

Substrata

Archaeological Geophysical Surveyors

An archaeological magnetometer survey

Land West of Dornafeld Lane Ipplepen, Devon

Centred on NGR (E/N): 283940,068120 (point)

Report: 1605IPP-R-1

Ross Dean BSc MSc MA MCIfA

15 June 2016

Substrata
Office 1, 5 Mill Street
Bideford, Devon EX39 2JT
Tel: 01273 273599
Email: geophysics@substrata.co.uk
Web: substrata.co.uk

Clients:

Devon County Council Environment Group
Lucombe House, County Hall
Exeter, Devon EX2 4QD

Mr Simon Dewhurst, Dornafeld, Two Mile
Oak, Newton Abbot, Devon TQ12 6DD

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Project archive

Report	Adobe PDF format
Copies of report figures	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: 10 and 13 May 2016
Area: 1.3ha
Lead surveyor: Mark Edwards BA
Author: Ross Dean BSc MSc MA MifA

1.2 Clients

Devon County Council Environment Group, Lucombe House, County Hall, Exeter, Devon EX2 4QD and Mr Simon Dewhurst, Dornafeld, Two Mile Oak, Newton Abbot, Devon TQ12 6DD

1.3 Location

Site: Land west of Dornafeld Lane
Civil Parish: Ipplepen
District: Teignbridge
County: Devon
Nearest Postcode: TQ12 5UU
NGR: SX 83940 68120 (point)
Ordnance Survey NGR (E/N): 283940,068120 (point)

1.4 Archive

OASIS number: substrat1-254856
Archive: At the time of writing, the archive of this survey will be held by Substrata.

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 the Devon County Council Environment Group and Mr Simon Dewhurst. 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.

Twenty-nine magnetic anomaly groups were mapped as representing possible archaeological deposits or features. Of these, six represent extant field banks of a field system recorded in the Devon Historical Environment Record and thought to be Iron Age. A further two anomaly groups may represent continuations of these field banks beyond the extant remains with a further two, and possibly up to four, groups representing removed field banks or other ground disturbance. One group may represent an earthwork thought to be the remains of an Iron Age hut circle although this is by no means certain. One group denotes disturbed ground with the possibility of heated deposits which could indicate the presence of a ploughed out barrow. Five groups represent different, regular, approximately parallel trends of ground disturbance. With four of these groups the origins of the ground disturbance is not clear and may be relatively recent. The other group may represent historical ridge-and-furrow cultivation with a possible ploughing headland.

The remaining magnetic anomaly groups mapped as possibly relating to archaeological deposits or features are likely to represent disturbed linear deposits, such as former ditches or banks, of unknown period and probably from more than one phase of past land management.

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 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/Digital Antiquity Guides (undated).

4 Site description

4.1 Landscape and land use

The survey area comprises one field on a small plateau with gentle slopes. To the north of the site there is a steep scarp deepened by quarrying. At the time of the survey the field was under grass pasture.

4.2 Geology

The survey area has a solid geology of limestone of the Devonian East Ogwell Limestone Formation. The superficial geology is not recorded in the source used (British Geological Survey, undated).

5 Archaeological background

5.1 Definitions

5.1.1 Terminology

Archaeological sites, buildings, historic parks and gardens, conservation areas, registered battlefields and other aspects of the historic environment that are significant because of their historic, archaeological, architectural or artistic interest are considered heritage assets. 'Designated heritage assets' are afforded protection as either scheduled monuments, listed buildings or through their inclusion within conservation areas. Non-designated heritage assets are potential archaeological remains and historic landscapes.

Scheduled monuments, as defined under the Ancient Monuments and Archaeological Areas Act (1979) are sites which have been selected by a set of non-statutory criteria to be of national importance. These criteria comprise period, rarity, documentation, group value, survival/condition, fragility/vulnerability, diversity, and potential.

5.1.2 Archaeological periods

Archaeological periods use in this report are defined as follows:

Prehistoric: before AD 43

Palaeolithic: circa 500,000 BC to circa 10,000 BC

Mesolithic: circa 10,000 BC to circa 4,000 BC
Neolithic: circa 4,000 BC to 2,200 BC
Bronze Age: circa 2,200 BC to circa 700 BC
Iron Age: circa 700 BC to AD 43
Romano-British: AD 43 to circa AD 410
Early Medieval: circa AD 410 to AD 1066
Medieval: AD 1066 to AD 1540
Post-medieval: AD 1540 to AD 1901
Modern: AD 1901 onwards

5.1.3 Grid references, distances and bearings

The centre of the survey area is provided in Section 1 as an easting/northing (E/N) and as a ten figure National Grid reference (NGR), both of which define a 1m square with its south-western corner on the reference point. Eight figure NGRs define a 10m square. Six figure NGRs a 100m square and so on. The distances and bearings provided below are relative to the south-western corner of the square defined by the NGR quoted.

