

Substrata

Archaeological Geophysical Surveyors

An archaeological magnetometer survey

Land off Holly Berry Road, Lee Mill Ivybridge, Devon

Centred on NGR (E/N): 259630,55900

Report: 17010HOL-R-1

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23 October 2017

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Project archive

Report.....	Adobe PDF format
Raw and processed grid & composite files.....	DW Consulting TerraSurveyor 3 formats
Minimal processing data plots and metadata	DW Consulting TerraSurveyor 3 formats
Final data processing data plots and metadata	DW Consulting TerraSurveyor 3 formats
GIS project, shape files and classification schema	
GIS project.....	Manifold 8 '.map' file
GIS shape files	ESRI standard
GIS classification schema	Adobe PDF format
AutoCAD version of the survey interpretation	AutoCAD DXF

Website: substrata.co.uk

For an overview of Substrata, our archaeological geophysical surveying techniques and the results we obtain.

1 Survey description and summary

1.1 Survey

Type: twin-sensor fluxgate gradiometer
Date: 18 to 21 October 2017
Area: 6.5ha
Lead surveyor: Mark Edwards BA
Author: Ross Dean BSc MSc MA MifA

1.2 Clients

Oakford Archaeology, 44 Hazel Road, Exeter, Devon EX2 6HN

1.3 Location

Site: Land off Holly Berry Road, Lee Mill
Civil Parish: Sparkwell
District: South Hams
County: Devon
Nearest Postcode: PL21 9EQ
NGR: SX 59630 55900 (point)
NGR (E/N): 259630,55900 (point)

1.4 Archive

OASIS number: substrat1-299137
Archive: At the time of writing, the archive of this survey will be held by Substrata. Depending on local authority policy, an archive of the unprocessed data may be deposited with the Archaeological Data Service

1.5 Introduction

This report presents the results of an archaeological magnetometer survey at the above site, hereafter referred to as the survey area. It has been prepared for Oakford Archaeology on behalf of clients. The survey area location is shown in Figure 1.

1.6 Summary

The magnetic responses across the survey area were sufficient to be able to differentiate between anomalies representing possible archaeological features and background magnetic responses.

Twelve magnetic anomaly groups were mapped as representing potential archaeological deposits or features. Four of these groups may represent a sizeable sub-rectangular enclosure with internal divisions. One anomaly group may represent either a linear archaeological deposit such as a former ditch or a linear spread of potential archaeological material resulting from ploughing disturbance. The remaining anomaly groups have characteristics typical of anomalies representing fragments of linear archaeological features such as former field or enclosure boundaries.

2 Survey aims and objectives

2.1 Aims

To establish the presence or absence, extent and character of any archaeological features and deposits within the survey area.

2.2 Survey objectives

1. Complete a magnetometer survey across agreed parts of the survey area.
2. Identify any magnetic anomalies that may be related to archaeological deposits, structures or artefacts.
3. Within the limits of the techniques and dataset, archaeologically characterise any such anomalies or patterns of anomalies.
4. Accurately record the location of the identified anomalies.

5. Produce a report based on the survey that is sufficiently detailed to inform any subsequent development on the survey area about the location and possible archaeological character of the recorded anomalies.

3 Methodology

The work was undertaken in accordance with the survey methodology statement (Dean, 2017).

The survey grid location information and grid plan was recorded as part of the project in a suitable GIS system (Table 3).

Data processing was undertaken using appropriate software (Table 3), with all anomalies being digitised and geo-referenced. The final report (this document) includes a graphical and textual account of the techniques undertaken, the data obtained and an archaeological interpretation of that data and conclusions about any likely archaeology.

4 Standards

The standards used to complete this survey are defined by the Chartered Institute for Archaeologists (2014a) and Historic England (2010). The codes of approved practice that were followed are those of the Chartered Institute for Archaeologists (2014b) and Archaeology Data Service (undated).

5 Site description

5.1 Landscape and land use

The survey area comprises three adjacent fields which lie to the west of Lee Mill, itself lying west of Ivybridge (Figure 1). The land slopes southeast from approximately 90m to 75m AOD. The southern edge of the survey area are bound by Moreland Road and New Park Road. Housing and associated infrastructure border the southeast of the area. Otherwise, the area is surrounded by hedged agricultural fields. All three fields were under maize stubble at the time of the survey.

5.2 Geology

The bedrock across the site comprises slate of the Middle Devonian Slates group. The superficial deposits for the site are unknown (British Geological Survey, undated).

6 Archaeological background

6.1 Historic landscape characterisation

'Barton fields': These relatively large, regular enclosures seem likely to have been laid out between C15th-C18th. Some curving boundaries may be following earlier divisions in the pre-existing medieval fields. In Cornwall these are sometimes called Barton fields (Devon County Council, undated)

6.2 Summary of archaeological background

The Devon County Council Historic Environment Record (DHER) was examined via the Heritage Gateway (Historic England, undated) to gain an appreciation of historic assets pertinent to the geophysical survey data within approximately 500m of the survey area perimeter.

This section is not designed to provide a comprehensive understanding of the historic environment of the surrounding area and should not be used as a source for further work.

Table 1 provides a summary of the DHER entries though relevant to the survey.

7 Results, discussion and conclusions

7.1 Scope and definitions

This survey was designed to record magnetic anomalies. A magnetic anomaly is a local variation in the Earth's magnetic field. Such variations can result from changes in the magnetism of underlying objects, varying solid geology, superficial geology and other near-surface deposits including those altered and created by past human activities. Near-surface artefacts can also create magnetic anomalies.

The terms 'archaeological deposit', 'structure' and 'feature' refer to any artefacts, material deposits or disturbance of natural deposits thought to be the result of human activity, excluding recent land maintenance and farming.

Magnetic anomalies cannot be regarded as physical archaeological deposits, structures or features and the dimensions of the anomalies shown do not represent the dimensions of any associated archaeology.

The analysis presented below identifies and characterises anomalies and anomaly groups that may relate to archaeological deposits, structures and features.

The reader is referred to section 8.

7.2 Results

Figures 2 and 3 show the interpretation of the survey data which includes the anomaly groups identified as possibly relating to archaeological deposits along with their identifying numbers. Table 2 is an extract of the detailed analysis of the survey data sourced from the attribute tables of the GIS project provided in the project archive.

Figures 2 and 3 along with Table 2 comprise the analysis of the survey data.

