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# LAND SOUTH OF DAME MARY ARCHER WAY CAMBRIDGE, CAMBRIDGESHIRE

## DETAILED MAGNETOMETER SURVEY



Report Number: 1071

October 2014

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**LAND SOUTH OF DAME MARY ARCHER WAY,  
CAMBRIDGE, CAMBRIDGESHIRE**

**Detailed Magnetometer Survey**

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|                      |               |              |                  |
|----------------------|---------------|--------------|------------------|
| <b>Site Code</b>     | ECB4287       | <b>NGR</b>   | TL 46321 54631   |
| <b>Planning Ref.</b> | -             | <b>OASIS</b> | britanni1-208410 |
| <b>Approved By</b>   | Matthew Adams | <b>DATE</b>  | October 2014     |



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## **ABSTRACT**

*A Detailed fluxgate gradiometer survey was undertaken by Britannia Archaeology Ltd in September 2014 on land south of Dame Mary Archer Way, Cambridge, Cambridgeshire. It was successful in identifying a range of anomalies that are of potential archaeological origin.*

*Iron spike anomalies were the most numerous with a potential cluster located within parallel and perpendicular positive linear anomalies that form a potential Roman enclosure.*

*Seven positive linear trends, that are interpreted as agricultural land drains were further recorded on a north to south alignment.*

*Two positive discrete anomalies indicative of archaeological rubbish pits were recorded to the west and east of the dataset, a geological derivation however cannot be ruled out.*

*Five thermo-remnant responses were recorded in the central northern section of the dataset that are indicative of areas of burning, burnt pits, fires, hearths or potentially even kilns aligned south-west to north-east. Located within perpendicular and parallel positive linear anomalies that form the enclosure. A more modern derivation cannot be ruled out.*

*Four weak positive linear anomalies orientated north-east to south-west and perpendicular form potential enclosure type ditch boundaries that correlate well with the cropmark survey.*



## 1.0 INTRODUCTION

On the 17<sup>th</sup> – 19<sup>th</sup> September 2014 Britannia Archaeology Ltd (BA) undertook a detailed magnetometer survey on behalf of Annie Calder, Principal Archaeological Consultant at URS Infrastructure and Environment UK Limited, in accordance with a specification (Calder. A. 2014) that had been approved by Andy Thomas of Cambridgeshire County Council Historic Environment Team. The survey was undertaken in advance of construction work to be undertaken by Cambridge Medipark Ltd, on land to the south of Dame Mary Archer Way, Cambridge, Cambridgeshire (NGR TL 46321 54631). This 6.7 hectare geophysical survey will help inform the subsequent trial trenching phase.

## 2.0 SITE DESCRIPTION

The survey was located in one 6.7 hectare arable field enclosed by a fence and hedgerows to the north, a ditch to the south, by scrubland to the west and by a cycle path to the east; the weather conditions were mainly overcast, interspersed with periods of sunshine. A temporary helipad associated with Addenbrookes Hospital was present within the eastern section of the site; this was found to be unsuitable for survey, along with the narrow section of land to the west. The site lies at a height between 15 and 20m AOD.

The bedrock geology is described as West Melbury Marly Chalk Formation; sedimentary bedrock formed approximately 94 to 100 million years ago in the Cretaceous Period when the local environment was dominated by warm chalk seas (BGS, 2014).

No superficial deposits were recorded for this location at the time of writing.

## 3.0 PLANNING POLICIES

The archaeological investigation is to be carried out on the recommendation of the local planning authority, following guidance laid down by the *National Planning and Policy Framework* (NPPF, DCLD 2012) which replaces *Planning Policy Statement 5: Planning for the Historic Environment* (PPS5, DCLG 2010). The relevant local planning policy is contained in the *South Cambridgeshire Local Plan; 2013 Policy Chapter 6*.

### 3.1 National Planning Policy Framework (NPPF, DCLG March 2012)

The NPPF recognises that 'heritage assets' are an irreplaceable resource and planning authorities should conserve them in a manner appropriate to their significance when considering development. It requires developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. The key areas for consideration are:

- The significance of the heritage asset and its setting in relation to the proposed development;



- The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance;
- Significance (of the heritage asset) can be harmed or lost through alteration or destruction, or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification;
- Local planning authorities should not permit loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred;
- Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.

### 3.2 South Cambridgeshire Local Plan; 2013 Policy Chapter 6.

The South Cambridgeshire Local Plan replaces the existing Local Development Framework and Chapter 6 deals specifically with safeguarding heritage assets. The key areas for consideration in relation to archaeology and development are:

- 6.53 Where development is proposed for a site which includes or has the potential to include heritage assets with archaeological interest, developers must submit an appropriate desk-based assessment and, where necessary, a field evaluation.
- 6.54 Prospective developers should contact the County Council's Historic Environment Team for information to establish whether there is known or potential archaeological interest and the need for investigation and evaluation at an early stage.

## 4.0 ARCHAEOLOGICAL BACKGROUND

A series of cropmarks to the south of the proposed development suggests that they relate to a continuation of the early Roman field system associated with settlement activity. At Clay Farm, Trumpington located approximately 1km to the north-west, excavations over approximately 20ha identified a multi-period landscape comprising Middle Bronze Age occupation, Iron Age, Roman and post-medieval enclosures, World War II anti-aircraft features were further recorded. Papworth Circus and Piazza lies approximately 400m to the north, these excavations identified a large Bronze Age enclosure ditch, orientated NW-SE and a Bronze Age metalled surface. Early Roman cultivation strips, segments of an associated field system and a series of mostly NW-SE boundaries which appear to be Roman and post-medieval. The excavations also recorded a large sub-rectangular feature that may be a sunken feature building, and post-medieval boundaries. Excavations at Bell Language School, 400m to the east identified a Bronze Age posthole alignment, and Roman plantation strips. Three sites



have been excavated at the Southern Perimeter Road approximately 120m north of the proposed development. The westernmost site contained part of an early Roman field system, several pits and a kiln. Further ditches associated with the early Roman field system were identified during excavation of a spur road to the east, additional ditches, planting strips and pits were recorded during the access road excavation at Robinson Way.

