PCFS/01

NEW ACCESS TRACK, CORFTON FARM, CORFTON, SHROPSHIRE

Geophysical Survey and Archaeological Watching Brief

commissioned by Berrys
on behalf of Corfton Farms Ltd

14/00784/EIA

March 2015

HEADLAND ARCHAEOLOGY

REGISTERED ORGANISATION CIfA

NEW ACCESS TRACK, CORFTON FARM, CORFTON, SHROPSHIRE

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project info

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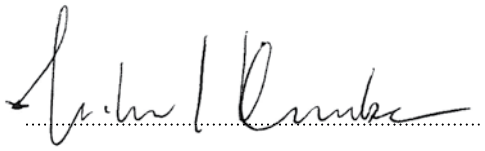

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LIST OF ILLUSTRATIONS

NEW ACCESS TRACK, CORFTON FARM, CORFTON, SHROPSHIRE

Geophysical Survey and Archaeological Watching Brief

Headland Archaeology undertook a watching brief during the construction of a new access track at Corfton Farm, Shropshire. An earlier geophysical survey had identified a number of anomalies of possible archaeological origin. At the southern extent of the access track, a linear ditch measuring 7m in width and 1.95m in depth was identified. No dateable material was recovered from the feature. Although its function is unclear, the feature is potentially comparable to nearby rectilinear cropmarks believed to represent prehistoric enclosures.

1 INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by Berrys on behalf of Corfton Farms Ltd to undertake a geophysical survey and watching brief on the site of a new access track at Corfton Farm near Craven Arms in Shropshire (NGR 349054,284722).

The work was undertaken as a condition of planning permission (App. No. 14/00784/EIA) granted for the erection of four poultry sheds and amendments to the vehicular access to the site.

Conditions 9a and b stated;

a) No development shall commence on site in connection with this approval until the applicant (or agent acting on his behalf) has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted to and approved in writing by the planning authority.

b) The scheme required by condition 9a above shall include provision for the carrying out of a geophysical survey of the proposed access track prior to the commencement date. If the results of the survey indicate that further evaluation is necessary to assess the extent, survival and significance of any archaeological remains then proposals for carrying out this additional survey work shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement date.

A geophysical survey of the access track (Appendix 1) was undertaken in August 2014 and the results submitted to the archaeological advisor to Shropshire County Council. Following consideration of the results, the archaeological advisor requested that an archaeological watching brief be undertaken during topsoil stripping associated with the construction of the new access track.

A written scheme of investigation (Kimber 2014) outlining the proposed methodology was submitted to and approved by the archaeological advisor. Archaeological monitoring of the topsoil strip was undertaken on the 26th and 27th January 2015.

2 SITE DESCRIPTION

Corfton Farm is located to the south-west of the small village of Corfton in Shropshire (**Illus 1**). The farm is currently accessed by a steep tarmac track connecting the main farm buildings to the B4368. The new access track joins the main road approximately 100m to the east of the current entrance, then travels north-west across steeply ascending pasture land before re-joining the existing track after a distance of c.250m.

The underlying geological deposits of the site are recorded as Siltstone of the Upper Ludlow Shales Group. At the southern extent of the site (at the base of the valley) Downton Castle Sandstone is recorded as the bedrock geology. There is no recorded drift geology (BGS 2015).

Corfton Farm

Bungalow

348850

348950

349050

284900

284800

284700

Pond

Well

B 4368

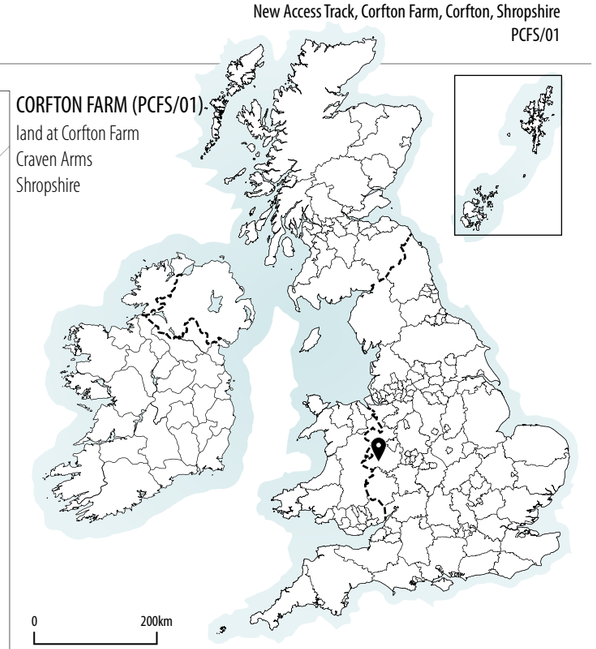
108

107

106

102

CORFTON FARM (PCFS/01)
land at Corfton Farm
Craven Arms
Shropshire



KEY
- site boundary/access track
- geophysics area
- bedrock [104]
- silty clay [105]

N
0
50m
scale 1:1,400 @ A3

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ILLUS 1
Site location

ILLUS 2
General view of access track during stripping (camera facing SE)

2.1 ARCHAEOLOGICAL BACKGROUND

A Heritage Impact Assessment (Morriss 2014) produced in support of the planning application identified three heritage assets relating to archaeology located with the vicinity of the access track; A Neolithic stone axe (HER PRN 02733) recovered from Corfton village, a rectilinear cropmark (HER PRN 04894) situated in the field immediately to the west of the proposed access track and residual ridge and furrow (HER PRN 20934) to the north-east of Corfton Farm.

A review of the Shropshire Sites and Monuments Record by the archaeological advisor identified further heritage assets within the vicinity of the site. A second cropmark enclosure c.340m south of Corfton Farm (HER PRN 04186) also located in the field adjacent to the access track was identified.

The route of the Greensforge to Central Wales Roman Road (HER PRN 04076) follows the B4368 immediately to the south of the proposed access track.

An examination of the associated aerial photography for the two enclosures suggested that HER PRN 04894 potentially extended into the field in which the proposed new access track was to be located.

Geophysical survey

A detailed gradiometer survey (Prestidge 2014) was undertaken in August 2014 in order to ascertain the archaeological potential along the route of the proposed access road. Two potential archaeological features were identified at the northern end of the proposed track, in the form of parallel linear anomalies thought to represent field boundaries. The boundaries are apparent on mapping of the site between 1884 and 1964 and formerly contained a thin band of woodland.

In the south of the survey area, adjacent to the main road, a broad linear feature was identified. This feature is not present on any historic mapping of the site. A further linear feature on a NW-SE orientation relates to the route of a former track way, visible on mapping (and later aerial photographs) between 1884 and 1999.

