



Project Spitfire – Site 2, High Post, Wiltshire

Gradiometer Survey Report

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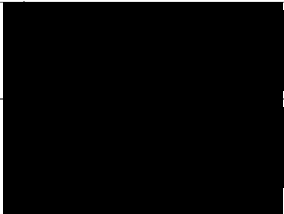
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 The Bluestone Centre
 Sunrise Way
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County Wiltshire
National grid reference 415100 136800 (SU 15100 36800)
Planning authority Wiltshire Council

WA project name Project Spitfire – Site 2, High Post, Wiltshire
WA project code 253792
Date of fieldwork 2 September 2024
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Summary

A detailed gradiometer survey was conducted over land at Project Spitfire – Site 2, High Post, Wiltshire (centred on NGR 415100 136800). The project was commissioned by Hibberd Development Co Ltd with the aim of establishing the presence, or otherwise, and nature of detectable archaeological features in support of a planning application for the development of the site.

The site comprises an arable field located 5 km to the north of the city of Salisbury. The survey covered an area of 3.3 ha. The geophysical survey was undertaken on 2 September 2024.

The survey has not identified any anomalies that can confidently be interpreted as archaeology. Several anomalies of possible archaeological origin have been identified. These include several parallel ditch features and a pit alignment interpreted as possible parts of a prehistoric field system noted in the surrounding area. Additionally, two large oval pit features suggest a possible Neolithic long barrow, however, it is more likely that they relate to WW1 or WW2 activities known from the wider region.

Evidence for historical ploughing has been identified across the site. The remaining features are identified as geological in origin.

Acknowledgements

Wessex Archaeology would like to thank Hibberd Development Co Ltd for commissioning the geophysical survey. The assistance of Dan Roycroft is gratefully acknowledged in this regard.

The fieldwork was undertaken by Callum Jervis and Emilie Porter. Brett Howard processed and Emilie Porter and Rok Plesnicar interpreted the geophysical data. Rok Plesnicar wrote the report. The geophysical work was quality controlled by Brett Howard. Illustrations were prepared by Rok Plesnicar. The project was managed on behalf of Wessex Archaeology by Tom Richardson.



Project Spitfire – Site 2, High Post, Wiltshire

Gradiometer Survey Report

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology was commissioned by Hibberd Development Co Ltd to carry out a geophysical survey at Project Spitfire – Site 2, High Post, Wiltshire (centred on NGR 415100 136800) (**Figure 1**). The survey forms part of an ongoing programme of archaeological works being undertaken in support of a planning application for the development of the site.

1.2 Scope of document

- 1.2.1 This report presents a brief description of the methodology followed by the detailed survey results and the archaeological interpretation of the geophysical data.

1.3 The site

- 1.3.1 The site is located at High Post, 5 km to the north of the city of Salisbury, in the county of Wiltshire.
- 1.3.2 The survey comprises 3.3 ha of agricultural land, currently utilised as arable. The site is bounded by the A345 to the west, by established hedgerows to the north and south, with agricultural land to the east.
- 1.3.3 The site slopes gently to the north-east from 128 m above Ordnance Datum (aOD) to 121 m aOD.
- 1.3.4 The bedrock geology throughout the site is mapped as Seaford Chalk Formation, and BGS records no superficial deposits. Previous archaeological evaluation immediately south of the site recorded the natural chalk substrate at a depth of between 0.35 m and 0.45 m. The chalk was overlain by an interfacial layer of loose, weathered chalk which was 0.20 m deep and then the plough soil on top was generally 0.30 m deep (BGS 2024; Brett 2001).
- 1.3.5 The soils underlying the site are likely to consist of typical paleo-argillic brown earths of the 343i (Andover 2) association (SSEW SE Sheet 5 1983). Soils derived from such geological parent material have been shown to produce magnetic contrasts acceptable for the detection of archaeological remains through magnetometer survey.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

- 2.1.1 A Historic Environment Desk-Based Assessment (HEDBA) was prepared by Wessex Archaeology (2024) for Project Spitfire, which examined the potential for the survival of buried archaeological remains within the development area and a 1 km study area. The following background is not exhaustive but is summarised from aspects of the HEDBA that are considered relevant to the interpretation of the geophysical survey data.



