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BRYN CYNAU ISAF
CWMFFRWD
CARMARTHENSHIRE

GEOPHYSICAL SURVEY
REPORT

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GREEN SWITCH DEVELOPMENTS LTD

BYRN CYNAU ISAF, CWMFFRWD

CARMARTHENSHIRE

GEOPHYSICAL SURVEY REPORT

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SUMMARY

In July 2014 Wardell Armstrong Archaeology undertook a geophysical survey of land at Bryn Cynau Isaf, Cwmffrwd, Carmarthenshire. The survey was undertaken for Green Switch Solutions Ltd, to provide information in support of a planning application for a solar development at the site.

The survey area lies within the four fields to the south of Bryn Cynau Isaf, to the east of Cwmffrwd, in South Wales. The site is centred on Ordnance Survey grid reference SN 4292 1693 and measures approximately 13.8ha in total.

The objective of the geophysical surveys therefore was to determine the presence/absence, nature and extent of potential archaeological features within the study area, and the presence/absence of any known modern features within the survey area, which may affect the results.

The Historic Environment Record contains two entries within the site boundary (HER 1654 and 23010). The geophysical survey appears to have confirmed the site recorded as 'Abercyfor Isaf' (HER 23010), on the east side of the proposed development area, which was detected as a curvilinear enclosure with internal divisions. Two possible rectangular fields or small enclosures were also detected to the south. However, the site of a Roman building (HER 1654) was not detected by the geophysical survey. This building is actually believed to be to the north, at the site of the modern property 'Abercyfor Hall'.

A number of other possible soil-filled ditches and pits were also detected at the site, the nature of which is uncertain. It is possible that some of these were geological features.

1 INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT (FIGURE 1)

1.1.1 Between 28th July and 1st August 2014 Wardell Armstrong Archaeology undertook a geophysical survey of land at Bryn Cynau Isaf, Cwmffrwd, Carmarthenshire. The survey was undertaken for Green Switch Developments Ltd, to provide information in support of a planning application for a solar development at the site. The geophysical survey of the site was required in order to help determine the archaeological potential of the site. This is in line with government advice as set out in Section 12 of the National Planning Policy Framework (NPPF 2012).

1.1.2 The survey area lies within the four fields to the south of Bryn Cynau Isaf, to the east of Cwmffrwd, in Carmarthenshire, Wales (Figure 1 & Figure 2). The site is centred on Ordnance Survey grid reference SN 4292 1693 and measures approximately 13.8ha in total.

1.1.3 An Archaeology and Cultural Heritage Assessment of the site has been undertaken by Wardell Armstrong LLP, which has identified that the Historic Environment Record contains two entries within the site boundary (HER 1654 and 23010). However, it has been identified that there may be some confusion in relation to the location of these sites. Local knowledge suggests the site of a Roman building (HER 1654) is actually to the north, at the site of the modern property 'Abercyfor Hall'. This has not, however, been confirmed archaeologically, and the exact position of this site is still unclear. With regards to the site recorded as 'Abercyfor Isaf' (HER 23010), although this is currently plotted within the site boundary, historical mapping seems to indicate it to have been outside the boundary, at the location of the existing building (Wardell Armstrong LLP 2014, 10).

1.1.4 As a result, a geophysical survey of the site has been requested by Mike Ings, Heritage Management and Planning Archaeologist, Dyfed Archaeological Trust, in order to help determine the archaeological potential of the site. This is in line with Welsh Government advice as set out in Section 6.5 of Planning Policy Wales (2014).

1.1.5 The objective of the geophysical survey was to determine the presence/absence, nature and extent of potential archaeological features within the survey area, and the presence/absence of any known modern features within the survey area, which may affect the results. This report outlines the results of the geophysical survey undertaken, and includes an interpretation of the geophysical survey results, in light of the historical and archaeological background of the site.

2 METHODOLOGY

2.1 STANDARDS

2.1.1 A Written Scheme of Investigation (WSI) for a geophysical survey at the site was submitted to Mike Ings, Heritage Management and Planning Archaeologist, Dyfed Archaeological Trust, prior to the start of the survey (Railton 2014). The WSI was adhered to in full and the work undertaken in accordance with IfA standard and guidance for archaeological geophysical survey (IfA 2011).

2.2 GEOPHYSICAL SURVEYS

2.2.1 ***Technique Selection:*** geomagnetic survey was selected as the most appropriate technique, given the non-igneous environment, and the expected presence of cut archaeological features at depths of no more than 1.5m. This technique involves the use of hand-held gradiometers, which measure variations in the vertical component of the earth's magnetic field. These variations can be due to the presence of sub-surface archaeological features. Data were recorded by the instruments and downloaded into a laptop computer for initial data processing in the field using specialist software.

2.2.2 ***Field Methods:*** the geophysical study area measured *c*.13.8ha in total, and lay within four separate fields (Areas 1-4). A 30m grid was established across each area, and tied-in to known Ordnance Survey points Total Station Theodolite.

2.2.3 Geomagnetic measurements were determined using a Bartington Grad601-2 dual gradiometer system, with twin sensors set 1m apart. It was expected that significant archaeological features at a depth of up to 1.5m would be detected using this arrangement. The survey was undertaken using a zig-zag traverse scheme, with data being logged in 30m grid units. A sample interval of 0.25m was used, with a traverse interval of 1m, providing 3600 sample measurements per grid unit, with measurements being recorded at the centre of each grid cell. The data were downloaded on site into a laptop computer for processing and storage.

2.2.4 ***Data Processing:*** geophysical survey data were processed using Terra Surveyor software, which was used to produce 'grey-scale' images of the raw data. Positive magnetic anomalies are displayed as dark grey, and negative magnetic anomalies are displayed as light grey. A palette bar shows the relationship between the grey shades and geomagnetic values in nT.

2.2.5 Raw data were processed in order to further define and highlight the archaeological features detected. The following basic data processing functions were used:

Despike: to locate and suppress random iron spikes in the gradiometer data (despike was performed on all survey grids using a window of 11x3 and threshold of 2.0).

Destripe: to reduce the effect of striping in the gradiometer data, sometimes caused by misalignment of the twin sensors (zero mean traverse was performed on all survey grids using a threshold of 2 standard deviations).

Destagger: to reduce location inaccuracies in the gradiometer data, sometimes caused by operator error (destagger applied in both x directions by -2 readings).

Clip: to clip data to specified maximum and minimum values, in order to limit large noise spikes in the geophysical data (clipped from -4nT to 4nT).

Interpolate: to match the resolution of the sample intervals in the x and y directions (doubled in the y direction).

2.2.6 ***Interpretation:*** six types of geophysical anomaly were detected in the gradiometer data:

positive magnetic: regions of anomalously high or positive magnetic data, which may be associated with the presence of high magnetic susceptibility soil-filled features, such as pits or ditches.

negative magnetic: regions of anomalously low or negative magnetic data, which may be associated with features of low magnetic susceptibility, such as stone-built features, geological features, land-drains or sub-surface voids.

dipolar magnetic: regions of paired positive and negative magnetic anomalies, which typically reflect ferrous or fired materials, including fired/ferrous debris in the topsoil, or fired structures, such as kilns or hearths.

bipolar magnetic: typically linear anomalies comprising alternating positive and negative magnetic responses, representing buried metallic structures or service pipes.

magnetic disturbance: areas of high amplitude magnetic disturbance or interference, which may be associated with the presence of modern structures, such as services, fences or buildings.

diffuse magnetic: irregular and poorly defined anomalies comprising both positive and negative magnetic responses, typically representing geological variations.

2.2.7 ***Presentation:*** the grey-scale images were combined with site survey data and Ordnance Survey data to produce the geophysical survey figures. Colour-coded geophysical interpretation diagrams are provided, showing the locations and extent of positive, negative, dipolar and bipolar geomagnetic anomalies and areas of magnetic disturbance.

2.2.8 Archaeological interpretation diagrams are also provided, which are based on the interpretation of the geophysical survey results in light of the archaeological and historical context of the site.

2.2.9 Plots of the raw unprocessed data are included in Appendix 1, which are clipped for display purposes only from -10nT to 10nT.

2.3 ARCHIVE

2.3.1 The data archive for the geophysical survey has been created in accordance with the recommendations of the Archaeology Data Service (ADS 2013). This archive is currently held at the company offices at Carlisle, Cumbria. The archive comprises a compressed (zipped) file folder, containing the geophysics data, documentation (metadata), and other project material (report and field notes).

2.3.2 One copy of the final report will be deposited with the County Historic Environment Record, where viewing will be available on request. A digital version will also be provided as a PDF.

3 BACKGROUND

3.1 LOCATION AND GEOLOGICAL CONTEXT (FIGURE 1)

3.1.1 The survey area lies within four fields to the south of Bryn Cynau Isaf, to the east of Cwmffrwd, in Carmarthenshire, Wales (Figure 1 & Figure 2). The site is centred on Ordnance Survey grid reference SN 4292 1693 and measures approximately 13.8ha in total.

3.1.2 The underlying geology over the northern part of the site comprises Lower Old Red Sandstone, sandstone and conglomerate bedrock formed approximately 398 to 416 million years ago in the Devonian Period. The underlying geology over the southern part of the site comprises argillaceous rocks, sandstone and conglomerate of the Milford Haven Group. This sedimentary bedrock was formed approximately approximately 407 to 423 million years ago in the Devonian and Silurian Periods (BGS 2001). These are overlain by glacial till deposits.

3.2 ARCHAEOLOGICAL BACKGROUND

3.2.1 An Archaeology and Cultural Heritage Assessment of the site has been undertaken by Wardell Armstrong LLP, a summary of which is provided below (Wardell Armstrong LLP 2014). This background is based mostly on secondary sources and is intended only as a brief introduction to the historic and archaeology of the site. References to the Historic Environment Record (HER) are included, where known.

3.2.2 ***Prehistoric:*** there is no known evidence for prehistoric activity at the site.

3.2.3 ***Romano-British:*** the Historic Environment Record records a possible Roman building at Abercyfor (HER 1654) on the south side of the proposed development area, which was first recorded in the late 18th century. It was noted in the early 20th century that this Roman building possessed 'a remarkable…tessellated pavement with a prodigious quantity of silver and copper coins of the Lower Empire'. The character of the finds, in conjunction with the isolated site, are suggestive of a villa or Romanised farmstead (Lloyd 1935, 105). There are no visible remains of this site and no local knowledge of the reported finds. Abercyfor is now incorporated in the names of three separate farms in the area (Wardell Armstrong LLP 2014, 6).

3.2.4 Although the HER places this site within the site boundary, local knowledge appears to suggest that this alleged Roman villa was actually located to the north, in the vicinity of the modern property known as Abercyfor Hall (*pers. comm.* Derek Phillips). Historical mapping shows that there were three properties known as 'Abercyfor' in the vicinity, and it has been considered that there may have been some confusion with regards to the location of this site when it was plotted in the HER.

3.2.5 The present course of the B4309, located to the west of the site, follows the line of the Roman road (HER 7459) between the fort at Loughor (*Leucarum*) and Carmarthen (*Moridunum*). The suggested line of an another Roman road is recorded in the HER running immediately to the west of the proposed development area, along the field boundaries (HER 3401).

