



**Land south of Ravenswing Farm  
Adjoining Aldermaston Road & Silchester Road  
Tadley  
West Berkshire**

**MAGNETOMETER SURVEY REPORT**

for

**RPS Consulting**

Kerry Donaldson & David Sabin

February 2022

Ref. no. J910

ARCHAEOLOGICAL SURVEYS LTD

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Primary archive location - Archaeological Surveys Ltd, Yatesbury, Wiltshire

Survey date – 11<sup>th</sup> February 2022  
Ordnance Survey Grid Reference – **SU 59730 62417**



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# CONTENTS

SUMMARY.....	1
1 INTRODUCTION.....	1
1.1 Survey background.....	1
1.2 Survey objectives and techniques.....	1
1.3 Standards, guidance and recommendations for the use of this report.....	1
1.4 Site location, description and survey conditions.....	2
1.5 Site history and archaeological potential.....	3
1.6 Geology and soils.....	3
2 METHODOLOGY.....	4
2.1 Technical synopsis.....	4
2.2 Equipment configuration, data collection and survey detail.....	4
2.3 Data processing and presentation.....	5
3 RESULTS.....	6
3.1 General assessment of survey results.....	6
3.2 Statement of data quality and factors influencing the interpretation of anomalies....	7
3.3 Data interpretation.....	7
3.4 List of anomalies.....	8
4 CONCLUSION.....	9
5 REFERENCES.....	9
Appendix A – basic principles of magnetic survey.....	11
Appendix B – data processing notes.....	11
Appendix C – survey and data information.....	11
Appendix D – digital archive.....	12

Appendix E – CAD layers for abstraction and interpretation plots.....	12
Appendix F – copyright and intellectual property.....	13

## LIST OF FIGURES

Fig 01	Map of survey area (1:25 000)	
Fig 02	Referencing information (1:1000)	
Fig 03	Greyscale plot of minimally processed magnetometer data & abstraction and interpretation of magnetic anomalies (1:1000)	

## LIST OF PLATES

Plate 1: Survey area looking south.....	3
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## LIST OF TABLES

Table 1: List and description of interpretation categories.....	8
Table 2: Archive metadata.....	12
Table 3: CAD layering.....	13

## SUMMARY

Detailed magnetometry was carried out by Archaeological Surveys Ltd on land to the north of Tadley, but within the parish of Aldermaston, West Berkshire. The results indicate the presence of a number of linear and discrete anomalies but these are not well defined. The linear anomalies tend to be weak and fragmented, with a stronger response to the discrete anomalies. A group in the south eastern corner could relate to pits; however, it is not possible to determine if they are natural or anthropogenic in origin. Several other discrete positive responses in the northern part of the site have a stronger response but it is not possible to determine if they relate to pit-like features, or if they are associated with the widespread magnetic debris within the site.

## 1 INTRODUCTION

### 1.1 *Survey background*

1.1.1 Archaeological Surveys Ltd was commissioned by RPS Consulting to undertake a magnetometer survey of an area of land to the north of Tadley, but just within the parish of Aldermaston, West Berkshire. Planning permission has been granted for the construction of a Lidl supermarket and the survey forms part of an archaeological assessment carried out under condition (Application Ref: 19/01063/COMIND). The geophysical survey was carried out in accordance with a Written Scheme of Investigation (WSI) produced by RPS (2021).

### 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 Geophysical survey can provide useful information on the archaeological potential of a site; however, the outcome of any survey relies on a number of factors and as a consequence results can vary. The success in meeting the aims and objectives of a survey is, therefore, often impossible to predetermine.

### 1.3 *Standards, guidance and recommendations for the use of this report*

1.3.1 Archaeological Surveys Ltd is a Registered Organisation with the Chartered Institute for Archaeologists and both company directors are Members of the Chartered Institute for Archaeologists (MCIfA) and have therefore been assessed for their technical competence and ethical suitability and abide by

the ClfA Codes of Conduct. The survey and report follow the recommendations set out by: European Archaeological Council (2015) *Guidelines for the Use of Geophysics in Archaeology*; Institute for Archaeologists (2002) *The use of Geophysical Techniques in Archaeological Evaluations*. The work has been carried out to the Chartered Institute for Archaeologists (2014) (updated 2020) *Standard and Guidance for Archaeological Geophysical Survey*.

