

Substrata

Archaeological Geophysical Surveyors

An archaeological gradiometer survey

**Land at Lower Kergilliak Farm
Falmouth Cornwall**

Ordnance Survey NGR (E/N): 178400,33000 (point)

Report: 150417

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Accompanying CD-ROM

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: between 4 and 25 March 2015
Area: 15 ha
Lead surveyor: Ross Dean BSc MSc MA MifA

1.2 Client

AC Archaeology Ltd, 4 Halthaies Workshops, Bradninch, Nr Exeter, Devon EX5 4QL

1.3 Location

Site: Land at Lower Kergilliak Farm
Town & Civil Parish: Falmouth
County & Unitary Authority: Cornwall
Nearest Postcode: TR11 4SA
NGR: SW 784 330
Ordnance Survey NGR (E/N): 178400,33000 (point)
Cornwall Council planning reference: PA12/10394

1.4 Archive

OASIS number: substrat1-201471
Archive: At the time of writing, the archive of this survey will be held by Substrata and will be deposited with the ADS in due course.

1.5 Introduction

This report was commissioned by AC Archaeology Ltd on behalf of Persimmon Homes (SW) Ltd and Taylor Wimpey UK Ltd. The survey is part of a programme of archaeological works undertaken in advance of and during development on land at the above site. The work was undertaken as a condition (9) of outline planning permission, and has been required by Cornwall Council as advised by their Historic Environment Planning Advice Officer. The requirements for the survey are specified in a Written Scheme of Investigation produced by AC Archaeology Ltd (Valentin, 2015). The location of the site is shown in Figure 1.

1.6 Summary

The magnetic contrast across the area was sufficient to be able to differentiate between anomalies representing possible archaeological features and background magnetic responses. Fifty-seven magnetic anomaly groups were identified as possibly representing archaeological deposits or features, the majority of which are fragmented linear and curvilinear groups that are most likely to relate to past field boundaries or other enclosures of unknown date. Three possible former tracks, speculatively field tracks associated with former field divisions, were recorded. Three anomaly groups may relate to archaeological pits although natural origins cannot be ruled out.

2 Survey aims and objectives

2.1 Aims

The main aim of the geophysical survey was to establish the presence or absence, extent and character of any archaeological features and deposits within the site. The results of the survey and any subsequent trial trenching will be reviewed and used to inform any subsequent mitigation.

The site specific aims are to:

- Establish the presence/absence of archaeological remains;
- Determine the extent, condition, nature, character, date and significance of any archaeological remains encountered;
- Establish the nature of activity on the site;
- Identify any deposits or structures that may relate to the occupation or use of the site;

- Provide further information on the archaeology of the site from any archaeological remains encountered.

2.2 Survey objectives

1. Complete a gradiometer survey across agreed parts of the application 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 site 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). 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). The document text was written using the house style of the Chartered Institute for Archaeologists (Chartered Institute for Archaeologists, undated).

4 Site description

4.1 Landscape and land use

The site occupies an area of just over 15 hectares and is situated to the west of the town of Falmouth, abutting the western extent of the urban edge. The land is generally undulating and falls quite steeply to the north and east towards the Penryn River. The site at Lower Kergilliack is sited on the north and east facing land divided into a series of fields falling generally east from the Hillhead Road towards Falmouth. The upper land falls from an altitude of 90m AOD, to the site's lowest point, close to the junction of Bickland Hill and Bickland Water Road, where it lies at approximately 65m AOD. A stream runs laterally across the site, eventually draining to the Swan Pool just inland of the coast within Falmouth. The site's main use is as pasture fields for cattle (Valentin, 2015).

4.2 Geology

The application area is located close to a solid geology boundary with microgranite of the Permian and Carboniferous Carnmenellis Intrusion to the west and metamorphic bedrock of hornfelsed slate and hornfelsed siltstone of the Devonian Mylor Slate Formation (British Geological Survey, undated). A small area of Head Deposits are indicated overlying the granite within the valley stream which crosses the southern end of the site (Valentin, 2015).

5 Archaeological background

The following is a short summary of information obtained from the Cornwall and Scilly Isles 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 (English Heritage, undated 1).

5.1 Heritage Assets within the survey area

The site has been the subject of a previous Archaeology and Cultural Heritage Assessment by GK Heritage Ltd. There are no previously recorded heritage assets recorded within the site itself, but it does lie in an area where there is piece meal evidence for prehistoric activity. However, it was considered likely that the main focus of prehistoric occupation would have concentrated within the area of the River Fal. The assessment also suggested that there was a general low potential for the site to contain buried remains relating to the Roman-British, Medieval or Post-medieval periods, although the general paucity of known information might be a reflection of the limited amount of archaeological work undertaken in the immediate area,

rather than an absence of buried remains (Valentin 2015 after GK Heritage 2012)

5.2 Heritage Assets within 500m of the Application Area

The HER entries within 500m of NGR 178400,33000 and thought relevant to the survey are concerned with Medieval, Post-Medieval (1540 AD to 1900 AD) and World War Two (1930 AD to 1945 AD) monuments.

