

GEOPHYSICAL SURVEY REPORT

STRATASCAN™



Project name:
Odd Down, Bath

Client:
CgMs Consulting Ltd

February 2014

Job ref:
J6375

Report author:
Thomas Richardson MSc AIFA

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Job ref:

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Field team:

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Techniques:

**Detailed magnetic survey –
Gradiometry**

Project manager:

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Survey date:

27th January - 7th February 2014

Report written By:

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Site centred at:

ST 742 617

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1 SUMMARY OF RESULTS

A detailed gradiometry survey was conducted over approximately 48 hectares of mixed agricultural and grassland. The survey identified a field boundary as the only probable archaeological anomaly on the site. A number of possible archaeological anomalies have also been identified; however their origin cannot be determined with any degree of confidence. The remaining anomalies are of geological or modern origin relating to mine works, former field boundaries, agricultural activity, underground services, ferrous objects and fencing.

2 INTRODUCTION

2.1 *Background synopsis*

Stratascan were commissioned to undertake a geophysical survey of an area outlined for development. This survey forms part of an archaeological investigation being undertaken by CgMs Consulting Ltd.

2.2 *Site location*

The site is located to the south of Bath at OS ref. ST 742 617.

2.3 *Description of site*

The survey area is approximately 48 hectares of mixed agricultural and grassland. The land use for each field is listed in the table below. Wooded field boundaries meant that areas of the site were un-surveable. The area is generally flat, with the exception of Field 3 which is undulating.

FIELD	LAND USE
1	Football pitch
2	Football pitch
3	Recently sown crop
4	Crop
5	Crop
6	Gardens
7	Crop
8	Grassland

9	Crop
10	Crop
11	Crop
12	Crop
13	Grassland

2.4 *Geology and soils*

The underlying geology is Twinhoe Member – Limestone across the north of the site and Combe Down Oolite Member – Limestone, Ooidal across the south (British Geological Survey website). There is no recorded drift geology (British Geological Survey website).

The overlying soils are known as Elmton 1 which are typical brown rendzinas. These consist of shallow brashy calcareous fine loamy soils over limestone (Soil Survey of England and Wales, Sheet 5 South West England).

2.5 *Site history and archaeological potential*

Extract from 'Heritage Assessment Land at Odd Down, Bath' (CgMs 2013):

Recorded evidence would indicate a low potential for any significant early Prehistoric remains to be present within the Site, although the possible recovery of isolated findspots of flint artefacts, indicative of further background activity in the wider landscape in this period, cannot be dismissed entirely.

8.4.2 A low to moderate potential for further Bronze Age activity to be present within the south western extent of the Site may be identified given its spatial proximity to a site of previously recorded occupation activity of this date, and the assumption that this lay in a peripheral location to possible associated settlement. Topographical factors could perhaps further limit this potential given that the occupation activity recorded to the south-west of the Site lies along the south facing scarp slope of the Cotswold Plateau, and therefore perhaps focused towards the Cam Brook Valley, and not directly on the higher ground of Odd Down itself. Elsewhere across the Site, the potential for any significant remains of this date to be present is considered low.

8.4.3 A moderate potential for Iron Age/Roman activity to be present on the Site, again perhaps more specifically focused across its western extent, is identified, given the Sites proximity to the known Roman villa site to the south. The character of any such activity is likely to be similar to that recorded by previous evaluation conducted immediately to the north-west, wherein this was considered to be reflective of former agricultural activity only and of limited significance.

8.4.4 Beyond the West Wansdyke itself, a low potential for any significant remains to be present within the Site dating to the Saxon-Early Medieval, Medieval and Post-Medieval periods is identified. Where potential remains may be shown to be present, these are likely to

be comprised of field boundary ditches etc., of no more than local importance, reflective of the Sites continued agricultural use throughout these periods.

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 Institute for Archaeologists document *Standard and Guidance for Archaeological Geophysical Survey*.

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 'Interpretation' drawings for the site.

3 RESULTS

The detailed magnetic gradiometer survey conducted at Odd Down has identified a number of anomalies that have been characterised as being either of a *probable* or *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*

- 1 A linear anomaly in Field 7, likely to be related to a former field boundary not present on available mapping. This anomaly would appear to be a continuation of a current field boundary.

3.2 *Possible Archaeology*

- 2 Positive linear anomalies in Fields 2-5. These are indicative of former cut features and may be related to former field boundaries or enclosure ditches.
- 3 Positive linear anomalies in Fields 5, 7 and 12. These are indicative of former cut features and may be of archaeological origin; however they may also be of modern agricultural origin.
- 4 Negative linear anomalies in Fields 3 and 6. These are indicative of former bank or earthwork features. These may be of archaeological or modern origin.

