GEOPHYSICAL SURVEY REPORT

STRATASCAN™

SUMO Survey Services
SUMO Group Member

Project name:

Willand, Near Cullompton, Devon

Client:

WYG Environmental

July 2015

Job ref:
J8706

Report author:
Rebecca Davies BSc (Hons)

GEOPHYSICAL SURVEY REPORT

Project name:
Willand, Near Cullompton, Devon
Client:
WYG Environmental

Job ref:
J8706

Techniques:
Detailed magnetic survey – Gradiometry

Survey date:
14th - 15th July 2015

Site centred at:
ST 036 116

Post code:
EX15 2EZ

Field team:
Steven Weston BA (Hons)
Jack Larner

Project manager:
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1 SUMMARY OF RESULTS

A detailed gradiometry survey was conducted over approximately 5 hectares of grassland. No features of probable archaeology have been identified, despite the high potential for archaeological remains. Three possible former pits have been identified and may be of archaeological origin. The remaining features are natural or modern in origin and include a large area of magnetic debris likely to be related to the former railway embankment, a former field boundary, and magnetic disturbance from nearby ferrous metal objects.

2 INTRODUCTION

2.1 Background synopsis

Stratascan were commissioned to undertake a geophysical survey of an area outlined for business and industrial development. This survey forms part of an archaeological investigation being undertaken by WYG Environmental.

2.2 Site location

The site is located north of Cullompton, Devon at OS ref. ST 036 116. The M5 motorway forms the north-western boundary of the site, with an industrial estate to the south and agricultural land to the north and east.

2.3 Description of site

The survey area is approximately 5 hectares of undulating grassland. An area of waterlogged ground in the north of the site is the only obstruction.

2.4 Geology and soils

The underlying geology is mudstone of Aylesbear Mudstone Group (British Geological Survey website). Superficial deposits of Alluvium – clay, silt and sand, are recorded across the north-west corner of the site (British Geological Survey website).

The overlying soils are known as Wigton Moor which are typical cambic gley soils. These consist of permeable fine and coarse loamy soils variably affected by groundwater (Soil Survey of England and Wales, Sheet 5 South West England).

2.5 *Site history and archaeological potential*

Extract from "Pallex South West Ltd. Land at Willand, Cullompton, Devon – Archaeology and Heritage Desk-Based Assessment" (WYG Planning and Environment, 2015):

"The proposed development site is located in an area rich in archaeology dating from the prehistoric period onwards. Archaeological evaluation carried out by Exeter Archaeology immediately to the east of the site revealed a complex of prehistoric and historic features including a Neolithic barrow or mortuary enclosure, and evidence for a possible Beaker burial (indicated by the presence of pottery characteristic of the Beaker period, and a blue faience bead), as well as a ring ditch, and a series of cut-and-fill features including prehistoric ditches or enclosures belonging to the Bronze Age period, and a potential Iron Age occupation layer and boundary ditch. Romano-British activity was also recorded and included a pit, and pit and posthole alignments of prehistoric or Roman date. Associated artefactual evidence was also recorded.

Medieval activity is also well characterised, and the site of the now destroyed chapel at Muxbere, and earthworks of possible building platforms (which are illustrated on the c. 1838 Halberton Tithe map) are recorded immediately to the east of the site; however, no buildings or structures were depicted within the development boundary on the Tithe map or subsequent Ordnance Survey coverage. In additional to the complex of multi-period prehistoric and Roman features recorded during archaeological evaluation immediately to the east of the site (Exeter Archaeology), a number of other earthworks and features of medieval or post-medieval date were also identified. These include an earthwork platform and a possible boundary ditch, and a group of boundary ditches parallel or at right angles to the current field system. Associated artefactual evidence was also recorded.

In light of the known archaeological remains to the immediate east of the site, it is considered that the proposed development site has a high potential to reveal similar and associated archaeological features and deposits."

The site has previously been the subject of geophysical survey (Stratascan, 2001), which recorded possible medieval or post-medieval field systems and boundary ditches.

2.6 *Survey objectives*

The objective of the survey was to locate any features of possible archaeological origin in order that they may be assessed prior to development.

2.7 *Survey methods*

This report and all fieldwork have been conducted in accordance with both the English Heritage guidelines outlined in the document: *Geophysical Survey in Archaeological Field Evaluation, 2008* and with the Chartered Institute for Archaeologists document *Standard and Guidance for Archaeological Geophysical Survey.*

Due to the high archaeological potential for prehistoric and medieval remains to be discovered, detailed magnetic survey (gradiometry) was used as an efficient and effective method of locating archaeological anomalies. More information regarding this technique is included in Appendix A.