All distances and bearings provided below are relative to the Ordnance Survey NGR centre point of the site recorded in Section 1.

5.2 Historic landscape characterisation

Rough ground with Prehistoric remains.

Earthworks in this rough grazing ground, heathland or moorland preserve the remains of a prehistoric landscape (Devon County Council, undated).

5.3 Historical and archaeological background

The following is a short summary of information obtained from the Devon Historic Environment Record (HER) within approximately 500m of the survey area and relevant to the understanding of the geophysical survey. Except where specifically cited, this information was obtained using the Heritage Gateway (Heritage Gateway, undated).

5.3.1 Heritage assets within the survey area

There are two known heritage assets within the application area. An Iron Age field system extends across the survey area with banks some 0.3m in average height (Figure 2, Historic Environment Record MDV8642, National Grid Reference SX 839 681).

An Iron Age hut circle is extant as a small grass covered mound (Figure 2, MDV8643, SX 839 681).

5.3.2 Heritage assets within 500m of the survey area

The surrounding area has an abundance of recorded barrows, four of which survive as four circular mounds with buried quarry ditches to the southeast of the site (Scheduled Monument 1003825). They are thought to be Bronze Age (2200 BC- 701 BC) and are situated on a slight ridge forming the watershed between the Kester Brook and River Hems (Table 1). They are classified as bowl barrows and range in size from 30m to 45m in diameter and from 1.5m to 3.5m in height. The northernmost mound is flat topped and had a radar post erected on it during the Second World War. The surrounding quarry ditches from which material to construct the mounds was derived survive as up to 4m wide buried features for all four bowl barrows. Three other possible Prehistoric barrows have been recorded in the area but are not included in the scheduled monument (Table 2).

Historic environment entry	Monument designation	National grid reference	Distance from survey area centre (m)	Bearing from survey area centre
MDV8588	Barrow A	SX 84189 68252	282	N62
MDV8587	Barrow B	SX 84161 68095	222	N96
MDV8586	Barrow C	SX 84067 68087	131	N105
MDV8583	Barrow D	SX 84064 67634	502	N166

Table 1: bowl barrows comprising Scheduled Monument 1003825 relative to the centre of the survey area (SX 83940 68120)

Historic environment entry	Short description	Dimensions	National grid reference	Distance from survey area centre	Bearing from survey area centre
MDV22314	Possible barrow, very ploughed out	Diameter 35m, height 1m	SX 841 683	241m	N42
MDV22315	Possible barrow, very ploughed out	Diameter 20m, height 0.5m	SX 840 683	190m	N18
MDV22316	Possible barrow, very faint mound. Shows as stone scatter when field is ploughed		SX 841 682	179m	N63

Table 2: non-scheduled Prehistoric barrows within 500m of the site

An Iron Age field system with a rectilinear appearance is recorded 573m on a bearing of N205 from the application area centre at Stallage common. Slight earth banks can be seen on rough pasture to north of Ippepen (MDV8616, SX 837 676).

A disused lime kiln estimated to be anywhere from Early Medieval to Modern in period lies 89m on a bearing on N333 from the application area (Figure 2, MDV14817, SX 839 682).

A Post-medieval to Modern quarry is mapped 300m on a bearing of N307 from the survey area centre within the parish of Oghwell (MDV48058, SX 837 683).

The site of a World War Two searchlight battery lies 316m on a bearing of N55 at Two Mile Oak (MDV72031, SX 842 683).

6 Results, discussion and conclusions

6.1 Scope

This survey was designed to record magnetic anomalies. The anomalies themselves cannot be regarded as actual archaeological features and the dimensions of the anomalies shown do not represent the dimensions of any associated archaeological features. The analysis presented below identifies and characterises anomalies and anomaly groups that may relate to archaeological deposits, structures and features.

The terms archaeological deposits, structures and features refer to any artefacts, material deposits or disturbance of natural deposits thought to be the result of human activity and not undertaken as recent land maintenance or farming.

The reader is referred to section 7.

6.2 Results

Figure 2 shows the interpretation of the survey data. It includes the anomaly groups identified as relating to archaeological deposits along with their identifying numbers. Table 3 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:

Figure 2 and Table 3 comprise the analysis of the survey data.

Figures 3 and 4 are plots of processed data as specified in Table 5. These plots represent different views of the data that were used to assess potential archaeology.