3.3 *Other Anomalies*

- 5 A large positive anomaly in Field 3. This is related to the abandoned Fullers Earth Works.
- 6 A positive linear anomaly in the south of Field 3. This is related to a modern anti-vandal ditch.
- 7 Positive linear anomalies in Fields 4 and 7. These are related to former field boundaries present on available mapping. 7a is present from 1887-1969, whilst 7b is present from 1970-1973.
- 8 Closely spaced parallel linear anomalies. These are related to modern agricultural activity, such as ploughing.
- 9 Areas of magnetic variance. These can be seen across the whole site and are of geological or pedological origin.
- 10 High amplitude bipolar linear anomalies in Fields 3, 4, 6, 7, 12 and 13. These are indicative of underground services.
- 11 Areas of magnetic disturbance are the result of substantial nearby ferrous metal objects such as fences. These effects can mask weaker archaeological anomalies, but on this site have not affected a significant proportion of the area.
- 12 A number of magnetic 'spikes' (strong focussed values with associated antipolar response) indicate ferrous metal objects. These are likely to be modern rubbish.

4 CONCLUSION

The survey at Odd Down has identified a former field boundary as the only probably archaeology on the site. A number of possible archaeological anomalies have also been identified; however it is not possible to determine their origin with any degree of confidence. A large anomaly in the west of the site matches abandonment plans for the Fullers Earth Mine (Macmillen and Chapman 2009).

The remaining anomalies are of natural or modern origin. The modern anomalies relate to former field boundaries, agricultural activity, underground services, ferrous objects and fencing.

5 REFERENCES

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

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(<http://www.bgs.ac.uk/opengeoscience/home.html?Accordion1=1#maps>) Geology of Britain viewer.

CgMs, 2013. *Heritage Assessment Land at Odd Down, Bath*

Macmillen, N., Chapman, M., 2009. *A History of The Fuller's Earth Mining Industry Around Bath*. Lightmoor Press

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

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<http://www.archaeologists.net/sites/default/files/nodefiles/Geophysics2010.pdf>

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.

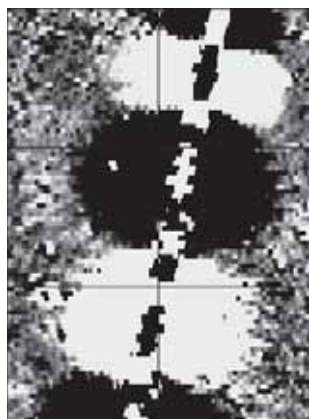
Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement 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.

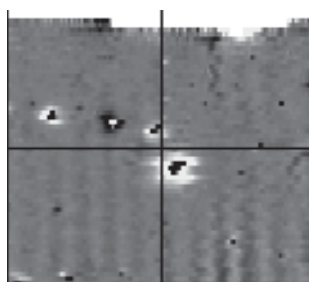
APPENDIX C – GLOSSARY OF MAGNETIC ANOMALIES

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

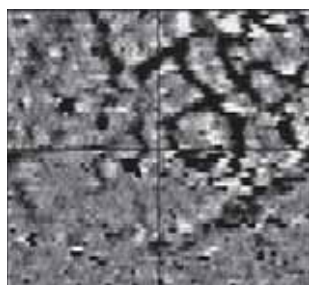


This consists of a single positive anomaly with an associated negative response. There should be no separation between the two polarities of response. These responses will be created by a single feature. The interpretation of the anomaly will depend on the magnitude of the magnetic measurements. A very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

Positive anomaly with associated negative response

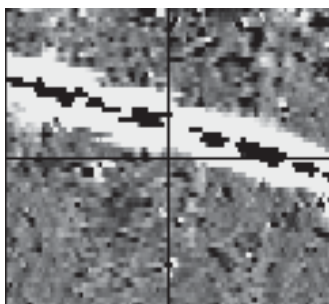
See bipolar and dipolar.

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.

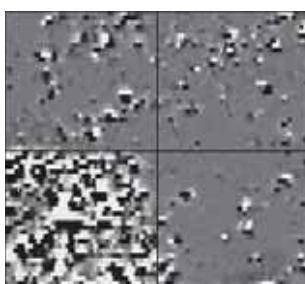
Positive point/area



depressions in the ground.