2.2 Summary of the archaeological resource

Prehistoric (970,000 BC–AD 43)

- 2.2.1 The site lies within a wider known active prehistoric landscape with the Stonehenge, Avebury and Associated Sites World Heritage Site (WHS) (NHLE 1000097) 3 km north-west of the site. The WHS is internationally important for its complexes of outstanding prehistoric monuments and demonstrates Neolithic and Bronze Age ceremonial and mortuary practices between 3700 BC to 1600 BC. However, within the study area, known dated remains are predominantly from the later Iron Age period, with no recorded finds or features that can be specifically attributed to the Palaeolithic or Mesolithic periods, and some flint potentially dating to the Neolithic or Bronze Age. However, there is a large network of undated cropmark features which have been identified in aerial imagery. These have largely been classified as potentially prehistoric or Romano-British, and may be associated with earlier prehistoric activity, although given the Iron Age and Romano-British settlement to the north-west, are more likely associated with these periods.
- 2.2.2 The known dated remains within the study area are predominantly from the later Iron Age period, with no recorded finds or features that can be specifically attributed to the Palaeolithic or Mesolithic periods, and some flint potentially dating to the Neolithic or Bronze Age. However, there is a large network of undated cropmark features which have been identified in aerial imagery. These have largely been classified as potentially prehistoric or Romano-British, and may be associated with earlier prehistoric activity, although given the Iron Age and Romano-British settlement to the north-west, are more likely associated with these periods.
- 2.2.3 Possible Prehistoric or Romano-British field systems are recorded surrounding the site, with the closest being 195 m to the north-east. To the east, potential settlement in the form of an enclosure is recorded near the field systems which are 360 m north-east of the site while the rectangular enclosure is 500 m south-east of the site. Extensive areas of field systems are recorded 300 m south of the site as well as a number of enclosures and trackways. Field systems in the north of the study area are over 900 m from the site.
- 2.2.4 Worked flint was found 455 m south-west of the site during a field walking survey undertaken by Wessex Archaeology in 1997. The flint was on a linear alignment, mirroring that of the field system, and was given a broad date range between the Neolithic to the Bronze Age. Part of the field system was within the area of a watching brief, but no evidence of its survival was recorded.
- 2.2.5 Parts of the identified field systems are faintly visible in LiDAR data from 2021. Analysis of LiDAR data for this study identified a potential feature on a NNE to SSW alignment which appears similar to the field systems and may connect to the recorded systems to the north-west.

Iron Age (700 BC–AD 43)

- 2.2.6 Two Iron Age enclosures indicating a significant Iron Age complex were recorded in a geophysical survey and investigated in later excavation. The southern enclosure contained three Iron Age round houses and multiple pits and gullies and evidence shows that settlement within the enclosure continued into the Romano-British period. The northern enclosure was investigated less but was found to also contain pits and other associated features. The enclosure ditch contained Iron Age and Romano-British pottery. The enclosures are 600 m west of the site and field systems north-east of them extend to 195 m north-west of the site, although as above, an assessment of LiDAR data suggests they may

extend into the site. While the field system is undated, it is most likely associated with Iron Age or Romano-British settlement here (Powell 2011; Wessex Archaeology 2008).

Romano-British (AD 43–410)

- 2.2.7 There is evidence for Romano-British settlement occupying the same space as the Iron Age complex. There is no suggestion that there was continued occupation throughout these two periods, but rather knowledge of the previous site, in addition to surviving earthworks, may have influenced where the Romano-British settlement was placed. The southern enclosure has been more heavily investigated and recorded Romano-British features associated within it include a crop-drying oven, a shrine, flint wall footings, a steelyard, and a burial. The evidence recorded there suggested that there was an intensification of arable cultivation surrounding the settlement during the Romano-British period, and the nearby and surrounding field systems mentioned earlier as potentially prehistoric, may be of a later Romano-British date (Powell 2011).

- 2.2.8 The Roman Road from Salisbury to Mildenhall is on a near north – south alignment and is recorded by the Historic Environment Record (HER) to extend 480 m south of the site. The *Rural Settlement of Roman Britain* (Allen *et al.* 2016) records the road to continue adjacent to the site and beyond.