2.8 Processing, presentation and interpretation of results

2.8.1 Processing

Processing is performed using specialist software. This can emphasise various aspects contained within the data but which are often not easily seen in the raw data. Basic processing of the magnetic data involves 'flattening' the background levels with respect to adjacent traverses and adjacent grids. Once the basic processing has flattened the background it is then possible to carry out further processing which may include low pass filtering to reduce 'noise' in the data and hence emphasise the archaeological or man-made anomalies.

The following schedule shows the basic processing carried out on all minimally processed gradiometer data used in this report:

1. *Destripe* (Removes striping effects caused by zero-point discrepancies between different sensors and walking directions)
2. *Destagger* (Removes zigzag effects caused by inconsistent walking speeds on sloping, uneven or overgrown terrain)

2.8.2 Presentation of results and interpretation

The presentation of the data for each site involves a print-out of the minimally processed data both as a greyscale plot and a colour plot showing extreme magnetic values. Magnetic anomalies have been identified and plotted onto the 'Abstraction and Interpretation of Anomalies' drawing for the site.

3 RESULTS

The detailed magnetic gradiometer survey conducted at Willand has identified a small number of anomalies that have been characterised as being of a *possible* archaeological origin.

The difference between *probable* and *possible* archaeological origin is a confidence rating. Features identified within the dataset that form recognisable archaeological patterns or seem to be related to a deliberate historical act have been interpreted as being of a probable archaeological origin.

Features of possible archaeological origin tend to be more amorphous anomalies which may have similar magnetic attributes in terms of strength or polarity but are difficult to classify as being archaeological or natural.

The following list of numbered anomalies refers to numerical labels on the interpretation plots.

3.1 Probable Archaeology

No probable archaeology has been identified within the survey area.

3.2 Possible Archaeology

1 Three small discrete positive anomalies in the north-east of the site. These are indicative of former cut features, such as backfilled pits, and may be of archaeological origin.

3.3 Medieval/Post-Medieval Agriculture

2 A series of magnetic spikes forming a linear feature in the northern field. These are related to a former fence-line/field boundary visible on aerial photographs c.2006.

3 A linear anomaly in the centre of the site. This is likely to be related to modern agricultural activity.

3.4 Other Anomalies

4 Areas of amorphous magnetic variation in the south east of the site. These are likely to be natural in origin.

5 A large area of strong magnetic debris across the south-west field. This is an area of made ground and is likely related to the spread of material from the former railway embankment in the south of the site. These effects have the potential to mask weaker archaeological anomalies.

6 Areas of magnetic disturbance are the result of substantial nearby ferrous metal objects such as fences and underground services. These effects can mask weaker archaeological anomalies, but on this site have not affected a significant proportion of the area.

7 A number of magnetic 'spikes' (strong focussed values with associated antipolar response) indicate ferrous metal objects. These are likely to be modern rubbish.

4 DATA APPRAISAL & CONFIDENCE ASSESSMENT

Mudstone geologies, such as those across the site, can give variable results for gradiometer survey. Given the high potential for archaeological remains across the site, and the lack of anomalies identified, it could be assumed that the mudstone has limited the effectiveness of the survey. The high amplitude magnetic debris across the south of the site is also likely to be masking weaker archaeological anomalies, meaning that any features that may be present in this area cannot be seen as a result of the debris.

5 CONCLUSION

The survey at Willand has not identified any features of probable archaeological origin, despite the potential for prehistoric and medieval remains as outlined in the desk-based assessment of the site. A small number of possible former backfilled pits have been identified, though the exact origin of these cannot be determined with confidence. The remaining features are natural or modern in origin and include a former fence-line, magnetic disturbance from nearby ferrous objects, and a large area of made ground that is likely to be related to the spread of material from a former railway embankment.

6 REFERENCES

British Geological Survey South Sheet, 1977. *Geological Survey Ten Mile Map, South Sheet First Edition (Quaternary).* Institute of Geological Sciences.

British Geological Survey, 2001. *Geological Survey Ten Mile Map, South Sheet, Fourth Edition (Solid)*. British Geological Society.

British Geological Survey, n.d., *website*: (http://www.bgs.ac.uk/opengeoscience/home.html?Accordion1=1#maps) Geology of Britain viewer.

Chartered Institute For Archaeologists. *Standard and Guidance for Archaeological Geophysical Survey.* http://www.archaeologists.net/sites/default/files/nodefiles/Geophysics2010.pdf

English Heritage, 2008. *Geophysical Survey in Archaeological Field Evaluation.*

Soil Survey of England and Wales, 1983. *Soils of England and Wales, Sheet 5 South West England*.

Stratascan, 2001. *Geophysical Survey at Willand, Cullompton, Devon*. Job Reference 1514

WYG Planning and Environment, 2015. *Pallex South West Ltd. Land at Willand, Cullompton, Devon – Archaeology and Heritage Desk-Based Assessment.*

APPENDIX A – METHODOLOGY & SURVEY EQUIPMENT

Grid locations

The location of the survey grids has been plotted together with the referencing information. Grids were set out using a Leica 705auto Total Station and referenced to suitable topographic features around the perimeter of the site or a Leica Smart Rover RTK GPS.