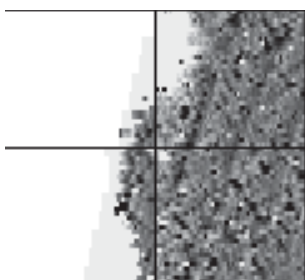
These are generally spatially small responses, perhaps covering just 3 or 4 reading nodes. They are entirely positive in polarity. Similar to positive linear anomalies they are generally caused by in-filled cut features. These include pits of an archaeological origin, possible tree bowls or other naturally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

Magnetic debris



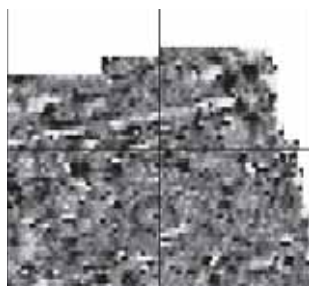
Magnetic debris consists of numerous dipolar responses spread over an area. If the amplitude of response is low ($\pm 3nT$) then the origin is likely to represent general ground disturbance with no clear cause, it may be related to something as simple as an area of dug or mixed earth. A stronger anomaly ($\pm 250nT$) 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 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).

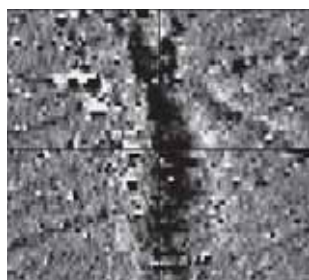
Strength of response

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 10m² 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



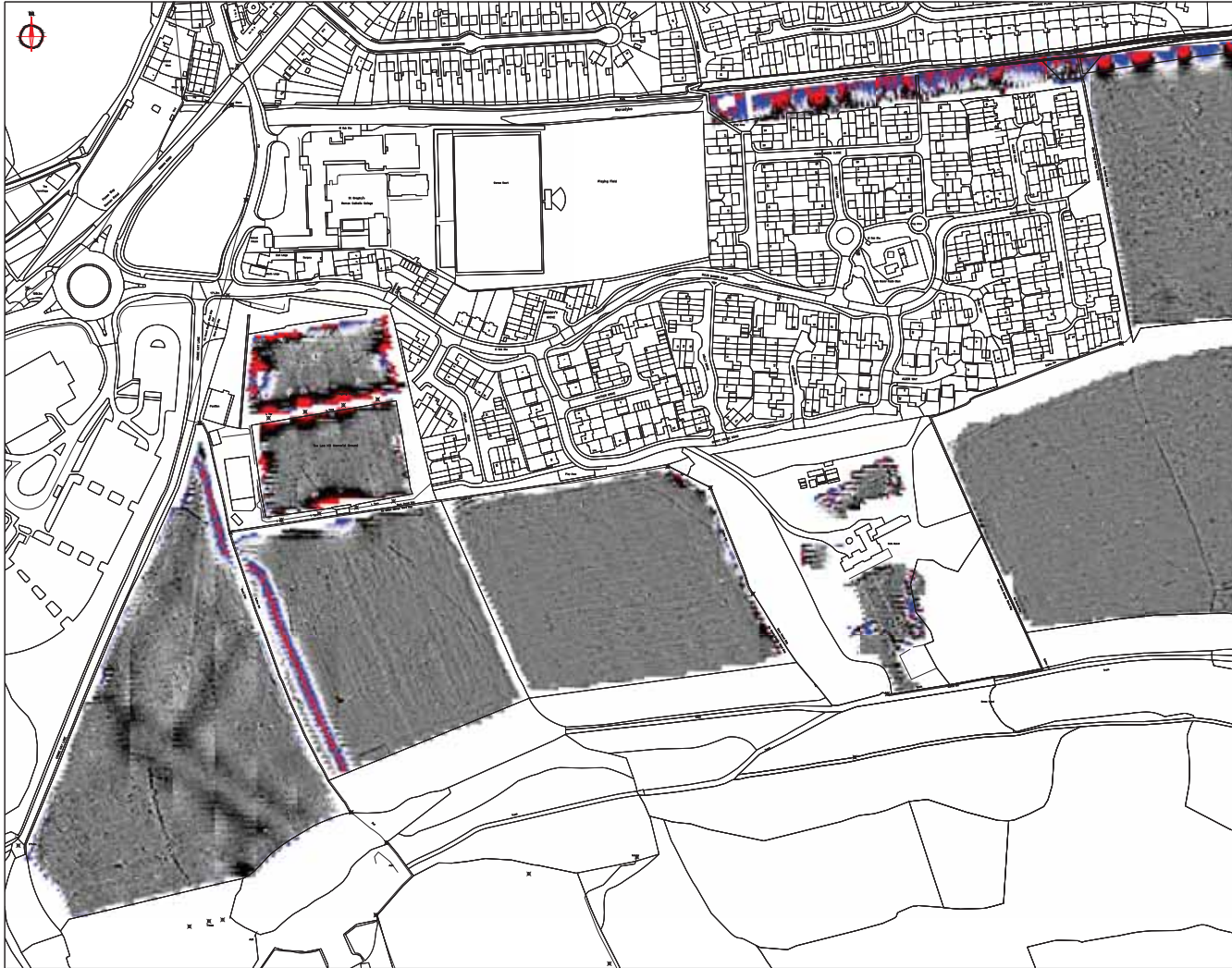
Weakly magnetic wide scale variations within the data can sometimes be seen within sites. These usually have no specific structure but can often appear curvy and sinuous in form. They are likely to be the result of natural features, such as soil creep, dried up (or seasonal) streams. They can also be 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.