A curvilinear ditched field boundary is visible as a cropmark on vertical aerial photographs taken in 1951 to the southeast of the site. It appears to fit into the field pattern marked on the 1st edition OS map of the area and is therefore considered likely to be Medieval (or earlier) in origin. Much of this field system has been destroyed, the site now lying under the Tregoniggie Industrial Estate (HER MCO33903). The base of a Medieval cross is marked as 'stone' on the 1909 OS map to the southwest of the site. The former presence of a cross is implied by the field-name 'Cross Close' recorded for the enclosure to the north on the Tithe Map. No remains were visible in 1968, though the cross base is said to be buried in the hedge or the grass verge of the lane HER MCO5579). The field system surrounding the modern farming settlement of Kergilliack to the west of the site may be of Medieval origin. A number of field boundaries which appear to fit into this field pattern are visible as cropmarks on vertical aerial photographs (HER MCO33896).

A Post-Medieval clay pit is marked on the modern OS 1:10,000 map immediately to the north-west of Kergilliack Farm. The pit and associated spoil covers an area of 0.75 ha. A smaller pit is marked at this location on the 1880 1st Edition OS map (HER MCO33899).

A number of World War Two monuments are recorded in the vicinity. The following were listed in the 1995 Fal Historic Audit, but not visited, and neither were they included in the Defence of Britain Project. A pillbox and anti-tank road block were recorded at the junction on Hillhead Road to the north of the site (HER MCO44948). The same combination was recorded at the junction on Trecobeas Road east of the site (HER MCO44949) and at the junction on Bickland Park Road (HER MCO44951) also to the east of the site. An anti-aircraft battery is listed as being on the site of the covered reservoir off Hillhead Road (HER MCO44954) to the northwest of the site.

Two World War Two sites were recorded during the Defence of Britain Project. A barrage balloon mooring site which is clearly visible on vertical aerial photographs taken in 1943 and 1951, in a field to the south of the road junction of Bickland Water Road and Bickland Hill to the east of the site. This was a fixed barrage balloon site with a centre mooring block, surrounded by smaller concrete mooring blocks set in the ground in a circular pattern (two concentric circles of blocks are visible on the photographs). The centre block and most of the outer blocks have been unearthed, many are still in their original positions, whilst others can still be seen in nearby hedgerows a few yards from their original positions (HER MCO33872). A type 24 pill box clearly visible on 1950 aerial photographs on the west side of Bickland Water Road, opposite Tregoniggie Industrial Estate to the southeast of the site. It was constructed from concrete blocks with normal thickness walls. An inner anti-ricochet wall visible through space above blocked-in entrance (HER MCO33877).

6 Results, discussion and conclusions

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 and structures.

The terms ‘archaeological features’ and ‘archaeological deposits’ 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.

6.1 Results

Figure 2 shows the interpretation of the survey data. It includes the anomaly groups identified as relating to archaeological deposits along with their numbers. Table 1 is an extract of the detailed analysis of the survey data which is provided in the attribute tables of the GIS project on the accompanying CD-ROM and in the project archive.

Figure 2 and Table 1 comprise the analysis of the survey data. Plots of the processed data are provided in Figures 3 and 4.

For the purposes of discussion, the survey area was divided into fields 1 to 13 as shown in Figure 2.

6.2 Discussion

6.2.1 General points

Not all anomalies or anomaly groups identified in Table 1 are necessarily discussed below. All identified anomaly groups are recorded in the GIS project on the accompanying CD-ROM.

Anomalies thought to relate to natural features were not mapped.

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.

There are numerous 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.

Data collection along the survey area edges was restricted as shown in Figures 3 and 4 due to the presence of magnetic materials in and adjacent to field and roadside boundaries. Strong magnetic responses mapped close to the field and roadside boundaries are likely to relate to these materials except where otherwise indicated in Figure 2.

All of the surveyed fields display parallel linear anomaly patterns orientated with the long axes of each field. These patterns are likely to reflect former ploughing. The clear patterns in fields 6, 8, 10 11 and 12 are likely to reflect former ridge-and-furrow cultivation.

6.2.2 Data relating to historical maps and other records

Magnetic anomaly 40 in field 9 and 55 in field 13 coincide with and are likely to represent former field boundaries mapped by the Ordnance Survey between 1880 and 1933.

