GEOPHYSICAL SURVEY REPORT

Great Cransley, Northamptonshire

Client

ULAS

Survey Report

10400

OASIS Ref. No.

sumogeop1-510505

HER Event No.

ENN110920

Date

01 November 2022

Survey Report 10400: Great Cransley, Northamptonshire

Survey dates	21 October 2022
Field co-ordinator	Jordan Morris BA
Field Team	Stephen Weston BA
Report Date	01 November 2022
CAD Illustrations	Thomas Cockcroft MSc MCIfA
Report Author	Thomas Cockcroft MSc MCIfA
Project Manager	Simon Haddrell BEng AMBCS PCIfA
Report approved	Dr John Gater BSc DSc(Hon) MCIfA FSA

SUMO Geophysics Ltd
Vineyard House
Upper Hook Road
Upton upon Severn
Worcestershire
WR8 0SA

T: 01684 592266

www.sumoservices.com
geophysics@sumoservices.com

TABLE OF CONTENTS

1 LIST OF FIGURES

2 LIST OF APPENDICES

3 SURVEY TECHNIQUE

3.1 Detailed magnetic survey (magnetometry) was chosen as the most efficient and effective method of locating the type of archaeological anomalies which might be expected at this site. All survey techniques followed the guidance set out by CIFA (2014, updated 2020), Historic England (2008), and the European Archaeology Council (EAC) (2016).

Bartington Grad 601-2 Traverse Interval 1.0m Sample Interval 0.25m

The only processes performed on data are the following unless specifically stated otherwise:

Zero Mean Traverse	This process sets the background mean of each traverse within each grid to zero. The operation removes instrument striping effects and edge discontinuities over the whole of the data set.
Step Correction (De-stagger)	When gradiometer data are collected in 'zig-zag' fashion, stepping errors can sometimes arise. These occur because of a slight difference in the speed of walking on the forward and reverse traverses. The result is a staggered effect in the data, which is particularly noticeable on linear anomalies. This process corrects these errors.

4 SUMMARY OF RESULTS

4.1 A magnetometer survey of 1.7 hectares of land at Great Cransley, Northamptonshire has recorded numerous magnetic responses which have been interpreted as being of archaeological interest. The locations of two enclosures have been marked, along with other trends, ditch-like responses and pit-like anomalies. However, it is possible that a recorded WWII camp may be responsible for some or many of the responses. A former field boundary and a service pipe are also visible in the magnetic data.

5 INTRODUCTION

5.1 **SUMO Geophysics Ltd** were commissioned to undertake a geophysical survey of an area outlined for development. This survey forms part of an archaeological investigation being undertaken by **ULAS**.

5.2 Site Details

NGR / Postcode	SP 82936 76717 / NN14 1FX
Location	The site is located 3.5 km west of Kettering and 1km north-west of Broughton. The survey area is bounded to the south by Church Lane and to the east by houses off Loddington Road.
HER	Northamptonshire HER
OASIS Ref. No.	sumogeop1-510505
HER Event No.	ENN110920
District	North Northamptonshire
Parish	Cransley Civil Parish
Topography	Flat
Land Use	Pasture
Geology (BGS 2022)	Bedrock: Northampton Sand Formation - Ironstone, ooidal Superficial: Glaciofluvial Deposits, Mid Pleistocene - Sand and gravel
Soils (CU 2022)	Soilscape 7: Freely draining slightly acid but base-rich soils
Survey Methods	Magnetometer survey (fluxgate gradiometer)
Study Area	1.7 ha

5.3 ***Archaeological Background*** *(HG 2022)*

5.3.1 Remains of the Shrunken Medieval settlement (MNN1442), formerly part of Great Cransley, lie in and around the existing village. The surviving earthworks together with the map of the parish of 1598 show that the village has been greatly altered in late medieval and post medieval times. There were three owners at Domesday, but the manors were reorganised into four by the C12th. In the late C16th the village was centred on Church Lane, with settlement mainly along this road and to the north. There were changes to the layout of the village and its road pattern between 1791 and 1835. Ridge and furrow ploughing is recorded in the HER (MNN133921) qhich have been mapped by the Midland Open Fields Project, 1995-99 (Ref: 7968005).

5.3.2 In the field on the north side of Church Lane, are slight traces of banks and scarps, all damaged by much later activity, which probably represent former closes (MNN23435). These do not however agree with boundaries on the 1598 map, and may be either older, or more recent. The houses present on the 1598 map had disappeared by the time of the 1st edition 1 inch OS map (1834). The site of a house shown on the 1598 map survives as earthworks at the south end of a small close north west of the church. Earthworks of rectangular enclosures in the area of the medieval/post medieval village are possibly earlier as they do not conform to the alignment of

the hollow way; NCCAP:SP8276/016. Field was stripped and levelled for agricultural purposes, revealing undated stone foundation walls and a small quantity of Roman and Medieval pottery.

5.3.3 A hollow way is (MNN23440) recorded in the south-east of the site, maps show a small loop road to the north of Church Lane. This loop road is virtually intact, except where it crossed the Loddington Road. This is a massive hollow way, up to 2.5m deep.

5.3.4 A low mound, only 1m high and rather irregular and disturbed by later digging, is the site of a dovecot which is shown on the map in approximately this position, the field was known as Dovehouse Close (MNN23437).

5.3.5 Numerous undated pits (MNN122156, MNN122158, MNN122159, MNN122160 & MNN122163) and ditches (MNN122161, MNN122171 & MNN122172) are recorded within the site which have mapped in Northamptonshire National Mapping Programme (1993-2002). The locations of two enclosures, thought to date to the Medieval period (MNN122152, MNN122153 & MNN122154) have been plotted along with a possible Medieval building (MNN122155).

5.3.6 Areas around of Great Cransley was requisitioned by the armed forces during the 2nd world war. The site access and the land now occupied by 2A Church Lane Great Cransley was used for temporary accommodation during the war and referred locally as 'The camp.' The survey area was also used to accommodate prisoners of war (John Thomas, *pers. comm*.).

5.4 ***Aims and Objectives***

5.4.1 To locate and characterise any anomalies of possible archaeological interest within the study area.

6 RESULTS

Specific anomalies have been given numerical labels [1] [2] which appear in the text below, as well as on the Interpretation Figure(s).

The interpretation that follows is based upon the evidence recorded in the local HER and referred to above in paragraphs 5.3.1 to 5.3.5. However, if the reported WWII camp (see 5.3.6) extended over this area it is conceivable that the interpretation of the aerial photographs and hence the magnetic anomalies may be erroneous.

6.1 ***Probable / Possible Archaeology***

6.1.1 A series of ditch-like responses and a linear trend [1, 2 & 3] have been recorded in the east of the site and have been assigned to the category of *Probable Archaeology*. The four segmented ditch-like anomalies [1 & 2] appear to form a rectangular enclosure and correspond with the locations of cropmarks that are recorded in the HER (MNN122152 & MNN23435).

6.1.2 Other ditch like-responses [4, 5 & 6] are also visible in the survey but they only partially coincide with features on the aerial transcription in the HER (see Fig 11); hence they have been assigned to the category of *Possible Archaeology*. A rectilinear response comprising discrete anomalies and linear trends [7] has also been assigned to the category of *Possible Archaeology* and may be a small enclosure or building platform.

6.2 ***Uncertain***

6.2.1 Numerous linear trends, discrete ditch-like anomalies, pit like responses and zones of increased magnetic response have been detected throughout the survey and have been assigned to the category of *Uncertain*. In places it has been difficult to interpret the responses, while it is likely that some are anthropogenic in origin, it is unclear about their origin they could

have medieval origins or be associated with the former POW camp. However, some of the responses could also be due to underlying geological variations or ridge and furrow ploughing.

6.3 *Former Field Boundary – Corroborated*

6.3.1 A linear curving anomaly has been recorded in the south-east of the survey which corresponds with the route of a former field boundary that is visible on 1892-1914 Ordnance Survey Mapping (see Figure 08).

6.4 *Service*

6.4.1 A strong linear dipolar ferrous response has been recorded in the south of the plot that marks the route of a service pipe.

6.5 *Ferrous / Magnetic Disturbance*

6.5.1 Ferrous responses close to boundaries are due to adjacent fences and gates. Smaller scale ferrous anomalies ("iron spikes") are present throughout the data and are characteristic of small pieces of ferrous debris (or brick / tile) in the topsoil; they are commonly assigned a modern origin. Only the most prominent of these are highlighted on the interpretation diagram.

7 DATA APPRAISAL & CONFIDENCE ASSESSMENT

7.1 Historic England guidelines (EH 2008) Table 4 states that the typical magnetic response on the local soils / geology is variable. The results from this survey indicate the presence of ditch and pit-like responses and as such is deemed to have worked well. However, in places it has been difficult to interpret the responses due to the strong magnetic variations within the dataset and the sheer density of anomalies present.