Figures 4 to 7 are plots of processed data as specified in Table 4. Figure 8 is a plot of unprocessed data with its metadata.

7.3 Discussion

7.3.1 General points

Discussion scope

Not all anomalies or anomaly groups identified in Table 2 are necessarily discussed below. All identified anomaly groups are recorded in the GIS project held the survey archive.

Data collection

Data collection along the survey area edges was restricted as shown in the figures due to the presence of magnetic materials within and adjacent to boundaries. Strong magnetic responses mapped close to the boundaries are likely to relate to these materials except where otherwise indicated in Figure 2 and Table 2.

Anomaly characterisation and mapping

There are a number of anomaly groups that could be interpreted as relating to large postholes or pits although most will have natural origins. Anomalies of this sort will only be mapped as potential archaeology when they are associated with other significant anomaly groups or otherwise formed recognisable patterns as listed in Table 2.

Anomalies thought to relate to natural features and recent man-made objects such as manholes, water management equipment, drains, cables and other services were only mapped where they comprised significant magnetic responses across the dataset that needed clarification.

Numerous dipole magnetic anomalies are scattered across the data set. These are likely to represent recent ferrous objects. They are only mapped if they could influence the analysis of anomaly groups thought to have an archaeological origin.

Data trends

Sets of parallel linear anomalies trending north-south, northwest to southeast and east-west were interpreted as recent ploughing disturbance (Figures 4 and 5).

7.3.2 Data relating to historic maps and other records (Figures 2 and 3, Table 2)

No magnetic anomaly groups related to historically mapped features or recorded monuments.

7.3.3 Data with no previous archaeological provenance (Figures 2 and 3, Table 2)

Magnetic anomaly groups **6 to 9** together may represent a sizeable sub-rectangular enclosure with internal divisions. The approximate dimensions are 100m (northern boundary) by 90m (eastern boundary), 85m (southern boundary) by 80m (western boundary). While a number of enclosures have been recorded close to the survey area, none are of this size and apparent complexity (Table 1).

Magnetic anomaly groups **1 to 4** and **10 to 12** may represent linear archaeological deposits or features such as a fragments of former field or enclosure boundaries.

Anomaly group **5** may represent either a linear archaeological deposit such as a former ditch or a linear spread of potential archaeological material resulting from ploughing disturbance.

7.4 Conclusions

The magnetic responses across the survey area were sufficient to be able to differentiate between anomalies representing possible archaeological features and background magnetic responses.

Twelve magnetic anomaly groups were mapped as representing potential archaeological deposits or features. Four of these groups (6 to 9) may represent a sizeable sub-rectangular enclosure with internal divisions. One anomaly group (5) may represent either a linear archaeological deposit such as a former ditch or a linear spread of potential archaeological material resulting from ploughing disturbance. The remaining anomaly groups (1 to 4 and 10 to 12) have characteristics typical of anomalies representing fragments of linear archaeological features such as former field or enclosure boundaries.

8 Disclaimer and copyright

The description and discussion of the results presented in this report are the authors, based on his interpretation of the survey data. Every effort has been made to provide accurate descriptions and interpretations of the geophysical data set. The nature of archaeological geophysical surveying is such that interpretations based on geophysical data, while informative, can only be provisional. Geophysical surveys are a cost-effective early step in the multi-phase process that is archaeology. The evaluation programme of which this survey is part may also be informed by other archaeological assessment work and analysis. It must be presumed that more archaeological features will be evaluated than those specified in this report.

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9 Acknowledgements

Substrata would like to thank Marc Steinmetzer of Oakford Archaeology for project managing this survey.

10 Bibliography

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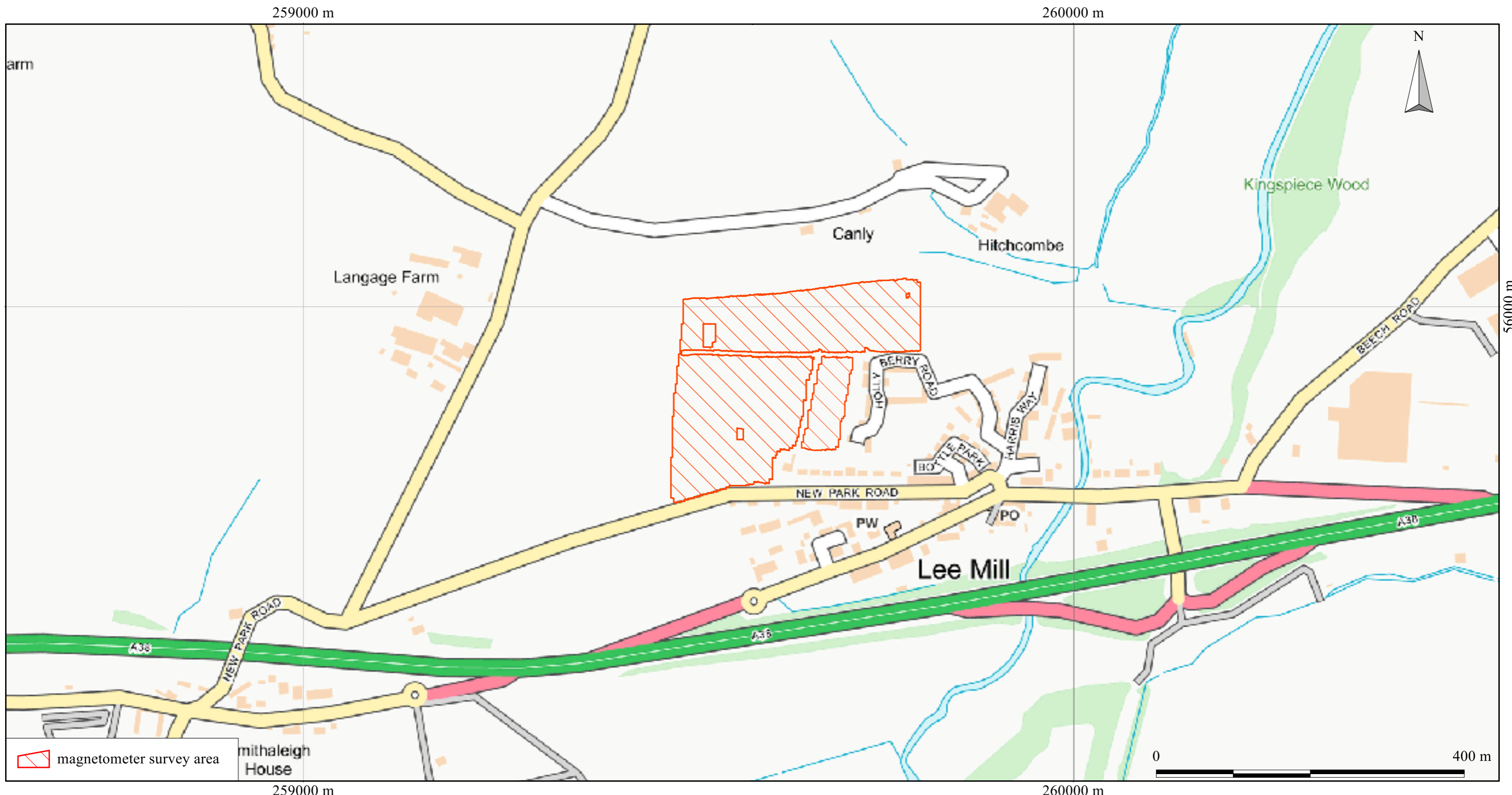
Historic England (2010) *Geophysical Survey in Archaeological Field Evaluation* [Online], Available: <https://content.historicengland.org.uk/images-books/publications/geophysical-survey-in-archaeological-field-evaluation/geophysics-guidelines.pdf/> [October 2017]