6.2.3 Data with no previous archaeological provenance

The majority of magnetic anomaly groups mapped as relating to potential archaeological deposits are linear and curvilinear groups that are most likely to relate to past field boundaries or other enclosures of unknown date.

Groups 7 (field 1), 9 and 11 (field 2) represent areas of enhanced magnetic response which can indicate an area of archaeological activity and/or disturbed deposits.

Groups 19 (field 4), 52 (field 13), and possibly 35 and 36 taken together (field 8), appear to relate to former tracks.

Groups 37 to 39 may represent filled natural features or possibly pits with burnt material or relatively deeply buried ferrous material. A geological origin also cannot be ruled out.

Groups 43 and 44 (field 10) may represent ploughed out archaeological deposits although a geological origin is equally likely.

6.3 Conclusions

The magnetic contrast across the area was sufficient to be able to differentiate between anomalies representing possible archaeological features and background magnetic responses. Fifty-seven magnetic anomaly groups were identified as possibly representing archaeological deposits or features, the majority of which are fragmented linear and curvilinear groups that are most likely to relate to past field boundaries or other enclosures of unknown date. Three possible former tracks, speculatively field tracks associated with former field divisions, were recorded. Three anomaly groups may relate to archaeological pits although natural origins cannot be ruled out.

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).

8 Acknowledgements

Substrata would like to thank John Valentin of AC Archaeology Ltd for commissioning us to complete this survey.

9 Bibliography

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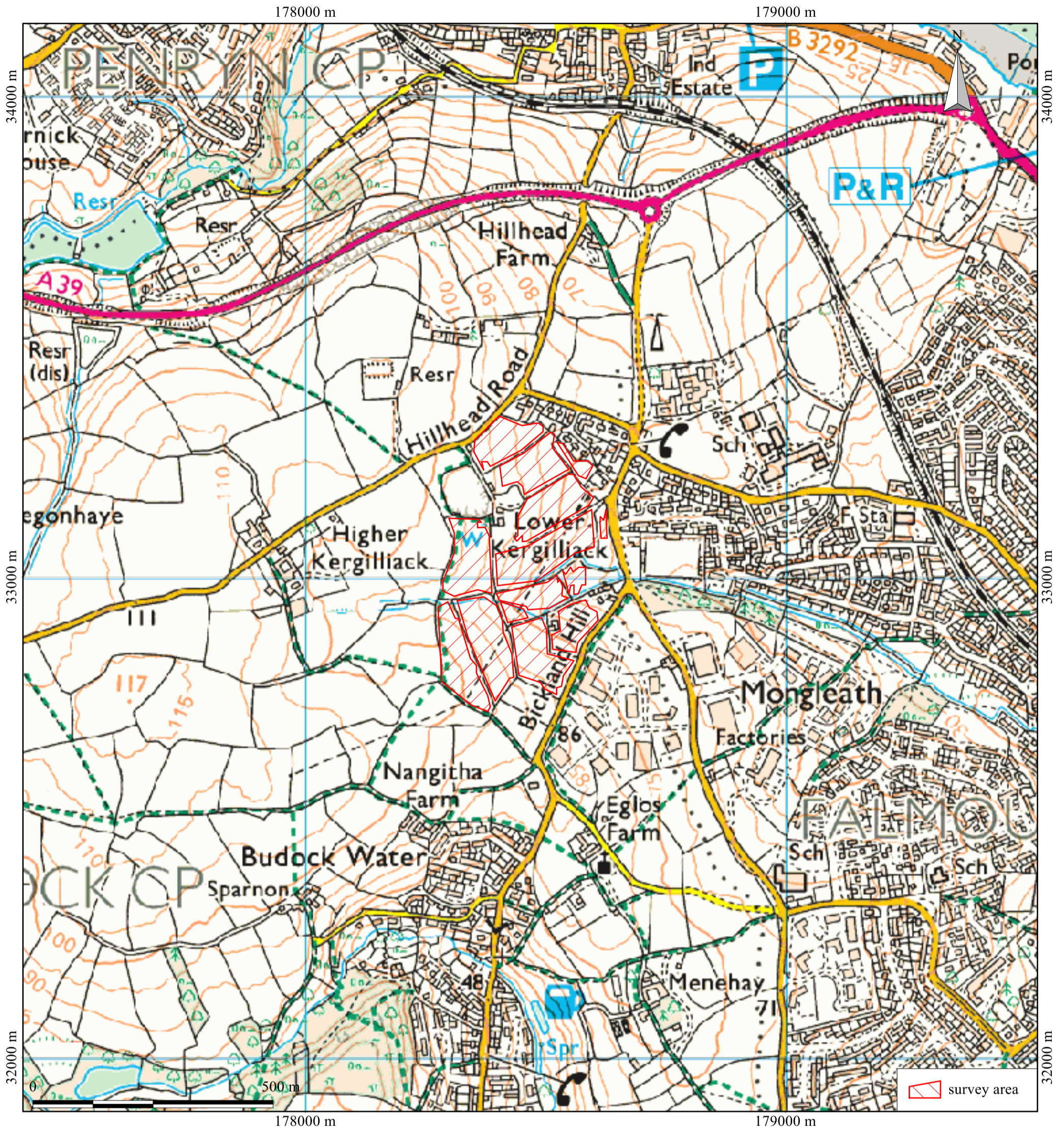
Valentin, J. (2015) *Land at Lower Kergilliak Farm, Falmouth centred on NGR SW 784 330, Written Scheme of Investigation for a Programme of Archaeological Works, Cornwall Council planning reference PA12/10394 (Condition 9)*, AC Archaeology Ltd unpublished document ACD1053/1/0