6.3 Discussion

6.3.1 General points

Discussion scope

Not all anomalies or anomaly groups identified in Table 1 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 adjacent to the survey area. Strong magnetic responses mapped close to survey boundaries are likely to relate to these materials except where otherwise indicated in Figure 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 are only mapped as potential archaeology if they are clustered in groups or otherwise form recognisable patterns.

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. If mapped, they are listed in Table 1 but are not discussed below.

Anomalies thought to relate to natural features were not mapped.

Numerous dipole magnetic anomalies are scattered across the data set. These are likely to represent recent buried ferrous objects and such patterns are frequently found in close proximity to modern settlements.

6.3.2 Data relating to historic maps and other records

Magnetic anomaly groups **3, 4, 7, 16, 21** and **23** coincide with and likely represent banks of a field system, thought to be Iron Age, that extends across the survey area. These banks are

recorded on the modern digital versions of Ordnance Survey maps (Figure 2) and in the Devon Historical Environment Record (entry MDV8642). The patterns of these anomaly groups suggest that the field banks have a stony core with either earthen flanks and/or flanking ditches. It is clear that some of the banks extend further than has been mapped as is discussed below.

Group **15** coincides with the location of a possible Iron Age hut circle as mapped by the Ordnance Survey. While this anomaly group may denote a stony deposit, it is not well defined in the data set and cannot be characterised as a likely archaeological deposit.

6.3.3 Data with no previous archaeological provenance

As mentioned in the previous section, some of the mapped Iron Age field banks appear extended in the gradiometer data. Groups **6** and **24** are continuations of groups **4** and **23** respectively. Group **25** appears to represent a different phase of the field bank represented by groups **23** and **24**. Group **26** may be an extension of **25** or be related to the separate linear anomaly **27**.

Anomaly groups **2** and **5** may relate to an extant field bank although relatively recent origins cannot be ruled out for either group. Likewise group **12** has characteristics often found in recently disturbed ground but may represent a former field bank.

A number of linear trends exist in the data set and have been recorded as groups **9**, **11**, **12**, **13** and **14**. Such groups can represent land disturbance from any period such as land drainage, ploughing or even the regular passage of animals or vehicles. Group **9**, however, has characteristics often seen in magnetic anomaly patterns left by historic ridge-and-furrow ploughing. Group **8** may represent an associated ploughing headland.

Group **29** is typical of anomaly patterns representing disturbed ground. The range of reading within the group may mean that there are heated materials within the deposit which in turn, given the surrounding barrows discussed in Section 5.3, could indicate that the group represents a ploughed out barrow although this is by no means certain.

The remaining groups mapped as possibly relating to archaeological deposits or features are likely to represent disturbed linear deposits, such as former ditches or banks, of unknown period and probably from more than one phase of past land management.

6.4 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.

Twenty-nine magnetic anomaly groups were mapped as representing possible archaeological deposits or features. Of these, six represent extant field banks of a field system recorded in the Devon Historical Environment Record and thought to be Iron Age. A further two anomaly groups may represent continuations of these field banks beyond the extant remains with a further two, and possibly up to four, groups representing removed field banks or other ground disturbance. One group may represent an earthwork thought to be the remains of an Iron Age hut circle although this is by no means certain. One group denotes disturbed ground with the possibility of heated deposits which could indicate the presence of a ploughed out barrow. Five groups represent different, regular, approximately parallel trends of ground disturbance. With four of these groups the origins of the ground disturbance is not clear and may be relatively recent. The other group may represent historical ridge-and-furrow cultivation with a possible ploughing headland.

The remaining magnetic anomaly groups mapped as possibly relating to archaeological deposits or features are likely to represent disturbed linear deposits, such as former ditches or banks, of unknown period and probably from more than one phase of past land management.

7 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.

Ross Dean, trading as Substrata, will assign copyright to the client upon written request but retains the right to be identified as the author of all project documentation and reports as defined in the Copyright, Designs and Patents Act 1988 (Chapter IV, s.79). This report contains material that is non-Substrata copyright or the intellectual property of third parties. Such material is labelled with the appropriate copyright and is non-transferrable by Substrata.

8 Acknowledgements

Substrata would like to thank Simon Dewhurst of Dornafeld and Bill Horner, Devon County Council Archaeologist, for commissioning us to complete this survey.