Appendix 1 Figures

General Guidance

The anomalies represented in the survey plots provided in this appendix are magnetic anomalies. The apparent size of such anomalies and anomaly patterns are unlikely to correspond exactly with the dimensions of any associated archaeological features .

A rough rule for interpreting magnetic anomalies is that the width of an anomaly at half its maximum reading is equal to the width of the buried feature, or its depth if this is greater (Clark, 2000: 83). Caution must be applied when using this rule as it depends on the anomalies being clearly identifiable and distinct from adjacent anomalies. In northern latitudes the position of the maximum of a magnetic anomaly will be displaced slightly to the south of any associated physical feature.



British Grid
 centre X: 259583.22 m, centre Y: 55875.53 m

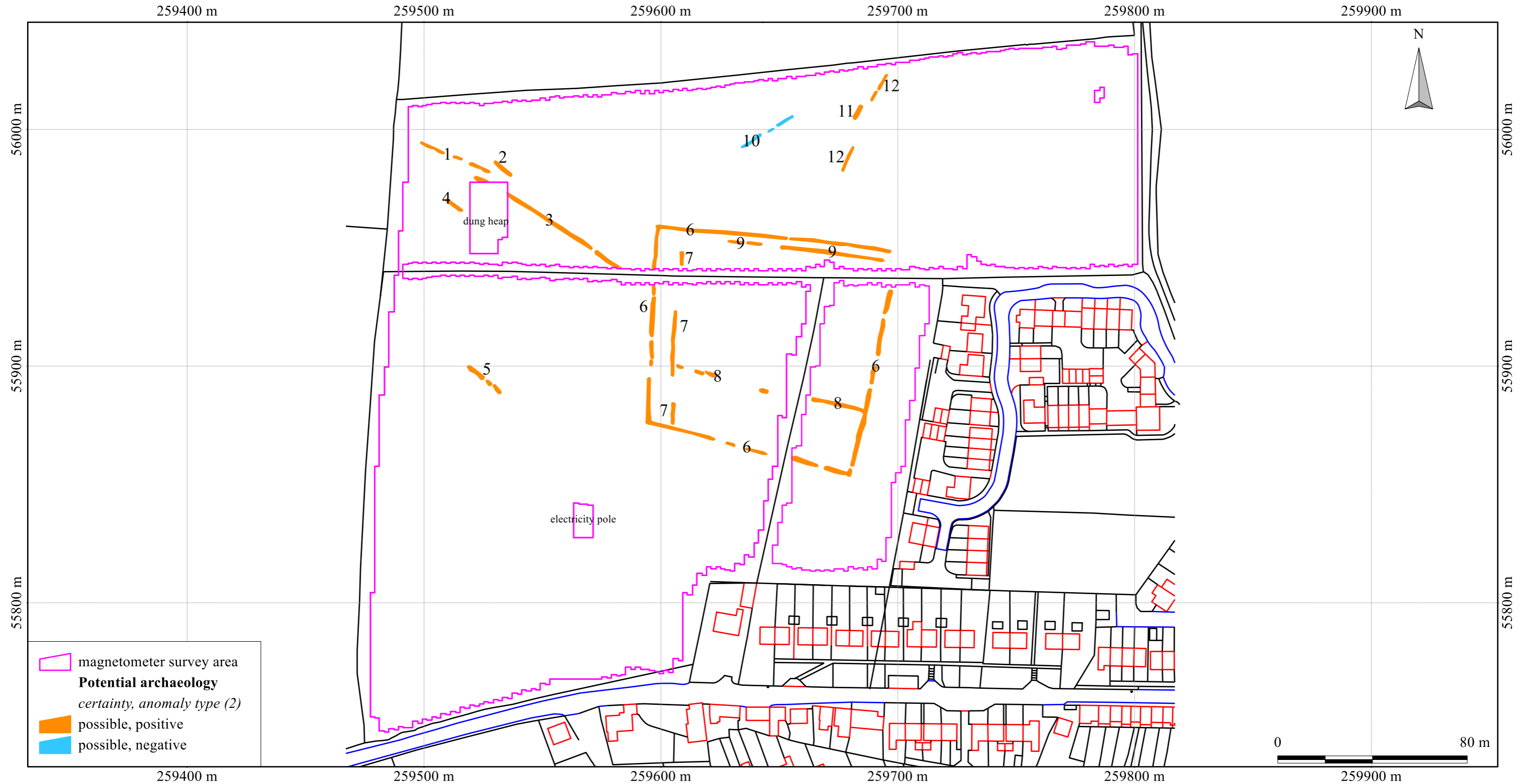
Scale: 1:5000 @ A3. Spatial Units: Meter. Do not scale off this drawing

Geophysical survey: Copyright Substrata Limited.
 Base map: Contains Ordnance Survey data
 © Crown copyright and database right 2017

An archaeological magnetometer survey
 Land off Holly Berry Road, Lee Mill, Ivybridge, Dev
 Centred on NGR (E/N): 259630,55900 (point)
 Report: 1710HOL-R-1

Figure 1: location map

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 Web: substrata.co.uk



British Grid
 centre X: 259643.00 m, centre Y: 55888.00 m

Geophysical survey: Copyright Substrata Limited.
 Base map: Ordnance Survey (c) Crown Copyright 2017.
 All rights reserved. Licence number 100022432

Notes: Scale: 1:1600 @ A3. Spatial Units: Meter. Do not scale off this drawing

1. All interpretations are provisional and represent potential archaeological deposits.
2. 'Anomaly type' is a description of the magnetic anomaly. See the report text or GIS for an archaeological characterisation.
3. Anomalies designated "likely archaeology" have supporting evidence e.g. historical maps and or visible earthworks.
4. Not all instances are mapped.
5. Anomalies likely to represent geological or other natural deposits are not mapped unless relevant to potential archaeological events or deposits.

