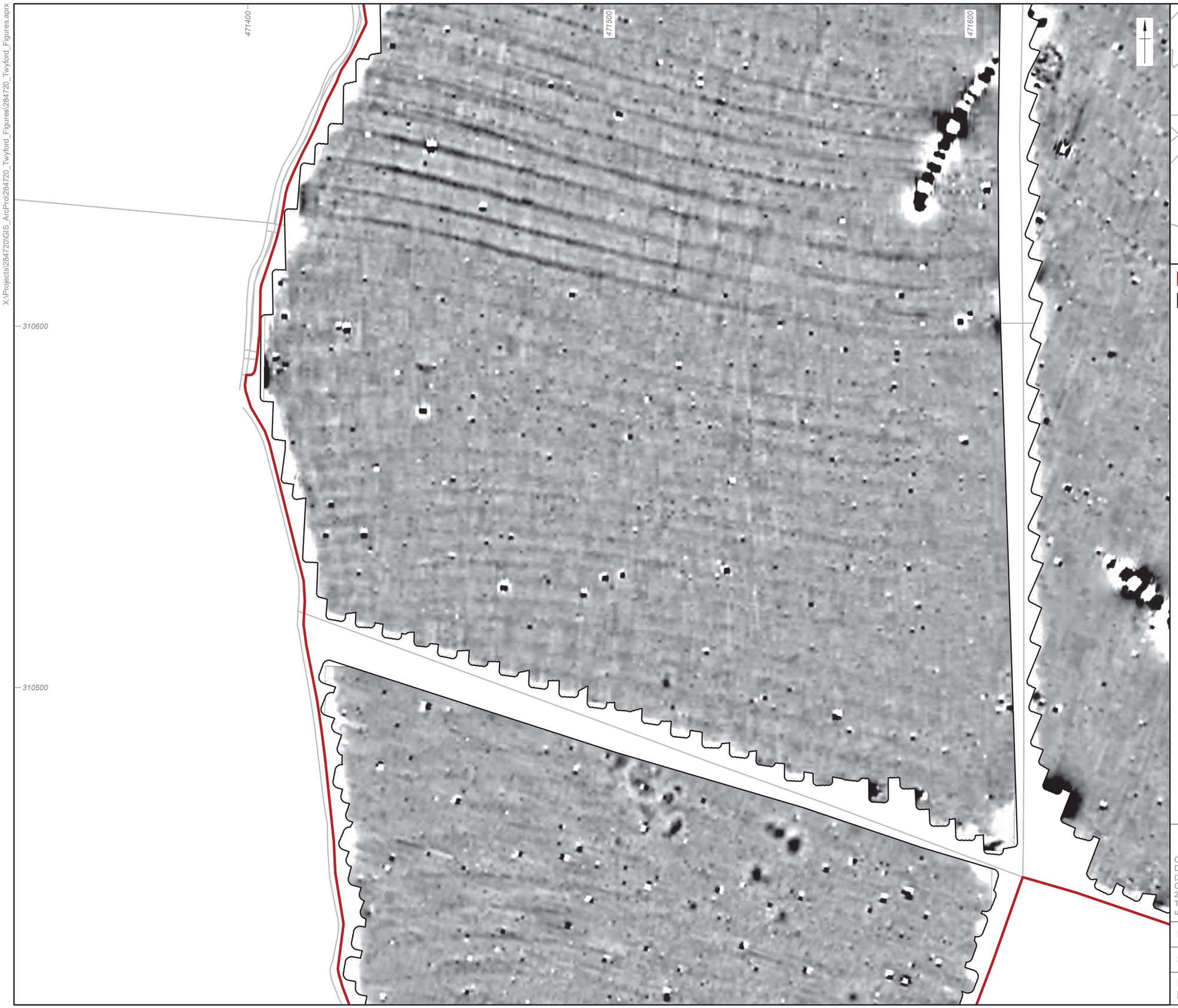
471400

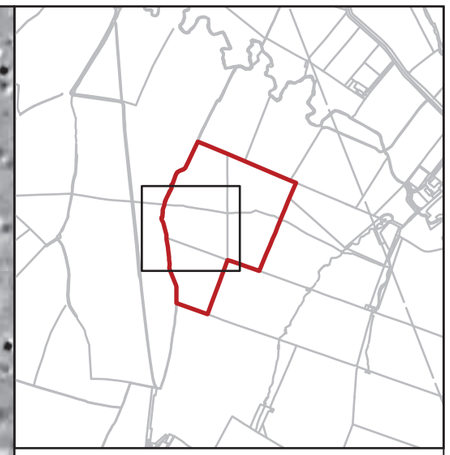
471500

471600

310600

310500





Site boundary

Detailed survey extent

-2 nT 3 nT

0 50 m

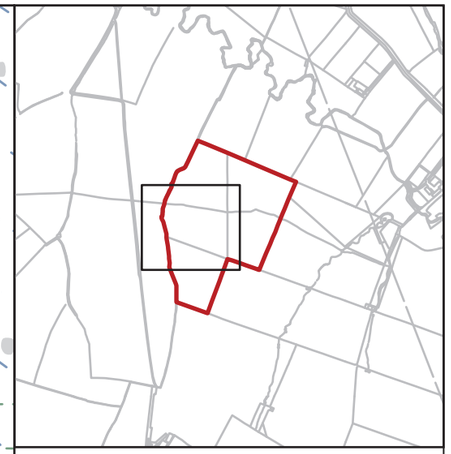
Date: 30/08/2023	Created by: ADT
Scale: 1:2000	Revision: 0

Figure 6: Detailed gradiometer survey results: greyscale plot (LP_001)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471400
471500
471600
310600
310500

4003
4006
4008
4000
4009
4002
a
b



Site boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Geology
Geomorphology
Historic cultivation
Modern service
Increased response
Ferrous
Agricultural feature
Drain
Trend

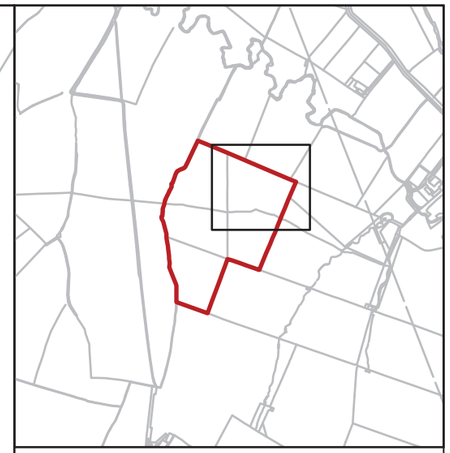
0 50 m

Date: 06/09/2023 | Created by: ADT