8 CONCLUSION

8.1 The magnetometer survey has recorded numerous magnetic responses that have been interpreted as being of archaeological interest, though the possibility exists that they are associated with a WWII camp. Ditch and pit-like anomalies have been assigned to the categories of probable and possible archaeology depending upon their magnetic strengths and / or their correlation with heritage assets recorded in the HER. The locations of two possible enclosures / building platforms have been plotted in the data. Many of the responses extend beyond the limits of the survey.

8.2 Linear anomalies and trends, pit-like responses and zones of increased magnetic response have been assigned to the category of uncertain. It has been difficult to interpret the responses with confidence, they could be archaeological, related to a reported WWII camp or even be natural in origin. The route of a former field boundary has been marked along with a service pipe.

9 REFERENCES

BGS 2022 British Geological Survey, Geology of Britain viewer [accessed 28/10/2022] *website*: (http://www.bgs.ac.uk/opengeoscience/home.html?Accordion1=1#maps)

CIfA 2014 Amended 2020 *Standard and Guidance for Archaeological Geophysical Survey.* Amended 2020. CIfA Guidance note. Chartered Institute for Archaeologists, Reading https://www.archaeologists.net/sites/default/files/CIfAS%26GGeophysics_3.pdf

CU 2022 The Soils Guide. Available: www.landis.org.uk. Cranfield University, UK. [accessed 28/10/2022] *website: http://mapapps2.bgs.ac.uk/ukso/home.html*

EAC 2016 *EAC Guidelines for the Use of Geophysics in Archaeology,* European Archaeological Council, Guidelines 2.

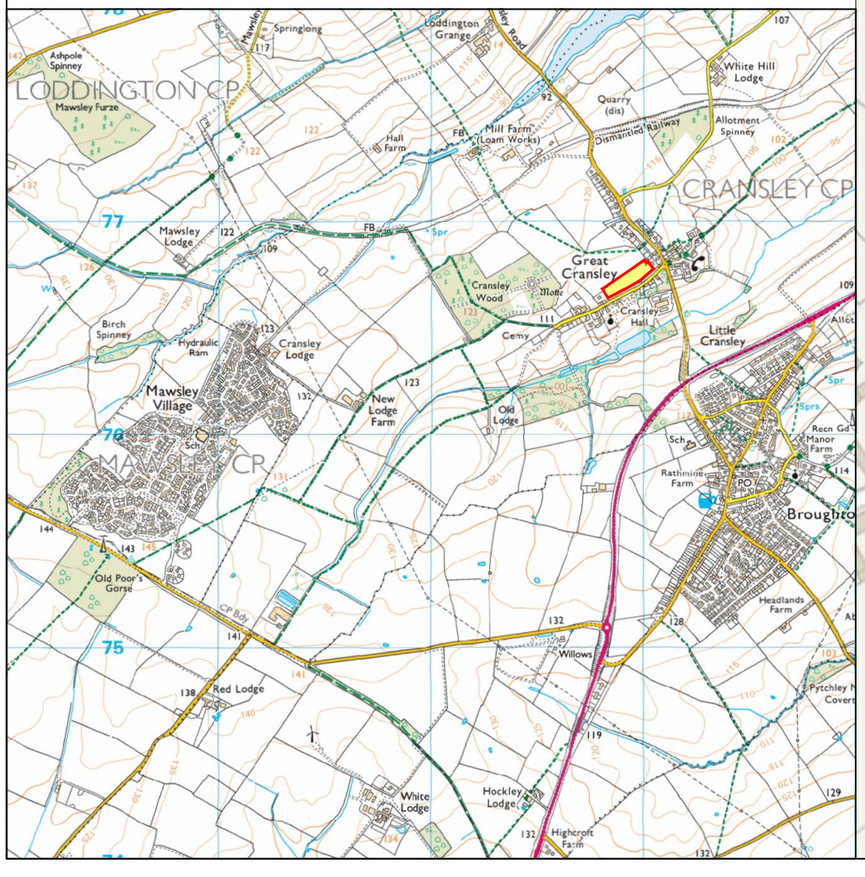
EH 2008 *Geophysical Survey in Archaeological Field Evaluation.* English Heritage, Swindon (now withdrawn, but used for evaluating suitability of soil types)

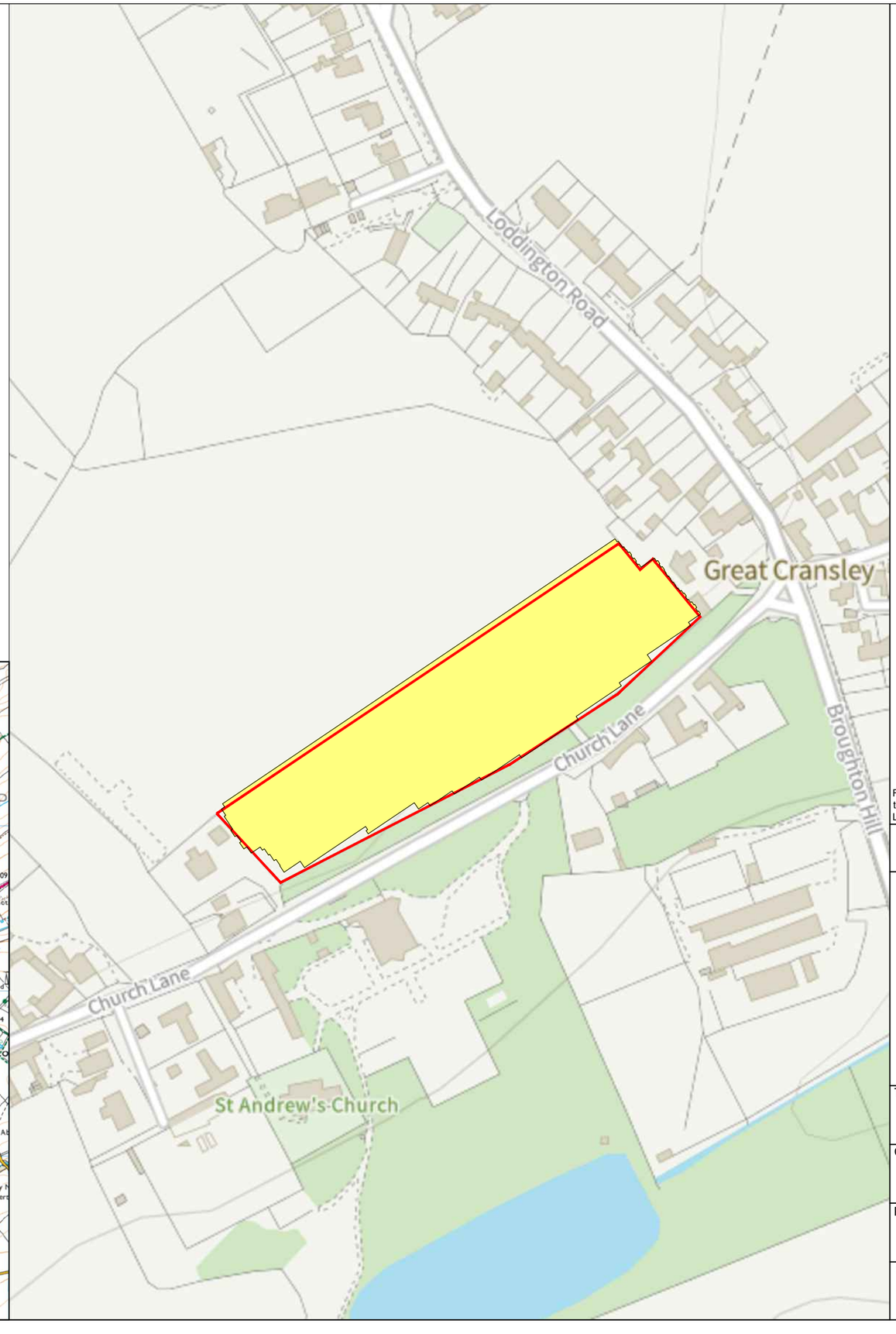
HG 2022 *Heritage Gateway Online Viewer [accessed 29/10/2022] website: https://www.heritagegateway.org.uk/gateway/*

10 ARCHIVE

10.1 The minimally processed data, data images, XY traces and a copy of this report are stored in **SUMO Geophysics Ltd.'s** digital archive, on an internal RAID configured NAS drive in the Midlands Office. These data are also backed up to the Cloud for off-site storage.

