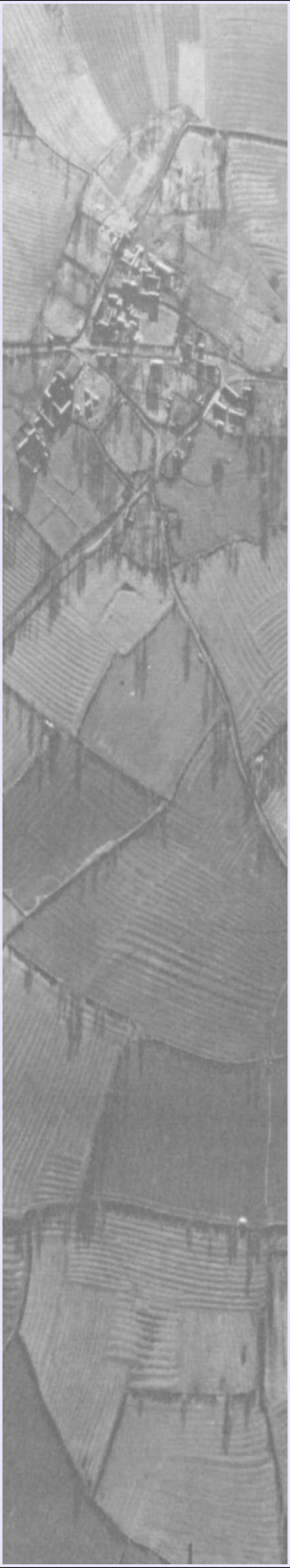

Plot A, Bath Business Park
Peasedown St John
Bath & North East Somerset

MAGNETOMETER SURVEY REPORT

for

Cotswold Archaeology

David Sabin and Kerry Donaldson

September 2012

Ref. no. 437

ARCHAEOLOGICAL SURVEYS LTD

Plot A, Bath Business Park
Peasedown St John
Bath & North East Somerset

Magnetometer Survey Report

for

Cotswold Archaeology

Fieldwork by David Sabin and Jack Cousins
Report by David Sabin BSc (Hons) MIFA and Kerry Donaldson BSc (Hons)

Survey date – **12th September 2012**
Ordnance Survey Grid Reference – **ST 71210 57215**

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SUMMARY

Archaeological Surveys Ltd conducted a detailed magnetometer survey at an area of land to the south east of Peasedown St John in Bath and North East Somerset. The survey was undertaken at the request of Cotswold Archaeology as part of an archaeological assessment of Plot A at Bath Business Park. The survey located two parallel positive linear anomalies that may relate to former ditches and several discrete anomalies that may indicate pit-like features, although their origin is uncertain. Magnetic disturbance cause by modern fencing and hoarding may obscure weaker anomalies around the periphery of the site.

1 INTRODUCTION

1.1 Survey background

1.1.1 Archaeological Surveys Ltd was commissioned by Cotswold Archaeology to undertake a magnetometer survey of an area of land at Peasedown St John in Bath and North East Somerset (B&NES). The site has been outlined for a proposed development known as Plot A of the Bath Business Park. The survey forms part of an archaeological assessment of the site.

1.1.2 The geophysical survey was carried out in accordance with a Written Scheme of Investigation (WSI) produced by Archaeological Surveys (2012) and approved by Richard Sermon, Senior Archaeological Officer for B&NES Council.

1.2 Survey objectives and techniques

1.2.1 The objective of the survey was to use magnetometry to locate geophysical anomalies that may be archaeological in origin, so that they may be assessed prior to development of the site. The methodology is considered an efficient and effective approach to archaeological prospection.

1.2.2 The survey and report generally follow the recommendations set out by: English Heritage (2008) *Geophysical survey in archaeological field evaluation;* and Institute for Archaeologists (2002) *The use of Geophysical Techniques in Archaeological Evaluations*. The work has been carried out to the Institute for Archaeologists (2011) *Standard and Guidance for Archaeological Geophysical Survey.*

1.2.3 A metal detection survey was also conducted over the site; however, the presence of rough and tall vegetation prevented close ground contact across much of the site. No metal finds other than modern rubbish were located by the survey.

1.3 Site location, description and survey conditions

1.3.1 The site lies on the south eastern edge of Peasedown St John in Bath & North East Somerset. It comprises a single field bounded to the north by the A367, and to the south and west by the Bath Business Park. The central OS Grid Reference is ST 71240 57230 see Figures 01 and 02.

1.3.2 The geophysical survey covers approximately 0.5ha of ungrazed, rough pasture and contained a large metal sign and an inner steel fence.

1.3.3 The ground conditions across the site were generally considered to be poor for the collection of magnetometry data. Weather conditions during the survey were variable with occasional showers.

1.4 Site history and archaeological potential

1.4.1 Previous archaeological evaluation trenches within the survey area and surrounding business park site, located widespread archaeological features during 2004-5. A number of undated inhumation burials were recorded, with 16 unexcavated grave cuts identified within the survey area. A possible Roman ditch was also recorded in the northern part of the area. The majority of the burials elsewhere within the site were at a depth of approximately 0.28m and were in a poor state of preservation. Grave goods were not recorded and the burials could date from between the Roman and Early Medieval periods (Rowe and Alexander, 2011).

1.4.2 Although human burials are very difficult to locate using magnetometry due to the lack of contrast between the fill of the grave cuts and the surrounding soil/subsoil, it may be possible to locate other cut features, such as ditches and pits containing occupational material.

1.5 Geology and soils

1.5.1 The underlying solid geology across the north eastern half of the survey area is mudstone from the Lower Fuller's Earth Member, with Ooidal Limestone from the Inferior Oolite Group across the southwestern half (BGS, 2012).

1.5.2 The overlying soil across the survey area is from the Sherborne association, which is a Brown Rendzina. It consists of shallow, well drained, brashy, calcareous clayey soil over limestone (Soil Survey of England and Wales, 1983).

1.5.3 Magnetometry survey carried out across similar soil has produced good results. The underlying geology and soils are therefore considered acceptable for magnetic survey.

2 METHODOLOGY

2.1 Technical synopsis

2.1.1 Magnetometry survey records localised magnetic fields that can be associated with features formed by human activity. Magnetic susceptibility and magnetic thermoremnance are factors associated with the formation of localised fields. Additional details are set out below and within Appendix A.

