

PENTIR ENERGY STORAGE PROJECT

Cultural Heritage Desk-Based Assessment

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Based Assessment
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CULTURAL HERITAGE DESK BASED ASSESSMENT

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EXECUTIVE SUMMARY

The Proposed Development on Land at Pentir in North Wales is for the construction of an Energy Storage System (ESS) to the north-west of the existing Pentir National Grid electricity sub-station. Associated works will include an access road from the west.

The site has been assessed for its below ground archaeological potential, and potential impacts on the settings of designated archaeological and built heritage assets in the surrounding area. The assessment has been prepared by RPS Consulting for Lightsource bp.

The site lies within the non-statutory designated Dinorwig Registered Historic Landscape of Outstanding Historic Interest.

Within a 3km radius of the site, there are 10 Scheduled Monuments, 103 listed buildings, 1 Registered Park and Garden and 3 Conservation Areas. No other asset types are present within 3km of the site. The nearest designated heritage asset to the site is 660m to the north.

Following map analysis and ground truthing, and observing the views from within the site, no designated archaeological assets have been identified that could be subject to an impact from the development.

As identified by desk-based work, archaeological potential by period and the likely significance of any non-designated archaeological remains which may be present is summarised in table form below:

| Period: | Identified Archaeological Potential | Identified Archaeological Significance |
|-----------------------------|---|--|
| Prehistoric | The evidence indicates a paucity of Prehistoric activity in proximity of the site. The potential for further remains from this period to be present within the site is considered to be low. Any such remains are likely to be isolated finds with low interest value | Low/Local |
| Roman | Although the line of a Roman road has been identified 500m south of the site, a low potential for this period has been established for the site | Low /Local |
| Early Medieval/ Medieval | Due to the paucity of evidence within proximity of the site a low potential has been established for these periods. Any such remains are likely to be isolated finds with low interest value | Low/Local |
| Post Medieval to Modern | A low potential for archaeological remains of these periods has been identified Relict land division within the site is likely of post-enclosure origin. As such, they are unlikely to be deemed 'important' under Hedgerow Regulations | Low/Local |

There is a low potential for finds or features from any period to be present in the site. Any archaeological remains present within the site are unlikely to be of more than low/local significance.

The potential development impacts on the historic environment consist of direct impacts on buried archaeological remains within the site and impacts on the settings of designated archaeological heritage assets beyond the site within 3km of its boundaries.

The assessment determined that there is the potential for impact on the setting of nine designated built heritage assets, the separately listed farm buildings associated with Ty'n Llwyn Farm. It is considered that the Proposed Development would have a very low impact on the setting of this cluster of heritage assets, and is deemed, on aggregate, to not materially impact the significance of the Ty'n Llwyn Farm cluster of heritage assets.

It is considered that the direct impact on the Registered Historic Landscape would be no more than negligible, due to the small scale of the site. The impact on its setting would be very limited, as the development will be shielded by existing and proposed woodland and hedgerows. The potential impact on setting of the Registered Historic Landscape is considered negligible, and it is further considered that the proposed development would have no discernible effect on the significance of the Historic Landscape.

Overall, it is not considered that impacts from the Proposed Development would have a significant impact on the historic environment as a whole.

It is considered that, due to the low potential for the site, no archaeological investigations would be required. Should further investigations be required, then it should be possible to carry these out post determination.

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1 INTRODUCTION AND SCOPE OF STUDY

- 1.1 This cultural heritage desk-based assessment (DBA) has been prepared by Neil Wright and James Edwards of RPS Consulting Services Ltd on behalf of Lightsource bp.
- 1.2 The subject of this assessment comprises land at Pentir, North Wales, hereafter referred to as the site. This Cultural Heritage Statement is prepared to accompany a planning application for the above development proposal which will be considered by officers at Cyngor Gwynedd Council.
- 1.3 The site comprises a single plot of land made up of three complete field parcels and an access trackway and small part of a fourth parcel (see Figure 1) and is centred at approximately NGR SH 55491 67845 and has an area of 2.57ha which also includes land set over for the cable route.
- 1.4 This desk-based assessment is designed to provide the baseline information to enable informed decisions about managing any impacts that may potentially arise on any significant archaeological assets in the site. This report discusses the potential for encountering below-ground archaeology during the course of the development within the site, using data from a study area radius of 1km.
- 1.5 Further consideration is given to, and an initial assessment made of, potential impacts on the settings of designated heritage assets, including built heritage assets, within 3km of the site boundary (Figure 2a). It can be seen that there are eleven designated heritage assets within 1km of the site. The topography of the site alongside the distance to other heritage assets as well as the surrounding tree screening limits intervisibility, and as a result, the significance of a very few designated heritage assets is likely to be impacted as a result of development within their setting.
- 1.6 In accordance with government policy (Planning Policy Wales and associated guidance), this assessment draws together the available archaeological, historic, topographic and land-use information in order to clarify the heritage significance and archaeological potential of the site.
- 1.7 This desk-based assessment uses evidence from the Gwynedd Historic Environment Record (GAT HER), the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) and other sources, including the results of a comprehensive map regression exercise. A site visit was undertaken as part of the assessment. A request for an aerial photograph search within the National Monuments Record of Wales was made. Aerial photographs from CRAPW have been viewed. Online aerial photographic resources including <http://aerialphotos.wales.gov.uk/> and Google Earth were also consulted.
- 1.8 Jenny Emmett, planning archaeologist at Heneb (Gwynedd Region), has commented on a draft of this report, and her observations and comments have been included in this version.
- 1.9 As a result, the assessment enables relevant planning decision makers to make a suitably informed decision, in relation to the historic environment on an application for the study site's development. Specifically, this would include assessment of the significance of archaeological and built heritage assets on and close to the site as well as assessing the potential for hitherto undiscovered archaeological heritage assets. In addition, potential impacts on the settings of any designated heritage assets within a 3km radius of the site are assessed. This enables potential impacts on all such assets to be identified along with the need for design, civil engineering or archaeological impact mitigation solutions.

2 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK

Legislation

- 2.1 National (UK-wide) legislation regarding archaeology, including scheduled monuments, is contained in the Ancient Monuments and Archaeological Areas Act 1979, amended by the National Heritage Act 1983 and 2002, and updated in April 2014.
- 2.2 The Well-being of Future Generation (Wales) Act 2015 places duties on public bodies requiring them to act in accordance with the 'sustainable development principle'. The Act also establishes well-being goals which include achieving 'a Wales of vibrant culture and Welsh language', described as 'a society that promotes and protects culture, heritage and the Welsh language'. The Act lays down the principle that a properly protected, conserved and enhanced historic environment can improve the quality of life and well-being for everyone.
- 2.3 The Historic Environment (Wales) Act 2016 was given Royal Assent in March 2016. This Act provides the legislative framework for managing the historic environment in Wales. Accompanying the Act was new policy and guidance in the form of a Technical Advice Note (TAN) specific to the Historic Environment (TAN24, see below), and changes to Planning Policy Wales (PPW). This legislation and guidance supersedes the previous Welsh Office Circulars which formed the basis of historic environment policy in Wales.
- 2.4 A new Historic Environment (Wales) Act has been given Royal Assent on 14th June 2023. The purpose of this Act is to consolidate existing Welsh and UK-wide legislation in one place. The 2023 Act consolidates enactments in or made under the following:
- the Historic Buildings and Ancient Monuments Act 1953;
 - Parts 1 and 3 of the Ancient Monuments and Archaeological Areas Act 1979;
 - Parts 14 and 15 of the Town and Country Planning Act 1990;
 - the Planning (Listed Buildings and Conservation Areas) Act 1990;
 - Part 5 of the Planning and Compulsory Purchase Act 2004;
 - the Historic Environment (Wales) Act 2016
- 2.5 The Welsh Government has published Planning Policy Wales (PPW), currently updated to Version 12 from February 2024 (PPW12). This sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in circulars and policy clarification letters.
- 2.6 PPW is additionally supported by guidance published by Cadw. This includes Heritage Impact Assessment in Wales (2017), and Setting of Historic Assets in Wales (2017).

National Planning Policy

Future Wales –the National Plan 2040 (February 2021)

- 2.7 Future Wales is the national development framework, setting the direction for development in Wales to 2040. It addresses key national priorities, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities. It is referred to as a broad overarching document to inform future development proposals.

Planning Policy Wales

- 2.8 Chapter 6 of PPW12, entitled 'Distinctive and Natural Places', has a section entitled 'The Historic Environment' (section 6.1 - pp. 129-135) which provides policy for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 6.1 in relation to the historic environment can be summarised (6.1.6) as seeking to:
- protect the Outstanding Universal Value of the World Heritage Sites;
 - conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
 - safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;
 - preserve or enhance the character or appearance of Conservation Areas, whilst the same time helping them remain vibrant and prosperous;
 - preserve the special interest of sites on the register of historic parks and gardens; and
 - protect areas on the register of historic landscapes in Wales.
- 2.9 Section 6.1 of PPW12 (6.1.1) describes the historic environment as comprising all the surviving physical elements of previous human activity and illustrates how past generations have shaped the world around us. The historic environment is made up of individual historic features, archaeological sites, historic buildings and historic parks, gardens, townscapes and landscapes, collectively known as historic assets.
- 2.10 Paragraphs 6.1.7 and 6.1.8 of PPW12 state the following: "It is important that the planning system looks to protect, conserve and enhance the significance of historic assets. This will include consideration of the setting of an historic asset which might extend beyond its curtilage. Any change that impacts on an historic asset or its setting should be managed in a sensitive and sustainable way. It is the responsibility of all those with an interest in the planning system, including planning authorities, applicants, developers and communities, to appropriately care for the historic environment in their area. The protection, conservation and enhancement of historic assets is most effective when it is considered at the earliest stage of plan preparation or when designing proposals new proposals".
- 2.11 Welsh planning legislation and policy guidance outlines that the conservation of archaeological remains and their settings is a material consideration in the determination of a planning application, whether those remains are scheduled or not (PPW12 Para. 6.1.23). In order to take account of archaeological considerations and deal with them from the beginning of the development control process, Local Planning Authorities in Wales need to be fully informed about the nature and importance of archaeological remains, and their setting, and the likely impact of any Proposed Development upon them.
- 2.12 Paragraph 6.1.26 of PPW12 states that where archaeological remains are known to exist or there is a potential for them to survive, an application should be accompanied by sufficient information, through desk-based assessment and/or field evaluation, to allow a full understanding of the impact of the proposal on the significance of the remains. The needs of archaeology and development may be reconciled, and potential conflict very much reduced, through early discussion and assessment.
- 2.13 Paragraph 6.1.27 of PPW12 states that if the planning authority is minded to approve an application and where archaeological remains are affected by proposals that alter or destroy them, the planning authority must be satisfied that the developer has secured appropriate and satisfactory provision for their recording and investigation, followed by the analysis and publication of the results and the deposition of the resulting archive in an approved repository. On occasions, unforeseen archaeological remains may still be discovered during the course of a development. A written scheme of investigation should consider how to react to such circumstances or it can be covered through an appropriate condition for a watching brief.

- 2.14 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance Future Wales and Planning Policy Wales, by current Development Plan Policy and by other material considerations.

Hedgerow Regulations

- 2.15 Under the Hedgerow Regulations 1997, hedgerows are deemed to be historically Important if they are more than 20m long and over 30 years old and if they meet at least one of these criteria:
- they mark all or part of a parish boundary that existed before 1850;
 - they mark an archaeological feature of a site that is a scheduled monument or noted on the Historic Environment Record;
 - they mark the boundary of an estate or manor or looks to be related to any building or other feature that's part of the estate or manor that existed before 1600; or
 - they are part of a field system or looks to be related to any building or other feature associated with the field system that existed before the Inclosure Acts (that is before 1845).
- 2.16 In practice (and following case law) hedgerows are deemed Important under the above regulations if they can be demonstrated to exist on the appropriate pre-1845 parish tithe or enclosure map.

Local Planning Policy

- 2.17 Gwynedd and Isle of Anglesey County Council adopted the Joint Local Development Plan (JLDP) in July 2017. Cyngor Gwynedd Council has determined to separate planning policy duties from the Isle of Anglesey County Council and in doing so will be preparing a new Gwynedd Local Development Plan (the new Plan). This is at a very early stage and accordingly carries little weight. Until such time as this document is adopted then the JLDP remains the statutory development plan.
- 2.18 The JLDP has the following relevant policy in respect of the historic environment:

POLICY PS 20: PRESERVING AND WHERE APPROPRIATE ENHANCING HERITAGE ASSETS

In seeking to support the wider economic and social needs of the Plan area, the Local Planning Authorities will preserve and where appropriate, enhance its unique heritage assets.