Amendments	
No.	Description

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

Site No.	J6375	Survey Date	FEB 14
Client	CgMs CONSULTING LTD		
Project Title	ODD DOWN, BATH		
Subject	COLOUR PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA SHOWING EXTREME VALUES - OVERVIEW		
GEOPHYSICS FOR ARCHAEOLOGY AND ENGINEERING VINEYARD HOUSE OPTON BRN SEVEN WISB USA T: 01484 592266 E: info@stratascan.co.uk www.stratascan.co.uk			
Scale: 1:2500 			
Plot	A1	Checked by	DGE
Date	FEB 14	Drawn by	TR
Issue No.	01	Figure No.	02



Amendments	
No.	Description

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

Job No.	Survey Date
J6375	FEB 14

Client
CgMs CONSULTING LTD

Project Title
ODD DOWN, BATH

Subject
COLOUR PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA SHOWING EXTREME VALUES - WEST

STRATASCAN
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GRIP
 SUMO GROUP MEMBER

Scale: 1:1250

Plot	Checked by	Issue No.
A1	DGE	01
Date	Drawn by	Figure No.
FEB 14	TR	03



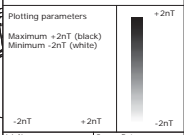
Amendments	
No.	Description

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

Job No.	J6375	Survey Date	FEB 14
Client	CgMs CONSULTING LTD		
Project Title	ODD DOWN, BATH		
Subject	COLOUR PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA SHOWING EXTREME VALUES - EAST		
VINEYARD HOUSE T: 01484 592266 OXFORD SPIN SEVEN E: info@stratascan.co.uk WIS1 5SA www.stratascan.co.uk			
Scale	1:1250		
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Date	FEB 14	Drawn by	TR
Issue No.	01	Figure No.	04



Amendments	
Rev	Description



Site No.	J6375	Survey Date	FEB 14
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Client
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Project Title
ODD DOWN, BATH

Subject
PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA - OVERVIEW

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Scale: 1:2500

Plot	A1	Checked by	DGE	Issue No.	01
Date	FEB 14	Drawn by	TR	Figure No.	05



Amendments	
No.	Description

Plotting parameters

Maximum +2nT (black)

Minimum -2nT (white)

Scale: 1:1250

Plot: A1

Date: FEB 14

Checked by: DGE

Drawn by: TR

Issue No: 01

Figure No: 06

Job No: J6375

Survey Date: FEB 14

Client: CgMs CONSULTING LTD

Project Title: ODD DOWN, BATH

Subject: PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA - WEST

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Amendments	
No.	Description

Plotting parameters
 Maximum +2nT (black)
 Minimum -2nT (white)

Scale: 1:1250

Plot No.	J6375	Survey Date	FEB 14
Client	CgMs CONSULTING LTD		
Project Title	ODD DOWN, BATH		
Subject	PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA - EAST		
 GEOPHYSICS FOR ARCHAEOLOGY AND ENGINEERING LTD VINEYARD HOUSE T: 01484 592266 UPTON BRN SEVEN E: info@stratascan.co.uk W88 1SA www.stratascan.co.uk			
 BGS SUMO GROUP MEMBER			
Scale	1:1250	Checked by	DGE
Plot	A1	Drawn by	TR
Date	FEB 14	Issue No.	01
		Figure No.	07