No evidence was found for the continuation of the large cropmark enclosure (HER PRN 04894) into the proposed development area.

3 OBJECTIVES

The objectives of the project were:

- to ensure the excavation and recording of any archaeological remains that would be disturbed by the construction of the new access track;
- to produce and deposit a satisfactory archive and disseminate the results of the work via grey-literature reporting and publication as appropriate.

ILLUS 3

SW facing section through deposits

ILLUS 4

NE facing section through ditch [102]

4.2 RECORDING

All recording followed CIfA Standard and Guidance for an archaeological watching brief (CIfA 2014). A plan was made of the stripped area and archaeological features were recorded on pro forma record sheets.

Excavated areas were photographed using 35mm black and white film and 35mm colour slide film. Digital photographs were taken for reference and reporting purposes but will not form part of the site archive.

4 METHOD

4.1 GROUND MONITORING

Monitoring was undertaken over a two day period during the mechanical removal of topsoil deposits from the route of the new access track (**Illus 2**).

All monitoring was undertaken by an archaeologist of ACIfA level experience. Excavation works were undertaken by the principal contractor using a mechanical excavator fitted with a flat-bladed bucket. The excavated areas were closely examined for any features and the spoil was re-examined in order to collect any artefacts. Sufficient time was afforded to the archaeologist to undertake recording of the exposed deposits.

5 RESULTS

Full context descriptions are provided in Appendix 2.

Topsoil and the upper deposits of subsoil were removed across the site to either construction formation level, or the level of bedrock. Site formation level varied between 0.50m and 0.75m below ground level.

5.1 GENERAL SITE STRATIGRAPHY

The southern extent of the access track was located at the base of a NW-SE aligned slope. Topsoil [100] consisted of a mid-brown silty clay (0.25m in depth) and overlay a light brown silty clay subsoil [101] measuring 0.50m in depth. A yellow, laminated siltstone bedrock [104] was present at a depth of 0.75m below ground level. The substantial depth of deposits overlying bedrock at the base of the slope is believed to be the result of soil creep.

A continuation of the soil strip upslope (to the north-west) identified a significant reduction in the depth of subsoil deposits (**Illus 3**). In the eastern half of the site bedrock [104] was identified within 0.35m of the surface. In the west of the site, the new access track appeared to be located within a NW-SE aligned valley filled with a grey silty clay [105] potentially representing an alluvial deposit.

5.2 ARCHAEOLOGICAL FEATURES

At the southern extent of the access track a NE-SW orientated linear feature [102] was identified (**Illus 4**). The ditch, which measured 7.00m in width was sealed beneath subsoil deposit [101] at a depth of 0.75m below ground level. Due to its significant depth a 2.00m wide slot was machine excavated through the feature in controlled spits, with all spoil being screened for artefacts.

ILLUS 5
Furrow [106] (camera facing SE)

The light-mid brown silty clay fill [103] of the feature was homogenous throughout and contained no artefacts. The profile was regular with sides of approximately 45° terminating in a rounded base at a depth of 1.95m. Groundwater penetrated into the feature at a depth of c.1.80m.

The ditch relates to a linear anomaly identified by the geophysical survey as spanning the full width of the survey area (c.100m)

A further linear [106] was identified on a NW-SE orientation (**Illus 5**). The feature, measuring 60m in length, was cut into the bedrock [104] to a depth of c.0.10m and varied in width between 1.30m and 2.30m. The shallow, concave profile of the feature was filled with the overlying subsoil deposit [105]. The feature appears to represent a furrow base, the broad nature of which may suggest a medieval or post-medieval date. The relationship of the feature to ditch [102] was not clear, however, the furrow did not appear to continue as far south as the ditch.

5.3 MODERN FEATURES

A NW-SE aligned linear feature [107] comprised of stone rubble is believed to represent a drainage trench that was excavated by the current incumbents of Corfton Farm (Mr. Steven Povall, pers comm) The location of the feature correlated with a geophysical anomaly interpreted as being of probable natural origin.

A French drain [108] located on a NE-SW orientation towards the northern end of the access road correlated with the alignment of a linear anomaly identified by geophysical survey. The anomaly was considered to relate to a field boundary associated with a former area of woodland, however, the continuation of feature [108] may potentially be the cause of the magnetic disturbance identified by the geophysical survey.

Excavations undertaken at the western extent of the stripped area encountered root disturbance within the topsoil and subsoil deposits, which may explain the magnetic 'noise' encountered at this location by the geophysical survey.

6 DISCUSSION

Archaeological monitoring did not identify any features at the north-west end of the new access track that may relate to a continuation of the cropmark enclosure identified in the adjacent field. The possible enclosure may never have extended into the area subject to soil stripping, or evidence for its presence may have been truncated by subsequent ploughing or tree planting. Subsoil deposits along the western boundary of the strip were disturbed by tree routes which appear to be the likely cause for the magnetic anomalies identified in this area.

A substantial ditch was identified at the base of the slope towards the southern extent of the new access track. Although the ditch did not contain any cultural material, the regular form of the feature identified by both excavation and geophysical survey suggests that it is a man-made feature rather than geological in origin. Although the form of the ditch is relatively well understood, its date and function remain unknown. Although a Roman road is known to be present immediately to the south of the feature, the substantial size of the ditch would appear to rule out the possibility that it represents a roadside drainage ditch. The geophysical survey interpretation suggests that at its western extent the ditch turns to the south. It may be therefore that the feature continues on the southern side of the road and represents the northern ditch to a further enclosure, in common with the enclosure features identified to the west of the new access road.

7 CONCLUSION

The project has achieved its aims and objectives in ensuring the preservation by record of a previously unrecorded heritage asset. A copy of this report will be supplied to the Shropshire HER and the site archive will be prepared and deposited with Ludlow Museum Resource Centre.

8 REFERENCES

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9 APPENDICES

APPENDIX 1 GEOPHYSICAL SURVEY REPORT

GEOPHYSICAL SURVEY REPORT

STRATASCAN™

SUMO Survey Services
SUMO Group Member

Project name:

Corfton Farm, Craven Arms, Shropshire

Client:

Headland Archaeology - Midlands and West

August 2014

Job ref:
J7258

Report author:
Orlando J. Prestidge BA (Hons) MA AIfA

Rebecca Davies BSc (Hons)

GEOPHYSICAL SURVEY REPORT

Project name:
Corfton Farm, Craven Arms, Shropshire
Client:
Headland Archaeology - Midlands and West

Job ref:
J7258

Techniques:
Detailed magnetic survey – Gradiometry

Survey date:
11 August 2014

Site centred at:
SO 491 849

Post code:
SY7 9DD

Field team:
Tim Coombs MSc PIfA,
John Pykett
Project manager:
Simon Haddrell BEng(Hons) AMBCS PIFA

Report written By:
Orlando J. Prestidge BA (Hons) MA AIfA
Rebecca Davies BSc (Hons)
CAD illustrations by:
Orlando J. Prestidge BA (Hons) MA AIFA

Checked by:
David Elks MSc AIFA

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1 SUMMARY OF RESULTS

A detailed gradiometry survey was conducted over approximately 2.15 hectares of grassland at Corfton Farm, Craven Arms. Two archaeological features have been identified, in the form of parallel field boundaries formerly containing an area of woodland. A further possible former field boundary has also been identified, along with a former track way.