3.2.6 ***Medieval:*** evidence for medieval settlement in the area may be provided by the suggested site of a medieval water mill to the north of Cwmffrwd (HER 12680), and the

property 'Pibwylwyd', which is located to the north-west of the site. This is recorded as a late medieval house, built for the Dwnn family who were resident there until the mid-17th century (HER 6548; Lloyd et al 2006, 168). A further possible medieval property may have existed to the northeast of the site at Beaulieu-Fawr, where it was noted in 1965 that 'there are still remnants of this 16th century dwelling in the grounds of the modern Beaulieu Fawr' (HER 1670).

3.2.7 ***Post medieval and Modern:*** Historic Landscape Characterisation suggests that the area comprised a landscape of dispersed settlement with regular and irregular fields throughout the post-medieval period. The HER entries which relate to this period largely comprise place names, which have been identified from the relevant tithe map and accompanying schedules. These suggest dispersed settlement, represented by cottages, farmsteads and other dwellings (for example HER 21721, 22923 and 22926).

3.2.8 The site of the post-medieval farmstead of 'Abercyfor Isaf' (HER 23010), is recorded within the centre of the proposed development area. However, historical mapping seems to indicate it was outside the site boundary, and immediately to the east, at the current site of Abercyfor-fawr.

3.2.9 There is some evidence for post-medieval industrial activity in the area, including the site of a quarry complex near Bolahaul Farm (HER 16416). A lead mine is also recorded to the north, although residential development now covers the core areas of this site (HER 16412).

3.2.10 The Tithe Map for the parish of Llandefailog (dated *c*.1841) shows the proposed development area subdivided into seven fields at that date, with Abercyfor labelled to the east of the site.

3.2.11 The village of Cwmffrwd, located to the west of the site, is relatively modern. The Tithe Map showing dispersed settlement, with none of the development that now exists along the A484 trunk road. Historic properties within the village include Oaklands, a villa of 1861, and St Anne's Church, constructed in 1866 (Lloyd et al 2006,168).

3.2.12 The First Edition Ordnance Survey map of *c*.1880 continues to show depicts the site as ten fields, with further field boundaries having been introduced in the northern part of the site. Several of these were removed in the late 20th century to create the present layout of fields.

3.3 PREVIOUS ARCHAEOLOGICAL WORK

3.3.1 No known previous archaeological interventions have taken place within the proposed development area.

4 THE GEOPHYSICAL SURVEYS

4.1 INTRODUCTION (FIGURE 2)

4.1.1 The geophysical survey was undertaken 28th July and 1st August 2014. Geomagnetic survey was undertaken over the whole of the study area (Areas 1-4), which comprised four fields of pasture at the time of the survey. The survey areas were bounded by field boundaries consisting of mature hedges, post & wire fences and farm tracks. The fences produced strong magnetic disturbance around the periphery of some of the survey areas.

4.1.2 Small discrete dipolar magnetic anomalies were detected across the whole of the study area. These are almost certainly caused by fired/ferrous litter in the topsoil, which is typical for modern agricultural land. These anomalies are indicated on the geophysical interpretation drawings, but not referred to again in the subsequent interpretations.

4.2 AREA 1 (FIGURES 3-5)

4.2.1 Area 1 comprised an irregularly-shaped field on the northeast side of the proposed development area, immediately to the south of Bryn Cynau Isaf. A trackway bound the north side of this area. Some 'striping' was produced in the gradiometer data on the east side of the site, which is excluded from the following description.

4.2.2 A linear series of very strong dipolar magnetic anomalies was detected crossing the west of this field, aligned northeast to southwest, due to the presence of an electric fence.

4.2.3 Diffuse positive and negative magnetic anomalies were detected over an area on the north side of Area 1, which are believed to be geological. These appeared to be further defined by linear positive magnetic anomalies, which probably also relate to the underlying geology.

4.2.4 An alignment of strong dipolar magnetic anomalies was detected crossing the centre of Area 1, aligned north to south, which are almost certainly associated with a former field boundary. These anomalies are typical of fired/ferrous debris which has accumulated along a former boundary. A field boundary is depicted in this location on the Tithe map of *c*.1841, but was removed in the late 20th century.

4.2.5 A parallel series of linear positive and negative magnetic anomalies was detected on the east side of Area 1, which are believed to relate to a former episode of ploughing or other vehicles movements.

4.2.6 A strong positive magnetic anomaly was detected crossing the centre of Area 1, aligned east to west with magnetic field strengths of between c.2.5nT and c.13nT, the nature of which is uncertain. This may represent a substantial soil-filled ditch or former boundary, but may also represent a geological feature.

4.2.7 A number of weak linear positive and negative magnetic anomalies were detected on the south side of Area 1, which are interpreted as land drains.

4.3 AREA 2 (FIGURES 6-8)

4.3.1 Area 2 comprised another irregular field to the west of Area 1. A trackway bound the west side of this area. Very strong magnetic disturbance was detected along the northern boundary of this field due to the presence of a wire fence.

4.3.2 Strong dipolar magnetic anomalies were detected along the southeast edge of Area 2, which are typical of fired/ferrous debris which has accumulated along the boundary.

4.3.3 A series of weak linear positive magnetic anomalies were detected, on the southeast side of Area 2 with magnetic field strengths of between *c*.1nT and *c*.2.5nT, which appear to represent an enclosure or field with internal subdivisions. This is interpreted as a series of small rectilinear enclosures or building foundations, within a curvilinear enclosure, measuring *c*.90m northeast to southwest by *c*.20m wide. The enclosure or field may represent one depicted on the 1st Edition Ordnance Survey map of *c*.1880.

4.3.4 Two weak negative magnetic anomalies were detected on the south side of Area 1, which are interpreted as land drains.

4.4 AREA 3 (FIGURES 9-11)

4.4.1 Area 3 comprised a smaller field to the south of Area 2 and a track to Abercyfor Uchaf. A concentration of small dipolar magnetic anomalies was detected at the northwest corner of Area 3, due to a deposit of brick rubble.

4.4.2 A strong bipolar magnetic anomaly was detected crossing the east side of Area 3, aligned north to south, which almost certainly represents a modern service pipe.

4.2.3 No potential archaeological features were detected in this area.

4.5 AREA 4 (FIGURES 12-14)

4.5.1 Area 4 comprised a further field on the south side of the proposed development area, to the south of Area 3. Two strong dipolar magnetic anomalies were detected in Area 3, due to a presence of two telegraph posts. Strong dipolar magnetic anomalies were also detected along the southwest edge of Area 4, which are typical of fired/ferrous debris, possibly associated with the adjacent road.

4.5.2 A strong linear positive magnetic anomaly was detected crossing the north side of Area 4, aligned northwest to southeast with magnetic field strengths of between c.2.5nT and c.15nT, which may represent a soil-filled ditch. A further weak linear positive magnetic anomaly was detected to the east, aligned north to south, which together with the previous feature may define a rectangular enclosure or small field.

4.5.3 A sub-rectangular positive magnetic anomaly was also detected on the northwest side of Area 4. This measured c.40m northeast to southwest and c30m northwest to southeast, with magnetic field strengths of between *c*.0.5 to *c*.5.0nT. A parallel series of linear positive magnetic anomalies was detected within this area, which may relate to a former episode of ploughing. This is interpreted as another possible former enclosure or small field, which may be associated with the adjacent farmstead.

4.5.4 A number of discrete positive magnetic anomalies were detected on the east and central parts of Area 4, the nature of which is uncertain. These exhibited magnetic field strengths of between *c*.4.5 to *c*.15.0nT and may possibly represent soil-filled pits.

4.6 DISCUSSION

4.6.1 A number of modern features were detected by the surveys, including a service pipe, telegraph posts, and fences, as well as evidence for a former field boundary which was removed in the late 20th century. Probable geological features have also been detected on the north side of the site.

4.6.2 More significantly the geophysical survey has detected what appears to be curvilinear enclosure or field with possible internal features in Area 2, which is interpreted as a former farmstead. The layout reflects the existing farmstead immediately to the east, and appears to confirm the presence of the post-medieval farmstead recorded in the Historic Environment Record (HER 23010). The enclosure may be the same as one depicted on the 1st Edition Ordnance Survey map of *c*.1880. However, the farmstead or enclosure is not depicted on the c.1841 Tithe Map, suggesting it may be earlier.

4.6.3 Two possible rectangular enclosures or small fields have also been detected in Area 4 to the south, which may represent fields associated with the former farmstead, but this is uncertain. A number of discrete anomalies have also been detected in this area, which could possible represent soil-filled pits.

5 CONCLUSIONS

5.1 CONCLUSIONS

5.1.1 Geomagnetic survey covering c.13.8ha of land has been conducted within four fields south of Bryn Cynau Isaf, covering the proposed location of a new solar development.

5.1.2 The surveys detected a modern service pipe and a former field boundary, as well as other modern features associated with the agricultural use of the site. Probable geological features have also been detected on the north side of the site.

5.1.3 Most significantly the geophysical survey appears to have identified the site recorded in the Historic Environment Record as 'Abercyfor Isaf' (HER 23010) on the east side of the proposed development area, adjacent to the existing farm. Two possible enclosures or small fields have been detected to the south, which may be associated.

5.1.4 The site of a Roman building (HER 1654) as recorded in the Historic Environment Record to the south, has not been identified by the geophysical survey. However, it is believed that this is actually located to the north, at the site of the modern property known as 'Abercyfor Hall'.