10.2 The Grey Literature will be archived with OASIS and the relevant HER within a period of 12 months.





Survey Areas

N

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Site Location

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
NOT TO SCALE

Fig No:
01

N

+2nT

-1nT

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Magnetometer Survey - Greyscale Plot
(+2nT to -1nT)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
01

N

+4nT

-2nT

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Magnetometer Survey - Greyscale Plot
(+4nT to -2nT)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
03

N

+6nT

-4nT

sumo Survey

GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Magnetometer Survey - Greyscale Plot
(+6nT to -4nT)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
04

N

+10nT

-10nT

sumo Survey

GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Magnetometer Survey - Greyscale Plot
(+10nT to -10nT)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
05

N

+100nT

-100nT

sumo Survey

GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:

Magnetometer Survey - Colour Plot

Client:

ULAS

Project:

10400 Great Cransley, Northamptonshire

Scale:

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1:1000 @ A3

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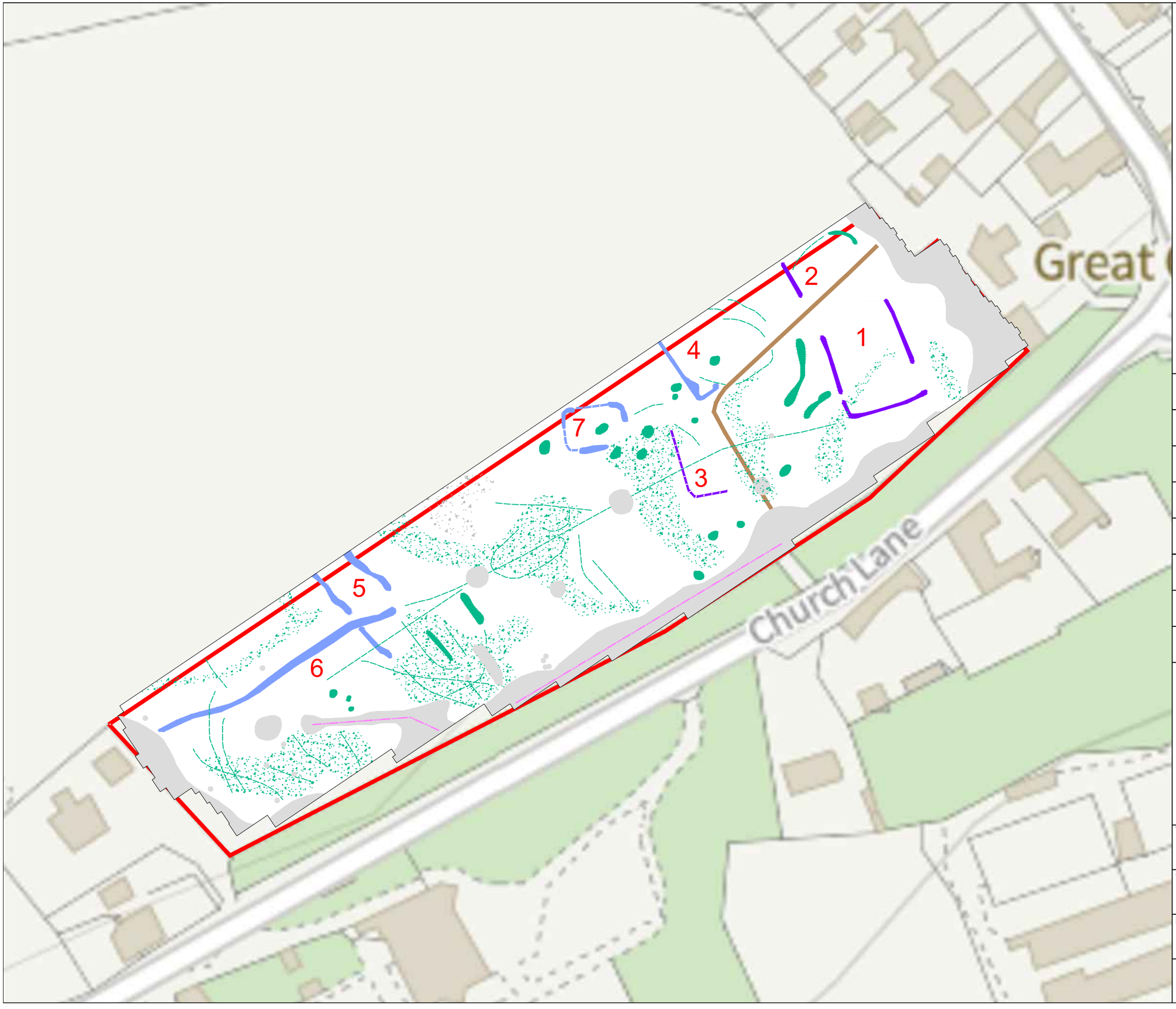

N

KEY

	Probable archaeology (discrete anomaly / trend)
	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / increased response)
	Former field boundary (corroborated)
	Magnetic disturbance
	Service
	Ferrous

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Magnetometer Survey - Interpretation

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
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1:1000 @ A3

Fig No:
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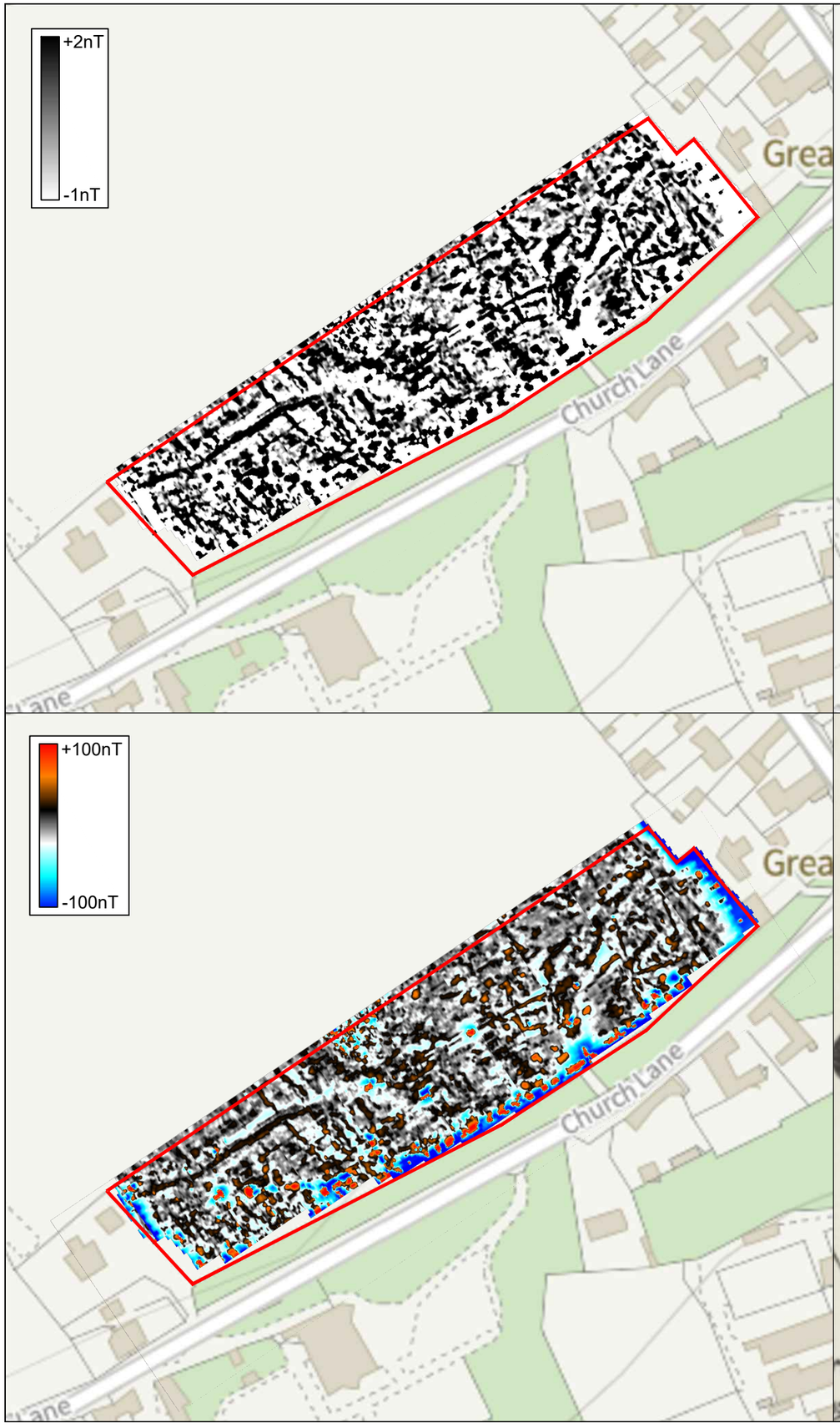

