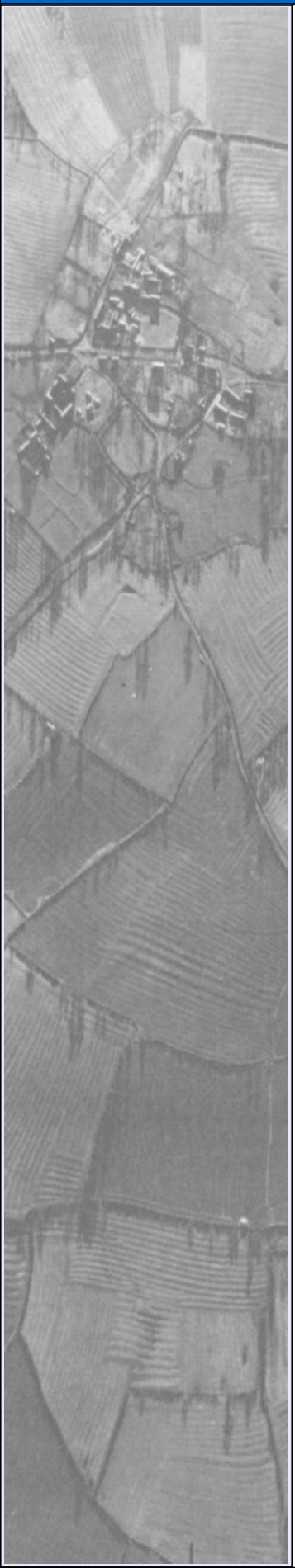

Land adjacent to Wentwood Drive
Bleadon
North Somerset

MAGNETOMETER SURVEY REPORT

for

Coldharbour Land Limited

David Sabin and Kerry Donaldson

November 2014

Ref. no. 578

ARCHAEOLOGICAL SURVEYS LTD

Land adjacent to Wentwood Drive
Bleadon
North Somerset

Magnetometer Survey Report

for

Coldharbour Land Limited

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

Survey date – 17th November 2014
Ordnance Survey Grid Reference – **ST 33325 58070**

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SUMMARY

Archaeological Surveys Ltd carried out a detailed magnetometer survey at a site near Wentwood Drive, Bleadon, North Somerset. The site contains a number of linear earthworks oriented north to south and east to west. The results of the survey demonstrate that these linear boundaries are associated with strongly magnetic material, such as slag or other magnetically thermoremnant material. There is some evidence of former boundaries or lynchets on a different orientation underlying these extant boundary features. A zone of pits is located in the south eastern corner of the site, upon the higher ground, and many of these are arranged in clusters. The origin and function of the pits cannot be confidently determined from the results of the magnetometry but their archaeological potential should be considered. In the north eastern corner of the site, where the ground dips quite steeply, there are a number of positive and negative linear and rectilinear anomalies of uncertain origin.

1 INTRODUCTION

1.1 Survey background

1.1.1 Archaeological Surveys Ltd was commissioned by Coldharbour Land Ltd to undertake a magnetometer survey of an area of land at Bleadon in North Somerset. The site has been outlined for a proposed residential development and 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 (2014) and issued to Vince Russett, County Archaeologist for North Somerset 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.*

1.3 Site location, description and survey conditions

1.3.1 The site is located approximately 1.5km north west of the village of Bleadon to the south of Weston-super-Mare in North Somerset. It is centred on Ordnance Survey National Grid Reference (OS NGR) ST 33325 58070, see Figures 01 and 02.

1.3.2 The geophysical survey covers approximately 3.25ha within an area of rough pasture. It contains a number of linear earthworks oriented north south and east west, with evidence of a modern agricultural track cutting through some of the earthworks in the northern part of the site. It slopes upwards towards the south east corner and slopes sharply downwards along the northern edge of the site. The site is in a prominent position on the western flank of a limestone ridge with extensive views from the south through west to the north, see Plate 1.

1.3.3 The ground conditions across the site were generally considered to be favourable for the collection of magnetometry data. However, the periphery of the field contained clumps of nettles and briars which prevented survey in some areas. Weather conditions during the survey were poor due to heavy rainfall.

