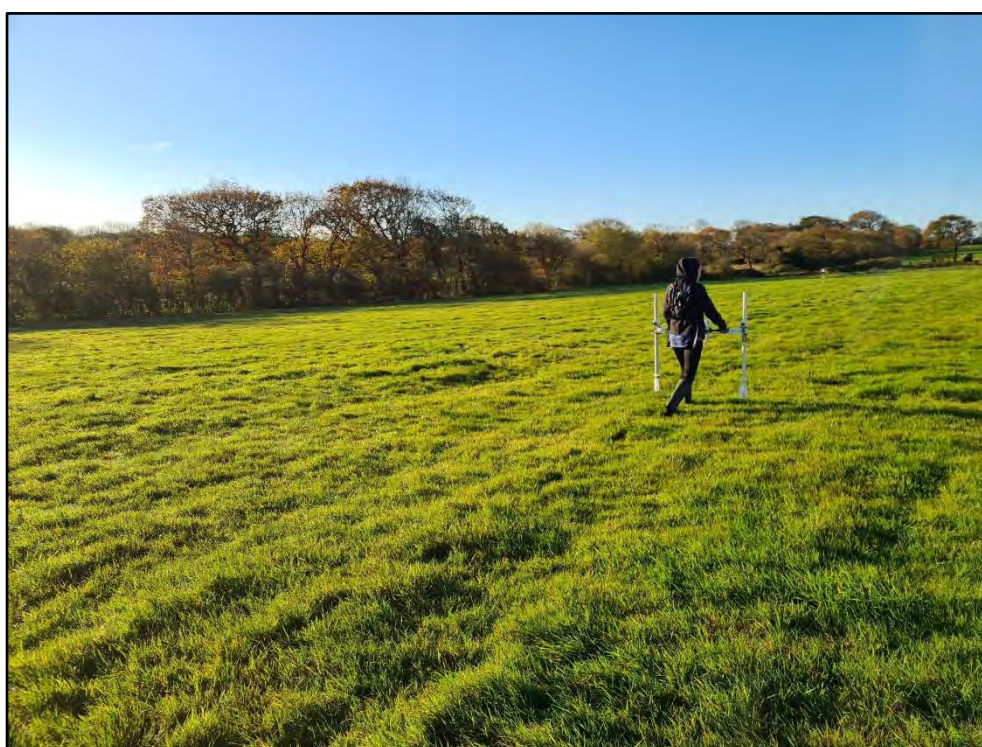


Document Reference	Appendix No.	Title
4.01.9b	9.2	Archaeological Evaluation (Geophysical Survey) Part 1

# *Archaeology Wales*

## **Land at Pancross, Redlands and Oaklands Farm, near Bonvilston, Vale of Glamorgan**

### **Geophysical Survey**



Report No. 2041

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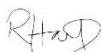


# Archaeology Wales

## Land at Pancross, Redlands and Oaklands Farm, near Bonvilston, Vale of Glamorgan

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## Summary

*In September 2021, Archaeology Wales was commissioned by Sirius Planning to carry out a geophysical survey on land 750m to the south of Bonvilston and 5km to the north of Cardiff Airport, Vale of Glamorgan, centred on NGR ST 07000 72770. The area surveyed totalled c.127Ha.*

*A fluxgate gradiometer survey was successfully undertaken across the site. Results showed the lines of historic field boundaries as well as drainage features.*

*There are three main areas of archaeological potential. The first is in the central part of Areas 1A and 1B with a concentration of potential archaeological features centred on a square, bivallate probable farmstead enclosure of likely Iron Age or Roman date. This is set amongst other linears, possibly describing square and rectangular enclosed areas. These are in the same alignments as the possible farmstead and therefore likely associated with it. The second area is a likely farmstead feature located in Area 2b. This feature does not appear to be associated with any other features although ploughing in this area may have disturbed earlier archaeology.*

*Area 3E is the third area of archaeological potential with a possible enclosure area demarked by a curvilinear feature. Inside the enclosed area are four sub-circular features two of which are intercutting as well as other less well-defined possible features. The west side of the enclosure may show an entrance way into the enclosure as well as other well defined linear features.*

## Crynodeb

*Yn fis Medi 2021, cafwyd Archaeology Wales ei chomisiynu gan Sirius Planning i gario allan arolwg geoffisegol ar dir 750m i'r dde o Bonvilston a 5km i ffwrdd o Faes awyr Caerdydd, Bro Morgannwg, wedi'i chanoli ar NGR ST 07000 72770. Cyfanswm y tir a arolygwyd oedd c.127hectarau.*

*Wnaeth arolwg fluxgate gradiometer ei ymgymryd yn llwyddiannus ar draws y safle. Wnaeth y canlyniadau ddangos y llinellau o ffiniau caeau hanesyddol a nodweddion draeniad.*

*Mae yna tri phrif ardal o botensial archeolegaidd. Y cyntaf yw rhan ganolig o Ardaloedd 1A ac 1B gyda chrynodeb o nodweddion potensial archaeolegaidd ar sgwâr, deuglawddamgaead ffermdy tebygol yn debygol o Oes Haearn neu Oes Rufeinig. Mae hyn wedi cael ei osod ymysg nodweddion llinol, yn bosib yn disgrifio ardaloedd amgaeedig sgwâr a phetryal. Mae'r rhain yn yr un aliniadau ar ffermdy posib ac yn debygol yn gysylltiedig. Mae'r ail ardal yn nodwedd ffermdy posib wedi'i lleoli yn Ardal 2B. Nid yw'r nodwedd hyn yn ymddangos fel ei fod yn gysylltiedig â nodweddion arall er hyn mae'n bosib fod gweithgareddau aredig wedi tarfu ar archeoleg henaf.*

*Ardal 3E yw trydedd ardal o botensial archeolegaidd gydag ardal gaeedig posib wedi'i nodi gan nodwedd gromliniol. Tu yn yr ardal gaeedig yw pedwar nodwedd is-gyrchol, dau o rain yn drawsbynciol yn ogystal â nodweddion arall llai diffiniedig. Mae'r ochr gorllewin o'r ardal gaeedig yn efalla yn dangos ffordd mynedfa i mewn i'r ardal gaeedig yn ogystal â nodweddion arall diffiniedig llinol.*

# **1. Introduction**

## **1.1 Location and Scope of Work**

- 1.1.1 In September 2021 Archaeology Wales (henceforth – AW) was commissioned to carry out a geophysical survey on land 750m to the south of Bonvilston and 5km to the north of Cardiff Airport, Vale of Glamorgan, centred on NGR ST 07000 72770 (Figure 1). The site is currently made up of 127 hectares of enclosed agricultural fields.
- 1.1.2 The recommendations for a geophysical survey on the site were outlined in an initial desk-based assessment (Evans, 2021) carried out for the proposed development. After consultation with the Glamorgan-Gwent Archaeological Trust – Archaeological Planning Management (GGAT-APM), as advisors to the local planning authority, the area initially recommended for geophysical survey was extended to cover the entirety of the proposed development area.
- 1.1.3 A Written Scheme of Investigation (Cole, 2021) was produced to outline the scope and methodology of the proposed archaeological work which was approved in advance by GGAT-APM.
- 1.1.4 The survey was undertaken as a single phase of work between October and December 2021. The work was managed by Charley James-Martin BA (Hons) MCIfA, Archaeology Wales, and the site work was supervised by Jennifer Muller BA (Hons) MA and Dan Moore BA (Hons) MA. Substantial contributions were made to the project by Dr Tim Young (GeoArch Ltd).

## **1.2 Site Description**

- 1.2.1 The site is located at the northern end of the A4226, where it meets the A48. The site comprises of three areas, with Areas One and Three on the west of the A4226 and Area Two on the eastern side of the road (Figure 1 and 2).
- 1.2.2 Area One is bounded to the north and south by enclosed fields, the east by the A4226, and to the west by a single-track road. Area Two is situated to the east of Area One and it is bounded to the north-west by enclosed fields, to the north-east, east and the south by woodland, and to the west by the A4226. Area Three is situated to the south of Area One and it is bounded to the north by enclosed fields, and to the east, south, and west by woodland (Figure 1).
- 1.2.3 The site is located on a low hill. Area One slopes down from approximately 95m aOD in the north-east to 45m aOD in the south-west. The slope steepens towards the south-west. Area Two slopes down to the south-east towards the River Waycock. The western part of the area is approximately 90m aOD. And the south-eastern edge is at approximately 50m aOD. Area Three is located on a south-western spur of the hill, with the land dropping away steeply towards the south, west, and north. This area is between 75m and 85m aOD.
- 1.2.4 The geology beneath the site varies, with four bedrock formations recorded. The majority of the site is underlain by the Mary's Well Bay Member, which is comprised of interbedded limestone and mudstone that formed in the Jurassic and Triassic

Periods. A band of the Lavernock Shales Member is recorded on the eastern and southern edge of Area Three. This bedrock formation is comprised of mudstone, which formed in the Jurassic Period.