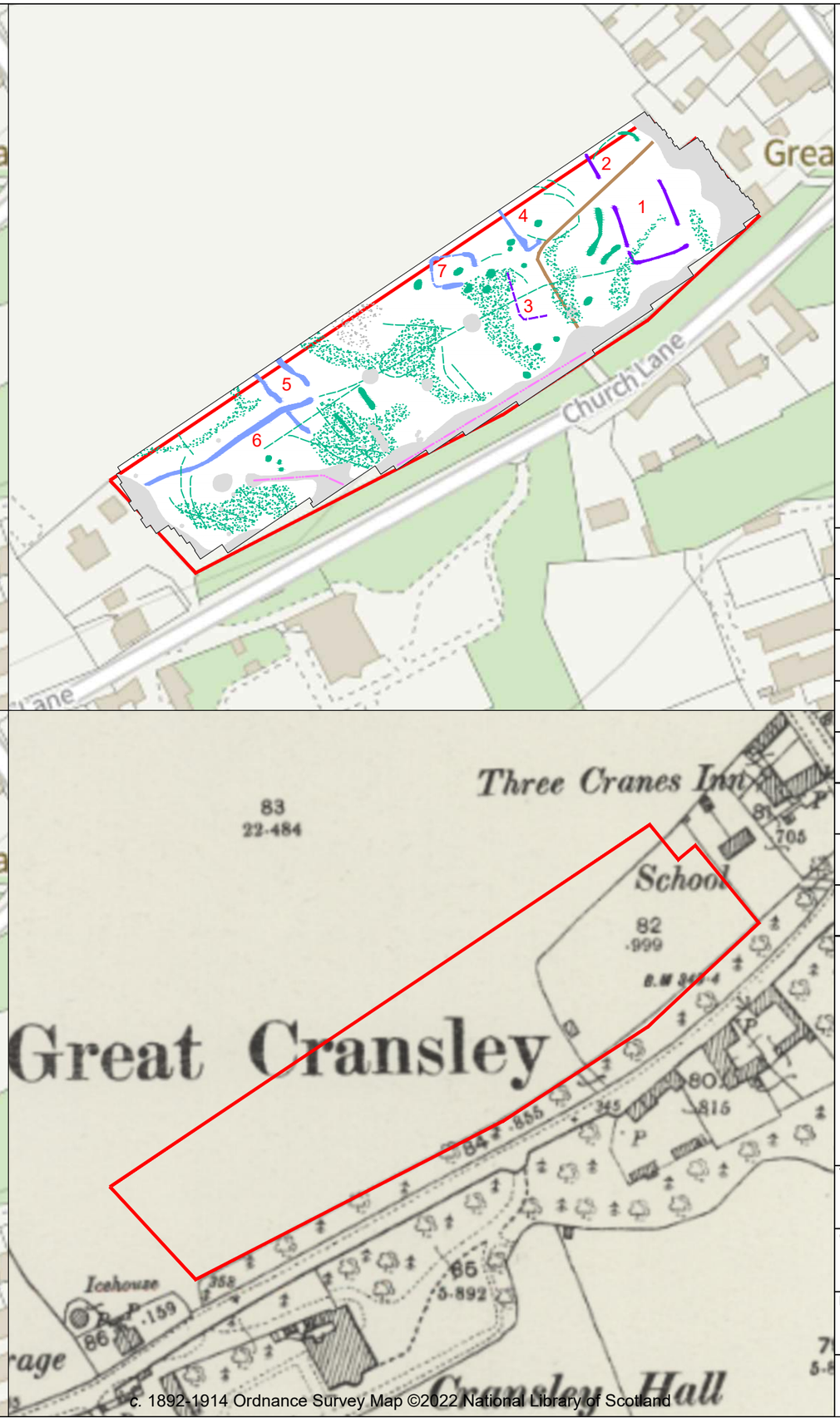

c. 1892-1914 Ordnance Survey Map ©2022 National Library of Scotland

N

KEY

	Probable archaeology (discrete anomaly / trend)
	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / increased response)
	Former field boundary (corroborated)
	Magnetic disturbance
	Service
	Ferrous

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Greyscale and Colour Plots / Interpretation / *c.* 1892-1914 Ordnance Survey Map

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
NOT TO SCALE

Fig No:
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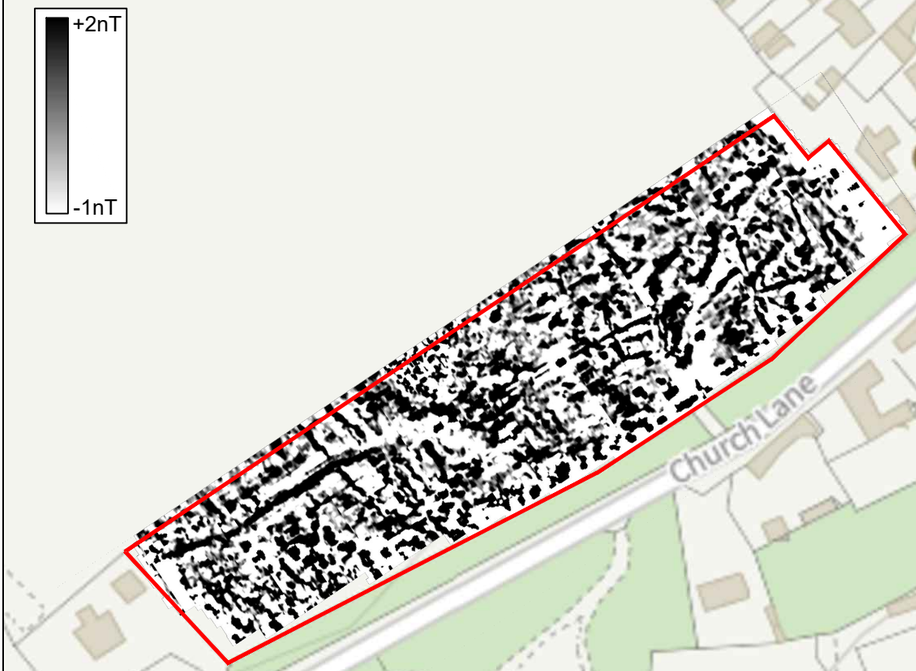