Plate 1: Survey area looking WNW towards Brean Down & Steepholm in distance

1.4 Site history and archaeological potential

1.4.1 An Archaeological Desk-Based Assessment has been carried out by Absolute Archaeology (2014). It outlines that the site lies immediately adjacent to the proposed location of the documented Roman station of 'Ad Axium' and it also

contains a series of undated earthworks. It is possible that the earthworks relate to a field system that may date from any period from the Iron Age to post-medieval, or they may be associated with the Roman station. A number of former field boundaries are indicated on the Tithe Map and subsequent Ordnance Survey maps that correspond to these earthworks. Within the surrounding area are a number of field systems, flint scatters, round barrows and evidence for Iron Age and Roman activity.

1.4.2 The presence of earthworks within the field and the purported site of 'Ad Axium' Roman station to the west indicates that there is potential for the survey to locate anomalies associated with these and other archaeological features, should they be present within the site.

1.4.3 The surface conditions within the site were not suitable for the observation of cultural material during the course of the survey. A scatter of stone was noted near the south eastern corner of the field and this may have been disturbed from the field boundary. The field contained numerous holes left by metal detectorists along with discarded ferrous objects.

1.5 Geology and soils

1.5.1 The underlying solid geology across the site is Dolostone from the Pembroke Limestone Group with limestone from the Burrington Oolite Subgroup encroaching onto the northern part of the site (BGS, 2014).

1.5.2 The overlying soil across the survey area is from the Crwbin association, which are brown rankers. These consist of very shallow and shallow, well drained, loamy soils formed over Carboniferous limestone (Soil Survey of England and Wales, 1983).

1.5.3 Magnetometry survey carried out across similar soils has produced good results; however, given the often shallow geology, many anomalies can be associated with natural features and these can be difficult to differentiate from those with an anthropogenic origin.

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 SENSYS MAGNETO®MXPDA 5 channel cart-based system. The instrument has 5 fluxgate gradiometers spaced 0.5m apart with readings recorded at 20 Hz. The gradiometers have a range of recording data between 0.1nT and 10,000nT. They are linked to a Leica GS10 RTK GPS with data recorded by SENSYS MAGNETO®MXPDA software on a rugged PDA computer system.

2.2.2 Data are collected along a series of parallel survey transects wherever possible. 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.

2.3 Data processing and presentation

2.3.1 Magnetic data collected by the MAGNETO®MXPDA cart-based system are initially prepared and automatically compensated using SENSYS MAGNETO®DLMGPS software. Georeferenced raw data are then exported in ASCII format for further analysis and display using TerraSurveyor.

2.3.2 The data are collected at ±10000nT and clipped for display at ±30nT. Data are resampled to a resolution of effectively 0.5m between tracks and 0.15m along each survey track. Appendix C contains specific information concerning the survey and data attributes and is derived directly from TerraSurveyor. Reference should be made to Appendix B for further information on any processes, such as clipping, carried out on the data.

2.3.3 A TIFF file (OSGB36) is produced by TerraSurveyor software along with an associated world file (.TFW) that allows automatic georeferencing when using GIS or CAD software. The main form of data display used in the report is the minimally processed greyscale plot.

2.3.4 The raster images are combined with base mapping using ProgeCAD Professional 2014 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.

2.3.5 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 within each survey area. Anomalies are abstracted using colour coded points, lines and polygons. All plots are scaled to landscape A3 for paper printing.

2.3.6 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 within a 3.25ha pasture field.

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

3.1.3 Anomalies located within each survey area have been numbered and are described below with subsequent discussion in Section 4.

3.2 Statement of data quality

3.2.1 Data are considered representative of the magnetic anomalies present within the site. There are no significant defects within the dataset. Some very localised magnetic disturbance has been caused by modern ferrous objects.

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.