- 1.2.5 Area Two is largely underlain by the Blue Anchor Formation, which is a mudstone sedimentary bedrock that formed in the Triassic Period. This is surrounded by a band of the Penarth Group, which is comprised of interbedded mudstone and limestone that formed in the Triassic Period.
- 1.2.6 No superficial deposits are recorded across the area of the site (BGS 2021).

### **1.3 Archaeological and Historical Background**

- 1.3.1 Archaeology Wales conducted a desk-based assessment of the site in April 2020 (Evans, 2020), which found that there had been 58 prior investigations and 136 previously recorded sites within close proximity to the proposed development site (Figure 3).
- 1.3.2 The assessment highlighted that the landscape surrounding the site is archaeologically rich and diverse, with sites dating from the Neolithic period through to the post medieval period. Tinkinswood Burial Chamber (GM009), which is a chambered long cairn of early Neolithic date, is located approximately 400m to the east of Area Two, while two medieval sites, Castle Ringwork (GM613) and Coed y Cwm Ringwork (GM117) are located on the northern edges of Areas One and Two respectively.
- 1.3.3 The assessment determined that fourteen of the known sites of archaeological value were located within the red line boundary. These were largely of post medieval date and related to Redlands Farm, within Area Two. Cropmarks (NPRN422326) of enclosures were also identified within Area Two.
- 1.3.4 In Area One, cropmarks of an enclosure and field system (GGAT03998s; NPRN 309275 & NPRN 309284) were identified. These are of unknown date, and it is possible that they predate the medieval and post medieval activity in the area.
- 1.3.5 The site visit identified a further two sites within the proposed development area that had previously been unknown. These were both located within Area One; the first was the remains of a building (OFV01) and the second was an old quarry/limekiln (OFV02).
- 1.3.6 As a part of improvement works to the A4226 (Five Mile Lane), just to the south of the proposed development area, a geophysical survey was undertaken. The survey identified a small number of ring ditches and a possible Romano-British rectilinear field system (GSB Prospection, 2015). Subsequently, excavations revealed extensive archaeological evidence dating from the prehistoric onwards. This included prehistoric circular enclosures, field systems and the excavations of over 450 inhumations/cremations (Red River Archaeology, forthcoming). The excavations also included the site of Whitton Lodge Roman villa, which had been excavated previously by Cardiff University during the 1960s. The villa was preceded by a group of roundhouses in the early first century AD, with the initial villa buildings dating to the mid second century AD (Evans, 2018).

## **2. Map Regression**

### **2.1 Tithe Map, Plan of the parish of Bonvilston, Glamorganshire, 1841**

- 2.1.1 The general appearance of the area in the tithe map is similar to the present day; the village of Bonvilston can be seen to the north, to the east is the road that is now the A4226, and to the west is the rural road that is still used.
- 2.1.2 The proposed development site, Areas One, Two and Three, are made up of a series of enclosed fields, much like the present day, but the fields are split up into a number of smaller fields.
- 2.1.3 It is worth noting that Brook Farm (NPRN 414419), with just a single building, is shown on the tithe map within field number 16.

### **2.2 Ordnance Survey Map, Glamorgan XLVI, 1885, 6-inch map**

- 2.2.1 This is the First Edition of the Ordnance Survey, and the first detailed map of the site and the surrounding area. There is very little change from the tithe map. The site is still split into a series of small, enclosed fields, but some of these appear to have merged into slightly larger fields.
- 2.2.2 In Area One, to the south of Ty'n-y-Coed, and to the east of Pencarreg (GGAT02058s), there is a structure (OFV01, Evans, 2021). It is unclear whether this structure was a dwelling or an agricultural building. There are also some anomalies noted on the map within Area One, possibly earthworks. Just to the north of the northern boundary, Castle Ringwork, 850m ENE of Ty'n-y-Coed (GM613), can be clearly seen with a number of trees within the circular enclosure.
- 2.2.3 A well is depicted on the map close to the south-western boundary of Area Two. Brook Farm (NPRN 414419) is also shown, and it appears to have been expanded in the intervening years between the tithe map and the First Edition of the Ordnance Survey. The farm now includes the three buildings recorded on the HER (GGAT03879s, GGAT03880s, & GGAT03881s). Coed y Cwm Ringwork (GM117) cannot be seen to the north of this area and is located within woodland.

### **2.3 Ordnance Survey Map, Glamorgan XLV.NW, 1900, 6-inch map & Glamorgan XLVI.NE, 1901, 6-inch map**

- 2.3.1 Area One: The earthworks noted in Area One on the previous map is now labelled as Old Quarry (OFV02, Evans, 2021). To the east of the Scheduled Monument, and to the south of Coed yr Aber woodland, there are further earthworks labelled as Old Quarry (OFV03, Evans, 2021).
- 2.3.2 Area Two: There are no discernible changes within this area.
- 2.3.3 Area Three: There are no discernible changes within this area.

### **2.4 Ordnance Survey Map, Glamorgan XLV.NW & Glamorgan XLVI.NE, 1921, 6-inch map**

- 2.4.1 Area One: There is only one minor change between the 1900 and 1921 maps. The earthwork noted in the central area of the site, previously labelled as Old Quarry, is now labelled Old Limekiln (OFV02).



- 2.4.2 Area Two: This is the first map to show the earthworks related to Coed y Cwm Ringwork (GM117), located immediately adjacent to the northern boundary of Area Two.
- 2.4.3 Area Three: there are no discernible changes within this area.
- 2.5 Ordnance Survey Map, Glamorgan XLVI.NW, c. 1942, 6-inch map & Glamorgan XLVI.NE, c. 1946, 6-inch map Ordnance Survey Plan, 1974-1990, 1:10, 000**
- 2.6.1 There are no discernible changes between the 1921 map and the 1974-1990 map.

### **3. Aerial Photographs and Lidar**

#### **3.1 Aerial Photographs**

- 3.1.1 A total of 24 aerial photographs were supplied by the Central Register of Air Photography for Wales and these date from 1946 to 2016.

##### ***Area One***

- 3.1.2 The aerial photography shows the site as it has been recorded in the historic mapping. The only major change that has occurred is the changes in the field boundaries. From 1979 it appears that some field boundaries in this area have slowly been removed to create larger fields, and then from the 1990s/2000s there are very few field boundaries and the whole area appears to be mostly a large open agricultural area.
- 3.1.3 Towards the northern boundary lies a medieval castle ringwork (GM613), outside the area of proposed development. This site is particularly noticeable on all the available aerial photos from 1946 to the present day.
- 3.1.4 As noted from the historic map sources, there was a structure (OFV01) in the western area of the site. It was located to the south of Ty'n-y-Coed, and to the east of Pencarreg (GGAT02058s). The roofline of the building and the surrounding enclosure is visible on aerial photos from the 1940s up until the 1990s. However, aerial photos from 2000 onwards no longer show the building and its surrounding enclosure. The photo from 2000 shows ground disturbance where the building once stood.
- 3.1.5 Also noted on historic maps were the remains of two small-scale industrial sites within Area One: a quarry/limekiln (OFV02) and a further quarry (OFV03). OFV02 appears as a circular feature covered with trees and incorporated into a field boundary/hedgerow in the aerial photos from the 1940s up until 2000. A photo from 1981 shows the feature in greater detail. In this photo there appears to be less tree coverage around the feature, and it possibly shows the remains of the stone structure of the limekiln itself. However, the most modern aerial photos no longer show the circular feature, and instead the field boundary/hedgerow continues in straight line. OFV03 is difficult to pick out in the aerial photos. The feature itself appears to be in amongst thick woodland, and the photos available are not able to pick the feature out. It is also difficult to ascertain whether this feature is incorporated into the development area, or whether it sits just outside it.
- 3.1.6 There are a number of linear features found throughout the aerial photography. The

majority of these can be attributed to former field boundaries that have been altered over the decades, or frequently used trackways. As mentioned above, there are two recorded cropmarks within Area One, an enclosure (NPRN 309284) and a field system (GGAT03998s; NPRN 309275). It was difficult establish the existence of these from the available aerial photos. Nonetheless, there are a few photographs that may represent these recorded cropmarks. A photo from 1963 appears to show the rectangular enclosure, and a photo from 1969 shows the enclosure faintly alongside a linear feature to its east, which could be the associated field system.