Proposals that will preserve and where appropriate enhance the following heritage assets, their setting and significant views into and out of the building/area will be granted:

- 1. Scheduled Ancient Monuments and other areas of archaeological importance (in line with Policy AT 4).*
- 2. Listed Buildings and their curtilages.*
- 3. Conservation Areas (in line with Policy AT 1).*
- 4. Beaumaris Castle and Caernarfon Castle and Town Walls World Heritage Sites (in line with Policy AT 1).*
- 5. Candidate World Heritage Sites.*
- 6. Registered Historic Landscapes, Parks and Gardens (in line with Policy AT 1).*
- 7. Buildings of architectural/ historic/ cultural merit that are not designated or protected (in line with Policy AT 3).*

Definitions and Guidance

2.19 The ‘*Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment in Wales*’ published by Cadw in March 2011 provides the basic principles under which all subsequent guidance has evolved. The six principles expressed are:

- Historic assets will be managed to sustain their values.
- Understanding the significance of historic assets is vital.
- The historic environment is a shared resource.
- Everyone will be able to participate in sustaining the historic environment.
- Decisions about change must be reasonable, transparent and consistent.
- Documenting and learning from decisions is essential.

Definition of the historic environment

2.20 The historic environment is defined in TAN 24 (at para. 1.7) as:

“All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed.”

Definition of Heritage Assets

2.21 Heritage assets are defined by Cadw (March 2011) and TAN 24 (2017) as:

“An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, an historic building or area, historic park and garden or a parcel of historic landscape. Nationally important historic assets will normally be designated.”

2.22 A Designated Heritage Asset is considered to be a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area. In Wales areas of landscape have been designated and included in the non-statutory Register of Landscapes of Historic Interest in Wales.

Significance

2.23 Significance in relation to heritage policy considerations is defined as:

- The sum of the cultural heritage values (Cadw 2011).

Setting

2.24 Guidance on the assessments of impact on the settings of heritage assets is provided by Cadw in ‘*Setting of Historic Assets in Wales*’ (May 2017). This provides a 4-stage process for determining if any impact on the settings of historic assets would arise from a Proposed Development, and how it could be mitigated if impacts are identified. The assessment undertaken in this Cultural Heritage Assessment adheres to this process. Specifically, this requires the following:

“Stage 1: Identify the historic assets that might be affected by a proposed change or development.

Stage 2: Define and analyse the settings to understand how they contribute to the significance of the historic assets and, in particular, the ways in which the assets are understood, appreciated and experienced.

Stage 3: Evaluate the potential impact of a proposed change or development on that significance.

Stage 4: If necessary, consider options to mitigate or improve the potential impact of a proposed change or development on that significance.”

3 GEOLOGY AND TOPOGRAPHY

Geology

- 3.1 The majority of the area to be occupied by the Proposed Development and associated access from the west is situated upon solid geology of felsic and tuff of the Padarn Tuff Formation. This is igneous bedrock formed between 635 and 541 million years ago, during the Ediacaran period. The smaller eastern part of the site is located upon interbedded sandstone and conglomerate of the Minffordd Formation, comprising sedimentary bedrock formed between 526 and 508 million years ago, during the Cambrian period. A small superficial deposit of clay, silt, sand and gravel alluvium is situated within the centre of the site. A smaller area of alluvium is present at the southern extent of the study area (BGS Viewer: accessed 07/11/2023).

Topography

- 3.2 The highest point of the site is situated at its north-eastern corner, where the ground lies at a height of c. 103m above Ordnance Datum (AOD). The ground slopes down towards the west, where it is situated at a height of c. 101m AOD at the south-western corner and the western extent of the proposed new access track (Elevation Finder: accessed 09/11/2023).
- 3.3 A ditch crosses the easternmost reaches of the site, approximately north-east by south-west. Another ditch, outside of the site, abuts up to the southern boundary of the site. The site visit identified that the site was boggy.

4 HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE

Prehistoric

| | |
|--------------|------------------------|
| Palaeolithic | c. 800,000 - 10,000 BC |
| Mesolithic | c. 10,000 - 4,000 BC |
| Neolithic | c. 4,000 - 2,500 BC |
| Bronze Age | c. 2,500 - 700 BC |
| Iron Age | c. 700 - AD 43 |

Historic

| | |
|---------------------------|-----------------------|
| Roman | AD 43 - 410 |
| Post-Roman/Early Medieval | AD 410 - 1066 |
| Medieval | AD 1066 - 1536 |
| Post Medieval | AD 1536 - 1750 |
| Industrial | AD 1750 - 1899 |
| Modern | AD 1900 - Present day |

Table 1: Timescales Used in This Report

Introduction

- 4.1 This chapter reviews the available built heritage and archaeological evidence for the site and the archaeological/historical background of the general area. Further, this chapter considers both the potential for any as yet to be discovered archaeological evidence on the site, and the potential for impacts on the settings of designated heritage assets.
- 4.2 This Cultural Heritage Assessment refers to the relevant legislative framework contained within the Planning (Listed Buildings and Conservation Areas) Act 1990, the Historic Environment (Wales) Act 2016, as well as national and local planning policy. Relevant information, including the listing citations for the relevant heritage assets, has also been consulted in preparing this Assessment. The conclusions reached in this report are the result of detailed historic research, a walkover survey of the Site and publicly accessible locations in the surrounding area, map studies and the application of professional judgement.
- 4.3 This assessment is based upon relevant Cadw guidance and of evidence in the Gwynedd Archaeological Trust Historic Environment Record (HER) for the site. Data held by The National Monuments Record (NMR), part of the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) was also consulted together with a historic map regression exercise charting the development of the study area from the early-19th century onwards until the present day.
- 4.4 Readily available digital historic maps and aerial photographs were used. A request for an aerial photograph search within the National Monuments Record of Wales was made. Online aerial photographic resources including CRAPW, <http://aerialphotos.wales.gov.uk/> and Google Earth were also consulted.
- 4.5 LiDAR data from <https://datamap.gov.wales/maps/lidar-viewer/> was examined.

- 4.6 What follows comprises a review of all known built heritage and archaeological assets within a 1km radius of the site boundary (Fig. 2b), also referred to as the study area. A search area of 3km was conducted for designated heritage assets (Fig. 2a).
- 4.7 A further assessment is made in a later section of potential impacts on the settings of designated assets within 3km of the site.
- 4.8 Chapter 5 subsequently considers the site conditions and whether the Proposed Development will impact the theoretical archaeological potential identified below.

Previous Archaeological Work

- 4.9 Thirty-one previous investigations have been recorded by the HER within 1km of the site. The HER did not provide spatial data for these previous investigations.
- 4.10 Jenny Emmett of Heneb (Gwynedd Region) reports (personal communication) that various recent investigations within and adjacent to the study area but not yet published/in the HER have provided evidence relevant to the assessment. The results of these are discussed below where relevant.

Prehistoric

- 4.11 There are no Prehistoric finds or features recorded in the HER within the site itself.
- 4.12 Six Scheduled Monuments of Prehistoric date are present between 660m and 3.2km from the site boundary. These are not discussed further here but are addressed later in this assessment.
- 4.13 Chance findspots of a Bronze Age flanged axe-head (HER 32824) and undated stone tool (HER 24) are recorded c. 940m east and 535m north-west of the site, respectively.
- 4.14 A Prehistoric hut circle settlement is recorded c. 620m north-west of the site (HER 4).
- 4.15 Two post holes, likely representing a Prehistoric structure (HER 90559), and a Prehistoric linear feature identified by evaluation (HER 90560), are recorded c. 970m north-west of the site.
- 4.16 An excavation associated with ongoing work to replace underground cables took place just under 1km south of the site (Jenny Emmett pers. Comm.). This identified a small cluster of burnt mounds, which are usually associated with the Bronze Age. Another possible burnt mound has been identified in a National Grid scheme at the nearby substation.
- 4.17 While there is a general background of Prehistoric activity in the surrounding area, this evidence remains limited to isolated finds, or evidence of dispersed burnt mounds. Overall, it is considered that there is a low potential for hitherto unknown Prehistoric finds or features to be present within the site. Any such remains are likely to be isolated finds, of no more than low/local significance.

Roman

- 4.18 There are no Roman period finds or features recorded in the HER within the site itself.
- 4.19 The conjectural line of the proposed Segontium to Bangor Roman road is recorded running north-east by south-west, immediately west of the site access route (HER 17829). Similarly, the conjectured line of the Segontium to Canovium Roman road is recorded running north-east by south, between 420m and 555m east of the site (HER 17566, 17834, 90578). Probable quarry pits likely associated with the Roman road have been found c. 555m south-east of the site (HER 90579). Other undated pits were found in the same area during an archaeological evaluation (HER 90580).
- 4.20 Recent investigations (Jenny Emmett pers. comm.) have confirmed PRN/HER 17834 as the correct alignment. This passes to the south-east of the substation, and so does not run through or in close proximity to the site, being 500m from the site at closest.

- 4.21 Further afield, a Roman clearance cairn (HER 34) and Roman hut circle settlement and field system (HER 792) have been recorded 835m and 890m north of the site, respectively.
- 4.22 It is clear that the wider area was utilised during the Roman period, but few significant records exist within proximity of the site. Evidence for Roman settlement is situated some distance from the site. The known route of a nearby Roman road has been established as at least 500m south of the site. As a result, a low potential has been established for the presence of hitherto unknown Roman-period remains to be present within the site.

Early Medieval/Later Medieval

- 4.23 There are no Early or Later Medieval finds recorded in the HER within the site itself and very little is recorded within the 1km study area.
- 4.24 The lack of evidence in the study area, and the local landscape, indicate a low potential for the presence of hitherto unknown finds or features from the Medieval periods to be present within the site. It seems likely that the site was agricultural land before the later Post-Medieval enclosure of the landscape. Any finds or features of Medieval date are likely to be of isolated finds only, and of low/local significance.

Post Medieval to Modern (including map regression exercise)

- 4.25 There are no Post-Medieval or Modern entries recorded in the HER within the site and very little is recorded in the wider 1km study area.
- 4.26 There are several Industrial period heritage assets in proximity to the site, all of which are associated with the Ty'n Llwyn Farm (see below) which was built in the early nineteenth century, c. 1km east of the site.
- 4.27 In these periods, understanding of settlement, land-use and the utilisation of the landscape is enhanced by cartographic sources, which can give additional detail to data contained within the HER.
- 4.28 Although unclear, the 1816 and 1822 Ordnance Survey drawings (Fig. 3) appears to show the site occupying featureless, unenclosed land.
- 4.29 Enclosure of the site is first evident on the 1839 and 1840 tithe maps (Fig. 4). The main part of the site is shown within parcel 272, which is described as pasture in the ownership of Thomas Assheton Smith.
- 4.30 New land divisions are first evident on the 1889 Ordnance Survey map (Fig. 5), dividing the site into three separate parcels. The site is described as furze (gorse) and heath. Tyddyn Forgan Covert woodland, which presently screens the site from the electricity sub-station, is first shown to the immediate east of the site.
- 4.31 The interior land divisions had gone by 1970 (Fig. 6), opening-up the site into a single field.
- 4.32 The site has remained relatively unchanged up to the time of writing (Figs. 7-9), inhabiting a single field, with post-enclosure interior relict land divisions and comprising boggy gorse and heathland.
- 4.33 Due to the paucity of evidence, it is likely that the site occupied agricultural pastoral land during these periods. As such, a low potential has been assigned for these periods.

Undated

- 4.34 A number of undated archaeological assets are recorded within the 1km study area. The closest of these to the site comprise: circular cropmark (HER 58; c. 200m north-west), trackway (HER 90523; c. 200m north); enclosure (HER 28869: c. 450m south).

LiDAR

- 4.35 LiDAR data held on the Datamap Wales website was viewed as part of this assessment. No features of a possible archaeological origin were discernible.

Aerial Photographs

- 4.36 A number of aerial photographs were reviewed as part of this report. A list of these photographs can be found at the end of this assessment. No features of a possible archaeological origin were discernible. Possible palaeochannels or variations in the natural geology were visible on a 1984 aerial photograph (Appendix 2).