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 AS-ABST MAG POS 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 relating to land management AS-ABST MAG BOUNDARY AS-ABST MAG PATH	Anomalies are mainly linear and may be indicative of the magnetically enhanced fill of cut features (i.e. ditches). The anomalies may be long and/or form rectilinear elements and they may relate to topographic features or be visible on early mapping. Associated agricultural anomalies (e.g. headlands, plough marks and former ridge and furrow) may support the interpretation. Land drains can appear in a classic herringbone pattern of interconnected multiple dipolar linear anomalies, or as parallel linear anomalies. The multiple dipolar response indicates a ceramic land drain.
Anomalies with an agricultural origin AS-ABST MAG AGRICULTURAL AS-ABST MAG LYNCHET	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. Lynchets can be represented by a positive and/or negative response and date from the prehistoric and Roman periods, through to the medieval and post-medieval periods.
Anomalies associated with magnetic debris AS-ABST MAG DEBRIS AS-ABST MAG STRONG DIPOLAR	Magnetic debris often appears as areas containing many small dipolar anomalies that may range from weak to very strong in magnitude. It often occurs where there has been dumping or ground make-up and is related to magnetically thermoremnant materials such as brick or tile or other small fragments of ferrous material. This type of response is occasionally associated with kilns, furnace structures, or hearths and may therefore be archaeologically significant. It is also possible that the response may be caused by natural material such as certain gravels and fragments of igneous or metamorphic rock. Strong discrete dipolar anomalies are responses to ferrous objects within the topsoil.
Anomalies with a modern origin AS-ABST MAG DISTURBANCE AS-ABST MAG SERVICE	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 1: List and description of interpretation categories

3.4 List of anomalies

Area centred on OS NGR 333325 158070 Figures 03 & 04.

Anomalies with an uncertain origin

(1) – The southern and south eastern part of the survey area contains a large number of discrete positive anomalies. These appear to relate to pits, some grouped in clusters. Many have a diameter of 2-3m and several positive linear anomalies also appear associated. Although of uncertain origin, it is possible that they relate to archaeological features.

(2) – A narrow, positive curvilinear anomaly is located in the northern central part of the survey area. It is in the vicinity of, or may contain a patch of, magnetic debris an although an association is possible, a cut, ditch-like feature should be considered for the curvilinear anomaly.

(3) – The north eastern part of the survey area contains a number of broad positive linear responses and negative linear anomalies. The trend is north south and east west, similar to the field boundaries and also the agricultural anomalies. However, they have an unusual rectilinear morphology, and although it is possible that they relate to other boundary features or agricultural anomalies, this is not certain.

(4) – Close to the western edge of the survey area is an amorphous positive anomaly. This type of response would generally indicate former quarrying although could relate to dumped soil also.

(5) – In the western part of the survey area are two weakly positive broad linear responses. One appears to be parallel to anomalies (13) and one may join anomaly (7). It is possible that they relate to former land boundary features or lynchets, but there is no surface expression.

(6) – A possible rectilinear anomaly is located in the centre of the survey area. It is in the vicinity of anomalies (13) but an association is uncertain.

(7) – A weakly positive linear response appears to extend westwards from an extant field boundary. However it does not relate to a corresponding earthwork feature and so may pre-date the field boundaries, or have been greatly truncated by subsequent agricultural activity.

(8) – A very weakly positive, narrow, linear anomaly extends north eastwards across the western part of the site towards anomaly (2). It is not possible to determine if it relates to a cut feature, due to the weak and narrow response.

(9) – The survey area contains a number of weakly positive linear and negative linear anomalies that do not have a coherent morphology or conform to a general trend. They are therefore uncertain in origin.

(10) – A negative linear anomaly extends across the majority of the southern part of the survey area. Although generally parallel to the former cultivation trend, it is much narrower than the majority of the linear responses and may relate to a pipe or drain.

Anomalies relating to land management

(11) – A number of weakly positive anomalies are a response to the extant earthworks and formerly mapped field boundaries evident within the field. They are associated with magnetic debris, generally on the northern and western sides.

(12) - Parallel negative and positive linear anomalies are a response to the modern agricultural track that crosses the northern part of the site.