### ***Area Two***

- 3.1.7 As with Area One, the only major change within this area of the site is the change to the field boundaries. These are significantly different in the 1979 aerial photograph to the preceding, and they appear to represent the field boundaries that are currently in place. There are several linear features observable on the aerial photography, most of which correspond to former field boundaries.
- 3.1.8 The medieval castle ringwork (GM117) which is immediately adjacent to Area Two is not visible in the aerial photography due to thick tree coverage in the area.
- 3.1.9 Field boundary (GGAT03873s) can be seen, but it is not possible to identify the other sites in this vicinity (GGAT03874s, GGAT03877s, GGAT03884s, & NPRN 15270).
- 3.1.10 Brook Farm (NPRN 414419) and its associated buildings (GGAT03879s, GGAT03880s & GGAT03881s) are visible in the aerial photography. The buildings appear to be in use from the 1940s to 1981. By the 1991 photography the buildings are in a state of disrepair and the surrounding area is overgrown, appearing as it does in the present day. Therefore, the buildings were abandoned in the ten years between 1981 and 1991.

### ***Area Three***

- 3.1.11 This area of the site has seen the fewest changes. The only discernible change is that in between 1981 and 1991 are large part of Coed Quinnet was cleared, including what is now the southern part of Area 3B, and turned into pasture for the grazing of livestock.

## **4. LiDAR**

- 4.1.1 LiDAR data at a resolution of 25cm, 50cm, and 1m DTM and DSM was unavailable for the site and the surrounding area. Therefore, LiDAR data at a resolution of 2m DTM and DSM was processed in order to examine the possible sub-surface features. LiDAR data at this resolution illustrates the topography of the site but does not allow for much detail (Figure 4).
- 4.1.2 Area One: Immediately to the north of Area One the earthworks associated with Castle Ringwork (GM613) are very clear and evident in the landscape. The anomalies illustrated by the data represent the existing field boundaries. There is no evidence from the LiDAR of the existence or survival of the recorded cropmarks of the enclosure and field system (NPRN 309284; GGAT03998s & NPRN 309275). There were also no

anomalies that could relate to the limekiln (GGAT02617s), the structure (OFV01), or the newly identified limekiln (OFV02). However, it must be noted that this lack of anomalies may relate to the resolution of the LiDAR data, and the lack of availability of more detailed data in this area.

- 4.1.3 Area Two: Coed y Cwm Ringwork (GM117) is clearly visible in the data to the north of Area Two. The current field boundaries can be seen, as well as other linear anomalies, including include a field boundary (GGAT03873s), the Brook Farm buildings (GGAT03879s, GGAT03880s & GGAT03881s), pond (GGAT03872s), and the field boundary parch mark (NPRN 422326). There are also depressions within the data, which appear to be geological features.
- 4.1.4 Area Three: Similarly, the anomalies in this area mainly represent the current field boundaries. However, there are some faint linear anomalies which run on a north-east to south-west axis, which are probably plough marks associated with agricultural activity on the site.

## **5. Aims and Objectives**

- 5.1.1 The primary objective of this survey is to locate and describe potential archaeological features present within the proposed development area. The work is intended to determine the presence or absence of archaeological remains, and where remains are identified to establish their character, distribution, extent and relative significance, providing sub-surface data to inform any future on-site works.
- 5.1.2 It is the aim of this report to provide information which is sufficiently detailed to allow the archaeological resource to be better understood. The information may then be used to help inform further archaeological work undertaken in association with the proposed development or to allow the developer to adjust their plans.

## **6. Methodology**

### **6.1 Geophysical Survey**

- 6.1.1 The survey was carried out using Bartington Grad601-2 dual sensor fluxgate gradiometers. This instrument has been chosen due to its proven efficient and effective method of locating sub-surface archaeological anomalies on greenfield sites. The machine consists of two high stability fluxgate sensors suspended on a single frame, accurately aligned, that can detect localised magnetic anomalies compared with the general magnetic background. When mapped in a systematic manner this allows changes in the magnetic field resulting from differing features in the soil to be plotted. Strong magnetic anomalies will be generated by iron-based objects or areas modified by heat, such as hearths and kilns. More subtle anomalies may be generated by changes, typically in the iron-oxide content, of underlying soils, compared to the natural subsoil. This enables the detection of material infilling sub-surface archaeological features such as ditches, pits and structural remains. Data from this may be mapped at closely spaced regular intervals, to produce an image that may be

interpreted to locate buried archaeological features (Clark, 1997) (Aspinall et al, 2011). The work includes a comprehensive assessment of regional context within which the archaeological evidence rests and aims to highlight any relevant research issues within national and regional research frameworks.

- 6.1.2 Fluxgate gradiometry has the advantage of being able to identify the broadest range of sub-surface archaeological feature types and can detect such anomalies at a range of soil depths (typically 0.3-1m).
- 6.1.3 The site was located by a GeoMax Zentih 25 GPS. All survey points were located with the GPS and plotted onto an OS base map.
- 6.1.4 Detailed survey was carried out in grids of 30m x 30m along zig-zag and parallel traverses spaced at 1m intervals, recording data points spaced at 0.25m intervals to a maximum instrument sensitivity of 0.1nT in accordance with all relevant professional standards (EAC 2016). The survey mode was set to bi-directional (traverses walked alternately northwest-southeast/southeast-northwest). Incomplete survey lines resulting from irregular area boundaries or obstacles were completed using the 'dummy log' key. At regular intervals the data was downloaded in the field onto a laptop computer for storage and assessment.
- 6.1.5 Limitations in the survey were mostly due to large electrical pylons, which not only interrupted the data collection, but masked any potential features at least 15m from all sides. In some areas, namely 1A, 1C, 2C and 2E, the data collected was also affected by the power lines themselves, creating distorted results on the data directly under their route. A planted orchard with metallic guards filled the larger part of Field 3F which reduced the opportunity for viable results.

## **6.2 Data Processing and Presentation**

- 6.2.1 Following the completion of the detailed survey, processing and analysis took place using the TerraSurveyor v.3 software package.
- 6.2.2 A composite of each detailed survey area has been created and processed using Terrasurveyor v.3. The report includes raw and unclipped data in both greyscale, colour, and x-y trace plots. Every effort has been made to reduce the instrument directional sensitivity in the field rather than reliance on post data-collection processing.
- 6.2.3 The final results have been presented at an appropriate scale tied to the Ordnance Survey National Grid.
- 6.2.4 The most typical method of visualising the data is as a greyscale image. In a greyscale plot, each data point is represented as a shade of grey, from black to white at either extreme of the data range. A limited number of standard operations can be carried out to process the data, including clipping and graduated shade. The data was analysed using a variety of parameters and styles and the most useful of these were saved as \*TIF images and displayed (Figures 5-7) using Adobe Illustrator software. The results of the survey were then overlaid onto a digital map of the study area. This was then used to produce interpretation figures (Figure 8).

- 6.2.5 All works were undertaken in accordance with the standard required by The Chartered Institute for Archaeologists' Standard and Guidance for Archaeological Geophysical Survey (2014) and current Health and Safety legislation.