Historic Landscape

- 4.37 The site lies within the Landmap Historic Landscape Aspect Area GWNDDHL024 Northern Arfon Plateau. The Historic Landscape Characterisation pages of Gwynedd Archaeological Region of Heneb record the site entirely within the Dinorwig Registered Landscape of Outstanding Historic Interest in Wales (GW 6). The site lies within Landscape Character Area 23 Arfon Plateau.
- 4.38 Landmap is a Wales-wide landscape characterisation tool developed by the Countryside Council for Wales, and describes the Aspect Area as follows – this description is also used in the Historic Landscape Characterisation pages:

“The rolling landscape of the Arfon plateau is made up largely of improved pasture, most of which was formerly Vaynol land. The pattern of substantial nineteenth century farmhouses (e.g. Carreg Goch, Tyddyn Conclog, Tyddyn Oer) and outbuildings is typical of the estate. Relict prehistoric settlements (hut groups and small forts) are dotted across the landscape, usually in the corners of fields, and some fields display a curvilinear pattern characteristic of this period. A wide area of disparate character, with the most prominent features being large enclosures and scattered farmsteads”

- 4.39 The implication of this assessment is that the arrangement of the current landscape containing the site had its origins largely in Post Medieval enclosures. There are relict land divisions within the site which likely have their origins at the end of the 19th century, after the land was enclosed in 1839/40.
- 4.40 An assessment of the visual impact of the Proposed Development on the designated Landscape of Outstanding Historic Interest is included in the Landscape and Visual Impact Assessment (LVIA) (RPS 2024).

Assessment of Significance (Designated Assets)

- 4.41 Existing national policy guidance for built heritage and archaeology (PPW as referenced in section 2) enshrines the concept of the ‘significance’ of heritage assets. Significance as defined in the PPW centres on the value of an archaeological or historic asset for its ‘heritage interest’ to this or future generations and is defined as the ‘sum of all cultural values’.

- 4.42 In terms of designated heritage assets, as defined above and as shown on Figure 2a, there are no statutory designated heritage assets within the site itself. A full list of identified heritage assets within the 3km search area of the Site is included in a gazetteer at Appendix 1.
- 4.43 There is one non-statutory designated heritage asset within the site, namely (part of) the Dinorwig Registered Historic Landscape of Outstanding Historical Interest.
- 4.44 There are eleven designated heritage assets within 1km of the site boundary:
- **Cadw ref CN175: Scheduled Monument.** *Fodol Ganol Enclosed Hut Group* (710m north)
 - **Cadw ref CN203: Scheduled Monument.** *Gors y Brithdir Enclosed Hut Group and Ancient Fields* (660m north)
 - **Cadw ref 83169: Listed Building II.** *Ty'n Llwyn Farm bothy* (1km east)
 - **Cadw ref 83170: Listed Building II.** *Ty'n Llwyn Farm cartshed and granary* (1km east)
 - **Cadw ref 83279: Listed Building II.** *Ty'n Llwyn Farm cattle shelter* (1km east)
 - **Cadw ref 83280: Listed Building II.** *Ty'n Llwyn Farm cattle shelter* (1km east)
 - **Cadw ref 83281: Listed Building II.** *Ty'n Llwyn Farm barn and cowhouse* (1km east)
 - **Cadw ref 83282: Listed Building II.** *Ty'n Llwyn Farm barn* (1km east)
 - **Cadw ref 83283: Listed Building II.** *Ty'n Llwyn Farm hay barn* (1km east)
 - **Cadw ref 83284: Listed Building II.** *Ty'n Llwyn Farm building* (1km east)
 - **Cadw ref 83285: Listed Building II.** *Ty'n Llwyn Farm barn* (1km east)
- 4.45 A number of designated archaeological heritage assets are present between 1km and 3.2km from the site, comprising:
- **Cadw ref CN017: Scheduled Monument.** *Dinas Dinorwic Camp* (2.37km south)
 - **Cadw ref CN150: Scheduled Monument.** *Glascoed Round Cairn* (2.94km south)
 - **Cadw ref CN156: Scheduled Monument.** *Rectangular Earthwork 110m North-west of Coed Ty Mawr* (1.150km south)
 - **Cadw ref CN192: Scheduled Monument.** *Gerlan Hut Group* (3.2km east)
 - **Cadw ref CN197: Scheduled Monument.** *Castell Llanddeiniolen* (2.25km south)
 - **Cadw ref CN375: Scheduled Monument.** *Standing Stone to the North of Coed Nant-y-garth* (1.370km west)
 - **Cadw ref CN376: Scheduled Monument.** *Goetre Uchaf Barrow* (1.76km north)
 - **Cadw ref CN417: Scheduled Monument.** *Penrhyn Quarry Railway* (3.2km east)
 - **11: World Heritage Site.** *The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda and the Ogwen Valley to Port Penrhyn* (3.2km east)
- 4.46 The Scheduled Monuments and the World Heritage Site (summarised at 4.7 above) located within the 1km to 3.2km search radius share no intervisibility or functional associations with the site and accordingly the Proposed Development will not impact their significance, either upon their settings or physical remains. Accordingly, they will be discounted from further consideration in this report.
- 4.47 In respect of built heritage assets, within this extended search radius of 1km- 3.2km there are also 94 listed buildings, several conservation areas and one Registered Park and Garden (RPG); the bulk of which fall immediately adjacent to or north-west of the A487, including a high number of listed buildings associated with Vaenol Park (which is an RPG and also in part a conservation area) as well as listed buildings within the settlement of Y Felinheli and Aber Pwyll. These heritage assets

share no intervisibility or functional association with the site and accordingly will not impact the significance of these heritage assets and are not considered further in this report.

4.48 Similarly, to the east of the site, a number of these 94 designated heritage assets are present including a conservation area and several listed buildings at Glasinfryn. These also share no intervisibility or functional associations with the site and are discounted also from further consideration.

4.49 Finally, of note are a cluster of listed buildings to the east of the site, at the settlement of Pentir, which, at 1.8km from the site, share no visual or functional links with the site and are also discounted.

Archaeological Designated Heritage Assets

4.50 Two Scheduled Monuments are present within the 1km study area:

- CN175: *Fodol Ganol Enclosed Hut Group* (710m north)
- CN203: *Gors y Brithdir Enclosed Hut Group and Ancient Fields* (660m north)

Fodol Ganol Enclosed Hut Group (CN175)

Summary Description and Reason for Designation

4.51 There are two hut circles within the enclosure, although the walls are just low grassy banks; other irregularities may be other features or possibly a third hut. A length of field wall 55 m long is included in the scheduled area. It runs from the enclosure wall in a NE direction and is probably of the same date as the enclosed settlement, although a more recent field wall has been constructed on top of the earlier wall. The monument is of national importance for its potential to enhance our knowledge of Prehistoric settlement. It retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits. The structures themselves may be expected to contain archaeological information concerning chronology and building techniques. The scheduled area comprises the remains described and areas around them within which related evidence may be expected to survive.

Gors y Brithdir Enclosed Hut Group and Ancient Fields (CN203)

Summary Description and Reason for Designation

4.52 A single round hut standing within a sub-rectangular enclosure on the level summit of a rocky outcrop overlooking the wooded valley of Gors y Brithdir. A field system adjoins the enclosure on the SW and is particularly well preserved in a belt of woodland occupying a steep slope. The site probably dates from the first millennium BC. A broad turf-covered, stony bank, representing the remains of a single hut, stands isolated in the middle of the enclosure. The hut measures c.10m across but has no obvious entrance. The sub-rectangular enclosure measures c.25m across with a prominent entrance of about 2.5m wide on the W side. The enclosure wall varies in width and height and is apparently absent along the S side where the natural rock outcrops. The boundaries of the field system consist mostly of stone walls, generally up to 2m thick and up to 1m high but include banks. The boundaries run up and down slope to form small paddocks or fields which utilised the Brithdir streams as a natural boundary on their west sides. There are also mounds of stones scattered amidst the fields, these are assumed to be field clearance cairns. The monument is of national importance for its potential to enhance our knowledge of Prehistoric settlement. It retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits. The structures themselves may be expected to contain archaeological information concerning chronology and building techniques. The scheduled area comprises the remains described and areas around them within which related evidence may be expected to survive.

- 4.53 Due to the intervening topography and vegetation there is no intervisibility between these two Scheduled Monuments and the site. As such, development of the site will have no effect upon the setting of these two designated archaeological assets.
- 4.54 The distance between the Scheduled Monuments and the site ensures there is no physical impact upon their buried remains.
- 4.55 As such, development of the site will have no impact on either of the two Scheduled Monuments situated within 1km of the site.

Designated Built Heritage Assets

- 4.56 To avoid repetition in the assessment of significance, the nine listed buildings which have the capacity to be impacted all form part of the former Ty'n Llwyn Farm. Accordingly, they share much of the same setting and significance and will be considered collectively under the title *Ty'n Llwyn Farm*.

Ty'n Llwyn Farm

- 4.57 **Significance:** Ty'n Llwyn Farm was likely constructed in the period 1820-30 and replaced an earlier farmstead which existed certainly by 1780. It was a farm on the Vaenol estate of Thomas Assheton Smith (listing citation). It was purposely laid out as a model farm, hence its ordered shape around a large yard possibly by the farm's most notable tenant, a John Owen of Ty'n Llwyn. According to the listing citation he was a "*pioneering farmer and writer on agriculture*" and "*invested considerably in the improvement of the land at Ty'n Llwyn.*" Further, the listing citation states that his "*interest in Welsh Black Cattle is possibly reflected in the design of this farm, which is laid out as a specialist stock-raising establishment.*" The farm has ceased operating as such and it is understood that in recent years the barns have been restored and converted to alternative uses.
- 4.58 The farm comprises nine separately listed buildings (as noted above), namely the Hay Barn, the north-west range, the Bothy and Bakehouse Range, the Cartshed and Granary, Cattle Sheds barns and cowhouse.
- 4.59 The buildings are largely single storey with some two-storey. Those of a more agricultural role were constructed in rough quarried rubble and slate roofs. The more domesticated buildings: the bakehouse and bothy were constructed in dressed quarry rubble. The bakehouse was once linked to the house.
- 4.60 Several barns are noted as being fine examples and many are well preserved though collectively form "*an integral part of an exceptionally complete large-scale planned specialist farmstead, retaining good estate character.*"
- 4.61 Ty'n Llwyn provides important evidential and aesthetic value as a planned model farm, through its materials used and its design. It is also reflective of the tastes and fashions in farming but also the technological advances made in agriculture in the mid-late nineteenth century. It is representative of wealthy landowners through its scale rather than the earlier smaller farmstead which was lost to this model farm. Collectively the built heritage assets share a group value with each other in forming a very complete model farm complex. The occupation by John Owen provides some associative value of possibly national renown in being linked to this farming pioneer. The cessation of a farming use has impacted the overall significance though, the noted restoration of parts of the farm has contributed positively to the overall significance.
- 4.62 **Setting:** Ty'n Llwyn Farm is set in isolation, surrounded by field parcels, itself being set some distance back from the unnamed lane to the north. The separately listed buildings are primarily experienced from the former farm yard which is enclosed by the built heritage assets, as well as from the nearby field parcels. The cessation of an agricultural use for the farm means that beyond its design and layout and situation there are limited associative elements that would help define the complex as a farm, including crop storage, livestock or machinery. Indeed, the conversions of the

buildings with noted rooflights draw the association with an agricultural role further away. The site sits in the wider extended setting and shares no intervisibility with the heritage assets on account of the Pentir substation which sits between the site and former farm which is itself heavily enclosed by woodland tree planting. The site does however form a part of the wider agricultural context in which the farm was constructed to serve. In this it makes a small positive contribution. This wider rurality is impacted to a degree by the location of the large substation which is visible from the heritage assets.

4.63 **Setting and Significance Summary:** Ty'n Llwyn Farm, comprising nine separately listed buildings are heritage assets of high (national) significance. This significance is primarily defined by their architectural and historic special interest as forming, collectively, a former model farm. Collectively they also share a group value and an historic associative value having been farmed by the farming pioneer John Owen. The cessation of an agricultural role for the farm has impacted the overall significance. Setting makes a positive, though secondary contribution to the overall significance, limited to the farm complex in which the listed buildings enclose, as well as the wider agricultural land which the farm was built to serve. In this, the site makes a small contribution to the overall significance in forming a very small part of an extensive wider setting.

Historic Landscape

Dinorwig Registered Historic Landscape of Outstanding Historical Interest

4.64 This large landscape area is registered for its broad range of human activity across many periods. The area has retained considerable evidence for late prehistoric land use and settlement, and for medieval land holdings, but superimposed over these earlier patterns, and dominating the present landscape, are the extensive remains of 19th and 20th centuries slate quarries, their associated settlements and transport infrastructure. These developments were made possible by, and were linked to, the Vaynol Estate, one of the most significant and powerful post-medieval landholdings in North West Wales.