## **5.0 PROJECT OBJECTIVES**

The objectives of the geophysical survey were:

- to establish the presence or absence of any archaeological anomalies within the area of proposed development site and to add to our understanding of the layout of field systems and enclosures within the site;
- to define the extent of any such anomalies;
- to characterise, if possible, any features or anomalies recorded; and
- to inform the scope of further archaeological evaluation and site specific research objectives.

## **6.0 METHODOLOGY**

### *6.1 Instrument Type Justification*

Britannia Archaeology Ltd employed a Bartington Dual Grad 601-2 fluxgate gradiometer to undertake the survey, because of its high sensitivity and rapid ground coverage. The surveyors noted that the field had moderately low magnetic background susceptibility, allowing a suitable zero point to be located with relative ease.

### *6.2 Instrument Calibration*

One hour was allowed in the morning for the magnetometers sensors to settle before the start of the first grid. The instrument was zeroed after every three grids to minimise the effect of sensor drift. An area with a relatively low magnetic reading was chosen to calibrate the instrument; this same point was used to zero the sensors throughout the survey providing a common zero point. Sensor drift was noted throughout the survey particularly during outbreaks of sunshine.

### *6.3 Sampling Interval and Grid Size*

The sampling interval was set at 0.25m along 1m traverse intervals, providing 4 readings a metre, the magnetometer survey was undertaken on 20 x 20m grids.





#### 6.4 Survey Grid Location

The survey grid was set out to the Ordnance Survey OSGB36 datum to an accuracy of  $\pm 0.1\text{m}$  employing a Leica Viva Glonass Smart Rover GS08 real time kinetic (RTK) system. Data were then converted to the National Grid Transformation OSTN02 and the instrument was regularly tested using stations with known ETRS89 coordinates. The grids were aligned north-east to south-west, positioned parallel with the long axis of the field for ease of survey (Figure 1).

#### 6.5 Data Capture

Instrument readings were recorded on an internal data logger that were downloaded to a laptop at lunchtime and then also at the end of the day. The grid order was recorded on a BA pro-forma to aid in the creation of the data composites. Data were filed in job specific folders. These data composites were checked for quality on site by BA, allowing grids to be re-surveyed if necessary. The data were backed up onto an external storage device in the office and finally a remote server at the end of the day. A five metre exclusion zone was left between the boundaries and the survey area to reduce the amount of magnetic disturbance.

#### 6.6 Data Presentation and Processing

Data are presented in both raw and processed data plots in greyscale format (Figures 2A, 2B, 3A, 3B, and 4). Two XY trace plots of the processed data have also been included (Figures 2C and 3C). Raw data are presented with no processing, and were clipped to produce a uniform greyscale plot; the processed data schedule is also displayed below.

##### *Raw Data:*

**Data Clipping:** 1 standard deviation.  
**Data Display:** Clip to -3/+3 standard deviation.

##### *Processed Data:*

**De-stripe:** Median, Traverse (Grids 52, 58, 64, 65, 69, 71, 75, and 77).  
**De-stripe:** Median, Sensors (all other grids).  
**Data Clipping:** 1 standard deviation;  
**Data Display:** Clip to -3/+3 standard deviation.

Interpretation plots characterising the anomalies recorded can be found at Figures 2D, 3D and 5, they draw together the evidence collated from both greyscale and XY trace plots (Figures 2A, 2B, 2C, 3A, 3B, 3C and 4). All figures are tied into the National Grid and printed at an appropriate scale. Metadata Sheets for raw and processed plots can be found at Appendix 1.

#### 6.7 Software

Raw data were downloaded using Archeosurveyor v2.5.16.0. and will be stored in this format as raw data. The software used to process the data and produce the composites



was also DW Consulting's Archeosurveyor v2.5.16.0. Datasets were exported into AutoCAD and placed onto the local survey grid. An interpretation plot was then produced using AutoCAD.

### 6.8 Grid Restoration

Britannia Archaeology Ltd did not position any reference stations in the fields due to planned future ploughing. The grid can be relocated using the geo-referenced stations present at Figure 1; this information can also be used to accurately target the location of the geophysical anomalies.

## 7.0 RESULTS & DISCUSSION (Figures 2D, 3D & 5)

A plethora of 'iron spike' responses (yellow dots) were recorded throughout the dataset, a slightly higher cluster of which were recorded in the centre and north of the positive, perpendicular linear anomalies. Some of them may have an archaeological derivation but the majority are more likely to represent ferrous debris being introduced into the topsoil during episodes of manuring.

Five areas of magnetic disturbance (yellow hatching) were recorded; the two on the northern boundary are caused by a buried gas pipe line and a metal fence that demarcates its route. The area on the southern boundary records an extant ferrous inspection chamber. Two areas of magnetic disturbance on the western boundary demarcate an area that contained a high concentration of ceramic building material and rubble hardcore within the topsoil, a site compound is believed to have been located here in the recent past (*pers. comm.*).

One dipolar linear trend (blue line) delineates the location of the buried modern gas pipeline; its route runs through the centre of the temporary helipad that was found to be unsuitable for survey.

Seven positive linear trends (green lines) are recorded fairly evenly spaced across the dataset. They are orientated approximately north to south and have been interpreted as buried agricultural ceramic land drains.

Two positive discrete anomalies (orange hatching) indicative of archaeological rubbish pits were recorded to the west and east of the dataset. It is possible that they could also be of a geological derivation.