- 1.3.2 Archaeological Surveys Ltd provide a detailed geophysical survey report and it is recommended that where possible the contents should be considered in full. The Summary provides a brief overview of the results with more detail available in the Discussion and/or Conclusion. The *List of anomalies* within the Results provides a detailed assessment of the anomalies within separate categories which can be useful in inferring a level of confidence to the interpretation. Quality and factors influencing the interpretation of anomalies is also set out within the results.
- 1.3.3 It is recommended that the full report should always be considered when using data and interpretation plots; where this is not possible, in the field for example, the abstraction and interpretation plots should retain their colour coding and be used with a corresponding legend.
- 1.3.4 Where targeting of anomalies by excavation is to be carried out, care should be taken to place trenches over solid lines or features visible on the abstraction and interpretation plots. Archaeological Surveys abstraction and interpretation avoids the use of dashed or dotted line formats, and broken or fragmented lines used in interpretive plots may well correspond closely with truncation of archaeological features.

#### **1.4 Site location, description and survey conditions**

- 1.4.1 The site is located on the southern edge of the parish of Aldermaston, just within West Berkshire and to the north of Tadley, Hampshire. It is bounded by Aldermaston Road to the west, Silchester Road to the south, with Winkworth Lane further to the north and pasture continuing to the east. It is centred on Ordnance Survey National Grid Reference (OS NGR) SU 59730 62417, see Figs 01 and 02.
- 1.4.2 The geophysical survey covers approximately 1ha within the south western corner of a larger pasture field. The site is generally on level ground bounded to the south west and south by hedgerows.
- 1.4.3 The ground conditions across the site were generally considered to be favourable for the collection of magnetometry data. Weather conditions during the survey were fine and the ground was frozen.



*Plate 1: Survey area looking south*

### **1.5 Site history and archaeological potential**

- 1.5.1 There are no designated or undesignated heritage assets within the site, although it has not been subject to previous archaeological investigation. The current field layout is recorded as part of the parliamentary enclosures, with the site of Ravenswing Farm being of possible 18<sup>th</sup> century origin. Approximately 350m to the north is the site of RAF Aldermaston airfield used during the Second World War and which became the Atomic Weapons Research Establishment from 1950 (known as the Atomic Weapons Establishment from 1987). Prehistoric and Roman sites are recorded within the wider vicinity, over 500m away.

### **1.6 Geology and soils**

- 1.6.1 The underlying geology is sand from the London Clay Formation with overlying Quaternary deposits of sand and gravel from the Silchester Gravel Member (BGS, 2017).
- 1.6.2 The overlying soil across the site is from the Southampton association and is a paleo-argillic podzol. It consists of a well drained, very acid, very flinty, sandy soil with bleached subsurface horizon (Soil Survey of England and Wales, 1983).
- 1.6.3 The underlying geology and soils are frequently associated with low magnetic contrast and low levels of magnetic susceptibility. However, cut features of archaeological potential may be located where human activity has altered the

magnetic characteristics of the soil sufficiently. 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 (also known as thermoremanence) are factors associated with the formation of localised fields.
- 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). Additional details are set out in 2.2 below and within Appendix A.

### 2.2 *Equipment configuration, data collection and survey detail*

- 2.2.1 The detailed magnetic survey was carried out using a SENSYS MAGNETO®MXPDA 5 channel cart-based system. The instrument has 5 fluxgate gradiometers (FGM650) spaced 0.5m apart with readings recorded at 20Hz. The cart is pushed at walking speed and not towed. Each sensor is not zeroed in the field as the vertical axis alignment is precisely fixed leaving sensor offsets that are removed during data processing. The fixing of the vertical alignment ensures the sensors are not unduly influenced by localised magnetic fields and that the vertical component of a magnetic anomaly is measured. The gradiometers have a measurement range of  $\pm 8000$ nT, although the recorded range is  $\pm 3000$ nT, and resolution is around 0.1nT. They are linked to a Leica GS10 RTK GNSS with data recorded by SENSYS MAGNETO®MXPDA software on a rugged PDA computer system.
- 2.2.2 Due to the fixed offsets within the fluxgate sensors, as a result of the manufacturing and tensioning process, the survey data do not provide a visually useful dataset until a zero median traverse algorithm is applied. It is recognised that this has the



potential to affect some anomalies detrimentally by removing linear features orientated parallel to survey transects. However, this has not been noted as a particular problem with the system due to the high resolution data collection, generally long length of traverses and variability within the magnetic characteristics of a linear anomaly.