Scale: 1:2000 | Revision: 0

Figure 7: Detailed gradiometer survey results: interpretation (LP_001)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471600
471700
471800
310800
310700
310600



Site boundary
Detailed survey extent

-2 nT
3 nT

0
50 m

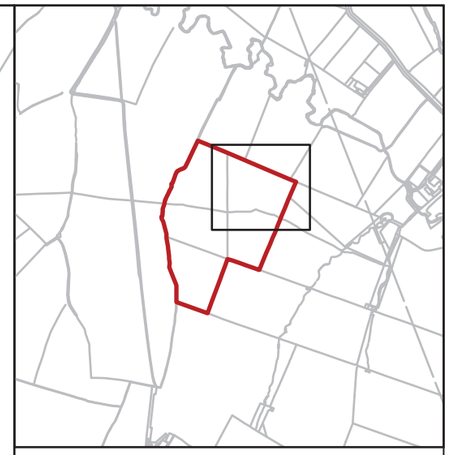
Date: 30/08/2023	Created by: ADT
Scale: 1:2000	Revision: 0

Figure 8: Detailed gradiometer survey results: greyscale plot (LP_002)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471600
471700
471800
310800
310700
310600

4007
4008
4000
4001
4004
a
b
c
d



Site boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Geology
Geomorphology
Historic cultivation
Modern service
Increased response
Ferrous
Agricultural feature
Drain
Trend