Appendix 1 Analysis table and 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: 178468.48 m, centre Y: 33019.83 m

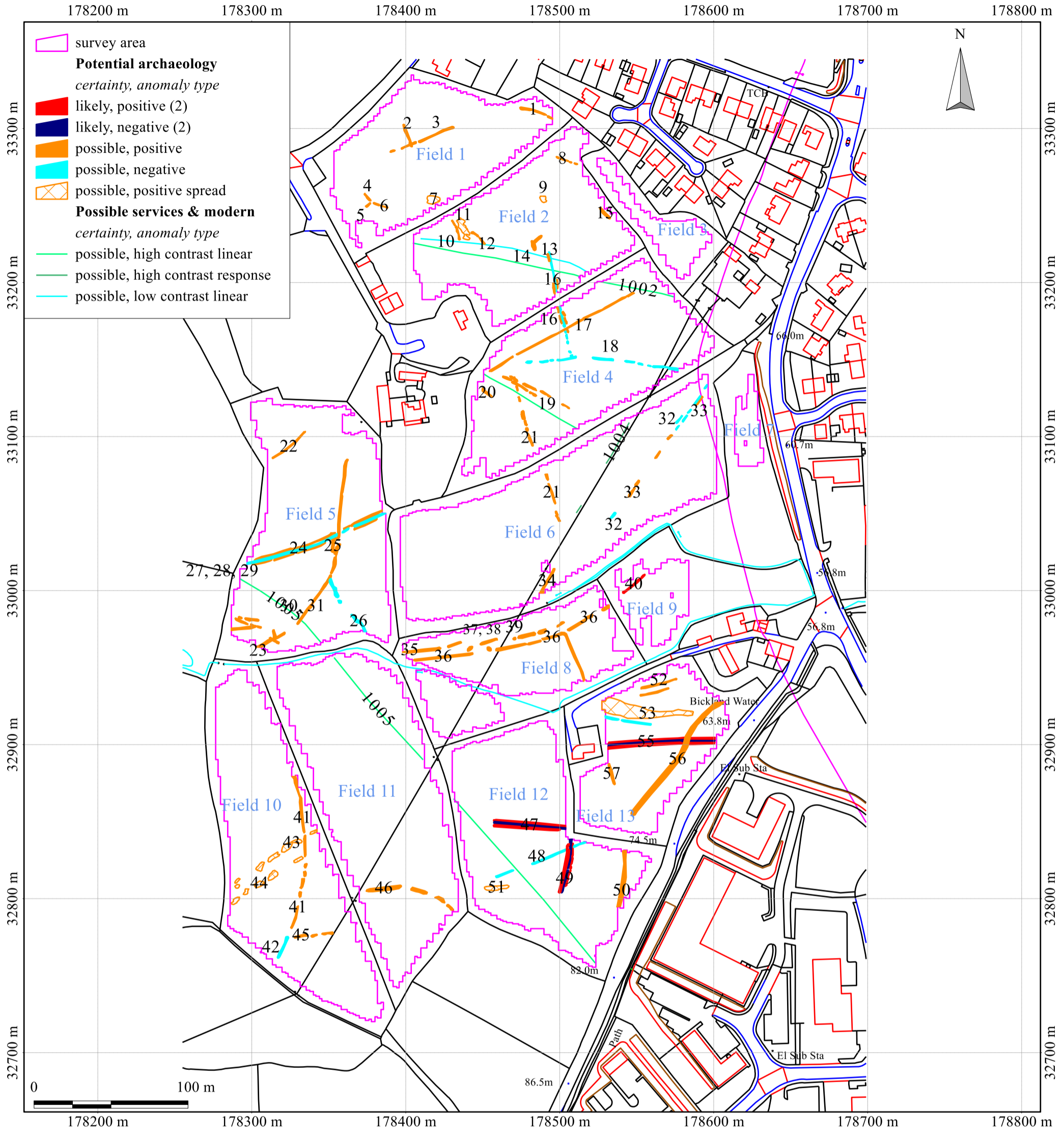
Copyright Substrata 2015.
Base map: Ordnance Survey (c) Crown Copyright 2015.
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Scale: 1:8000 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological gradiometer survey
Land at Lower Kergilliak Farm, Falmouth Cornwall
Ordnance Survey (E/N): 178400,33000 (point)
Report: 150417