9 Bibliography

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Heritage Gateway (undated) Heritage Gateway [Online], Available: <http://www.heritagegateway.org.uk/gateway/> [June 2016]

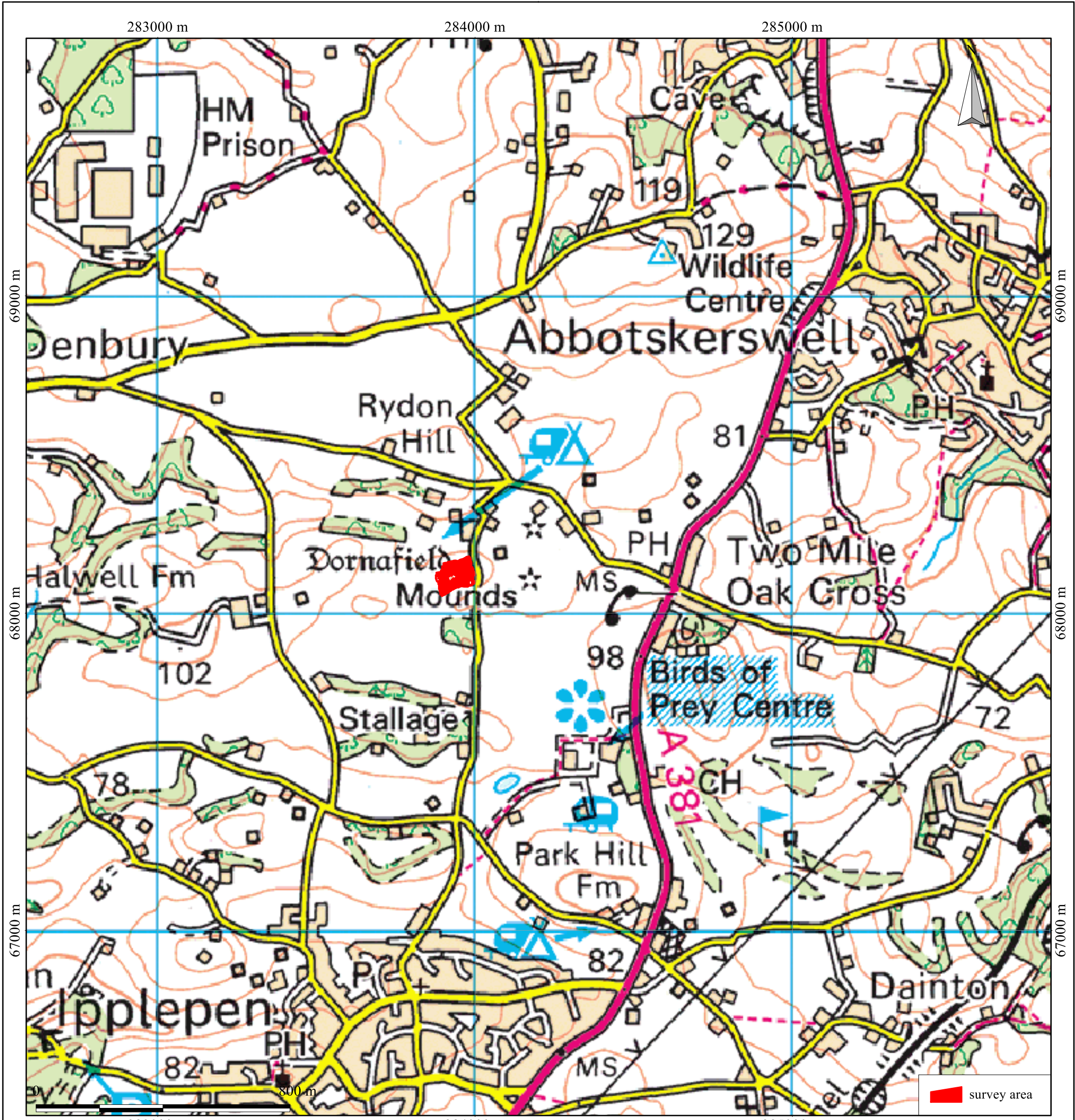
Historic England (2010) *Geophysical Survey in Archaeological Field Evaluation*, [Online], Available: <https://content.historicengland.org.uk/images-books/publications/geophysical-survey-in-archaeological-field-evaluation/geophysics-guidelines.pdf/> [April 2016]

Appendix 1 Supporting plots

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: 284200.30 m, centre Y: 68114.23 m

