

LAND SOUTH OF BRONWYDD, LLANNON, CEREDIGION GEOPHYSICAL SURVEY 2017 (NGR SN 51180 63311)



Prepared by DAT Archaeological Services
For: Mr Tim Franklin



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LAND SOUTH OF BRONWYDD, LLANNON, CEREDIGION GEOPHYSICAL SURVEY 2017

Gan / By

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**LAND SOUTH OF BRONWYDD, LLANNON, CEREDIGION
GEOPHYSICAL SURVEY**

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LAND SOUTH OF BRONWYDD, LLANNON, CEREDIGION
GEOPHYSICAL SURVEY

SUMMARY

DAT Archaeological Services were commissioned by Mr Tim Franklin to undertake a geophysical survey of land south of Bronwydd, Llannon, Ceredigion, on which it is intended to construct five new dwellings. A geophysical survey was recommended following consultation on the planning application for the development.

The purpose of the geophysical survey was to provide a better indication of the archaeological potential of the site and if required enable targeting of any further archaeological mitigation requirements before or during the development. The archaeological advisor to the local planning authority (Dyfed Archaeological Trust-Development Management) has suggested that should the geophysical survey provide no evidence of potential archaeology within the development area then no further work would be required.

The survey area was approximately 0.21ha in size and the survey was conducted using a fluxgate gradiometer which detects variations in the earth's magnetic field. Readings were taken at a medium resolution on traverses 0.5m wide and every 0.25m within a 20m x 20m grid across the field. The site was surveyed on the 17th of October, 2017.

The results of the geophysical survey show an apparent linear formation of isolated dipoles but this is thought to be associated with a known mains service that runs through the development area. No further anomalies believed to be of archaeological origin were detected within the development area.

1. INTRODUCTION

1.1 Project Commission

- 1.1.1 DAT Archaeological Services were commissioned by Mr Tim Franklin to undertake a geophysical survey of 0.21ha ahead of the proposed development of five new dwellings on land southwest of Bronwydd, Pennant, Llannon, Ceredigion (centred on NGR SN 51180 63311; Figure 1). Such archaeological works are required to satisfy a condition placed on planning permission for the development (Planning Application No. A130758). This condition was placed following advice from the archaeological advisors to the planning authority, Dyfed Archaeological Trust - Development Management (DAT-DM),
- 1.1.2 The condition stated: *"No development shall take place until the applicant, or their agents or successors in title has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority."* Following discussions with the archaeological advisor to the planning authority (Zoe Bevans-Rice, DAT-DM) it has been confirmed that the geophysical survey will consist of a fluxgate gradiometer survey, which detects variations in the earth's magnetic field. Readings will be taken at a medium resolution on traverses 0.5m wide and every 0.25m within a 20m x 20m grid across the field.
- 1.1.3 The purpose of the geophysical survey is to provide a better indication of the archaeological potential of the site and enable targeting of any further archaeological mitigation requirements before or during the development. The archaeological advisor has stated that should the survey show no evidence of potential archaeology then no further work will be required.
- 1.1.4 A written scheme of investigation defining the archaeological works was produced by DAT Archaeological Services and was approved by DAT-DM.

1.2 Scope of the project

- 1.2.1 The aims of the project were laid out in the written scheme of investigation for the geophysical survey were prepared by DAT Archaeological Services and approved by DAT-DM. The aims were thus:
- To identify the presence/absence of any archaeological deposits;
 - To establish by geophysical survey, as far as is possible, the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
 - To prepare a report and using the the results of the geophysical survey to determine if any further archaeological mitigation would be required at the site either prior to or during construction in order to mitigate against any disturbance to archaeological remains from the proposals.
 - To prepare an archive for deposition in to the Historic Environment Record (HER).

1.3 Report outline

- 1.3.1 This report provides a summary and discussion of the geophysical survey and its results.

1.4 Abbreviations

- 1.4.1 Sites recorded on the Regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Gradiometer readings are measured in nanoTesla (nT).

1.5 Illustrations

- 1.5.1 Printed map extracts are not necessarily produced to their original scale.

1.6 Timeline

- 1.6.1 The following timeline (Table 1) is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text.

Period	Approximate date	
Palaeolithic –	c.450,000 – 10,000 BC	Prehistoric
Mesolithic –	c. 10,000 – 4400 BC	
Neolithic –	c.4400 – 2300 BC	
Bronze Age –	c.2300 – 700 BC	
Iron Age –	c.700 BC – AD 43	
Roman (Romano-British) Period –	AD 43 – c. AD 410	Historic
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	
Medieval Period –	1086 – 1536	
Post-Medieval Period ¹ –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20 th century onwards	

Table 1: Archaeological and Historical Timeline for Wales.