## **7. Geophysical Survey Results**

### **7.1 Introduction to the results**

- 7.1.1 A number of response types with differing polarities were captured across the site. Polarity is the phrase used to describe the measurement of the magnetic response. Anomalies with positive polarity have values above 0nT, while anomalies with a negative polarity have values below 0nT. It is possible for anomalies to have values of both positive and negative polarity.
- 7.1.2 A number of terms are used below to describe the different types of anomalies recorded within the dataset. These are:
- **Dipolar:** these anomalies consist of a single positive anomaly with an associated negative response. There should be no separation between the two polarities of response. These anomalies will be created by a single feature and the interpretation will depend on the magnitude of the magnetic measurements.
  - **Bipolar:** these anomalies are comprised of both positive and negative responses. They can be made up of any number of positive and negative responses. 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.
  - **Positive:** These anomalies are usually related to backfilled cut features, where the fill material is magnetically enhanced compared to the surrounding matrix. These anomalies can be caused by features of archaeological origin, but they can also be caused by former field boundaries and ploughing. It is possible that some may be of natural origin.
  - **Positive anomaly with associated negative response:** These responses are caused by a single feature. Such responses could be caused by the cables of modern services, although magnetically weaker responses could relate to earthworks and field boundaries.
  - **Negative:** These anomalies are generally caused by raised earthen features where material has built up that has a lower magnetic magnitude relative to the background soil.
  - **Magnetic debris:** this consists of numerous dipolar responses spread over an area. Weaker responses could represent general ground disturbance with stronger responses being more indicative of a spread of ferrous debris. Moderately strong responses may be the result of a spread of thermoremanent material such as bricks or ash.

- 7.1.3 The anomalies recorded within the dataset across the site relate to geological and agricultural features, as well as features of known archaeological interest and those of potential archaeological interest. Where possible, interpretations of the anomalies have been provided, although it is difficult to be certain on the functions of many of the positive linear anomalies. Potential dates for anomalies have also been suggested where possible.
- 7.1.4 The results below have been split into categories, with geological features, agricultural features, known archaeological features, and features of potential archaeological interest being discussed under different headings for each area. The historic field boundaries are discussed as a separate section, as these are encountered within the data across the entire site.

## **7.2 Historic Field Boundaries**

- 7.2.1 Across all of the areas of the site historic field boundaries are evident within the dataset, which are positive linear responses, with most having associated negative responses, marked in red (Figure 8). These relate to the field boundaries as shown on the Tithe Map and Ordnance Survey Maps (Figure 9). The nature of the responses suggest that when the field boundaries were dug out many were backfilled with soil containing modern rubbish which may account for the negative responses evident.

## **7.3 Area 1 Ditched Enclosure**

- 7.3.1 In the central section of Area 1A, a large square ditched enclosure is clear within the dataset (Figure 8 and Figure 10). The enclosure has an outer ditch enclosing all sides, with a second inner ditch, which encloses all but the west side. It is possible that the inner continues along the western side of the enclosure but has been backfilled with soil that has a similar magnetic value to the soil surrounding it.
- 7.3.2 The outer ditch is approximately 1.6m wide, while the inner ditch is 2.2m wide. The ditches are set approximately 6.5m apart and the inner enclosed area measures 38m by 35m.
- 7.3.3 There is no clear evidence to suggest a bank between the two ditches, although there are a few areas of negative responses along the southern and eastern sides, which could represent a denuded bank. This area of the site has been heavily ploughed, and it is likely any surviving bank material has been heavily damaged and spread across the field.
- 7.3.4 Morphologically, it is possible to suggest that there was a domestic settlement within the enclosure, possibly of Iron Age or Romano-British date. Similar enclosures are known within the Vale, including at Moorlands Farm (Young, 2020).
- 7.3.5 There are four weak positive linear anomalies, F15, which may be associated with the enclosure. These are located on the south and south-western edges of the enclosure.
- 7.3.6 A number of faint positive linears, F37, (Figure 8) lie further east in Area 1B. Their

arrangement suggest that they may be related to the linears of F15. The linear anomalies of F37 are similar in their arrangement to those of F15 and are possibly associated with square ditched enclosure F14. Together these features may form part of an associated field system. These linears lie on either side of the former lime kiln which lies on the edge of the track, between Areas 1A and 1B.

#### **7.4 Area 1 Boundary Ditch**

- 7.4.1 Feature 28 is broadly aligned east to west and is a long, wide linear anomaly measuring approximately 160m in length and 2.2m in width (Figure 8 and Figure 11). The anomaly is picked up again in Area 1C to the east, although its line is partially obscured by the pylon in that area. The feature follows the contour of the topography, appearing at its high points. However, because it is distinct and regular in size and shape it could be interpreted as a large ditch truncated by former ploughing, evidence of which is apparent across Area 1.
- 7.4.2 This could represent a large boundary ditch predating the historic field enclosures, as it does not follow a similar alignment to the field patterns on the historic mapping. It is possible that F26 forms part of F28, as they are on a similar alignment and are located in close proximity.

#### **7.5 Area 1A**

*Agricultural features (Brown – ploughing; orange – land drains)*

- 7.5.1 There is evidence of modern ploughing within the central section of Area 1A, marked in brown, with the responses being aligned east-north-east to west-south-west (Figure 8). These responses are both positive and negative and continue across the top of the historic field boundaries.
- 7.5.2 A second area of ploughing is evident to the east, with positive responses on a north-west to south-east alignment. These are aligned with the historic field boundaries and likely relate to post medieval land use.
- 7.5.3 A small number of negative linear anomalies are evident within the area of modern ploughing. These are thought to be modern land drains, marked in orange (Figure 8).

*Features of known archaeological interest (Yellow)*

- 7.5.4 A small number of features that are known to be of archaeological potential were recorded within Area 1A.
- 7.5.5 At the western edge of the area, a wide, positive response was identified (F1) which is aligned north-north-east to south-south-west and curves south-westwards towards the modern road (Figure 8). The historic map regression shows that the alignment of the road has altered from the time the Tithe Map was produced. The response is approximately 6m wide and it is possible that it represents the original line of the road, or perhaps the line of a field boundary that ran alongside the road.

- 7.5.6 A similar positive curvilinear response, F2, is located just to the south. The feature is approximately 3.5m in width and is aligned north-east to south-west before curving towards the south. The Tithe Map shows the road curving back through this part of the site and it is possible that the feature relates to the road.
- 7.5.7 To the north-east of both F1 and F2, an area of magnetic disturbance was recorded (F7). The strength of the response suggests it is a spread of thermoremanent material. The First Edition Ordnance Survey map shows a building bounded by hedges or walls in this location, and it is likely that the disturbance is the remains of this building.
- 7.5.8 Feature 34 is located along the southern edge of Area 1A and is a magnetic disturbance, with the response again suggesting it is a spread of thermoremanent material. The previous desk-based assessment (Evans, 2020) identified the remains of a lime kiln within this area, which is also shown on the First Edition OS map sheet. The response likely corresponds to the demolished remains of the kiln.
- 7.5.9 The final response of known archaeological interest is F25, towards the east of Area 1A. This is comprised of two parallel, positive linear anomalies with associated negative response. This relates to a trackway, which runs along the south-eastern edge of Area 1A. This is a modern trackway and is not of archaeological interest but has been included within this section as a known feature.

*Features of potential archaeological interest (Blue)*

- 7.5.10 There were a total of 30 features of potential archaeological interest across Area 1A.
- 7.5.11 Of these features, thirteen were formed of weak positive linear anomalies (F3, F5, F8, F10, F13, F18, F19, F20, F21, F22, F24, F30 and F35), which were all located within the western and central section of Area 1A. Features 3, 5, 18, 20, 22 and 30 are all short linear anomalies, which may belong to larger features. These could be of archaeological interest and may represent gullies or ditches. They could also relate to ploughing activity but the isolated nature of most of these features suggests this is not the case and it is very unlikely that F35 is related to ploughing.
- 7.5.12 Features 24 and 35 are long anomalies measuring approximately 240m and 170m respectively. It is possible these are boundary ditches, although they could also relate to drainage.
- 7.5.13 Feature 8 appeared to form a V-shaped anomaly, although the response at the convergence of the two linears is very weak and it could be that it represents two separate features. Immediately to the east is F9, which is formed of two parallel linear anomalies, which are set approximately 15m apart.
- 7.5.14 Feature 10, located to the north-east, is formed of a curvilinear positive anomaly. The north-eastern end of the feature has a corresponding negative response, which may relate to a separate dipolar feature. It is also possible that the fill within this part of F10 contains more magnetic material than the fill within the rest of the feature.
- 7.5.15 Feature 13 is aligned east-north-east to west-south-west and appears to run across



part of F14, discussed above. The linear anomaly of F13 appears to respect the historic field boundaries and it may be that the feature represents a field boundary that pre-dates the Tithe Map.