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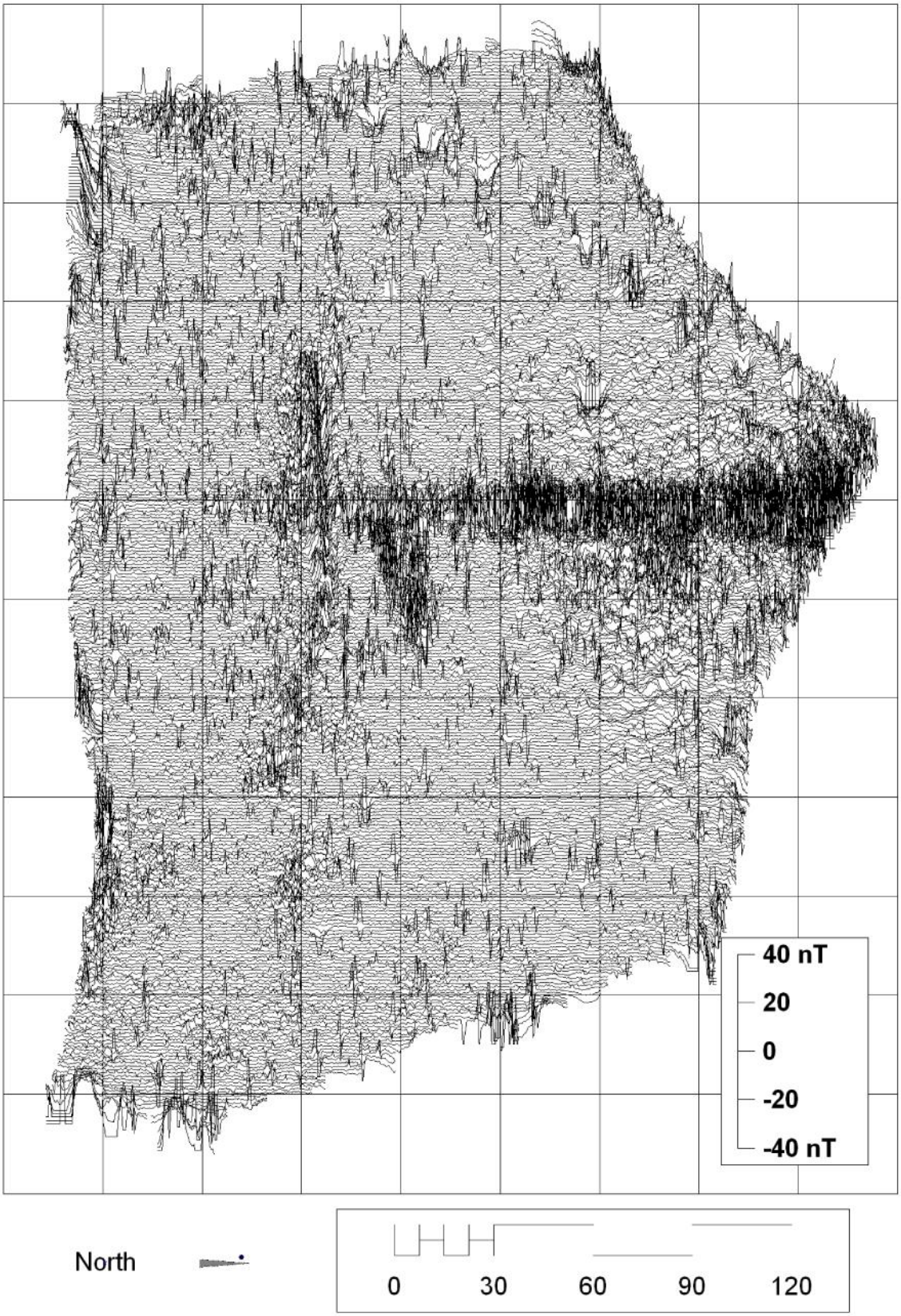
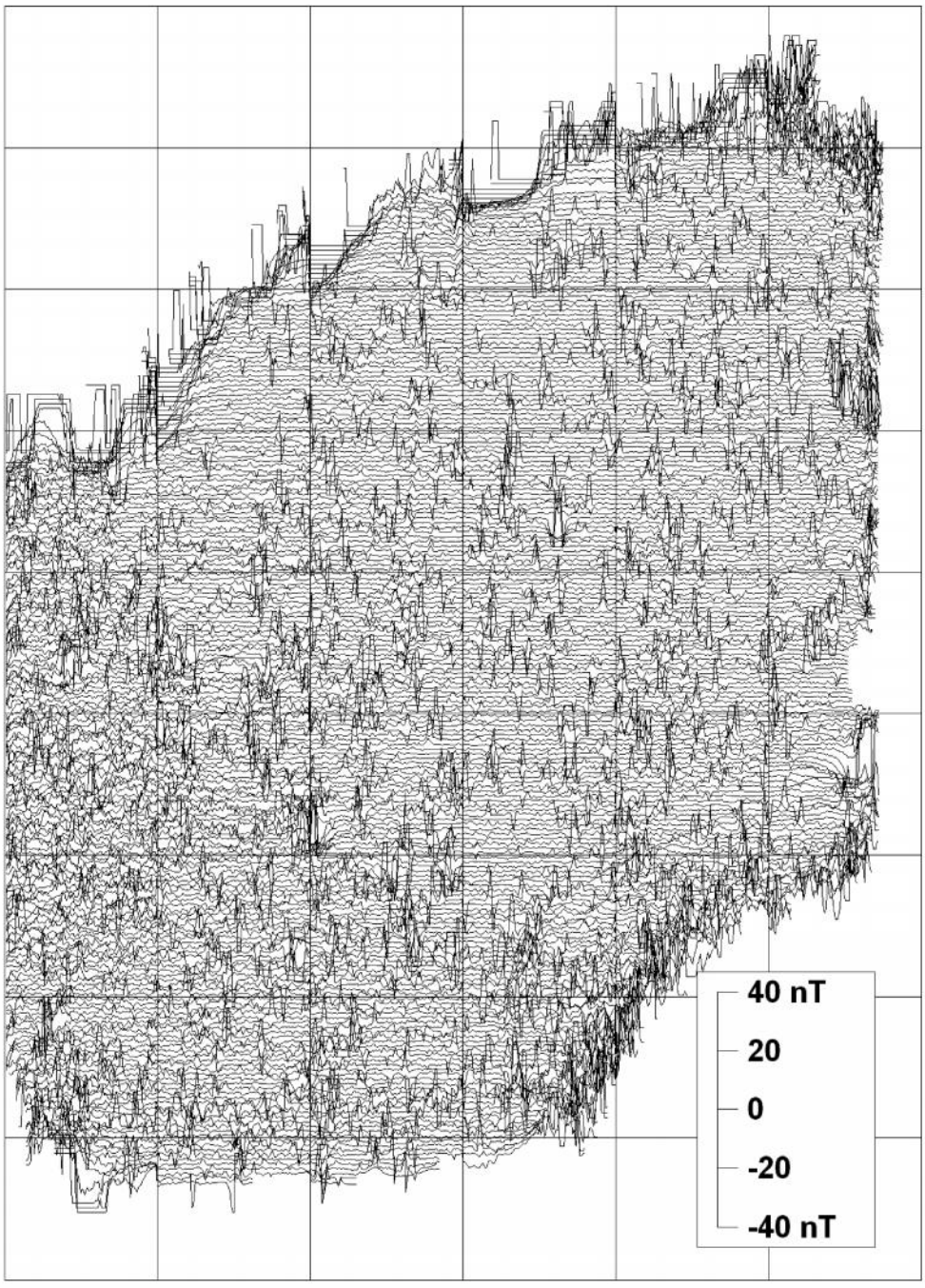
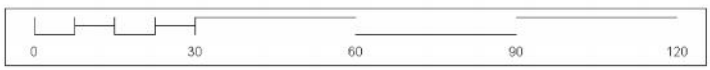
APPENDIX 1: TRACE PLOTS