Five thermo-remnant responses (magenta hatching) are recorded in the central northern section of the dataset. They are indicative of areas of burning, burnt pits, fires, hearths or potentially even kilns that form an alignment from south-west to north-east. They are also located within perpendicular and parallel positive linear anomalies (red hatching) that form an enclosure and therefore could be related. These responses are also fairly close to the gas pipeline, therefore a more modern derivation cannot be ruled out.



Five weak positive linear anomalies (red hatching) have been recorded in the dataset. They are orientated north-east to south-west and perpendicular forming potential enclosure type ditch boundaries. A good degree of correlation in the orientation and layout of some enclosures recorded on the cropmark survey with the geophysical anomalies does exist. They are between 4 and 13m away from the plotted cropmarks, however it is fairly likely that are the same enclosure ditch type anomaly.

## **8.0 CONCLUSION**

This detailed geophysical survey was successful in identifying a fairly wide range of geophysical anomalies, some of which have been interpreted as being of potential archaeological origin. The next phase of archaeological investigation will be trial trenching; this will enable the interpretations given in this report to be ground-tested.

The perpendicular and parallel linear anomalies and the thermo-remnant responses are most likely to be of archaeological origin. It would be prudent to target them along with the discrete anomalies. It is likely that the enclosure and thermo-remnant responses are related, potentially with a Roman settlement phase that also includes a cluster of ferrous debris within. The cropmark survey gives credence to the presence of an enclosure; however there is a slight discrepancy between their locations. The cropmarks reveal contrasting soil moisture content within features and act on the same principal as an earth resistance meter. It would therefore be important to target any cropmarks that have not been recorded by the magnetometer survey, to make use of this important data. The geophysical survey will also aid in increasing the accuracy of the cropmark positions that are plotted between 4 and 13m away from their geophysical locations.

Blank areas should also be further targeted to test whether archaeological features do not show with enough clarity to be detected by the fluxgate's sensors.

## **9.0 PROJECT ARCHIVE AND DEPOSITION**

A full archive will be prepared for all work undertaken in accordance with guidance from the *Selection, Retention and Dispersion of Archaeological Collections*, Archaeological Society for Museum Archaeologists, 1993. Arrangements will be made for the archive to be deposited with the relevant museum/HER Office.

## **10.0 ACKNOWLEDGEMENTS**

Britannia Archaeology Ltd would like to thank Annie Calder of URS for funding the project and arranging access. Our thanks also to Andy Thomas of Cambridge County Council Historic Environment Team for his input throughout the project.



## **BIBLIOGRAPHY**

Ayala. G. *et al.* 2004. *Geoarchaeology; Using Earth Sciences to Understand the Archaeological Record*. English Heritage.

Calder. A. 2014. *Land South of Dame Mary Archer Way, Cambridgeshire; Written Scheme of Investigation for Geophysical Survey*. URS Infrastructure & Environment UK Limited.

Clark. A. J. 1996. *Seeing Beneath the Soil, Prospecting Methods in Archaeology*. BT Batsford Ltd, London.

David. A. 1995. *Geophysical Survey in Archaeological Field Evaluation: Research and Professional Services Guidelines*. No.1. English Heritage.

David. A. *et al.* 2008. *Geophysical Survey In Archaeological Field Evaluation, Second Edition*. English Heritage.

Gaffney. C, Gater. J. and Ovenden. S. 2002. *The Use of Geophysical Techniques in Archaeological Evaluations*. IFA Technical Paper No. 6.

Gaffney. C. and Gater. J. 2003. *Revealing the Buried Past, Geophysics for Archaeologists*. Tempus Publishing Ltd.

Gurney. D. 2003. *Standards for Archaeology in the East of England*, East Anglian Archaeology Occasional Paper 14.

Institute for Archaeologists. 2011. *Standard and Guidance for Archaeological Geophysical Survey*.

Linford. N. 2006. Notes from an English Heritage Seminar.

Schmidt. A. 2001. *Geophysical Data in Archaeology: A Guide to Good Practice*. Archaeology Data Service. Oxbow Books.

Whitten. D.G.A. 1978. *The Penguin Dictionary of Geology*. Penguin Books Ltd. London.

Witten. A.J. 2006. *Handbook of Geophysics and Archaeology*. Equinox Publishing Ltd. London.

## **Websites**

The British Geological Survey, 2014, (Natural Environment Research Council) – Geology of Britain Viewer - [www.bgs.ac.uk/opengeoscience/home.html](http://www.bgs.ac.uk/opengeoscience/home.html)



## APPENDIX 1 METADATA SHEETS

### Raw Data

|                           |                             |
|---------------------------|-----------------------------|
| Filename                  | Adden 1P.xcp                |
| <b>Description</b>        |                             |
| Instrument Type           | Grad 601-2<br>(Gradiometer) |
| Units                     | nT                          |
| Surveyed by               | TPS/MB on 9/19/2014         |
| Assembled by              | TPS on 9/21/2014            |
| Direction of 1st Traverse | 135 deg                     |
| Collection Method         | ZigZag                      |
| Sensors                   | 2 @ 1.00 m spacing.         |
| Dummy Value               | 32702.00                    |
| <b>Dimensions</b>         |                             |
| Composite Size (readings) | 2160 x 120                  |
| Survey Size (meters)      | 540.00m x 120.00 m          |
| Grid Size                 | 20.00 m x 20.00 m           |
| X Interval                | 0.25 m                      |
| Y Interval                | 1.00 m                      |
| <b>Stats</b>              |                             |
| Max                       | 13.30                       |
| Min                       | -13.53                      |
| Std Dev                   | 3.40                        |
| Mean                      | 0.01                        |
| Median                    | 0.00                        |
| Composite Area            | 6.48 ha                     |
| Surveyed Area             | 4.20 ha                     |
| <b>Program</b>            |                             |
| Name                      | ArcheoSurveyor              |