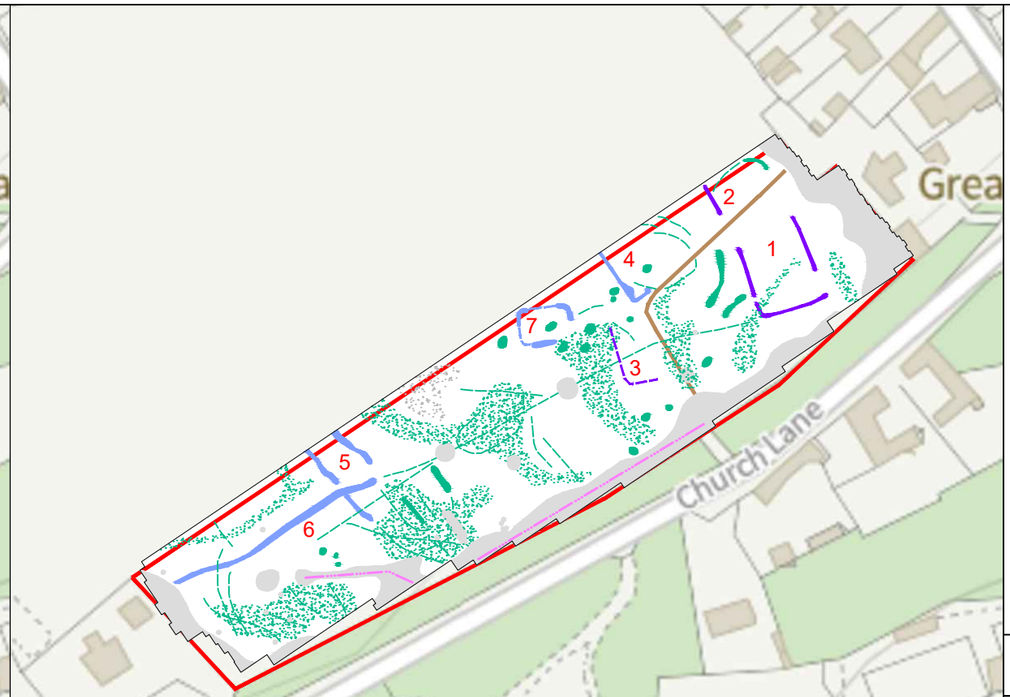

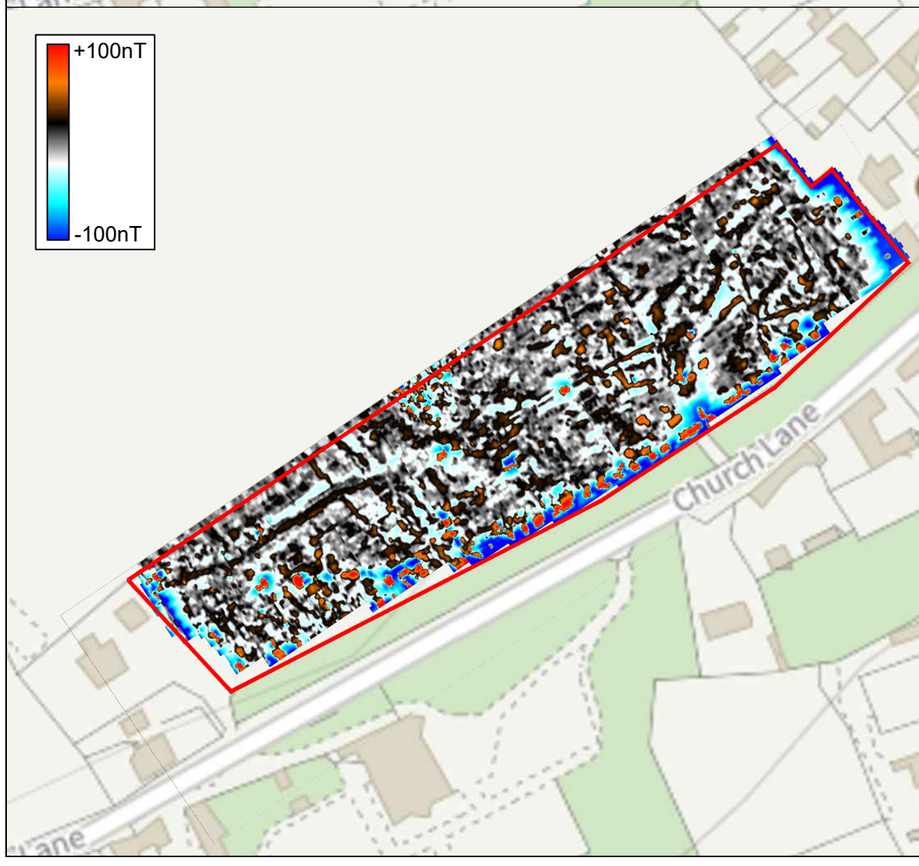

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KEY

	Probable archaeology (discrete anomaly / trend)
	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / increased response)
	Former field boundary (corroborated)
	Magnetic disturbance
	Service
	Ferrous

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

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Client: ULAS

Project: 10400 Great Cransley, Northamptonshire

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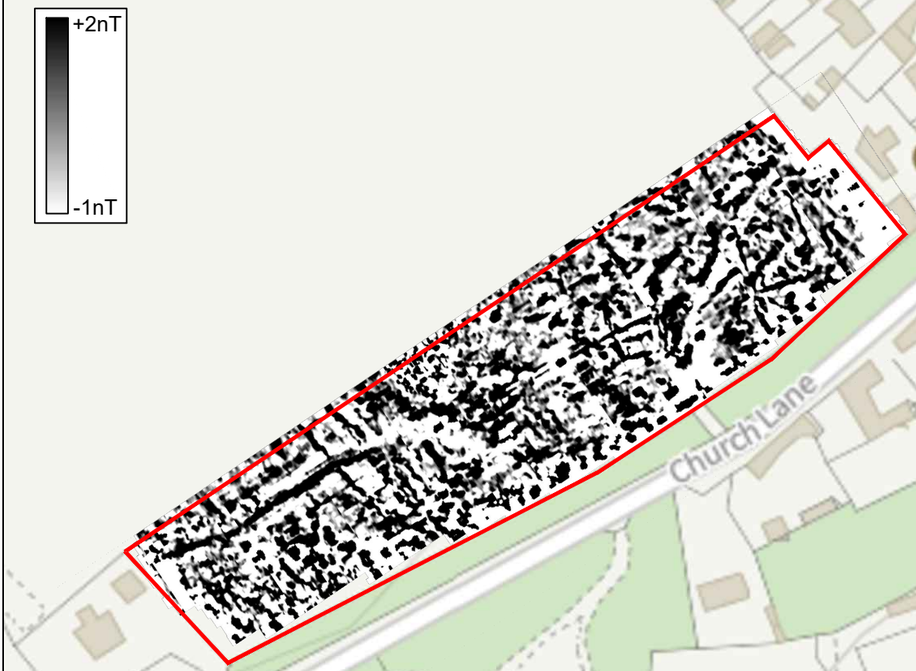