¹ The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

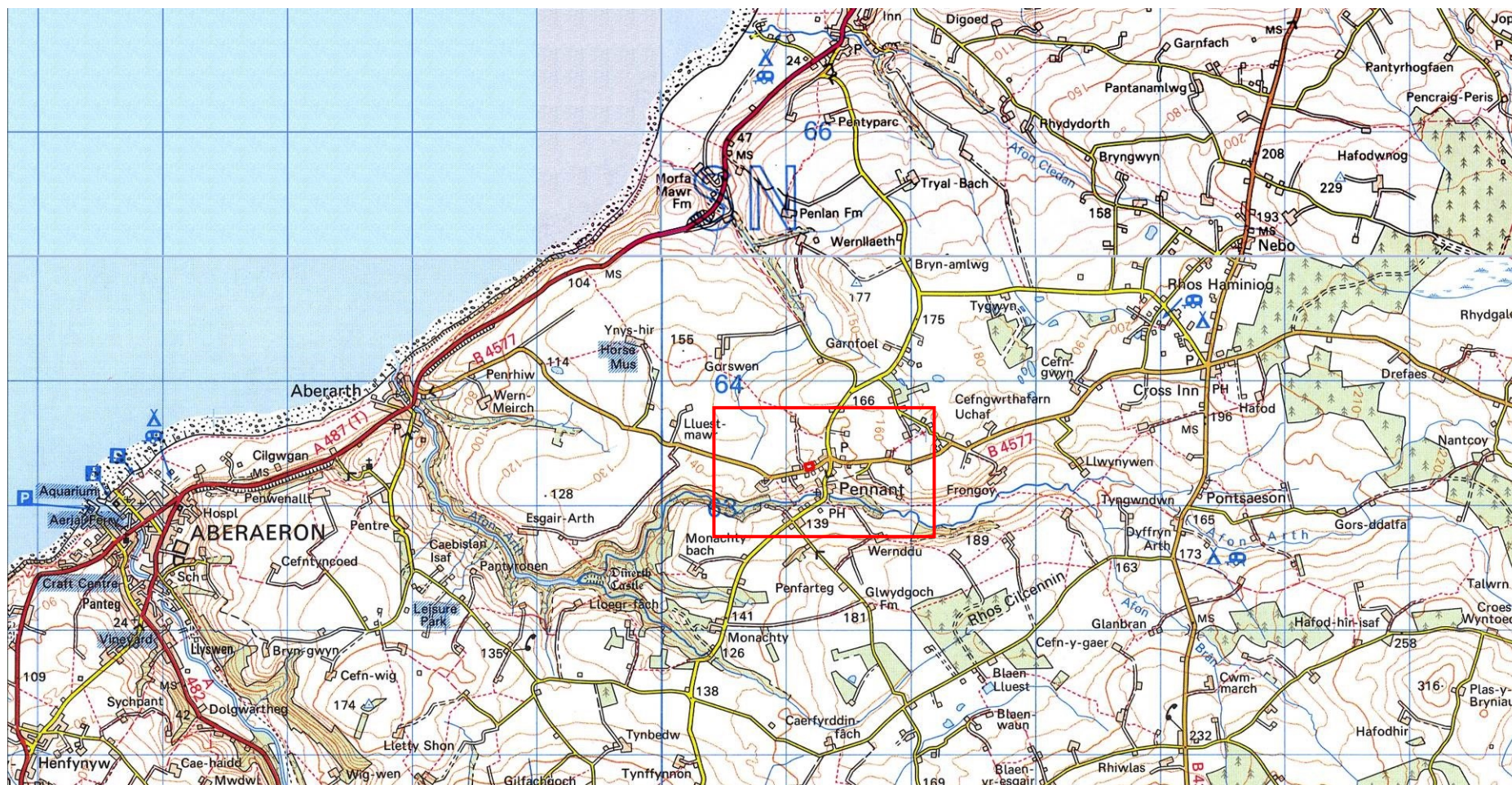


Figure 1: Location map, based on the Ordnance Survey.

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2. THE SITE

2.1 Location (Photo 1)

- 2.1.1 The development area (Figure 2 & 3) lies to the north of the east-west road through the village of Pennant within former agricultural land. The site covers an area approximately 0.21ha centred on NGR SN 51180 63311.
- 2.1.2 The development area comprises an enclosed field of flat grassland.
- 2.1.3 The underlying geology of the area comprises Mynydd Bach Formation - Sandstone and Mudstone. Sedimentary Bedrock formed approximately 433 to 444 million years ago in the Silurian Period.

The superficial deposits are glacial till - sedimentary deposits that are glacial in origin. They are detrital, created by the action of ice and meltwater, they can form a wide range of deposits and geomorphologies associated with glacial and inter-glacial periods during the Quaternary. (Source: British Geological Survey).



Photo 1: The development area that was subjected to geophysical survey-
looking northwest.

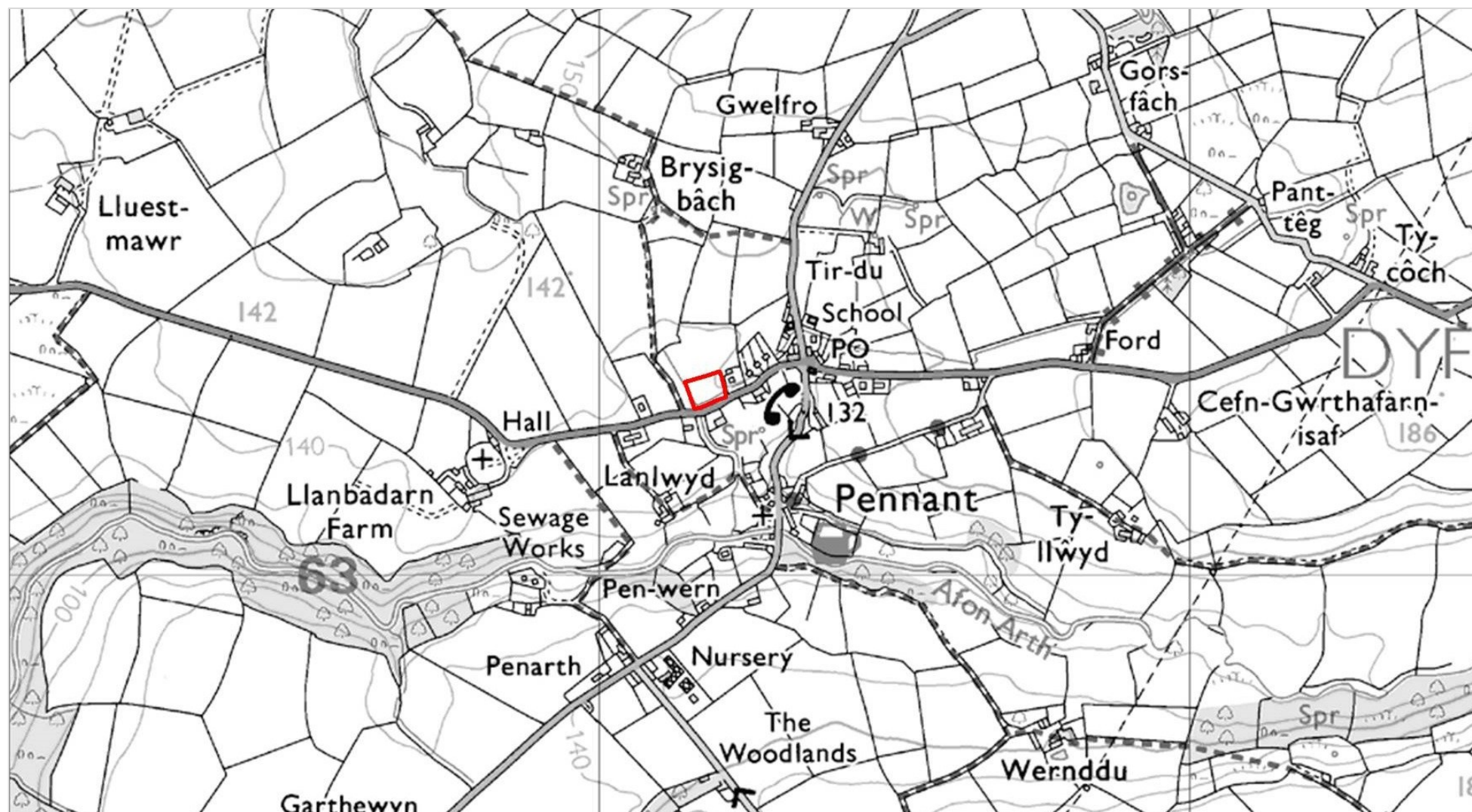


Figure 2: Site location plan, based on the Ordnance Survey. The development area is outlined in red.

