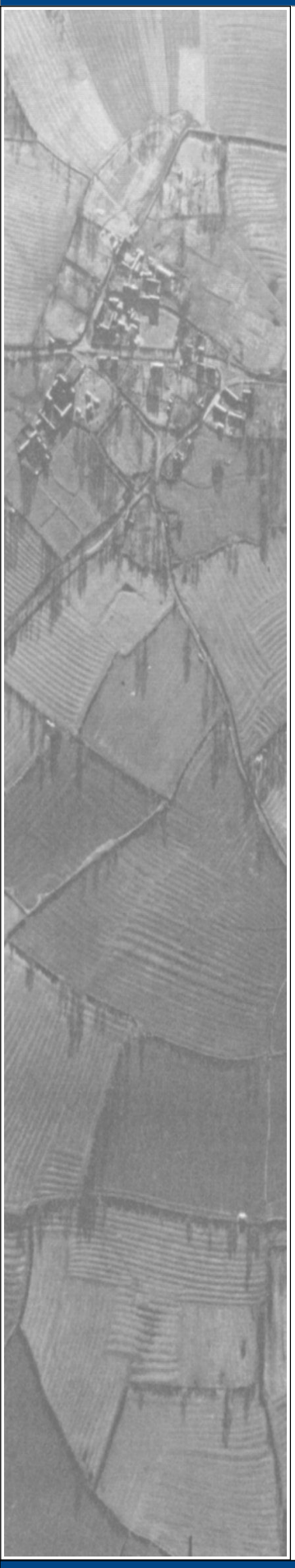

Park Farm
Heywood
Wiltshire

MAGNETOMETER SURVEY REPORT

for

Wiltshire Council

on behalf of

Swindon Borough Council

Kerry Donaldson & David Sabin

August 2025

Ref. no. J1049

ARCHAEOLOGICAL SURVEYS LTD

Park Farm
Heywood
Wiltshire

MAGNETOMETER SURVEY REPORT

for

Wiltshire Council

on behalf of

Swindon Borough Council

Fieldwork by David Sabin BSc (Hons) MCIfA
Report by Kerry Donaldson BSc (Hons) MCIfA
Report checked by David Sabin
Primary archive location - Archaeological Surveys Ltd, Yatesbury, Wiltshire

Survey date – 25th July 2025
Ordnance Survey Grid Reference – **ST 87905 52720**

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Web: www.archaeological-surveys.co.uk

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SUMMARY

Detailed magnetometry was carried out ahead of a tree planting scheme within a 4ha field at Park Farm, Heywood to the north east of Westbury, Wiltshire. Several anomalies associated with formerly mapped field boundaries and land drainage were recorded along with magnetic debris associated with modern infill along one of the boundaries. A fragmented linear ditch-like feature was located just to the north of, and parallel with, one of the former boundaries, but unlike the former boundary ditch the linear anomaly does not have any surface expression.

1 INTRODUCTION

1.1 Survey background

1.1.1 Archaeological Surveys Ltd was commissioned by Wiltshire Council, on behalf of Swindon Borough Council, to undertake a magnetometer survey of an area of land at Park Farm, Heywood, Wiltshire. The site has been outlined for a proposed tree planting scheme and the survey was carried out in order to assess the archaeological potential of the site.

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 any ground disturbance at 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 (CIfA) 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 CIfA 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 and Wiltshire Council Archaeology Service (2025) Standards and Guidance for Archaeological Assessment and Fieldwork in Wiltshire and Swindon Borough.

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 Magnetic anomalies may relate to features within the topsoil, subsoil or within the underlying solid or superficial geology. Anomalies are created by contrasting magnetic susceptibility; however, this is not necessarily consistent with changes in soil texture or colour and may not be contained within well defined features. Magnetic contrast and the magnitude of anomalies does not necessarily correlate with the volume or thickness of magnetic material present. The vertical component of the magnetic field is measured by the magnetometer and this falls rapidly with distance from the sensor, it may not be possible to distinguish weak features within the topsoil from deeper features containing more magnetic material.

1.3.5 Interpretation of anomalies relies on detailed analysis of the data. The morphology of anomalies and their magnitude are important factors in the interpretation process. Wherever possible, supporting information is used, e.g. LiDAR, early mapping and desk-based assessments. However, anomalies often cannot be confidently interpreted without intrusive investigation and as such are categorised as of uncertain origin; this classification may include anomalies relating to archaeological features.