Area 1



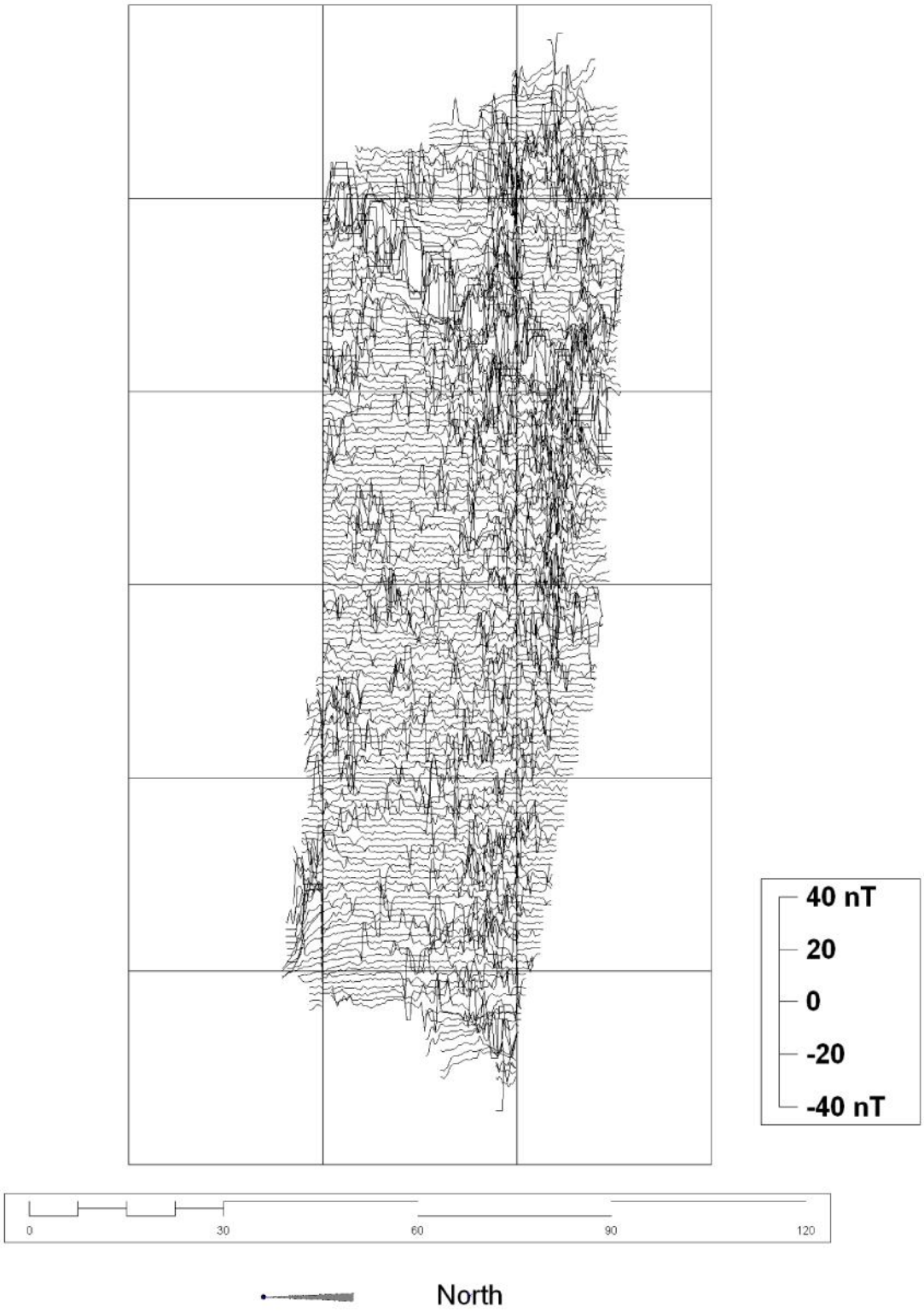
Area 2



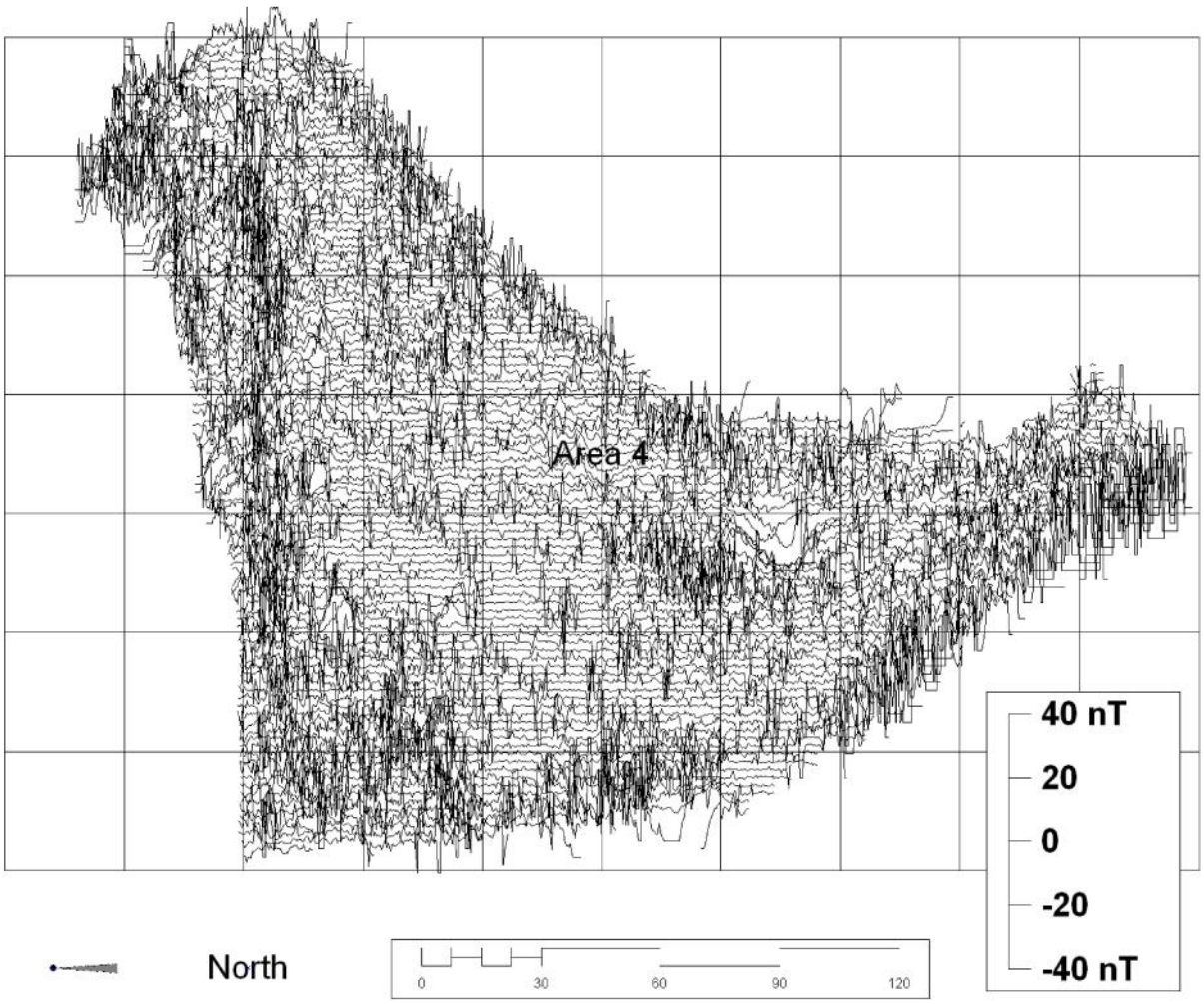


North

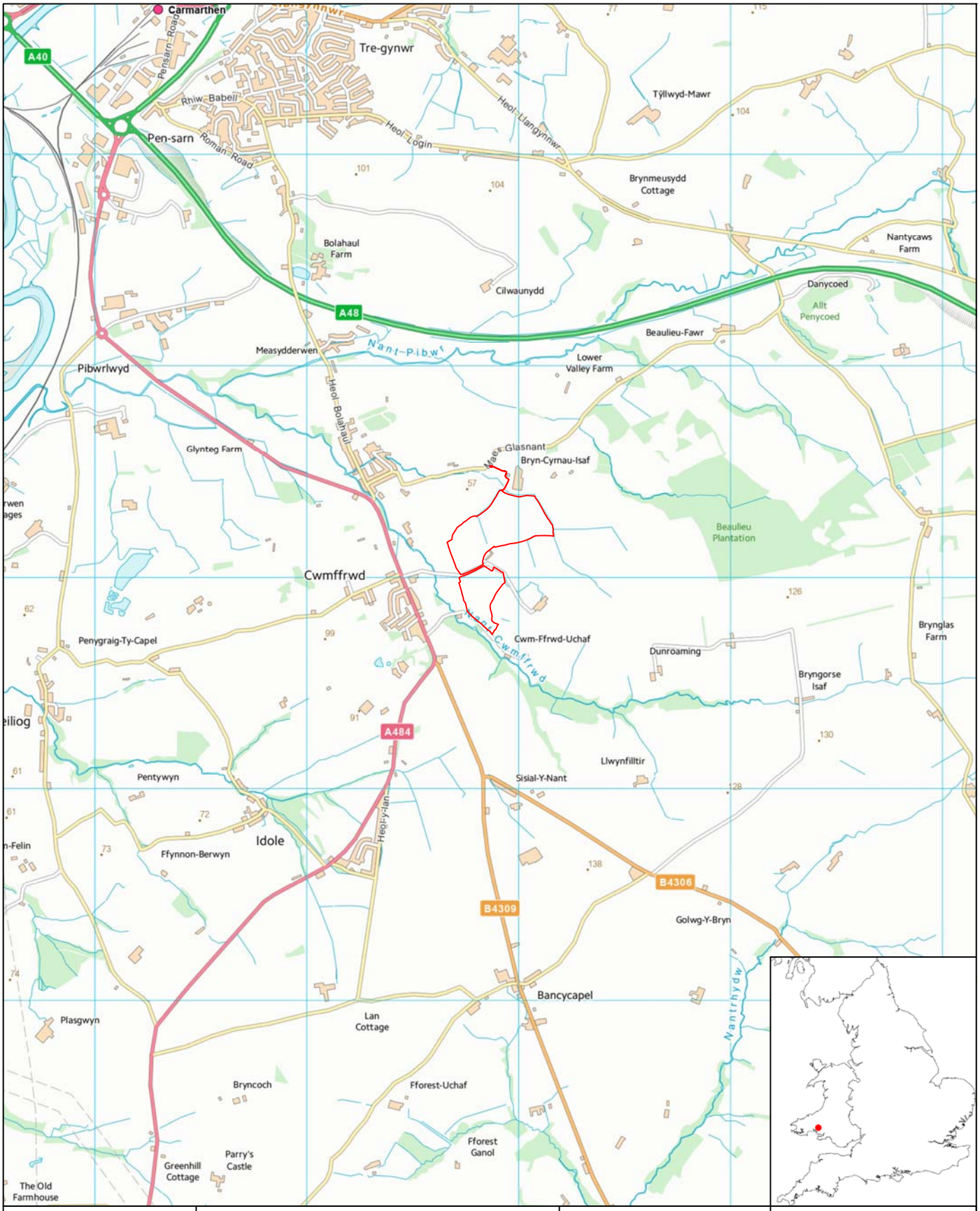
Area 3



Area 4



APPENDIX 2: FIGURES



PROJECT:	Bryn Cynau Isaf, Cwmffrwd, Carmarthenshire
SCALE:	1:25,000 at A4
REPORT No:	CP11060
CLIENT:	Green Switch Developments Ltd
DRAWN BY:	AB
DATE:	August 2014
FIGURE:	1

KEY:

Site location

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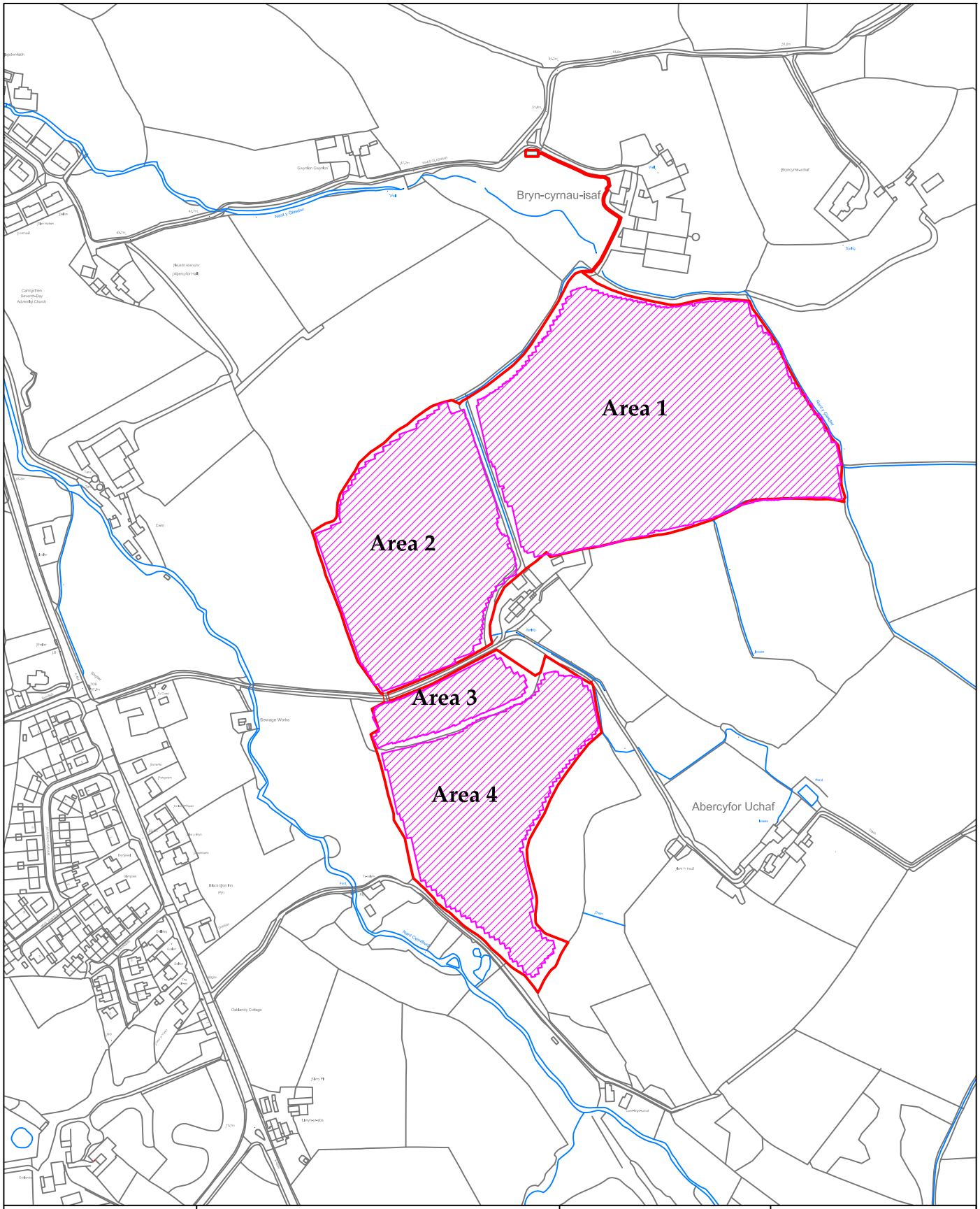
Figure 1: Site location.