Anomalies with an agricultural origin

(13) – Within the central part of the survey area are two parallel weakly positive linear anomalies. They are oriented north north east to south south west, generally parallel with the contour within the field. The eastern anomaly appears to be truncated within the centre of the field. There is no corresponding surface expression but the magnetic response is very similar to anomalies from other sites where lynchets have formed on sloping ground.

(14) – The survey area contains a number of parallel linear anomalies oriented east to west. They appear to extend over the majority of the site, although some are clearer than others, and not all of the anomalies have been abstracted. They relate to former agricultural activity.

Anomalies associated with magnetic debris

(15) – Linear zones of strongly magnetic debris are associated with the extant earthworks. They lie generally on the northern and western sides of anomalies (11) and correspond to the earthwork features. The strength of the response indicates that ferrous material, such as slag, may be incorporated into them, either during construction or at a later date. It is possible that the material may have been used to fill ditches adjacent to the earthworks and that this has subsequently been spread by ploughing.

(16) – A small patch of magnetic debris lies within the zone containing pits (1). It is possible that there is some association with the pits although the debris is localised.

(17) – The survey area contains numerous strong, discrete, dipolar responses that relate to ferrous and other magnetically thermoremnant objects within the topsoil.

Anomalies with a modern origin

(18) – Magnetic disturbance is a response to ferrous material within and surrounding the survey area.

4 DISCUSSION

4.1.1 The zone containing discrete positive anomalies appears generally confined to the south east corner and southern edge of the site, and it appears to be defined by the extant earthwork boundaries. It is possible, therefore, that the features are contemporary with, or post-date, the earthwork banks. They may relate to mineral extraction as post-medieval lead mining has been recorded at Purn Hill, less than 1km to the south. The mining appears to be associated with a number of small pits or hollows at Purn Hill. However, the discrete anomalies within the survey area are not represented by any surface expression which may be expected with extraction pits and associated spoil heaps of post-medieval date. The responses are moderately strong at 10-30nT, peaking at over 40nT, which may indicate that they have burnt material incorporated into them. Although several of them are irregular in shape, many are circular or oval with several clustered groups. It is possible that they relate to pits with an archaeological origin, and such features, dating to the Iron Age period, have been recorded at Whitegate Farm 1km to the south east (Young, 2007).

4.1.2 The extant earthworks in the site are oriented generally north to south and east to west. The response to them can be seen as a weak positive anomaly, with adjacent linear zones of magnetic debris. It appears that they have either been constructed from, or have had material subsequently incorporated into them that consists of ferrous and/or magnetically thermoremnant material, such as slag. The magnetic material may have been spread by subsequent cultivation over the earthworks and may have been used to infill depressions or ditches immediately adjacent to the banks. Such material may have been derived from industrial activity, although none is recorded in the immediate vicinity. It is possible that the pits are associated; however, there is very little magnetic debris within the vicinity of the pits.

4.1.3 It appears that the site has been subject to ploughing, oriented parallel with the earthwork features. In the north eastern corner of the site, a number of positive and negative anomalies also reflect the north to south and east to west trend of these boundaries, but their layout and form is difficult to interpret. In the central part of the site there appear to be several linear anomalies that may relate to former boundary features or lynchets that pre-date the extant earthwork features.

5 CONCLUSION

5.1.1 The detailed magnetometer survey located a number of geophysical anomalies throughout the survey area. Several of them relate directly to the extant linear earthworks that exist within the site and are oriented north to south and east to west. Linear zones of magnetic debris are associated with these earthworks, possibly indicating that magnetically thermoremnant material such as slag has been incorporated into them or adjacent ditches.

5.1.2 A zone in the southern and south eastern part of the site contains numerous discrete positive responses. These often appear in clusters, and although they may relate to mineral extraction, they do not appear as depressions within the ground surface. This type of response may indicate a cluster of pits with an archaeological origin and this should be considered.

5.1.3 Several linear anomalies with a north north east to south south west orientation appear that they may have been truncated by the earthworks in the central part of the site. It is possible that they relate to earlier boundary features or lynchets. Other positive and negative linear anomalies have been located in the north eastern corner of the site but their origin is uncertain.