1.4 Site location, description and survey conditions

1.4.1 The site is located to the east of the A350 and north of the mainline railway to Westbury within the parish of Heywood to the north east of Westbury, Wiltshire. It is centred on Ordnance Survey National Grid Reference (OS NGR) ST 87905 52720 and covers 4ha within a single pasture field, see Figs 01 and 02.

1.4.2 It is a triangular field, bounded by hedgerows and trees to the south, west and north east. To the east is a landfill site that infilled the clay pits associated with the former Westbury Cement Works, which was located 700m to the east and

operated from 1962 to 2009. The site is generally level ground at approximately 60m AODN.

1.4.3 The ground conditions across the site were generally considered to be suitable for the collection of magnetometry data. Weather conditions during the survey were fine.

Plate 1: Survey area looking north

1.5 Site history and archaeological potential

1.5.1 A strip of land within the south western part of the site was previously subject to geophysical survey in 2003 and trial trench evaluation in 2004 ahead of a new road scheme for the Westbury Bypass. A number of narrow gullies and a pit were located along with a boundary bank and ditch which contained post medieval pottery. 19th and 20th century mapping shows the boundary extending across the southern part of the site along with another extending along the western edge, forming a linear track. A line of diseased elm trees along this boundary were removed in the late 20th century.

1.6 Geology and soils

1.6.1 The underlying geology is mudstone from the Kimmeridge Clay Formation (BGS, 2023).

1.6.2 The overlying soil across the site is from the Denchworth association (712b) and is a pelo-stagnogley soil. It consists of a slowly permeable, seasonally waterlogged, clayey soil (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 magnetic 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 positive magnetic anomalies that can be mapped by magnetic prospection. In addition, where soil is displaced by material of comparatively low magnetic susceptibility, such as many types of sedimentary rock, anomalies of negative value may occur which could be indicative of structural remains.

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® MX V3 6 channel cart-based system. The instrument has 6 fluxgate gradiometers (FGM650) spaced 0.5m apart with readings recorded at 20Hz which equates to a survey resolution of 0.5m by 0.15m. 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 recorded range of ±3000nT, and resolution is approximately 0.1nT. They are linked to a Leica GS10 RTK GNSS with data recorded by SENSYS MonMX software on a rugged notebook 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 <100s.

2.3 Data processing and presentation

2.3.1 Magnetic data collected by the MAGNETO® MX V3 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 ±3000nT and clipped for display at ±3nT. Data are interpolated to a resolution of effectively 0.5m between tracks and 0.15m along each survey track.

2.3.4 Additional data processing has been carried out in the form of high pass filtering. This effectively removes low frequency variation along a traverse that has been caused by large magnetic bodies, cultivation or rapid temperature change. Data treated to additional processing have been compared to unprocessed data to ensure that no significant anomalies have been removed.

2.3.5 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.

2.3.6 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. 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.

2.3.7 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.

2.3.8 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.

2.3.9 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.

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

2.4 Supplementary measurement of magnetic susceptibility

2.4.1 Magnetic susceptibility is an important factor in the formation of magnetic anomalies located by a magnetometry survey, see 2.1. Accurate measurement of the magnetic susceptibility of soil, subsoil and underlying geology may enhance the results of the magnetometry survey by providing an assessment of magnetic contrast within a site. Where sampling of topsoil only is possible, measurement may assist in understanding whether the soil is likely to be associated with strong, moderate or weak anomalies, which may be a result of low levels of iron minerals, waterlogging, etc. Accurate measurement may also assist in determining industrial activity and the presence of layers or features not visually or texturally apparent on excavation.

2.4.2 Supplementary measurement of soil magnetic susceptibility is not considered part of the main objective of the survey and is discussed in section 3.2 below as a factor influencing the formation of anomalies.

2.4.3 Measurements are achieved using a Bartington MS2 Magnetic Susceptibility Meter with MS2B sensor. Small soil samples are measured in 10 cubic centimetre plastic pots after accurately weighing, generally each sample is subdivided and at least 3 separate measurements are made in order to provide a mean value, or assess variability due to ferrous contamination and other factors. Measurement can be made at low or high frequency, generally low frequency measurements are made but occasionally high frequency measurements are also recorded as the frequency dependence of a soil may be informative.