Figure 1: location map

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British Grid
centre X: 178482.16 m, centre Y: 33015.34 m

Copyright Substrata 2015.
Base map: Ordnance Survey (c) Crown Copyright 2015.
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Scale: 1:2500 @ A3. Spatial Units: Meter. Do not scale off this drawing

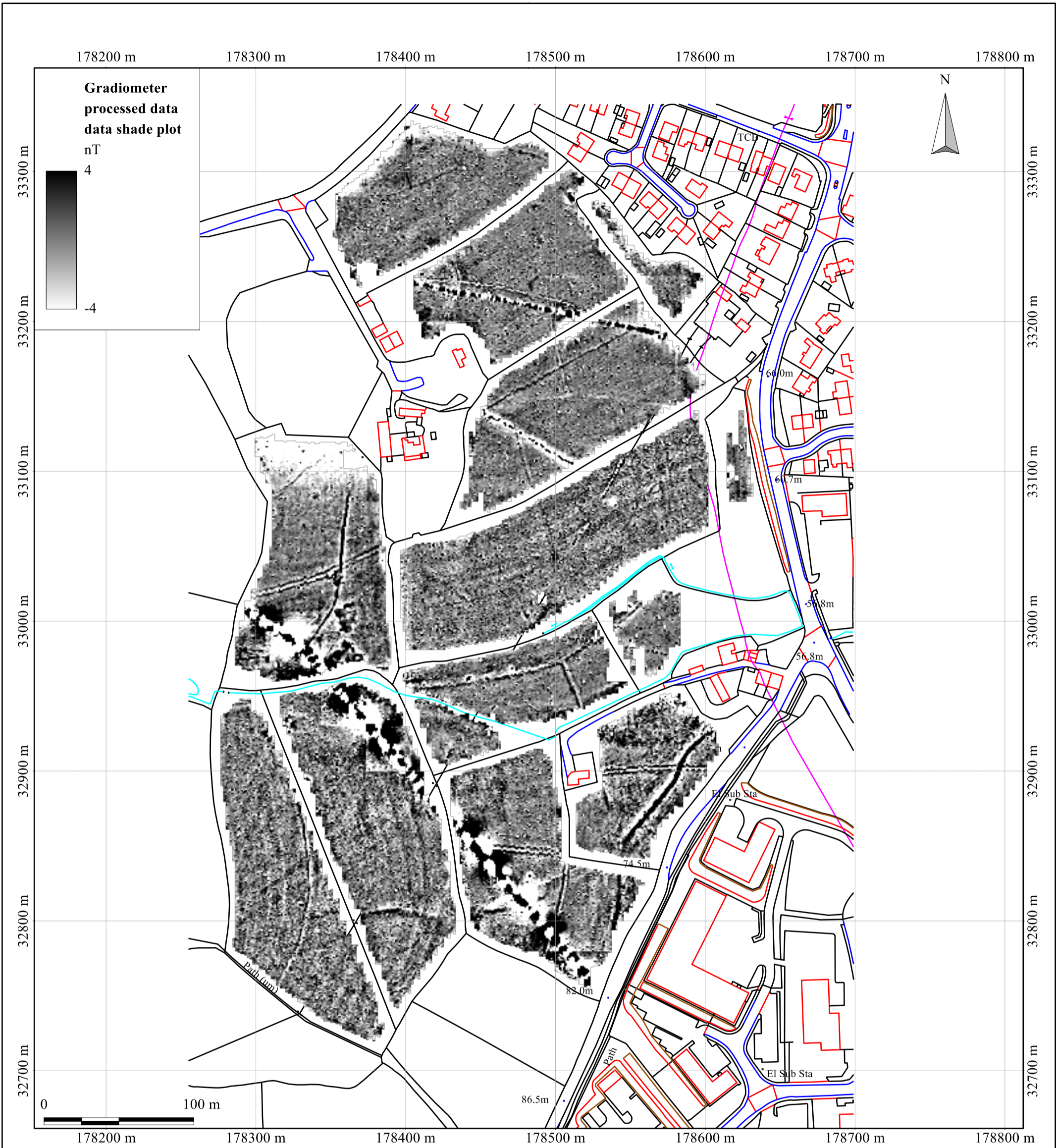
Notes:

1. All interpretations are provisional and represent potential archaeological deposits.
2. Anomalies designated "likely archaeology" have supporting evidence e.g. historical maps and or visible earthworks.
3. Anomalies likely to represent geological or other natural deposits are not mapped unless relevant to potential archaeological events or deposit

Site: An archaeological gradiometer survey
Land at Lower Kergilliak Farm, Falmouth Cornwall
Ordnance Survey (E/N): 178400,33000 (point)
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field number	anomaly group	associated anomalies	anomaly characterisation certainty & class	anomaly form	additional archaeological characterisation	comments	supporting evidence
1		1 2 3 4 5 6 7	possible, positive possible, positive possible, positive possible, positive possible, positive possible, positive possible, positive spread	disrupted linear linear disrupted linear linear linear linear irregular	area of potential archaeological activity	anomaly group may represent archaeological or natural deposits	
2		8 9 10 11 12 13 14 15 16	possible, positive possible, positive spread possible, positive possible, positive spread possible, positive possible, positive possible, positive possible, positive possible, pos/neg/pos	disrupted linear irregular disrupted curvilinear irregular disrupted curvilinear linear linear linear linear	area of potential archaeological activity area of potential archaeological activity field boundary service trench	anomaly group may represent an archaeological deposit but is more likely to reflect recent ploughing or vehicle tracks anomaly groups are typical of those representing a Cornish bank field wall which comprises a stone-revetted earthen bank and flanking ditches	
2 & 4		1001 1002	possible, low contrast linear possible, high contrast linear	linear	ferrous cable, pipe or drain		
3		1002	possible, high contrast linear		ferrous cable, pipe or drain		
4		16 17 18 19 20 21 1005	possible, pos/neg/pos possible, positive possible, negative possible, positive possible, positive possible, positive possible, high contrast linear	disrupted linear disrupted linear disrupted linear disrupted parallel linears linear disrupted linear	field boundary track	anomaly groups are typical of those representing a Cornish bank field wall which comprises a stone-revetted earthen bank and flanking ditches anomaly group extends into field 6	
5		22 23 24 25 26 27 28 29 30 31	possible, positive possible, positive possible, pos/neg/pos possible, positive possible, negative possible, positive possible, positive possible, positive possible, positive possible, positive	disrupted curvilinear disrupted curvilinear disrupted curvilinear linear disrupted curvilinear disrupted linear disrupted linear linear linear linear	Cornish Bank field boundary field boundary or natural feature	anomaly groups are typical of those representing a Cornish bank field wall which comprises a stone-revetted earthen bank and flanking ditches	
6		32 33 34 1004	possible, negative possible, positive possible, positive possible, high contrast response	disrupted linear disrupted linear linear	response from overhead cables		
8		35 36 37 38 39	possible, positive possible, positive possible, positive possible, positive possible, positive	disrupted linear multilinear oval oval oval	field boundary pit with burnt material or relatively deeply buried ferrous material pit with burnt material or relatively deeply buried ferrous material pit with burnt material or relatively deeply buried ferrous material	anomaly groups likely to be an extension of one coinciding with a field boundary recorded on Ordnance Survey maps between 1880 and 1908	OS maps 1880 1:2500 to 1933 1:2500
9		40	likely, positive	linear	field boundary	anomaly group coincides with a field boundary recorded on Ordnance Survey maps between 1880 and 1908	OS maps 1880 1:2500 to 1933 1:2500
10		41 42 43 44 45	possible, positive possible, negative possible, positive spread possible, positive spread possible, positive	disrupted curvilinear disrupted curvilinear disrupted linear disrupted linear disrupted linear		anomaly group is an expression of the same archaeological feature as group 42 anomaly group is an expression of the same archaeological feature as group 41 anomaly groups may represent archaeological deposits or be an expression of natural geological features anomaly groups may represent archaeological deposits, remnants of former ploughing or be expressions of natural features	
11 11 & 12		46 1005	possible, positive possible, high contrast linear	disrupted curvilinear	ferrous cable, pipe or drain		
12		47 48 49 49 49 50 51	likely, pos/neg/pos possible, negative likely, positive likely, negative likely, positive possible, positive possible, positive spread	linear disrupted linear disrupted linear linear disrupted linear curvilinear broad linear	Cornish Bank field boundary archaeological linear or recent service trench Cornish Bank field boundary Cornish Bank field boundary Cornish Bank field boundary	anomaly groups are typical of those representing Cornish bank field boundaries and here are likely to be former extensions of adjacent extant field boundaries anomaly groups are typical of those representing Cornish bank field boundaries and here are likely to be former extensions of adjacent extant field boundaries anomaly groups are typical of those representing Cornish bank field boundaries and here are likely to be former extensions of adjacent extant field boundaries anomaly groups are typical of those representing Cornish bank field boundaries and here are likely to be former extensions of adjacent extant field boundaries	
13		52 53 54 55 56 57	possible, positive possible, positive spread possible, negative likely, pos/neg/pos possible, positive possible, positive	disrupted parallel linears broad linear linear curvilinear linear	track area of archaeological activity or stream palaeochannel Cornish Bank field boundary	anomaly groups coincide with a field boundary recorded on Ordnance Survey maps between 1880 and 1908	OS maps 1880 1:2500 to 1933 1:2500