6 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 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 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 field. The difference between the two sensors will relate to the strength 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. It has been found that clipping data to ranges between ±20nT and ±10nT 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.

Appendix C – survey and data information

COMPOSITE
Filename: J578-mag-proc.xcp
Description: Imported as Composite from: J578-mag.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):
Northwest corner: 333223.658239639, 158157.980236129 m
Southeast corner: 333415.148239639, 157985.730236129 m
Direction of 1st Traverse: 90 deg
Collection Method: Parallel
Sensors: 1
Dummy Value: 32702

Source GPS Points: 730400

Dimensions
Composite Size (readings): 1473 x 1325
Survey Size (meters): 191 m x 172 m
Grid Size: 191 m x 172 m
X Interval: 0.13 m
Y Interval: 0.13 m

Stats
Max: 33.15
Min: -33.00
Std Dev: 11.79
Mean: 0.04
Median: -0.06
Composite Area: 3.2984 ha
Surveyed Area: 2.4617 ha

Processes: 1
1 Base Layer

GPS based Proce3
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 Clip from -30.00 to 30.00 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). A PDF copy of the report will be sent to the North Somerset Historic Environment Record.

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

- TerraSurveyor version 3.0.23.0 (geophysical data analysis),
- SENSYS MAGNETO®ARCH version 1.00-04(geophysical data analysis),
- ProgeCAD Professional 2014 (report graphics),
- AutoCAD LT 2007 (report figures),
- OpenOffice.org 3.0.1 Writer (document text),
- PDF Creator version 0.9 (PDF)

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

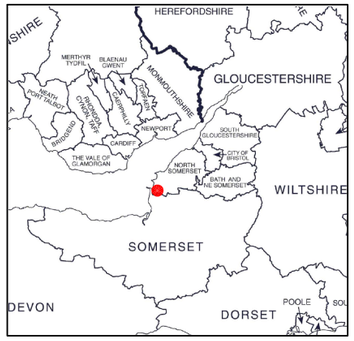
- TerraSurveyor grid and composite files for all geophysical data,
- CSV files for raw and processed composites,
- geophysical composite file graphics as tif images,
- AutoCAD DWG files in 2000 and 2007 versions,
- report text as PDF / PDF/A,
- PDFs of all figures.