Anglo-Saxon (AD 410–1066) and Medieval (AD 1066–1500)

- 2.2.9 Areas of ridge and furrow are recorded by the HER within the study area, showing that agriculture continued in the medieval period within the surrounding area. These areas are recorded 515 m north-east and 840 m south-west of the site.

Post-medieval (AD 1500–1800) and 19th century (AD 1800–1900)

- 2.2.10 Probable post-medieval trackways are recorded 170 m south of the site on a generally east – west alignment. These trackways are recorded in the same place as the location of some possible prehistoric or Romano-British features which may actually be associated with the post-medieval trackways in this location. The only other recorded post-medieval heritage assets within the study area is a Grade II Listed milestone (NHLE 1318620) from the 18th century which is 450 m south of the site.

Modern (AD 1900–present day)

- 2.2.11 The site is situated within the area recorded by HER for the High Post Aerodrome, which was an important site in World War 2 for its aircraft testing facilities. The aerodrome assembled and tested most of the RAF's Spitfire Vs, VIIIs and all its Mk XIIs, the bodies of which were made in nearby Salisbury. The aerodrome buildings were 415 m to the south-west of the site, on the Upper Woodford - High Post Road. The runway was to the south-west of the site, aligned north-east to south-west. It passed across the road, which was closed off by a barrier constructed from plane fuselages. There were at least three crashes on and within the vicinity of the runway during its operation, one of which was fatal. The aerodrome was under military command between 1940 and 1947. Though the runway no longer exists, its path is still visible in the shape of nearby field boundaries to the west (Ashworth 1982). A possible annexe of the military camp and airfield at High Post is visible on aerial photographs 701 m north-east of the site. Aerial photographs from 1943 show multiple planes flying over the site.
- 2.2.12 A further example of wartime heritage within the study area takes the form of a FW3/22 type pillbox, 10 m south of the site past the hedgerow dividing the site from The Stones hotel. Pillboxes of this type are typically 10 ft in internal diameter and hexagonal in shape.



Undated

- 2.2.13 There are a series of undated cropmarks and features found through geophysical survey within the study area. These are more ambiguous than those categorised as Prehistoric. The cropmarks include possible further field boundaries and enclosures, trackways, pits, and ring ditches. The closest to the site is an undated bowl barrow 250 m to the south. Although currently undated, it is highly probable that these are related to the later prehistoric and Romano-British activity recorded within the study area.

2.3 Assessment of archaeological survival and previous impacts

- 2.3.1 Archaeological evaluation immediately south of the site comprised three 15 m long and 1.5 m wide trenches across a 0.84 ha field. The evaluation recorded no archaeological features or deposits despite the survival of Iron Age and Romano-British settlement activity nearby. It was considered that any archaeology may have been truncated by heavy ploughing. Due to the site's proximity to this area and its similar known historical use, it may have experienced the same intensive ploughing or below ground impacts (Brett 2001).

3 METHODOLOGY

3.1 Introduction

- 3.1.1 The geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team on 2 September 2024. Field conditions were good throughout the period of survey. An overall coverage of 3.23 ha was achieved.
- 3.1.2 The methods and standards employed throughout the geophysical survey conform to that set out in the best practice, and guidance outlined by the Chartered Institute for Archaeologists' (CIfA 2020) and Europae Archaeologiae Consilium (Schmidt *et al.* 2015).

3.2 Aims and objectives

- 3.2.1 The aims of the survey comprise the following:
- To determine, as far as is reasonably possible, the nature of the detectable archaeological resource within a specified area using appropriate methods and practices; and
 - To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.
- 3.2.2 In order to achieve the above aims, the objectives of the geophysical survey are:
- To conduct a geophysical survey covering as much of the specified area as possible, allowing for on-site obstructions;
 - To clarify the presence/absence of anomalies of archaeological potential; and
 - Where possible, to determine the general nature of any anomalies of archaeological potential.

3.3 Fieldwork methodology

- 3.3.1 The cart-based gradiometer system used a Carlson BRX-7 RTK GNSS instrument, which receives corrections from a network of reference stations operated by the OS. Such instruments allow positions to be determined with a precision of 0.02 m in real-time and

therefore exceeds Europae Archaeologiae Consilium recommendations (Schmidt et al. 2015).