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. A SmartNet RTK GPS uses Ordnance Survey's network of over 100 fixed base stations to give an accuracy of around 0.01m.

Survey equipment and gradiometer configuration

Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.2 nanoTeslas (nT) in an overall field strength of 48,000nT, can be accurately detected using an appropriate instrument.

The mapping of the anomaly in a systematic manner will allow an estimate of the type of material present beneath the surface. Strong magnetic anomalies will be generated by buried iron-based objects or by kilns or hearths. More subtle anomalies such as pits and ditches can be seen if they contain more humic material which is normally rich in magnetic iron oxides when compared with the subsoil.

To illustrate this point, the cutting and subsequent silting or backfilling of a ditch may result in a larger volume of weakly magnetic material being accumulated in the trench compared to the undisturbed subsoil. A weak magnetic anomaly should therefore appear in plan along the line of the ditch.

The magnetic survey was carried out using a dual sensor Grad601-2 Magnetic Gradiometer manufactured by Bartington Instruments Ltd. The instrument consists of two fluxgates 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. The Grad601-2 consists of two high stability fluxgate gradiometers suspended on a single frame. Each gradiometer has a 1m separation between the sensing elements so enhancing the response to weak anomalies.

Sampling interval

Readings were taken at 0.25m centres along traverses 1m apart. This equates to 3600 sampling points in a full 30m x 30m grid.

Depth of scan and resolution

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m, though strongly magnetic objects may be visible at greater depths. The collection of data at 0.25m centres provides an optimum methodology for the task balancing cost and time with resolution.

Data capture

The readings are logged consecutively into the data logger which in turn is daily down- loaded into a portable computer whilst on site. At the end of each site survey, data is transferred to the office for processing and presentation.

APPENDIX B – BASIC PRINCIPLES OF MAGNETIC SURVEY

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.

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 and material such as brick and tile may be magnetised through the same process.

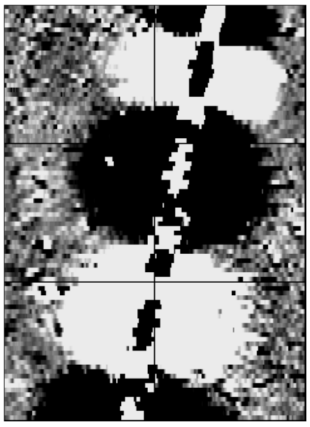
Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement 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 field. The difference between the two sensors will relate to the strength of a magnetic field created by a buried 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, disturbance from modern services etc.

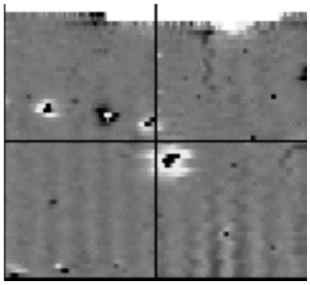
APPENDIX C – GLOSSARY OF MAGNETIC ANOMALIES

Bipolar



A bipolar anomaly is one that is composed of both a positive response and a negative response. It can be made up of any number of positive responses and negative responses. For example a pipeline consisting of alternating positive and negative anomalies is said to be bipolar. See also dipolar which has only one area of each polarity. The interpretation of the anomaly will depend on the magnitude of the magnetic field strength. A weak response may be caused by a clay field drain while a strong response will probably be caused by a metallic service.

Dipolar

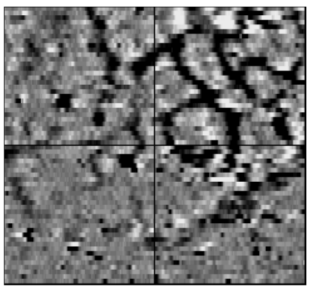


This consists of a single positive anomaly with an associated negative response. There should be no separation between the two polarities of response. These responses will be created by a single feature. The interpretation of the anomaly will depend on the magnitude of the magnetic measurements. A very strong anomaly is likely to be caused by a ferrous object.

Positive anomaly with associated negative response

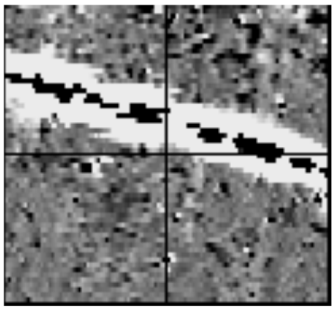
See bipolar and dipolar.

Positive linear



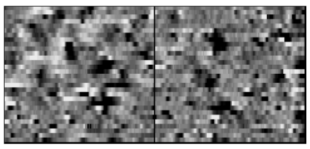
A linear response which is entirely positive in polarity. These are usually related to in-filled cut features where the fill material is magnetically enhanced compared to the surrounding matrix. They can be caused by ditches of an archaeological origin, but also former field boundaries, ploughing activity and some may even have a natural origin.