Other features identified are likely modern or natural in origin. These consist of magnetic disturbance related to field boundaries and fences, areas of scattered magnetic debris, natural geological/pedological variation and isolated magnetic spikes.

2 INTRODUCTION

2.1 Background synopsis

Stratascan were commissioned to undertake a geophysical survey of an area outlined for development. This survey forms part of an archaeological investigation being undertaken by Headland Archaeology – Midlands and West.

2.2 Site location

The site is located north-west of the B4368 near Diddlebury, Shropshire at OS ref. SO 491 849. The site sits to the north of the B4368 road and south west of the hamlet of Corfton itself.

2.3 Description of site

The survey area is approximately 2.15 hectares of grassland used as pasture. The site is largely unobstructed aside from a number of trees that are scattered across the site.

2.4 Geology and soils

The underlying geology is Upper Ludlow Shales Group – Siltstone (British Geological Survey website). There is no recorded drift geology (British Geological Survey website).

The overlying soils are known as Munslow which are typical brown earth soils. These consist of well drained coarse silty soils over siltstone (Soil Survey of England and Wales, Sheet 3 Midland and Western England).

2.5 Site history and archaeological potential

The following is taken from the Heritage Impact Assessment produced by Richard K Morriss & Associates (2014) and provided by Headland Archaeology:

"Impact Proposals have been made to build four poultry units to the north of the main farmstead of Corfton Farm, in the parish of Diddlebury in the Corvedale. There are no listed buildings on the site but it is within the Shropshire Hills Area of Outstanding Natural Beauty."

"….One scheduled ancient monument is within 500m or so of the site but the views from it towards the study area restricted."

No heritage assets are present within the survey area, although a number are recorded within 500m of it (Shropshire Heritage Environment Record (HER) 2014). These include former enclosures located to the south of Corfton Farm. One of these is visible as a crop mark in the field directly west of the survey area. The mound (motte) of Corfton's Norman Castle sits within 1km distance to the south of the site whilst the site of the former Corfton Hall is located 500m to the east (Shropshire HER).

2.6 Survey objectives

The objective of the survey was to locate any features of possible archaeological origin in order that they may be assessed prior to a poultry farm development.

2.7 Survey methods

This report and all fieldwork have been conducted in accordance with both the English Heritage guidelines outlined in the document: *Geophysical Survey in Archaeological Field Evaluation, 2008* and with the Institute for Archaeologists document *Standard and Guidance for Archaeological Geophysical Survey.*

Detailed magnetic survey (gradiometry) was used as an efficient and effective method of locating archaeological anomalies. Magnetometer surveys can be recommended over any sedimentary geology (English Heritage 2008) so it was chosen as the most appropriate survey method. More information regarding this technique is included in Appendix A.

2.8 Processing, presentation and interpretation of results

2.8.1 Processing

Processing is performed using specialist software. This can emphasise various aspects contained within the data but which are often not easily seen in the raw data. Basic processing of the magnetic data involves 'flattening' the background levels with respect to adjacent traverses and adjacent grids. Once the basic processing has flattened the background it is then possible to carry out further processing which may include low pass filtering to reduce 'noise' in the data and hence emphasise the archaeological or man-made anomalies.

The following schedule shows the basic processing carried out on all minimally processed gradiometer data used in this report:

1. *Destripe* (Removes striping effects caused by zero-point discrepancies between different sensors and walking directions)
2. *Destagger* (Removes zigzag effects caused by inconsistent walking speeds on sloping, uneven or overgrown terrain)

2.8.2 Presentation of results and interpretation

The presentation of the data for each site involves a print-out of the minimally processed data both as a greyscale plot and a colour plot showing extreme magnetic values. Magnetic anomalies have been identified and plotted onto the 'Abstraction and Interpretation of Anomalies' drawing for the site.

3 RESULTS

The detailed magnetic gradiometer survey conducted at Corfton Farm has identified a number of anomalies that have been characterised as being either of a *probable* or *possible* archaeological origin.

The difference between *probable* and *possible* archaeological origin is a confidence rating. Features identified within the dataset that form recognisable archaeological patterns or seem to be related to a deliberate historical act have been interpreted as being of a probable archaeological origin.

Features of possible archaeological origin tend to be more amorphous anomalies which may have similar magnetic attributes in terms of strength or polarity but are difficult to classify as being archaeological or natural.

The following list of numbered anomalies refers to numerical labels on the interpretation plots.

3.1 Probable Archaeology

1 Linear anomalies related to former field boundaries. Visible on mapping between 1884 and 1964.

3.2 Possible Archaeology

2 Linear anomaly possibly related to former field boundary. Not visible on available historic mapping.

3.3 Other Anomalies

3 An area of disturbed ground relating to a former area of woodland which is visible on historic mapping between 1884 and 1964.

4 Linear/debris anomalies relating to a former track way visible on mapping and later on aerial photographs between 1884 and 1999.

5 Areas of magnetic disturbance are the result of substantial nearby ferrous metal objects such as fences and underground services. These effects can mask weaker archaeological anomalies, but on this site have not affected a significant proportion of the area.

6 Scattered magnetic debris, likely of modern origin.

7 Area of amorphous magnetic variation, probably natural (e.g. pedological or geological) in origin.

8 A number of magnetic 'spikes' (strong focussed values with associated antipolar response) indicate ferrous metal objects. These are likely to be modern rubbish.

4 CONCLUSION

The survey at Corfton Farm has identified two features of archaeological interest. These relate to two parallel field boundaries, visible in the north of the site, formerly located either side of a thin band of woodland. These are apparent on mapping between 1884 and 1964.

A further linear feature, running parallel to the road at the survey areas southern border, is thought to be a former field boundary. However this is not visible on available historic mapping. Another linear feature, and associated areas of debris relate to the route of a former track way, visible on mapping (and later aerial photographs) between 1884 and 1999.

The field directly to the west of the survey area has a large crop mark enclosure visible. However, there is no evidence to suggest that this feature continues into the survey area, and it appears to stop before the farm track that serves as a boundary between the two fields.