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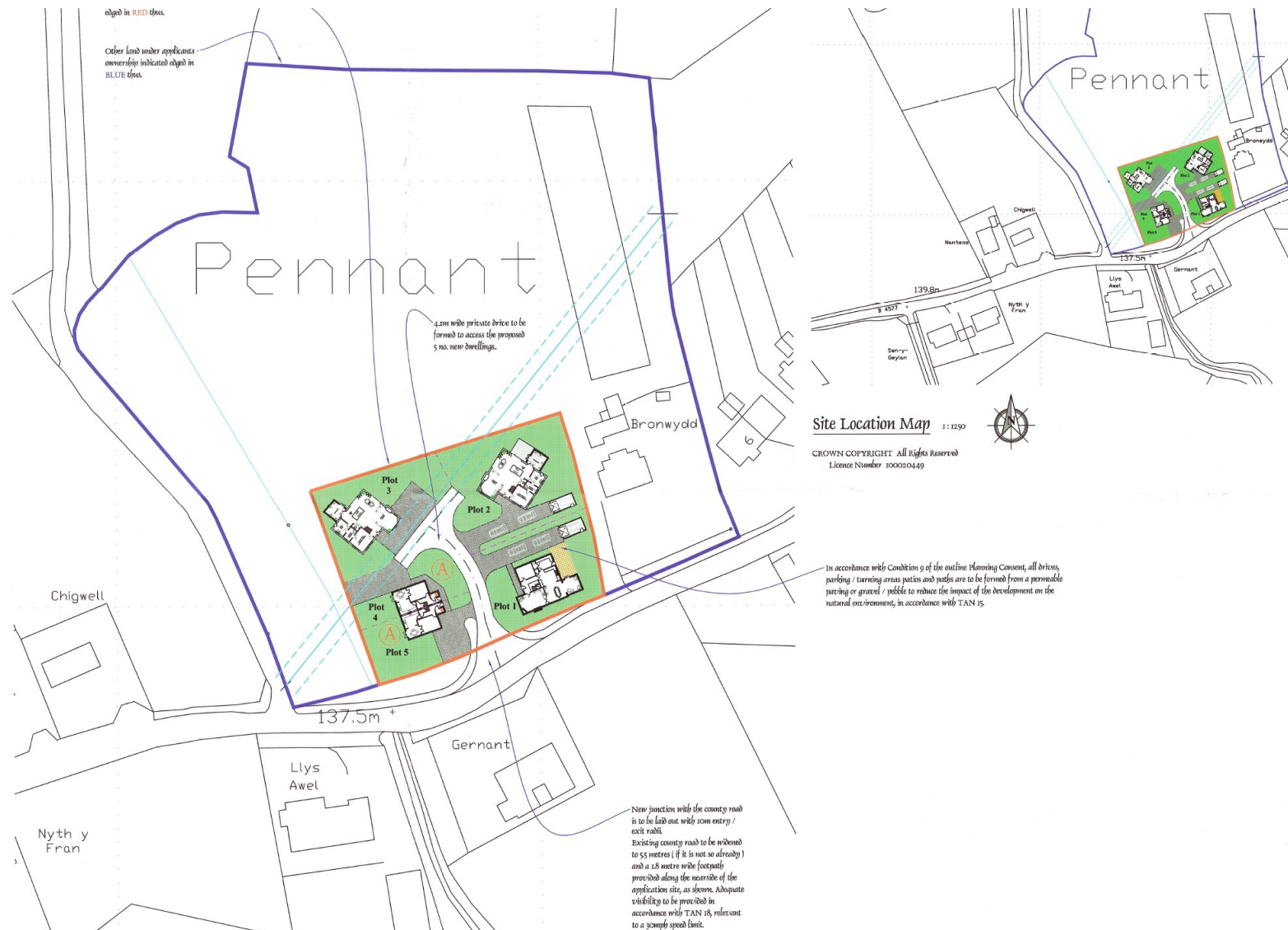


Figure 3: Proposed development layout, land south of Bronwydd, Pennant, Llannon, Ceredigion (from planning website)