4.65 The site lies in one Historic Landscape Character Area, namely the Arfon Plateau, described above at 4.38.

Assessment of Significance (Non-Designated Assets)

4.66 As identified by desk-based work, archaeological potential by period and the likely significance of any archaeological remains which may be present is summarised in table form below:

| Period: | Identified Archaeological Potential | Identified Archaeological Significance |
|-----------------------------|---|--|
| Prehistoric | The evidence indicates a paucity of Prehistoric activity in proximity of the site. The potential for further remains from this period to be present within the site is considered to be low. Any such remains are likely to be isolated finds with low interest value | Low/Local |
| Roman | Although the line of a Roman road has been identified 500m south of the site, a low potential for this period has been established for the site | Low /Local |
| Early Medieval/ Medieval | Due to the paucity of evidence within proximity of the site a low potential has been established for these periods. Any such remains are likely to be isolated finds with low interest value | Low/Local |
| Post Medieval to Modern | A low potential for archaeological remains of these periods has been identified. | Low/Local |

| | | |
|--|---|--|
| | Relict land division within the site is likely of post-enclosure origin. As such, they are unlikely to be deemed 'important' under Hedgerow Regulations | |
|--|---|--|

Table 2: Archaeological Potential by period

- 4.67 The boggy nature of the site, identified during the site visit, suggests it is unlikely that it would have been particularly favourable for settlement.
- 4.68 There is a low potential for all periods. Any archaeological remains present within the site are unlikely to be of more than low/local significance.

5 SITE CONDITIONS, THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL AND BUILT HERITAGE ASSETS

Site Conditions

- 5.1 The bulk of the site is a loosely rectangular shape with a proposed trackway through existing fields to the west of the main area. This proposed trackway will connect the site to an unnamed road which feeds off the B4947.
- 5.2 The site was visited in November 2023 (Plates 1-8).
- 5.3 The site is 2.57 ha in size and comprises what was originally three field parcels, though now are broadly interconnected with the bulk of the original hedgerows between the three parcels remaining. The trackway traverses along a narrow trackway and then across the northern reaches of a field parcel before exiting onto the unnamed lane.
- 5.4 The site abuts woodland to the east and a watercourse and self-seeded scrubland and trees to the south. To the west and the north, the site abuts agricultural land and is separated by hedgerow planting. Beyond the woodland to the south-east lies the substantial Pentir substation which is almost fully enclosed by later woodland planting.

Proposed Development

- 5.5 The Proposed Development will comprise an ESS (Energy Storage System), ancillary infrastructure and associated works. It will also include landscaping and ecological enhancement. The energy storage project is anticipated to have a storage capacity of 57MWac.
- 5.6 The ESS will comprise batteries, Heating Ventilation and Air Conditioning (HVAC) units, a combined Power Conversion System (PCS), transformer units, a ESS Intake/customer substation and associated electrical infrastructure.
- 5.7 The Proposed Development will comprise the following components:
- 24 x Battery Blocks each comprised of 4x BESS Enclosures (96 units in total).
 - 3 x Twin MV Skid (each comprised of 2 x Power conversion systems and 1 x MV transformer),
 - 6 x Single MV Skid (each comprised of 1 x Power conversion systems and 1 x MV transformer),
 - 1 x Monitoring House,
 - 1 x Backup Generator,
 - 1 x BESS Intake Substation,
 - 1 x Transformer,
 - 1 x GRP,
 - 3 x Spares containers (1 x 20-foot, 2 x 40-foot), and
 - 14 x CCTV cameras mounted on posts.
- 5.8 Access to the Proposed Development would be along a newly created access track following an existing hedge line to the northwest. Access of the local road, opposite Garth Farm, would be via an

improved existing field entrance Proposed Development is for the construction of an Energy Storage System (ESS) to the north-west of the existing Pentir National Grid electricity sub-station. Associated works will include an access road from the west.

Review of Potential Development Impacts on Designated Assets

- 5.9 Two Scheduled Monuments are present within 1km of the site. Due to their distance from the site and lack of intervisibility between the site and Monuments, development of the site will have no impact on either their settings or physical remains.

Impacts other than visual

- 5.10 There will be no direct physical impacts on the fabric of any designated archaeological assets. Any changes will be to settings and it is deemed that the changes will be sufficiently small that they will not materially impact the significance of the heritage assets; these being the eleven designated heritage assets closer than 1km from the site (two Scheduled Monuments and nine Listed Buildings (Grade II listed)).
- 5.11 At distances further than 1km from the site, it is considered that the development would not produce noise or light pollution, or generate increased traffic, which could adversely affect these assets in a way unrelated to visibility. Any impacts on designated archaeological heritage assets will be confined to the settings of any assets affected.
- 5.12 There will be a direct physical impact on the Dinorwig Registered Historic Landscape of Outstanding Historic Interest. This will comprise the introduction of industrial elements into agricultural fields totalling approximately 2.5ha. This will affect a very small area of the registered landscape. The existing fieldscape will not be altered, and the development will be largely reversible. It is not considered that this impact will have more than a Negligible effect on the significance of the Registered Landscape.

Potential visual impacts on settings

- 5.13 The initial assessment identified one group of designated built heritage assets, comprising nine separately listed former farm buildings associated with Ty'n Llwyn Farm, that may be subject to impacts on their setting, as follows.

Ty'n Llwyn Farm

- 5.14 Ty'n Llwyn Farm sits in isolation surrounded by field parcels and set back from the road to the north. It appears to have ceased operations as a farm but is still nonetheless read as a cluster of farm buildings, irrespective of whether farming has ceased. From this it derives some contribution to its significance from the surrounding landscape which provides the rural and agricultural context and forms part of its historic functional setting. The site shares no intervisibility but it is plausible that the Proposed Development may be visible from the unnamed road which leads across the top of the substation and north of the site through the woodland to emerge into the agricultural land around the heritage assets. In this aspect it may reduce to a small degree the wider rural landscape. Whilst the wider rural setting will change to a very small degree, in view however of the existing substation with associated infrastructure including pylons, the Proposed Development is deemed, on aggregate, to **not materially impact the significance** of the Ty'n Llwyn Farm cluster of heritage assets.

Dinorwig Registered Historic Landscape of Outstanding Historic Interest

- 5.15 The setting of the site in Historic Landscape terms is defined by the Registered Historic Landscape itself. The immediate area is dominated visually by the Pentir electricity substation 100m to the south-east of the site. The site is enclosed by woodland to the south-east and south-west, with the only longer-distance views to the north-west, although this side of the site is partially enclosed by existing hedgerows. The proposed development includes provision for increased density and height existing hedgerows, which will effectively shield the site from views in and out.
- 5.16 It is not considered that the proposed development will have a measurable impact on the setting of the Registered Historic Landscape.

Review of Potential Development Impacts on Non-Designated Assets

- 5.17 The Proposed Development could potentially have a below-ground impact on buried archaeological remains if any are present. The potential for hitherto unknown archaeological remains from any period across all of the site is considered to be low-moderate for the Roman period and low for all other periods.
- 5.18 Any such impact could be destructive of any buried remains. It is considered that any archaeological remains present in the site are unlikely to be of more than local significance. The Proposed Development is therefore not considered likely to have any significant impact on the buried archaeological element of the historic environment.

6 SUMMARY AND CONCLUSIONS

- 6.1 The site has been assessed for its below ground archaeological potential, and potential effects on the settings of designated archaeological and built heritage assets in the surrounding area.
- 6.2 The site lies within the non-statutory designated Dinorwig Registered Historic Landscape of Outstanding Historic Interest.
- 6.3 Within a 3km radius of the site, there are 10 Scheduled Monuments, 103 listed buildings, 1 Registered Park and Garden and 3 Conservation Areas. No other asset types are present within 3km of the site. The nearest designated heritage asset to the site is 660m to the north .
- 6.4 Following map analysis and ground truthing, and observing the views from within the site, no designated heritage assets have been identified that could be subject to an impact from the Proposed Development.
- 6.5 As identified by desk-based work, archaeological potential by period and the likely significance of any non-designated archaeological remains which may be present is summarised in table form below:

| Period: | Identified Archaeological Potential | Identified Archaeological Significance |
|-----------------------------|---|--|
| Prehistoric | The evidence indicates a paucity of Prehistoric activity in proximity of the site. The potential for further remains from this period to be present within the site is considered to be low. Any such remains are likely to be isolated finds with low interest value | Low/Local |
| Roman | Although the line of a Roman road has been identified 500m south of the site, a low potential for this period has been established for the site | Low /Local |
| Early Medieval/ Medieval | Due to the paucity of evidence within proximity of the site a low potential has been established for these periods. Any such remains are likely to be isolated finds with low interest value | Low/Local |
| Post Medieval to Modern | A low potential for archaeological remains of these periods has been identified Relict land division within the site is likely of post-enclosure origin. As such, they are unlikely to be deemed 'important' under Hedgerow Regulations | Low/Local |

Table 2: Archaeological Potential by period

- 6.6 The archaeological potential of the site is limited to the possible remains of a conjectured Roman road to the immediate west of the proposed access road.
- 6.7 There is a low potential for finds or features from any other period to be present anywhere in the site. Any archaeological remains present within the site are unlikely to be of more than low/local significance.
- 6.8 The potential development impacts on the historic environment consist of direct impacts on buried archaeological remains within the site and impacts on the settings of designated archaeological heritage assets beyond the site within 3km of its boundaries.
- 6.9 The assessment determined that there is the potential for impact on the setting of nine designated built heritage asset, the separately listed farm buildings associated with Ty'n Llwyn Farm. It is considered that the Proposed Development would have a very low impact on the setting of this cluster of heritage assets associated with Ty'n Llwyn Farm, and is deemed, on aggregate, to not materially impact the significance of the Ty'n Llwyn Farm cluster of heritage assets.

- 6.10 It is considered that the direct impact on the Registered Historic Landscape would be no more than negligible, due to the small scale of the site. The impact on its setting would be very limited, as the development will be shielded by existing and proposed woodland and hedgerows. The potential impact on setting of the Registered Historic Landscape is considered negligible, and it is further considered that the proposed development would have no discernible effect on the significance of the Historic Landscape.
- 6.11 Overall, it is considered that the Proposed Development would not impact the significance of the identified heritage assets considered in this report.
- 6.12 It is considered that, due to the low potential for the site, no archaeological investigations would be required. Should further investigations be required, then it should be possible to carry these out post determination.

Sources Consulted

General

Gwynedd Archaeological Trust HER Enquiry Ref: Gather1941

RCAHMW

CRAPW

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Cartographic

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1676 John Speed's Map of Caernarvon

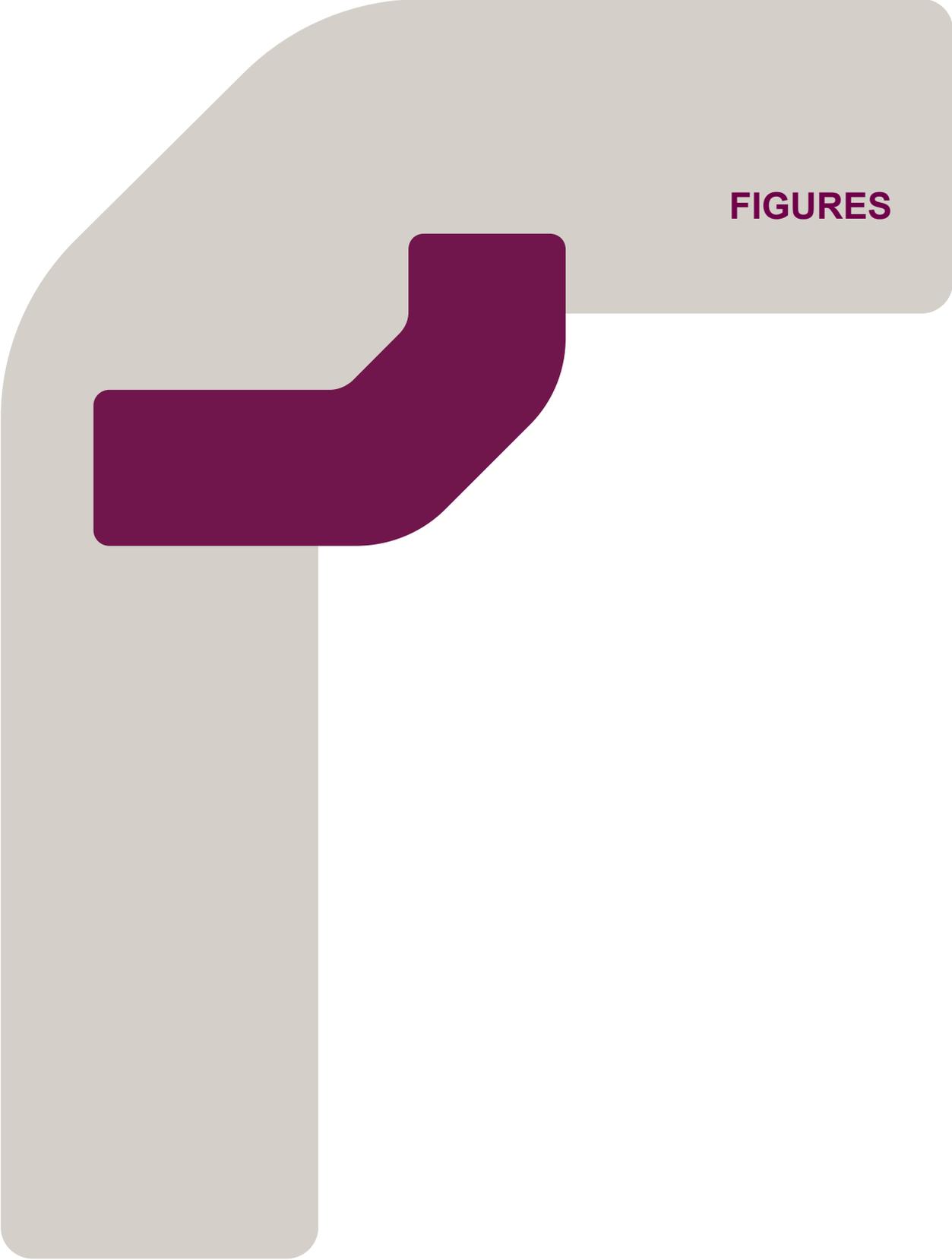
1794 Cary's New Map of England and Wales