Other features identified are likely modern or natural in origin. These consist of magnetic disturbance related to field boundaries and fences, areas of scattered magnetic debris, natural geological/pedological variation and isolated magnetic spikes.

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APPENDIX A – METHODOLOGY & SURVEY EQUIPMENT

Grid locations

The location of the survey grids has been plotted together with the referencing information. Grids were set out using a Leica 705auto Total Station and referenced to suitable topographic features around the perimeter of the site or a Leica Smart Rover RTK GPS.

An RTK GPS (Real-time Kinematic Global Positioning System) can locate a point on the ground to a far greater accuracy than a standard GPS unit. A standard GPS suffers from errors created by satellite orbit errors, clock errors and atmospheric interference, resulting in an accuracy of 5m-10m. An RTK system uses a single base station receiver and a number of mobile units. The base station re-broadcasts the phase of the carrier it measured, and the mobile units compare their own phase measurements with those they received from the base station. A SmartNet RTK GPS uses Ordnance Survey's network of over 100 fixed base stations to give an accuracy of around 0.01m.

Survey equipment and gradiometer configuration

Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.2 nanoTeslas (nT) in an overall field strength of 48,000nT, can be accurately detected using an appropriate instrument.

The mapping of the anomaly in a systematic manner will allow an estimate of the type of material present beneath the surface. Strong magnetic anomalies will be generated by buried iron-based objects or by kilns or hearths. More subtle anomalies such as pits and ditches can be seen if they contain more humic material which is normally rich in magnetic iron oxides when compared with the subsoil.

To illustrate this point, the cutting and subsequent silting or backfilling of a ditch may result in a larger volume of weakly magnetic material being accumulated in the trench compared to the undisturbed subsoil. A weak magnetic anomaly should therefore appear in plan along the line of the ditch.

The magnetic survey was carried out using a dual sensor Grad601-2 Magnetic Gradiometer manufactured by Bartington Instruments Ltd. The instrument consists of two fluxgates very accurately aligned to nullify the effects of the Earth's magnetic field. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background. The Grad601-2 consists of two high stability fluxgate gradiometers suspended on a single frame. Each gradiometer has a 1m separation between the sensing elements so enhancing the response to weak anomalies.

Sampling interval

Readings were taken at 0.25m centres along traverses 1m apart. This equates to 3600 sampling points in a full 30m x 30m grid.

Depth of scan and resolution

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m, though strongly magnetic objects may be visible at greater depths. The collection of data at 0.25m centres provides an optimum methodology for the task balancing cost and time with resolution.

Data capture

The readings are logged consecutively into the data logger which in turn is daily down- loaded into a portable computer whilst on site. At the end of each site survey, data is transferred to the office for processing and presentation.

APPENDIX B – BASIC PRINCIPLES OF MAGNETIC SURVEY

Detailed magnetic survey can be used to effectively define areas of past human activity by mapping spatial variation and contrast in the magnetic properties of soil, subsoil and bedrock.

Weakly magnetic iron minerals are always present within the soil and areas of enhancement relate to increases in *magnetic susceptibility* and permanently magnetised *thermoremanent* material.

Magnetic susceptibility relates to the induced magnetism of a material when in the presence of a magnetic field. This magnetism can be considered as effectively permanent as it exists within the Earth's magnetic field. Magnetic susceptibility can become enhanced due to burning and complex biological or fermentation processes.

Thermoremanence is a permanent magnetism acquired by iron minerals that, after heating to a specific temperature known as the Curie Point, are effectively demagnetised followed by re-magnetisation by the Earth's magnetic field on cooling. Thermoremanent archaeological features can include hearths and kilns and material such as brick and tile may be magnetised through the same process.

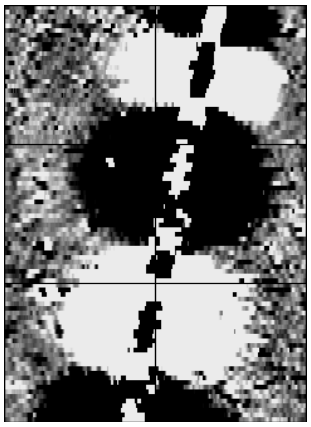
Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement allowing assessment and characterisation of subsurface features. Material such as subsoil and non-magnetic bedrock used to create former earthworks and walls may be mapped as areas of lower enhancement compared to surrounding soils.

Magnetic survey is carried out using a fluxgate gradiometer which is a passive instrument consisting of two sensors mounted vertically 1m apart. The instrument is carried about 30cm above the ground surface and the top sensor measures the Earth's magnetic field whilst the lower sensor measures the same field but is also more affected by any localised buried field. The difference between the two sensors will relate to the strength of a magnetic field created by a buried feature, if no field is present the difference will be close to zero as the magnetic field measured by both sensors will be the same.

Factors affecting the magnetic survey may include soil type, local geology, previous human activity, disturbance from modern services etc.

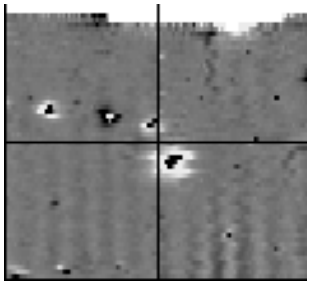
APPENDIX C – GLOSSARY OF MAGNETIC ANOMALIES

Bipolar



A bipolar anomaly is one that is composed of both a positive response and a negative response. It can be made up of any number of positive responses and negative responses. For example a pipeline consisting of alternating positive and negative anomalies is said to be bipolar. See also dipolar which has only one area of each polarity. The interpretation of the anomaly will depend on the magnitude of the magnetic field strength. A weak response may be caused by a clay field drain while a strong response will probably be caused by a metallic service.

Dipolar

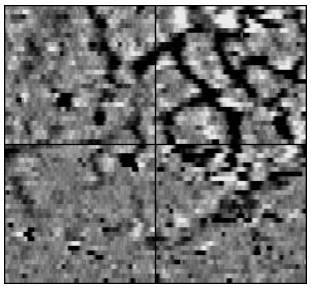


This consists of a single positive anomaly with an associated negative response. There should be no separation between the two polarities of response. These responses will be created by a single feature. The interpretation of the anomaly will depend on the magnitude of the magnetic measurements. A very strong anomaly is likely to be caused by a ferrous object.

Positive anomaly with associated negative response

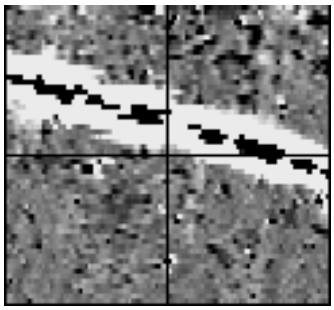
See bipolar and dipolar.