Positive linear anomaly with associated negative response



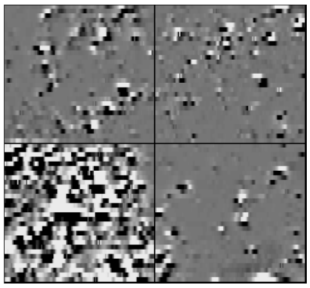
A positive linear anomaly which has a negative anomaly located adjacently. This will be caused by a single feature. In the example shown this is likely to be a single length of wire/cable probably relating to a modern service. Magnetically weaker responses may relate to earthwork style features and field boundaries.

Positive point/area



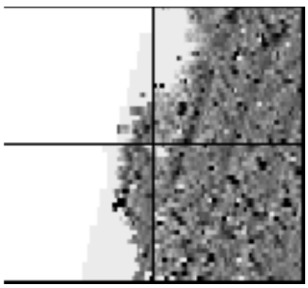
These are generally spatially small responses, perhaps covering just 3 or 4 reading nodes. They are entirely positive in polarity. Similar to positive linear anomalies they are generally caused by in-filled cut features. These include pits of an archaeological origin, possible tree bowls or other naturally occurring depressions in the ground.

Magnetic debris



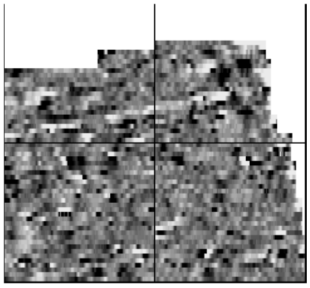
Magnetic debris consists of numerous dipolar responses spread over an area. If the amplitude of response is low (+/-3nT) then the origin is likely to represent general ground disturbance with no clear cause, it may be related to something as simple as an area of dug or mixed earth. A stronger anomaly (+/-250nT) is more indicative of a spread of ferrous debris. Moderately strong anomalies may be the result of a spread of thermoremanent material such as bricks or ash.

Magnetic disturbance



Magnetic disturbance is high amplitude and can be composed of either a bipolar anomaly, or a single polarity response. It is essentially associated with magnetic interference from modern ferrous structures such as fencing, vehicles or buildings, and as a result is commonly found around the perimeter of a site near to boundary fences.

Negative linear

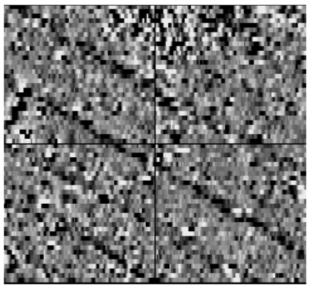


A linear response which is entirely negative in polarity. These are generally caused by earthen banks where material with a lower magnetic magnitude relative to the background top soil is built up. See also ploughing activity.

Negative point/area

Opposite to positive point anomalies these responses may be caused by raised areas or earthen banks. These could be of an archaeological origin or may have a natural origin.

Ploughing activity



Ploughing activity can often be visualised by a series of parallel linear anomalies. These can be of either positive polarity or negative polarity depending on site specifics. It can be difficult to distinguish between ancient ploughing and more modern ploughing. Clues such as the separation of each linear, straightness, strength of response and cross cutting relationships can be used to aid this, although none of these can be guaranteed to differentiate between different phases of activity.

Polarity

Term used to describe the measurement of the magnetic response. An anomaly can have a positive polarity (values above 0nT) and/or a negative polarity (values below 0nT).

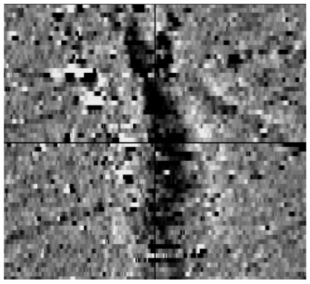
Strength of response

The amplitude of a magnetic response is an important factor in assigning an interpretation to a particular anomaly. For example a positive anomaly covering a 10m^2 area may have values up to around 3000nT, in which case it is likely to be caused by modern magnetic interference. However, the same size and shaped anomaly but with values up to only 4nT may have a natural origin. Colour plots are used to show the amplitude of response.