- 3.3.2 The survey was conducted using four Sensys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart. Data were collected with an effective sensitivity of $\pm 8 \mu\text{T}$ over $\pm 1000 \text{ nT}$ range at a rate of 100 Hz, producing intervals of 0.02 m along transects spaced 4 m apart.

3.4 Data processing

- 3.4.1 Data from the survey were subjected to minimal correction processes. These comprise a 'Destripe' function ($\pm 5 \text{ nT}$ thresholds), applied to correct for any variation between the sensors, and an interpolation used to grid the data and discard overlaps where transects have been collected too close together.
- 3.4.2 Further details of the geophysical and survey equipment, methods and processing are described in **Appendix 1**.

4 GEOPHYSICAL SURVEY RESULTS AND INTERPRETATION

4.1 Introduction

- 4.1.1 The detailed gradiometer survey has identified magnetic anomalies across the site. Results are presented as a series of greyscale plots, and archaeological interpretations at a scale of 1:1250 (**Figures 2 to 3**). The data are displayed at -2 nT (white) to +3 nT (black) for the greyscale image.
- 4.1.2 The interpretation of the datasets highlights the presence of potential archaeological anomalies, ferrous responses, burnt or fired objects, and magnetic trends (**Figure 3**). Full definitions of the interpretation terms used in this report are provided in **Appendix 2**.
- 4.1.3 Numerous ferrous anomalies are visible throughout the dataset. These are presumed to be modern in provenance and are not referred to, unless considered relevant to the archaeological interpretation.
- 4.1.4 It should be noted that small, weakly magnetised features may produce responses that are below the detection threshold of magnetometers. It may therefore be the case that more archaeological features may be present than have been identified through geophysical survey.
- 4.1.5 Gradiometer survey may not detect all services present on site. This report and accompanying illustrations should not be used as the sole source for service locations and appropriate equipment (e.g., CAT and Genny) should be used to confirm the location of buried services before any trenches are opened on site.

4.2 Gradiometer survey results and interpretation

- 4.2.1 Several weak positive linear anomalies traverse the site on a north – south orientation at **4000**. They appear to be up to 2 m wide with segments of up to 120 m long, spanning across the entire site. In its northern part the anomaly comprises two parallel linears. They indicate ditch-like features and likely pertain to field boundaries of unknown origin. They could relate to the prehistoric field systems identified in the wider landscape. The parallel element of the anomaly could relate to a track or drove way.
- 4.2.2 A strong positive linear anomaly has been identified crossing **4000** in the centre of the survey area at **4001**. It is up to 1.5 m wide and 23 m long east – west, indicating a ditch-like feature. Considering it crosses **4000** at a right angle it could belong to the same agricultural

organisation, however, the difference in magnetic response does not support this theory. This feature is of an unknown origin.

- 4.2.3 At the northern part of the survey area are two positive oval anomalies at **4002**. They are up to 20.5 m long and 8.5 m wide on a north-east to south-west parallel alignment. These anomalies indicate large pit-like features which are 15.5 m apart. Similar features which are known from the wider landscape were identified as possible Neolithic long barrows, however, the overall dimensions do not support this theory. It is more likely that this feature relates to the 19th or 20th century military activities known in the wider region or it is geological in origin.
- 4.2.4 To the west of **4000** is an alignment of at least 10 small discrete positive anomalies on a north-west to south-east alignment at **4003**. They span 80 m with an average distance of 8 m between the anomalies and are up to 2.5 m in diameter. These kinds of anomaly infer pit-like features, possibly post holes of an unknown origin. The different alignment to **4000** suggests they are not a part of the same field system. They could equally be natural pitting in the chalk bedrock.
- 4.2.5 Additionally, numerous small positive discrete anomalies have been identified across the site indicating further possible pit-like features. They are up to 3 m in diameter and could suggest refuse or storage pits, however, it is more likely that they are a result of natural pitting in the chalk geology.
- 4.2.6 Weak positive parallel linear anomalies have been identified across the site. They are on a NNW – SSE orientation, traversing the site with 3 m regular intervals. These anomalies have been identified as historical ploughing.
- 4.2.7 Two broad linear areas of weak positive anomalies were identified within the site. They indicate weak geological features on site.