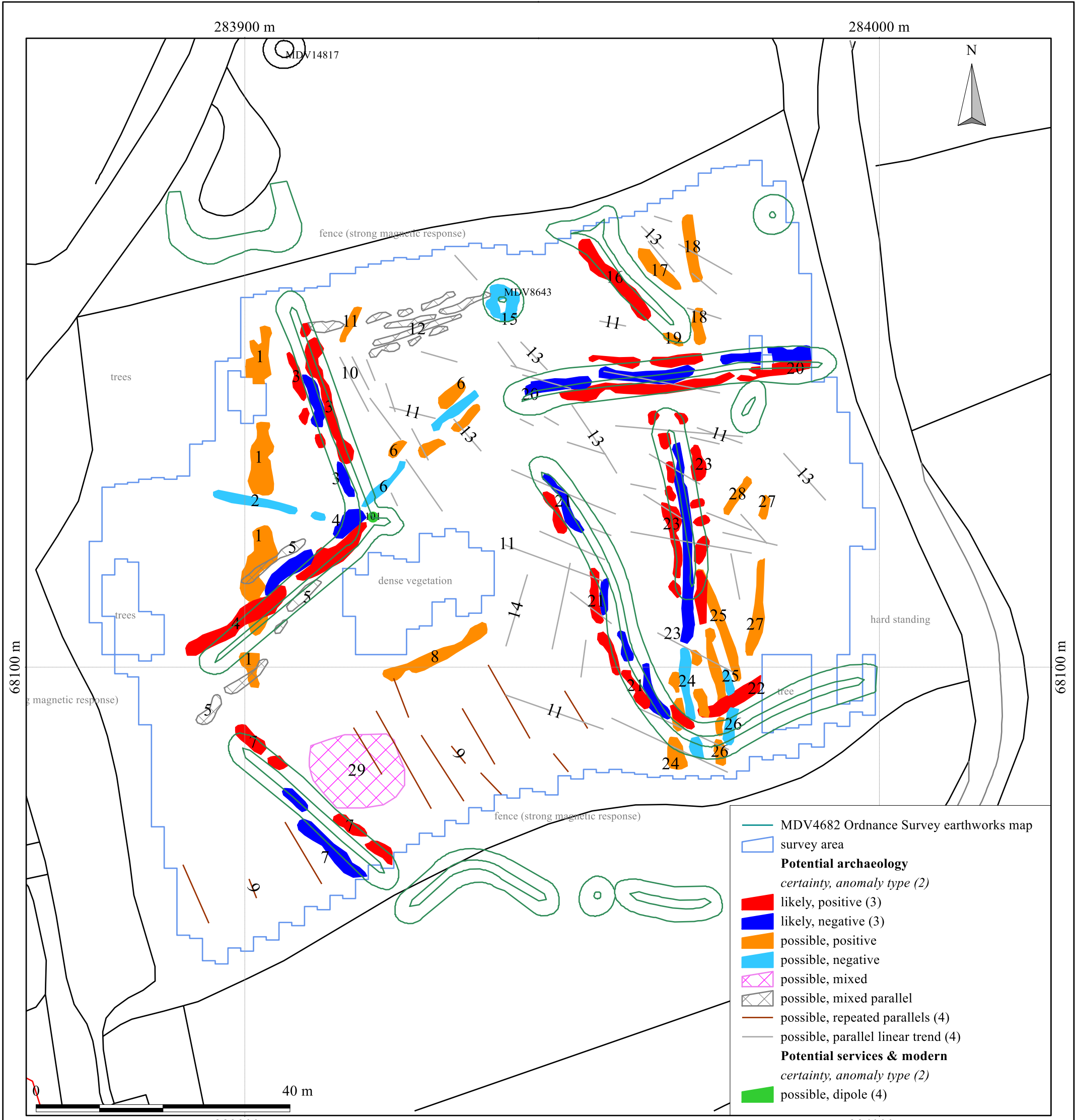
Geophysical survey: Copyright Substrata 2016.
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Scale: 1:12000 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological magnetometer survey
Land west of Dornafield Lane, Ipplepen, Devon
Centred on NGR (E/N): 283940,068120 (point)
Report: 1605IPP-R-1

Figure 1: location map

Substrata
Office 1, 5 Mill Street
Bideford, Devon EX39 2JT
Tel: 01273 273599
Email: geophysics@substrata.co.uk
Web: substrata.co.uk



British Grid
centre X: 283946.30 m, centre Y: 68114.23 m

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Scale: 1:600 @ A3. Spatial Units: Meter. Do not scale off this drawing

- Notes:
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. Representative; 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.