2.1.2 Iron minerals within the soil may become altered by burning and the break down of biological material; effectively the magnetic susceptibility of the soil is increased, and the iron minerals become magnetic in the presence of the Earth's magnetic field. Accumulations of magnetically enhanced soils within features, such as pits and ditches, may produce magnetic anomalies that can be mapped by magnetic prospection.

2.1.3 Magnetic thermoremnance can occur when ferrous minerals have been heated to high temperatures such as in a kiln, hearth, oven etc. On cooling, a permanent magnetisation may be acquired due to the presence of the Earth's magnetic field. Certain natural processes associated with the formation of some igneous and metamorphic rock may also result in magnetic thermoremnance.

2.1.4 The localised variations in magnetism are measured as sub-units of the Tesla, which is a SI unit of magnetic flux density. These sub-units are nano Teslas (nT), which are equivalent to 10^{-9} Tesla (T).

2.2 Equipment configuration, data collection and survey detail

2.2.1 The detailed magnetic survey was carried out using a Bartington Grad 601-2 gradiometer. The instrument effectively measures a magnetic gradient between two fluxgate sensors mounted vertically 1m apart. Two sets of sensors are mounted on a single frame 1m apart horizontally.

2.2.2 The instrument is extremely sensitive and is able to measure magnetic variation to 0.01nanoTesla (nT), with an effective resolution of 0.03nT. The data are limited to ±100nT when surveying with the highest sensitivity. All readings are saved to an integral data logger for analysis and presentation.

2.2.3 The instrument is operated according to the manufacturer's instructions with consideration given to the local conditions. An adjustment procedure is required, prior to collection of data, in order to balance the sensors and remove the effects of the Earth's magnetic field; further adjustment is required during the survey due to instrument drift often associated with temperature change.

2.2.4 It can be very difficult to obtain optimum balance for the sensors due to localised magnetic vectors that may be associated with large ferrous objects, geological/pedological features, 'magnetic debris' within the topsoil and natural temperature fluctuations. Imperfect balance results in a heading error often visible as striping within the data; this can be effectively removed by software processing and generally has little effect on the data unless extreme.

2.2.5 The Bartington gradiometer undergoes regular servicing and calibration by the manufacturer. A current assessment of the instrument is shown in Table 1 below.

Sensor type and serial numbers	Bartington Grad - 01 – 1000 Nos. 084, 085
Date of certified calibration/service	Sensors 084 and 085 - 17th August 2012 (due Aug 2014)
Bandwidth	12Hz (100nT range) both sensors
Noise	<100pT peak to peak
Adjustable errors	<2nT

Table 1: Bartington fluxgate gradiometer sensor calibration results

The instrument was considered to be in good working order prior to the survey, with no known faults or defects.

2.2.6 Data were collected at 0.25m centres along traverses 1m apart. The survey area was separated into 20m by 20m grids (400m²) giving 1600 measurements per grid. This sampling interval is very effective at locating archaeological features and is the recommended methodology for archaeological prospection (English Heritage, 2008).

2.2.7 The survey grids were set out to the Ordnance Survey OSGB36 datum using a Penmap RTK GPS. The GPS is used in conjunction with Leica's SmartNet service, where positional corrections are sent via a mobile telephone link. Positional accuracy of around 10 – 20mm is possible using the system. The instrument is regularly checked against the ETRS89 reference framework using Ordnance Survey ground marker C1ST7784 (Horton).

2.3 Data processing and presentation

2.3.1 Magnetometry data downloaded from the Grad 601-2 data logger are analysed and processed in specialist software known as ArcheoSurveyor. The software allows greyscale and trace plots to be produced for presentation and display. Survey grids are assembled to form an overall composite of data (composite file) creating a dataset of the complete survey area. Appendix C contains specific information concerning the survey and data attributes and is derived directly from ArcheoSurveyor; this should be used in conjunction with information provided by Figure 02.

2.3.2 Only minimal processing is carried out in order to enhance the results of the survey for display. Raw data are always analysed, as processing can modify anomalies. The following schedule sets out the data and image processing used in this survey:

- clipping of the raw data at ±30nT to improve greyscale resolution,
- clipping of processed data at ±1nT to enhance low magnitude anomalies,
- zero median/mean traverse is applied in order to balance readings along each traverse.

Reference should be made to Appendix B for further information on the specific processes carried out on the data. Appendix C metadata includes details on the processing sequence used.

2.3.3 An abstraction and interpretation is offered for all geophysical anomalies located by the survey. A brief summary of each anomaly, with an appropriate reference number, is set out in list form within the results (Section 3) to allow a rapid and objective assessment of features.

2.3.4 The main form of data display prepared for this report is the greyscale plot. Both 'raw' and 'processed' data have been shown followed by an abstraction and interpretation plot. Anomalies are abstracted using colour coded points, lines and polygons. All plots are scaled to landscape A3 for paper printing.

2.3.5 Graphic raster images in bitmap format (.BMP) are initially prepared in ArcheoSurveyor. Regardless of survey orientation, data captured along each traverse are displayed and processed by ArcheoSurveyor from left to right. Prior to displaying against base mapping, raster graphics require a rotation of 125° anticlockwise to restore north to the top of t he image upon insertion into AutoCAD.

2.3.6 The raster images are combined with base mapping using ProgeCAD Professional 2009 and AutoCAD LT 2007, creating DWG file formats. All images are externally referenced to the CAD drawing in order to maintain good graphical quality. Quality can be compromised by rotation of graphics in order to allow the data to be orientated with respect to grid north; this is considered acceptable as the survey results are effectively georeferenced allowing relocation of features using GPS, resection method etc.

2.3.7 A digital archive is produced with this report, see Appendix D below. The main archive is held at the offices of Archaeological Surveys Ltd.

3 RESULTS

3.1 General assessment of survey results

3.1.1 The detailed magnetic survey was carried out over approximately 0.5ha.

3.1.2 Magnetic anomalies located can be generally classified as positive and negative anomalies of an uncertain origin, areas of magnetic disturbance and strong discrete dipolar anomalies relating to ferrous objects.

3.2 Statement of data quality

3.2.1 Data are considered representative of the magnetic anomalies present within the site. However, significant levels of magnetic disturbance were caused by steel fencing surrounding the interior of the field and a large sign or hoarding. Tall vegetation also produced difficult traversing conditions.