N

Archaeological Surveys Ltd

Geophysical Survey
Land adjacent to Wentwood Drive
Bleadon
North Somerset

Map of survey area



● Survey location

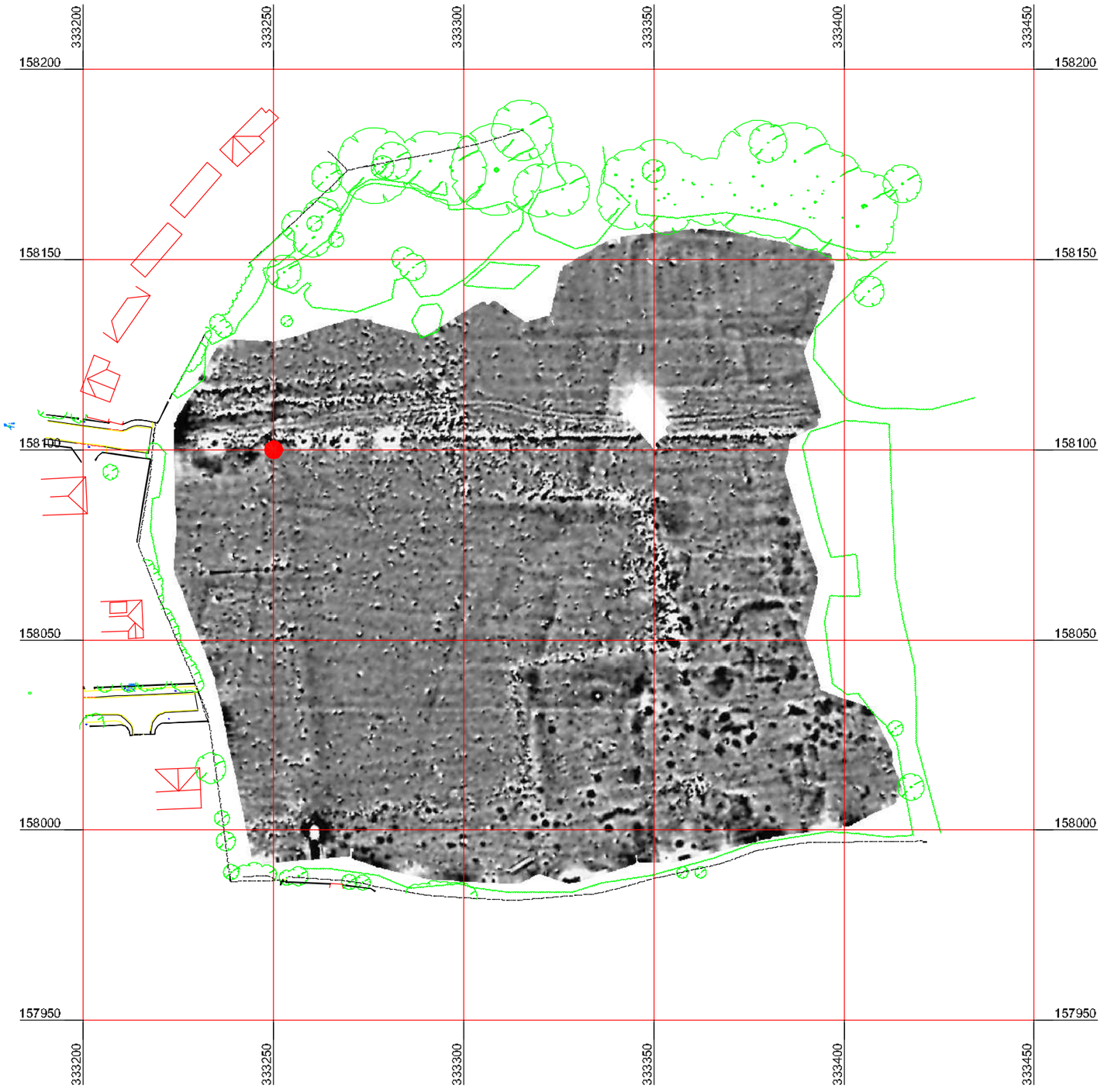
Site centred on OS NGR
ST 33325 58070

SCALE 1:25 000

0m 500m 1000m

SCALE TRUE AT A3

FIG 01



Archaeological Surveys Ltd