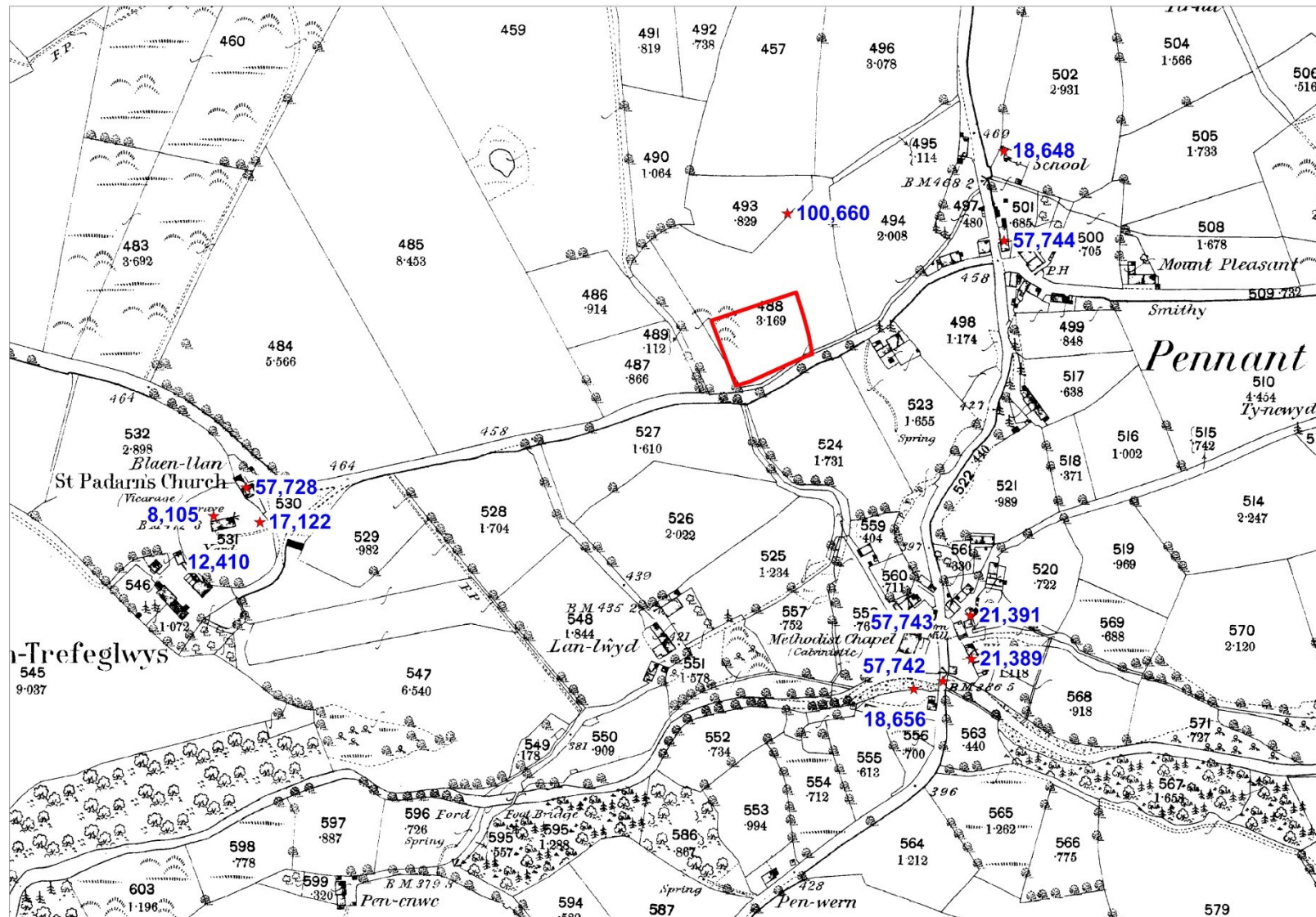


Figure 4: An extract of the Ordnance Survey 1889 1st edition 1:2500 map of Cardiganshire showing the archaeological and historical sites recorded on the Dyfed HER within 500m of the proposed development area (outlined in red).

2.2 Archaeological Potential

- 2.2.1 The following information has been extracted from the Historic Environment Record (HER) held by Dyfed Archaeological Trust.
- 2.2.2 The Dyfed Historic Environment Record lists 12 known archaeological sites within 500m of the proposed development area (Table 2, Figure 4). These include the remains of the medieval parish church (PRN 12410) which was rebuilt in the 19th century (PRN 17122). The church may have Early Medieval origins and could also lie within an earlier Iron Age enclosure, although this has not been confirmed (PRN 8105).
- 2.2.3 All other recorded sites on the HER, except one, are of post-medieval date and relate to the later development of the village, including the school (PRNs 18648 and 57728), a chapel (PRNs 18653 and 57743), Pont Pennant bridge (PRNs 18656 and 57742), a former corn mill (PRN 21391) and Llain cottage and its associated railings (PRN 57744).
- 2.2.4 The final site recorded is of Bronze Age date, relating to the find of a Bronze Age perforated stone axe (PRN 100660).
- 2.2.5 Therefore it was considered that there was potential for archaeological remains of medieval (and possibly early medieval date) associated with settlement activity around the church to exist within the development area. The potential for Bronze Age remains is difficult to assess, as there is only a single findspot although this was located close to the north of the development area. There is also a potential for post-medieval settlement activity to be present within the site boundary.

PRN	Site Name	Summary	Period	NGR
8105	Llanbadarn Trefeglwys Parish Church; St Padarn's	Early medieval C site, ie. low-probability early medieval origins. Churchyard occupied by the medieval Llanbadarn Trefeglwys parish church PRN 12410, which was probably rebuilt in the earlier 19th century, as post-medieval 17122, in the same location	Early Medieval, Iron Age	SN50806320
12410	Llanbadarn Trefeglwys Parish Church; St Padarn's	Site of medieval parish church. It was probably rebuilt in the earlier 19th century, as post-medieval 17122, in the same location as its predecessor and was extended and restored in 1905.	Medieval	SN50806320
17122	St Padarn's	Church	Post-medieval	SN5083263195
18648	Pennant Cp School	School	Post-medieval	SN51356344
18656	Pont-Pennant	Bridge	Post-medieval	SN51286307
21389	Ship Inn Pennant	Inn	Post-medieval	SN51326309
21391	Felin Cwm; Pennant	Corn Mill	Post-medieval	SN51326312
57728	Former School By Church Of St Padarn	Grade II listed church schoolroom	Post-medieval	SN5082363219
57742	Pont Pennant	Grade II listed bridge	Post-medieval	SN5130063075
57743	Ty Capel	Grade II listed chapel	Post-medieval	SN5128263111
57744	Llain including outbuildings attached to gable ends	Grade II listed cottage & outbuildings. Stable on left gable, carpenter's workshop on right gable.	Post-medieval	SN5134963378
100660	Pennant, Llanbadarn, Trefeglwys	A Bronze Age perforated stone axe hammer. Has convex edges with a curve from the squared butt to the blade. The faces are parallel. Hour-glass perforation with the sides smoothly curved. Quartz incisions stand proud on the surface.	Bronze Age	SN512634

Table 2: Archaeological and historical sites recorded on the Dyfed Historic Environment Record within 500m of the proposed development area.
Shown in Figure 4

3. METHODOLOGY

- 3.1 A fluxgate gradiometer, which detects variations in the earth's magnetic field, with a DL601 data logger was used to conduct a detailed survey of the proposed development area. A sample interval of 0.25m (four readings per metre) was used with 0.5m wide traverses across 20m x 20m grids using the zigzag traverse method of collecting data. The gradiometers sensitivity was set to detect a magnetic variation in the order of 0.1 nanoTesla.
- 3.2 The survey grid was tied in to the local Ordnance Survey grid using Differential Global Positioning System (DGPS).
- 3.3 The data was processed using *Terrasurveyor 3.0* and presented with a minimum of processing. The presence of high values caused by ferrous objects, which tend to hide fine details and obscure archaeological features, have been 'clipped' to remove the extreme values allowing the finer details to show through.
- 3.4 The processed data has been presented as a grey-scale plots (Figures 5 and 6) overlaid on local topographical features.
- 3.5 The resulting survey results and interpretation diagrams should not be seen as a definitive model of what lies beneath the ground surface, not all buried features will provide a magnetic response that can be identified by the gradiometer. In interpreting those features that are recorded the shape is the principal diagnostic tool, along with comparison with known features from other surveys. The intensity of the magnetic response could provide further information, a strong response for example indicates burning, high ferric content or thermoremnancy in geology. The context may provide further clues but the interpretation of many of these features is still largely subjective.
- 3.6 All measurements given will be approximate as accurate measurements are difficult to determine from fluxgate gradiometer surveys. The width and length of identified features can be affected by its relative depth and magnetic strength.