Site: An archaeological magnetometer survey
Land west of Dornafeld Lane, Ipplepen, Devon
Centred on NGR (E/N): 283940,068120 (point)
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anomaly group	associated anomalies	anomaly characterisation certainty & class	anomaly form	additional archaeological characterisation	comments	supporting evidence
1		possible, positive	disrupted linear			
2	11?	possible, negative	disrupted linear		anomaly group appears to be associated with a mapped earthwork but could be a recent service trench	
3		likely, positive/negative/positive	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides with a mapped earthwork	Ordnance Survey, HER MDV8642
4	5	likely, positive/negative/positive	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides with a mapped earthwork	Ordnance Survey, HER MDV8642
5	4	possible, mixed parallel	linears	field boundary, routeway or informal track	such anomaly patterns can relate to prehistoric, historic and recent routeways although the proximity to an extant earthwork means that they could be expressions of the field boundary	Ordnance Survey, HER MDV8642
6	4	possible, positive/negative	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group appears to be an extension of a mapped earthwork	Ordnance Survey, HER MDV8642
7		likely, positive/negative	linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides with a mapped earthwork	Ordnance Survey, HER MDV8642
8	9	possible, positive	linear	headland?		
9	8	possible, repeated parallels		cultivation traces: possible ridge-and-furrow		
10	9?	possible, parallel linear trend		cultivation traces	anomaly group may relate to archaeological or recent disturbance	
11		possible, parallel linear trend		unknown linear trends: either cultivation traces or drainage		
12		possible, mixed parallel	linears	ploughed out Prehistoric bank, routeway, informal track or recent land-forming after cable or pipe laying	anomaly group may be related to either archaeological or recent deposits	
13		possible, parallel linear trend		unknown linear trends: either cultivation traces or drainage		
14		possible, parallel linear trend		unknown linear trends: either cultivation traces or drainage		
15		possible, negative	sub-circular	stony deposit or near-surface bedrock	anomaly group is by no means clear in the data and is recorded because of it coincides with a mapped earthwork thought to be a possible Iron Age hut circle because of morphological similarities with other monuments recorded nearby	Ordnance Survey, HER MDV8643
16	17? 19?	likely, positive	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides with a mapped earthwork	Ordnance Survey, HER MDV8642
17	16?	possible, positive	linear		anomaly groups is either associated with a set of linear trends or with a mapped earthwork	
18		possible, positive	disrupted linear			
19	16?	possible, positive	linear		anomaly group may be associated with a Prehistoric bank	Ordnance Survey, HER MDV8642
20		likely, positive/negative/positive	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides with a mapped earthwork	Ordnance Survey, HER MDV8642
21	22	likely, positive/negative/positive	disrupted curvilinear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides with a mapped earthwork	Ordnance Survey, HER MDV8642
22	21	likely, positive	linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group in close proximity to and same trend as a mapped earthwork	Ordnance Survey, HER MDV8642
23	24	likely, positive/negative/positive	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group coincides and extends a mapped earthwork	Ordnance Survey, HER MDV8642
24	23	possible, positive/negative/positive	disrupted linear	Prehistoric bank; possible rubble core with flanking ditches; part of a field system	anomaly group probably is an extension of a mapped earthwork	Ordnance Survey, HER MDV8642
25	26?	possible, positive/negative/positive	linear	field boundary: possible rubble wore with flanking ditches		
26	25 or 27?	possible, positive/negative				
27	26?	possible, positive	disrupted linear			
28		possible, positive	linear			
29		possible, mixed	oval	area of archaeological activity: barrow?	anomaly group shows an enhanced response which can be the result of heated deposits mixed with natural deposits; in this archaeological environment a ploughed-out barrow must be considered	
101		possible, dipole		ferrous material; such anomalies usually represent modern material	anomaly group is included here as it coincides with a mapped eearthwork terminus and so needs explanation	