3.3 Data interpretation

3.3.1 The list of sub-headings below attempts to define a number of separate categories that reflect the range and type of features located during the survey. A basic explanation of the characteristics of the magnetic anomalies is set out for each category in order to justify interpretation, a basic key is indicated to allow cross referencing to the abstraction and interpretation plot. CAD layer names are included to aid reference to associated digital files (.dwg/.dxf). Sub-headings are then used to group anomalies with similar characteristics for each survey area.

Report sub-heading CAD layer names and plot colour	Description and origin of anomalies
Anomalies with an uncertain origin AS-ABST MAG POS LINEAR UNCERTAIN AS-ABST MAG NEG LINEAR UNCERTAIN AS-ABST MAG POS DISCRETE UNCERTAIN	The category applies to a range of anomalies where there is not enough evidence to confidently suggest an origin. Anomalies in this category may well be related to archaeologically significant features, but equally relatively modern features, geological/pedological features and agricultural features should be considered. Positive anomalies are indicative of magnetically enhanced soils that may form the fill of 'cut' features or may be produced by accumulation within layers or 'earthwork' features; soils subject to burning may also produce positive anomalies. Negative anomalies are produced by material of comparatively low magnetic susceptibility such as stone and subsoil.
Anomalies associated with magnetic debris AS-ABST MAG STRONG DIPOLAR	Strong discrete dipolar anomalies are responses to ferrous objects within the topsoil.
Anomalies with a modern origin AS-ABST MAG DISTURBANCE	The magnetic response is often strong and dipolar indicative of ferrous material and may be associated with extant above surface features such as wire fencing, cables, pylons etc.. Often a significant area around such features has a strong magnetic flux which may create magnetic disturbance; such disturbance can effectively obscure low magnitude anomalies if they are present. Fluxgate sensors may respond erratically and with hysteresis adjacent to strong magnetic sources.

Table 2: List and description of interpretation categories

3.4 List of anomalies

Area centred on OS NGR 371210 157215, see Figures 04 & 05.

Anomalies with an uncertain origin

(1) – A positive linear anomaly oriented north-east to south-west. It is approximately 3nT in magnitude and appears to have a parallel negative linear anomaly to the south. It is possible that this anomaly relates to a cut feature and may be associated with a former Romano-British ditch located during evaluation within northern part of the site.

(2) – A weakly positive linear anomaly located parallel with, and 15m to the south east of anomaly (1). The response is generally less than 1nT, indicating that it contains less magnetically enhanced material than anomaly (1), although it is likely to be associated.

(3) – A group of discrete positive anomalies are located in the eastern half of the site. They are generally less than 1nT in strength and appear to relate to pit-like anomalies. They are located in the general vicinity of a series of undated burials located during evaluation, however it is not possible to determine if they archaeological in origin. This type of response may be archaeologically significant; however, it is also possible for them to relate to natural features, or to have been caused by more recent ground disturbance.

(4) – Two very weakly positive linear anomalies are located in the western part of the site. It is possible that one of them is a continuation of anomaly (1), but this is not certain.

(5) – Very weakly positive (<0.5nT) linear anomalies are of uncertain origin.

(6) – Two negative linear anomalies are located within the site and oriented north east to south west. It is possible that these are a response to subsoil and associated with the evaluation trenches from 2004/5.

Anomalies associated with magnetic debris

(7) – The survey area contains several strong discrete dipolar anomalies which are a response to ferrous objects within the topsoil.

Anomalies with a modern origin

(8) – The survey area is surrounded by magnetic disturbance from ferrous material within fencing.

4 CONCLUSION

4.1.1 The detailed magnetometer survey located two parallel linear anomalies that may indicate ditch-like features within the eastern part of the site. Located mainly between these ditches are a number of weak, discrete, positive anomalies that may indicate pit-like features. While this type of anomaly may be archaeologically significant, a natural or modern origin is also possible. Other weakly positive linear anomalies of uncertain origin have been located in the south and west of the site. Two negative linear anomalies may be associated with evaluation trenches from 2004/5.

5 REFERENCES

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

Appendix A – basic principles of magnetic survey

Iron minerals are always present to some degree within the topsoil and enhancement associated with human activity is related to increases in the level of magnetic susceptibility and thermoremnant material.

Magnetic susceptibility is an induced magnetism within a material when it is in the presence of a magnetic field. This can be thought of as effectively permanent due to the presence of the Earth's magnetic field.

Thermoremnant magnetism occurs when ferrous material is heated beyond a specific temperature known as the Curie Point. Demagnetisation occurs at this temperature with re-magnetisation by the Earth's magnetic field upon cooling.

Enhancement of magnetic susceptibility can occur in areas subject to burning and complex fermentation processes on biological material; these are frequently associated with human settlement. Thermoremnant features include ovens, hearths, and kilns. In addition thermoremnant material such as tile and brick may also be associated with human activity and settlement.

Silting and deliberate infilling of ditches and pits with magnetically enhanced soil can create an area of enhancement compared with surrounding soils and subsoils into which the feature is cut. Mapping enhanced areas will produce linear and discrete anomalies allowing an assessment and characterisation of hidden subsurface features.

It should be noted that areas of negative enhancement can be produced from material having lower magnetic properties compared to the topsoil. This is common for many sedimentary bedrocks and subsoils which were often used in the construction of banks and walls etc. Mapping these 'negative' anomalies may also reveal archaeological features.

Magnetic survey or magnetometry can be carried out using a fluxgate gradiometer and may be referred to as gradiometry. The gradiometer is a passive instrument consisting of two fluxgate sensors mounted vertically 1m apart. The instrument is carried about 30cm above the ground surface and the upper sensor measures the Earth's magnetic field as does the lower sensor but this is influenced to a greater degree by any localised buried field. The difference between the two sensors will relate to the strength the magnetic field created by the buried feature. If no enhanced feature is present the field measured by both sensors will be similar and the difference close to zero.

There are a number of factors that may affect the magnetic survey and these include soil type, local geology and previous human activity. Situations arise where magnetic disturbance associated with modern services, metal fencing, dumped waste material etc., obscures low magnitude fields associated with archaeological features.

Appendix B – data processing notes

Clipping

Minimum and maximum values are set and replace data outside of the range with those values. Extreme values are removed improving colour or greyscale contrast associated with data values that may be archaeologically significant. It has been found that clipping data to ranges between ±5nT and ±1nT often improves the appearance of features associated with archaeology. Different ranges are applied to data in order to determine the most suitable for anomaly abstraction and display.