Thermoremanent response

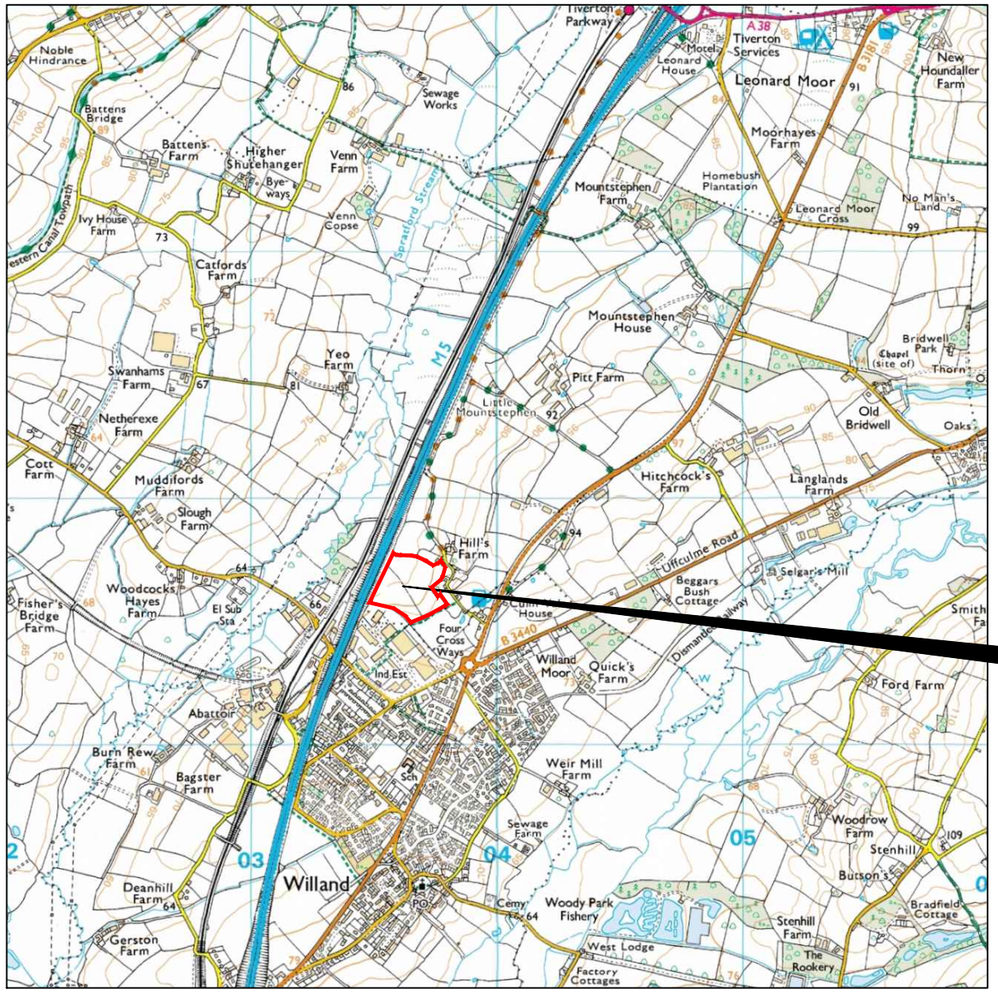
A feature which has been subject to heat may result in it acquiring a magnetic field. This can be anything up to approximately +/-100 nT in value. These features include clay fired drains, brick, bonfires, kilns, hearths and even pottery. If the heat application has occurred in situ (e.g. a kiln) then the response is likely to be bipolar compared to if the heated objects have been disturbed and moved relative to each other, in which case they are more likely to take an irregular form and may display a debris style response (e.g. ash).

Weak background variations



Weakly magnetic wide scale variations within the data can sometimes be seen within sites. These usually have no specific structure but can often appear curvy and sinuous in form. They are likely to be the result of natural features, such as soil creep, dried up (or seasonal) streams. They can also be caused by changes in the underlying geology or soil type which may contain unpredictable distributions of magnetic minerals, and are usually apparent in several locations across a site.

14
13
12
11
10



02 03 04 05 06

Amendments

Issue No.	Date	Description
-	-	-
-	-	-

Site centred on NGR: ST 036 116

Client: WYG ENVIRONMENTAL

Project Title: GEOPHYSICAL SURVEY - WILLAND, NEAR CULLOMPTON, DEVON

Job No. 8706

Subject: LOCATION PLAN OF SURVEY AREA

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Scale: 1:25000 (0m 500 1000m)