### Processed Data

|                           |                             |
|---------------------------|-----------------------------|
| Filename                  | Adden 1R.xcp                |
| <b>Description</b>        |                             |
| Instrument Type           | Grad 601-2<br>(Gradiometer) |
| Units                     | nT                          |
| Surveyed by               | TPS/MB on 9/19/2014         |
| Assembled by              | TPS on 9/21/2014            |
| Direction of 1st Traverse | 135 deg                     |
| Collection Method         | ZigZag                      |
| Sensors                   | 2 @ 1.00 m spacing.         |
| Dummy Value               | 32702.00                    |
| <b>Dimensions</b>         |                             |
| Composite Size (readings) | 2160 x 120                  |
| Survey Size (meters)      | 540.00m x 120.00 m          |
| Grid Size                 | 20.00 m x 20.00 m           |
| X Interval                | 0.25 m                      |
| Y Interval                | 1.00 m                      |
| <b>Stats</b>              |                             |
| Max                       | 12.69                       |
| Min                       | -14.37                      |
| Std Dev                   | 3.84                        |
| Mean                      | -0.74                       |
| Median                    | -0.57                       |
| Composite Area            | 6.48 ha                     |
| Surveyed Area             | 4.20 ha                     |
| <b>Program</b>            |                             |
| Name                      | ArcheoSurveyor              |

### Source Grids: 127

|                             |
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## **APPENDIX 2            TECHNICAL DETAILS**

### **Magnetometer Survey**

The magnetometer differs from the 'active' magnetic susceptibility meter by being a 'passive' instrument. Rather than injecting a signal into the ground it detects slight variations in the Earth's magnetic field caused by cultural and natural disturbance (Clark).

Thermoremanent magnetism is produced when a material containing iron oxides is strongly heated. Clay for example has a high iron oxide content that in a natural state is weakly magnetic, when heated these weakly magnetic compounds become highly magnetic oxides that a magnetometer can detect.

The demagnetisation of iron oxides occurs above a temperature known as the Curie point; for example haematite has a Curie point of 675 Celsius and magnetite 565C. At the time of cooling the iron oxides become permanently re-magnetised with their magnetic properties re-aligned in the direction of the Earth's magnetic field (Gaffney and Gater). The direction of the Earth's magnetic field shifts over time and these subtle alignment differences can be recorded. Kilns, hearths, baked clay and ovens can reach Curie point temperatures, and are the strongest responses apart from large iron objects that can be detected. Other cultural anomalies that can be prospected include occupation areas, pits, ditches, furnaces, sunken feature buildings, ridge and furrow field systems and ritual activity (David, 2011). Commonly recorded anomalies include modern ferrous service pipes, field drainage pipes, removed field boundaries, perimeter fences and field boundaries.

### **Fluxgate Gradiometers**

Fluxgate gradiometers are sensitive instruments that utilise two sensors placed in a vertical plane, spaced 1 metre apart. The sensor above reads the Earth's magnetic (background) response while the sensor below records the local magnetic field. Both sensors are carefully adjusted to read zero before survey commences at a 'zeroing' point, selected for its relatively 'quiet' magnetic background reading. When differences in the magnetic field strength occur between the two sensors a positive or negative reading is logged. Positive anomalies have a positive magnetic value and conversely negative anomalies have a negative magnetic value relative to the site's magnetic background. Examples of positive magnetic anomalies include hearths, kilns, baked clay, areas of burning, ferrous material, ditches, sunken feature buildings, furrows, ferrous service pipes, perimeter fences and field boundaries. Negative magnetic anomalies include earthwork embankments, plastic water pipes and geological features.

The instruments are usually held approximately 0.30m to 0.50m above the ground surface and can detect to a depth of between 1-2metres. Best practice dictates that the optimal direction of traverse in Britain is east to west.





## **Magnetic Anomalies**

### **Linear trends**

Linear trends can be both positive and negative magnetic responses. If they are broad, relatively weak or negative in nature they may be of agricultural or geological origin, for example periglacial channels, land drains or ploughing furrows. If the responses are strong positive trends they are more likely to be of archaeological origin. Archaeological settlement ditches tend to be rich in highly magnetic iron oxides that accumulate in them via anthropogenic activity and humic backfills. Conversely surviving banks will be negative in nature; the material is derived from subsoil deposits that are less likely to be positively magnetic. Curvilinear trends can also be recorded and are indicative of archaeological structures such as drip-gullies.

### **Discrete anomalies**

Discrete anomalies appear as increased positive responses present within a localised area. They are caused by a general increase in the amount of magnetic iron oxides present within the humic back-fill of for example a rubbish pit.

### **'Iron spike' anomalies**

These strong isolated dipolar responses are usually caused by ferrous material present in the topsoil horizon. They can have an archaeological origin but are usually introduced into the topsoil during manuring.

### **Areas of magnetic disturbance**

An area of magnetic disturbance is usually associated with material that has been fired. For example areas of burning, demolition (brick) rubble or slag waste spreads. They can also be caused by ferrous material, e.g. close proximity to barbwire or metal fences and field boundaries, buried services, pylons and modern rubbish deposits.