An archaeological magnetometer survey
 Land off Holly Berry Road, Lee Mill, Ivybridge, Dev
 Centred on NGR (E/N): 259630,55900 (point)
 Report: 1710HOL-R-1

Figure 2: survey interpretation, total area

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British Grid
 centre X: 259643.00 m, centre Y: 55907.68 m

Geophysical survey: Copyright Substrata Limited.
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Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

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Figure 3: survey interpretation, detailed view



British Grid
 centre X: 259643.00 m, centre Y: 55888.00 m

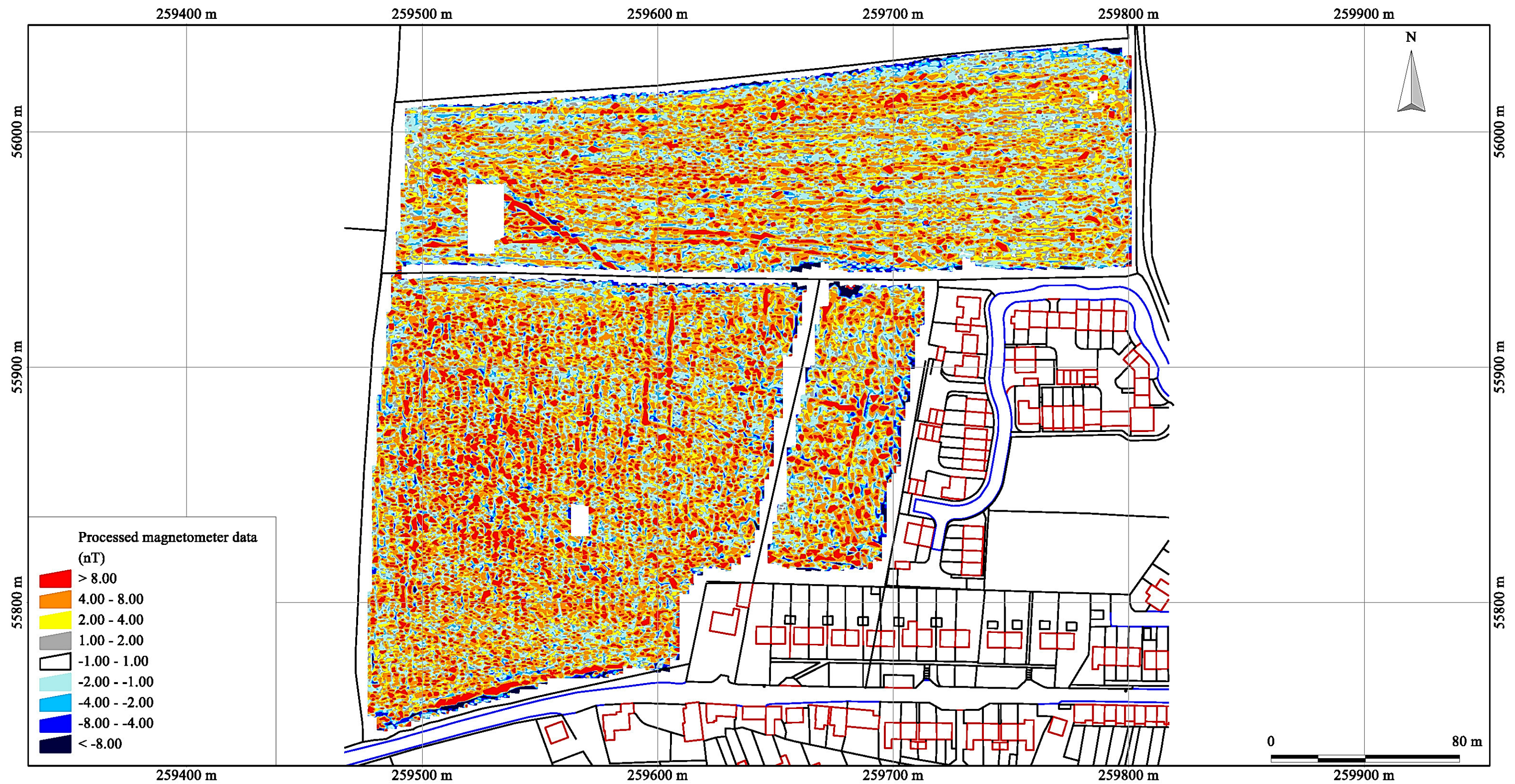
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Scale: 1:1600 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological magnetometer survey
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 Centred on NGR (E/N): 259630,55900 (point)
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Figure 4: shade plot of processed data, total area