Positive linear



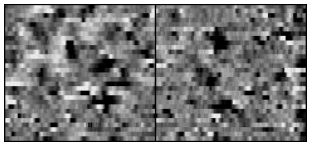
A linear response which is entirely positive in polarity. These are usually related to in-filled cut features where the fill material is magnetically enhanced compared to the surrounding matrix. They can be caused by ditches of an archaeological origin, but also former field boundaries, ploughing activity and some may even have a natural origin.

Positive linear anomaly with associated negative response



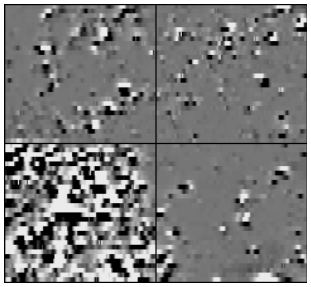
A positive linear anomaly which has a negative anomaly located adjacently. This will be caused by a single feature. In the example shown this is likely to be a single length of wire/cable probably relating to a modern service. Magnetically weaker responses may relate to earthwork style features and field boundaries.

Positive point/area



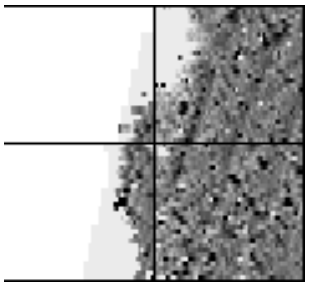
These are generally spatially small responses, perhaps covering just 3 or 4 reading nodes. They are entirely positive in polarity. Similar to positive linear anomalies they are generally caused by in-filled cut features. These include pits of an archaeological origin, possible tree bowls or other naturally occurring depressions in the ground.

Magnetic debris



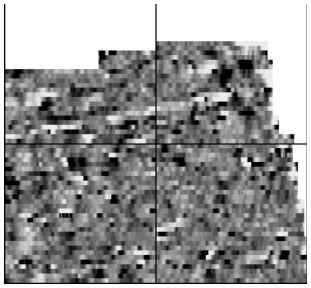
Magnetic debris consists of numerous dipolar responses spread over an area. If the amplitude of response is low (+/-3nT) then the origin is likely to represent general ground disturbance with no clear cause, it may be related to something as simple as an area of dug or mixed earth. A stronger anomaly (+/-250nT) is more indicative of a spread of ferrous debris. Moderately strong anomalies may be the result of a spread of thermoremanent material such as bricks or ash.

Magnetic disturbance



Magnetic disturbance is high amplitude and can be composed of either a bipolar anomaly, or a single polarity response. It is essentially associated with magnetic interference from modern ferrous structures such as fencing, vehicles or buildings, and as a result is commonly found around the perimeter of a site near to boundary fences.

Negative linear

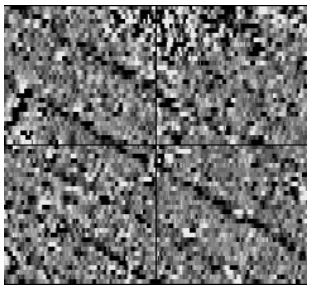


A linear response which is entirely negative in polarity. These are generally caused by earthen banks where material with a lower magnetic magnitude relative to the background top soil is built up. See also ploughing activity.

Negative point/area

Opposite to positive point anomalies these responses may be caused by raised areas or earthen banks. These could be of an archaeological origin or may have a natural origin.

Ploughing activity



Ploughing activity can often be visualised by a series of parallel linear anomalies. These can be of either positive polarity or negative polarity depending on site specifics. It can be difficult to distinguish between ancient ploughing and more modern ploughing. Clues such as the separation of each linear, straightness, strength of response and cross cutting relationships can be used to aid this, although none of these can be guaranteed to differentiate between different phases of activity.

Polarity

Term used to describe the measurement of the magnetic response. An anomaly can have a positive polarity (values above 0nT) and/or a negative polarity (values below 0nT).

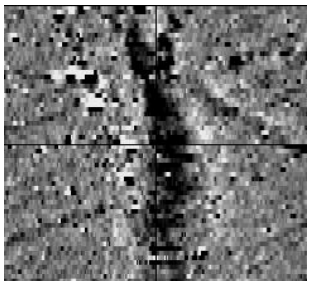
Strength of response

The amplitude of a magnetic response is an important factor in assigning an interpretation to a particular anomaly. For example a positive anomaly covering a 10m^2 area may have values up to around 3000nT, in which case it is likely to be caused by modern magnetic interference. However, the same size and shaped anomaly but with values up to only 4nT may have a natural origin. Colour plots are used to show the amplitude of response.

Thermoremanent response

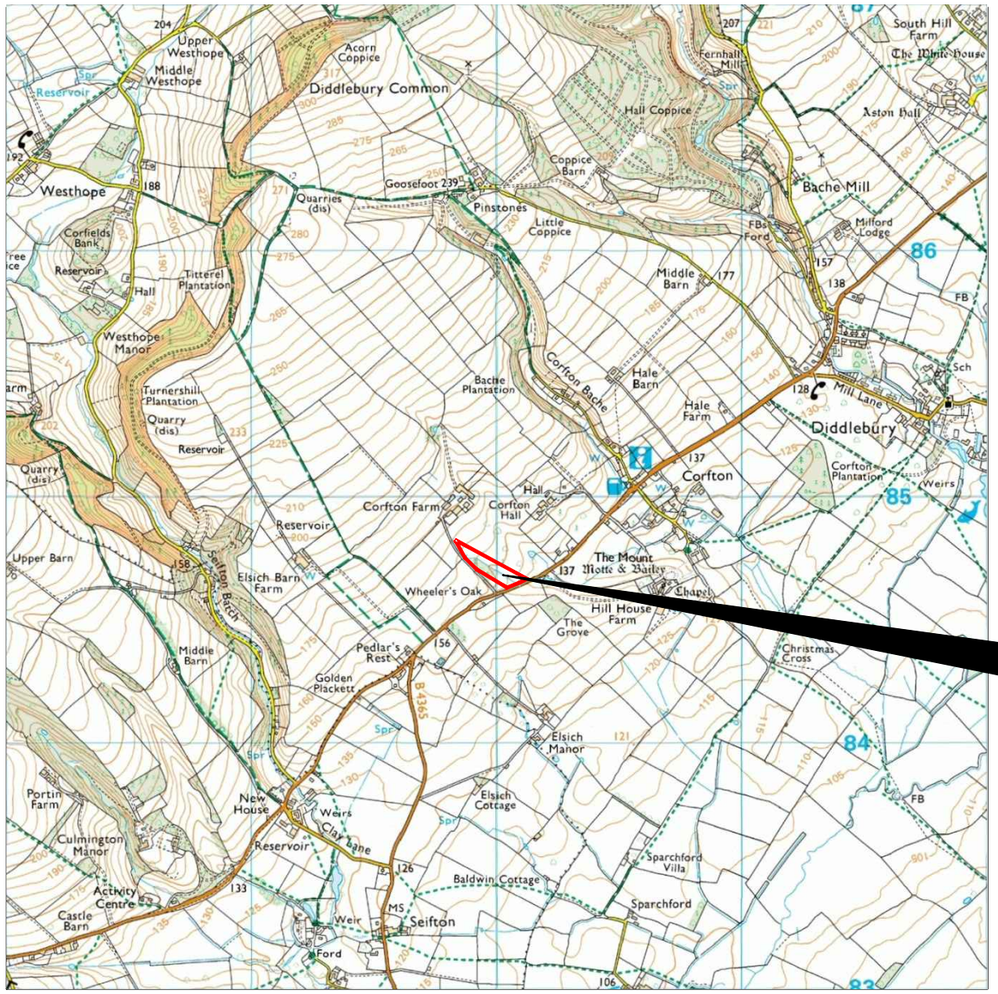
A feature which has been subject to heat may result in it acquiring a magnetic field. This can be anything up to approximately +/-100 nT in value. These features include clay fired drains, brick, bonfires, kilns, hearths and even pottery. If the heat application has occurred in situ (e.g. a kiln) then the response is likely to be bipolar compared to if the heated objects have been disturbed and moved relative to each other, in which case they are more likely to take an irregular form and may display a debris style response (e.g. ash).