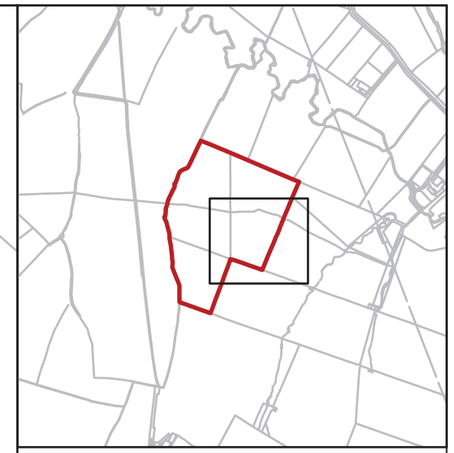
0 50 m

Date: 06/09/2023 | Created by: ADT
Scale: 1:2000 | Revision: 0

Figure 9: Detailed gradiometer survey results: interpretation (LP_002)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471600
471700
471800
310600
310500
310400



-2 nT 3 nT

0 50 m

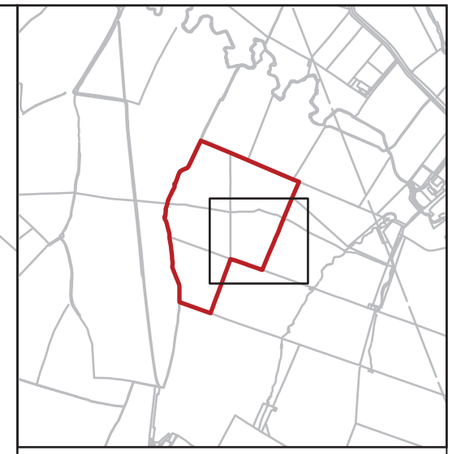
Date: 30/08/2023	Created by: ADT	
Scale: 1:2000	Revision: 0	

Figure 10: Detailed gradiometer survey results: greyscale plot (LP_002)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471600
471700
471800
310600
310500
310400

a
4001
b
c
d
4004
4010
4009



Site boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Geology
Geomorphology
Historic cultivation
Modern service
Increased response
Ferrous
Agricultural feature
Drain
Trend

0 50 m

Date: 06/09/2023 | Created by: ADT
Scale: 1:2000 | Revision: 0

Figure 11: Detailed gradiometer survey results: interpretation (LP_002)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471400