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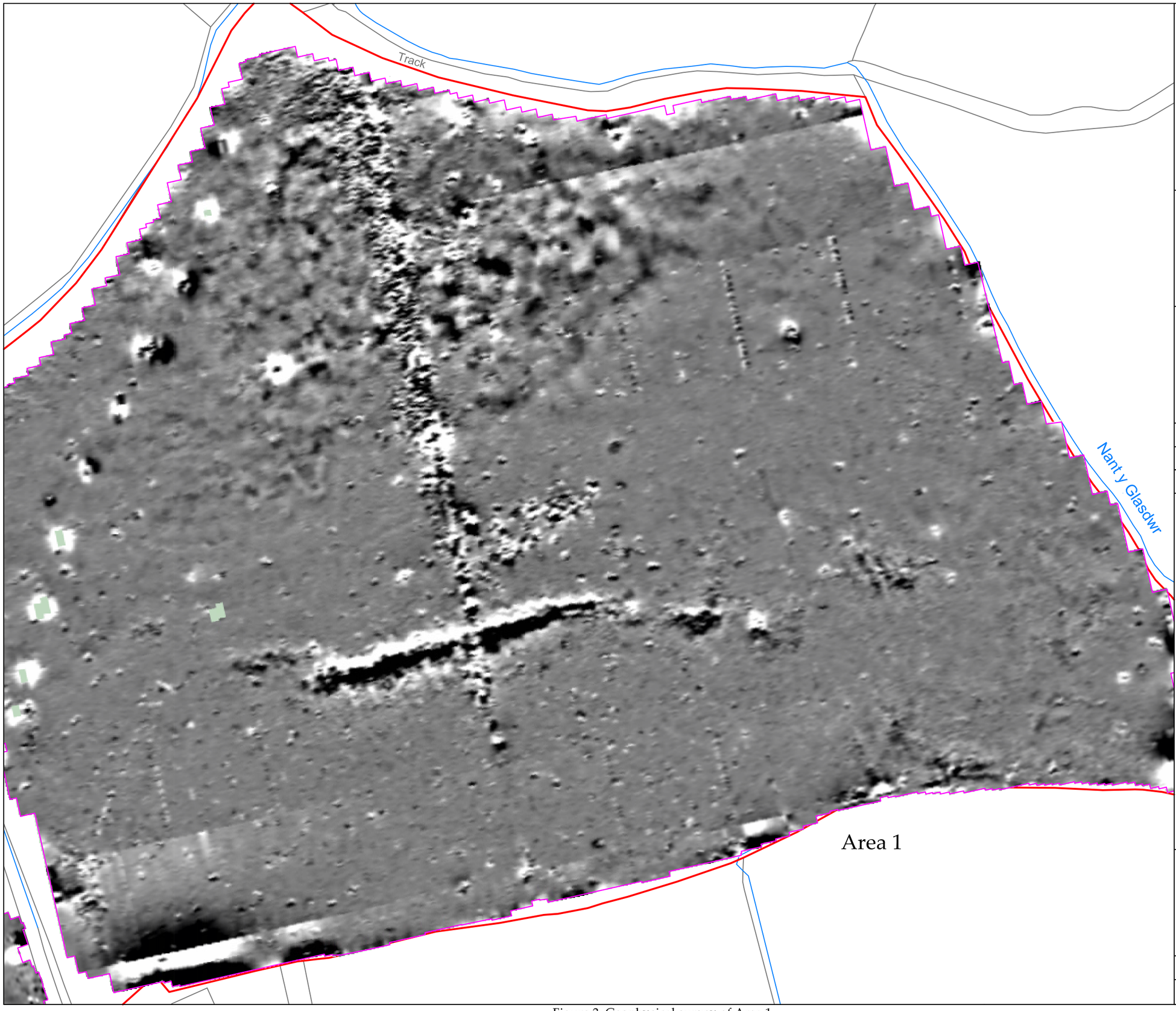
PROJECT:	Bryn Cynau Isaf, Cwmffrwd, Carmarthenshire
SCALE:	1:5,000 at A4
REPORT No:	CP11060
CLIENT:	Green Switch Developments Ltd
DRAWN BY:	MDR
DATE:	August 2014
FIGURE:	2

KEY:

Outline of proposed development

Geophysical survey area

Figure 2: Location of the geophysical survey areas (Areas 1-3).



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Green Switch Developments Ltd

SCALE: 1:1,000 at A3

DRAWN BY: MDR

DATE: August 2014

KEY:

Outline of proposed development area

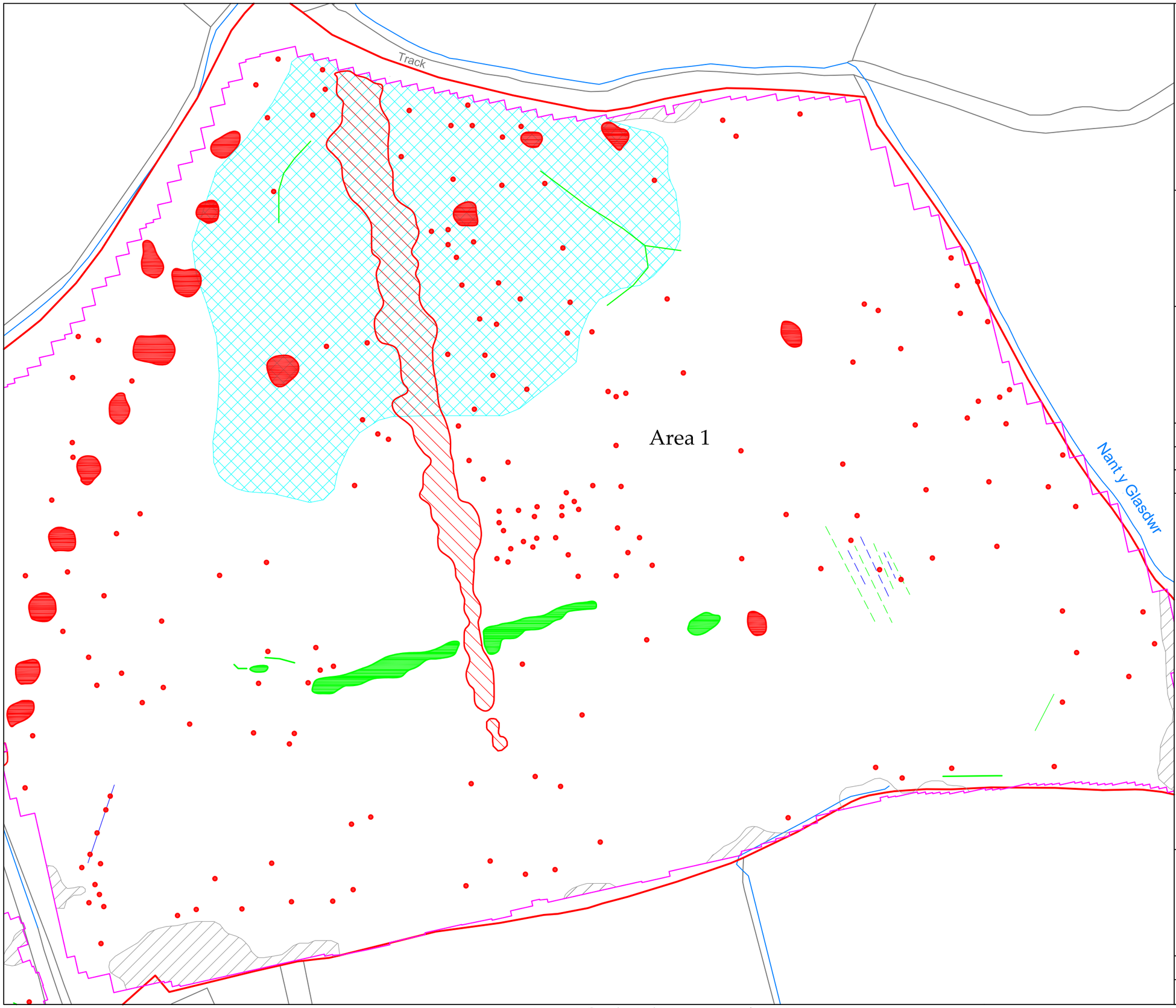
Outline of geophysical survey area

4 nT
3.2
2.4
1.6
0.8
0
-0.8
-1.6
-2.4
-3.2
-4 nT

REPORT No: CP11060

FIGURE: 3

Figure 3: Geophysical survey of Area 1.



Wardell Armstrong
Archaeology
2014

PROJECT:

Bryn Cynau Isaf, Cwmffrwd, Carmarthenshire

CLIENT:

Green Switch Developments Ltd

SCALE: 1:1,000 at A3

DRAWN BY: MDR

DATE: August 2014

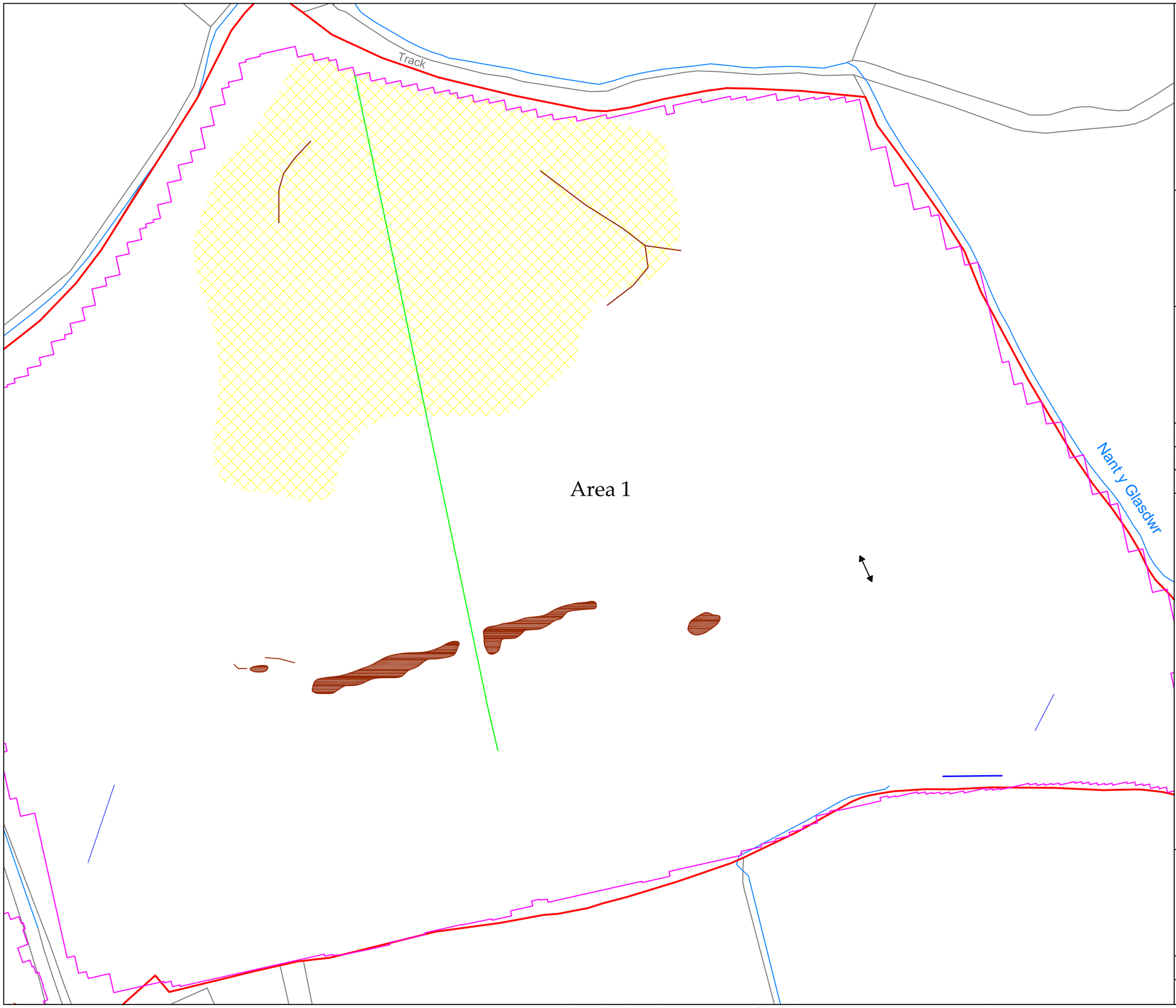
KEY:

- Outline of proposed development area
- Outline of geophysical survey area
- Dipolar magnetic anomaly
- Positive magnetic anomaly
- Negative magnetic anomaly
- Magnetic disturbance
- Diffuse magnetic anomaly

REPORT No: CP11060

FIGURE: 4

Figure 4: Geophysical interpretation of Area 1.