- 7.5.16 Feature 19 is formed of a long, segmented linear, which measures approximately 281m in length. The weak magnetic response of the feature may indicate that it is actually one single linear anomaly, with the low magnetic value of the 'gaps' not being registered by the magnetometer as there are a large number of features within the surrounding area. The feature is aligned roughly north to south, curving slightly towards the south-west.
- 7.5.17 Feature 21 is an L-shaped linear, which is aligned north-east to south-west, turning towards the south-east. The south-east to north-west aligned section has three dipolar responses along the length of the anomaly, which could relate to separate features within this area. Where the feature turns towards the north-east the magnetic response becomes stronger.
- 7.5.18 There are three weak bipolar linear responses evident within the data, F4, F6 and F11. The nature of the responses does not suggest that these relate to modern services, which is often the case with bipolar responses; F4 and F6 may be clay land drains.
- 7.5.19 Feature 11 is formed of three linear anomalies with a central linear running north-north-west to south-south-east, and two further linears branching off it at an approximately 45-degree angle. It is unclear what type of feature F11 may be.
- 7.5.20 The remaining features are all formed of stronger positive anomalies.
- 7.5.21 Features 12, 16, and 17 are located within the central section, with F12 aligned roughly north-west to south-east, F16 aligned east-north-east to west-south-west, and F17 aligned north-north-west to south-south-east. Feature 12 curves as it intersects with F13 and ends where it meets ditched enclosure F14, discussed above. It is possible that it is connected to F14.
- 7.5.22 Features 16 and 17 may form a single L-shaped feature although the intersection between the two being at the edge of a grid makes it difficult to be certain. Both are very straight linears and it may be that they are historic field boundaries. If that is the case they pre-date the drawing of the Tithe Map, as neither appear on any of the available historic mapping. It is also possible that F17 was formed by post medieval ploughing, as it is located within the area of suggested post medieval ploughing discussed above. However, it is not quite on the same alignment as the plough furrows and so may not be related.
- 7.5.23 Features 26, 27, 32, and 33 are all short linear anomalies. As with the short weaker positive anomalies, these could be of archaeological interest and may be short lengths of ditches backfilled with more highly magnetic material. They could be related to ploughing but again the isolated nature of most suggest this is unlikely to be the case.
- 7.5.24 Feature 23 is broadly aligned south to north and curves towards the north-west. It is likely part of a larger feature, although it does not continue southwards into Area 1B.
- 7.5.25 Feature 29 is comprised of three linears that appear to form three sides of a rectilinear

enclosure, which is aligned roughly north to south. The enclosure measures 40m in width by a minimum of 54m in length (Figure 8 and Figure 12).

- 7.5.26 The final strong positive anomalies are the four curvilinear features that form F31, at the far eastern edge of Area 1A. These are all slightly different in form and size and it is not certain that they are of archaeological interest.

#### *Dipolar Responses*

- 7.5.27 There are a number of dipolar responses highlighted across the whole area. The responses suggest these are likely ferrous material within the soil matrix. The linear dipolar responses at the western and eastern edges are likely to be modern services.
- 7.5.28 There are two pylons across the area, which have caused huge disturbance in the area surrounding. These are not highlighted but are located just to the east of the central section.

### **7.6 Area 1B**

#### *Features of geological origin (Purple)*

- 7.6.1 Towards the north-western end of Area 1B, centred around a corner in the northern field boundary, is a curving, semi-circular anomaly (Figure 8). The weakly magnetic variation creating its shape is indicative of a natural feature, likely where water has collected regularly through time. The lidar data shows this particular area to be slightly depressed compared to the ground level around it, which would account for regular water collection.
- 7.6.2 Towards the eastern end of Area 1B, on the southern border, is a probable paleochannel (Figure 8), distinctive in its curvilinear, weakly magnetic signature. It is located along the edge of a water course running along the southern end of the field.

#### *Agricultural features (Brown – ploughing; orange – land drains)*

- 7.6.3 Two distinct areas bounded by historic field boundaries show evidence of agricultural activity. The south-west corner of Area 1B contains distinct, positive linears (Figure 8) regularly spaced, running north-east to south-west and at a diagonal to a squared boundary. The boundary containing these linears only appears on the tithe map and does not exist on any of the later historic mapping. These linears are likely the remains of plough furrows; their spacing, which is on average 10m apart, would indicate at least a late medieval date.
- 7.6.4 To the east of the plough marks are a series of negative linears (Figure 8) running roughly north-east to south-west, all of which connect to a central positive linear running north to south. These are likely a drainage system, comprised of land drains running off a central drain.

#### *Features of potential archaeological interest (Blue)*

- 7.6.5 At the southern end of Area 1B, situated along one of the historic field boundaries and located within the historic field that contains the land drain system, is a spread of magnetic debris, F36 (Figure 8). The amplitude of the debris ranges widely from low to high. At its centre appears to be a circular area with a positive magnetic response. The feature's location adjacent to a field boundary and the mix of responses within it suggest this represents a spot in which rubbish was dumped or burned. Materials such as brick or ferrous debris can both create a strong response, as can ash from burned materials.
- 7.6.6 However, due to its location immediately next to the water course, and because of the shape and size of the anomaly, it is also possible that this could be interpreted as a prehistoric burnt mound. The positive response at the centre of the anomaly could very well be a pit; a number of burnt mounds recorded have been found to have pits within them (Higginbottom *et al.* 2007, 7). In 2007, GGAT carried out an assessment of burnt mounds within south-east Wales. Including both previously known examples and those identified by the survey, they recorded a total of 43 burnt mounds within their study area (*ibid*, 6).

### **7.7 Area 1C**

#### *Features of geological origin (Purple)*

- 7.7.1 At the far eastern end of Area 1C is a curving, semi-circular anomaly, similar to the one in Area 1B. This is another sunken area, shown clearly on the lidar data, where a weakly magnetic variation displays an area where water collects. Its origins could be a former quarry site, though the First Edition OS Map shows no evidence of this. However, there are a number of sunken areas similar to this around the edges of the survey area, some of which are listed as disused quarry sites.

#### *Features of potential archaeological interest (Blue)*

- 7.7.2 There are two curving bands of weakly positive magnetic responses at the western side of Area 1C, Features 28 and 38 (F28 is discussed above). Feature 38 is aligned roughly north-east to south-west and follows the contour of the topography, appearing at its high points. However, because it is distinct and regular in size and shape it could be interpreted as a ditch which has been truncated by former ploughing, the evidence of which is apparent at the eastern end of the two bands.
- 7.7.3 Another weak, positive linear, F39, intersects Feature 28. This linear is narrower and runs east-north-east to west-south-west. Feature 39 may connect to the two historic field boundaries running north to south, forming a rectangular shape, but it is much fainter and not as straight as the known field boundaries, so is probably not connected to these.
- 7.7.4 Three other, short, positive linears were also identified north and west of F39, which

are grouped as Feature 40. The longer and western of these runs from the corner of the known historic boundaries on the western end of Area 1C.

- 7.7.5 Of the two to the north of F39, one is a positive anomaly with corresponding negative responses on either side. Its location near the pylon might suggest this is a length of cable relating to the tower. However, its response is only moderately strong, so it could be the remains of a section of a ditch, with the earth on either side slightly raised.

## **7.8 Area 2A**

*Agricultural features (Brown – ploughing; red – field boundaries; orange – land drains)*

- 7.8.1 The entire field of Area 2A is dominated by evidence of land drains running throughout the field. These are apparent in the white lines running roughly north-west to south-east and the central ones running north-east to south-west.

## **7.9 Area 2B**

*Agricultural features (Brown – ploughing; orange – land drains)*

- 7.9.1 Ploughing is evident across the north-eastern section of the field (Figure 8). The positive and negative linear responses shown are very typical of ploughing. The furrows are set approximately 4.5m apart and it is possible that the ploughing is ridge and furrow of medieval date.