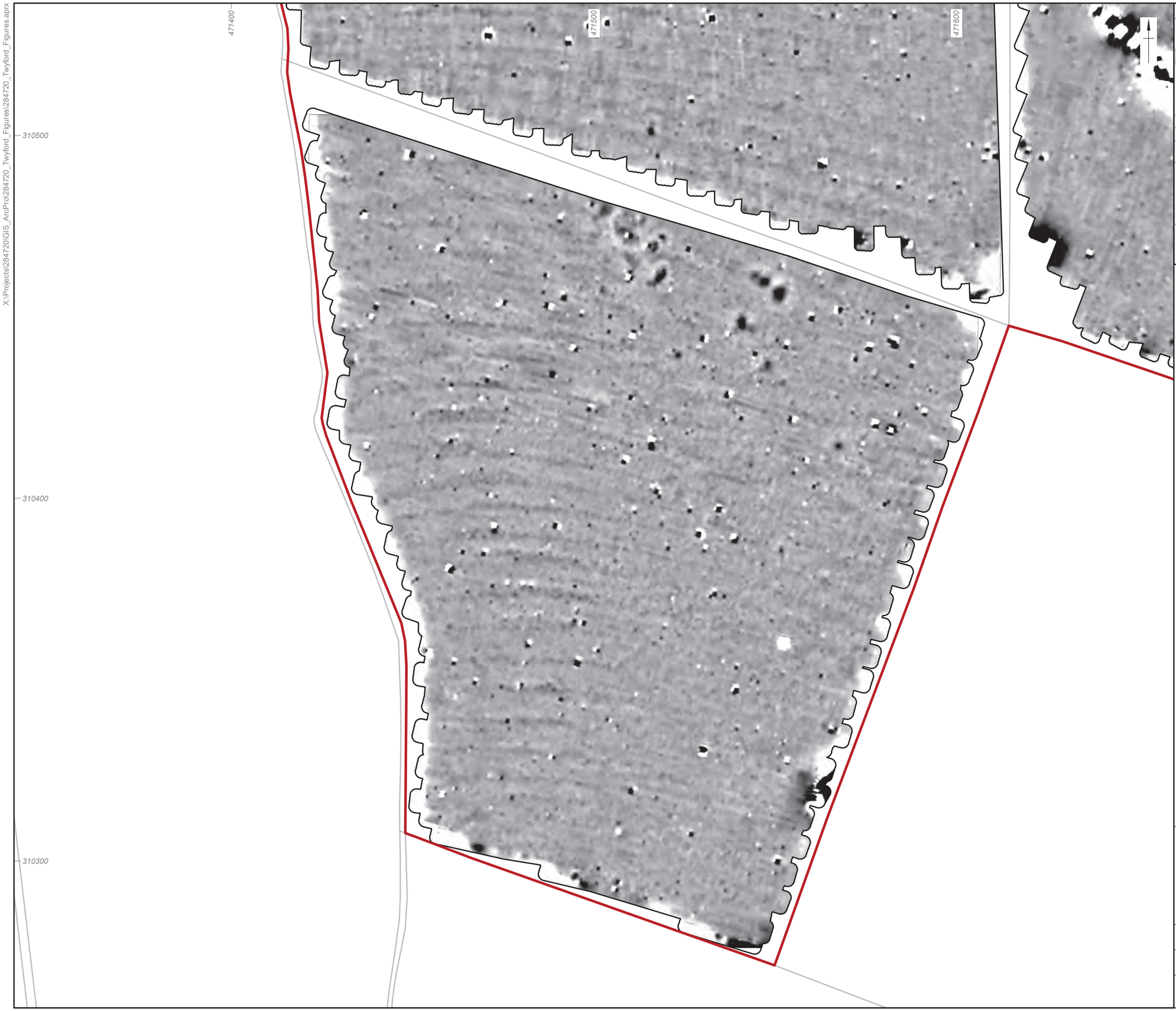
471500

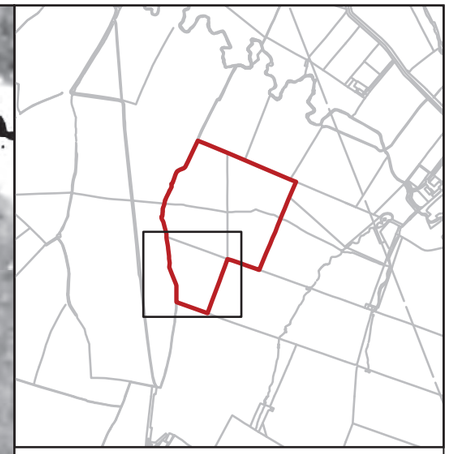
471600

310500

310400

310300





Site boundary

Detailed survey extent

-2 nT

3 nT

0

50 m

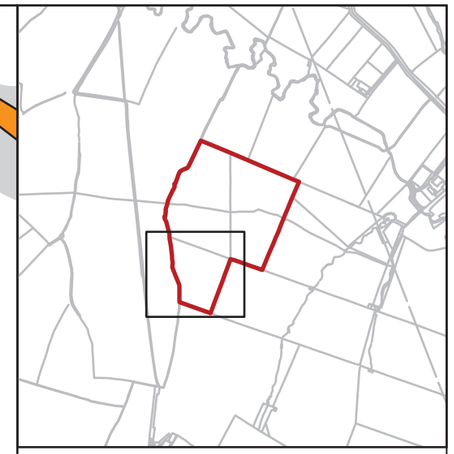
Date: 30/08/2023	Created by: ADT	
Scale: 1:2000	Revision: 0	

Figure 12: Detailed gradiometer survey results: greyscale plot (LP_003)

X:\Projects\284720\GIS_ArcPro\284720_Twyford_Figures\284720_Twyford_Figures.aprx

471400
471500
471600
310500
310400
310300

4009
4002
a
b
4005



Site boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Geology
Geomorphology
Historic cultivation
Modern service
Increased response
Ferrous
Agricultural feature
Drain
Trend

0 50 m

Date: 06/09/2023 | Created by: ADT
Scale: 1:2000 | Revision: 0

Figure 13: Detailed gradiometer survey results: interpretation (LP_003)

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