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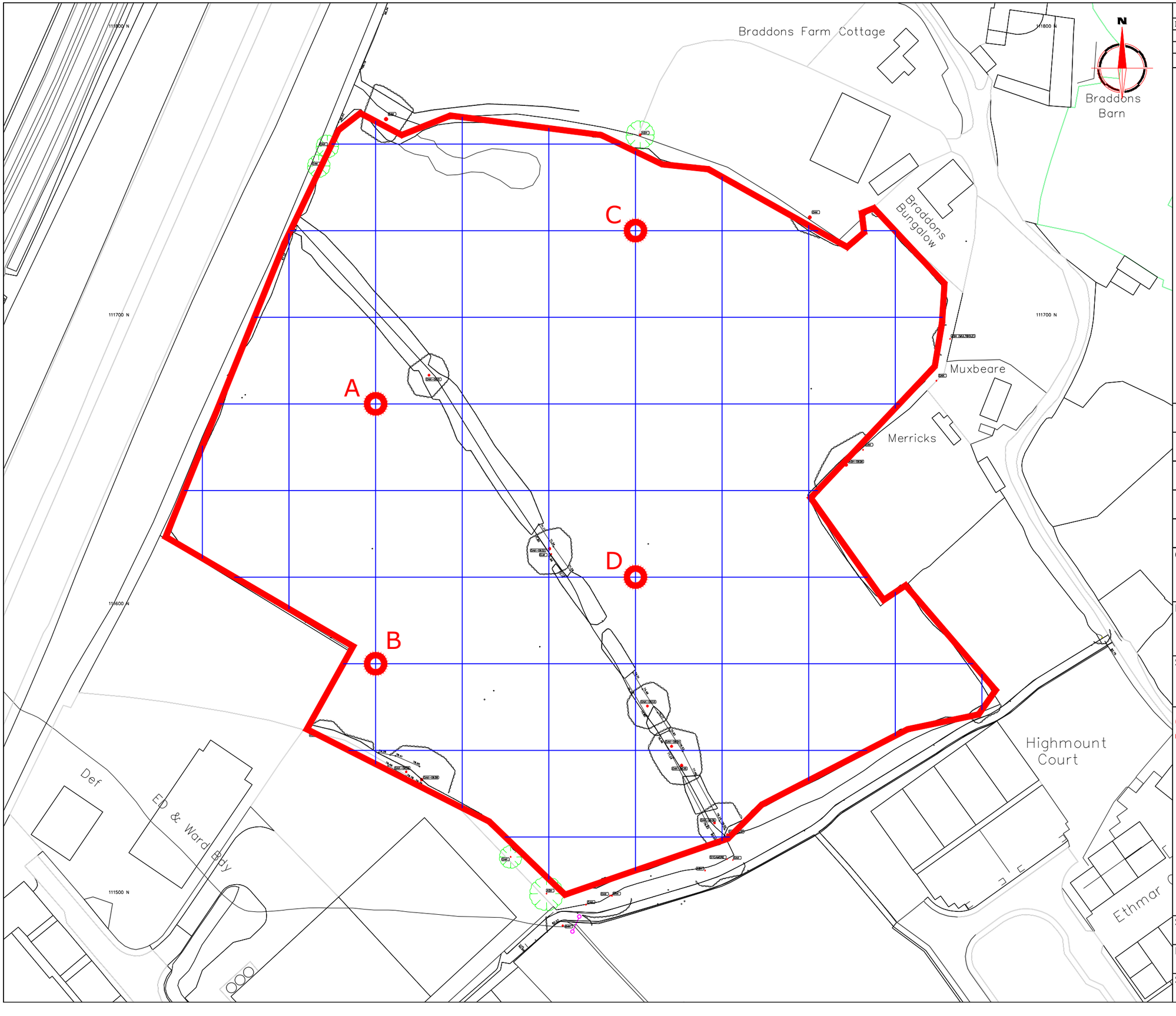
A3	DGE	01
Survey date	Drawn by	Figure No.
JUL 15	RD	01



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Issue No.	Date	Description
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OS GRID REFERENCES

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C	303666.81, 111729.17
D	303666.81, 111609.17