2.4.4 The measurements are converted to mass specific readings using SI units for bulk density. Archaeological Surveys express the measurements as X_{lf} or X_{hf} for low frequency or high frequency magnetic susceptibility respectively with units of $10^{-8}m^3kg^{-1.}$

3 RESULTS

3.1 General assessment of survey results

3.1.1 The detailed magnetic survey was carried out over approximately 4ha within a triangle-shaped pasture field.

3.1.2 Magnetic anomalies located can be generally classified as positive anomalies of an uncertain origin, anomalies associated with land management, areas of magnetic debris and disturbance and strong discrete dipolar anomalies relating to ferrous objects. Anomalies located within each survey area have been numbered and are described in 3.4 below.

3.2 Data quality and factors affecting the interpretation or formation 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 There a few anomalies from which to make a useful qualitative assessment of magnetic contrast; however, the soil and underlying geology are typically associated with weak anomalies, although strong anomalies can form where burning has occurred or anthropogenic activity has been relatively intense over a long period, such as may be associated with settlement sites.

3.2.3 In order to provide further understanding of the magnetic characteristics of the soil, a topsoil sample was collected from the central part of the field and its mass specific magnetic susceptibility was measured, see 2.4. The sample from produced an average low frequency mass specific magnetic susceptibility (X_{lf}) of 7.9 $10^{-8}m^3kg^{-1}$. The value is low but typical of clay topsoil formed over Kimmeridge Clay. It is also consistent with a soil located away from intense anthropogenic activity and the formation of weak magnetic anomalies of low contrast.

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
Anomalies with an uncertain origin	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. 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.
Anomalies relating to land management	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 ceramic land drains.
Anomalies associated with magnetic debris	Magnetic debris often appears as areas containing many small dipolar anomalies that may range from weak to very strong in magnitude. They often occur where there has been dumping or ground make-up and are 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, hearths and nail spreads from former wooden structures or rooves 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	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 387905 152720, see Figs 03 – 05.

Anomalies with an uncertain origin

(1) – A fragmented positive linear anomaly is located in the south western part of the site. It is located to the north of and parallel with former field boundary (5). The close proximity and parallel orientation of the anomaly with (5) may indicate an association, but while (5) is associated with an extant depression in the ground, anomaly (1) has no surface expression.

(2) – A positive rectilinear anomaly, surrounds a negative response with a discrete positive response in the centre. The strength of the anomaly may indicate a response to bricks, but it is not clear if it relates to a structure, or if it is associated with the removal and burning of diseased elm trees and back-fill of the adjacent former field boundary (4).

(3) – The survey area contains a small number of weak, discrete and short linear anomalies. They generally lack a coherent morphology and cannot be confidently interpreted as cut features.

Anomalies associated with land management

(4 & 5) – Two former boundaries are recorded in the south and west of the field in the 19th and early 20th centuries. Anomaly (4) has a very strongly magnetic response relating to burning and infill of the boundary ditch with ferrous and other magnetically thermoremnant material, such as brick/tile. Anomaly (5) is a weakly magnetic response associated with an extant shallow gully.

(6) – A series of shallow ditches are located within the field and several have a general negative response and they are associated with land drainage.

Anomalies associated with magnetic debris

(7) – Strongly magnetic debris is associated with infill of the former boundary ditch (4). There are also patches of it to the west and this must be related to dumped/burnt material associated with the felling of the line of elm trees, burning and burying of their roots and infill of the ditch.

4 CONCLUSION

4.1.1 Detailed magnetometry was carried out within a 4ha field at Park Farm, Heywood ahead of a tree planting schemes. Two formerly mapped field boundaries were located along with land drainage. A linear ditch-like feature lies just to the north of, and parallel with, one of the mapped field boundary ditches; however, it does not relate to an extant feature.

5 REFERENCES

Aspinall, A., Gaffney, C. and Schmidt, A. 2009. *Magnetometry for Archaeologists*. Lanham (US), AltaMira Press.

British Geological Survey, 2025. *Geology Viewer, [online]* available from https://geologyviewer.bgs.ac.uk [accessed 1/8/2025].

Chartered Institute for Archaeologists, 2014 (updated 2020). *Standard and Guidance for archaeological geophysical survey*. CIfA, University of Reading.

European Archaeological Council, 2015. *EAC Guidelines for the Use of Geophysics in Archaeology: Questions to Ask and Points to Consider.* Europae Archaeologia Consilium and Association Internationale sans But Lucratif, Belgium.