*Features of potential archaeological interest (Blue)*

- 7.9.2 Feature 41 is comprised of two parallel linears running north-east to south-west at the eastern end of the field. Both are negative linears with positive associated responses, indicating raised earth with ditches on either side. The northernmost is likely an early field boundary, though it does not appear on any historic OS maps. It ends abruptly where the plough lines also come to an end. However, the ploughing appears to run over it, indicating the boundary was removed prior to the ploughing. The lower of the two linears is clearly connected to a later field boundary which still partially exists to the west of it.
- 7.9.3 The other anomaly within this field is Feature 40, which appears to be a sub-square ditched enclosure (Figure 8 and 13). Unlike F14 in Area 1A, this enclosure consists of a single ditch, which is approximately 3.5m wide. The ditch is most visible at its north-east and south-western corners, which have negative responses associated with the positive anomalies. It is possible the negative responses are the remains of a denuded bank, but this is unclear.
- 7.9.4 The enclosure measures approximately 44m by 40m and as with F14 there are no clear anomalies within the interior that may suggest domestic occupation or other forms of activity.

### *Dipolar Responses*

- 7.9.5 A single, linear dipolar response close to the northern edge of the field. This is likely part of a modern service.

## **7.10 Area 2C**

### *Agricultural features (Brown – ploughing; orange – land drains)*

- 7.10.1 There are a number of land drains within the central section of this field, which are shown as negative linear responses.
- 7.10.2 There also appears to be evidence of ploughing within the central area of the field. The positive linear anomalies are most likely plough furrows, but it is difficult to be certain, as much of the data has been affected by the presence of the pylon and the overhead cables. The potential plough furrows appear to follow the alignment of the historic field system and are contained within two of these fields. This may strengthen the suggestion that they are evidence of historic ploughing.

### *Features of potential archaeological interest (Blue)*

- 7.10.3 There are a number of positive linear anomalies within this field which may be possible features of archaeological nature.
- 7.10.4 The first is F42, which is at the north-eastern end. It is comprised of two narrow positive linear anomalies, aligned broadly east to west. It is not clear if these are part of the same feature or are two separate features.
- 7.10.5 Feature 43 is comprised of three anomalies. It is possible that the two longer linears are part of the same L-shaped feature, with disturbance from the overhead cables making it difficult to determine. The longer of the two appears to have a corresponding negative linear on its north-western edge, which may suggest an earthen bank.
- 7.10.6 The third shorter linear appears to be on a similar alignment and so is possibly connected to the two longer linear anomalies.
- 7.10.7 Feature 85 forms a possibly interrupted curve of magnetic material with a visible overall length of approximately 200m.
- 7.10.8 To the north of this feature was a series of at least six magnetic responses (F84) each measuring approximately 7-10m across

## **7.11 Area 2D**

- 7.11.1 The data collected across this field has been affected by the presence of the pylon and the overhead cables, with magnetic disturbances present across parts of the field.

*Agricultural features (Brown – ploughing; orange – land drains)*

- 7.11.2 The vast majority of responses within this field relate to ploughing, with this activity spread across the entire field. It is likely that this is modern ploughing, as it appears to continue across the top of the historic field boundaries.
- 7.11.3 There are also a number of land drains across the south-eastern part of the field.

*Features of potential archaeological interest (Blue)*

- 7.11.4 There are only two potential features of archaeological interest within this field. Feature 44 is a strong positive linear anomaly with corresponding negative responses, which is aligned north to south. It is possible it is a ditch with earthen banks along the edges.
- 7.11.5 Feature 45 is comprised of two parallel, strong positive responses with a corresponding negative response between them. The linears are aligned north-east to south-west, with the responses becoming weaker to the north-east. The responses suggest that the anomalies could be two parallel ditches with a bank in between. The weaker responses to the north-east could indicate that the feature is heavily plough damaged in this area.

**7.12 Area 2E**

*Features of known archaeological interest (Yellow)*

- 7.12.1 There is one feature of known interest within this field, Feature 51. The feature is located in the north-eastern corner of the field. The HER data lists four sites within this area of the field and it is likely the response evident in the dataset relates to a barn which is shown on the Tithe Map. The feature is comprised of three strong positive linear anomalies, which could represent the foundations of the barn. These are surrounded by magnetic debris, which may be the result of the demolition of the structure.

*Features of potential archaeological interest (Blue)*

- 7.12.2 Feature 46 appears to be an L-shaped anomaly, with the east to west orientated section being a moderately strong positive anomaly. The north-to south orientated section is obscured by the overhead power cables which have affected the data. A faint positive anomaly is evident beneath the affected data. It may be that these are two separate features, and the nature of the east to west section suggests it may be a natural feature.
- 7.12.3 Feature 47 is located just to the north of F46 and is formed of three strong positive linear responses. The responses suggest the feature is formed of ditches, with the ditch forming the eastern side being much more highly magnetic than the other two. It is possible that this is due to the presence of Feature 48, which is situated

immediately to the east and is a strongly magnetic feature, with both positive and negative responses. The positive response forms almost a complete circle, with negative responses in the interior as well as surrounding the outer edge of the feature.

- 7.12.4 It is unclear what function either of these features had, but it is possible they may be related to each other.
- 7.12.5 Feature 49 is located to the east and is aligned broadly north to south. The feature is comprised of a short, strongly positive linear anomaly.
- 7.12.6 The final feature within this field is F50, which is comprised of a negative linear anomaly with corresponding positive responses along both edges. The negative response indicates the feature is an earthen bank, potentially with shallow ditches or gullies running alongside it.

### **7.13 Area 2F**

#### *Bipolar Response*

- 7.13.1 There is a large bipolar response running north to south through this field. This is the result of a modern service.

#### *Agricultural features (Brown – ploughing; orange – land drains)*

- 7.13.2 At the southern end of the field a number of land drains are evident as well as evidence of ploughing. Both appear to be modern.

#### *Features of potential archaeological interest (Blue)*

- 7.13.3 Feature 51 is located almost centrally and is aligned east to west. It is a relatively weak positive linear anomaly. It is possible that it is part of a historic field boundary which is shown on the tithe map, although with only a short length evident in the dataset it is not possible to be certain.
- 7.13.4 Feature 52 is just to the north and is a roughly circular anomaly comprised of a strong positive response with corresponding negative responses around the interior and exterior of the feature. It is possible that this is not archaeological in nature and may be a ferrous response as there are three dipolar responses running east to west just above the feature.

### **7.14 Area 3A**

#### *Features of known archaeological interest (Yellow)*

- 7.14.1 Feature 53 is a weak, positive linear anomaly that runs from the north-east to south-west corner the field. This feature is a footpath visible on the aerial photography.

## **7.15 Area 3B**

### *Agricultural features*

- 7.15.1 Ploughing is evident across most of the north of the field, orientated north-north-east to south-south-west (Figure 8). The positive and negative linear responses indicate that the furrows were around 4.5m apart, meaning that this is likely to be ridge and furrow of medieval date. In the north-west corner of the field the responses are stronger than in the rest of the field, indicating that the east of the field has subsequently been subject to greater disturbance.

### *Features of potential archaeological interest (Blue)*

- 7.15.2 Feature 54 is located in the north-west corner of the field. It is a weak negative linear anomaly, aligned east-north-east to west-south-west. It is 104m long and stops at the edge of the stronger area of ploughing, which it runs perpendicular to.
- 7.15.3 Two curvilinear features, F55 and F56, are located in the same area of the field. Both are negative anomalies. Feature 55 is aligned roughly north-east to south-west before curving gently to the south, stopping at the former field boundary. Feature 56, slightly to the west, has a similar curvature, appearing to join F55. It is not clear if these features are contemporary, or if one replaced the other.
- 7.15.4 Feature 57 is a wide band of magnetic disturbance that runs roughly east to west across the south of the field. It is an uneven width, varying between 6m and 18m. The strength of the response suggests it is a spread of thermoremanent material. It is in the area of the field that was formerly woodland before it was cleared between 1981 and 1991, on the basis of aerial photographic evidence. The feature is visible on the photograph from 1991 as a crop mark.
- 7.15.5 Features 58 and 59 are two areas of strong magnetic disturbance in the same part of the field and may be related to the same event. Feature 58 is circular, with a diameter of around 20m, while F59 is square and also about 20m in width.

## **7.16 Area 3C**

### *Features of potential archaeological interest (Blue)*

- 7.16.1 Feature 60 is a long, north-west to south-east orientated feature that runs for about 150m across the majority of the field. It is a negative anomaly with a weak positive response on its south-west side.
- 7.16.2 Feature 61 is a short, north-west to southeast orientated negative linear feature to the east of the field. It has a slightly different alignment to F59. It is 40m long.
- 7.16.3 Feature 62 is a group of six irregularly shaped features with bipolar responses that are located along the west, south and south-east of the field. They vary in size, with the largest being approximately 24m by 12m and the smallest being 14m by 6m.