Weak background variations



Weakly magnetic wide scale variations within the data can sometimes be seen within sites. These usually have no specific structure but can often appear curvy and sinuous in form. They are likely to be the result of natural features, such as soil creep, dried up (or seasonal) streams. They can also be caused by changes in the underlying geology or soil type which may contain unpredictable distributions of magnetic minerals, and are usually apparent in several locations across a site.

87
86
85
84
83



47 48 49 50 51

N

Amendments

Issue No.	Date	Description
-	-	-
-	-	-

Site centred on NGR: SO 491 849

Client: HEADLAND ARCHAEOLOGY - MIDLANDS AND WEST

Project Title: GEOPHYSICAL SURVEY - CORFTON FARM, CRAVEN ARMS, SHROPSHIRE

Job No. 7258

Subject: LOCATION PLAN OF SURVEY AREA

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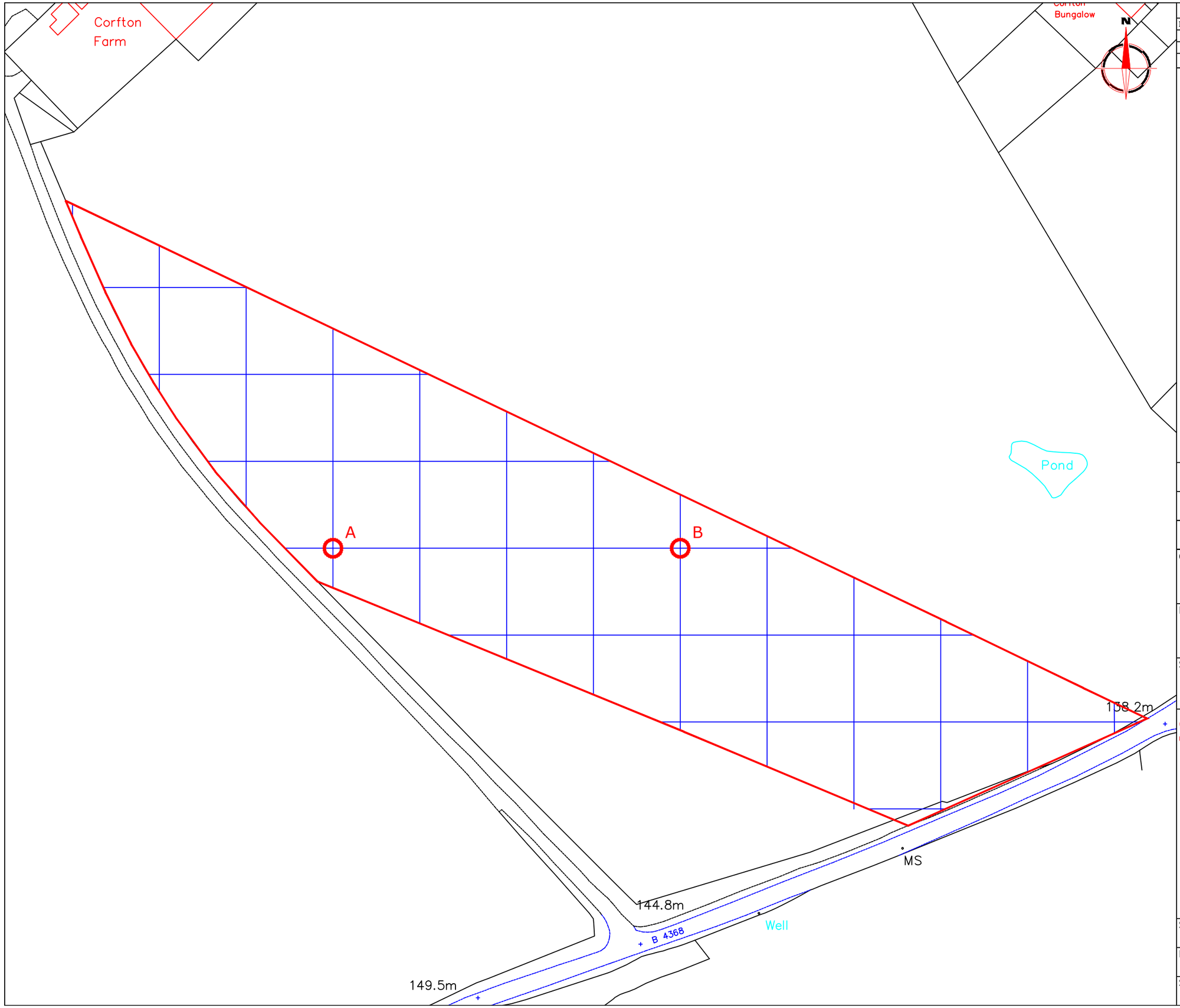
SUMO GROUP MEMBER

Scale: 1:25000 (0m 500 1000m)

Plot	Checked by	Issue No.
A3	DGE	01
Survey date	Drawn by	Figure No.
AUG 14	OJP	01