4. RESULTS AND DISCUSSION

- 4.1 The area was surveyed on the 17th October 2017. The resultant greyscale plot can be seen in Figure 5 and an interpretation of these results is shown in Figure 6.
- 4.2 In general around the perimeter of the survey area magnetic interference (orange hatchings) can be seen (Figure 5), this response is typical of modern ferrous debris and is not associated with subsurface archaeological features.
- 4.3 A series of isolated discrete dipole anomalies (shaded red, Figure 5) were detected by the survey. These anomalies consist of a single positive response with an associated negative response forming a 'halo effect'. They are of equal magnitude but opposite polarity and caused by the same feature. Dipole anomalies are a very common anomaly observed across a range of sites. They are usually the result of modern ferrous debris such as brick and tile fragments as well as horse shoes and plough shares, which lie just below or on the surface. Usually, unless these anomalies form a pattern or a part of a larger geophysical feature, they are disregarded as insignificant. In this instance they appear to form a linear formation roughly southwest to northeast across the site. It is possible they are associated with a modern service that runs through the site.
- 4.4 A number of discrete positive (shaded blue, Figure 5) pit-like anomalies can be seen. Although there is some potential for them to be of archaeological origin it is also possible that they are a natural feature of the geology or a tree throw. Again, as with the dipole anomalies, unless these anomalies form a pattern or are part of another geophysical feature it is unlikely they are of archaeological interest.
- 4.5 No further anomalies considered to be of archaeological significance were identified during the survey.

5. CONCLUSIONS

- 5.1 The size of the survey area was such that it covered the area that will be disturbed by groundworks during the proposed development of five new dwellings.
- 5.2 In this instance, the geophysical survey has not detected any anomalies that are likely to have an archaeological origin. The only feature detected is likely to be associated with a mains service that is known to be located within the development area.

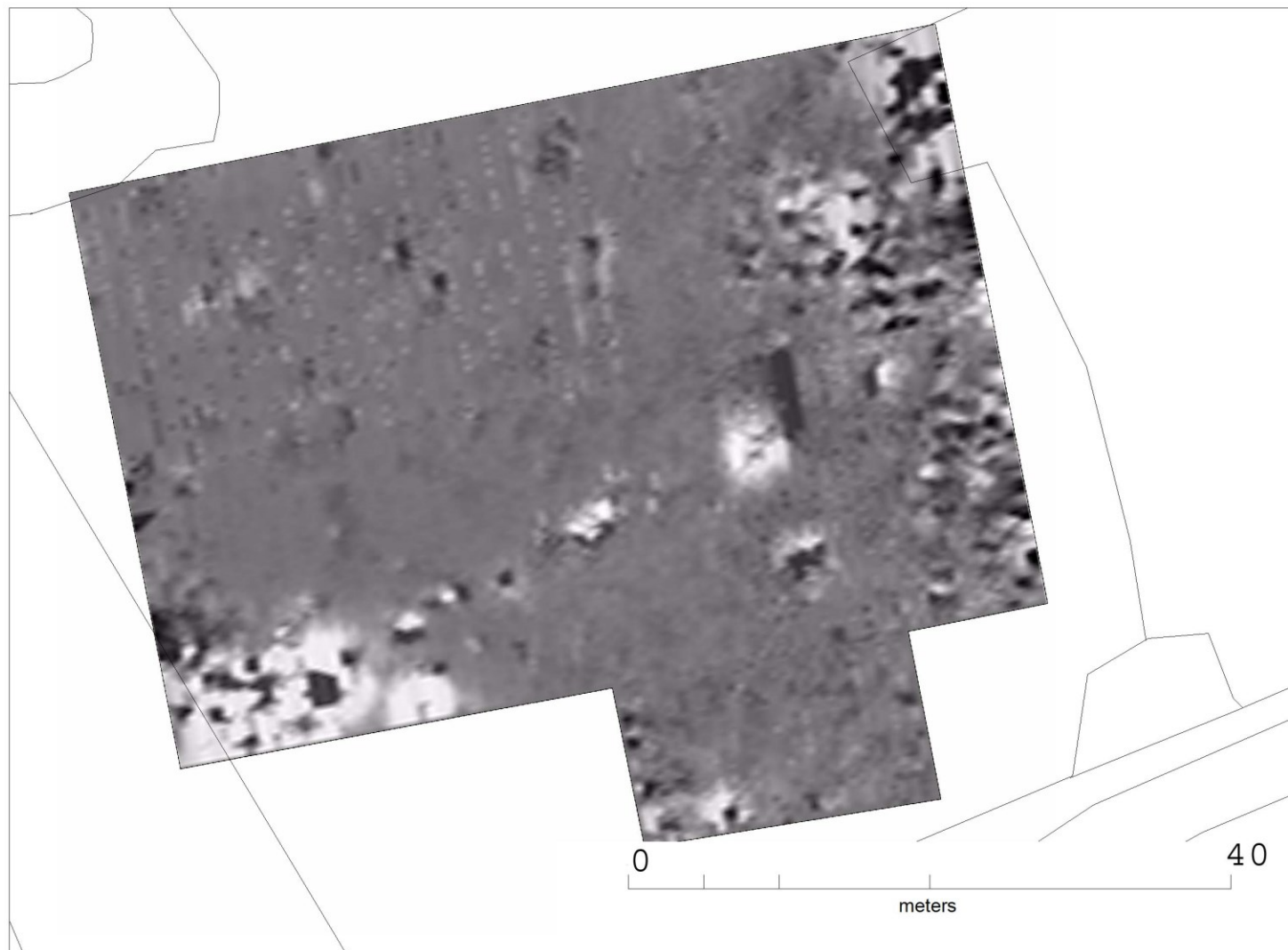


Figure 5: Geophysical
Survey Results



Figure 6: Interpretation Plot



6. SOURCES

Databases

Dyfed Archaeological Trust Historic Environment Record, The Shire Hall, Llandeilo, Carmarthenshire, SA19 6AF