## APPENDIX 3 OASIS FORM

OASIS ID: britanni1-208410

### Project details

|  |  |
|--|--|
| Project name                           | Land South of Dame Mary Archer Way, Cambridge, Cambridgeshire; Detailed Magnetometer Survey  |
| Short description of the project       | A Detailed fluxgate gradiometer survey was undertaken by Britannia Archaeology Ltd in September 2014 on land south of Dame Mary Archer Way, Cambridge, Cambridgeshire. It was successful in identifying a range of anomalies that are of potential archaeological origin. Iron spike anomalies were the most numerous with a potential cluster located within parallel and perpendicular positive linear anomalies that form a potential Roman enclosure. Seven positive linear trends, that are interpreted as agricultural land drains were further recorded on a north to south alignment. Two positive discrete anomalies indicative of archaeological rubbish pits were recorded to the west and east of the dataset, a geological derivation however cannot be ruled out. Five thermo-remnant responses were recorded in the central northern section of the dataset that are indicative of areas of burning, burnt pits, fires, hearths or potentially even kilns aligned south-west to north-east. Located within perpendicular and parallel positive linear anomalies that form the enclosure. A more modern derivation cannot be ruled out. Four weak positive linear anomalies orientated north-east to south-west and perpendicular form potential enclosure type ditch boundaries that correlate well with the cropmark survey. |
| Project dates                          | Start: 17-09-2014 End: 19-09-2014  |
| Previous/future work                   | No / Not known   |
| Any associated project reference codes | P1075 - Contracting Unit No.   |
| Any associated project reference codes | R1071 - Contracting Unit No.   |
| Any associated project reference codes | ECB4287 - Sitecode   |
| Type of project                        | Field evaluation   |
| Site status                            | None   |
| Current Land use                       | Cultivated Land 3 - Operations to a depth more than 0.25m  |
| Monument type                          | NONE None  |
| Monument type                          | NONE None  |
| Significant Finds                      | NONE None  |



Land South of Dame Mary Archer Way, Cambridge, Cambridgeshire  
Detailed Magnetometer Survey

|                                  |   |
|----------------------------------|---|
| Methods & techniques             | "Geophysical Survey"                      |
| Development type                 | Building Development                      |
| Prompt                           | National Planning Policy Framework - NPPF |
| Position in the planning process | Pre-application                           |
| Solid geology (other)            | West Melbury Marly Chalk Formation        |
| Drift geology                    | Unknown                                   |
| Techniques                       | Magnetometry                              |

#### Project location

|                   |  |
|-------------------|--|
| Country           | England  |
| Site location     | CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE Land South of Dame Mary Archer Way, Cambridge, Cambridgeshire |
| Study area        | 6.70 Hectares  |
| Site coordinates  | TL 46321 54631 52.1700845201 0.139837249837 52 10 12 N 000 08 23 E Point                         |
| Height OD / Depth | Min: 15.00m Max: 20.00m  |

#### Project creators

|                              |   |
|------------------------------|---|
| Name of Organisation         | Britannia Archaeology Ltd   |
| Project brief originator     | Local Planning Authority (with/without advice from County/District Archaeologist) |
| Project design originator    | Timothy Schofield   |
| Project director/manager     | Timothy Schofield   |
| Project supervisor           | Timothy Schofield   |
| Type of sponsor/funding body | Archaeological Contractor   |
| Name of sponsor/funding body | URS Infrastructure and Environment UK Limited                                     |

#### Project archives

|                           |   |
|---------------------------|---|
| Physical Archive Exists?  | No  |
| Digital Archive recipient | Cambridgeshire HER                                      |
| Digital Contents          | "Survey"  |
| Digital Media available   | "Database","Geophysics","Images vector","Survey","Text" |
| Paper Archive             | Cambridgeshire HER                                      |

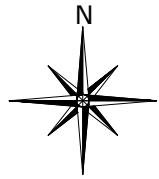


recipient  
Paper Contents "Survey"  
Paper Media available "Plan","Report","Survey ","Unpublished Text"


**Project  
bibliography 1**

Publication type Grey literature (unpublished document/manuscript)  
Title Land South of Dame Mary Archer Way, Cambridge, Cambridgeshire; Detailed Magnetometer Survey  
Author(s)/Editor(s) Schofield, T. P.  
Other bibliographic details R1071  
Date 2014  
Issuer or publisher Britannia Archaeology Ltd  
Place of issue or publication Stowmarket  
Description A4 Bound Report with A3 Fold-out Figures  
URL [www.britannia-archaeology.com](http://www.britannia-archaeology.com)

Entered by Tim Schofield (tim@britannia-archaeology.com)  
Entered on 9 April 2015



| STATION | EASTING    | NORTHING   |
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| 02      | 546533.113 | 254696.399 |
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 Site Boundary