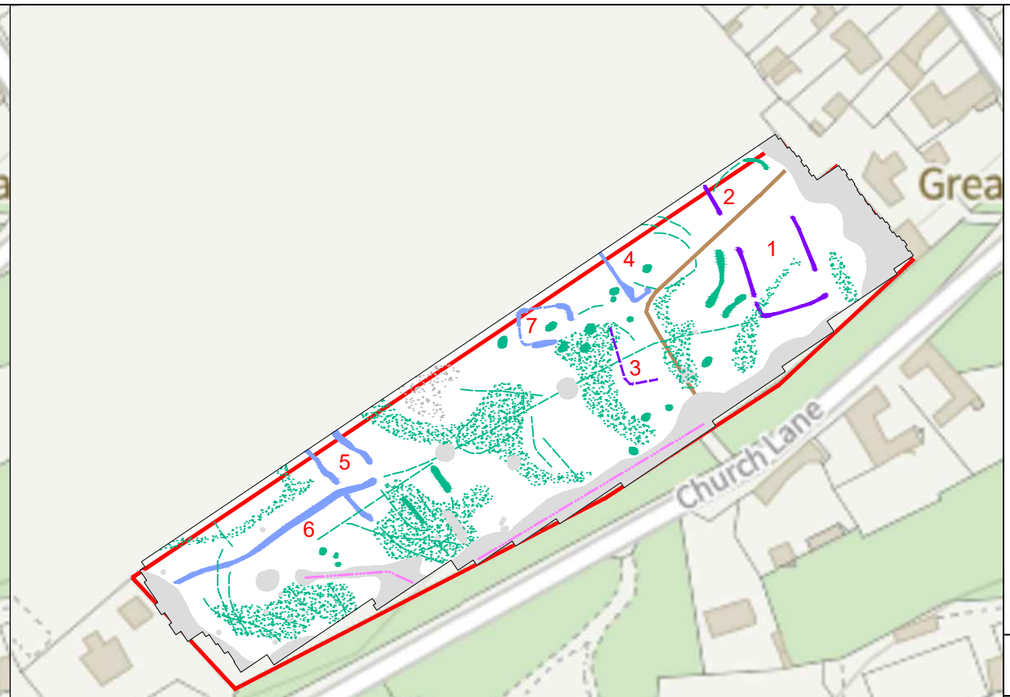

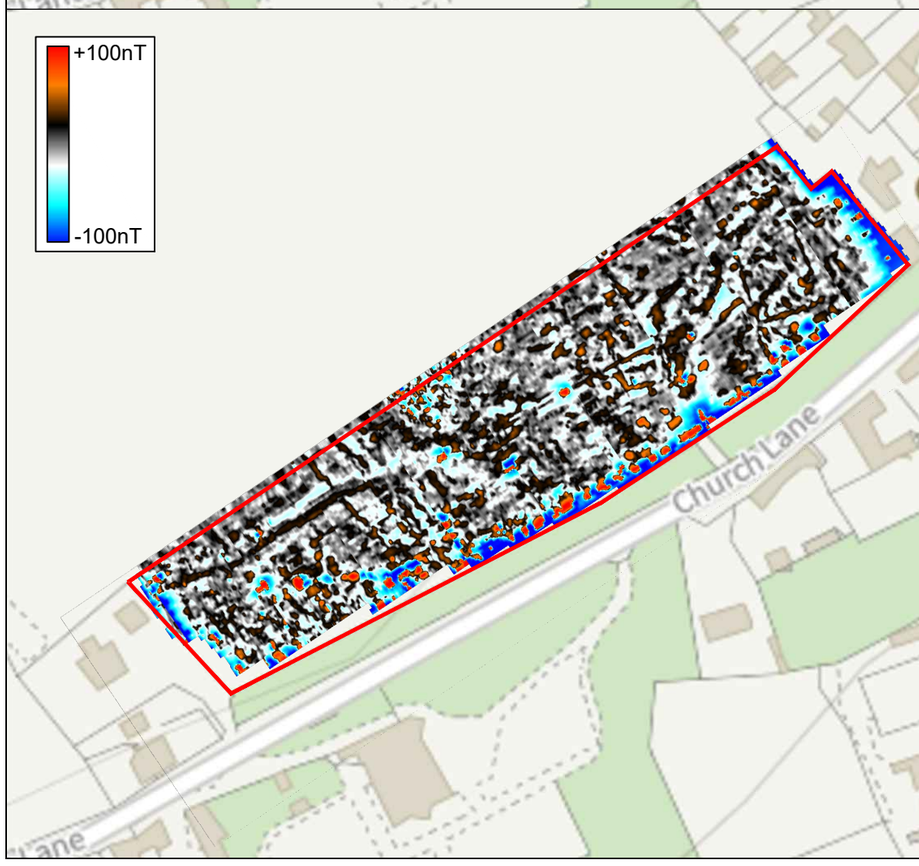

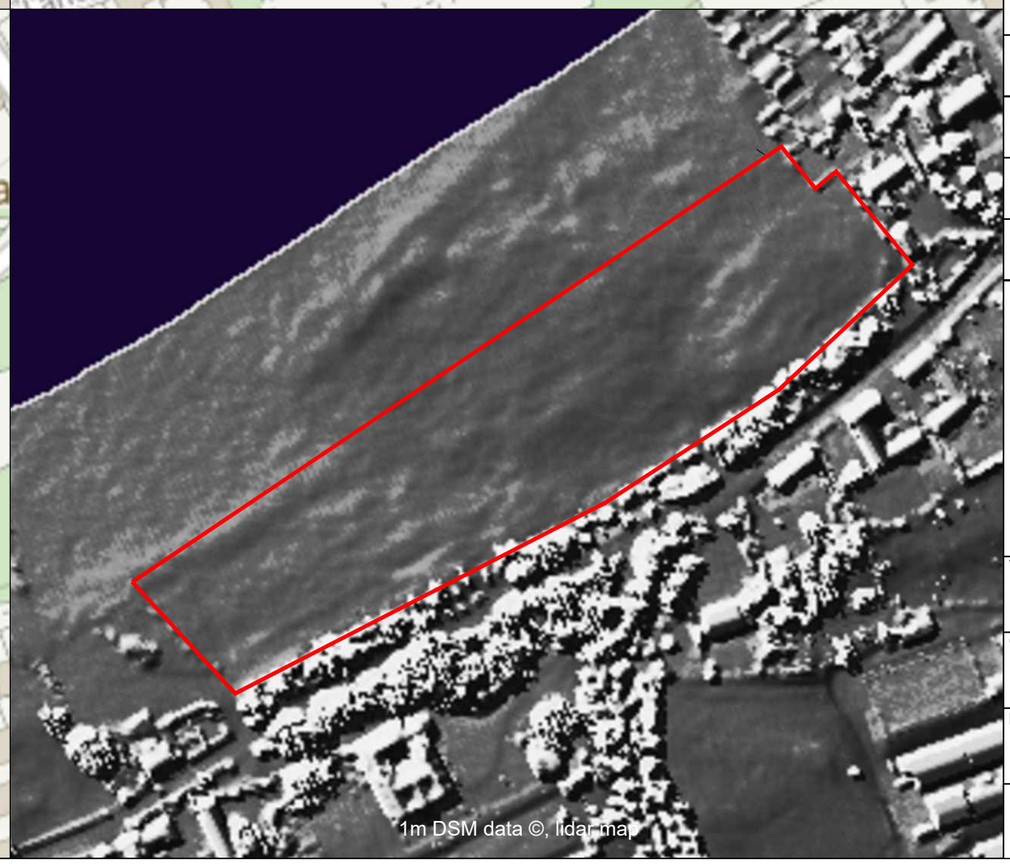

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	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / increased response)
	Former field boundary (corroborated)
	Magnetic disturbance
	Service
	Ferrous

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Greyscale and Colour Plots / Interpretation / LiDAR Data Plot

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
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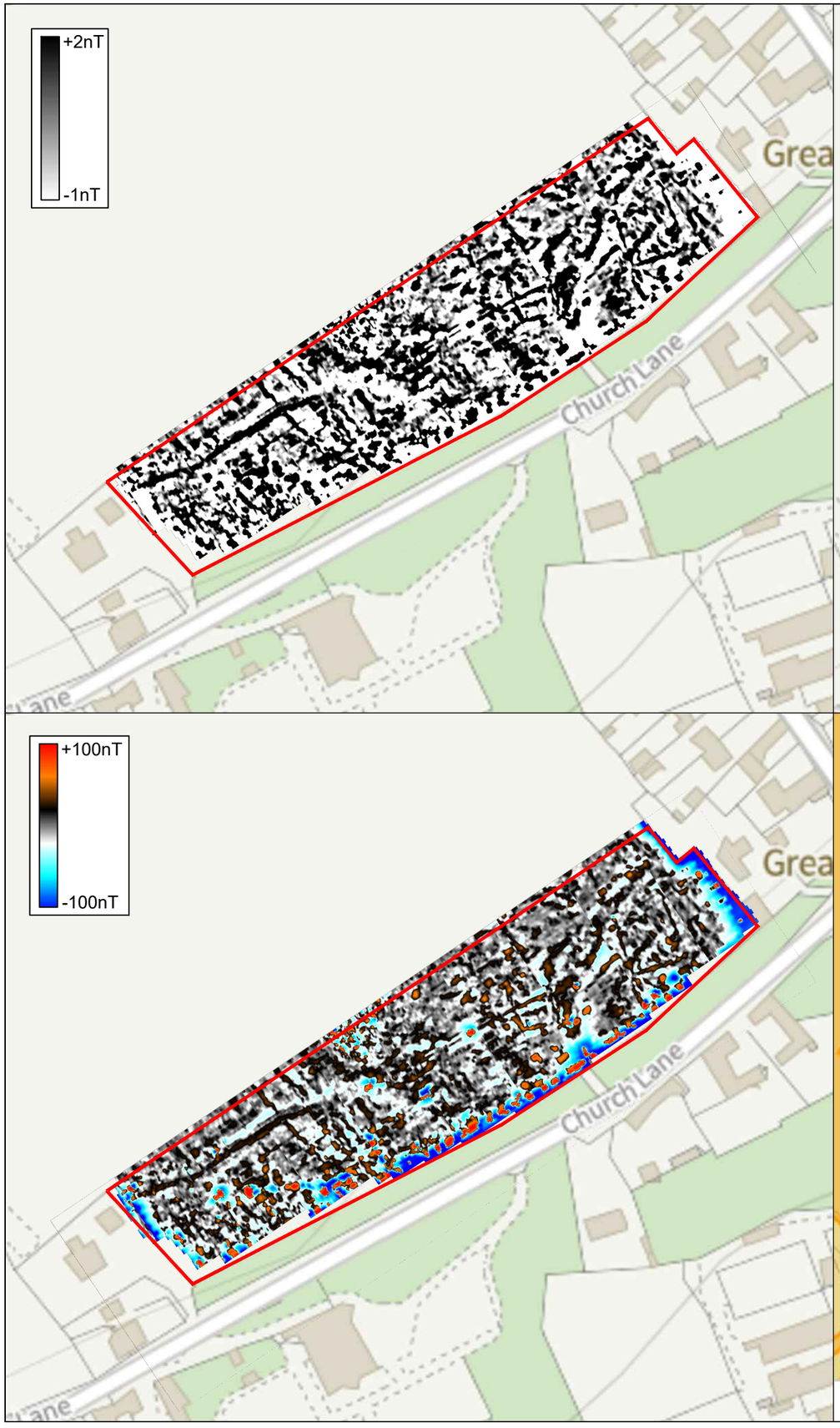