Amendments	
Rev	Description

KEY

PROBABLE ARCHAEOLOGY

- Historic or prehistoric stone structure - possibly lost features of archaeological origin
- Historic or prehistoric stone structure - possibly bank or earthwork of archaeological origin
- Other anomaly - possibly related to field boundary not present on available mapping
- Other - historical curlew - possible linear anomalies - possibly related to crop and furrows

POSSIBLE ARCHAEOLOGY

- Historic or prehistoric stone structure - possible lost feature of archaeological origin
- Historic or prehistoric stone structure - possibly bank or earthwork of archaeological origin

OTHER ANOMALIES

- Clearly visible parallel linear anomalies - possibly related to agricultural activity such as ploughing
- Other anomaly - possibly related to crop, table or other residual surface
- Other anomaly - possibly related to field boundary present on available mapping from 1975
- Linear anomaly - possibly related to Roman Earth bank
- Linear anomaly - possibly related to modern anti-rust ditch
- Magnetic disturbance associated with nearby metal object such as service or field boundary
- Linear magnetic feature - possibly structural or made ground
- Random magnetic debris
- Area of anomalous magnetic variation - possibly natural (e.g. geological or pedological) origin
- Magnetic spike - possibly former signal

Site No.	J6375	Survey Date.	FEB 14
Client	CGMs CONSULTING LTD		
Project Title	ODD DOWN, BATH		
Subject	INTERPRETATION - OVERVIEW		

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 AND ENGINEERING
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 www.stratascan.co.uk

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 SURVEY GROUP MEMBER

Scale: 1:2500
 0m 20m 40m 60m 80m 100m

Plot	A1	Checked by	DGE	Issue No.	01
Date	FEB 14	Drawn by	TR	Figure No.	08



Amendments	
No.	Description
1	28/02/2014

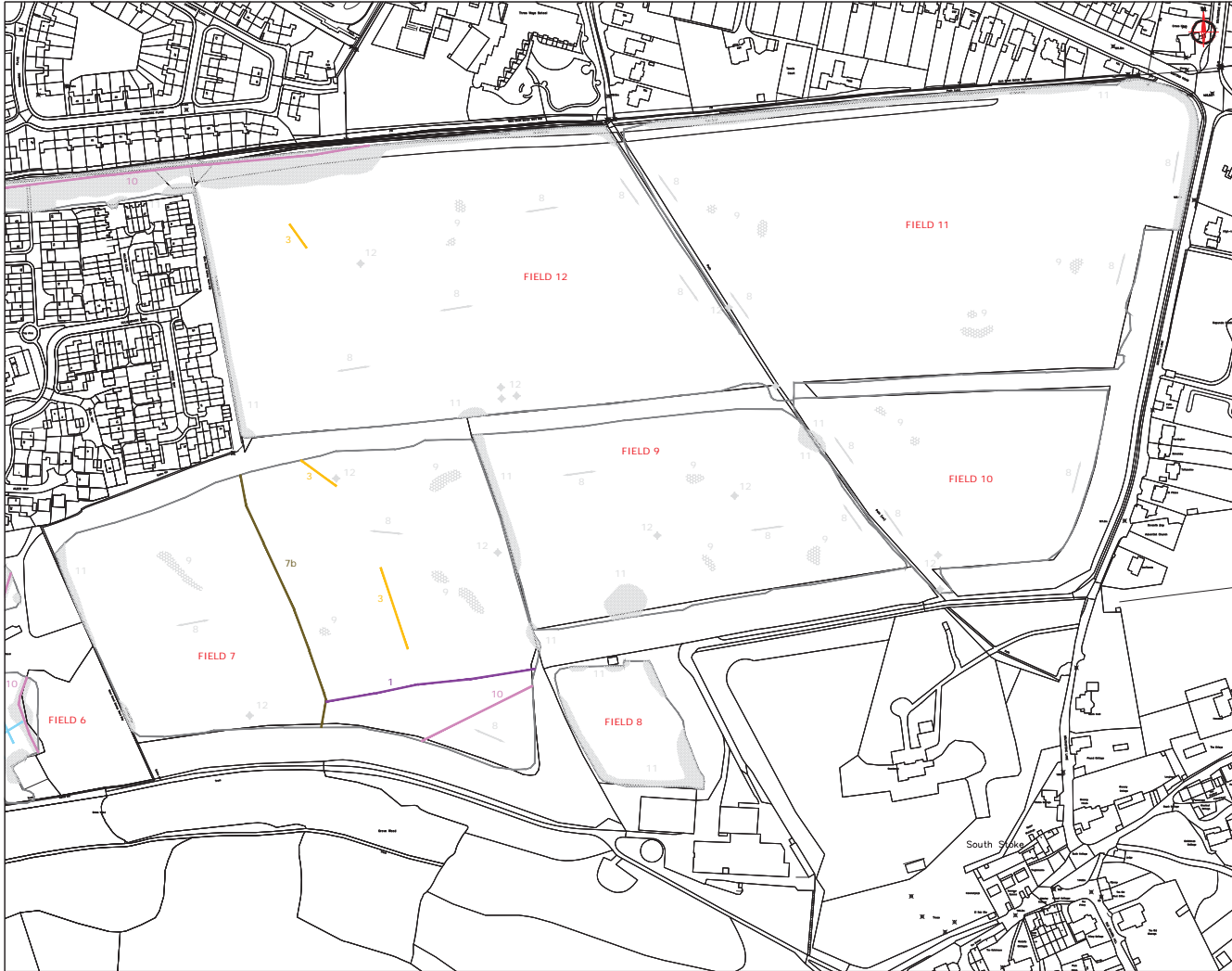
KEY	
PROBABLE ARCHAEOLOGY	
[Red line]	Positive anomaly - possible anomaly - possible feature of archaeological origin
[Blue line]	Negative anomaly - possible anomaly - possible bank or earthwork of archaeological origin
[Green line]	Other anomaly - possibly related to field boundary not present on available mapping
[Yellow line]	Other anomaly - possibly related to other anomalies - possibly related to crop and furrows
POSSIBLE ARCHAEOLOGY	
[Red line]	Positive anomaly - possible anomaly - possible feature of archaeological origin
[Blue line]	Negative anomaly - possible anomaly - possible bank or earthwork of archaeological origin
OTHER ANOMALIES	
[Red line]	Clearly defined parallel linear anomalies - possibly related to agricultural activity such as ploughing
[Blue line]	Other anomaly - possibly related to pipe, cable or other modern service
[Green line]	Other anomaly - possibly related to field boundary present on available mapping from 1970
[Yellow line]	Other anomaly - possibly related to other anomalies
[Red line]	Other anomaly - possibly related to modern anti-rust ditch
[Blue line]	Magnetic disturbance associated with nearby metal object such as service or field boundary
[Green line]	Strong magnetic debris - possible structural or waste ground
[Yellow line]	Random magnetic debris
[Red line]	Area of anomalous magnetic variation - possible natural (e.g. geological or pedological) origin
[Blue line]	Magnetic spike - possible buried object