NGR: TL 46321 54631      REPORT NUMBER: 1071

PROJECT: LAND SOUTH OF DAME MARY ARCHER WAY, CAMBRIDGE, CAMBRIDGESHIRE

CLIENT: **URS**

DESCRIPTION: SITE, GRID & REFERENCING INFORMATION PLAN

**BRITANNIA ARCHAEOLOGY LTD**



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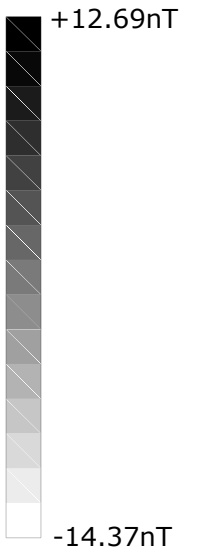
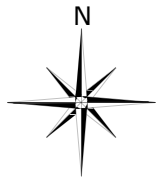
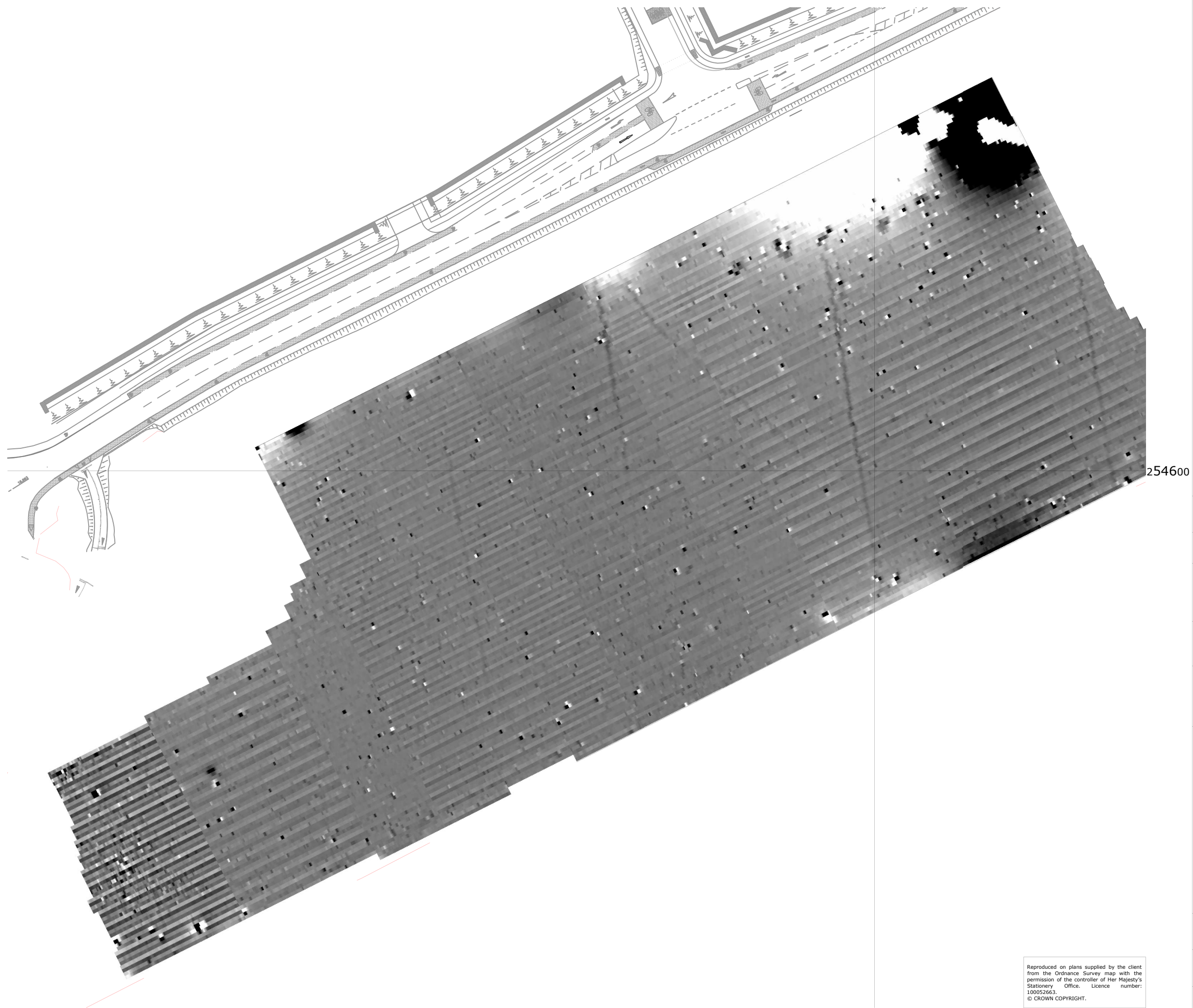
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SCALE: 1:2000      0 80m

PLOT: A3      APPROVED: MCA      VERSION: 01

DATE: OCT 2014      AUTHOR: TPS      FIGURE: 01

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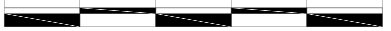
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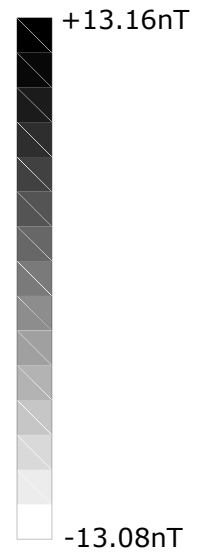
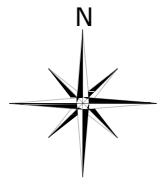
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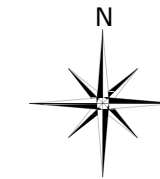
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| DATE:   | AUTHOR:   | FIGURE:                |
| OCT 2014  | TPS   | 2B                     |

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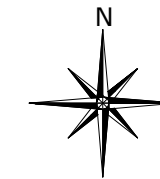


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|  | Weak Positive Linear Anomaly, Archaeology |
|  | Thermo-remnant Response, Archaeology?     |
|  | Positive Discrete Anomaly, Archaeology?   |
|  | Positive Linear Trend, Agriculture        |
|  | Dipolar Linear Trend, Modern Service      |
|  | Area of Magnetic Disturbance, Modern?     |
|  | Isolated Dipolar Responses                |
|  | Site Boundary                             |