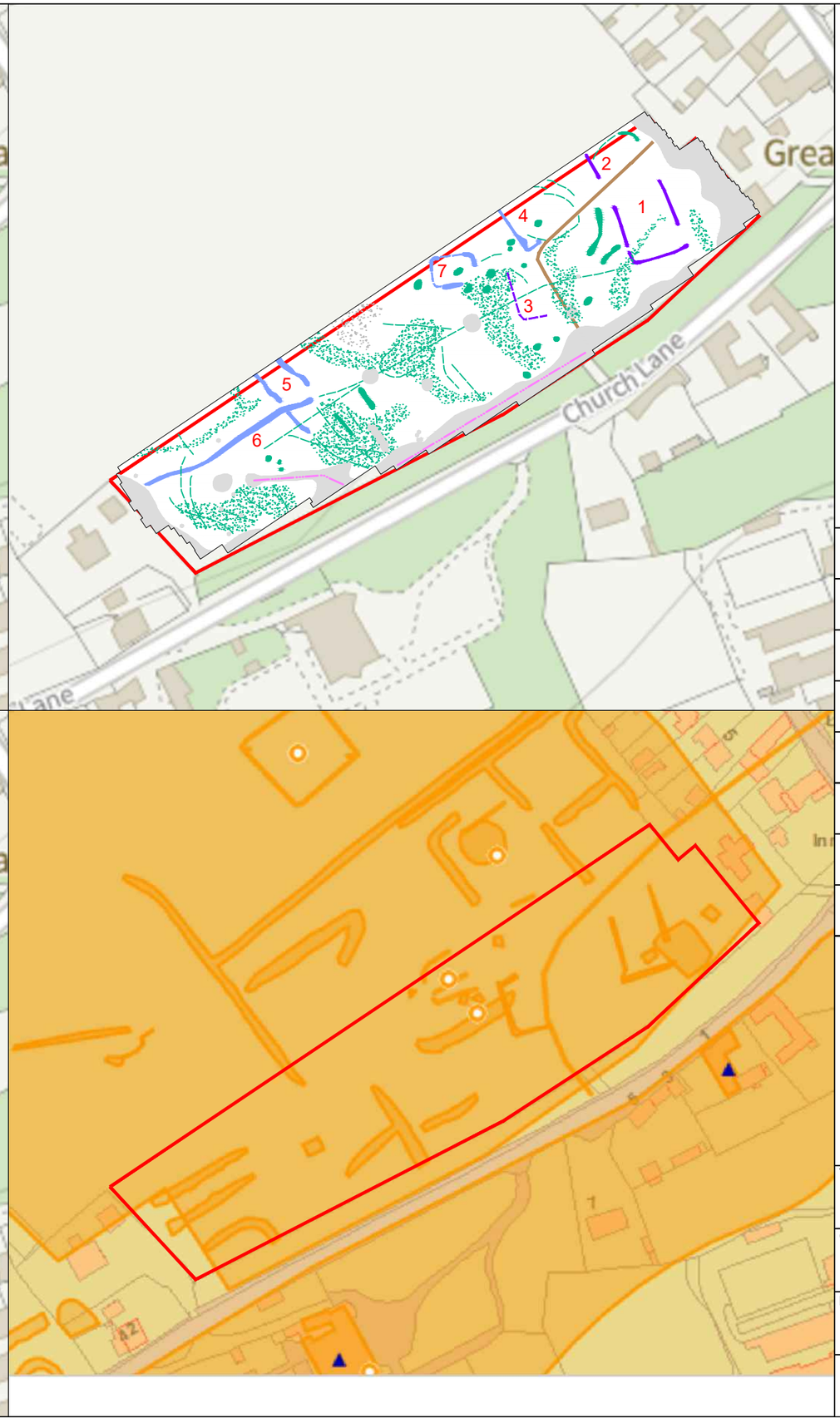

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	Possible archaeology (discrete anomaly / trend)
	Uncertain Origin (discrete anomaly / trend / increased response)
	Former field boundary (corroborated)
	Magnetic disturbance
	Service
	Ferrous

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title: Greyscale and Colour Plots / Interpretation / Northamptonshire Historic Environment Record Event Polygons (HG 2022)

Client: ULAS

Project: 10400 Great Cransley, Northamptonshire

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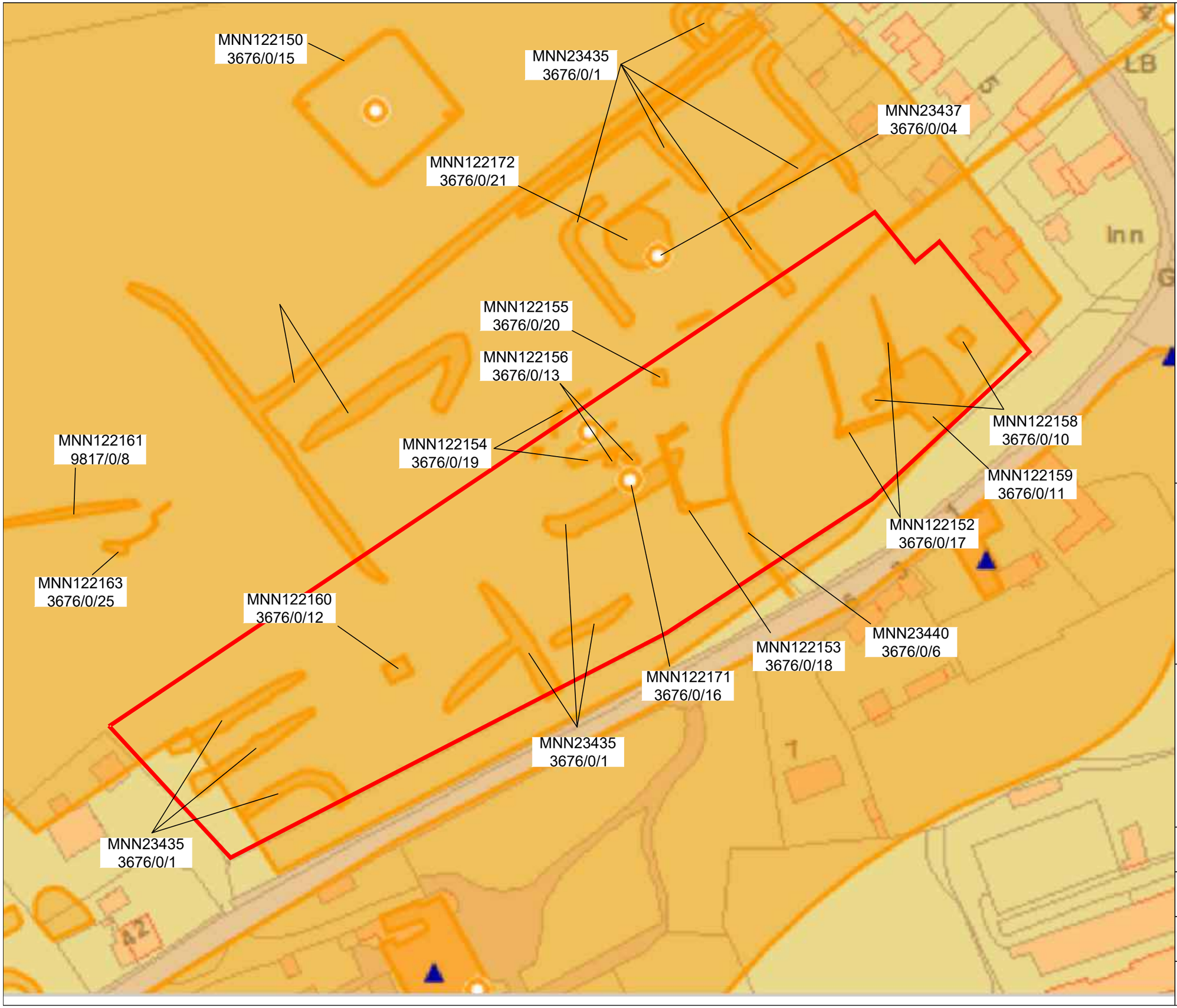

N

+10nT

-10nT

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Northamptonshire Historic Environment Record Event Polygons (HG 2022)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
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1:1000 @ A3

Fig No:
12

N

+10nT

-10nT

sumo Survey

GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
Minimally Processed Data - Greyscale Plot

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
13

N

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
XY Trace Plots (clipped at +/-15nT)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
14

N

sumo Survey
GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Title:
XY Trace Plots (clipped at +/-50nT)

Client:
ULAS

Project:
10400 Great Cransley, Northamptonshire

Scale:
0 metres 50
1:1000 @ A3

Fig No:
15

Appendix A - Technical Information: Magnetometer Survey Method

Grid Positioning

For hand held gradiometers the location of the survey grids has been plotted together with the referencing information. Grids were set out using a Trimble R8 Real Time Kinematic (RTK) VRS Now GNSS GPS system.

An RTK GPS (Real-time Kinematic Global Positioning System) can locate a point on the ground to a far greater accuracy than a standard GPS unit. A standard GPS suffers from errors created by satellite orbit errors, clock errors and atmospheric interference, resulting in an accuracy of 5m-10m. An RTK system uses a single base station receiver and a number of mobile units. The base station re-broadcasts the phase of the carrier it measured, and the mobile units compare their own phase measurements with those they received from the base station. This results in an accuracy of around 0.01m.

Technique	Instrument	Traverse Interval	Sample Interval
Magnetometer	Bartington Grad 601-2	1.0m	0.25m
Magnetometer	Bartington Cart System	1.0m	0.125m

Instrumentation:

Bartington instruments operate in a gradiometer configuration which comprises fluxgate sensors mounted horizontally, set 1.0m apart. The fluxgate gradiometer suppresses any diurnal or regional effects. The instruments are carried, or cart mounted, with the bottom sensor approximately 0.1-0.3m from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is measured in nanoTesla (nT). The sensitivity of the instrument can be adjusted; for most archaeological surveys the most sensitive range (0.1nT) is used. Generally, features up to 1m deep may be detected by this method, though strongly magnetic objects may be visible at greater depths.

Bartington Grad 601-2

Hand-Held: Data will be collected using a Bartington Grad 601-2. The instrument consists of two paired sensors and readings are logged at 0.25m centres along traverses 1.0m apart across 30m grids. The collection of data at 0.25m centres provides an appropriate methodology balancing cost and time with resolution as per Historic England guidelines

Bartington Cart System

Data will be collected using a cart carrying four paired Bartington magnetic sensors. Each data point is geographically referenced using an on-board Trimble RTK survey grade GPS system. Readings will be taken at 0.125m centres along traverses 1.0m apart.