Zero Median/Mean Traverse

The median (or mean) of each traverse is calculated ignoring data outside a threshold value, the median (or mean) is then subtracted from the traverse. The process is used to equalise slight differences between the set-up and stability of gradiometer sensors and can remove striping. The process can remove archaeological features that run along a traverse so data analysis is also carried out prior its application.

De-stagger

Compensates for small positional errors within data collection by shifting the position of the readings along each traverse by a specified amount. Data lost at the end of each traverse are extrapolated from adjacent value in the same row.

Deslope

Corrects for striping and distortion caused by metal objects/services etc.. The process calculates a curve based on a polynomial best fit mathematical function for each traverse. This curve is then subtracted from the actual data.

Edge Match

Calculates the mean of the 2 lines (rows or columns) of data either side of the edge to match. It then subtracts the difference between the means from all datapoints in the selected area.

FFT (Fast Fourier Transform) spectral filtering

A mathematical process used to determine the frequency components of a traverse. Repetitive features, such as plough marks, produce characteristic spectral zones that can be suppressed allowing greyscale images to appear clearer.

Appendix C – survey and data information

Raw magnetometer data

COMPOSITE
Filename: J437-mag-raw.xcp
Instrument Type: Bartington (Gradiometer)
Units: nT
Surveyed by: on 12/09/2012
Assembled by: on 12/09/2012
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 32702.00

Dimensions
Composite Size (readings): 240 x 160
Survey Size (meters): 60.00m x 160.00 m
Grid Size: 20.00 m x 20.00 m
X Interval: 0.25 m
Y Interval: 1.00 m

Stats
Max: 30.00
Min: -30.00
Std Dev: 5.71
Mean: -1.60
Median: -0.45
Composite Area: 0.96 ha
Surveyed Area: 0.48 ha

PROGRAM
Name: ArcheoSurveyor
Version: 2.5.16.0
Processes: 2
1 Base Layer
2 Clip from -30.00 to 30.00 nT

Source Grids: 21
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:0 Row:5 grids\06.xgd
7 Col:0 Row:6 grids\07.xgd
8 Col:0 Row:7 grids\08.xgd
9 Col:1 Row:0 grids\09.xgd
10 Col:1 Row:1 grids\10.xgd
11 Col:1 Row:2 grids\11.xgd
12 Col:1 Row:3 grids\12.xgd
13 Col:1 Row:4 grids\15.xgd
14 Col:1 Row:5 grids\16.xgd
15 Col:1 Row:6 grids\17.xgd
16 Col:1 Row:7 grids\18.xgd
17 Col:2 Row:1 grids\13.xgd
18 Col:2 Row:2 grids\14.xgd
19 Col:2 Row:5 grids\19.xgd
20 Col:2 Row:6 grids\20.xgd
21 Col:2 Row:7 grids\21.xgd

Processed magnetometer data

COMPOSITE
Filename: J437-mag-proc.xcp

Stats
Max: 1.00
Min: -1.00
Std Dev: 0.61
Mean: 0.00
Median: 0.00
Composite Area: 0.96 ha
Surveyed Area: 0.42 ha

Processes: 8
1 Base Layer
2 Search & Replace From: -100 To: 100 With: Dummy (Area: Top 61, Left 0, Bottom 145, Right 17)
3 Search & Replace From: -100 To: 100 With: Dummy (Area: Top 13, Left 0, Bottom 30, Right 10)
4 Search & Replace From: -100 To: 100 With: Dummy (Area: Top 62, Left 108, Bottom 81, Right 165)
5 Search & Replace From: -100 To: 100 With: Dummy (Area: Top 61, Left 99, Bottom 83, Right 162)
6 DeStripe Median Traverse: Grids: All
7 Clip from -3.00 to 3.00 nT
8 Clip from -1.00 to 1.00 nT

Appendix D – digital archive

Archaeological Surveys Ltd hold the primary digital archive at their offices in Wiltshire (see inside cover for address). Data are backed-up onto an on-site data storage drive and at the earliest opportunity data are copied to CD ROM for storage on-site and off-site.

Surveys are reported on in hardcopy (recycled paper) using A4 for text and A3 for plots (all plots are scaled for A3). The distribution of both hardcopy report and digital data is considered the responsibility of the Client unless explicitly stated in the survey Brief, Written Scheme of Investigation or other contractual agreement.

This report has been prepared using the following software on a Windows XP platform:

- ArcheoSurveyor version 2.5.16.0 (geophysical data analysis),
- ProgeCAD Professional 2009 (report graphics),
- AutoCAD LT 2007 (report figures),
- OpenOffice.org 3.0.1 Writer (document text),
- PDF Creator version 0.9 (PDF archive).