5 DISCUSSION

- 5.1.1 The gradiometer survey has not identified any anomalies that can confidently be interpreted as archaeology. Several anomalies of possible archaeological origin have been identified. These include several parallel ditch features interpreted as possible parts of a prehistoric field system noted in the surrounding area. Additionally, two large oval pit features suggest a possible Neolithic long barrow, however, it is more likely that they relate to WW1 or WW2 activities known from the wider region. A pit alignment of an unknown origin has been identified on site, possibly forming part of the wider prehistoric field system.
- 5.1.2 Evidence for historical ploughing has been identified across the site.
- 5.1.3 The remaining features are identified as geological in origin.



REFERENCES

- Brett, M. 2001. *Land to the West of the Inn at the High Post, Salisbury, Wiltshire. Archaeological Evaluation*. Cirencester: Cotswold Archaeology.
- British Geological Survey 2024. *Geology of Britain Viewer*
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed September 2024).
- Chartered Institute for Archaeologists [CIfA] 2014 *Standards and guidance for archaeological geophysical survey*. Reading, CIfA.
- Ordnance Survey 1983 *Soil Survey of England and Wales Sheet 5, Soils of South West England*. Southampton.
- Powell, A. 2011. *An Iron Age Enclosure and Romano-British Features at High Post, near Salisbury*. Salisbury: Wessex Archaeology.
- Schmidt, A., Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A. and Fassbinder, J. 2015. *Guidelines for the use of geophysics in archaeology: questions to ask and points to consider*. EAC Guidelines 2, Belgium: European Archaeological Council.
- Wessex Archaeology 2008. *Chemring Countermeasures, High Post, Salisbury, Wiltshire: Archaeological Evaluation Report*. Salisbury: unpublished report, ref. 69541.03.
- Wessex Archaeology 2024 *Project Spitfire, High Post, Wiltshire: Historic Environment Desk-Based Assessment*. Salisbury; unpublished report, ref. 253791.03

APPENDICES

Appendix 1 Survey equipment and data processing

Survey methods and equipment

The magnetic data for this project were acquired using a non-magnetic hand-pushed cart fitted with four SenSys FGM650/3 magnetic gradiometers.

The instrument has four sensor assemblies fixed horizontally 1 m apart allowing four traverses to be recorded simultaneously. Each sensor contains two fluxgate magnetometers arranged vertically with a 0.6 m separation and measures the difference between the vertical components of the total magnetic field within each sensor array. This arrangement of magnetometers suppresses any diurnal or low frequency effects.

The gradiometers have an effective resolution of $\pm 8 \mu\text{T}$ over $\pm 1000 \text{ nT}$ range. All of the data will be then relayed to a CS35 tablet, running the MONMX program, which is used to record the survey data from the array of FGM650/3 probes at a rate of 100 Hz. The program also receives measurements from a GPS system, which is fixed to the cart at a measured distance from the sensors, providing real time locational data for each data point.

The cart-based system relies upon accurate GPS location data which is collected using a Carlson BRX-7 RTK system. This receives corrections from a network of reference stations operated by the Ordnance Survey, allowing positions to be determined with a precision of 0.02 m in real-time and therefore exceed the level of accuracy recommended by European Archaeologiae Consilium (Schmidt *et al.* 2015).

Post-processing

The magnetic data collected during the detail survey were downloaded from the Sensys system for processing and analysis using both commercial and in-house software. This software allows for both the data and the images to be processed in order to enhance the results for analysis; however, it should be noted that minimal data processing was conducted so as not to distort the anomalies.

The cart-based system generally requires a lesser amount of post-processing than the handheld instrument. This is largely because mounting the gradiometers on the cart reduces the occurrence of operator error, caused by inconsistent walking speeds and deviation in traverse position due to varying ground cover and topography.

Typical data and image processing steps include:

- Destripe – Applying a zero-mean traverse in order to remove differences caused by directional effects inherent in the magnetometer;
- Destagger – Shifting each traverse longitudinally by a number of readings. This corrects for operator errors and is used to enhance linear features;
- Despike – Filtering isolated data points that exceed the mean by a specified amount to reduce the appearance of dominant anomalous readings (generally only used for earth resistance data)

Typical displays of the data used during processing and analysis:



- Greyscale – Presents the data in plan view using a greyscale to indicate the relative strength of the signal at each measurement point. These plots can be produced in colour to highlight certain features but generally greyscale plots are used during analysis of the data.