Table 1: data analysis



British Grid
 centre X: 178482.16 m, centre Y: 33015.34 m

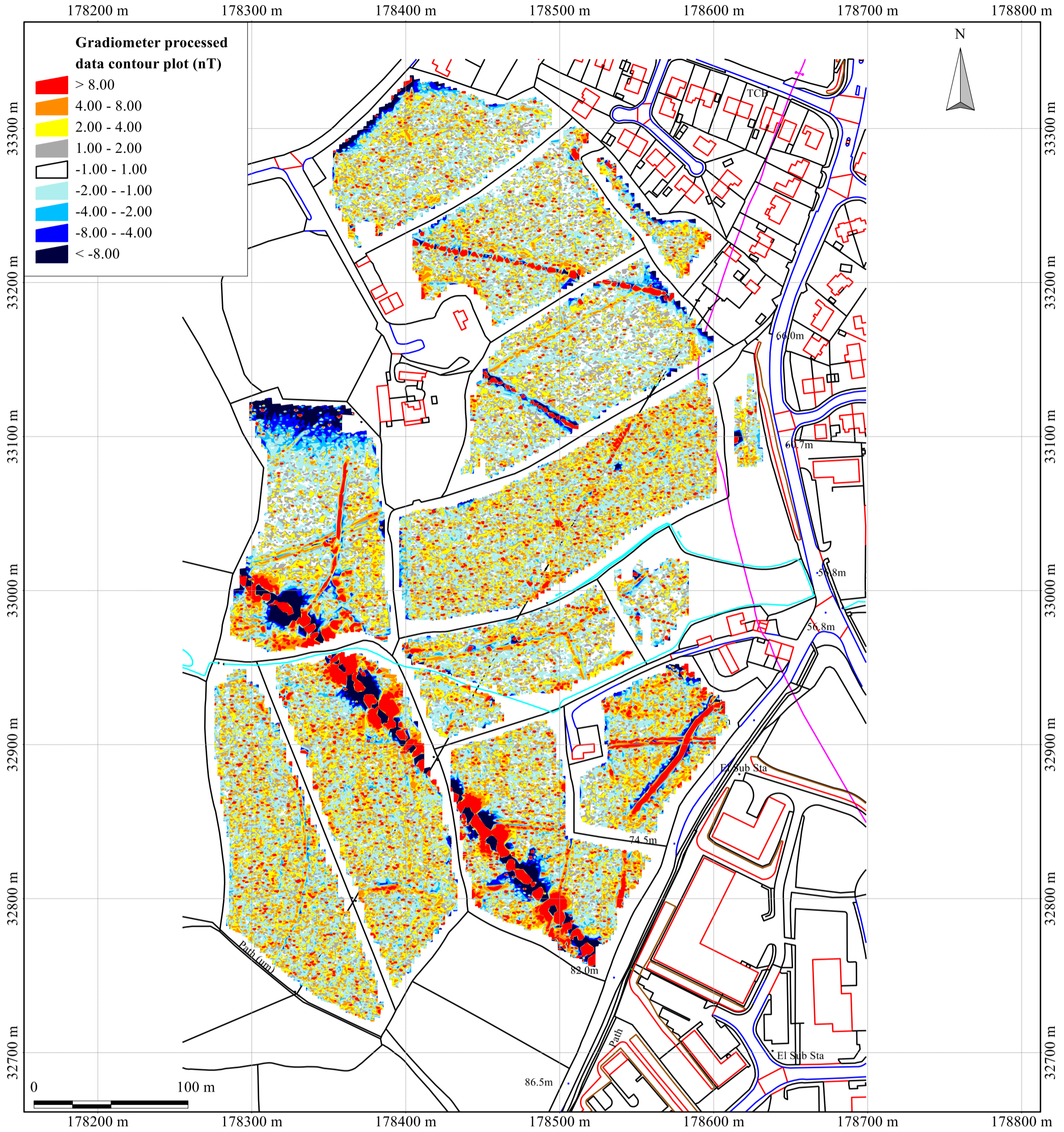
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Scale: 1:2500 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological gradiometer survey
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Figure 3: shade plot of processed