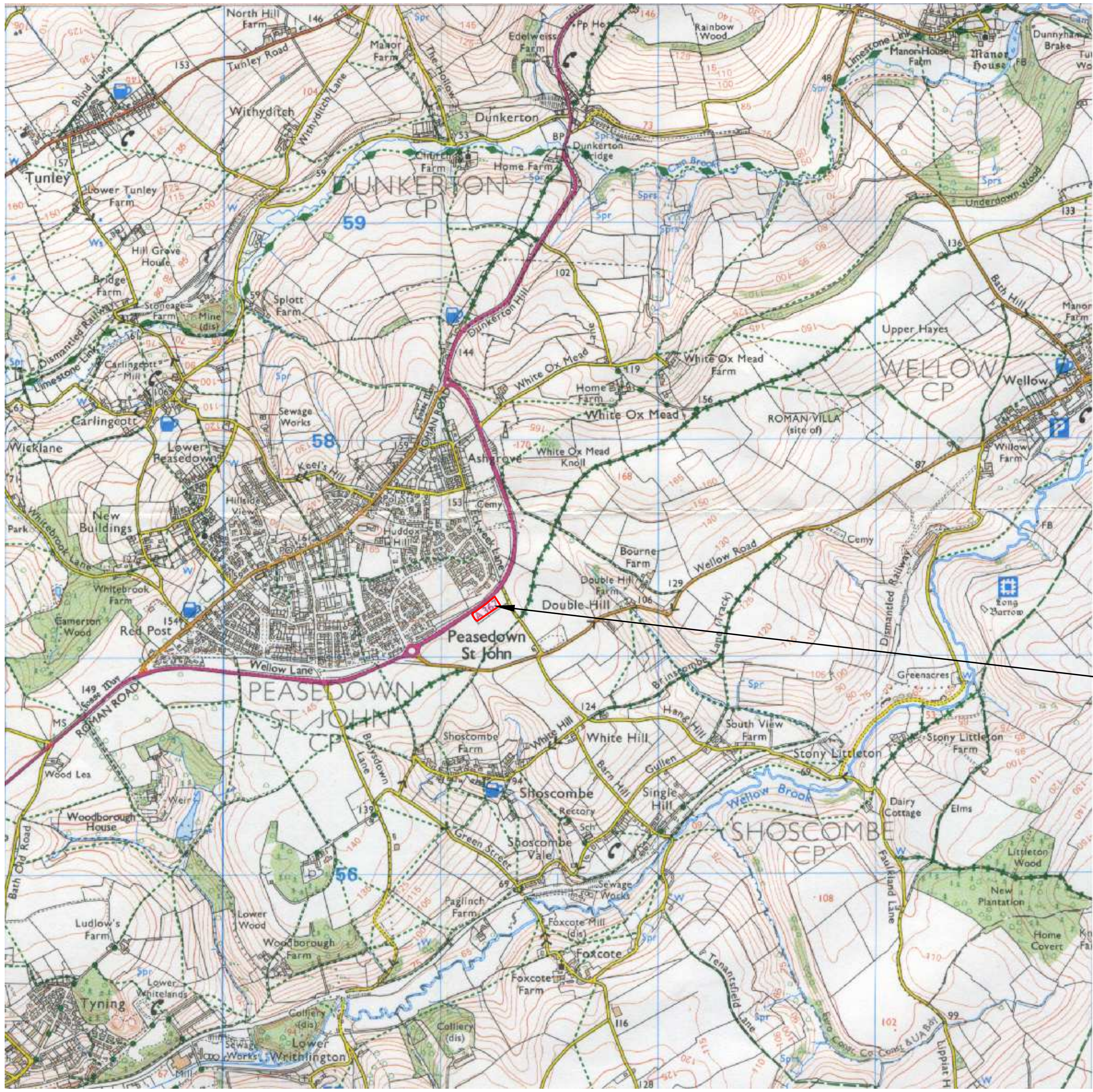
Digital data produced by the survey and report include the following files:

- ArcheoSurveyor grid and composite files for all geophysical data,
- CSV files for raw and processed composites,
- geophysical composite file graphics as Bitmap images,
- AutoCAD DWG files in 2000 and 2007 versions,
- report text as OpenOffice.org ODT file,
- report text as Word 2000 doc file,
- report text as rich text format (RTF),
- report text as PDF,
- PDFs of all figures.

Archaeological Surveys Ltd

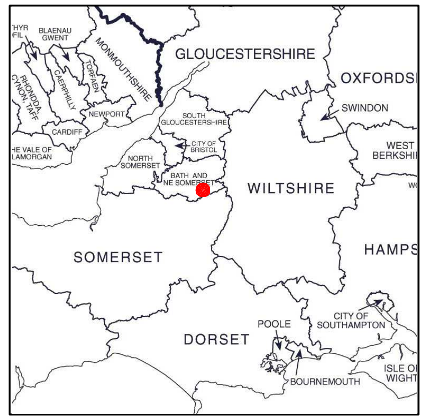
Geophysical Survey
Plot A Bath Business Park
Peasedown St John
BaNES

N



Map of survey area

Reproduced from OS Explorer map no.142 1:25 000 by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office.