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 Web: substrata.co.uk



British Grid
 centre X: 259643.00 m, centre Y: 55888.00 m

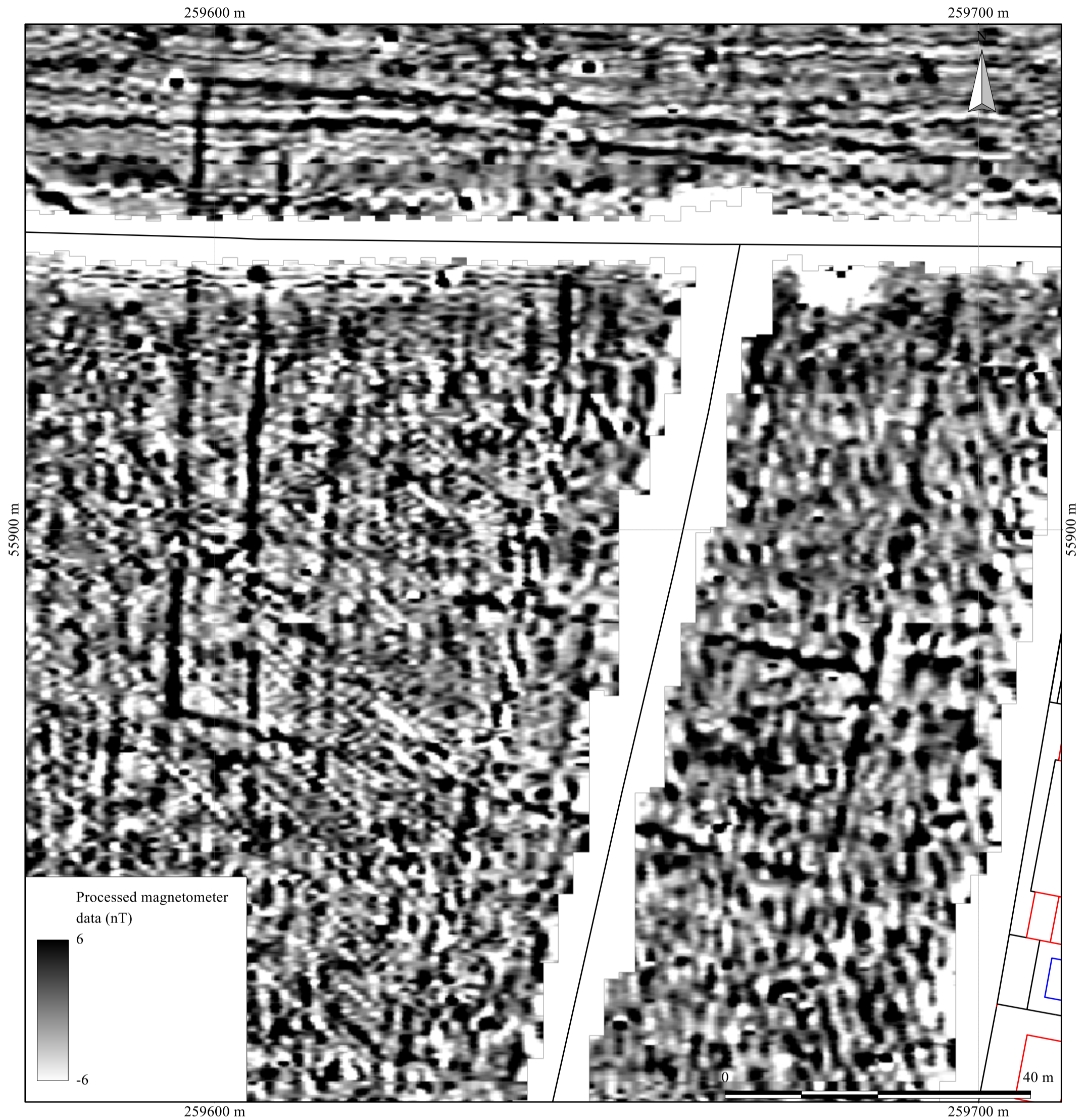
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An archaeological magnetometer survey
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 Centred on NGR (E/N): 259630,55900 (point)
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Figure 5: contour plot of processed data, total area

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British Grid
 centre X: 259643.00 m, centre Y: 55895.65 m

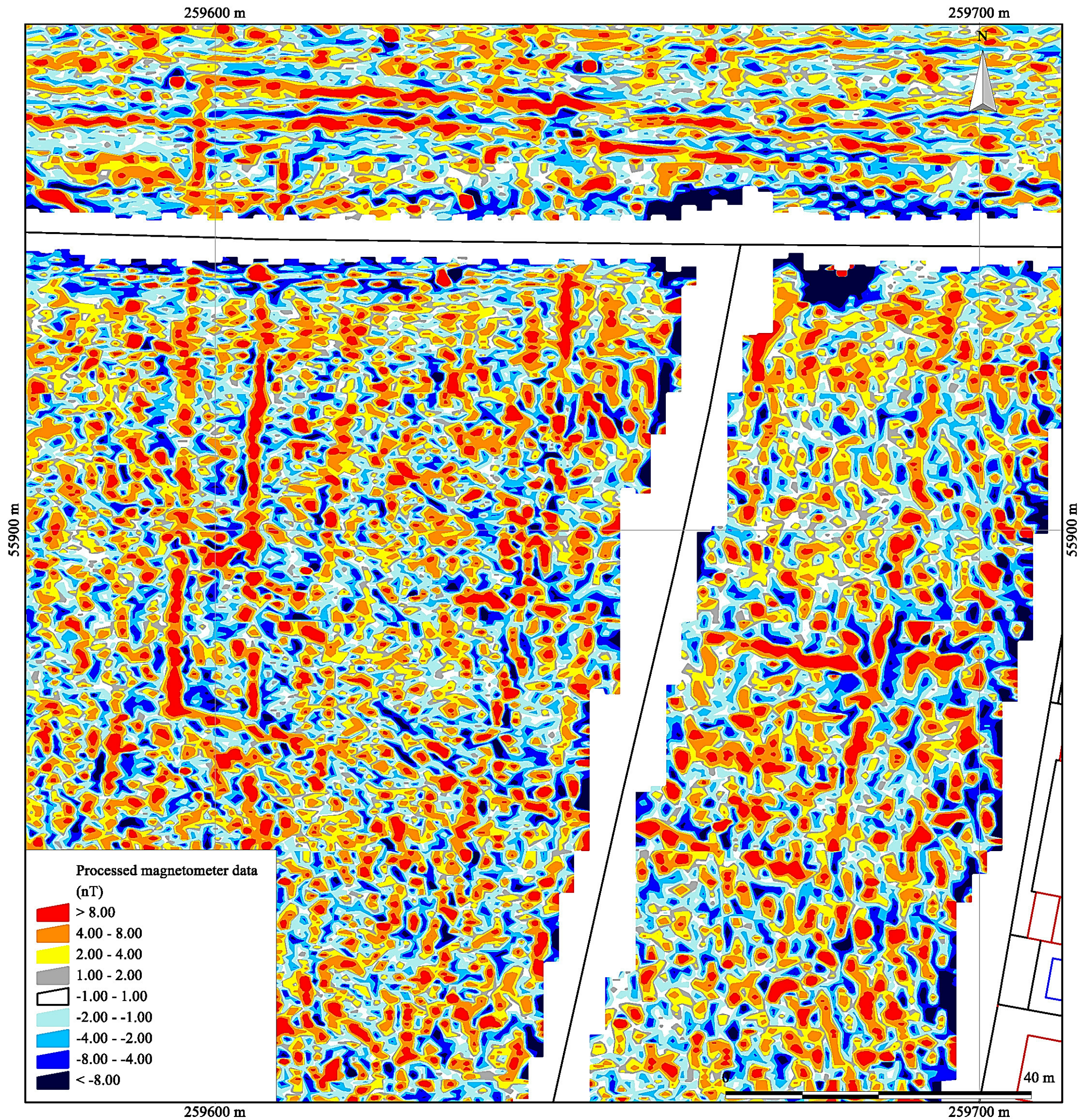
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Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