Client

WYG ENVIRONMENTAL

Project Title — Job No. 8706

GEOPHYSICAL SURVEY - WILLAND, NEAR CULLOMPTON, DEVON

Subject

LOCATION OF SURVEY GRIDS AND REFERENCING

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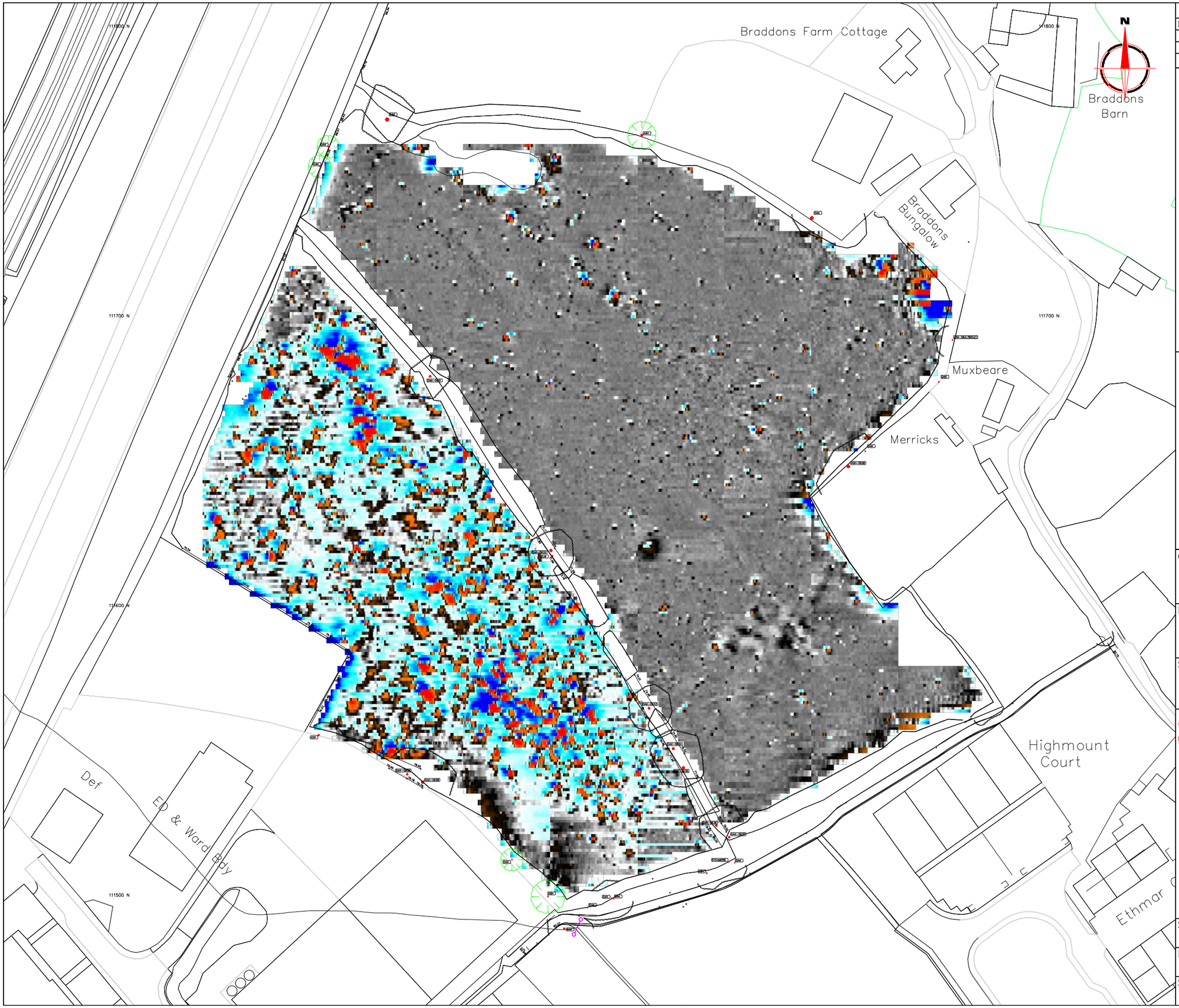

Amendments

Issue No.	Date	Description
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-	-	-

Plotting parameters

Maximum +100nT (red)
Minimum -100nT (blue)

+100nT
+25nT
+3nT
-3nT
-25nT
-100nT

Client
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Project Title
GEOPHYSICAL SURVEY - WILLAND, NEAR CULLOMPTON, DEVON

Job No. 8706

Subject
COLOUR PLOT OF GRADIOMETER DATA SHOWING EXTREME VALUES

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ISO 14001 certified

Scale 1:1250
0m 10 20 30 40 50m

Plot	Checked by	Issue No.
A3	DGE	01
Survey date	Drawn by	Figure No.
JUL 15	RD	03

Amendments

Issue No.	Date	Description
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-	-	-

Plotting parameters

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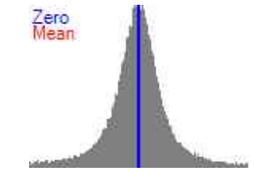
Minimum -2nT (white)