RCAHMW Coflein Database <http://www.coflein.gov.uk/>

Cof Cymru - National Historic Assets of Wales

<http://cadw.gov.wales/historicenvironment/recordsv1/cof-cymru/?lang=en>

Cartographic

Ordnance Survey 1st edition 1:2500 map of Cardiganshire

Ordnance Survey, 2003, 1:25 000, Ceredigion

APPENDIX I

LAND SOUTH OF BRONWYDD, PENNANT, LLANON, CEREDIGION – ARCHAEOLOGICAL GEOPHYSICAL SURVEY ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL WORKS

1 INTRODUCTION

- 1.1 This written scheme of investigation presents a methodology for archaeological geophysical survey of the proposed site of five new dwellings on land to the southwest of Bronwydd, Pennant, Llannon, Ceredigion (NGR SN 51180 63311; Figure 1). This document has been prepared by James Meek MCIfA of DAT Archaeological Services.
- 1.2 The site area lies to the north of the east-west road through Pennant within former agricultural land. The site covers an area of around 0.25ha centred on NGR SN 51180 63311.
- 1.3 The planning permission for the development includes a condition relating to archaeology which states: *"No development shall take place until the applicant, or their agents or successors in title has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority."* Following discussions with the archaeological advisor to the planning authority (Zoe Bevans-Rice, Development Management section – Dyfed Archaeological Trust) it has been confirmed that the archaeological investigations should take the form of geophysical survey of the proposed development area. It was determined that the best way of determining the presence or absence of archaeological remains at the site would be through the implementation of phased archaeological works.
- 1.4 A geophysical survey should provide a better indication of the archaeological potential of the site through the identification of subsurface features which could be indicative of archaeology. We proposed to undertake a gradiometer survey of the site, which, through the measurement of tiny variations in the earth's magnetic field, can indicate the presence of buried features such as ditches, pits, walls or postholes, which are not visible on the ground surface.
- 1.5 The Dyfed Historic Environment Record lists 12 known archaeological sites within 500m of the proposed development area (Table 1), although a number of these relate to the same site but refer to grade II listed structures. These include the remains of the medieval parish church (PRN 12410) which was rebuilt in the 19th century (PRN 17122). The church may have Early Medieval origins and could also lie within an earlier Iron Age enclosure, although this has not been confirmed (PRN 8105).
- 1.6 All other recorded sites on the HER, except one, are of Post-medieval date and relate later development of the village, including the school (PRNs 18648 and 57728), a chapel (PRNs 18653 and 57743), Pont Pennant bridge (PRNs 18656 and 57742), a former corn mill (PRN 21391) and Llain cottage and its associated railings (PRN 57744).
- 1.7 The final site recorded is of Bronze Age date, relating to the find of a Bronze Age perforated stone axe (PRN 100660).
- 1.8 The site is thus considered to have the potential for archaeological remains of medieval (and possibly early medieval date) associated with settlement activity around the church. The potential for Bronze Age remains is difficult to assess, as

there is only a single findspot although this was located close to the north of the development area. There is also a potential for post-medieval settlement activity to be present within the site boundary.

PRN	Site Name	Summary	Period	NGR
8105	Llanbadarn Trefeglwys Parish Church; St Padarn's	Early medieval C site, ie. low-probability early medieval origins. Churchyard occupied by the medieval Llanbadarn Trefeglwys parish church PRN 12410, which was probably rebuilt in the earlier 19th century, as post-medieval 17122, in the same location	Early Medieval, Iron Age	SN50806320
12410	Llanbadarn Trefeglwys Parish Church; St Padarn's	Site of medieval parish church. It was probably rebuilt in the earlier 19th century, as post-medieval 17122, in the same location as its predecessor and was extended and restored in 1905.	Medieval	SN50806320
17122	St Padarn's	Church	Post-medieval	SN5083263195
18648	Pennant Cp School	School	Post-medieval	SN51356344
18656	Pont-Pennant	Bridge	Post-medieval	SN51286307
21389	Ship Inn Pennant	Inn	Post-medieval	SN51326309
21391	Felin Cwm; Pennant	Corn Mill	Post-medieval	SN51326312
57728	Former School By Church Of St Padarn	Grade II listed church schoolroom	Post-medieval	SN5082363219
57742	Pont Pennant	Grade II listed bridge	Post-medieval	SN5130063075
57743	Ty Capel	Grade II listed chapel	Post-medieval	SN5128263111
57744	Llain including Outbuildings Attached To Gable Ends	Grade II listed cottage & outbuildings. Stable on left gable, carpenter's workshop on right gable.	Post-medieval	SN5134963378
100660	Pennant, Llanbadarn, Trefeglwys	A Bronze Age perforated stone axe hammer. Has convex edges with a curve from the squared butt to the blade. The faces are parallel. Hour-glass perforation with the sides smoothly curved. Quartz incisions stand proud on the surface.	Bronze Age	SN512634

Table 1: Archaeological and historical sites recorded on the Dyfed Historic Environment Record within 500m of the proposed development area

- 1.9 A site visit was undertaken on 21st September 2017 to assess the site area, identify any constraints and determine if the site area was suitable for geophysical survey. The site area is relatively easy to access from the road, either via the new break created in the southern hedge boundary or via the driveway of Bronwydd. Overhead services were visible across the southern boundary of the development area, but these appear relatively high and should not restrict access, and should only have a small impact on the gradiometer survey results in the immediate vicinity of these cables. No clear indications of any underground services, such as manhole covers, were present.

- 1.10 This WSI will need to be approved by the local planning authority and the scheme implemented in full, in order to fulfil the archaeological condition that has been placed on planning permission for the site.
- 1.11 The specification is in accordance with the relevant Institute for Archaeologists Standard and Guidance for archaeological geophysical survey (Chartered Institute for Archaeologists (CIfA 2014).
- 1.12 The Trust always operates to best professional practice. DAT Archaeological Services has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.
- 1.13 ***Dyfed Archaeological Trust is a CIfA Registered Organisation.***
- 1.14 ***All permanent staff members of DAT Archaeological Services are CSCS² registered.***