Institute for Archaeologists, 2002. *The use of Geophysical Techniques in Archaeological Evaluations*. IfA Paper No. 6. IfA, University of Reading.

Schmidt, A., 2013. *Geophysical Data in Archaeology: A Guide to Good Practice.* Oxbow Books.

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

Wiltshire Council Archaeology Service, 2025.*Standards and Guidance for Archaeological Assessment and Fieldwork in Wiltshire and Swindon Borough.*

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 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.

High Pass Filter

Removes low frequency anomalies within the data that are not considered to be archaeologically significant and may be natural in origin. A window passes over the data, the mean of all the data within the window is subtracted from the centre value. The size of the window is adjusted as is the weighting which may be uniform or Gaussian. The process is used to improve the visibility of anomalies of interest.

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

Minimally processed data
Filename: J1049-mag-proc.xcp
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 387812.28, 152928.54 m
Southeast corner: 387998.43, 152532.24 m
Collection Method: Randomised
Sensors: 6
Dummy Value: 32702
Dimensions
Survey Size (meters): 186 m x 396 m
X&Y Interval: 0.15 m
Source GPS Points: Active: 1215397, Recorded: 1215403

Stats
Max: 3.32
Min: -3.30
Std Dev: 1.12
Mean: -0.02
Median: 0.05
Composite Area: 7.3771 ha
Surveyed Area: 4.1629 ha
PROGRAM
Name: TerraSurveyor
Version: 3.0.37.0
GPS based Proce4
1 Base Layer.
2 Unit Conversion Layer (UTM to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -3.00 to 3.00 nT

Filtered data
Filename: J1049-mag-proc-hpf.xcp
Stats
Max: 3.32
Min: -3.30
Std Dev: 1.02
Mean: 0.00
Median: 0.01

GPS based Proce5
1 Base Layer.
2 Unit Conversion Layer (UTM to OSGB36).
3 DeStripe Median Traverse:
4 High pass Uniform (median) filter: Window dia: 300
5 Clip from -3.00 to 3.00 nT

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.

A PDF copy will be supplied to the Wiltshire Historic Environment Record with greyscale images and abstraction layers made available on request. The report will also be uploaded to OASIS, the online system for reporting archaeological investigations and linking research outputs and archives and the digital data archived with the Archaeology Data Service.

Archive contents:

File type	Naming scheme	Description
Data	J1049-mag-**[area number/name]**.asc J1049-mag-**[area number/name]**.xcp J1049-mag-**[area number/name]**-proc.xcp	Raw data as ASCII CSV TerraSurveyor raw data TerraSurveyor minimally processed data
Graphics	J1049-mag-**[area number/name]**-proc.tif	Image in TIF format
Drawing	J1049-**[version number]**.dwg	CAD file in 2018 dwg format
Report	J1049 report.odt	Report text in LibreOffice odt format