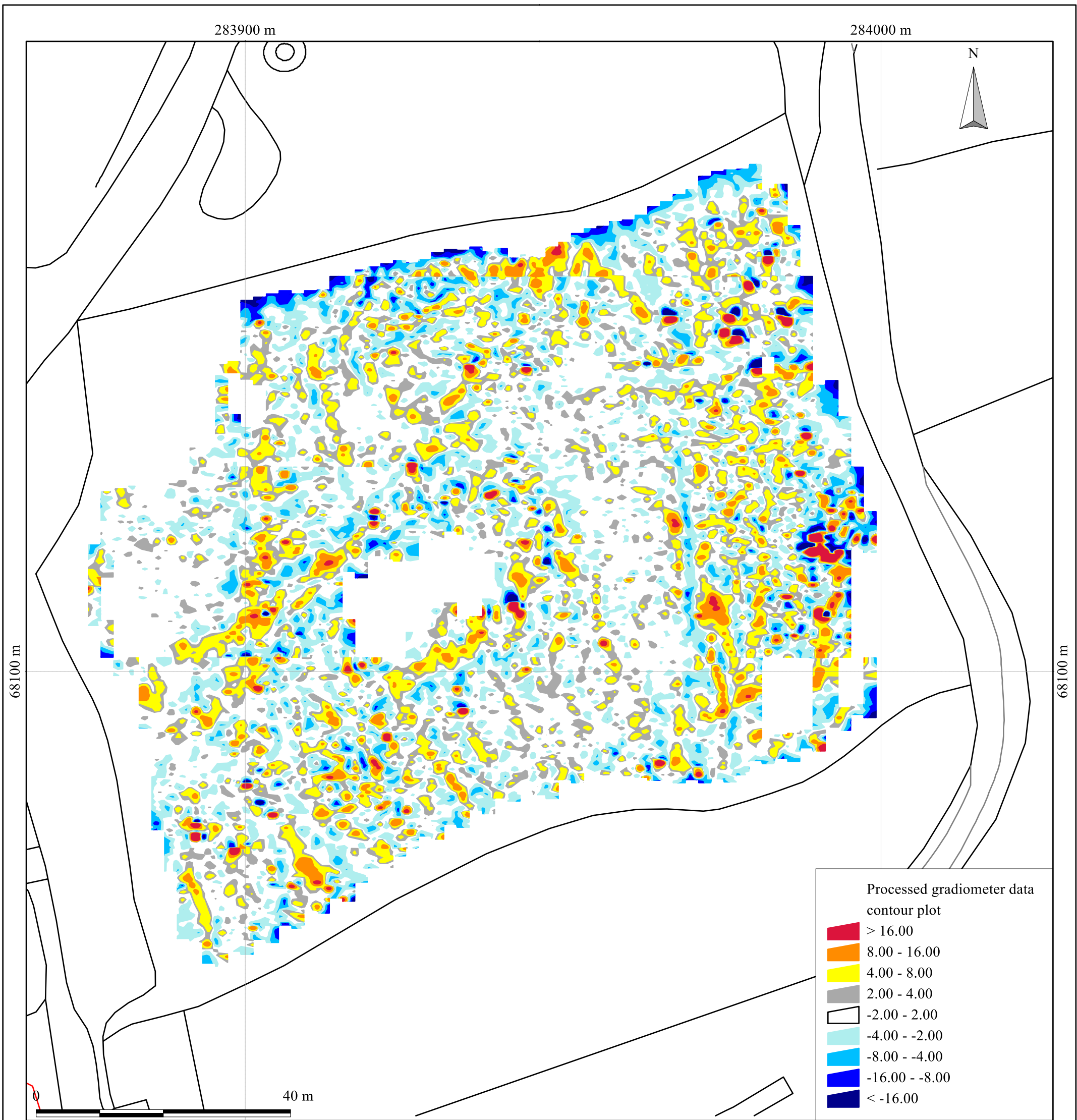
Table 3: data analysis



British Grid
centre X: 283946.30 m, centre Y: 68114.23 m

Geophysical survey: Copyright Substrata 2016.
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Scale: 1:600 @ A3. Spatial Units: Meter. Do not scale off this drawing



British Grid
centre X: 283946.30 m, centre Y: 68114.23 m

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Scale: 1:600 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological magnetometer survey
Land west of Dornafeld Lane, Ipplepen, Devon
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Figure 4: contour plot of procesed data

Substrata
Office 1, 5 Mill Street
Bideford, Devon EX39 2JT
Tel: 01273 273599
Email: geophysics@substrata.co.uk
Web: substrata.co.uk

Appendix 2 Methodology Summary

Table 4: methodology summary	
Documents Survey methodology statement: Dean (2016)	
Methodology <ol style="list-style-type: none"> 1. The work was undertaken in accordance with the survey methodology statement. The geophysical (magnetometer) survey was undertaken with reference to standard guidance provided by the Chartered Institute for Archaeologists (2014) and Archaeology Data Service/ Digital Antiquity Guides (undated). 2. The survey grid location information and grid plan was recorded as part of the project in a suitable GIS system. 3. Data processing was undertaken using appropriate software, with all anomalies being digitised and geo-referenced. The final report included 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. 	
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.	
Equipment <i>Instrument:</i> Bartington Instruments grad601-2 <i>Firmware:</i> version 6.1	Data Capture <i>Sample Interval:</i> 0.25m <i>Traverse Interval:</i> 1 metre <i>Traverse Method:</i> zigzag <i>Traverse Orientation:</i> GN
Data Processing, Analysis and Presentation Software IntelliCAD Technology Consortium IntelliCAD 8.0 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	

Table 5: magnetometer survey - processed data metadata		
<p>SITE 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</p> <p>PROGRAM Name: TerraSurveyor Version: 3.0.29.3</p>		
Stats Max: 56.44 Min: -70.85 Std Dev: 4.69 Mean: 0.25 Median: 0.04	Processes: 7 1 Base Layer 2 Clip at 2.00 SD 3 De Stagger: Grids: All Mode: Both By: -2 intervals 4 De Stagger: Grids: All Mode: Both By: -2 intervals 5 De Stagger: Grids: b1.xgd b4.xgd b2.xgd b3.xgd Mode: Both By: -2 intervals 6 DeStripe Median Sensors: Grids: All 7 Interpolate: Match X & Y Doubled.	