² *Construction Skills Certification Scheme (Health and Safety Tested)*

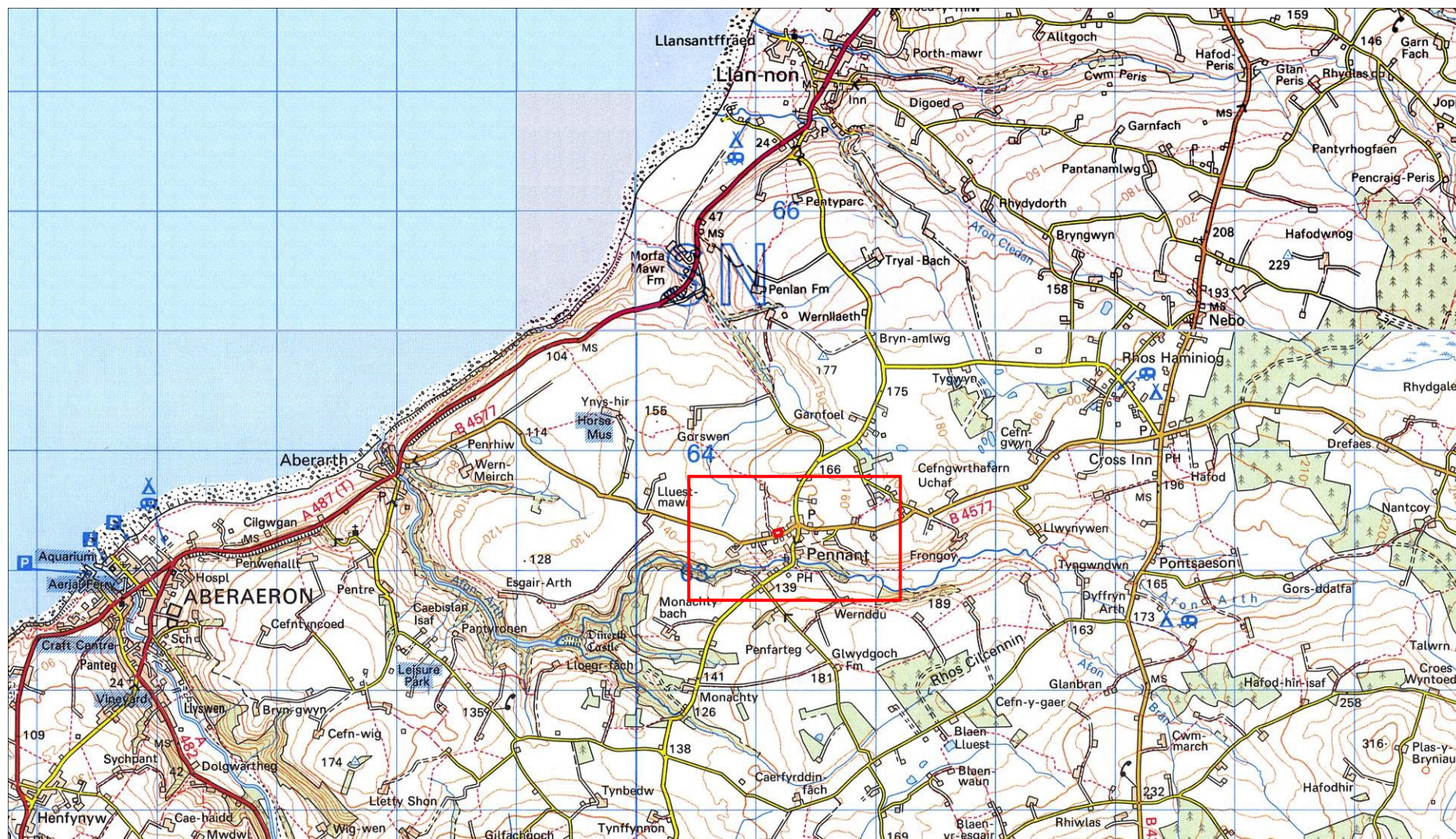


Figure 1: Location map of Pennant, Ceredigion, based on the Ordnance Survey.

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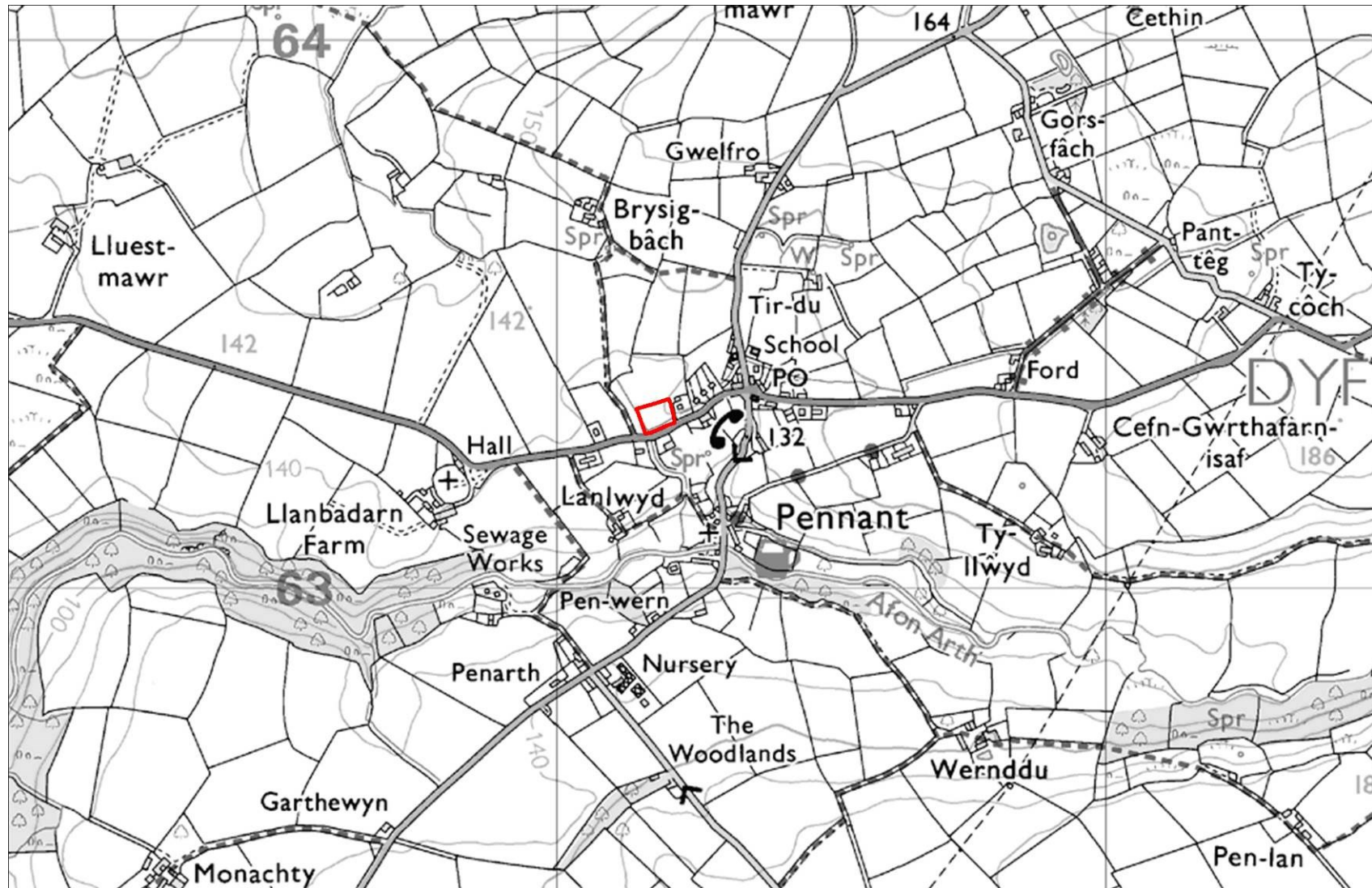