- 2.2.3 Data are collected along a series of parallel survey transects to achieve 100% coverage of the surveyable land. The length of each transect is variable and relates to the size of the survey area and other factors including ground conditions. A visual display allows accurate placing of transects and helps maintain the correct separation between adjacent traverses. Data are not collected within fixed grids and data points are considered to be random even though the data are collected in a systematic manner covering all accessible areas (Aspinall, Gaffney and Schmidt, 2009).
- 2.2.4 Fluxgate sensors are highly sensitive to temperature change and this manifests as drift during the course of a survey. This can be particularly noticeable during the morning as temperatures rise and the equipment warms or cools. Sensor drift within the course of a traverse will appear as a line trending from negative to positive after processing with a zero median traverse algorithm. To remove the potential for temperature drift, data were collected after a 20 minute stabilisation period and traverses were limited to a time of generally <60s.

### 2.3 *Data processing and presentation*

- 2.3.1 Magnetic data collected by the MAGNETO®MXPDA cart-based system are initially prepared using SENSYS MAGNETO®DLMGPS software. The software effectively allocates a geographic position for each data point and can compensate for fixed offsets present within the FGM650 sensors. The offsets are positive or negative values present on all fluxgate gradiometer sensors. Some systems use manual or electronic balancing to effectively zero the sensors; however, this is a short term measure that is prone to drift through temperature changes and vibration and can easily be incorrectly set due to localised magnetic fields. The FGM650 sensors are very accurately aligned to the vertical magnetic gradient and are highly stable showing negligible drift on long traverses. The offset values are removed using TerraSurveyor software.
- 2.3.2 Survey tracks are analysed and georeferenced raw data (UTM Z30N) are then exported in ASCII format for further analysis and display within TerraSurveyor. The removal of the offset values (compensation) of the sensors is also carried out in TerraSurveyor using a zero median traverse function. Data are then considered to be minimally processed. Note: without the zero median traverse function it is not possible to create a meaningful data plot as all sensors have a different offset value. Although a zero median traverse algorithm can remove anomalies aligned with the survey tracks, in practice this rarely occurs due to the use of long traverses, high resolution measurement and variability within the magnetic susceptibility of long linear features.

- 2.3.3 The minimally processed data are collected between limits of  $\pm 3000\text{nT}$  and clipped for display at  $\pm 3\text{nT}$ . Data are interpolated to a resolution of effectively 0.5m between tracks and 0.15m along each survey track.
- 2.3.4 Appendix C contains metadata concerning the survey and data attributes and is derived directly from TerraSurveyor. Reference should be made to Appendix B for further information on processing.
- 2.3.5 A TIF file is produced by TerraSurveyor software along with an associated world file (.TFW) that allows automatic georeferencing (OSGB36 datum) when using GIS or CAD software. The main form of data display used in the report is the minimally processed greyscale plot. With regard to the Sensys MXPDA, minimally processed data are considered by the manufacturer to be data that are compensated by SENSYS MAGNETO DLMGPS software, see 2.3.1 and 2.3.2. Note: traceplots are not considered to be appropriate as they do not provide an accurate or useful assessment of the magnetic anomalies due to the very high density of data collection. In addition, traceplots cannot be meaningfully plotted against base mapping and in areas of complexity traces may be lost or highly confused. Traceplots may be used to demonstrate characteristic magnetic profiles across discrete features where it is considered beneficial.
- 2.3.6 The raster images are combined with base mapping using ProgeCAD Professional 2021, creating DWG (2018) file formats. All images are externally referenced to the CAD drawing in order to maintain good graphical quality. The CAD plots are effectively georeferenced facilitating relocation of features using GNSS, resection method, etc.
- 2.3.7 An abstraction and interpretation is drawn and plotted for all geophysical anomalies located by the survey. Anomalies are abstracted using colour coded points, lines and polygons. All plots are scaled to landscape A3 for paper printing. Appendix E sets out CAD layer names with colour and graphic content for each interpretation category, see 3.3.
- 2.3.8 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 within the survey area.
- 2.3.9 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 1ha.

- 3.1.2 Magnetic anomalies located can be generally classified as positive anomalies of an uncertain origin, linear anomalies of an agricultural origin, areas of magnetic disturbance, strong discrete dipolar anomalies relating to ferrous objects and strong multiple dipolar linear anomalies relating to buried services or pipelines.
- 3.1.3 Anomalies located within each survey area have been numbered and are described in 3.4 below.