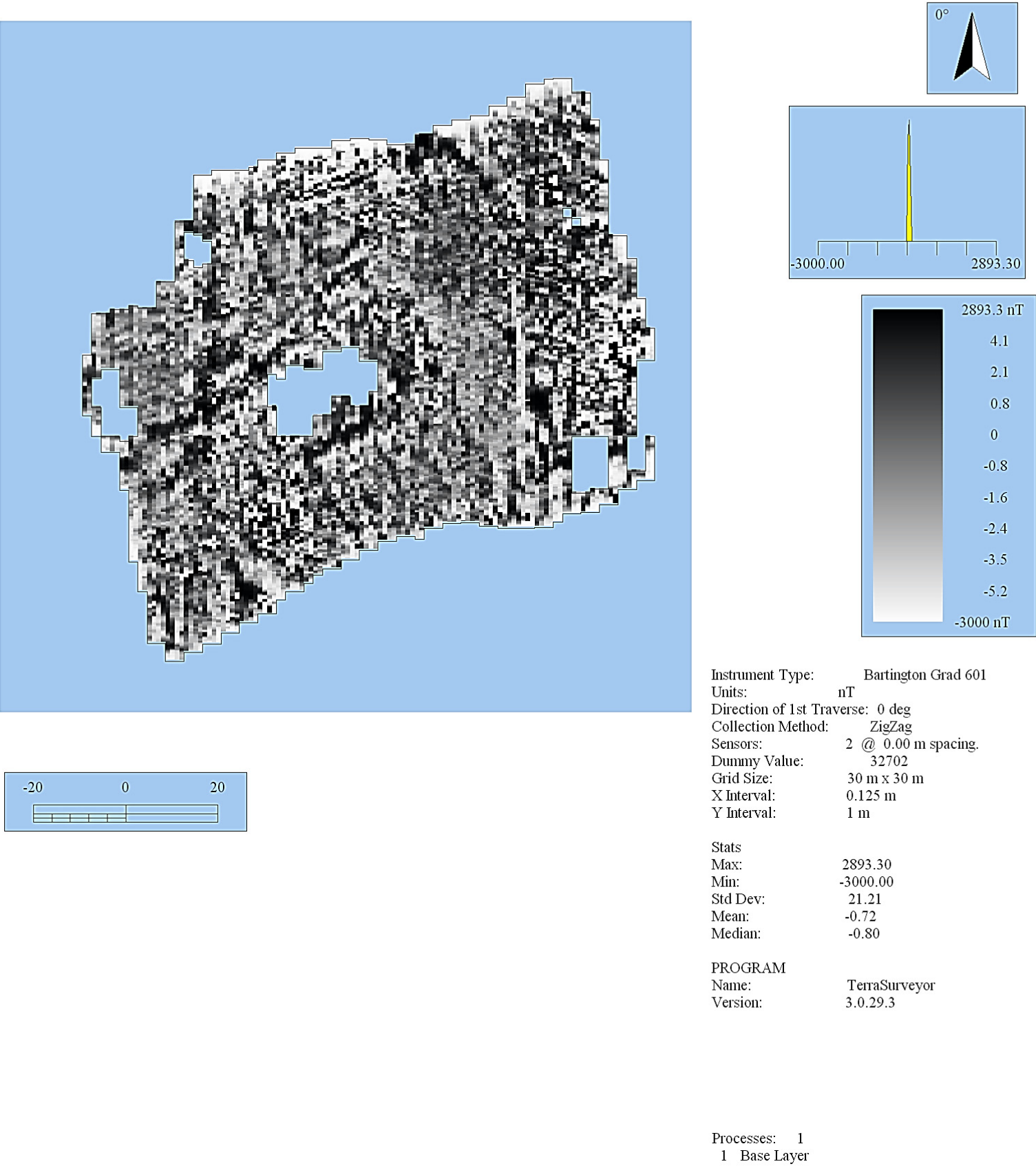


Figure 5: shade plot of unprocessed data