## **7.17 Area 3D**

### *Agricultural features*

- 7.17.1 Positive and negative linear responses of varying strength are present across the entire field. The furrows are orientated north-north-west to south-south-east and are about 2m apart.

### *Features of potential archaeological interest (Blue)*

- 7.17.2 Features 63 and 64 are two roughly parallel, north-east to south-west aligned positive linear anomalies. Feature 63 is roughly in the centre of the field and is about 145m long. Feature 64 is around 35m to the south and is about 160m long.
- 7.17.3 Feature 65 is a north-north-east to south-south-west orientated positive linear anomaly, which crosses the east end of F64. It is 71m long but likely continues beyond the southern field boundary. Feature 66 is a weak positive anomaly on the same alignment, 25m to the south-east. It is roughly 45m long.
- 7.17.4 To the east of F66 is a gently curving, roughly north-north-east to south-south-west orientated positive anomaly (F67).
- 7.17.5 At the north-eastern end of F67, near the eastern field boundary, is a large, circular area of strong magnetic disturbance (F68). This feature is c. 15m in diameter and strength of the response suggests it is a spread of thermoremanent material.

## **7.18 Area 3E**

### *Agricultural features*

- 7.18.1 Ploughing is evident across the whole field, orientated east-north-east to west-south-west. The furrows are orientated north-north-west to south-south-east and are about 3.5m apart.

### *Features of potential archaeological interest (Blue)*

- 7.18.2 There are six linear features in this area (Figure 8 and Figure 14). Three of the linears (F69, 74 and 75) are aligned north-north-west to south-south-east and range in length from c.7m to 65m. Two are aligned north-north-east to south-south-west (F72 and F80) and measure c.25m and 75m respectively. Feature F70 is aligned east-west and joins Feature F69 to Feature F71. Feature F71 is a large curvilinear feature possibly part of an enclosure.
- 7.18.3 Within this area there are four sub-circular features with similar size (F73, 76, 77 and 79). The long axis of these features measures c.15m while the short axis measures c.9m.
- 7.18.4 A further curvilinear feature F78 is located to the north of F79, comprises a north-south aligned linear with a curve from the north to the east at its northern end.

## **7.19 Area 3F**

### *Agricultural features*

- 7.19.1 The data collected across the south-east of this field has been affected by the presence of an orchard which interrupted the surveying

### *Features of known archaeological interest (Yellow)*

- 7.19.2 Features 81 and 82 are continuations of path F53 in Area 3A. They are both positive responses around 3 – 4m in width. Like F53, F81 is visible on all of the aerial photographs from the 1940s, while F82 is only visible in one taken in 1947.
- 7.19.3 Feature 83 is a modern farm track that first appears on aerial photography in 1991.

## **8. Conclusions**

- 8.1.1 A fluxgate gradiometer survey has been successfully undertaken across the site. Slight interference associated with the overhead power cables may have impacted some of the results along its line although this is minimal. The pylons and their bases along with metal fences and gates have the largest non-archaeological impact on the results. No services were imaged by the survey.
- 8.1.2 Historic maps have aided the interpretation of the survey area with clear linears shown on the exact lines of historic field boundaries. The entire survey area depicts a predominantly agricultural landscape with ploughing present across approximately half of the site and represented in all three areas. There are variations in ploughing orientation, width and locations suggesting different ploughing types with changes to these practices between farm occupants and over time.
- 8.1.3 Areas 1 and 3 show a variation of water management across the site. Clear drainage features are likely either stone lined /French drains or clay fired drainage pipes.
- 8.1.4 There are three main areas of archaeological potential. The first is the central part of Areas 1A and 1B with a concentration of potential archaeological features centred on a square, bivallate probable farmstead enclosure of likely Iron Age or Roman date. This is set amongst other linears, possibly describing square and rectangular enclosed areas. These are in the same alignments as the farmstead and therefore likely associated with it. The second area is a likely farmstead feature located in Area 2b. This feature does not appear to be associated with any other features although ploughing in this area may have disturbed earlier archaeology.
- 8.1.5 Area 3E is the third area of archaeological potential with a possible enclosure area demarked by a curvilinear feature. Inside the enclosed area are four sub-circular features two of which are intercutting as well as other less well-defined possible features. The west side of the enclosure may show an entrance way into the enclosure as well as other well defined linear features.

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### Maps

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Ordnance Survey Map, 1885. *Glamorgan XLVI, 6-inch map*

Ordnance Survey Map, 1900. *Glamorgan XLV.NW, 6-inch map*

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Figure 1. Site Location plan showing the three Areas that form the site boundary