REC No.	J6375	Survey Date:	FEB 14
Client:	CGMs CONSULTING LTD		
Project Title:	ODD DOWN, BATH		
Subject:	INTERPRETATION - WEST		

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Scale:	1:1250
Plot:	A1
Checked by:	DGE
Issue No.:	01
Date:	FEB 14
Drawn by:	TR
Figure No.:	09



Amendments	
No.	Description
1	28/02/2014

KEY

PROBABLE ARCHAEOLOGY

- Positive anomaly - possible anomaly - possible feature of archaeological origin
- Negative anomaly - possible anomaly - possible bank or earthwork of archaeological origin
- Other anomaly - possibly related to field boundary not present on available mapping
- Other - possible curlew - possible linear anomalies - possibly related to clip and furrow

POSSIBLE ARCHAEOLOGY

- Positive anomaly - possible anomaly - possible feature of archaeological origin
- Negative anomaly - possible anomaly - possible bank or earthwork of archaeological origin

OTHER ANOMALIES

- Clearly related parallel linear anomalies - possibly related to agricultural activity such as ploughing
- Other anomaly - possibly related to pipe, cable or other services
- Other anomaly - possibly related to field boundary present on available mapping from 1970
- Linear anomaly - related to Roman Earth mile
- Linear anomaly - related to modern anti-rustle ditch
- Magnetic disturbance associated with nearby metal object such as service or field boundary
- Strong magnetic fields - possible structural or made ground
- Random magnetic debris
- Area of anomalous magnetic variation - possible natural (e.g. geological or pedological) origin
- Magnetic spike - possible service support

DC No.	J6375	Survey Date.	FEB 14
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Client: **CgMs CONSULTING LTD**

Project Title: **ODD DOWN, BATH**

Subject: **INTERPRETATION - EAST**

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Scale: 1:1250

Plot	A1	Checked by	DGE	Issue No.	01
Date	FEB 14	Drawn by	TR	Figure No.	10

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