Table 2: Archive metadata

Appendix E – copyright and intellectual property

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Tel: 01249 814 231

Archaeological Surveys
Specialist Geophysical Surveyors

Geophysical Survey
Park Farm
Heywood
Wiltshire

Map of survey area

Survey location

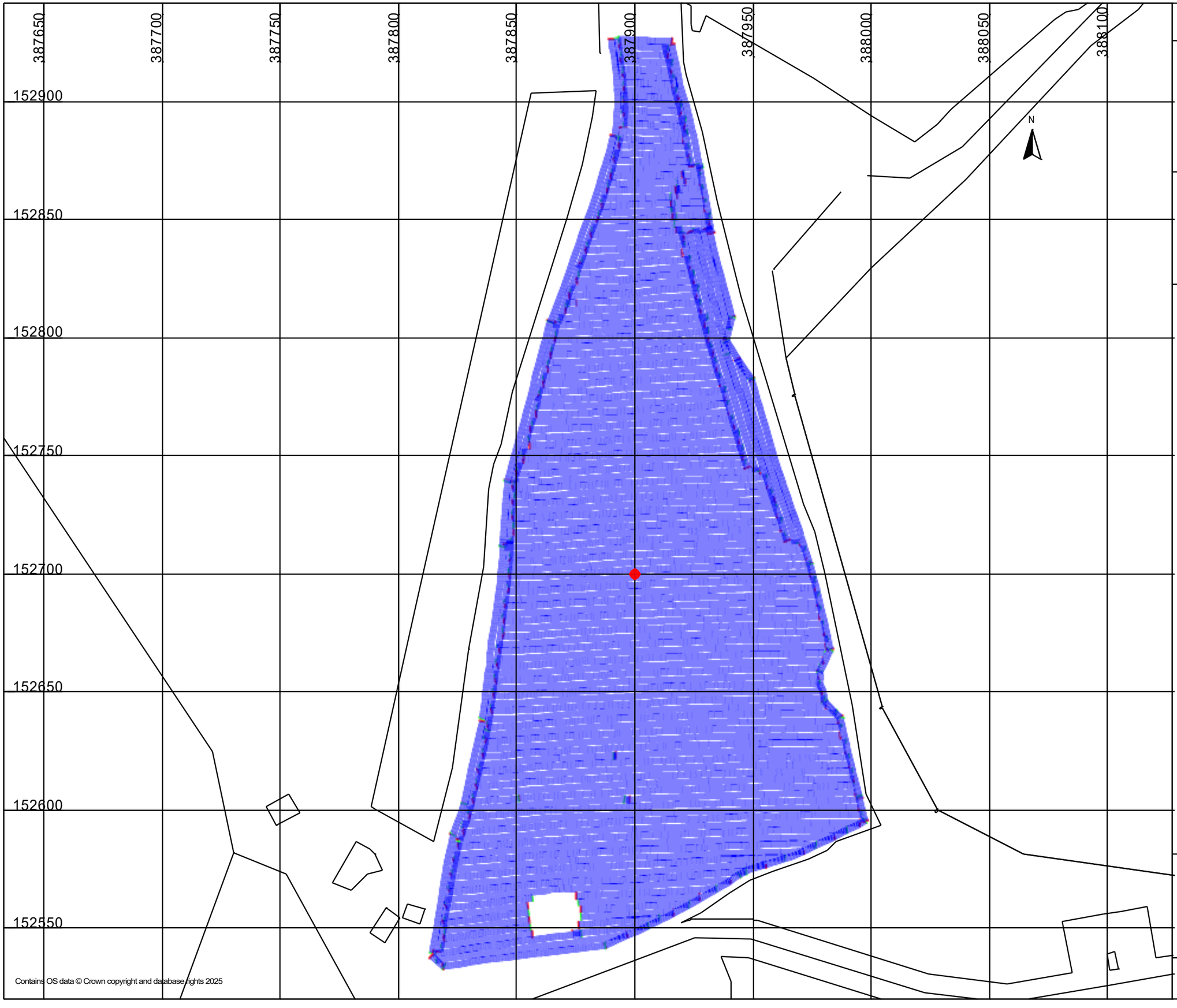
Site centred on OS NGR
ST 87905 52720

SCALE 1:25 000

0m 500m 1000m

SCALE TRUE AT A3

DRAWN BY	CHECKED BY	
KTD	DJS	FIG 01



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Geophysical Survey
Park Farm
Heywood
Wiltshire