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DESCRIPTION: INTERPRETATION PLOT OF MAGNETOMETER ANOMALIES

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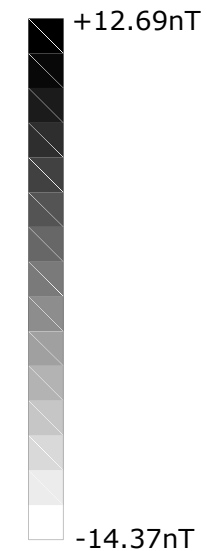
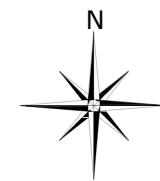
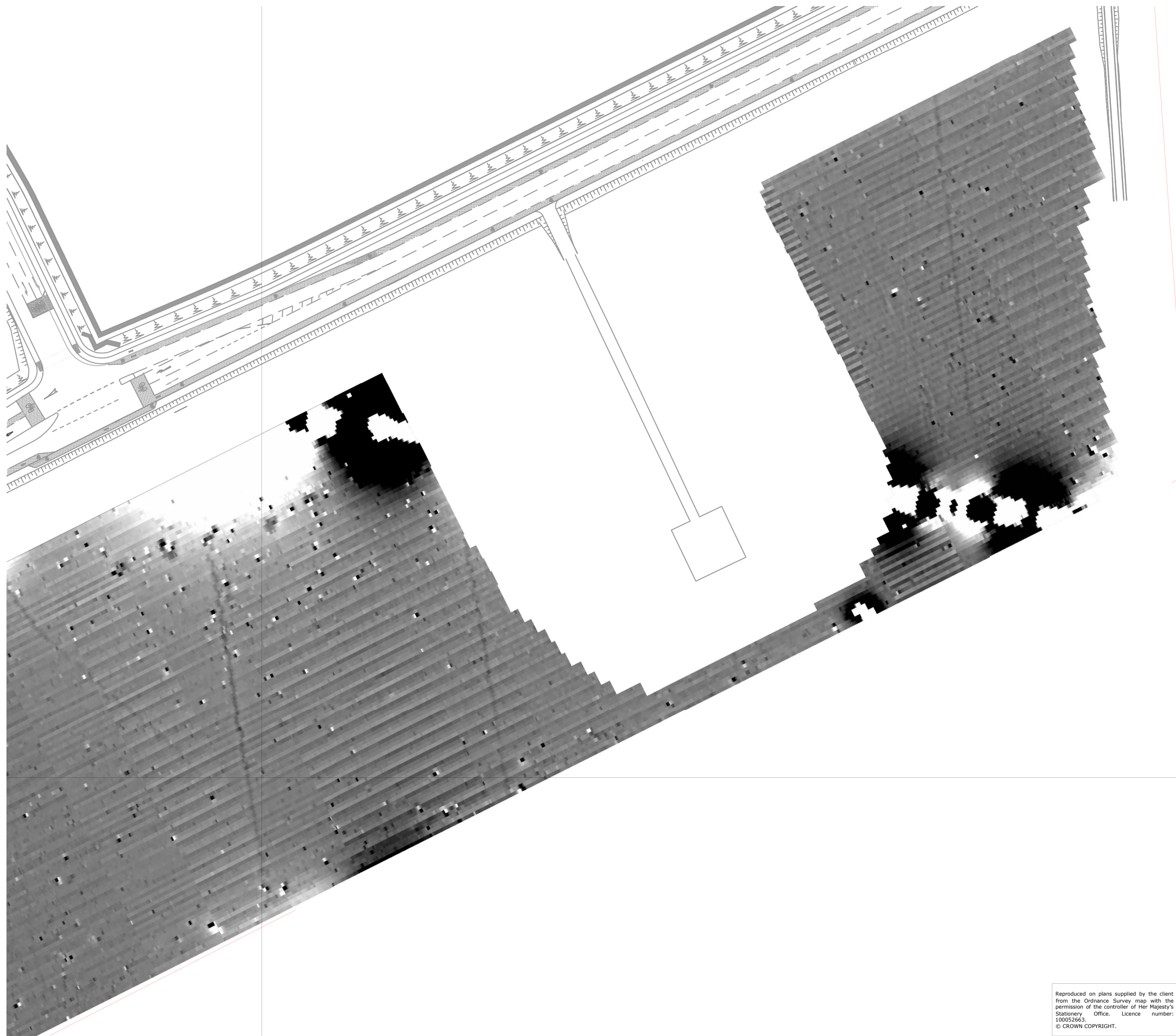
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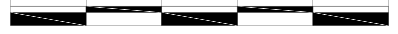
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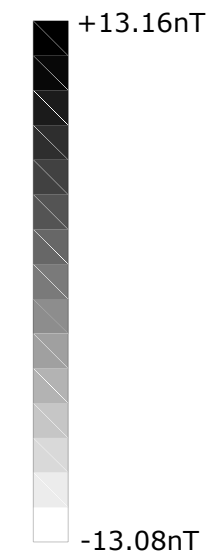
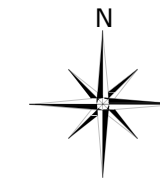
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DESCRIPTION: PROCESSED MAGNETOMETER  
GREYSCALE PLOT

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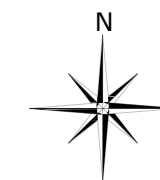
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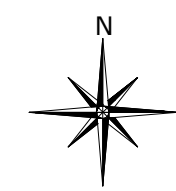


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| DATE:<br>OCT 2014  | AUTHOR:<br>TPS  | FIGURE:<br>3C  |



|  |   |
|--|---|
|  | Weak Positive Linear Anomaly, Archaeology |
|  | Thermo-remnant Response, Archaeology?     |
|  | Positive Discrete Anomaly, Archaeology?   |
|  | Positive Linear Trend, Agriculture        |
|  | Dipolar Linear Trend, Modern Service      |
|  | Area of Magnetic Disturbance, Modern?     |
|  | Isolated Dipolar Responses                |
|  | Site Boundary                             |