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Scale: 1:2500 @ A3. Spatial Units: Meter. Do not scale off this drawing

Appendix 2 Methodology Summary

Table 1: methodology summary	
<p>Documents Survey methodology statement: Dean (2015)</p>	
<p>Methodology</p> <ol style="list-style-type: none"> 1. The work was undertaken in accordance with the survey methodology statement. The geophysical (gradiometer) 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. 	
<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> 0.25-metres <i>Traverse Interval:</i> 1 metre <i>Traverse Method:</i> zigzag <i>Traverse Orientation:</i> GN42</p>
<p>Data Processing, Analysis and Presentation Software IntelliCAD Technology Consortium IntelliCAD 7.2 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>	

Appendix 3 Data processing

Table 2: gradiometer survey - processed data metadata	
SITE	
Instrument Type:	Bartington Grad 601
Units:	nT
Direction of 1st Traverse:	0 deg
Collection Method:	ZigZag
Sensors:	2 @ 1.00 m spacing.
Dummy Value:	32702
PROGRAM	
Name:	TerraSurveyor
Version:	3.0.25.0
Stats	
Max:	90.25
Min:	-91.48
Std Dev:	9.97
Mean:	-0.22
Median:	-0.06
Processes: 24	
1	Base Layer
2	Clip from -100.00 to 100.00 nT
3	Clip at 5.00 SD
4	De Stagger: Grids: All Mode: Both By: -2 intervals
5	De Stagger: Grids: ka10+kb23.xgd ka11+kb24.xgd ka23.xgd ka12.xgd ka22.xgd ka13.xgd ka21.xgd ka14.xgd ka20+kf1.xgd ka15.xgd ka19+kf2.xgd Mode: Both By: -1 intervals
6	De Stagger: Grids: ka8+kb19.xgd ka7.xgd ka6.xgd ka5.xgd ka4.xgd Mode: Both By: -1 intervals
7	De Stagger: Grids: ka1+kb17.xgd ka2+kb18.xgd ka3.xgd Mode: Both By: -1 intervals
8	De Stagger: Grids: pg2.xgd pg8.xgd pg20+pg9.xgd pg3.xgd pg7.xgd pg10.xgd pg4.xgd pg6.xgd pg11.xgd pg5.xgd pg12.xgd Mode: Both By: -1 intervals
9	De Stagger: Grids: pg15+pg21.xgd pg16+pg28.xgd pg14.xgd pg17.xgd Mode: Both By: -1 intervals
10	De Stagger: Grids: pg26.xgd pg32.xgd pg27.xgd pg31.xgd pg16+pg28.xgd pg30.xgd Mode: Both By: -1 intervals
11	De Stagger: Grids: kc21+kd3.xgd kd5.xgd kd10.xgd kd14.xgd kd18.xgd kd24.xgd kc20.xgd kd4.xgd kc24+kd11.xgd kd13.xgd kd19.xgd kd23.xgd Mode: Both By: -1 intervals
12	De Stagger: Grids: kd6.xgd kd9.xgd kd15.xgd kd17+ke28.xgd Mode: Both By: -1 intervals
13	De Stagger: Grids: kd24.xgd kd25.xgd kd23.xgd kd26.xgd kd31.xgd Mode: Both By: -1 intervals
14	De Stagger: Grids: kd22.xgd kd27.xgd kd30.xgd a7+kd21.xgd a8+kd28.xgd kd29.xgd Mode: Both By: -1 intervals
15	DeStripe Median Sensors: All
16	Edge Match (Area: Top 30, Left 1440, Bottom 119, Right 1559) to Left edge
17	Edge Match (Area: Top 30, Left 1560, Bottom 119, Right 1679) to Left edge
18	Edge Match (Area: Top 210, Left 360, Bottom 239, Right 479) to Right edge
19	Edge Match (Area: Top 90, Left 2280, Bottom 119, Right 2399) to Left edge
20	Edge Match (Area: Top 120, Left 2400, Bottom 149, Right 2519) to Left edge
21	Edge Match (Area: Top 150, Left 2400, Bottom 179, Right 2519) to Left edge
22	De Stagger: Grids: ke1+kf16.xgd ke6.xgd ke7.xgd ke2+kf15.xgd ke5.xgd ke8.xgd ke13.xgd kf14.xgd ke4.xgd ke9.xgd ke12.xgd Mode: Both By: -1 intervals
23	De Stagger: Grids: ke10.xgd ke11.xgd Mode: Both By: -1 intervals
24	De Stagger: Grids: kc30.xgd kc29.xgd Mode: Both By: -1 intervals
Note: converting the gradiometer data into ESRI GIS files imposed an x=y interpolation on the entire dataset	