### 3.2 *Statement of data quality and factors influencing the interpretation of anomalies*

- 3.2.1 Data are considered representative of the magnetic anomalies present within the site. There are no significant defects within the dataset.
- 3.2.2 Close to the southern and south western boundaries the survey was affected by high magnitude magnetic disturbance probably caused by adjacent services. Although the disturbance has the potential to obscure weak anomalies, it is only present within a very narrow zone.
- 3.2.3 The underlying superficial geology can be associated with soils of very low magnetic susceptibility and poor magnetic contrast. In order to assess the magnetic characteristics of the soils, mass specific magnetic susceptibility was measured on a single sample of the underlying Silchester Gravel Member superficial geology and a single sample of the topsoil from the Southampton association. The samples were collected from ground disturbed by previous geotechnical investigations and were subdivided allowing several measurements of magnetic susceptibility using a Bartington MS2 with MS2B sensor. The Silchester Gravel Member produced an average value ( $X_{if}$ ) of  $5.3 \cdot 10^{-8} \text{m}^3 \text{kg}^{-1}$ ; the topsoil an average value of  $8.2 \cdot 10^{-8} \text{m}^3 \text{kg}^{-1}$ . The results may not be representative of the whole site and are likely to be associated with poor magnetic contrast, which combined with relatively high levels of magnetic 'noise' within the topsoil tend to infer difficult conditions for magnetometry. However, several anomalies have been located, including those created by former agricultural features, and where past human activity has been prolonged or intensive, it is likely that features would be present within the data.

### 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 general explanation of the characteristics of the magnetic anomalies is set out for each category in order to justify interpretation, see Table 1.

Interpretation category	Description and origin of anomalies
<b>Anomalies with an uncertain origin</b>	The category applies to a range of anomalies where <u>there is not enough evidence to confidently suggest an origin</u> . Anomalies in this category <u>may well be related to archaeologically significant features, but equally relatively modern features, geological/pedological features and agricultural features should be considered</u> . Morphology may be unclear or uncharacteristic and there may be a lack of additional supporting information. 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.
<b>Anomalies with an agricultural origin</b>	The anomalies are often linear and form a series of parallel responses or are parallel to extant land boundaries. Where the response is broad, former ridge and furrow is likely; narrow response is often related to modern ploughing. This category <u>does not include</u> agricultural features of early date or considered to be of archaeological potential (e.g. animal stockades, enclosures, farmsteads, etc).
<b>Anomalies associated with magnetic debris</b>	Strong discrete dipolar anomalies are responses to ferrous objects within the topsoil.
<b>Anomalies with a modern origin</b>	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 these 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 adjacent to strong magnetic sources. Buried services may produce characteristic multiple dipolar anomalies dependant upon their construction.

Table 1: List and description of interpretation categories

### 3.4 List of anomalies

Area centred on OS NGR 459730 162417, see Fig 03.

#### *Anomalies with an uncertain origin*

(1) – The survey area contains a small number of weakly positive linear anomalies (1-2nT), with the majority situated in the western part of the site. Although there appears to be some rectilinear elements, the anomalies are poorly defined and lack a coherent morphology.

(2) – A small number of discrete, positive responses are situated in the northern part of the survey area. They have a response of 20-30nT, which indicates that they are magnetically enhanced; however, due to the widespread distribution of magnetic material (5) across the site, it is not clear if these relate to pit-like features, or if they are associated with the magnetic debris.

(3) – A number of discrete positive responses and a small number of short, positive linear anomalies are located towards the south eastern corner of the survey area. Their magnitude is 5-10nT, and the morphology of the discrete anomalies could indicate that they relate to pit-like features. However, it is not possible to determine if they have any archaeological potential, or if they relate to naturally formed features, or if they are associated with more modern ground disturbance.

#### *Anomalies with an agricultural origin*

(4) – A series of parallel linear anomalies relate to former agricultural activity.

### *Anomalies associated with magnetic debris*

(5) – The entire site contains widespread and numerous strong, discrete, dipolar anomalies which are a response to ferrous and other magnetically thermoremnant objects, such as brick and tile within the topsoil.

### *Anomalies with a modern origin*

(6) – A small section of water pipe can be seen in the south western corner of the survey area. It generally lies just beyond the surveyable area along the south western and southern edges of the site.

## 4 CONCLUSION

4.1.1 The geophysical survey located a number of positive linear and discrete anomalies within the site. However, these are generally poorly defined and lack a coherent morphology preventing interpretation as cut features. Anomalies associated with former agricultural activity and widespread magnetic debris have also been encountered.

## 5 REFERENCES

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## 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 thermoremanent 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. Thermoremanent 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. Thermoremanent features include ovens, hearths, and kilns. In addition thermoremanent 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 SENSYS gradiometer is a passive instrument consisting of two fluxgate sensors mounted vertically 65cm apart. The instrument is carried about 10-20cm 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 magnetic field. The difference between the two sensors will relate to the strength of the magnetic field created by the buried feature.