Appendix 2: Geophysical interpretation

The interpretation methodology used by Wessex Archaeology separates the anomalies into four main categories: archaeological, modern, agricultural, and uncertain origin/geological.

The archaeological category is used for features when the form, nature and pattern of the anomaly are indicative of archaeological material. Further sources of information such as aerial photographs may also have been incorporated in providing the final interpretation. This category is further sub-divided into three groups, implying a decreasing level of confidence:

- Archaeology – used when there is a clear geophysical response and anthropogenic pattern.
- Possible archaeology – used for features which give a response, but which form no discernible pattern or trend.

The modern category is used for anomalies that are presumed to be relatively modern in date:

- Ferrous – used for responses caused by ferrous material. These anomalies are likely to be of modern origin.
- Modern service – used for responses considered relating to cables and pipes; most are composed of ferrous/ceramic material although services made from non-magnetic material can sometimes be observed.

The agricultural category is used for the following:

- Former field boundaries – used for ditch sections that correspond to the position of boundaries marked on earlier mapping.
- Ridge and furrow – used for broad and diffuse linear anomalies that are considered to indicate areas of former ridge and furrow.
- Ploughing – used for well-defined narrow linear responses, usually aligned parallel to existing field boundaries.
- Drainage – used to define the course of ceramic field drains that are visible in the data as a series of repeating bipolar (black and white) responses.

The uncertain origin/geological category is used for features when the form, nature and pattern of the anomaly are not sufficient to warrant a classification as an archaeological feature. This category is further sub-divided into:

- Increased magnetic response – used for areas dominated by indistinct anomalies which may have some archaeological potential.
- Trend – used for low amplitude or indistinct linear anomalies.
- Superficial geology – used for diffuse edged spreads considered to relate to shallow geological deposits. They can be distinguished as areas of positive, negative, or broad bipolar (positive and negative) anomalies.



Appendix 3 OASIS form

OASIS Summary for wessexar1-528190

OASIS ID (UID)	wessexar1-528190
Project Name	Geophysical Survey at Project Spitfire – Site 2
Sitename	Project Spitfire – Site 2
Sitecode	253792.03
Project Identifier(s)	Project Spitfire – Site 2, 253790.03
Activity type	Geophysical Survey, MAGNETOMETRY SURVEY
Planning Id	
Reason For Investigation	Planning: Pre application
Organisation Responsible for work	Wessex Archaeology
Project Dates	02-Sep-2024 - 02-Sep-2024
Location	Project Spitfire – Site 2 NGR : SU 15105 36795 LL : 51.130238562592105, -1.785510547059592 12 Fig : 415105,136795
Administrative Areas	Country : England County/Local Authority : Wiltshire Local Authority District : Wiltshire Parish : Durnford
Project Methodology	The cart-based gradiometer system used a Carlson BRX-7 RTK GNSS instrument, which receives corrections from a network of reference stations operated by the OS. Such instruments allow positions to be determined with a precision of 0.02 m in real-time and therefore exceeds Europae Archaeologiae Consilium recommendations (Schmidt et al. 2015). The survey was conducted using four Sensys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart. Data were collected with an effective sensitivity of $\pm 8 \mu\text{T}$ over $\pm 1000 \text{ nT}$ range at a rate of 100 Hz, producing intervals of 0.02 m along transects spaced 4 m apart.
Project Results	The survey has not identified any anomalies that can confidently be interpreted as archaeology. Several anomalies of possible archaeological origin have been identified. These include several parallel ditch features and a pit alignment interpreted as possible parts of a prehistoric field system noted in the surrounding area. Additionally, two large oval pit features suggest a possible Neolithic long barrow, however, it is more likely that they relate to WW1 or WW2 activities known from the wider region. Evidence for historical ploughing has been identified across the site. The remaining features are identified as geological in origin.
Keywords	
Funder	Private or public corporation Hibberd Development Co LTD
HER	Wiltshire and Swindon HER - unRev - STANDARD
Person Responsible for work	Tom Richardson
HER Identifiers	
Archives	