1816 Ordnance Survey Drawing (south)
1822 Ordnance Survey Drawing (north)
1839 Tithe Map, Llanddeniolen – Carnarvonshire
1840 Tithe Map, Bangor – Carnarvonshire
1888 Ordnance Survey Map (1:10,560)
1889 Ordnance Survey Map (1:2,500)
1900 Ordnance Survey Map (1:2,500)
1901 Ordnance Survey Map (1:10,560)
1914 Ordnance Survey Map (1:2,500)
1952 Ordnance Survey Map (1:10,560)
1963 Ordnance Survey Map (1:10,000)
1970 Ordnance Survey Map (1:2,500)
1973-8 Ordnance Survey Map (1:10,000)
1976 Ordnance Survey Map (1:2,500)
1979 Ordnance Survey Map (1:2,500)
1990 Ordnance Survey Map (1:10,000)
1995 Ordnance Survey Map (1:2,500)
2000 10k Raster Mapping (1:10,000)
2006 10k Raster Mapping (1:10,000)
2023 VectorMap Local (1:10,000)

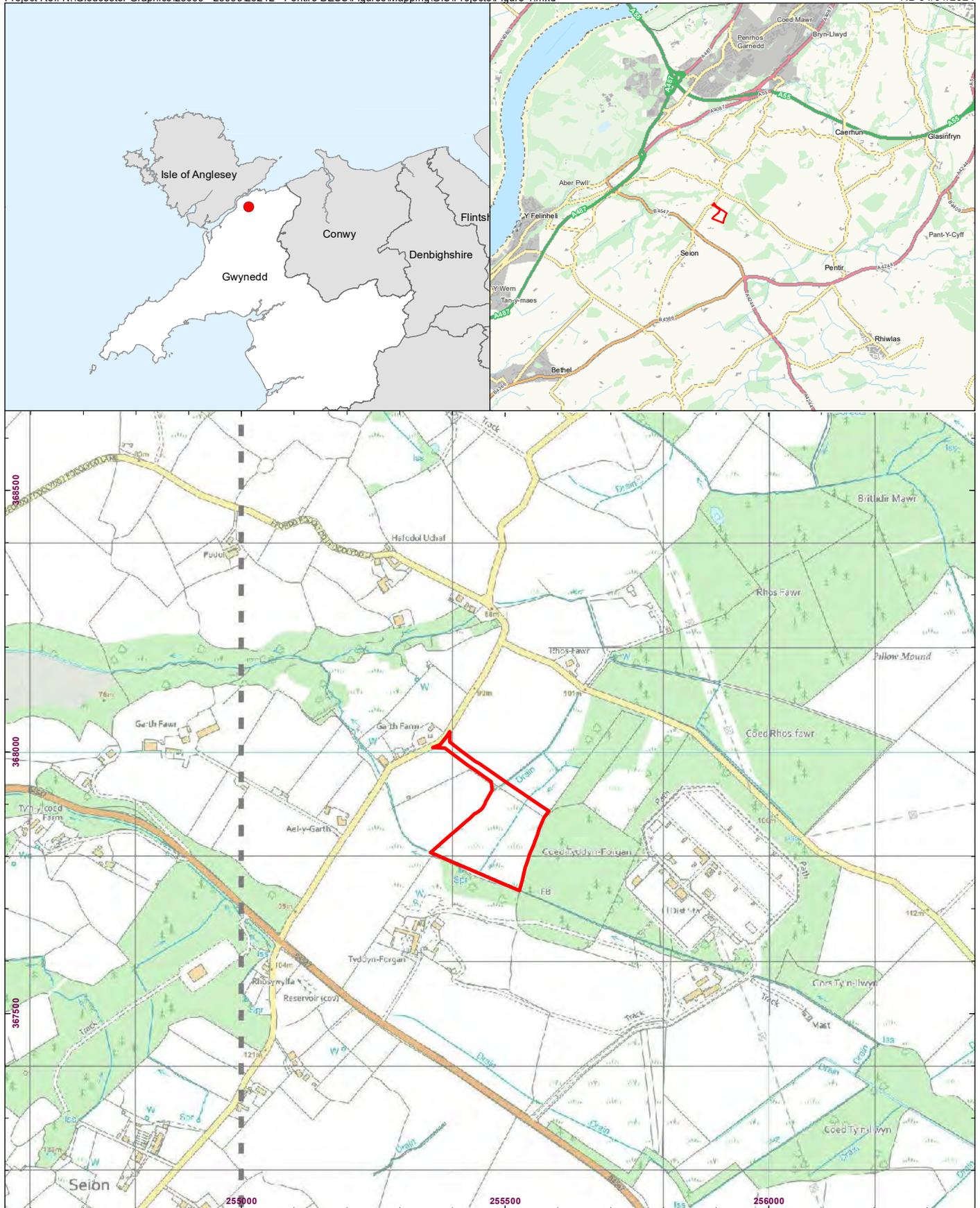
Aerial Photographs

1947 4712 RAFCPE UK_1996 1319
1948 4826 RAFCPE UK_2615 3076 NO frame 3077
1948 4826 RAFCPE UK_2615 3078
1960 6004 58RAF3579 F21 0089
1966 6626 OS66_104 283
1966 6626 OS66_104 345
1970 7051 OS 70_249 120
1971 7165 OS 71_102 130
1984 8446 OS84_108 079
1984 8446 OS84_108 080
1986 Oct_Nov 8606 JAS 52_86 0041 Snowdonia NP
1990 9001 ADAS 452 236
1994 9501 BKS9514 142
2000 Getmapping

Google Earth



FIGURES



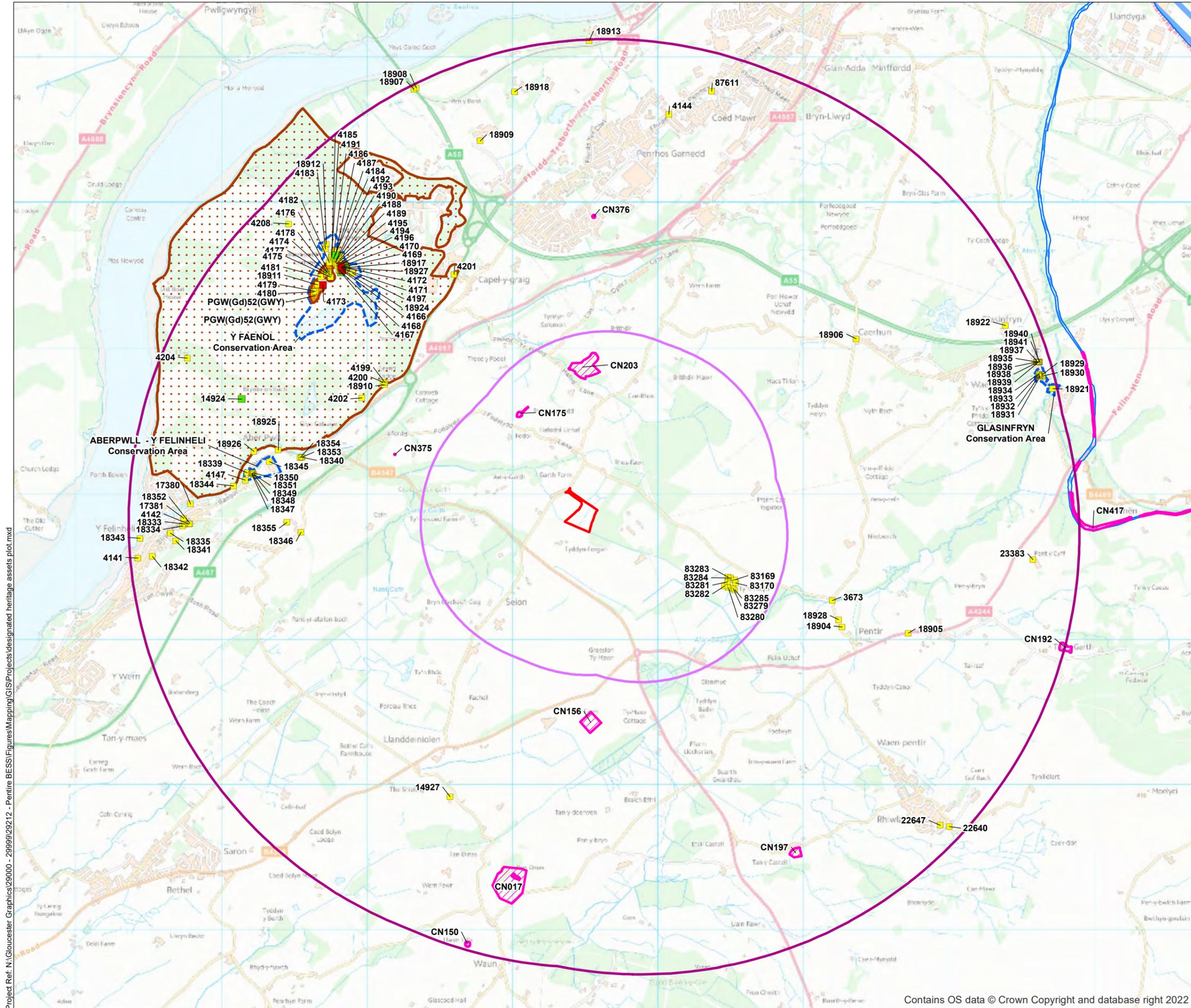
 Site Boundary



0 100 200m
Scale at A4: 1:10,000



Figure 1
Site Location



Legend

- Site Boundary
- 3km search radius
- 1km search radius
- Designated Heritage Assets:**
- Listed Buildings**
- Grade**
- I
- II*
- II
- Kitchen Gardens
- Scheduled Monuments
- Conservation Areas
- Registered Parks and Gardens
- World Heritage Sites**
- 11 - The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn

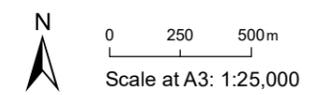
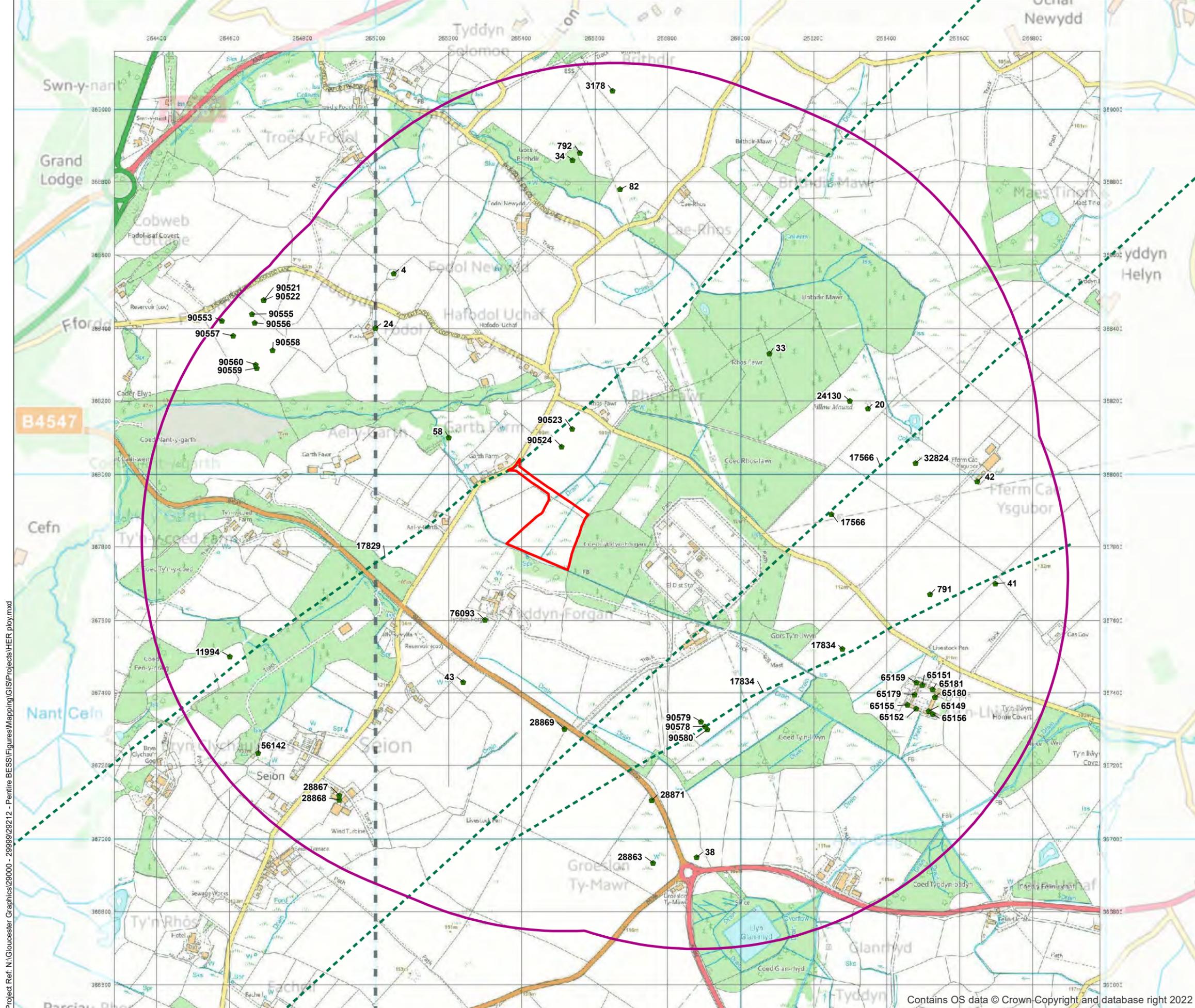