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Figure 6: shade plot of processed data, detailed view



British Grid
 centre X: 259643.00 m, centre Y: 55895.65 m

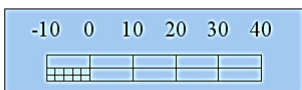
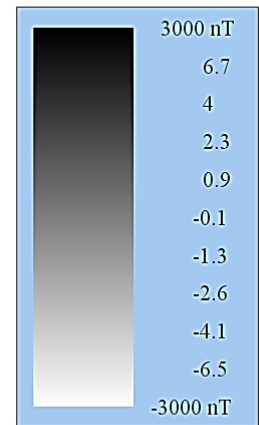
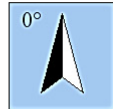
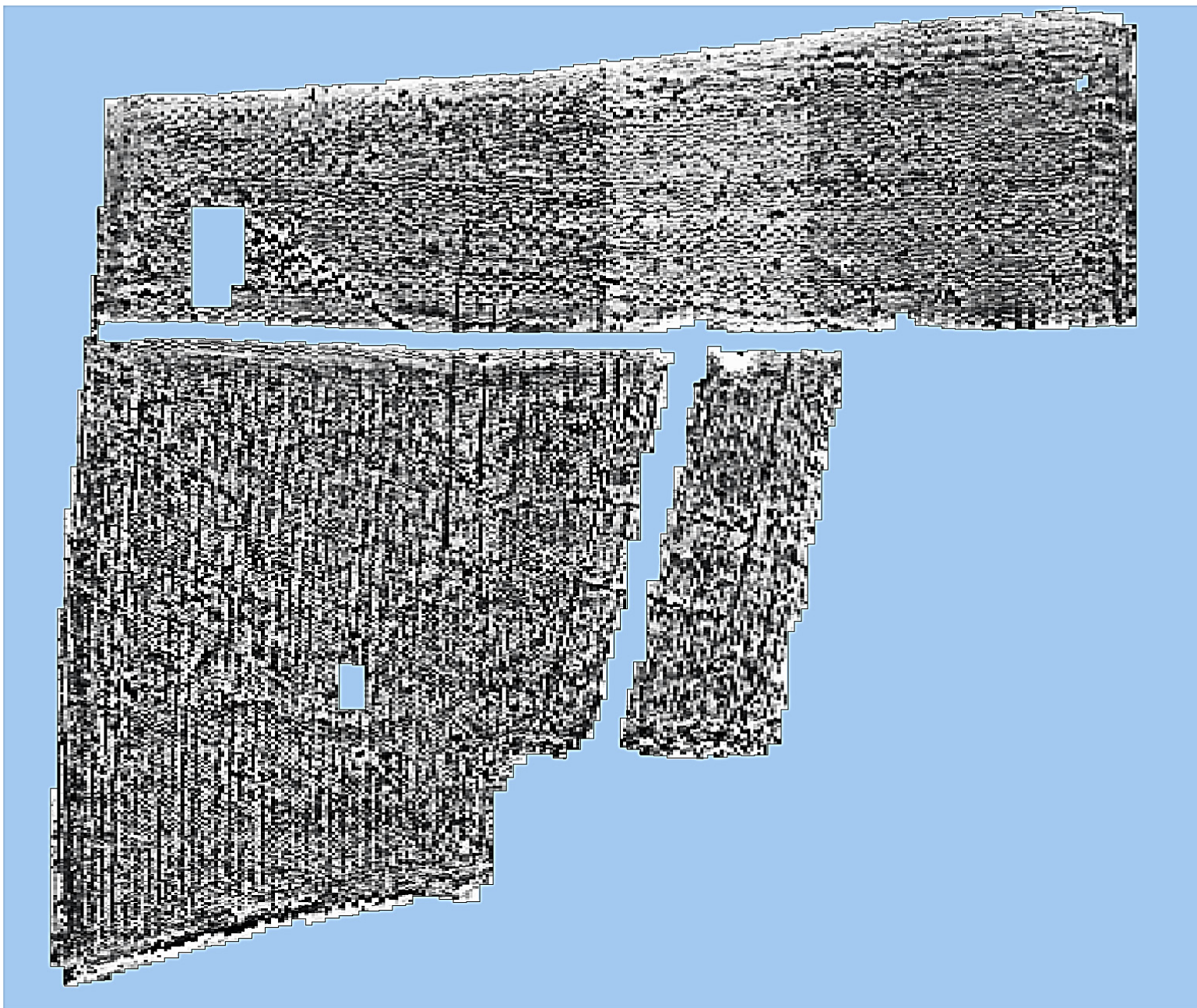
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Figure 7: contour plot of processed data, detailed view



Processes: 1
1 Base Layer

Instrument type: Bartington grad601-2
Units: nT
Direction of 1st Traverse: 0 deg
Collection Method: ZigZag
Sensors: 2 @ 0.00 m spacing.
Dummy Value: 32702

Dimensions
Composite Size (readings): 1200 x 360
Survey Size (meters): 300 m x 360 m
Grid Size: 30 m x 30 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 3000.00
Min: -3000.00
Std Dev: 50.08
Mean: -0.43
Median: -0.10

PROGRAM
Name: TerraSurveyor
Version: 3.0.31.0

Figure 8: shade plot of unprocessed magnetometer data

Appendix 2 Tables

An archaeological magnetometer survey
 Land off Holly Berry Road, Lee Mill, Ivybridge, I
 Centred on NGR (E/N): 259630,55900 (point)
 Report: 1710HOL-R-1