Wardell Armstrong Archaeology 2014

PROJECT:

Bryn Cynau Isaf, Cwmffrwd, Carmarthenshire

CLIENT:

Green Switch Developments Ltd

SCALE: 1:1,000 at A3

DRAWN BY: MDR

DATE: August 2014

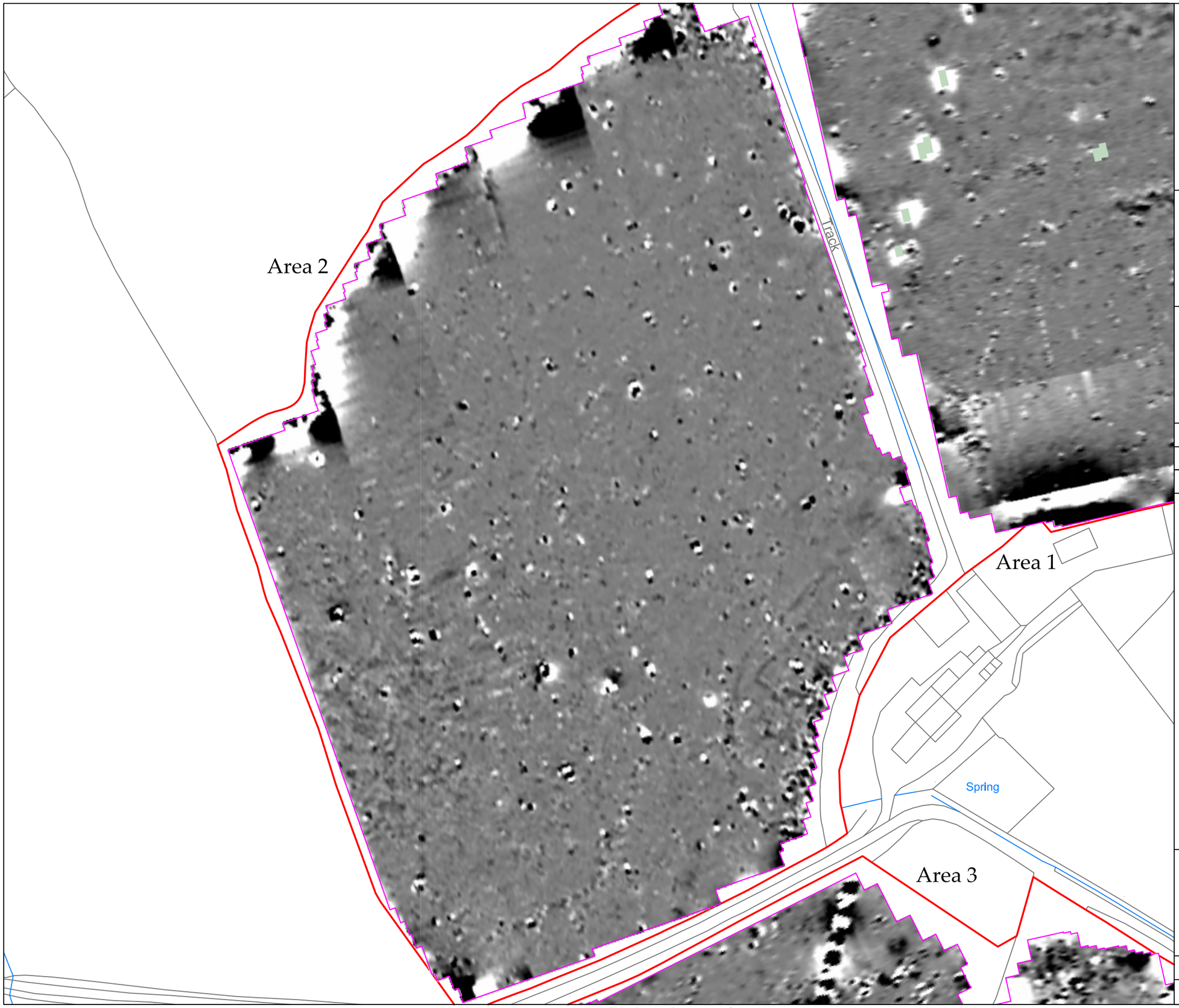
KEY:

- Outline of proposed development area
- Outline of geophysical survey area
- Possible land drain
- Former field boundary
- Direction of ploughing
- Possible soil-filled features
- Geological features

REPORT No: CP11060

FIGURE: 5

Figure 5: Archaeological interpretation of Area 1.



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CLIENT:

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SCALE: 1:1,000 at A3

DRAWN BY: MDR

DATE: August 2014

KEY:

Outline of proposed development area

Outline of geophysical survey area

4 nT
3.2
2.4
1.6
0.8
0
-0.8
-1.6
-2.4
-3.2
-4 nT

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FIGURE: 6

Figure 6: Geophysical survey of Area 2.

Area 1

Area 2

Area 3

Track

Spring

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DATE: August 2014

KEY:

- Outline of proposed development area
- Outline of geophysical survey area
- Dipolar magnetic anomaly
- Positive magnetic anomaly
- Negative magnetic anomaly
- Magnetic disturbance
- Diffuse magnetic anomaly

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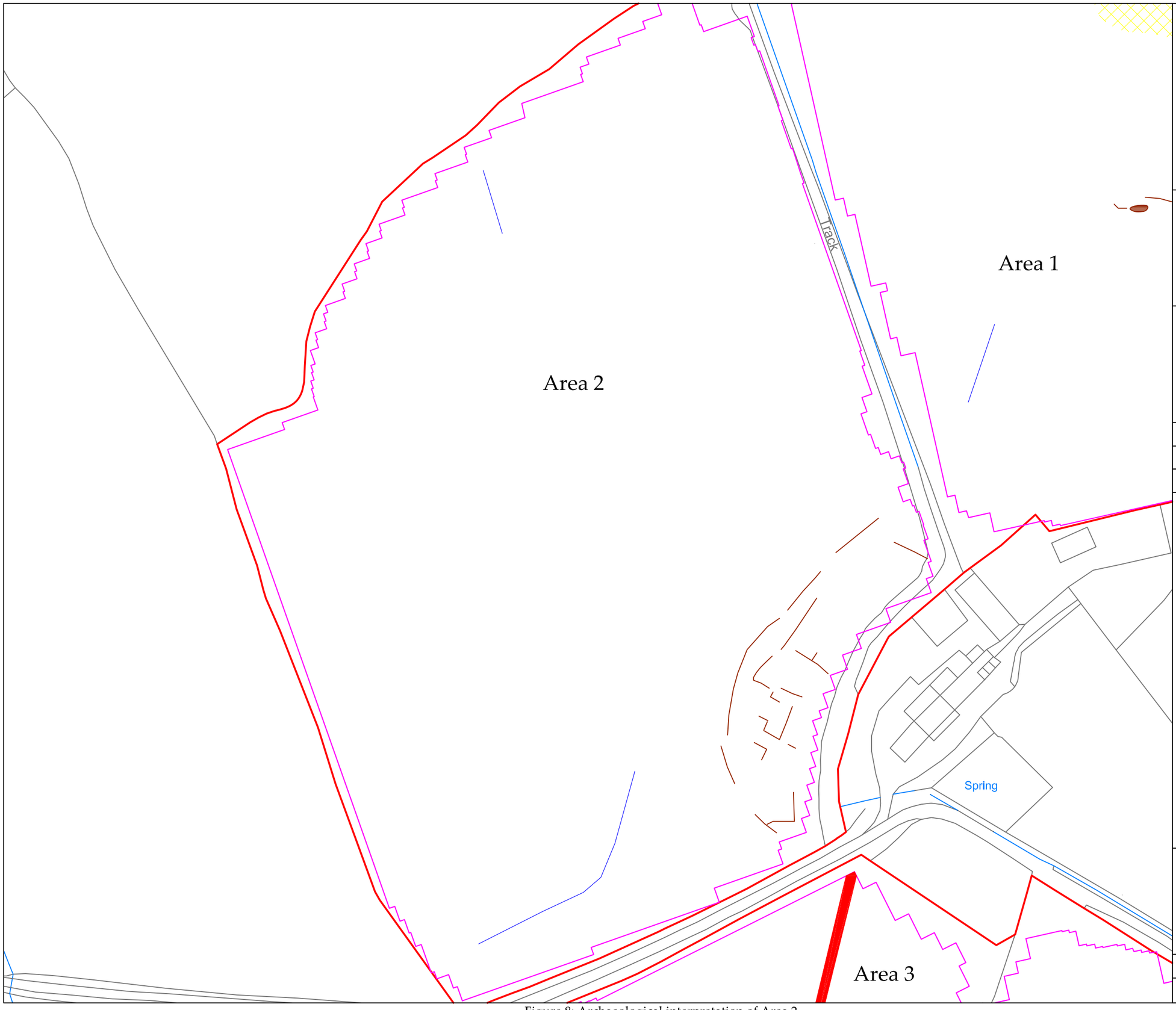
FIGURE: 7

Figure 7: Geophysical interpretation of Area 2.



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DATE: August 2014

KEY:

- Outline of proposed development area
- Outline of geophysical survey area
- Possible land drain
- Possible soil-filled features
- Geological features

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FIGURE: 8

Figure 8: Archaeological interpretation of Area 2.