Figure 2a
Designated Heritage Assets Plot

Project Ref: N:\Gloucester_Graphics\290000 - 29999\29212 - Penrhyn BESS\Figures\Mapping\GIS\Projects\designated heritage assets plot.mxd



Legend

- Site Boundary
- 1km search radius

Non-designated Heritage Assets:

- HER Records Points
- Roman Roads

N

0 250 500m

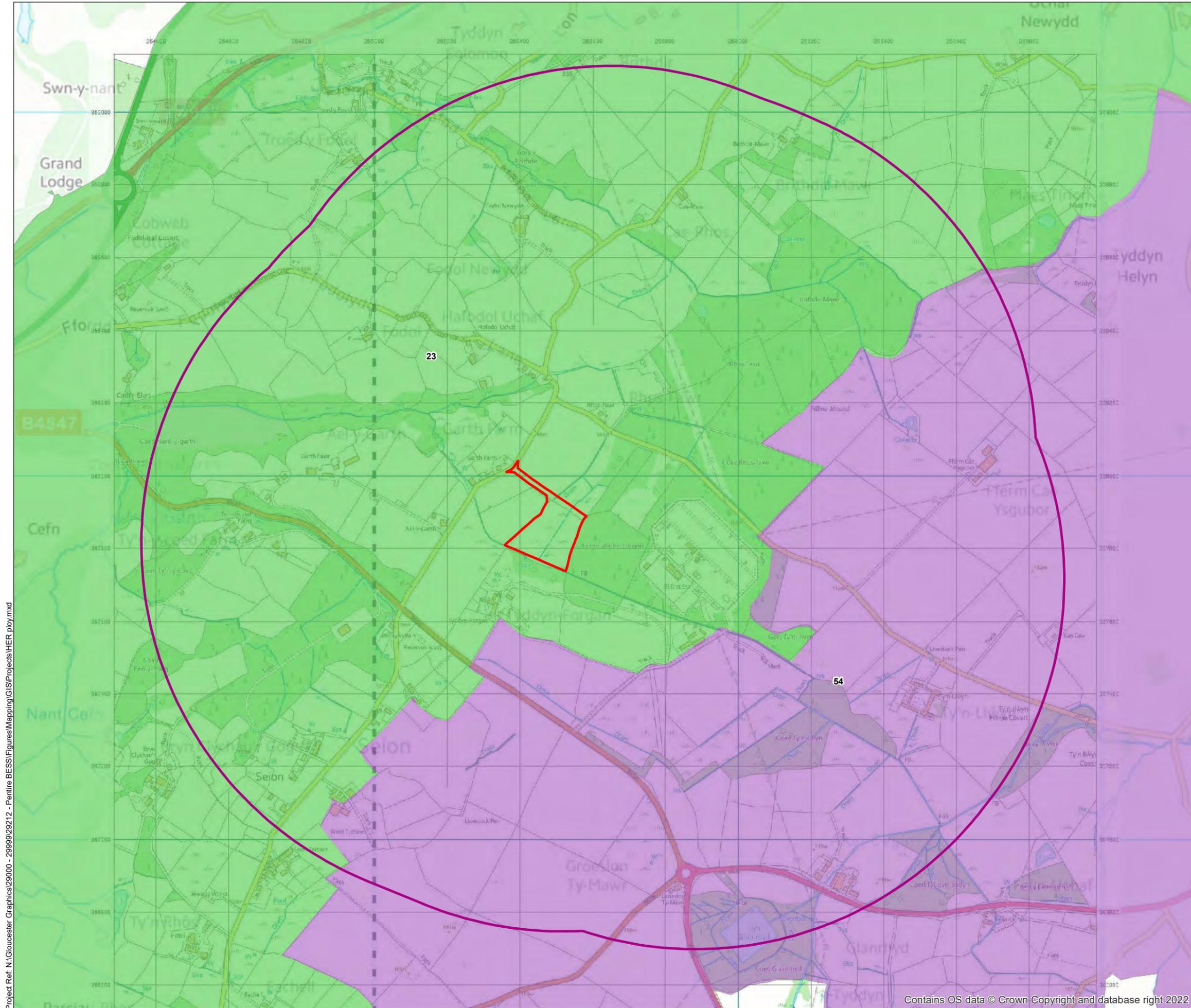
Scale at A3: 1:10,000



Figure 2b
HER Records Plot

Project Ref: N:\Gloucester_Graphics\290000 - 29999\29212 - Pentire BESS\Figures\Mapping\GIS\Projects\HER_plot.mxd

Contains OS data © Crown Copyright and database right 2022



Legend

Site Boundary

1km search radius

Historic Landscape Characterisation:

ARFON PLATEAU

IMPROVED FIELDS ABOVE PENTIR

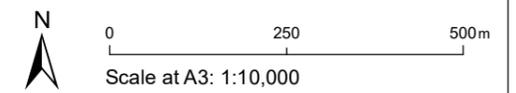
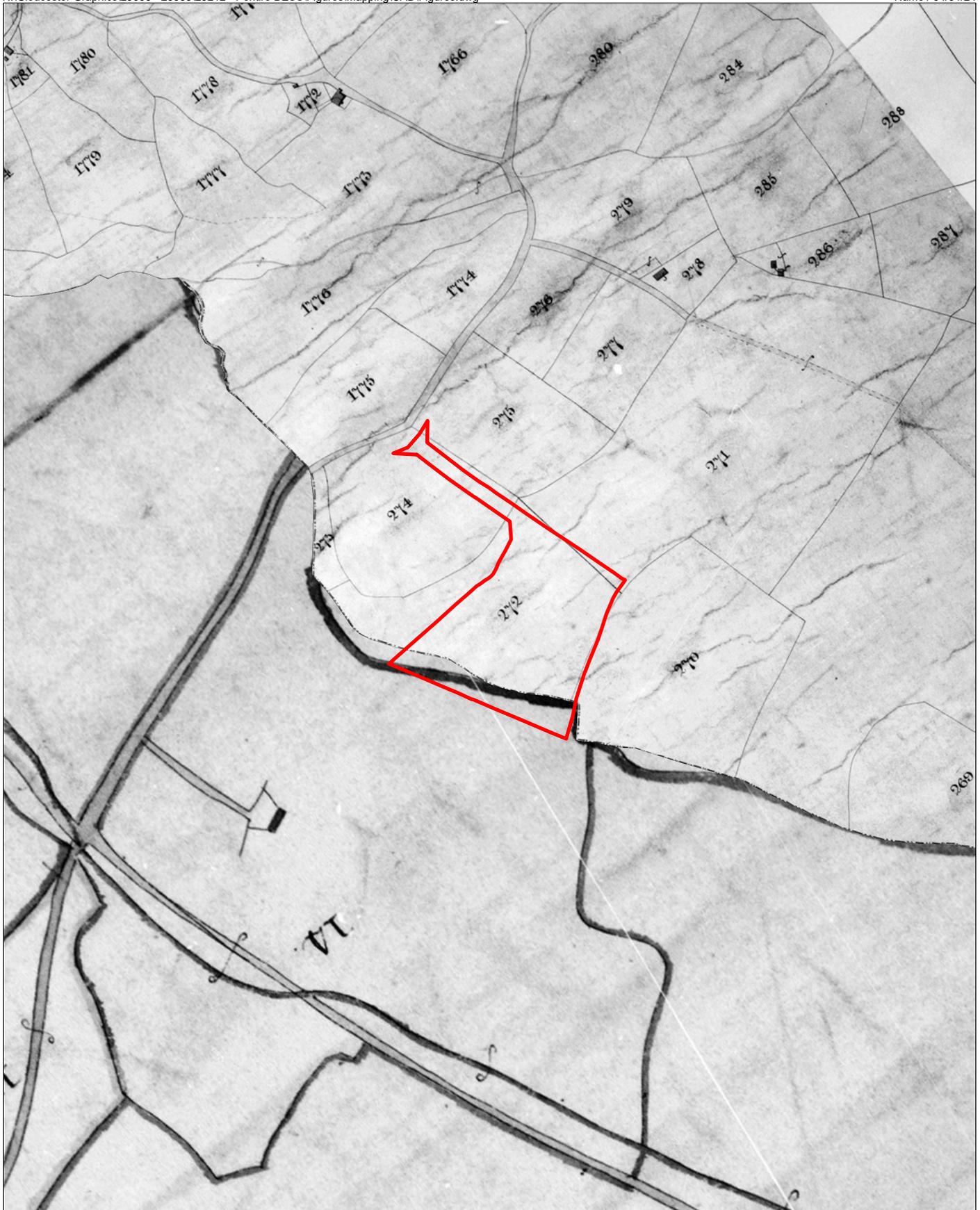
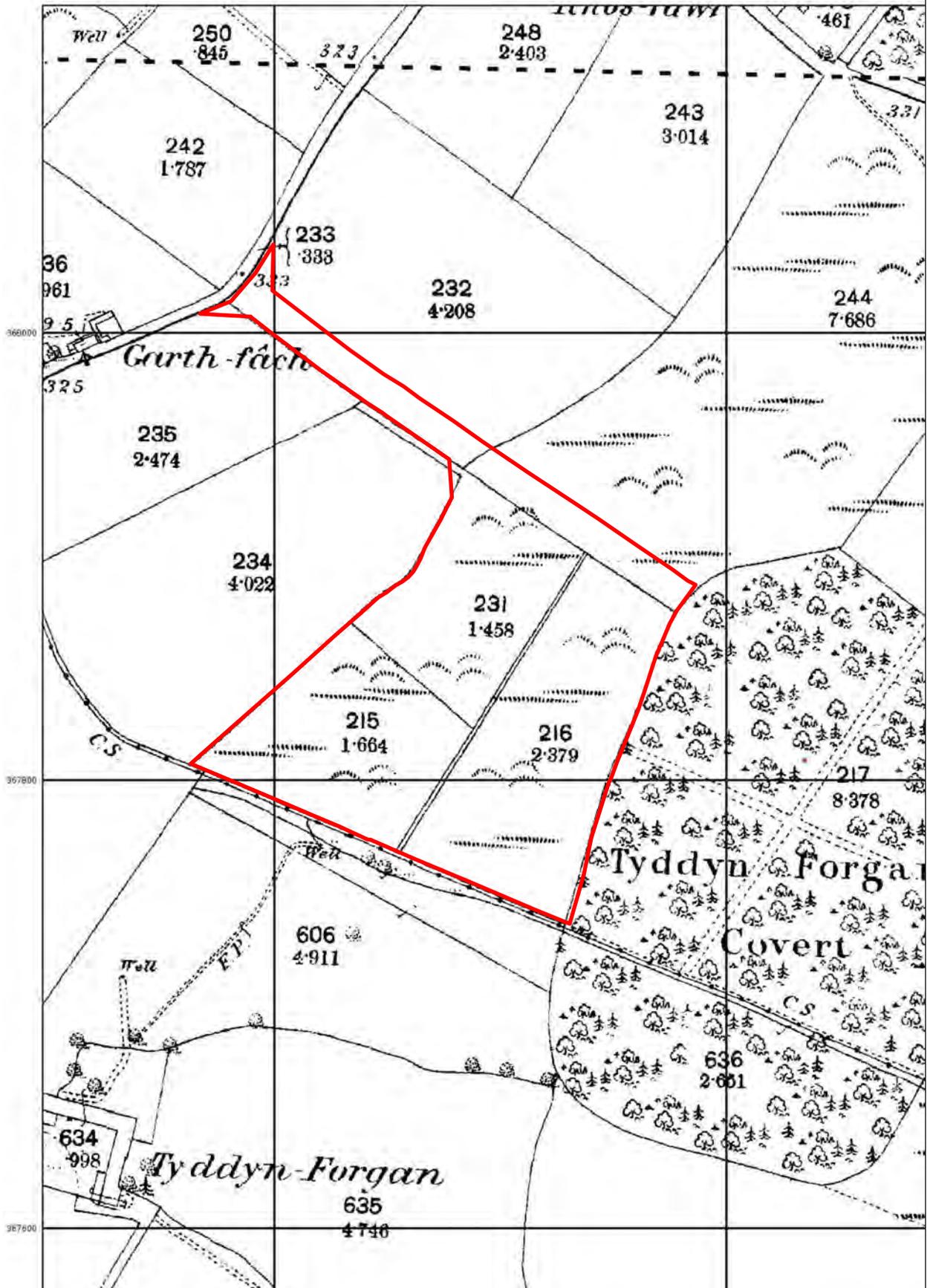