Referencing information

Referencing grid to OSGB36 datum at 50m intervals

387900 152700

Survey tracks

Survey track start

Survey track stop

SCALE 1:1500

0m 10 20 30 40 50m

SCALE TRUE AT A3

DRAWN BY	CHECKED BY	
KTD	DJS	FIG 02

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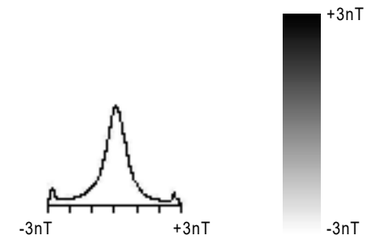
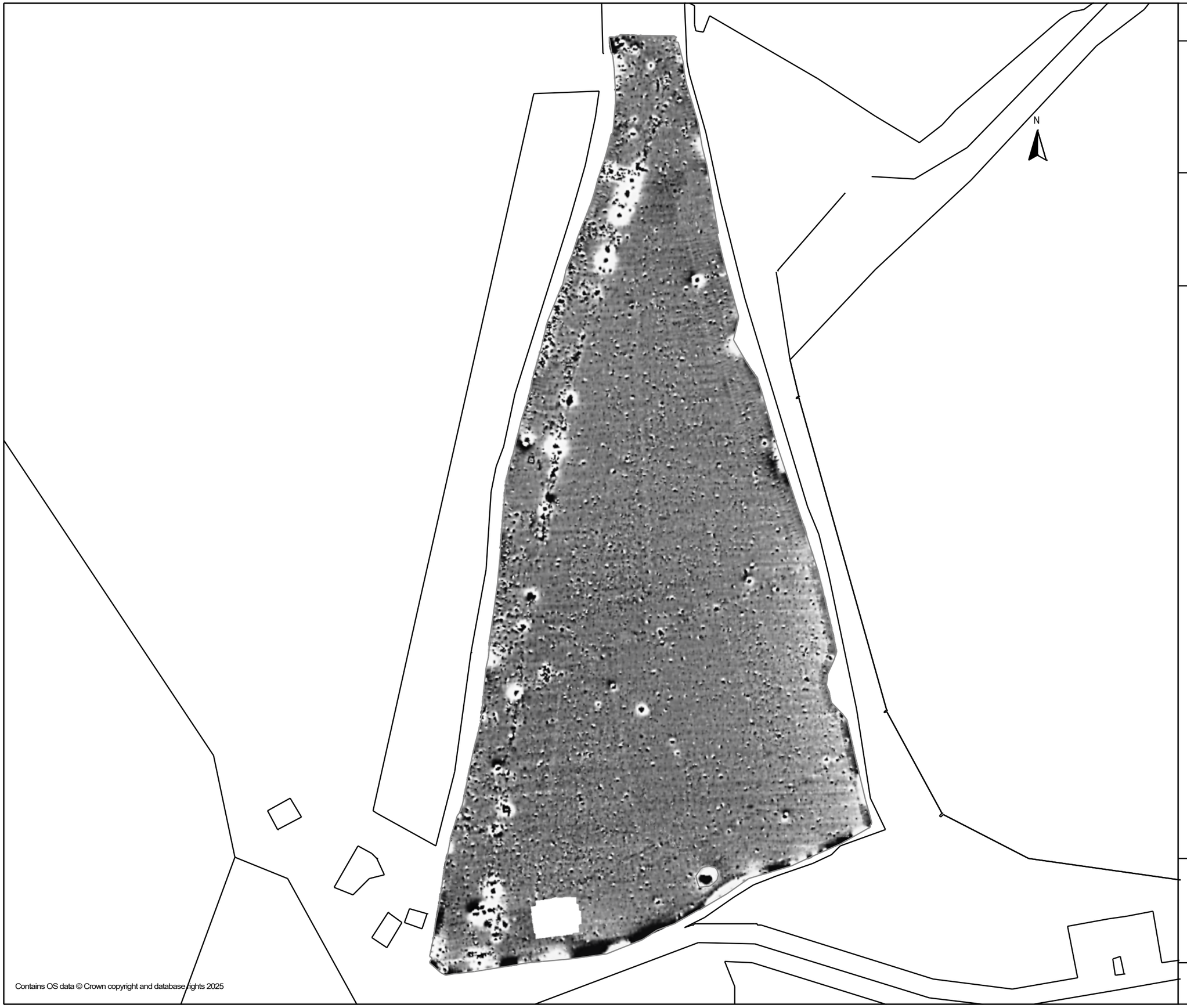
Geophysical Survey
Park Farm
Heywood
Wiltshire

Greyscale plot of minimally processed magnetometer data





SCALE 1:1500

0m 10 20 30 40 50m

SCALE TRUE AT A3

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KTD	DJS	FIG 03

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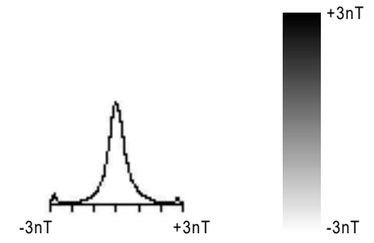
Greyscale plot of filtered magnetometer data



N

SCALE 1:1500

0m 10 20 30 40 50m

SCALE TRUE AT A3

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KTD	DJS	FIG 04

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Abstraction and interpretation of magnetic anomalies

N

3
4
2
7
3
6
5
1

- Positive linear anomaly - possible ditch-like feature
- Positive linear anomaly - former field boundary
- Negative linear anomaly - associated with extant drainage
- 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 1:1500

0m 10 20 30 40 50m

SCALE TRUE AT A3

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KTD	DJS	FIG 05