Amendments

Issue No.	Date	Description
-	-	-
-	-	-

OS GRID REFERENCES

A	348903.67, 284749.01
B	349023.67, 284749.01

Client
HEADLAND ARCHAEOLOGY - MIDLANDS AND WEST

Project Title — Job No. 7258
GEOPHYSICAL SURVEY - CORFTON FARM, CRAVEN ARMS, SHROPSHIRE

Subject
LOCATION OF SURVEY GRIDS AND REFERENCING

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SUMO GROUP MEMBER

Scale 1:1250 — 0m 10 20 30 40 50m

Plot	Checked by	Issue No.
A3	DGE	01
Survey date	Drawn by	Figure No.
AUG 14	OJP	02

Amendments

Issue No.	Date	Description
-	-	-
-	-	-

Plotting parameters

Maximum +100nT (red)
Minimum -100nT (blue)

+100nT
+10nT
-10nT
-100nT

Client
HEADLAND ARCHAEOLOGY - MIDLANDS AND WEST

Project Title — Job No. 7258
GEOPHYSICAL SURVEY - CORFTON FARM, CRAVEN ARMS, SHROPSHIRE

Subject
COLOUR PLOT OF GRADIOMETER DATA SHOWING EXTREME VALUES

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Scale 1:1250
0m 10 20 30 40 50m

Plot	Checked by	Issue No.
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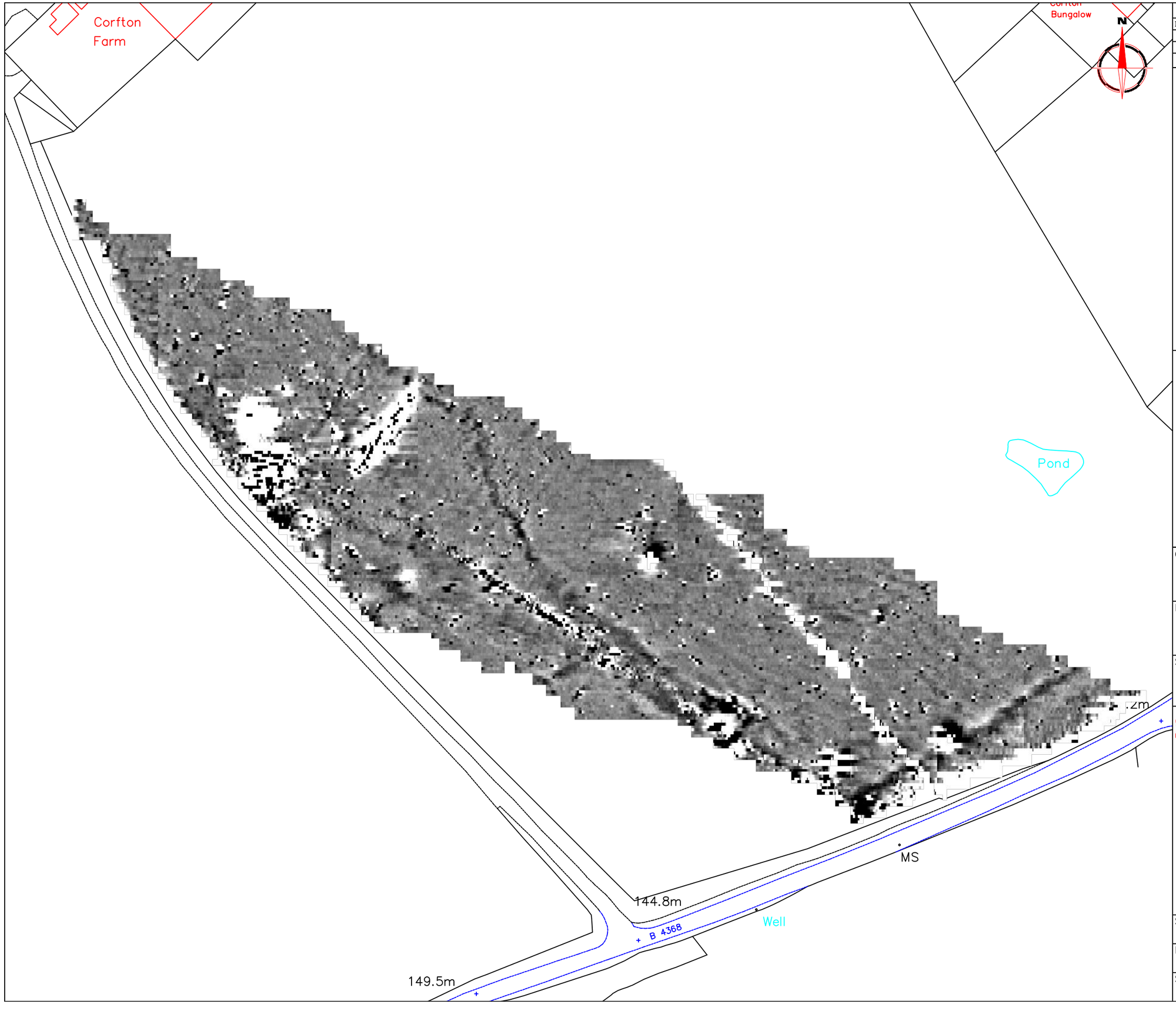
Survey date	Drawn by	Figure No.
AUG 14	OJP	03

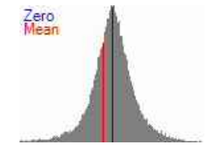


Amendments

Issue No.	Date	Description
-	-	-
-	-	-

Plotting parameters

Maximum +2nT (black)
Minimum -2nT (white)