Data Processing

Zero Mean Traverse	This process sets the background mean of each traverse within each grid to zero. The operation removes striping effects and edge discontinuities over the whole of the data set.
Step Correction (De-stagger)	When gradiometer data are collected in 'zig-zag' fashion, stepping errors can sometimes arise. These occur because of a slight difference in the speed of walking on the forward and reverse traverses. The result is a staggered effect in the data, which is particularly noticeable on linear anomalies. This process corrects these errors.

Display

Greyscale/ Colourscale Plot	This format divides a given range of readings into a set number of classes. Each class is represented by a specific shade of grey, the intensity increasing with value. All values above the given range are allocated the same shade (maximum intensity); similarly, all values below the given range are represented by the minimum intensity shade. Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. The assigned range (plotting levels) can be adjusted to emphasise different anomalies in the data-set.

Interpretation Categories

In certain circumstances (usually when there is corroborative evidence from desk-based or excavation data) very specific interpretations can be assigned to magnetic anomalies (for example, *Roman Road, Wall,* etc.) and where appropriate, such interpretations will be applied. The list below outlines the generic categories commonly used in the interpretation of the results.

Archaeology / Probable Archaeology	This term is used when the form, nature and pattern of the responses are clearly or very probably archaeological and /or if corroborative evidence is available. These anomalies, whilst considered anthropogenic, could be of any age.
Possible Archaeology	These anomalies exhibit either weak signal strength and / or poor definition, or form incomplete archaeological patterns, thereby reducing the level of confidence in the interpretation. Although the archaeological interpretation is favoured, they may be the result of variable soil depth, plough damage or even aliasing as a result of data collection orientation.
Industrial / Burnt-Fired	Strong magnetic anomalies that, due to their shape and form or the context in which they are found, suggest the presence of kilns, ovens, corn dryers, metal-working areas or hearths. It should be noted that in many instances modern ferrous material can produce similar magnetic anomalies.
Former Field Boundary (probable & possible)	Anomalies that correspond to former boundaries indicated on historic mapping, or which are clearly a continuation of existing land divisions. Possible denotes less confidence where the anomaly may not be shown on historic mapping but nevertheless the anomaly displays all the characteristics of a field boundary.
Ridge & Furrow	Parallel linear anomalies whose broad spacing suggests ridge and furrow cultivation. In some cases, the response may be the result of more recent agricultural activity.
Agriculture (ploughing)	Parallel linear anomalies or trends with a narrower spacing, sometimes aligned with existing boundaries, indicating more recent cultivation regimes.
Land Drain	Weakly magnetic linear anomalies, quite often appearing in series forming parallel and herringbone patterns. Smaller drains may lead and empty into larger diameter pipes, which in turn usually lead to local streams and ponds. These are indicative of clay fired land drains.
Natural	These responses form clear patterns in geographical zones where natural variations are known to produce significant magnetic distortions.
Magnetic Disturbance	Broad zones of strong dipolar anomalies, commonly found in places where modern ferrous or fired materials (e.g. brick rubble) are present.
Service	Magnetically strong anomalies, usually forming linear features are indicative of ferrous pipes/cables. Sometimes other materials (e.g. pvc) or the fill of the trench can cause weaker magnetic responses which can be identified from their uniform linearity.
Ferrous	This type of response is associated with ferrous material and may result from small items in the topsoil, larger buried objects such as pipes, or above ground features such as fence lines or pylons. Ferrous responses are usually regarded as modern. Individual burnt stones, fired bricks or igneous rocks can produce responses similar to ferrous material.
Uncertain Origin	Anomalies which stand out from the background magnetic variation, yet whose form and lack of patterning gives little clue as to their origin. Often the characteristics and distribution of the responses straddle the categories of *Possible Archaeology* / *Natural* or (in the case of linear responses) *Possible Archaeology* / *Agriculture*; occasionally they are simply of an unusual form.

Where appropriate some anomalies will be further classified according to their form (positive or negative) and relative strength and coherence (trend: weak and poorly defined).

Appendix B - Technical Information: Magnetic Theory

Detailed magnetic survey can be used to effectively define areas of past human activity by mapping spatial variation and contrast in the magnetic properties of soil, subsoil and bedrock. Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.1 nanoTeslas (nT) in an overall field strength of 48,000 (nT), can be accurately detected.

Weakly magnetic iron minerals are always present within the soil and areas of enhancement relate to increases in *magnetic susceptibility* and permanently magnetised *thermoremanent* material.

Magnetic susceptibility relates to the induced magnetism of a material when in the presence of a magnetic field. This magnetism can be considered as effectively permanent as it exists within the Earth's magnetic field. Magnetic susceptibility can become enhanced due to burning and complex biological or fermentation processes.

Thermoremanence is a permanent magnetism acquired by iron minerals that, after heating to a specific temperature known as the Curie Point, are effectively demagnetised followed by re-magnetisation by the Earth's magnetic field on cooling. Thermoremanent archaeological features can include hearths and kilns; material such as brick and tile may be magnetised through the same process.

Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement allowing assessment and characterisation of subsurface features. Material such as subsoil and non-magnetic bedrock used to create former earthworks and walls may be mapped as areas of lower enhancement compared to surrounding soils.

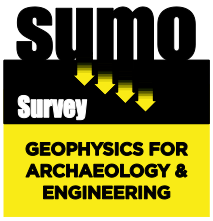
Magnetic survey is carried out using a fluxgate gradiometer which is a passive instrument consisting of two sensors mounted vertically 1m apart. The instrument is carried about 30cm above the ground surface and the top sensor measures the Earth's magnetic field whilst the lower sensor measures the same field but is also more affected by any localised buried feature. The difference between the two sensors will relate to the strength of a magnetic field created by this feature, if no field is present the difference will be close to zero as the magnetic field measured by both sensors will be the same.

Factors affecting the magnetic survey may include soil type, local geology, previous human activity and disturbance from modern services.

Summary for sumogeop1-510505

OASIS ID (UID)	sumogeop1-510505
Project Name	Geophysical Survey, Magnetometry Survey at Great Cransley, Northamptonshire
Sitename	Great Cransley, Northamptonshire
Activity type	Geophysical Survey, Magnetometry Survey, MAGNETOMETRY SURVEY
Project Identifier(s)	10400
Planning Id	
Reason For Investigation	Planning requirement
Organisation Responsible for work	SUMO Geophysics Ltd.
Project Dates	21-Oct-2022 - 21-Oct-2022
Location	Great Cransley, Northamptonshire NGR : SP 82926 76724 LL : 52.3822827313464, -0.783081705497964 12 Fig : 482926,276724
Administrative Areas	Country : England County : Northamptonshire District : Kettering Parish : Cransley
Project Methodology	A temporary grid system was established over the site and marked out using canes. The location of the grid will be set out using an RTK GPS system theoretically accurate to some 0.01m and referenced to OS co-ordinates. Hand Held: Data will be collected using a Bartington Grad 601-2. The instrument consists of two paired sensors (see below) and readings are logged at 0.25m centres along traverses 1.0m apart across 30m grids. The collection of data at 0.25m centres provides an appropriate methodology balancing cost and time with resolution as per Historic England guidelines. Two sensors mounted 1m horizontally apart and very accurately aligned to nullify the effects of the earth's magnetic field. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background.
Project Results	The magnetometer survey has recorded numerous magnetic responses that have been interpreted as being of archaeological interest, though the possibility exists that they are associated with a WWII camp. Ditch and pit-like anomalies have been assigned to the categories of probable and possible archaeology depending upon their magnetic strengths and / or their correlation with heritage assets recorded in the HER. The locations of two possible enclosures / building platforms have been plotted in the data. Many of the responses extend beyond the limits of the survey. Linear anomalies and trends, pit-like responses and zones of increased magnetic response have been assigned to the category of uncertain. It has been difficult to interpret the responses with confidence, they could be archaeological, related to a reported WWII camp or even be natural in origin. The route of a former field boundary has been marked along with a service pipe.

Keywords	Enclosure - UNCERTAIN - FISH Thesaurus of Monument Types Ditch - UNCERTAIN - FISH Thesaurus of Monument Types Pit - UNCERTAIN - FISH Thesaurus of Monument Types Field Boundary - POST MEDIEVAL - FISH Thesaurus of Monument Types Pipeline - 20TH CENTURY - FISH Thesaurus of Monument Types
Funder	
HER	Northamptonshire SMR - unRev - STANDARD
Person Responsible for work	Thomas, Cockcroft
HER Identifiers	HER Event No - ENN110920
Archives	



- Archaeological
- Geophysical
- Laser Scanning
- Measured Building
- Topographic
- Utility Mapping

SUMO Services Ltd, incorporated under the laws of England and Wales,
Company Registration No.4275993.
Registered Office Unit 8 Hayward Business Centre, New Lane, Havant, Hampshire, PO9 2NL