Figure 2c

HLC Plot

Project Ref: N:\Gloucester_Graphics\29000 - 29999\29212 - Pentire BESS\Figures\Mapping\GIS\Projects\HER_plot.mxd





 Site Boundary

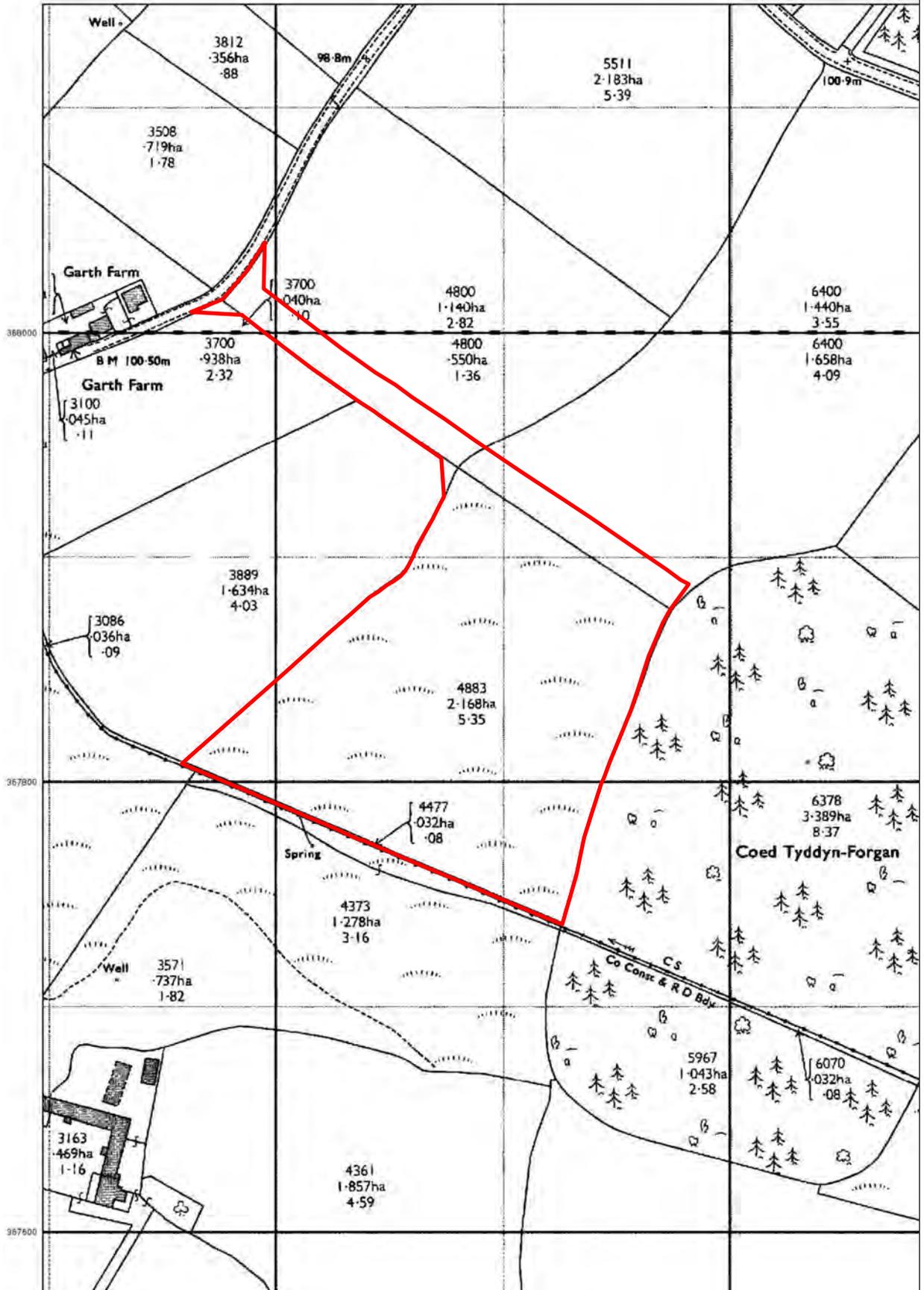


0 25 50m
Scale at A4: 1:2,500



Figure 5

1889 Ordnance Survey Map



 Site Boundary

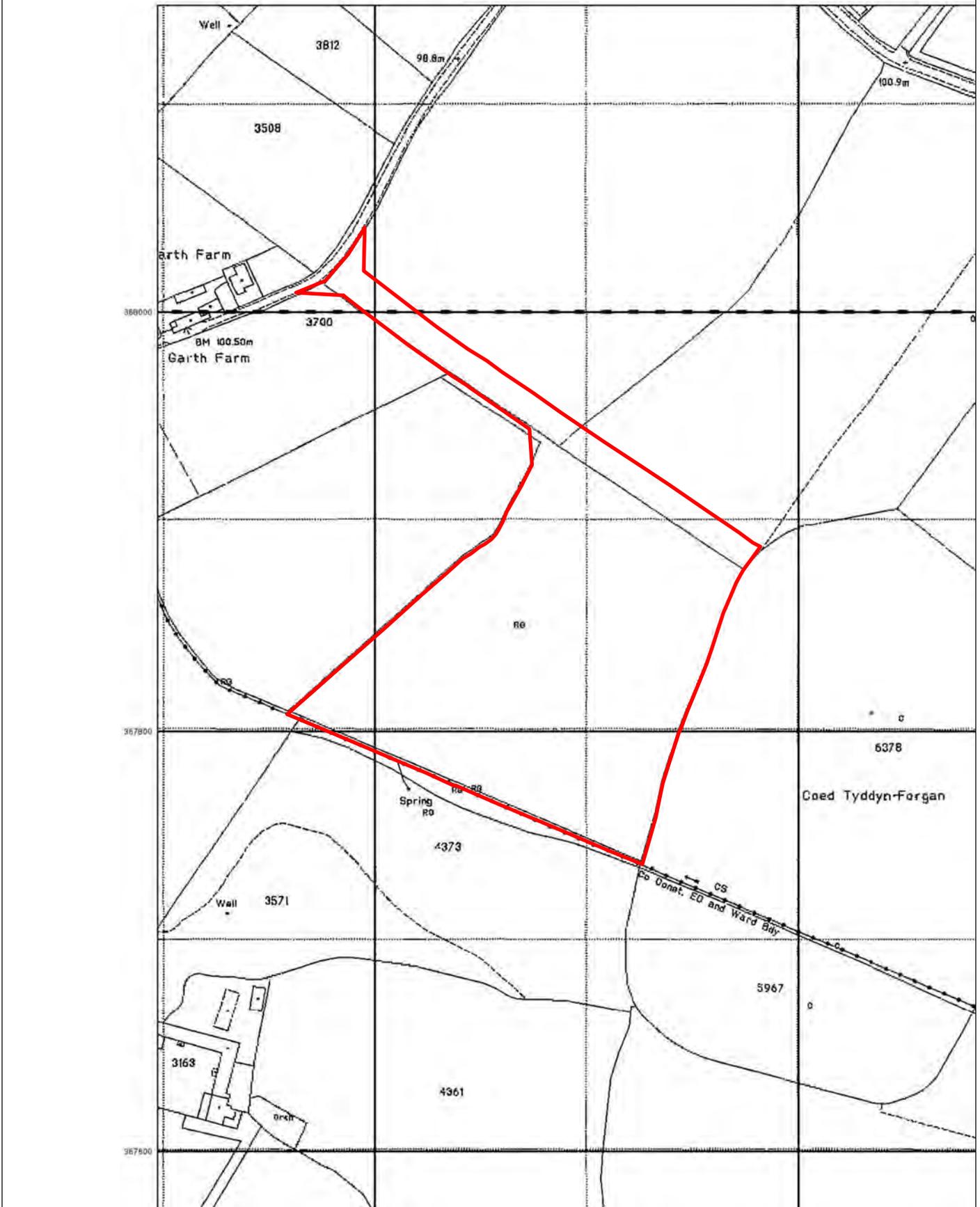


0 25 50m
Scale at A4: 1:2,500



Figure 6

1970 Ordnance Survey Map



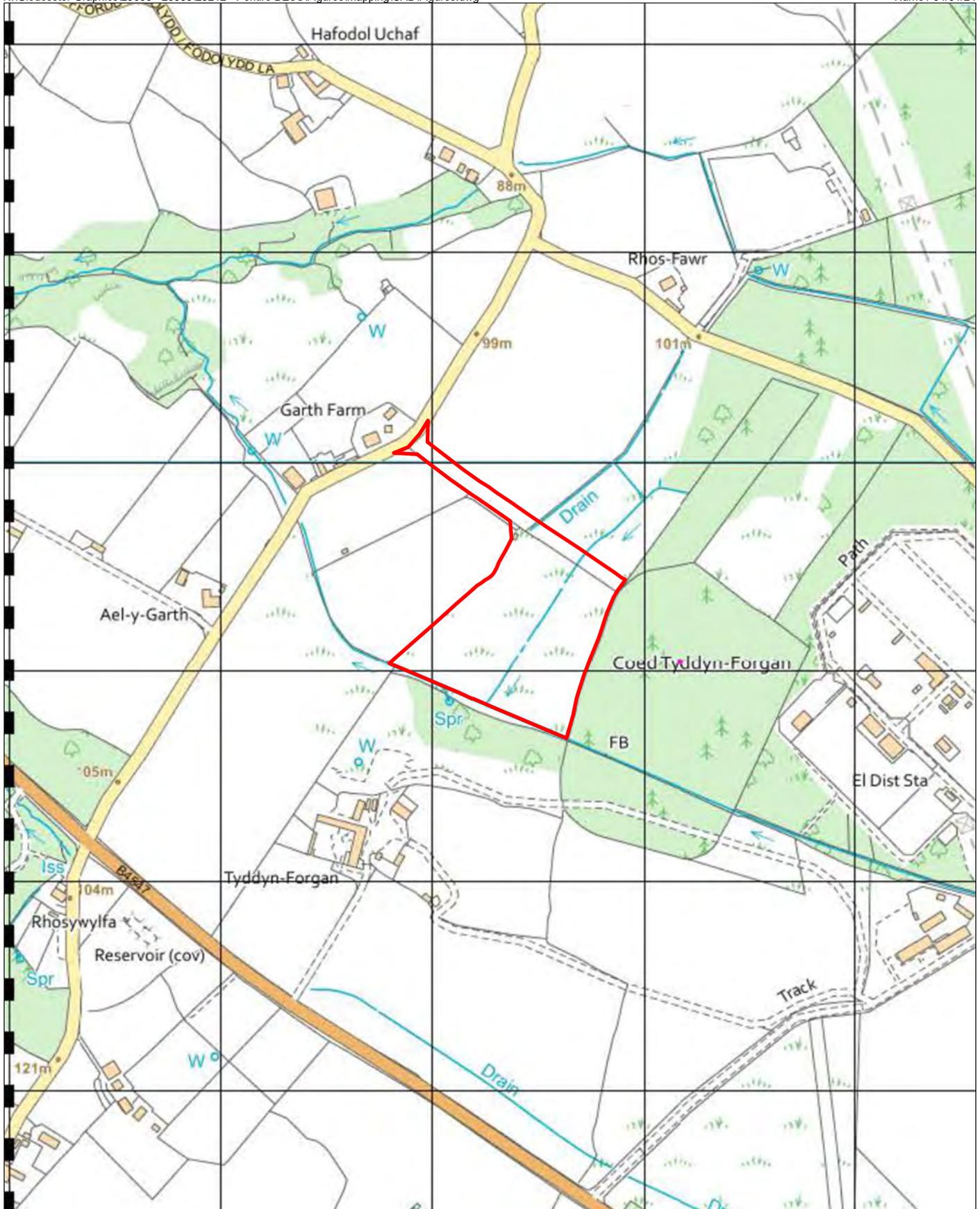
 Site Boundary



0 25 50m
Scale at A4: 1:2,500



Figure 7
1995 Ordnance Survey Map



 Site Boundary



0 50 100m
Scale at A4: 1:5,000



Figure 8

2023 VectorMap Local



 Site Boundary



0 30 60m
Scale at A4: 1:3,000



Figure 9

2023 Modern Satellite Imagery

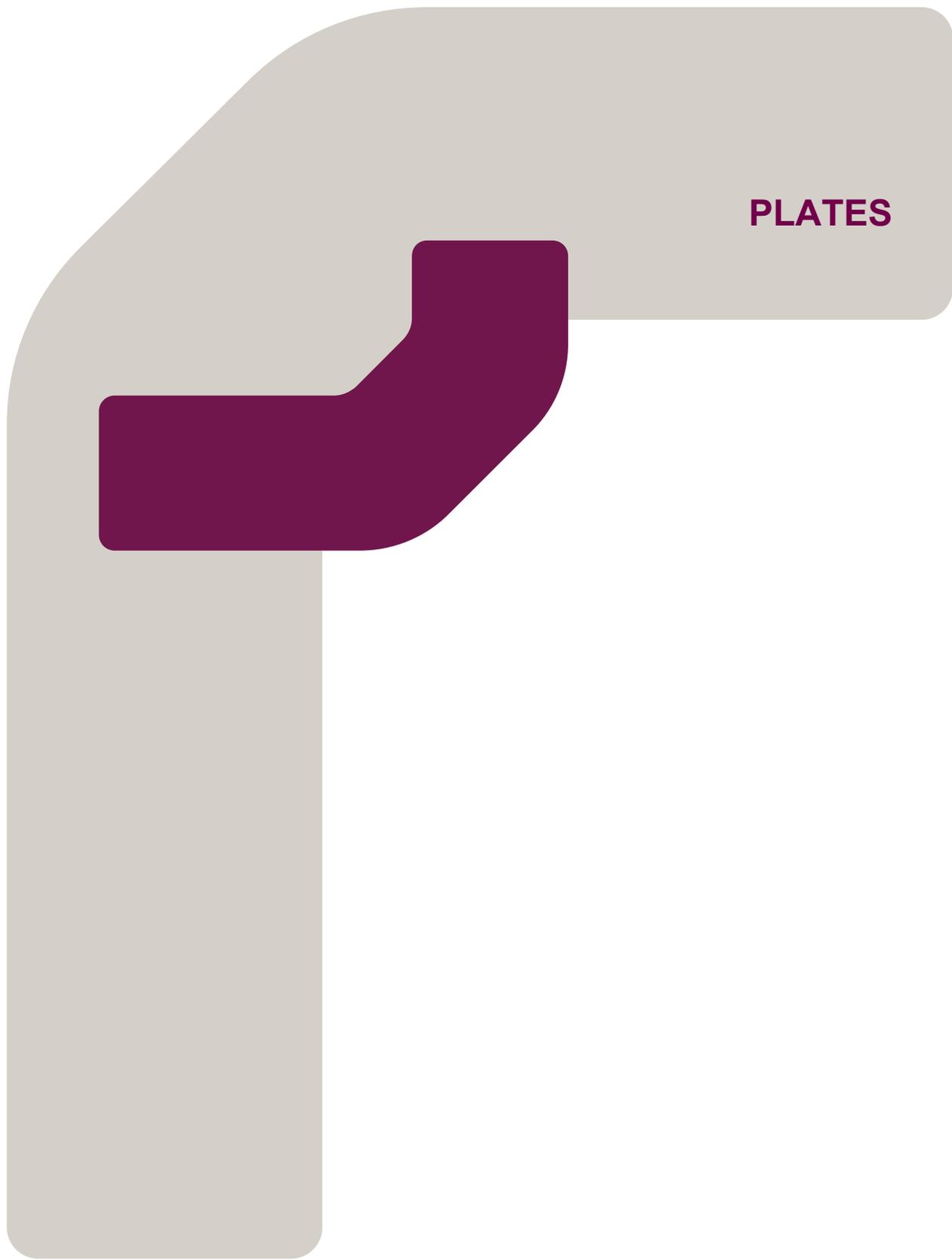




Plate 1: View from centre of northern boundary of site, looking south-west along central watercourse and land division



Plate 2: View from south-east corner of site, looking north-west towards central watercourse and land division



Plate 3: View from south-west corner of site, looking north-east



Plate 4: View from centre of site, looking south-east towards electricity sub-station, beyond the trees



Plate 5: View from centre of site, looking south-west along the central watercourse and land division



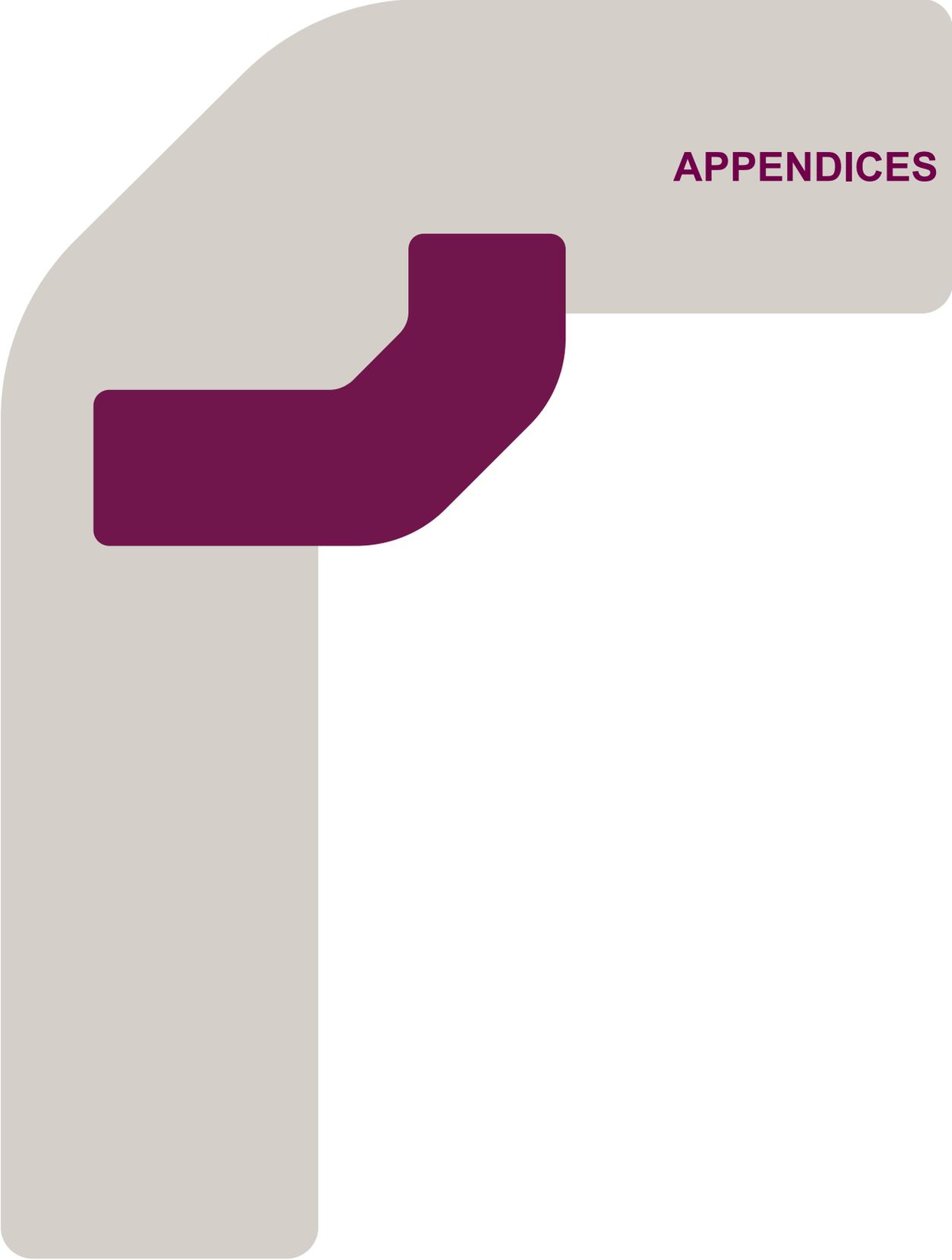
Plate 6: View from centre of western boundary, looking south-east towards electricity sub-station beyond trees and remnants of east by west land division to the right



Plate 7: View from north-west corner of site, looking south-east



Plate 8: View from north-west corner of site, looking east across northern boundary



APPENDICES

Appendix 1

Gazetteer of heritage assets

HER Records

| ID | Type | Description | Location |
|-----------|----------------------------|---|----------|
| CN017 | Scheduled Monument | Dinas Dinorwic Camp. The remains of a hillfort, which probably dates to the Iron Age (c. 800 BC - AD 74, the Roman conquest of Wales) | 2,370m S |
| CN150 | Scheduled Monument | Glascoed Round Cairn. The remains of a burial cairn, probably dating to the Bronze Age (c. 2300 - 800BC) | 2,945m S |
| CN156 | Scheduled Monument | Rectangular Earthwork 110m NW of Coed Ty Mawr. The remains of a well-preserved Medieval moated homestead | 1,150m S |
| CN175 | Scheduled Monument | Fodol Ganol Enclosed Hut Group. Prehistoric | 710m N |