County: Devon
 District: South Hams
 Parish: Sparkwell
 Source: Heritage Gateway

HER number	grid reference	designations	type	period	description	distance (m) from site centre	bearing (GN) from site centre
MDV79454	SX 598 558		Clothing industry site	XIV to XXI - 1400 AD to 2009 AD (Between)	'Tender Field', suggests the former presence of frames for cloth drying	197	120
MDV79457	SX 598 558		Field boundary	Unknown date	Site of field boundary. Visible on Ordnance Survey 1880s-90s First Edition 25 inch map	197	120
MDV72045	SX 597 561		Searchlight battery	WWII XX - 1901 AD to 2000 AD (Between)	Site of WWII searchlight at Mill Bridge	212	19
MDV79641	SX 597 557		Road	Unknown date	Site of road, south of New Park Road. Visible on Ordnance Survey Drawing Part III, 1784-1786	212	161
MDV38181	SX 598 561		Settlement	Medieval - 1066 AD to 1539 AD (Between)	Settlement in the parish of sparkwell. Hitchcombe is first mentioned in the lay subsidy rolls of 1332 and in another document of 1809 as 'hitchcomb' (goodyear).	262	40
MDV17052	SX 599 558		Paper mill	I to XXI - 1 AD to 2009 AD (Between)	Site of paper mill/ yard known to have been operating at Lee Mill Bridge between 1833 and 1908.	288	110
MDV18226	SX 599 557		Bridge	Medieval - 1066 AD to 1539 AD (Between)	Lee Mill Bridge, River Yealm, was mentioned in a document in 1414	336	127
MDV14546	SX 598 556		Findspot	Early Neolithic to Late Bronze Age - 4000 BC to 701 BC (Between)	Side-scraper of Beer flint found in Sparkwell parish during surveillance of A38 roadworks. In good condition, dating from Neolithic or Early Bronze Age	345	150
MDV119833	SX 595 554		Field system	Unknown date	A possible field system was recorded as a series of linear and curvilinear anomalies during a geophysical survey on land to the east of Challonsleigh Farm.	517	195
MDV51239	SX 598 554		Mill	Medieval - 1066 AD to 1539 AD (Between))	Domesday reference to ludbrook mill (pim).	528	161
MDV44680	SX 601 562		Leat	XVIII to XXI - 1751 AD to 2009 AD (Between))	Leat serving Lee Paper Mills (sx55ne/86). Cut by South West Water pipeline at SX600560. 1.2m wide at base, stone revetted sides circa 1.5 metres high.	558	57
MDV38156	SX 602 557		Mill	Unknown date	Beach farm. Appears to lie on site of a mill. The leat is visible on os map (1906)	604	109
MDV16923	SX 592 552		Farmstead	VIII to XVI - 701 AD to 1600 AD (Between)	Challonsleigh was called lega in domesday. It was held by william de poillei. Before the conquest it was held by offers, or osferd. In the 1241 testa de nevil it was held by ralf de chalun (reichel). May have formed part of the medieval estate of plympton priory Challonsleigh. At the time of the tithe map, the farmhouse and outbuildings were sited at this ngr. They have been moved to SX59205534 where there was a barn in 1840 (tithe map).	822	212
MDV1803	SX 588 567		Mansion house	Medieval - 1066 AD to 1539 AD (Between)	Mansion on site of earlier structure belonging to plympton priory. Quadrangular. Retains court gateway and a blocked arch may have formed part of the gatehouse. Rare fireplace.	1153	314
MDV1804	SX 588 567		Gatehouse	Medieval - 1066 AD to 1539 AD (Between)	A blocked arch may have formed part of the gatehouse of the earlier belonging to plympton priory.	1153	314
MDV1805	SX 588 567		Gateway	Medieval - 1066 AD to 1539 AD (Between)	The mansion retains a court gateway.	1153	314
MDV116900	SX 586 550		Ditch, Pit	Roman - 43 AD to 409 AD (Between)	Sections of a ditch dating to the Romano British period were excavated following the identification of linear anomalies by geophysical survey.	1368	229
MDV106140	SX 580 554		Settlement	Prehistoric - 698000 BC to 42 AD (Between)	Extensive features (ditches, pits, enclosures) and artefacts (lithics, pottery) providing evidence of late Neolithic to Romano-British occupation. Revealed during development of the Choakford to Langage Gas Pipeline.	1705	253
MDV46795	SX 602 559		Quarry	XVIII to XXI - 1751 AD to 2009 AD (Between)	quarry' indicated on os 6" (1907) but not on os 6" (1966)	570	90
MDV66723	SX 600 566		Quarry	XVIII to XXI - 1751 AD to 2009 AD (Between)	Evidence of quarrying	792	28
MDV20364	SX 599 549		Quarry	Unknown date	Evidence of former quarrying, in challonsleigh plantation. (Spoil heaps, hollows and trackways.)	1036	165
MDV20365	SX 599 549		Quarry	Unknown date	Evidence for former quarrying either side of parish boundary	1036	165
MDV37022	SX 595 554		Enclosure	Prehistoric - 698000 BC to 42 AD (Between)	An irregularly shaped enclosure was recorded as a cropmark in 1985. Evidence from a geophysical survey undertaken in 2017 suggests that the feature is geological rather than archaeological in origin	517	195
MDV119832	SX 593 554		Enclosure	Lower Palaeolithic to Roman - 698000 BC to 409 AD (Between)	Enclosure identified as an anomaly during a geophysical survey. The enclosure, which measures about 45 metres east-west, has a break/entrance in the south-east quadrant and internal responses are suggestive of pits and other habitation features within the interior	599	213
MDV42927	SX 597 573		Enclosure	Prehistoric - 698000 BC to 42 AD (Between))	Complex of sub-rectangular enclosures of probable prehistoric date south of Great Stert Three sides of rectilinear single ditched enclosure with rounded corners at nw and ne. Length ew 80m. Recorded as cropmark in 1989 by f. Griffith	1402	3
MDV2875	SX 607 549		Enclosure	Iron Age - 700 BC to 42 AD (Between)	South of strashleigh farm, coldrings, on land long under cultivation, are vestiges of a large earthwork of the iron age b stronghold type. The site is on the western end of a spur. The banks and ditches have been ploughed down, leaving the enclosure, little worthill, with a marked lynchet on all sides except to the north. Coldrings would appear to be the remains of a multivallate hill-fort, with two lines of ramparts spaced about 90m apart	1465	133
MDV50172	SX 604 545		Enclosure	Prehistoric - 698000 BC to 42 AD (Between)	Site of a Prehistoric rectangular enclosure recorded as a cropmark in 1989 to the southwest of Swainstone farm	1598	151

Table 1: Historical Environment Entries thought relevant to geophysical survey
 Order: by distance from the site centre with separate sections for quarries and enclosures