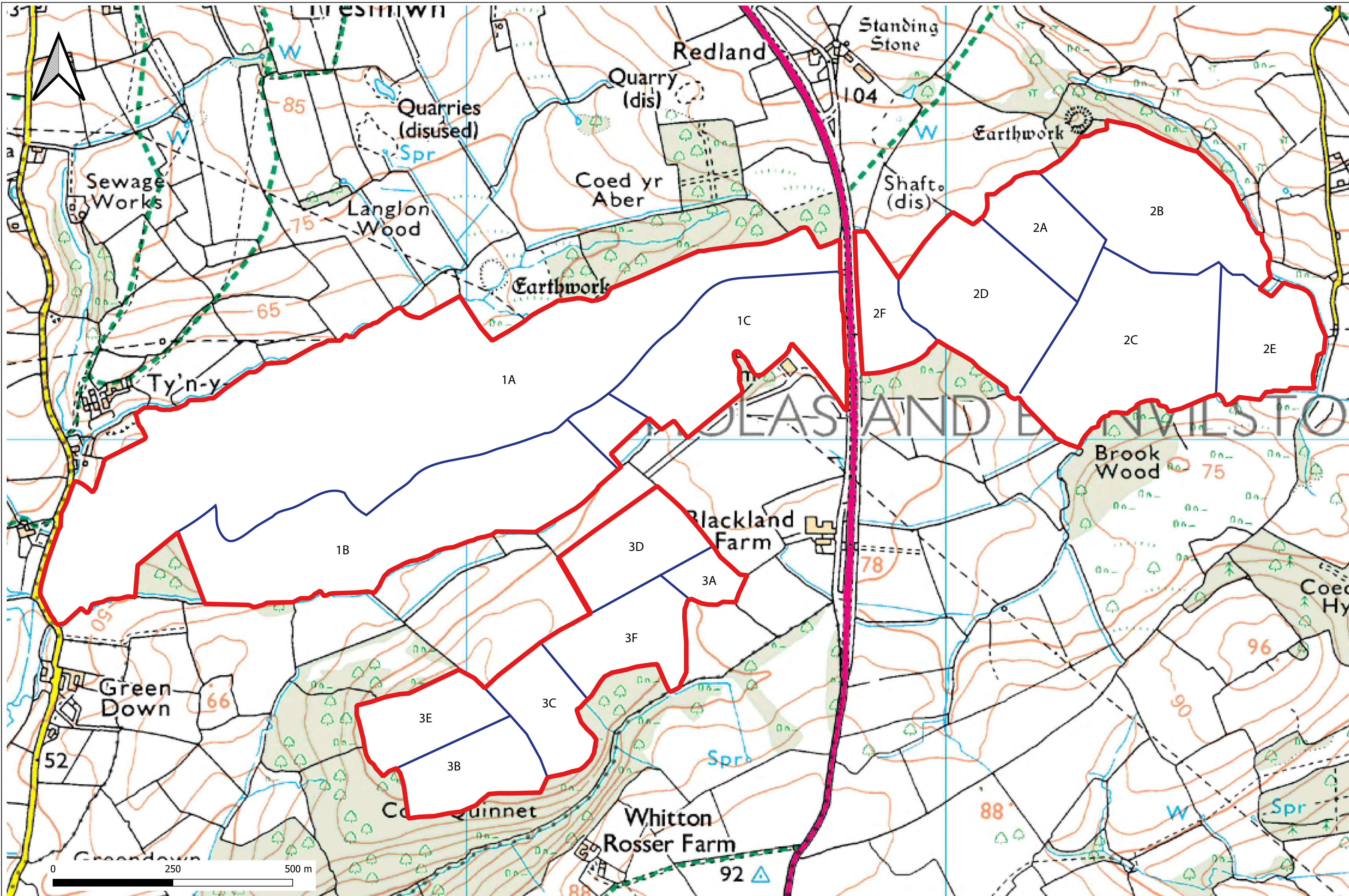


Figure 2. Plan showing the field numbering



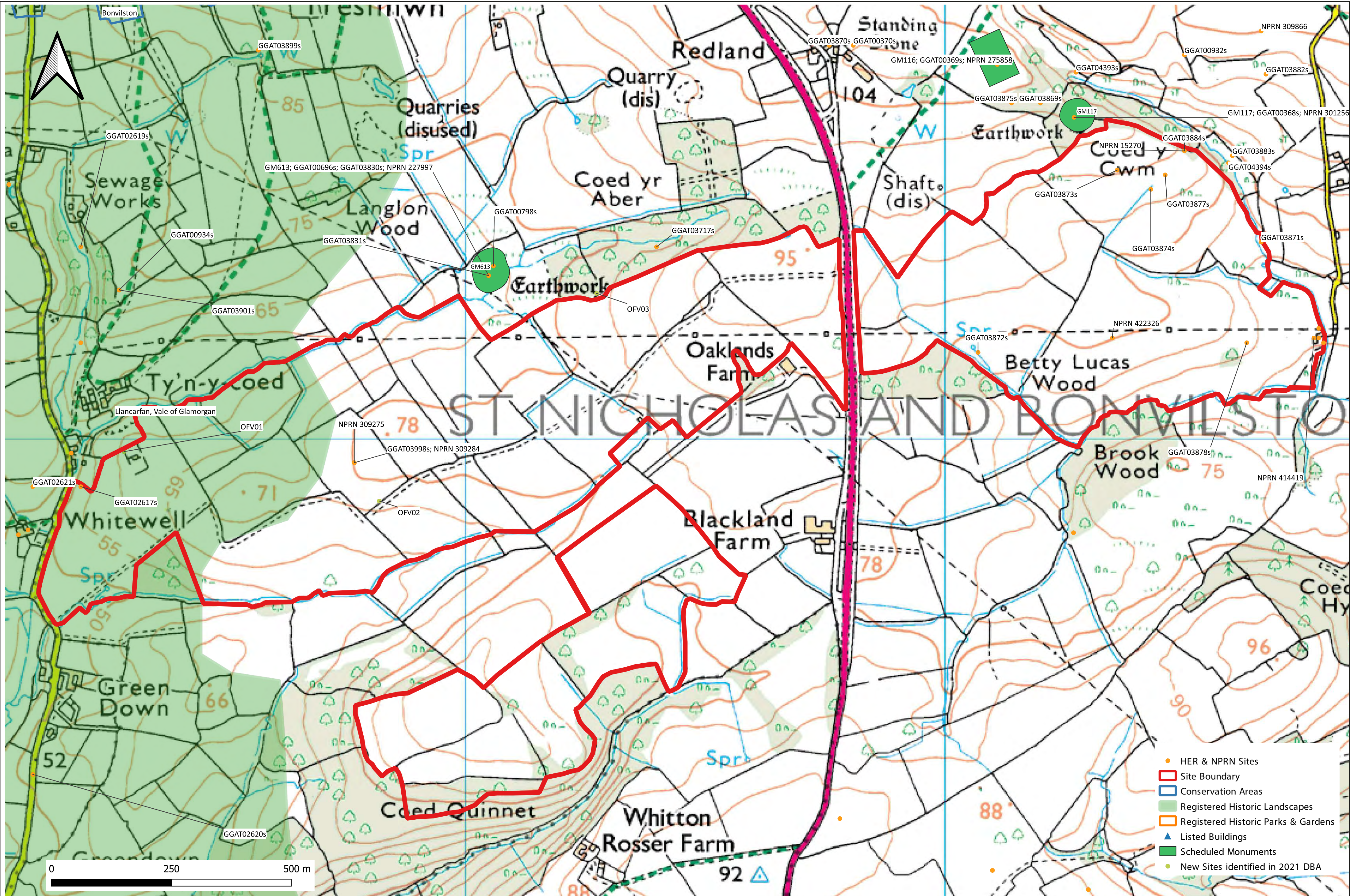


Figure 3. Plan of the Previously identified sites of historical interest as well as those identified during the 2021 desk-based assessment.



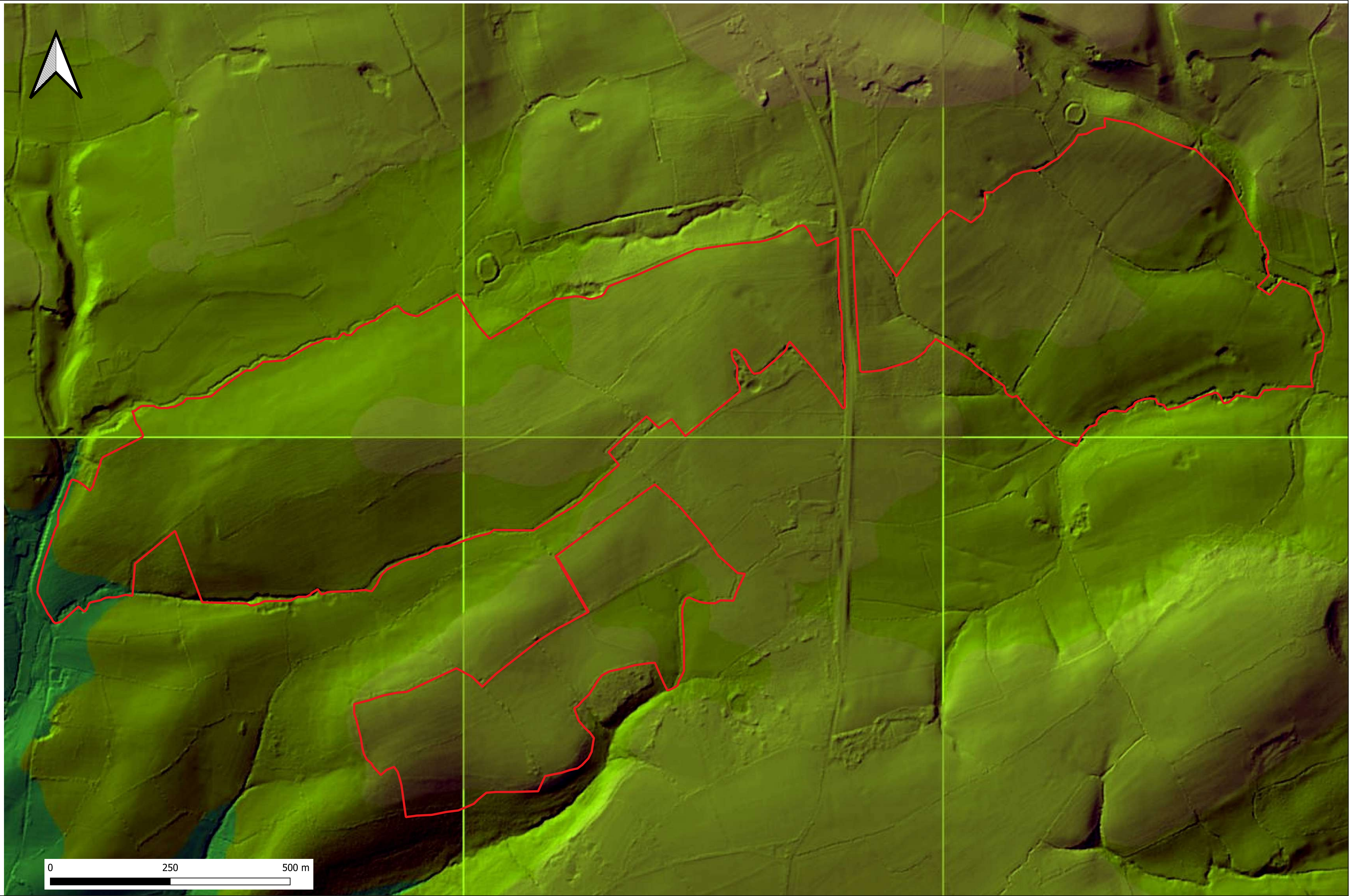


Figure 4. Plan showing the Lidar image for the development area