-2nT +2nT

+2nT

-2nT

Client
HEADLAND ARCHAEOLOGY - MIDLANDS AND WEST

Project Title
GEOPHYSICAL SURVEY - CORFTON FARM, CRAVEN ARMS, SHROPSHIRE

Job No. 7258

Subject
PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA

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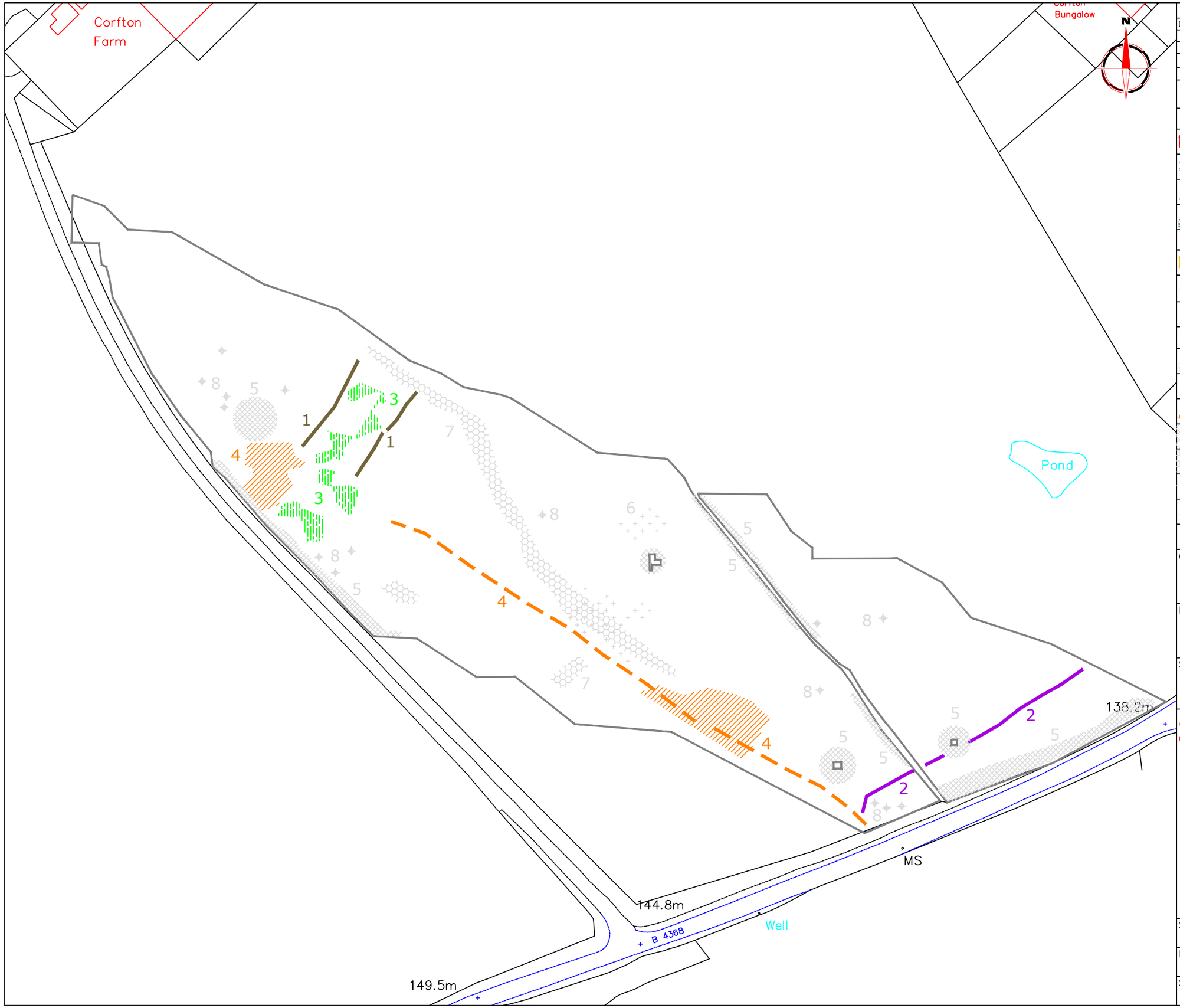
Scale 1:1250

0m 10 20 30 40 50m

Plot	Checked by	Issue No.
A3	DGE	01
Survey date	Drawn by	Figure No.
AUG 14	OJP	04



Amendments

Issue No.	Date	Description
-	-	-
-	-	-

KEY

PROBABLE ARCHAEOLOGY

- Positive anomaly / weak positive anomaly - probable cut feature of archaeological origin
- Negative anomaly / weak negative anomaly - probable bank or earthwork of archaeological origin
- Linear anomaly related to former field boundary (visible on historic mapping between 1884 and 1964)
- Widely spaced curving parallel linear anomalies - probably related to ridge-and-furrow

POSSIBLE ARCHAEOLOGY

- Positive anomaly / weak positive anomaly - possible cut feature of archaeological origin
- Negative anomaly / weak negative anomaly - possible bank or earthwork of archaeological origin
- Linear anomaly possibly related to former field boundary (not visible on historic mapping)

OTHER ANOMALIES

- Closely spaced parallel linear anomalies - probably related to agricultural activity such as ploughing
- Disturbed ground related to former area of woodland (visible on historic mapping between 1884 and 1964))
- Linear/debris anomaly - related to route of former track/footpath (visible on aerial photos and historic mapping between 1884 and 1999)
- Magnetic disturbance associated with nearby metal object such as service or field boundary
- Strong magnetic debris - possible disturbed or made ground
- Scattered magnetic debris
- Area of amorphous magnetic variation - probable natural (e.g. geological or pedological) origin
- Magnetic spike - probable ferrous object

Client
HEADLAND ARCHAEOLOGY - MIDLANDS AND WEST

Project Title — Job No. 7258
GEOPHYSICAL SURVEY - CORFTON FARM, CRAVEN ARMS, SHROPSHIRE

Subject
ABSTRACTION AND INTERPRETATION OF GRADIOMETER ANOMALIES

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A3	DGE	01
Survey date	Drawn by	Figure No.
AUG 14	OJP	05

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APPENDIX 2 CONTEXT REGISTER

Context	Description	Deposit depth (BGL)
100	Mid brown silty clay topsoil.	0.00 – 0.25m
101	Light brown silty clay subsoil present at the southern end of the access track (at the base of the slope). Overlies feature [102].	0.25 – 0.75m
102	Cut for U-shaped ditch at south of stripped area. Located 6.5m to the north of the southern fence line approximately parallel to road. Correlates with feature identified by geophysical survey. 7m wide in plan. Crosses full width of access track (12m) on a NE-SW alignment. Cuts natural bedrock. Regular shape in section with even sides of c.45° to rounded base.	0.75 – 2.65m
103	Fill of [102]. Light-mid brown silty clay. Compact/plastic consistency with a high water content. Groundwater present towards base of feature. Deposit appears to be homogenous and sterile.	0.75 – 2.65m
104	Bedrock – yellow, laminated Siltstone	0.35m+
105	Grey silty clay with a brown hue. Subsoil or colluvial deposit present on upper and middle parts of slope.	0.25 – 0.35m+
106	Broad (varying between 1.3-2.3m), shallow (0.10m) linear feature on NW-SE orientation. Present over southern end of soil strip for a distance of 60m before continuing beyond excavated area to the north. Relationship with [102] not clear. Filled with subsoil deposit [105]. No finds recovered. Appears to represent a plough furrow.	0.35 – 0.45m
107	Stone and rubble backfill of N-S ditch excavated for insertion of drain. 1m wide. Appears to relate to geophysical anomaly.	Not excavated
108	Stone filled French drain on NE-SW alignment. 0.50m wide x 0.50m deep. Located at northern end of access track.	0.35 – 0.85m

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