Client
WYG ENVIRONMENTAL

Project Title
GEOPHYSICAL SURVEY - WILLAND, NEAR CULLOMPTON, DEVON

Job No. 8706

Subject
PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA

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Scale	Plot	Checked by	Issue No.
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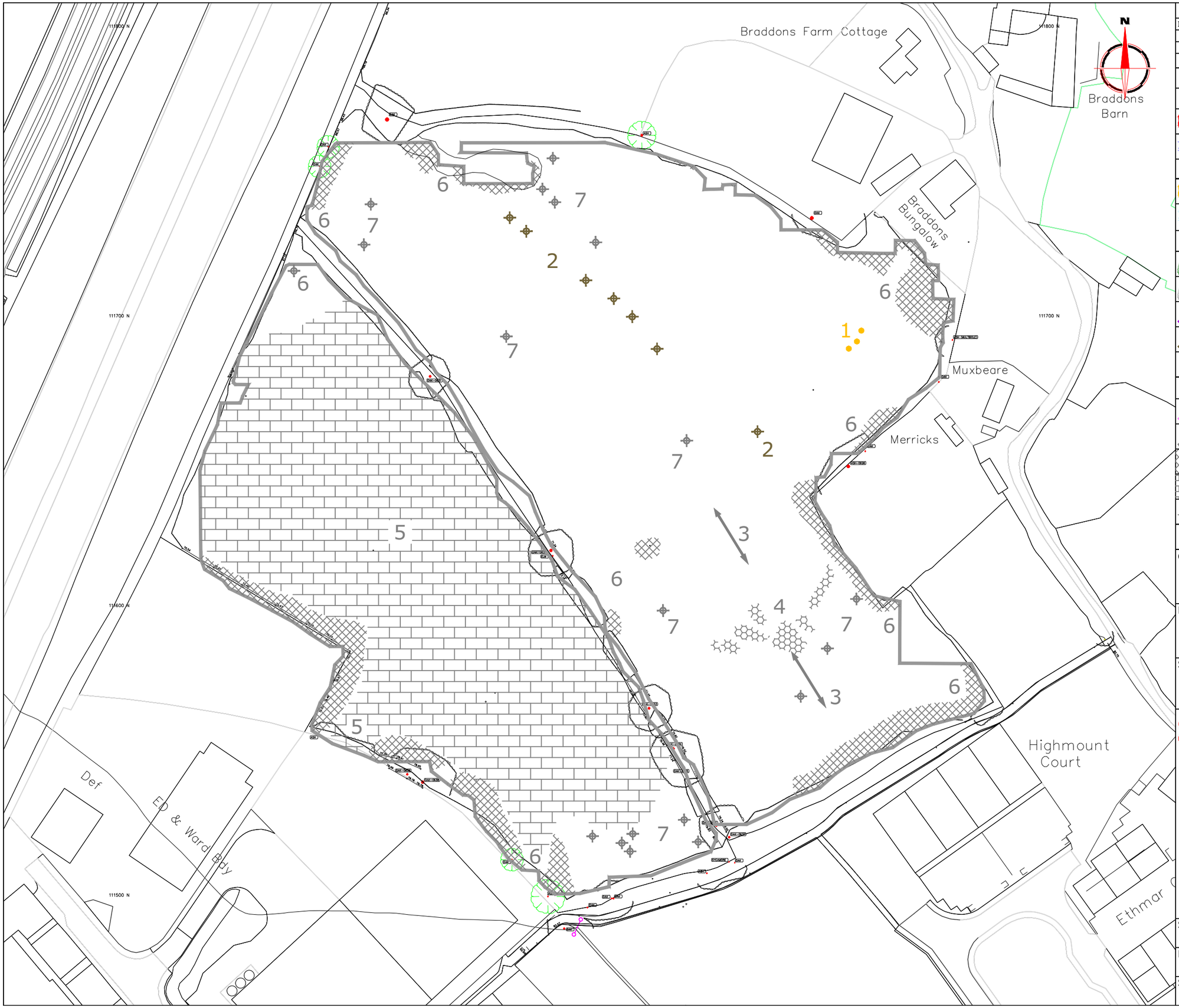

Amendments

Issue No.	Date	Description
-	-	-
-	-	-

PROBABLE ARCHAEOLOGY

- Positive anomaly / weak positive anomaly - probable cut feature of archaeological origin
- Negative anomaly / weak negative anomaly - probable bank or earthwork of archaeological origin

POSSIBLE ARCHAEOLOGY

- Positive anomaly / weak positive anomaly - possible cut feature of archaeological origin
- Negative anomaly / weak negative anomaly - possible bank or earthwork of archaeological origin

MEDIEVAL/POST-MEDIEVAL AGRICULTURE

- Widely spaced curving parallel linear anomalies - probably related to ridge-and-furrow
- Closely spaced parallel linear anomalies - probably related to agricultural activity such as ploughing
- Linear anomaly - probably related to a former field boundary not present on available mapping
- Linear anomaly - related to a former field boundary present on available mapping
- Magnetic spike - related to former fenceline/field boundary

OTHER ANOMALIES

- Linear anomaly - probably related to pipe, cable or other modern service
- Linear anomaly - possibly related to land drain
- Magnetic disturbance associated with nearby metal object such as service or field boundary
- Strong magnetic debris - disturbed or made ground possibly related to dismantled railway
- Area of amorphous magnetic variation - probable natural (e.g. geological or pedological) origin
- Magnetic spike - probable ferrous object

Client

WYG ENVIRONMENTAL

Project Title — Job No. 8706

GEOPHYSICAL SURVEY - WILLAND, NEAR CULLOMPTON, DEVON

Subject

ABSTRACTION AND INTERPRETATION OF GRADIOMETER ANOMALIES

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Scale						
1:1250	0m	10	20	30	40	50m

Plot	Checked by	Issue No.
A3	DGE	01
Survey date	**Drawn by**	**Figure No.**
JUL 15	RD	05

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