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. 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 data from 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 differences between the offset values of the gradiometer sensors. The process can remove archaeological features that run along a traverse but with the high resolution datasets created by the Sensys FGM650 sensors and the method of data collection this has not been a notable problem. In fact, the removal of offsets using software avoids carrying out a balancing procedure on site, which inevitably can never be done in magnetically clean conditions and results in improperly aligned fluxgate sensors and/or electronic adjustment values.

## Appendix C – survey and data information

Filename:	J910-mag-proc.xcp	Dummy Value:	32702	Median:	0.05
Description:	Imported as Composite from:	Dimensions		Composite Area:	1.899 ha
J910-mag.asc		Survey Size (meters):	150 m x 127 m	Surveyed Area	1.1337 ha
Instrument Type:	Sensys DLMGPS	X&Y Interval:	0.15 m	PROGRAM	
Units:		Source GPS Points:	Active: 290600, Recorded:	Name:	TerraSurveyorPre
UTM Zone:	30U	290600		Version:	3.0.36.24
Survey corner coordinates (X/Y):	OSGB36	Stats		GPS based Proce4	
Northwest corner:	459654.64, 162498.03 m	Max:	3.32	1 Base Layer.	
Southeast corner:	459804.64, 162371.43 m	Min:	-3.30	2 Unit Conversion Layer (Lat/Long to UTM).	
Collection Method:	Randomised	Std Dev:	1.43	3 DeStripe Median Traverse:	
Sensors:	5	Mean:	0.03	4 Clip from -3.00 to 3.00	

## Appendix D – digital archive

Archaeological Surveys Ltd hold the primary digital archive at their offices in Wiltshire. 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. The digital data will also be archived with the Archaeology Data Service (ADS).

A PDF copy will be supplied to the West Berkshire Historic Environment Record with greyscale images and abstraction layers made available on request. The report will also be uploaded to the Online Access to the Index of archaeological investigations (OASIS).






Archive contents:

File type	Naming scheme	Description
Data	J910-mag-[area number/name].asc J910-mag-[area number/name].xcp J910-mag-[area number/name]-proc.xcp	Raw data as ASCII CSV TerraSurveyor raw data TerraSurveyor minimally processed data
Graphics	J910-mag-[area number/name]-proc.tif	Image in TIF format
Drawing	J910-[version number].dwg	CAD file in 2018 dwg format
Report	J910 report.odt	Report text in LibreOffice odt format

Table 2: Archive metadata

## Appendix E – CAD layers for abstraction and interpretation plots

The table below sets out Archaeological Surveys Ltd CAD layer names with associated colours and graphical content. Where CAD files are available layers may be extracted for further CAD/GIS use. Note: hatched polygon boundaries are contained within layers with the RGB colour code 254, 255, 255 (near white) in order to prevent their visibility.

Report sub-heading and associated CAD layer names	Colour with RGB index	Layer content
<b>Anomalies with an uncertain origin</b>		
AS-ABST MAG POS LINEAR UNCERTAIN	 255,127,0	Line, polyline or polygon (solid)
AS-ABST MAG POS DISCRETE UNCERTAIN	 255,127,0	Solid donut, point or polygon (solid)
<b>Anomalies with an agricultural origin</b>		
AS-ABST MAG AGRICULTURAL	 Green 0,255,0	Line or polyline
<b>Anomalies associated with magnetic debris</b>		
AS-ABST MAG STRONG DIPOLAR	 132, 132, 132	Solid donut, point or polygon (solid)
<b>Anomalies with a modern origin</b>		
AS-ABST MAG DISTURBANCE	 132, 132, 132	Polygon (hatched ANSI31)



AS-ABST MAG SERVICE	132, 132, 132	Line or polyline
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Table 3: CAD layering

## Appendix F – copyright and intellectual property

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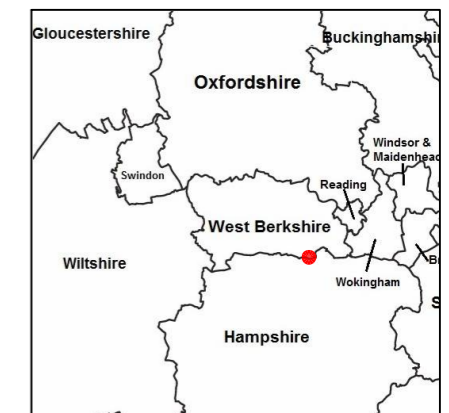