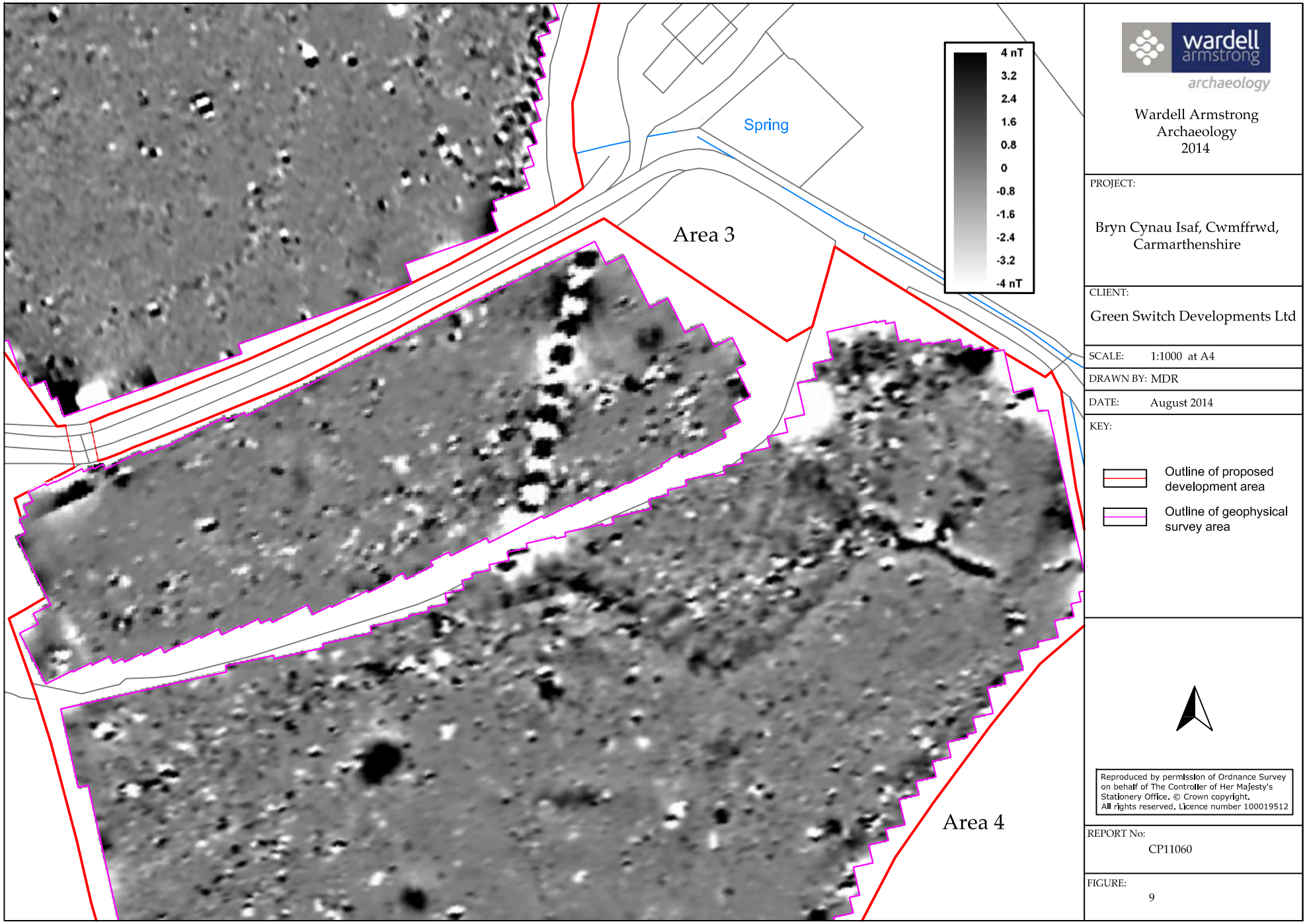


Figure 9: Geophysical survey of Area 3.

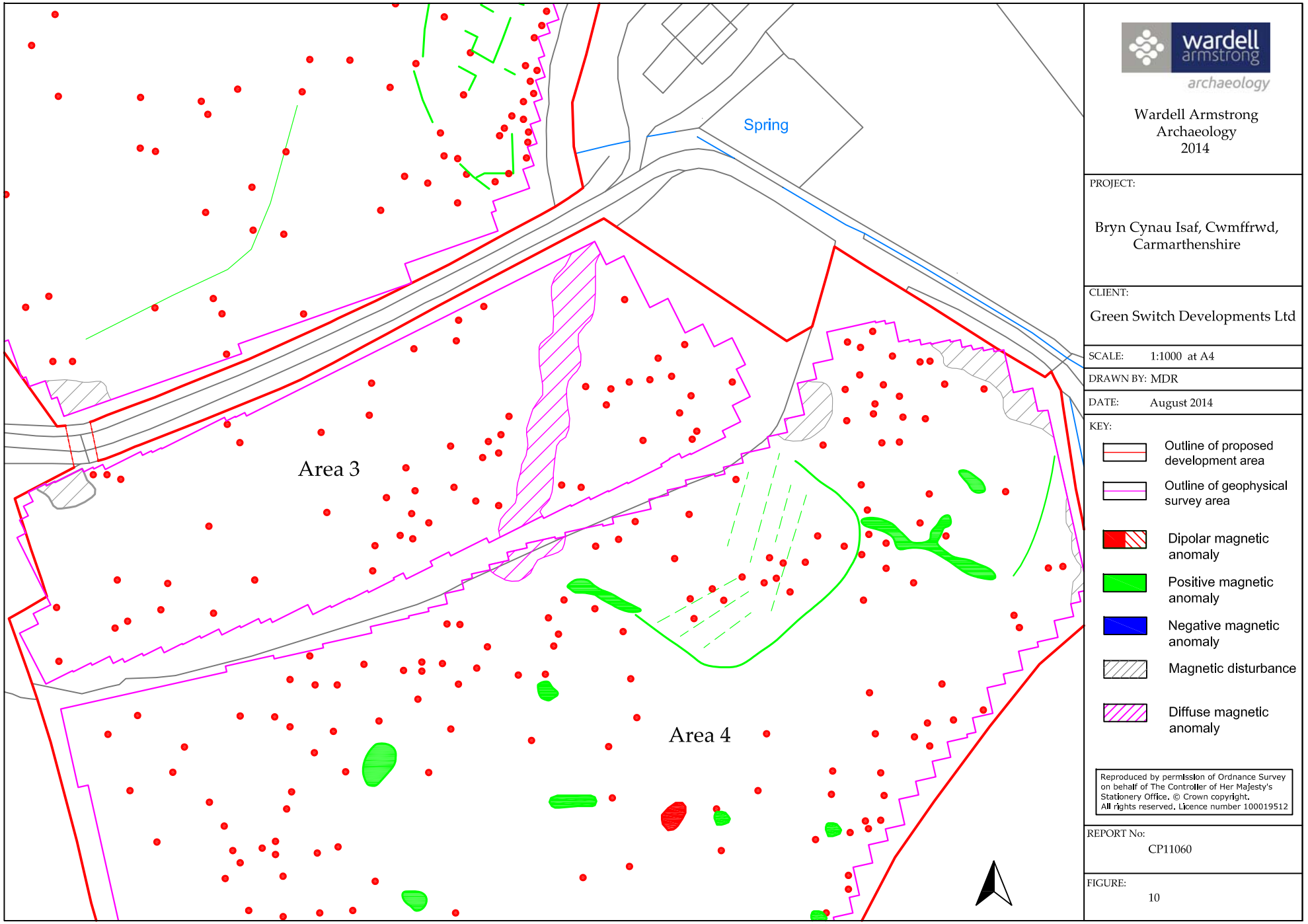


Figure 10: Geophysical interpretation of Area 3.

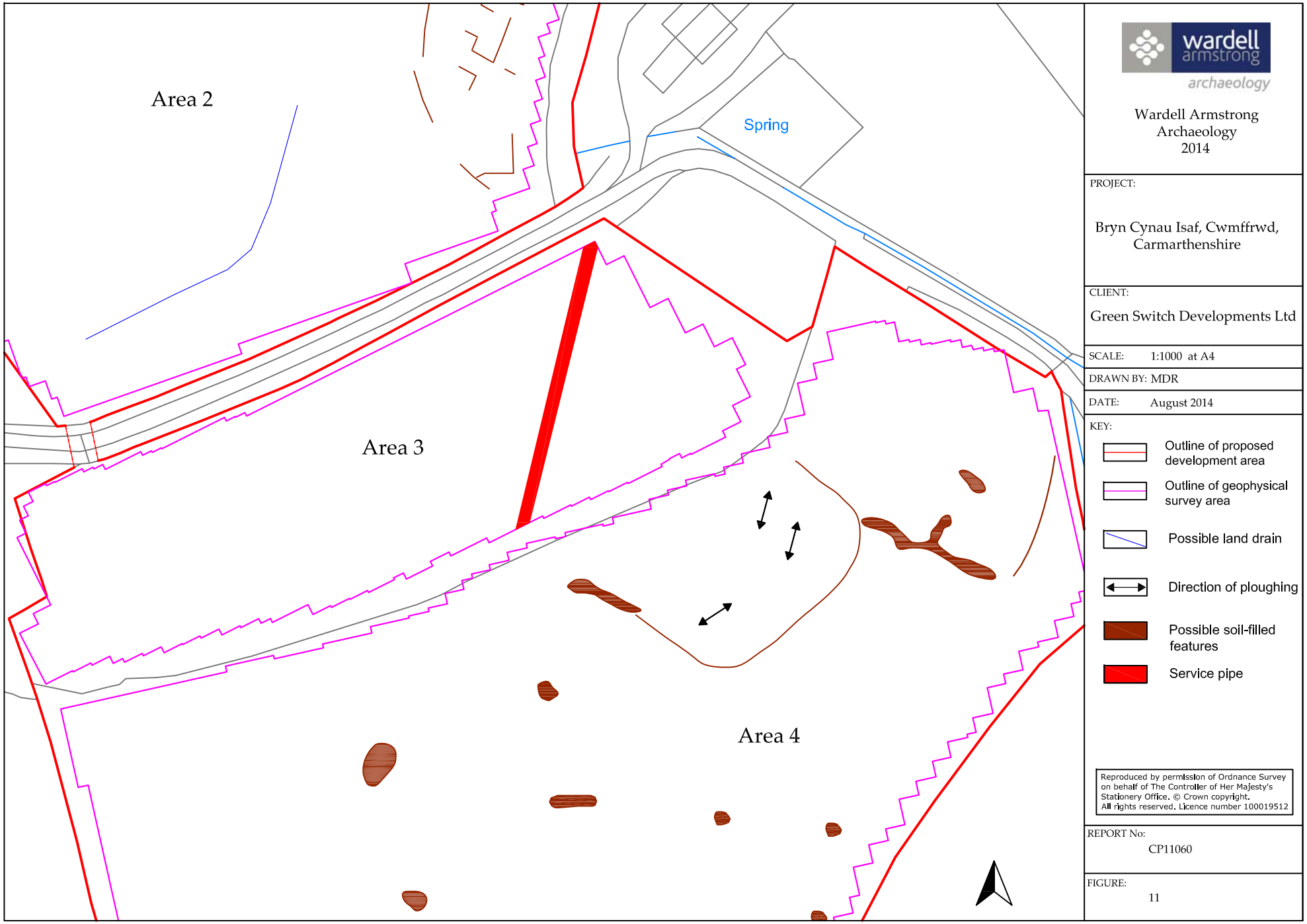
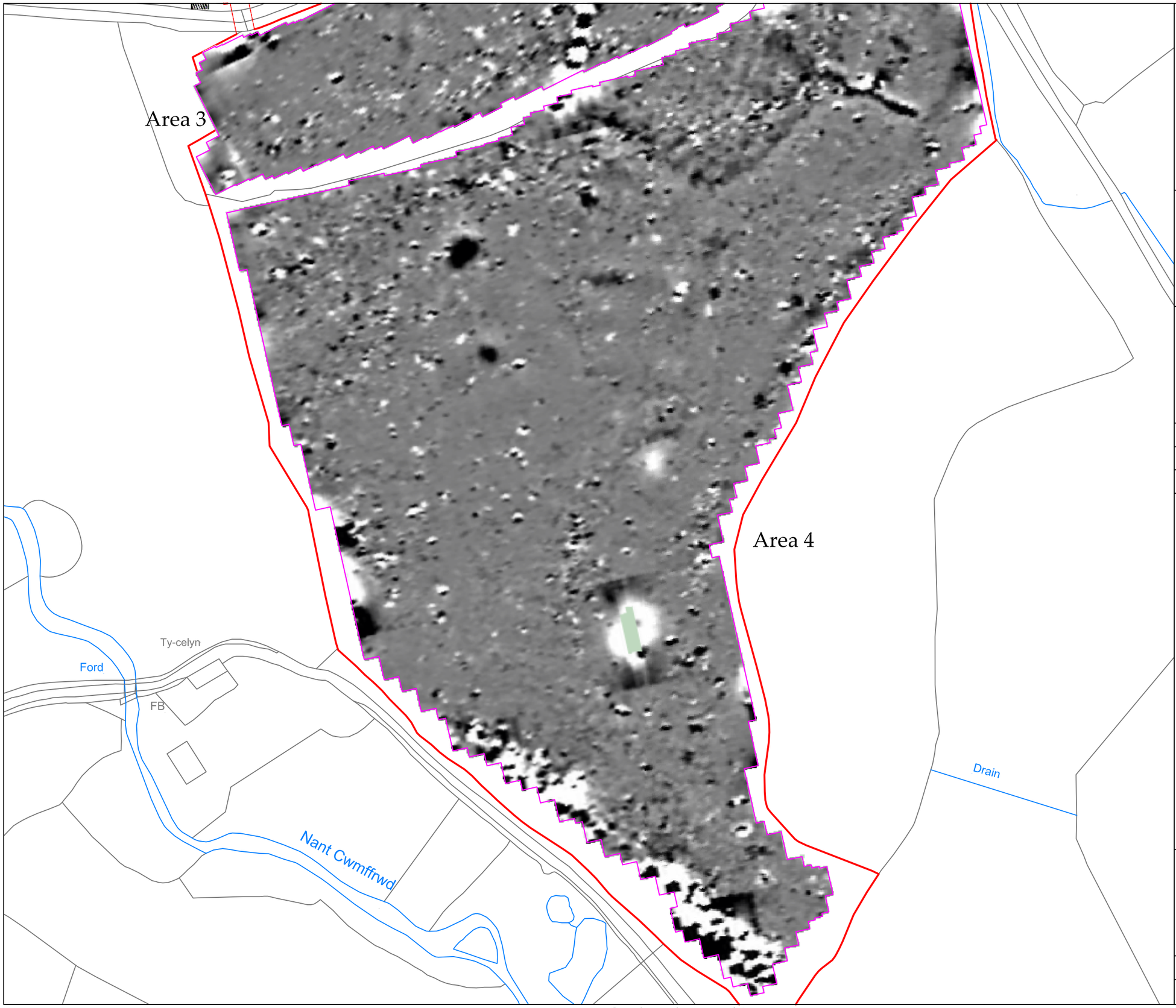