Site: An archaeological magnetometer survey
 Land off Holly Berry Road, Lee Mill, Ivybridge, Devon
 Centred on NGR (E/N): 259630,55900 (point)
 Report: 1710HOL-R-1

anomaly group	associated anomalies	anomaly characterisation certainty & class	anomaly form	additional archaeological characterisation	comments	supporting evidence
1		possible, positive	disrupted linear			
2		possible, positive	linear			
3		possible, positive	disrupted linear			
4		possible, positive	linear			
5		possible, positive	disrupted linear	linear deposit or linear spread caused by ploughing		
6	7 8 9	possible, positive	disrupted sub-rectangular	sub-rectangular enclosure with internal divisions	anomaly group represent the external boundary of a sizable sub-rectangular enclosure with internal sub-divisions; the approximate external dimensions are 100m (north side), 90m (east side), 85m (south side) and 80m (west side)	
7	6 8 9	possible, positive	disrupted linear	sub-rectangular enclosure with internal divisions	anomaly group represents an internal sub-division of a substantial sub-rectangular enclosure	
8	6 7 9	possible, positive	disrupted linear	sub-rectangular enclosure with internal divisions	anomaly group represents an internal sub-division of a substantial sub-rectangular enclosure	
9	7 8 9	possible, positive	disrupted linear	sub-rectangular enclosure with internal divisions	anomaly group represents an internal sub-division of a substantial sub-rectangular enclosure	
10		possible, negative	disrupted linear			
11		possible, positive	linear			
12		possible, positive	disrupted linear			

Table 2: data analysis

<p>Grid <i>Method of Fixing:</i> DGPS set-out using pre-planned survey grids and Ordnance Survey coordinates. <i>Composition:</i> 30m by 30m grids <i>Recording:</i> Geo-referenced and recorded using digital map tiles. <i>DGPS used:</i> Spectra Precision PM5V2 GPS with external antenna and survey pole and DigiTerra Explorer 7 as the survey control program.</p>	
<p>Equipment <i>Instrument:</i> Bartington Instruments grad601-2 <i>Firmware:</i> version 6.1</p>	<p>Data Capture <i>Sample Interval:</i> 0.25m <i>Traverse Interval:</i> 1 metre <i>Traverse Method:</i> zigzag <i>Traverse Orientation:</i> GN</p>
<p>Data Processing, Analysis and Presentation Software QCAD Professional 3 DW Consulting TerraSurveyor3 Manifold System 8 GIS Microsoft Corp. Office Excel 2013 Microsoft Corp. Office Publisher 2013 Adobe Systems Inc Adobe Acrobat 9 Pro Extended</p>	

Table 3: methodology information

Instrument	
Type:	Bartington Grad-601 gradiometer
Units:	nT
Direction of 1st Traverse:	see below
Collection Method:	ZigZag
Sensors:	2 @ 1.00 m spacing.
Dummy Value:	32702
Program	
Name:	TerraSurveyor
Version:	3.0.31.0
Statistics	Processing
Max:	110.81
Min:	-96.84
Std Dev:	5.49
Mean:	0.15
Median:	0.00
	1 Base Layer
	2 Clip at 1.00 SD
	3 De Stagger: Grids: All Mode: Both By: -1 intervals
	4 De Stagger: Grids: All Mode: Both By: -1 intervals
	5 De Stagger: Grids: c7.xgd c10.xgd c15.xgd c6.xgd c11.xgd c14.xgd c5.xgd c12.xgd c13.xgd Mode: Both By: -1 intervals
	6 De Stagger: Grids: c15.xgd c14.xgd c13.xgd Mode: Both By: -1 intervals
	7 De Stagger: Grids: c18.xgd Mode: Both By: -1 intervals
	8 De Stagger: Grids: c23.xgd c26.xgd d3.xgd c22.xgd c27.xgd d2.xgd c21.xgd c28.xgd d1.xgd Mode: Both By: -1 intervals
	9 De Stagger: Grids: d1.xgd Mode: Both By: 1 intervals
	10 De Stagger: Grids: d3.xgd d6.xgd d11.xgd d14.xgd d2.xgd d7.xgd d10.xgd d15.xgd Mode: Both By: -1 intervals
	11 De Stagger: Grids: d8.xgd d9.xgd Mode: Both By: 1 intervals
	12 De Stagger: Grids: b20.xgd b19.xgd b21.xgd b23.xgd b32.xgd b18.xgd b22.xgd b10+b24.xgd b31.xgd b4.xgd b9.xgd b11+b25.xgd b30.xgd b33.xgd b5.xgd b8.xgd b12+b26.xgd b29.xgd b34.xgd b6+c16.xgd b7+c17.xgd c24+b27+b13.xgd c25+b28.xgd d4+b35.xgd Mode: Both By: -1 intervals
	13 DeStripe Median Traverse: Grids: a1.xgd a15.xgd a16.xgd b14.xgd a2.xgd a14.xgd a17.xgd b15.xgd a3.xgd a13.xgd a18.xgd b16.xgd a4.xgd a12.xgd a19.xgd b17.xgd a5.xgd a11.xgd a20.xgd b3.xgd a6.xgd a10.xgd a21.xgd b2.xgd a7.xgd c1+a9.xgd a22+c8.xgd b1+c9.xgd a8.xgd c2.xgd c7.xgd c10.xgd c3.xgd c6.xgd c11.xgd c4.xgd c5.xgd c12.xgd
	14 DeStripe Median Traverse: Grids: b20.xgd b19.xgd b21.xgd b23.xgd b18.xgd b22.xgd b10+b24.xgd
	15 DeStripe Median Sensors: Grids: b18.xgd b22.xgd b10+b24.xgd b31.xgd b4.xgd b9.xgd b11+b25.xgd b30.xgd b5.xgd b8.xgd b12+b26.xgd b29.xgd b6+c16.xgd b7+c17.xgd c24+b27+b13.xgd c25+b28.xgd c15.xgd c18.xgd c23.xgd c26.xgd
	16 DeStripe Median Traverse: Grids: c14.xgd c19.xgd c22.xgd c27.xgd d2.xgd d7.xgd d10.xgd d15.xgd c13.xgd c20.xgd c21.xgd c28.xgd d1.xgd d8.xgd d9.xgd d16.xgd
	17 DeStripe Median Traverse: Grids: d4+b35.xgd d5.xgd d12.xgd d13.xgd d3.xgd d6.xgd d11.xgd d14.xgd
	18 Interpolate: Match X & Y Doubled.

Table 4: processed data metadata