● Survey location

Site centred on OS NGR
ST 71210 57215

SCALE 1:25 000

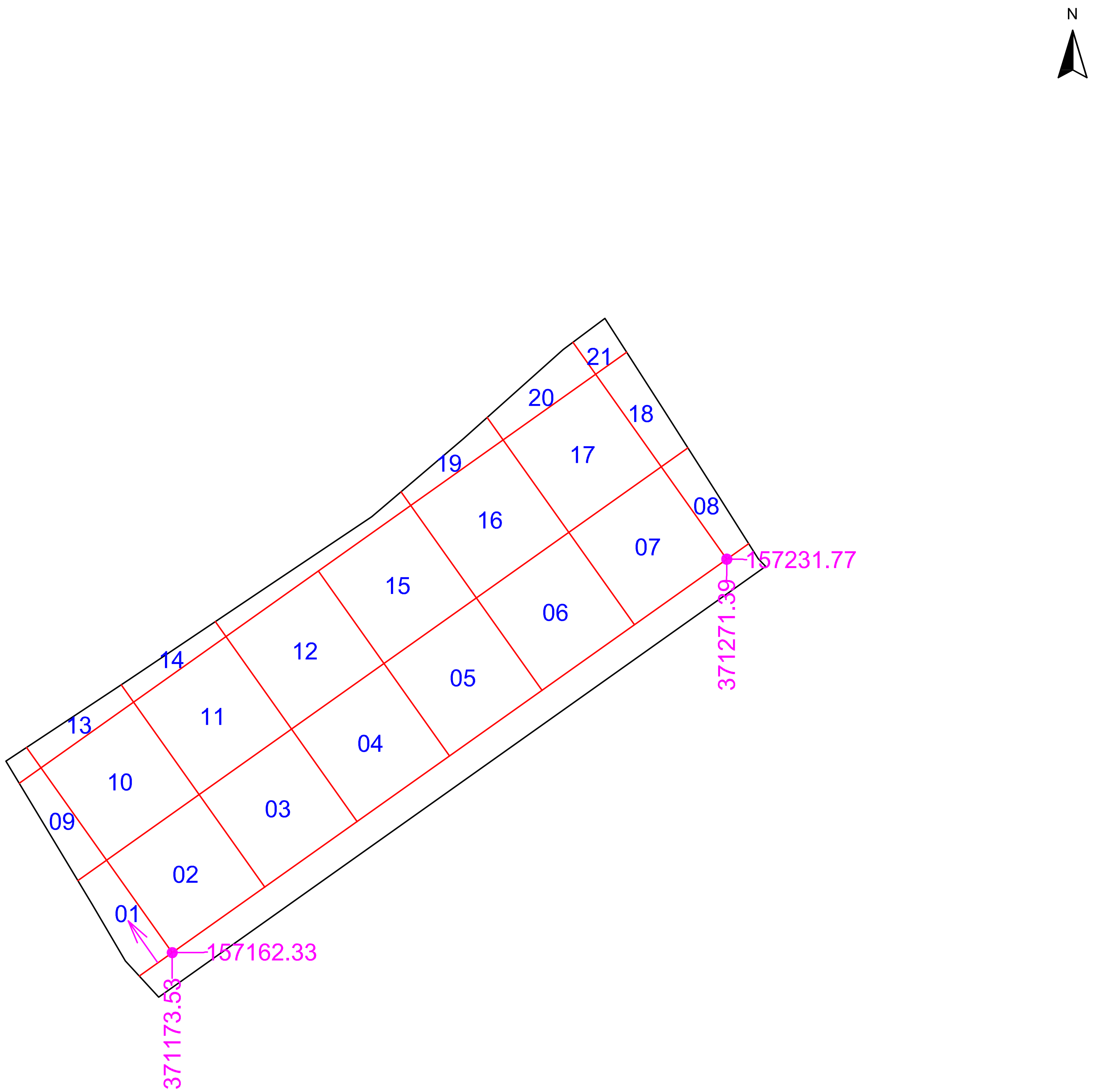
0m 500m 1000m

SCALE TRUE AT A3

FIG 01

Archaeological Surveys Ltd

Geophysical Survey
Plot A Bath Business Park
Peasedown St John
BaNES



Referencing information

Grid coordinates based on Ordnance Survey OSGB36 datum

Grids set out using RTK GPS with Leica SmartNet correction data RTCMv2 format OSTN02 transformation