NGR: TL 46321 54631      REPORT NUMBER: 1071

PROJECT: LAND SOUTH OF DAME MARY ARCHER WAY, CAMBRIDGE, CAMBRIDGESHIRE

CLIENT: **URS**

DESCRIPTION: INTERPRETATION PLOT OF MAGNETOMETER ANOMALIES

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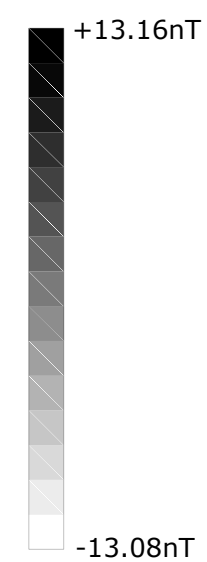
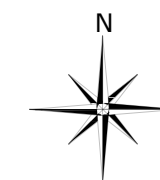
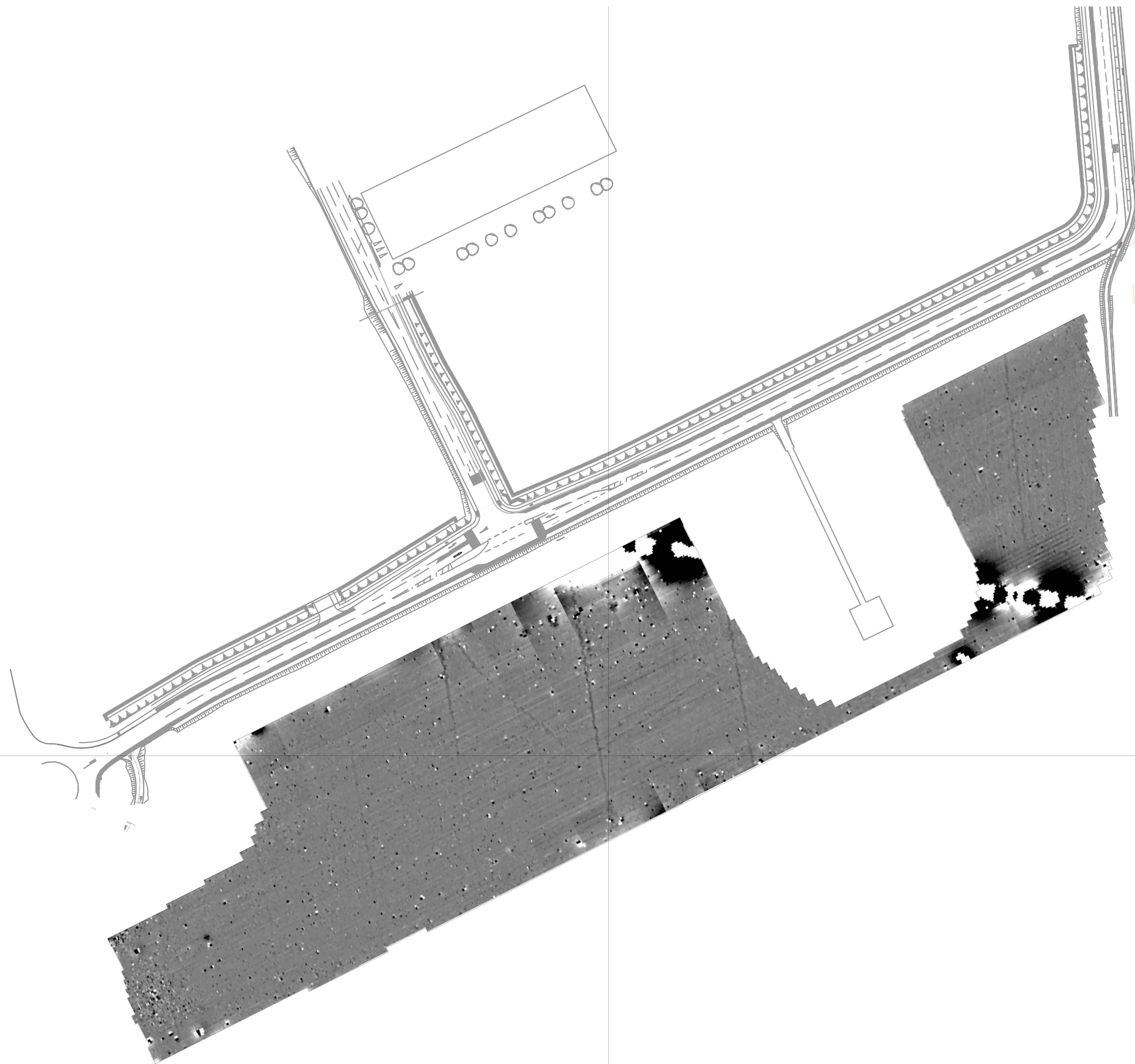
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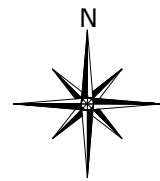


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|  Site Boundary   |   |
| NGR: TL 46321 54631   | REPORT NUMBER: 1071   |
| PROJECT: LAND SOUTH OF DAME MARY ARCHER WAY, CAMBRIDGE, CAMBRIDGESHIRE  |   |
| CLIENT: <b>URS</b>  |   |
| DESCRIPTION: COMBINED PROCESSED MAGNETOMETER GREYSCALE PLOTS  |   |
| <b>BRITANNIA ARCHAEOLOGY LTD</b>  |   |
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| SCALE: 1:2000   |  |
| PLOT: A3  | APPROVED: MCA   |
| DATE: OCT 2014  | VERSION: 01   |
|   | AUTHOR: TPS   |
|   | FIGURE: 04  |



|  |   |
|--|---|
|  | Weak Positive Linear Anomaly, Archaeology |
|  | Thermo-remnant Response, Archaeology?     |
|  | Positive Discrete Anomaly, Archaeology?   |
|  | Positive Linear Trend, Agriculture        |
|  | Dipolar Linear Trend, Modern Service      |
|  | Area of Magnetic Disturbance, Modern?     |
|  | Isolated Dipolar Responses                |
|  | Site Boundary                             |

NGR: TL 46321 54631      REPORT NUMBER: 1071

PROJECT: LAND SOUTH OF DAME MARY ARCHER WAY, CAMBRIDGE, CAMBRIDGESHIRE

CLIENT: **URS**

DESCRIPTION: COMBINED INTERPRETATION PLOT OF MAGNETOMETER ANOMALIES

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SCALE: 1:2000      0 80m

PLOT: A3      APPROVED: MCA      VERSION: 01

DATE: OCT 2014      AUTHOR: TPS      FIGURE: 05

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