Figure 2: Detailed site location plan, based on the Ordnance Survey. The development area is shown with the red boundary.

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Figure 3: Proposed development layout, land south of Bronwydd, Pennant, Llannon, Ceredigion (from planning website)

2. AIM AND OBJECTIVES OF THE PROJECT

2.1 This document provides a scheme of works for:

The implementation of a geophysical survey using a gradiometer within the proposed development area to the southwest of the property known as Bronwydd, Pennant, Ceredigion. The results of the survey will be presented in a report and an archive will be prepared.

2.2 The following tasks will be completed:

- Provision of a written scheme of investigation to outline the methodology for the geophysical survey (this document);
- To identify the presence/absence of any potential archaeological deposits through an initial gradiometer survey;
- To establish the character and extent of any potential archaeological remains within the site area that could be affected by the proposed works;
- To prepare a report and archive on the results of the geophysical survey.

3. GEOPHYSICAL SURVEY METHODOLOGY

3.1 A fluxgate gradiometer will be used for the survey, which detects variations in the earth's magnetic field (full specifications are in Appendix 1). Readings will be taken on traverses of at most 1m wide and every 0.25m within 20m x 20m grids across the site. The full area of the proposed development area will be surveyed, some 0.25ha in total. A Trimble TST will be used to tie the survey grid into the local Ordnance Survey grid.

3.2 The underlying geology and soils appear suitable for geophysical survey. As noted above the presence of over-ground wires along the southern boundary of the site will cause some disturbance to the gradiometry survey results in that area, but these should be relatively isolated to their immediate vicinity.

Processing, presentation and interpretation

3.3 Processing will be performed using *TerraSurveyor 3.0*. The data will be presented with a minimum of processing. The presence of high values caused by ferrous objects, which tend to hide fine details and obscure archaeological features, will be 'clipped' to remove the extreme values allowing the finer details to show through.

3.4 The processed data will be presented as grey-scale plots overlaid on local topographical features. The main magnetic anomalies will be identified and plotted onto the local topographical features as a level of interpretation.

3.5 The resulting survey results and interpretation diagrams should not be seen as a definitive model of what lies beneath the ground surface, not all buried features will provide a magnetic response that can be identified by the gradiometer. In interpreting those features that are recorded the shape is the principal diagnostic tool, along with comparison with known features from other surveys. The intensity of the magnetic response could provide further information, a strong response for example indicates burning, high ferric content or thermoremnancy in geology. The context may provide further clues but the interpretation of many of these features is still largely subjective.

3.6 All measurements given will be approximate as accurate measurements are difficult to determine from fluxgate gradiometer surveys. The width

and length of identified features can be affected by its relative depth and magnetic strength.

- 3.7 The interpretation diagrams will be used to identify the presence/absence of any potential archaeological deposits.

4 POST-FIELDWORK REPORTING AND ARCHIVING

- 4.1 A copy of the final report will be deposited with the regional HER within six months of the completion of the project.
- 4.2 All data recovered during the fieldwork will be collated into a site archive structured in accordance with the specifications in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2007), and the procedures recommended by the National Monuments Record, Aberystwyth. The *National Standards for Wales for Collecting and Depositing Archaeological Archives* produced by the Federation of Museums and Art Galleries of Wales will also be adhered to.
- 4.3 The results of the geophysical survey will be included in a specification for further archaeological mitigation at the site. The results will also be included in any subsequent reports on any future archaeological mitigation implemented at the site.
- 4.4 The report will be prepared to follow the relevant Institute for Archaeologists *Standards and Guidance* (IfA 1994/1995, revised 2001 & 2008).

5 STAFF

- 5.1 The project will be managed by James Meek, Head of DAT Archaeological Services.
- 5.2 The on-site geophysical survey will be undertaken by Charlie Enright and Alice Day, both experienced geophysical surveyors.

6 MONITORING

- 6.1 The site work may need to be monitored by the archaeological advisor to the planning authority. The works will also be monitored by the Project Manager.

7 HEALTH AND SAFETY

- 7.1 All permanent members of DAT Archaeological Services staff are CSCS³ registered.
- 7.2 DAT Archaeological Services will carry out a health and safety risk assessment to ensure that all potential risks are minimised.
- 7.3 All relevant health and safety regulations must be followed.
- 7.4 Gradiometer survey is a non-intrusive method of archaeological prospection. The process involves the laying out of grids across the site area which are then traversed with the gradiometer taking regular readings. Trip hazards are one of the main issues for such work.
- 7.5 Due to the nature of the survey surveyors are not able to wear any clothing with metal in (such as safety boots). Sturdy footwear is worn with no metal parts.
- 7.6 The developer will make all site staff aware of any other PPE⁴ that may be required.

³ *Construction Skills Certification Scheme (Health and Safety Tested)*

⁴ *Personal Protection Equipment*

LAND SOUTH OF BRONWYDD, LLANNON, , CEREDIGION GEOPHYSICAL SURVEY 2017

RHIF Y PROSIECT / EVENT RECORD NO. 111144
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**Hydref 2017
October 2017**

Paratowyd yr adroddiad hwn gan / This report has been prepared by

Charles Enright

Swydd / Position: Archaeologist DAT Archaeological Services

Llofnod / Signature  Dyddiad / Date 11/12/17

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

Fran Murphy

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position: Project Manager DAT Archaeological Services

Llofnod / Signature  Dyddiad / Date 11/12/17

Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau
sydd gennych ar gynnwys neu strwythur yr adroddiad hwn

As part of our desire to provide a quality service we would welcome any
comments you may have on the content or presentation of this report