Figure 11: Archaeological interpretation of Area 3.



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KEY:

Outline of proposed development area

Outline of geophysical survey area

4 nT
3.2
2.4
1.6
0.8
0
-0.8
-1.6
-2.4
-3.2
-4 nT

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FIGURE: 12

Figure 12: Geophysical survey of Area 4.

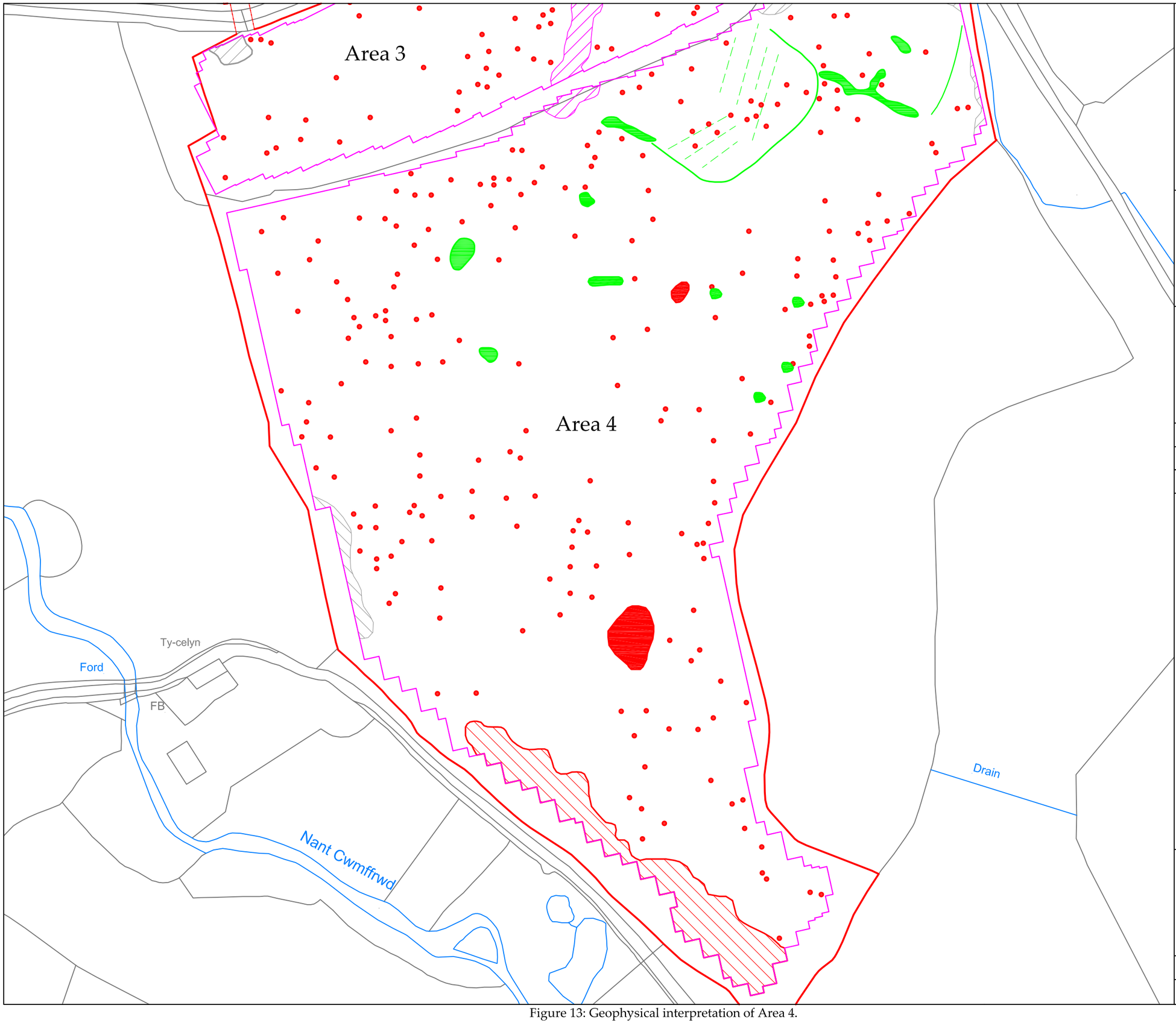

Figure 13: Geophysical interpretation of Area 4.

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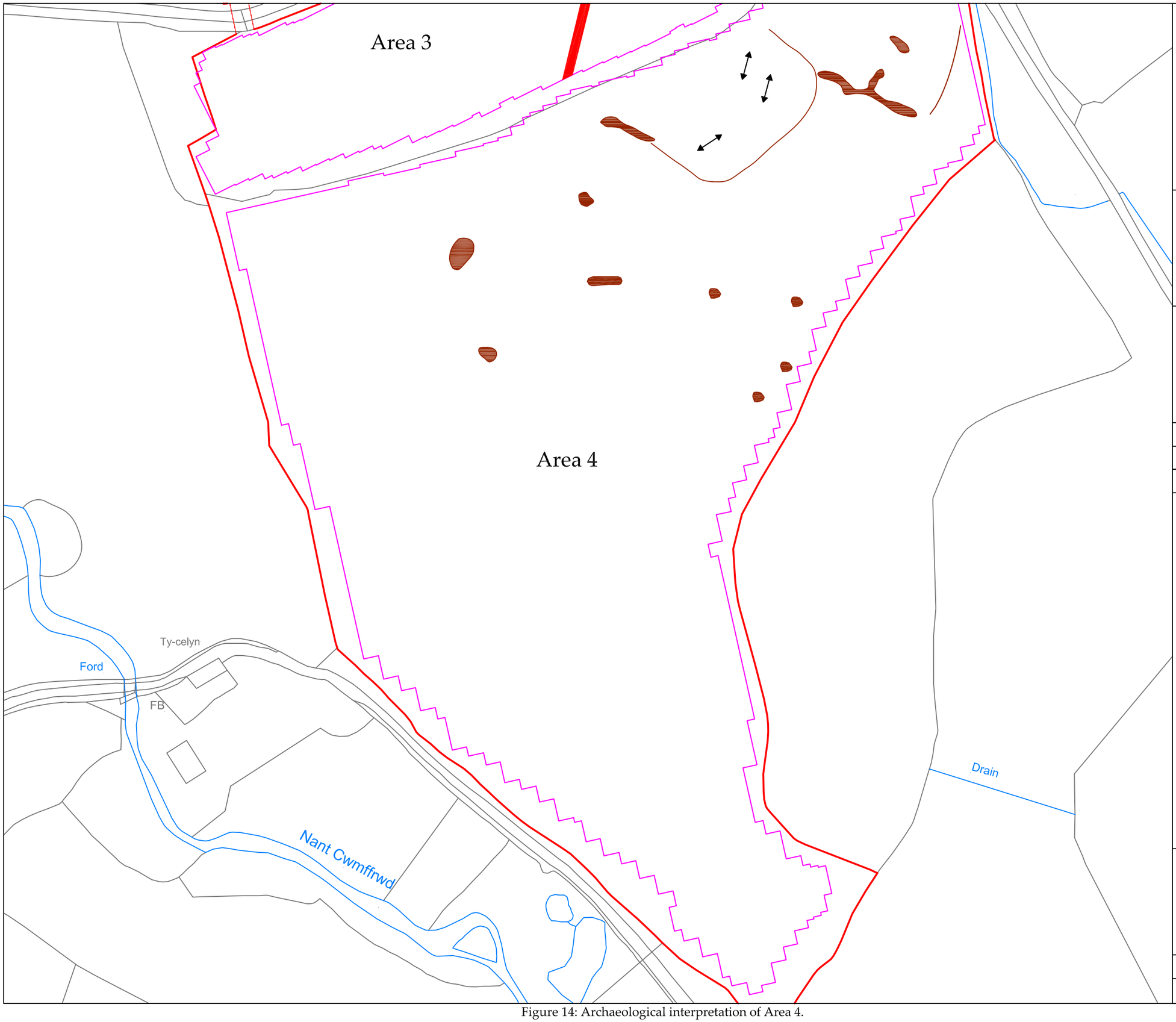
KEY:

- Outline of proposed development area
- Outline of geophysical survey area
- Dipolar magnetic anomaly
- Positive magnetic anomaly
- Negative magnetic anomaly
- Magnetic disturbance
- Diffuse magnetic anomaly

REPORT No: CP11060

FIGURE: 13



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SCALE: 1:1,000 at A3

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KEY:

- Outline of proposed development area
- Outline of geophysical survey area
- Direction of ploughing
- Possible soil-filled features
- Service pipe

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FIGURE: 14

Figure 14: Archaeological interpretation of Area 4.

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