Survey grid size = 20m

Survey start and traverse direction

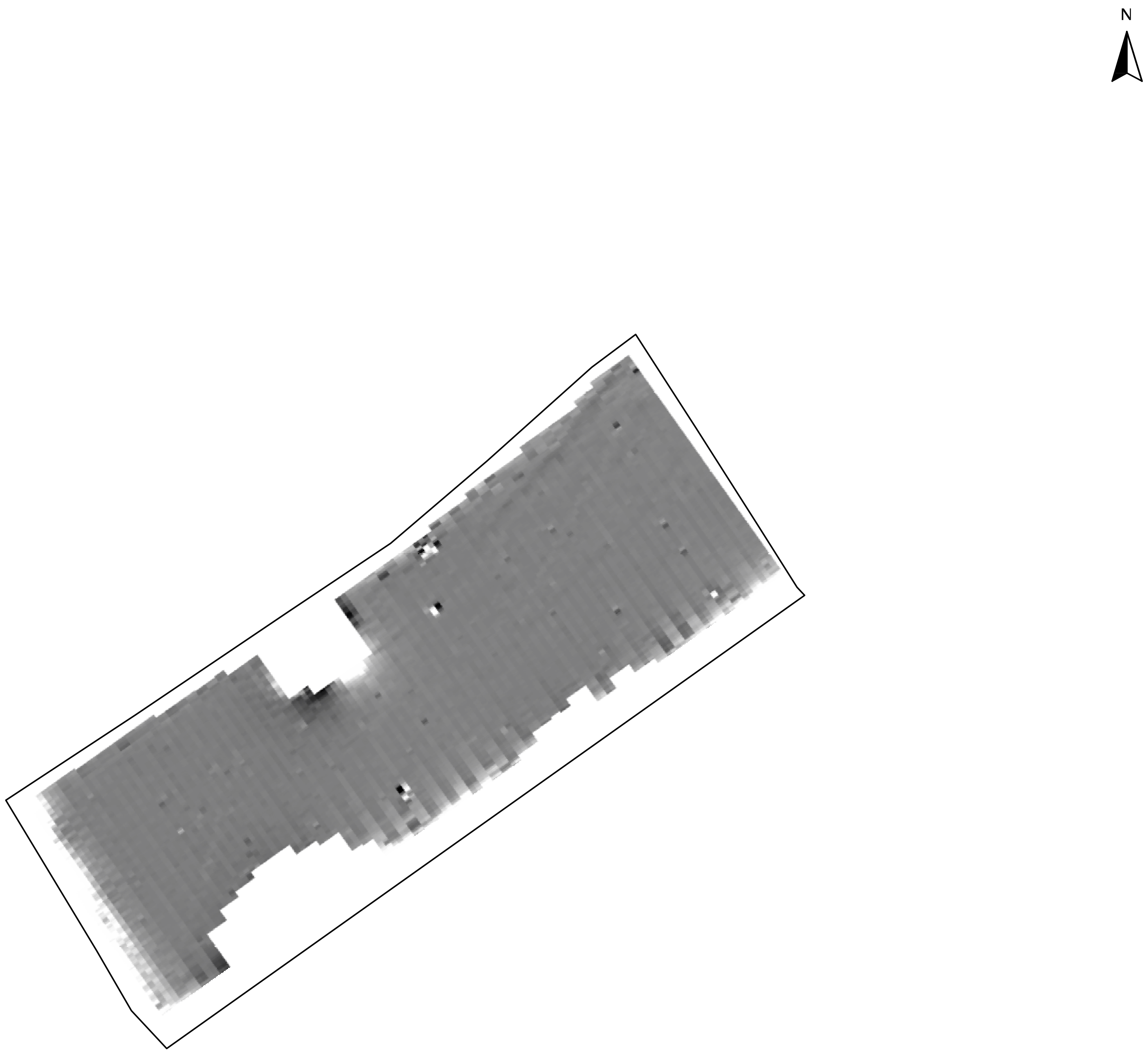
01 Grid reference number and filename

SCALE 1:1000

0m 10 20 30 40 50m

SCALE TRUE AT A3

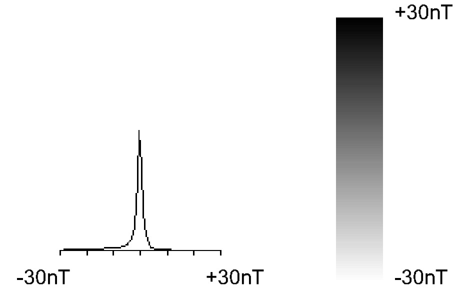
FIG 02



Archaeological Surveys Ltd

Geophysical Survey
Plot A Bath Business Park
Peasedown St John
BaNES

Greyscale plot of raw magnetometer data



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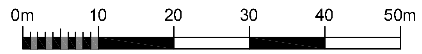
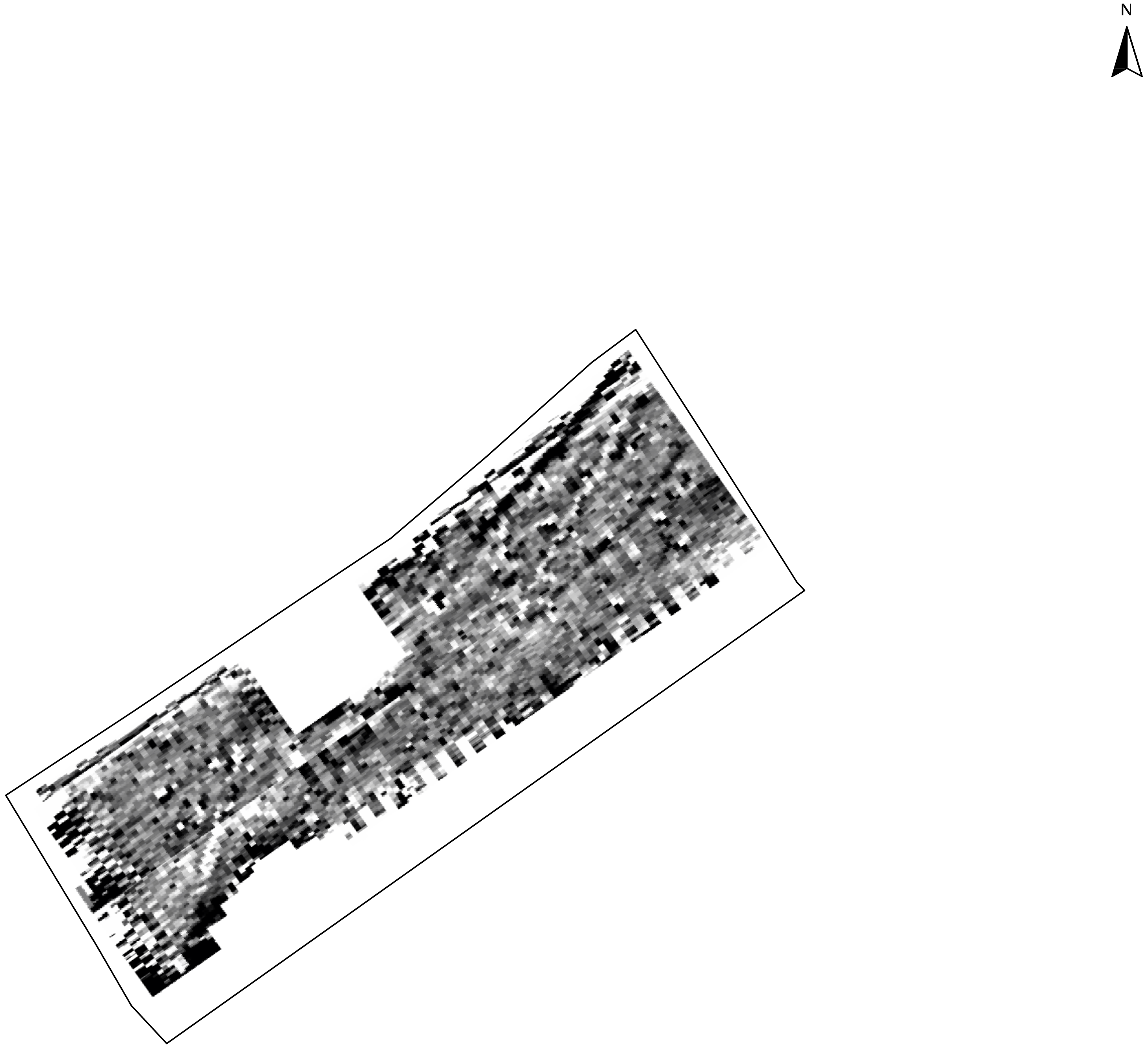


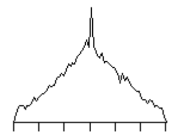
FIG 03

Archaeological Surveys Ltd

Geophysical Survey
Plot A Bath Business Park
Peasedown St John
BaNES



Greyscale plot of processed magnetometer data



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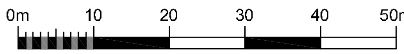
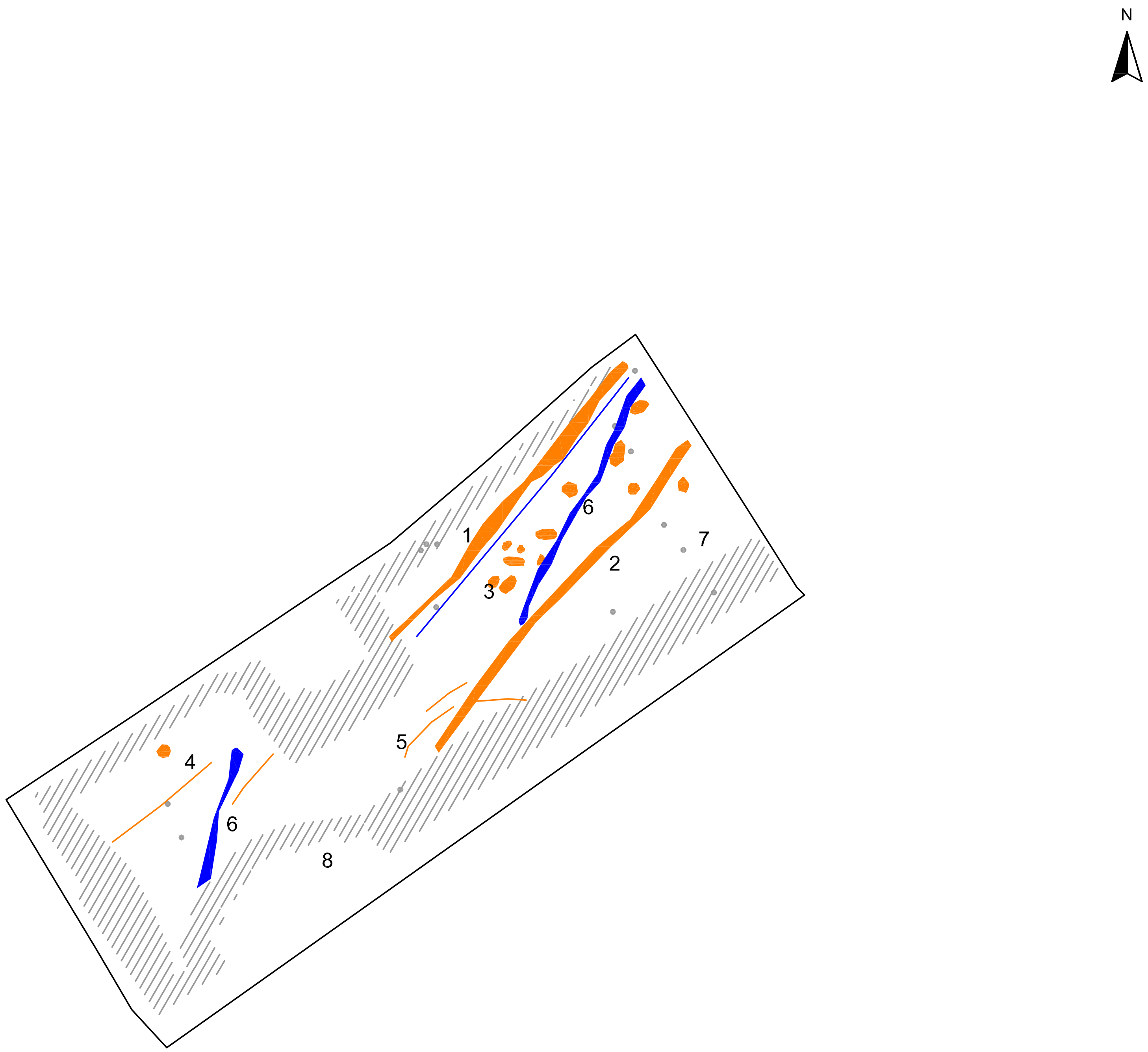