Geophysical Survey
Land adjacent to
Wentwood Drive
Bleadon
North Somerset

Referencing information

Referencing grid to OSGB36 datum at 50m intervals

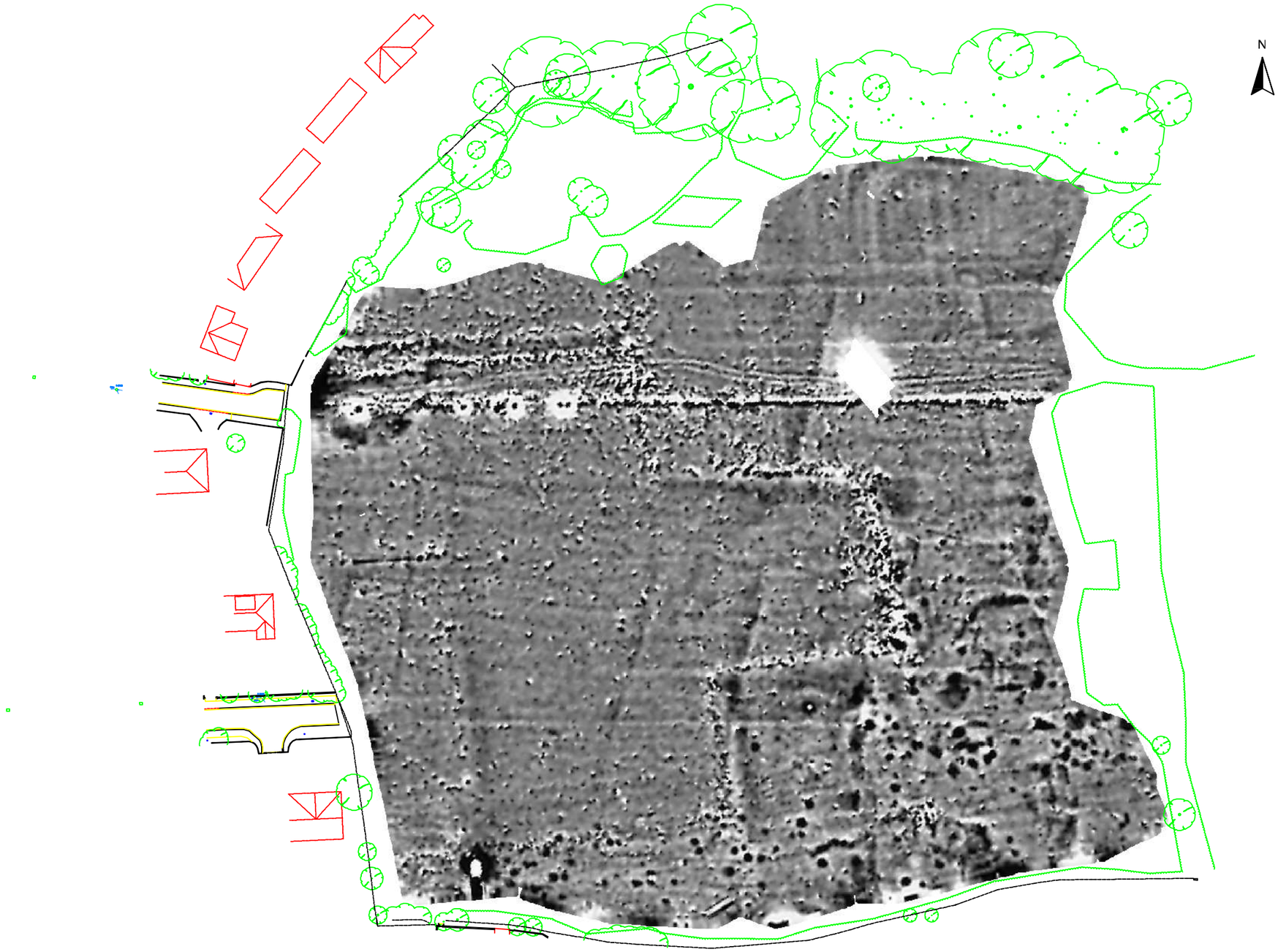
Data collected at 20Hz and georeferenced to ETRS89 zone 30 with conversion to OSGB36 using OSTN02