X:\Projects\253792\GIS_ArcPro\253792_Working.aprx



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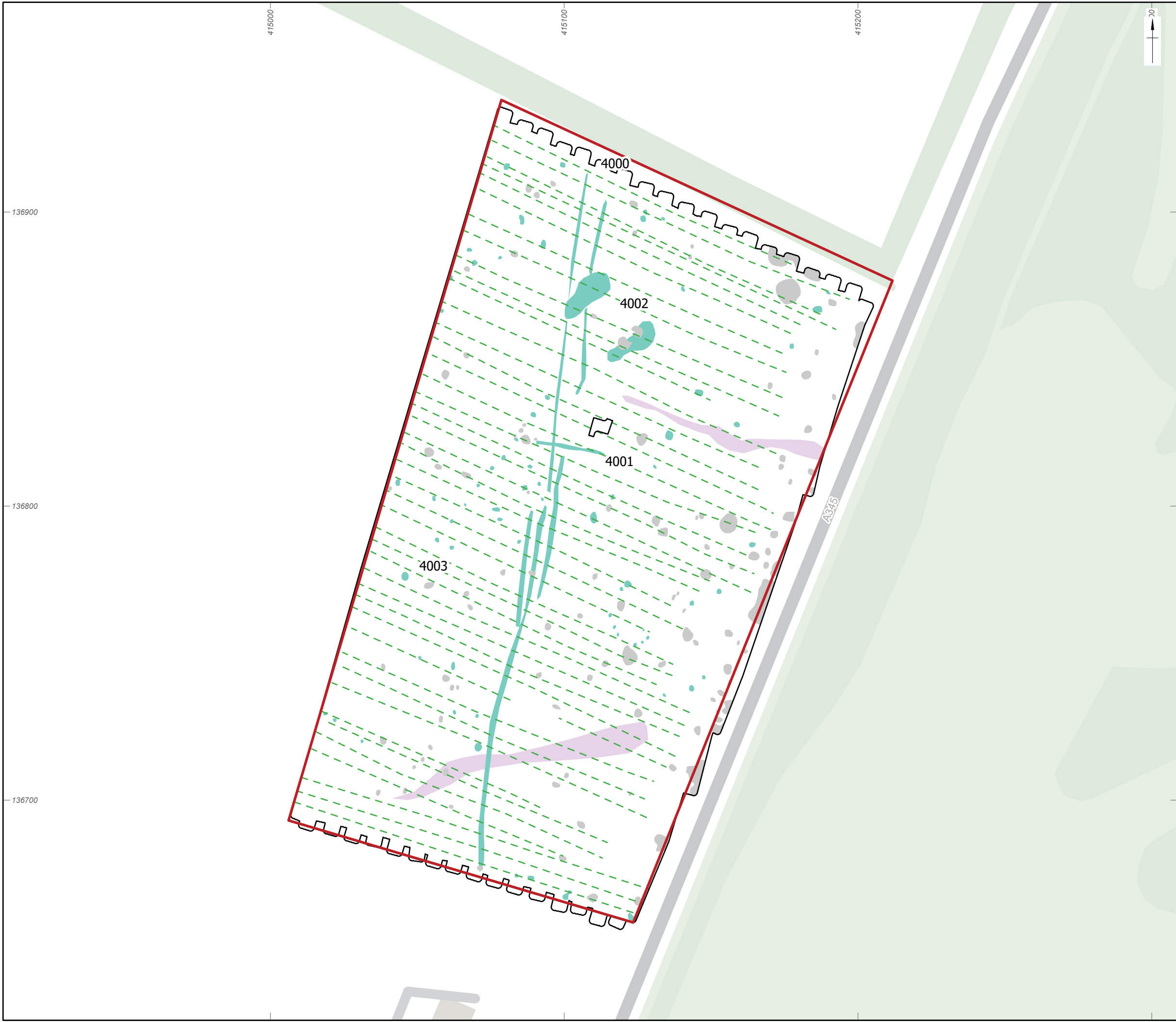
- Site boundary
- Detailed survey extent



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Figure 2: Gradiometer survey results: greyscale plots (-2nT to 3nT)



- Site boundary
- Detailed survey extent
- Possible archaeology
- Historiccultivation
- Geology
- Ferrous

0 50 m

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Scale: 1:1,250	Revision: 0	

Figure 3: Gradiometer survey results: interpretation



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