SCALE TRUE AT A3

FIG 04

Archaeological Surveys Ltd



Geophysical Survey
Plot A Bath Business Park
Peasedown St John
BaNES

Abstraction and interpretation of magnetometer anomalies

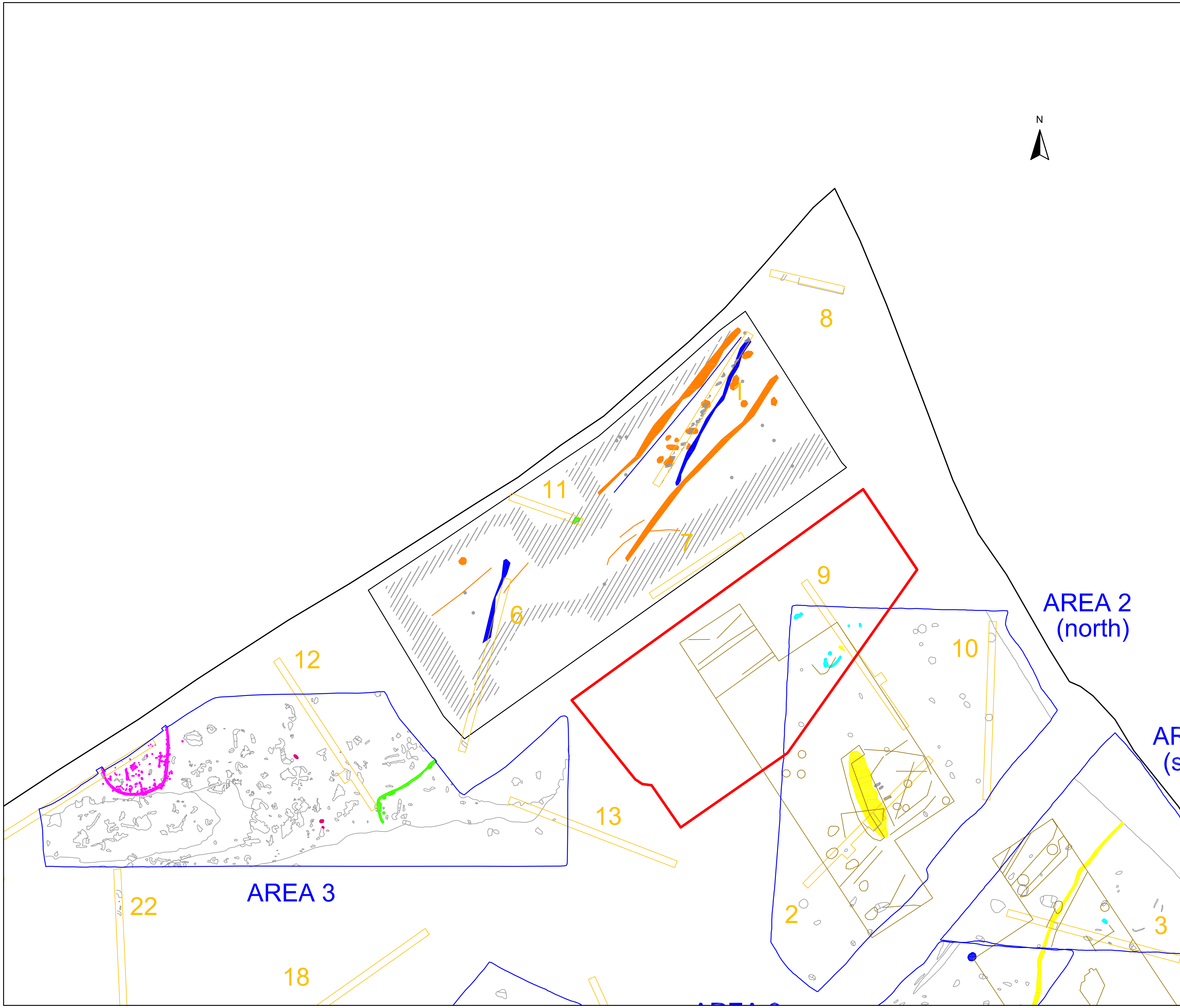
- Positive linear anomaly - possible ditch-like feature
- Negative linear anomaly - material of low magnetic susceptibility
- Discrete positive response - possible pit-like feature
- Magnetic disturbance from ferrous material
- Strong dipolar anomaly - ferrous object

SCALE 1:1000

0m 10 20 30 40 50m

SCALE TRUE AT A3

FIG 05



Archaeological Surveys Ltd

Geophysical Survey
Plot A Bath Business Park
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BaNES

Abstraction and interpretation of magnetometer anomalies with overlain former trench plans

- Positive linear anomaly - possible ditch-like feature
- Negative linear anomaly - material of low magnetic susceptibility
- Discrete positive response - possible pit-like feature
- Magnetic disturbance from ferrous material
- Strong dipolar anomaly - ferrous object

- 1 Cotswold Archaeology Evaluation Trench
- Cotswold Archaeology - linear feature
- Cotswold Archaeology - grave cut

SCALE 1:1000

0m 10 20 30 40 50m

SCALE TRUE AT A3

FIG 06