- 333250 158100

SCALE 1:1250

0m 10 20 30 40 50m

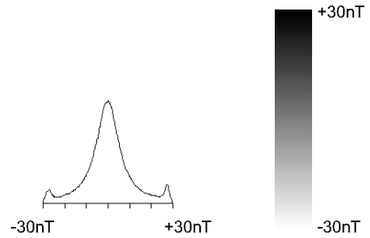
FIG 02



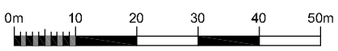
Archaeological Surveys Ltd

Geophysical Survey
Land adjacent to
Wentwood Drive
Bleadon
North Somerset

Greyscale plot of minimally processed magnetometer data

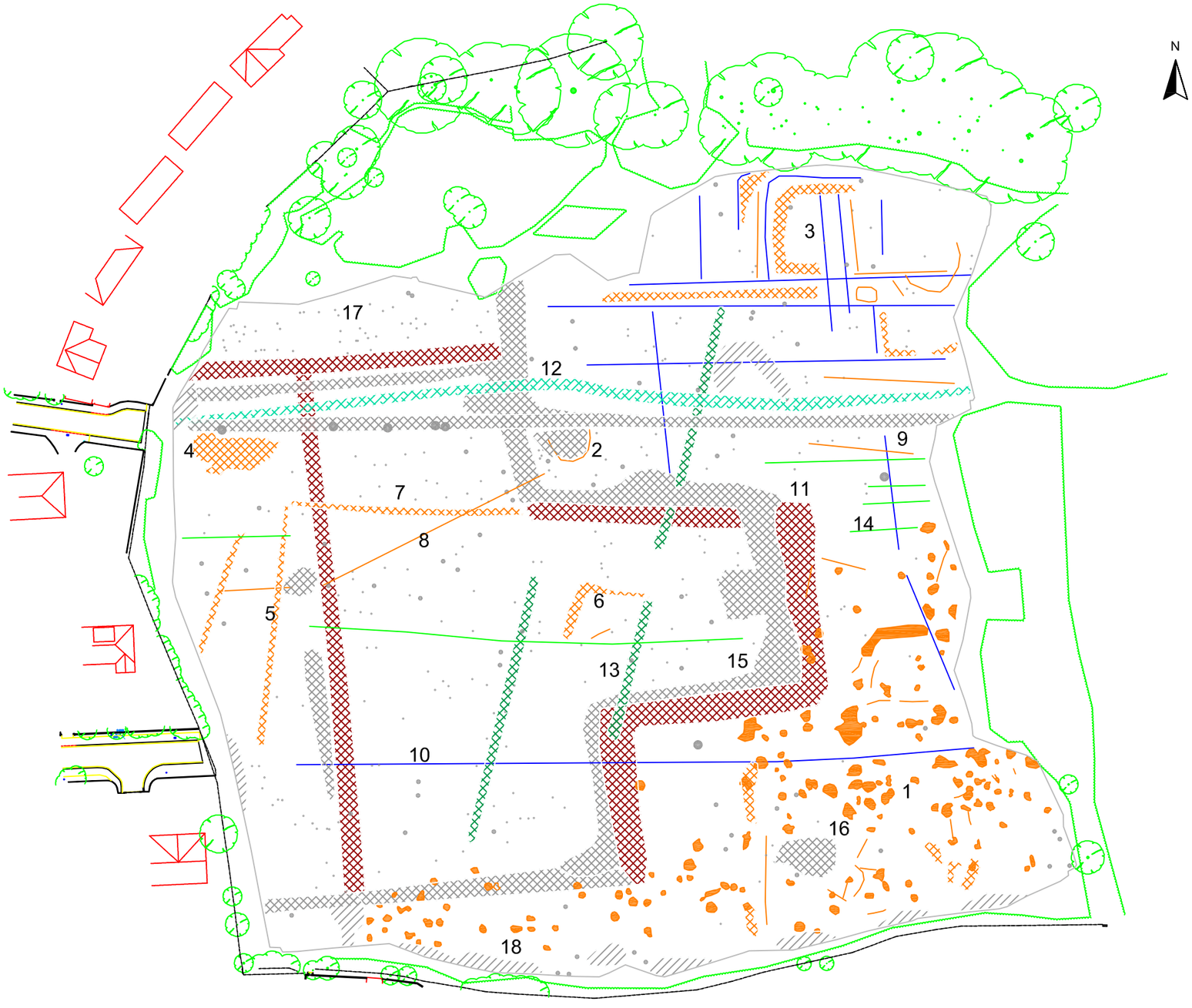


SCALE 1:1000



SCALE TRUE AT A3

FIG 03



Archaeological Surveys Ltd

Geophysical Survey
Land adjacent to Wentwood Drive
Bleadon
North Somerset

Abstraction and interpretation of magnetometer anomalies

- Positive linear anomaly - possible ditch-like feature
- Linear anomaly - of agricultural origin
- Negative linear anomaly - material of low magnetic susceptibility
- Linear anomaly - possible lynchet
- Positive response - field boundary
- Weakly positive anomaly - magnetically enhanced material
- Parallel narrow positive/negative linear anomalies - agricultural track
- Discrete positive response - possible pit-like feature
- Magnetic debris - spread of magnetically thermoremnant/ferrous material
- Magnetic disturbance from ferrous material
- Strong dipolar anomaly - ferrous object

SCALE 1:1000

0m 10 20 30 40 50m

SCALE TRUE AT A3

FIG 04