**Geophysical Survey**  
**Land south of Ravenswing Farm**  
**Adjoining Aldermaston Road &**  
**Silchester Road**  
**Tadley**  
**West Berkshire**

Map of survey area



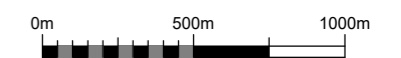
Survey location



● Survey location

Site centred on OS NGR  
SU 59730 62417

SCALE 1:25 000



SCALE TRUE AT AS

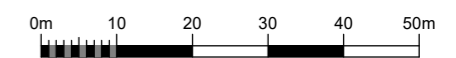
**Geophysical Survey**  
**Land south of Ravenswing Farm**  
**Adjoining Aldermaston Road &**  
**Silchester Road**  
**Tadley**  
**West Berkshire**

**Referencing information**

Referencing grid to OSGB36 datum at 50m intervals

-  459700 162450
-  Survey tracks
-  Survey track start
-  Survey track stop
-  Development boundary

**SCALE 1:1000**

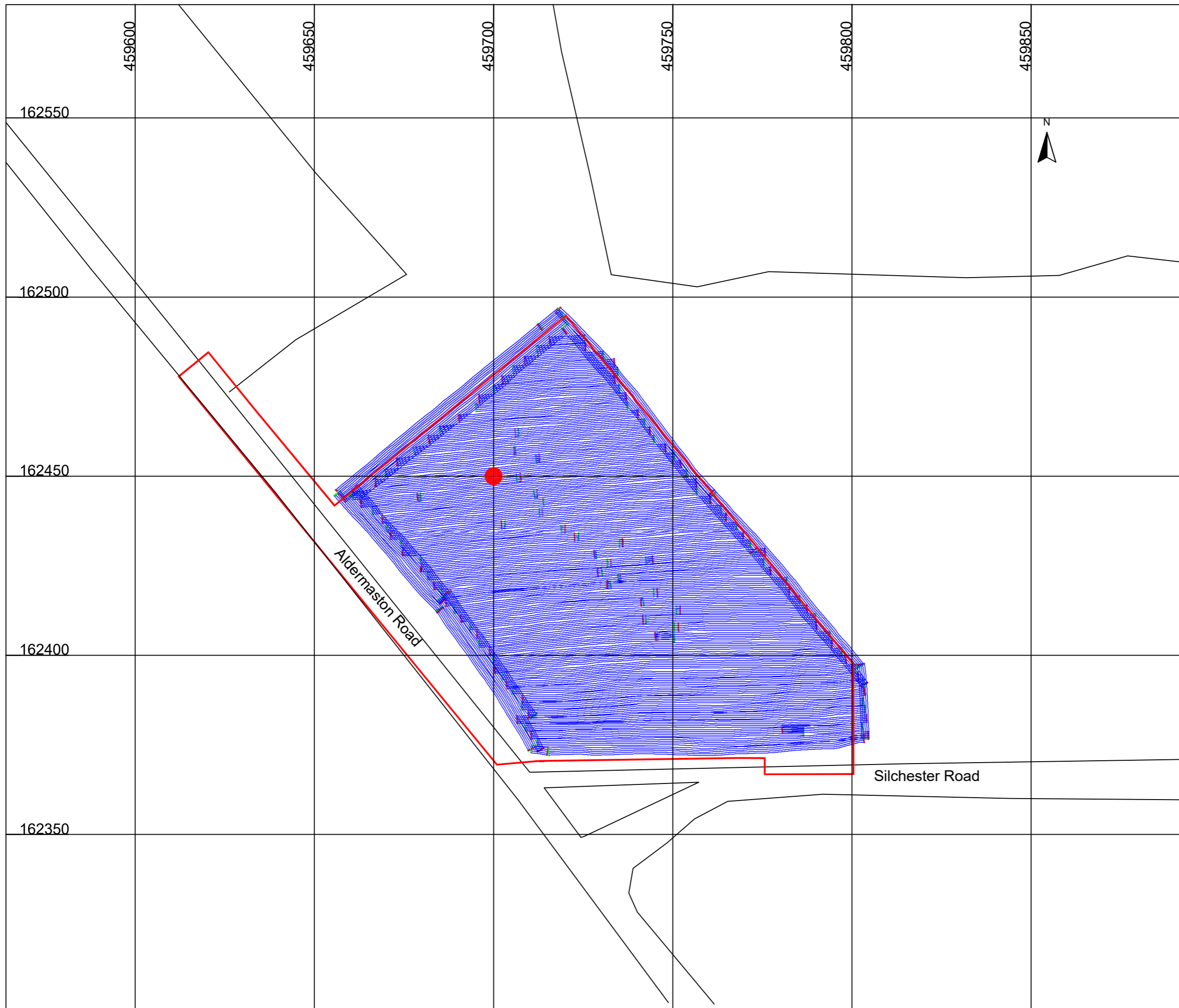


SCALE TRUE AT AS







DRAWN BY  
**KTD**

CHECKED BY  
**DJS**

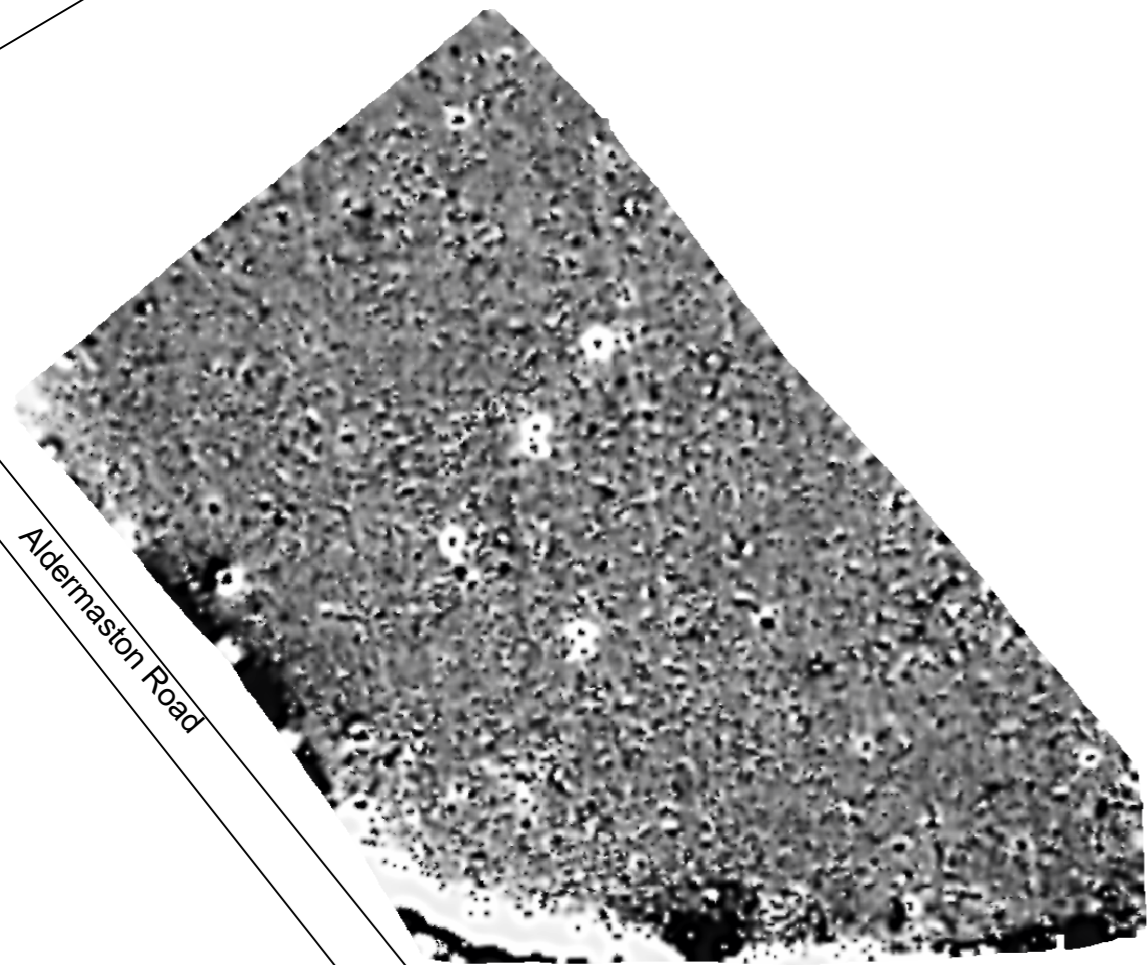
**FIG 02**



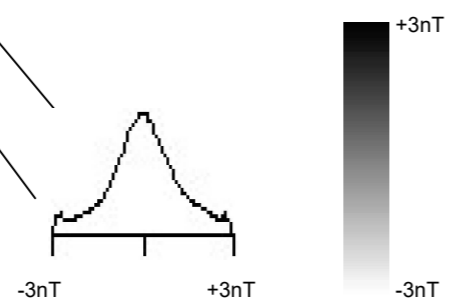
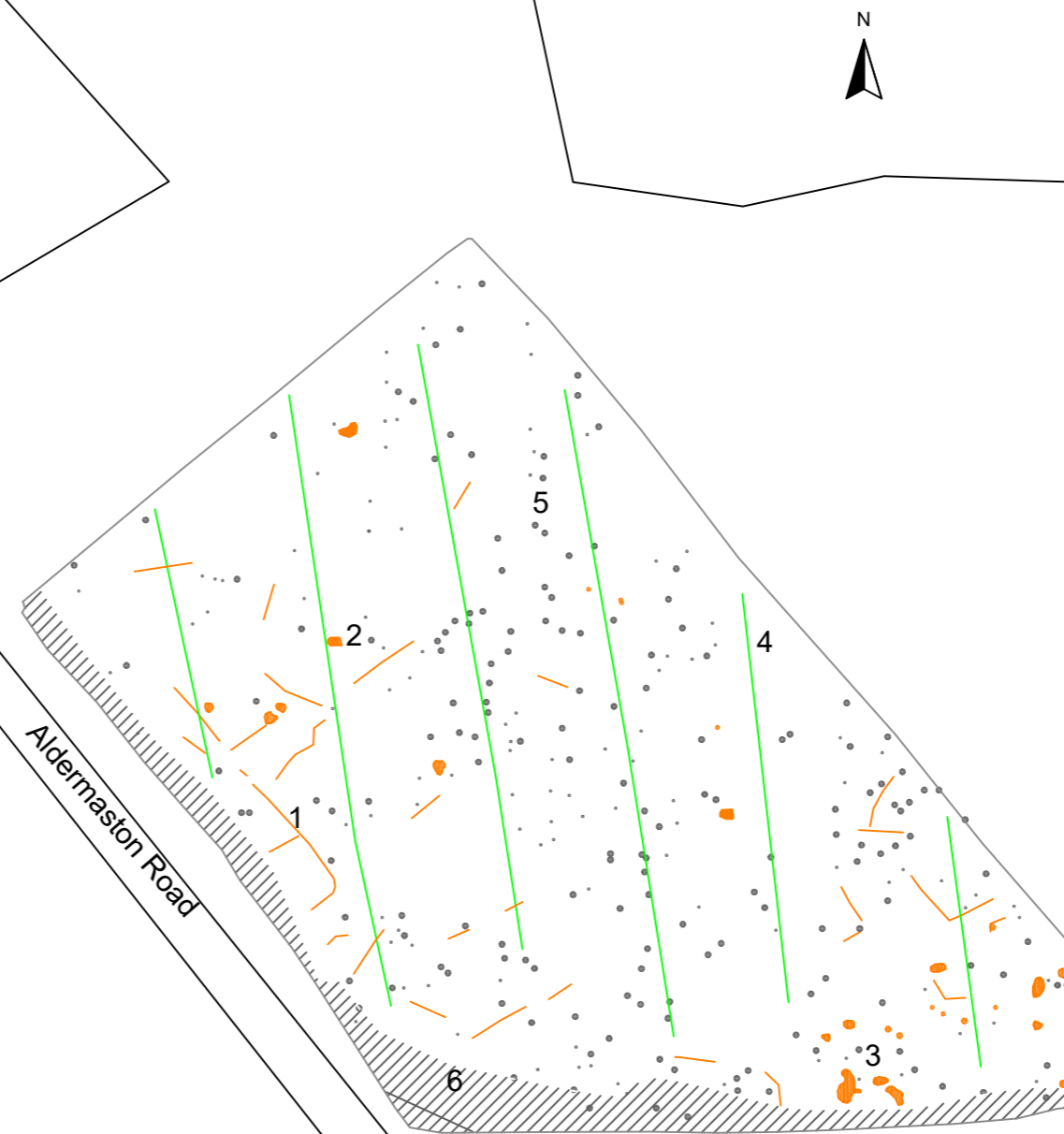
Greyscale plot of minimally processed magnetometer data & abstraction & interpretation of magnetic anomalies

-  Positive linear anomaly - possible ditch-like feature
-  Linear anomaly - of agricultural origin
-  Discrete positive response - possible pit-like feature
-  Magnetic disturbance from ferrous material
-  Strong multiple dipolar linear anomaly - pipeline / cable / service
-  Strong dipolar anomaly - ferrous object

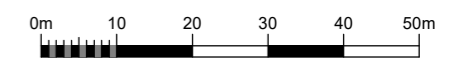
Greyscale plot of processed magnetometer data



Abstraction & interpretation of magnetic anomalies



SCALE 1:1000



SCALE TRUE AT AS