| CN192 | Scheduled Monument | Gerlan Hut Group. Well-preserved group of stone huts: 6 roughly circular structures, with boulder-faced stone walls, of probable Romano-British | 3,200m E |
| CN197 | Scheduled Monument | Castell Llanddeiniolen. The remains of a defensive site, which resembles a Medieval ringwork, although it may be Prehistoric in origin | 2,250m S |
| CN203 | Scheduled Monument | Gors y Brithdir Enclosed Hut Group and Ancient Fields. The site probably dates from the first millennium BC | 660m N |
| CN375 | Scheduled Monument | Standing Stone to the North of Coed Nant-y-garth. Probably dating to the Bronze Age (c. 2300 BC - 800 BC) | 1,370m W |
| CN376 | Scheduled Monument | Goetre Uchaf Barrow. The remains of a round barrow, a burial mound probably dating to the Bronze Age (c. 2300 BC - 800 BC) | 1,760m N |
| CN417 | Scheduled Monument | Penrhyn Quarry Railway. Remains of Penrhyn Slate Quarry Railway, developed during the 1870s to replace the Penrhyn Quarry Railroad | 3,200m E |
| 11 (1633) | World Heritage Site | The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda and the Ogwen Valley to Port Penrhyn | 3,200m E |
| 83169 | Listed Building II | Ty'n Llwyn Farm. Post Medieval bothy | 1,000m E |
| 83170 | Listed Building II | Ty'n Llwyn Farm. Post Medieval cartshed and granary | 1,000m E |
| 83279 | Listed Building II | Ty'n Llwyn Farm. Post Medieval cattle shelter | 1,000m E |
| 83280 | Listed Building II | Ty'n Llwyn Farm. Post Medieval cattle shelter | 1,000m E |
| 83281 | Listed Building II | Ty'n Llwyn Farm. Post Medieval barn and cowhouse | 1,000m E |
| 83282 | Listed Building II | Ty'n Llwyn Farm. Post Medieval barn | 1,000m E |
| 83283 | Listed Building II | Ty'n Llwyn Farm. Post Medieval hay barn | 1,000m E |
| 83284 | Listed Building II | Ty'n Llwyn Farm. Post Medieval farm building | 1,000m E |
| 83285 | Listed Building II | Ty'n Llwyn Farm. Post Medieval barn | 1,000m E |
| 11994 | Building | Capel Y Graig Lodge, Llanddeiniolen. Post Medieval | 820m SW |
| 17566 | Roman Road | Part of Roman Road, Segontium to Canovium | 420m E |
| 17829 | Roman Road | Roman Road, Proposed, Segontium to Bangor | Imm. W |
| 17834 | Roman Road | Part of Roman Road, Segontium to Canovium | 555m SE |
| 20 | Pillow Mound | Undated | 815m E |
| 24 | Findspot | Stone Tool (Hammer). Undated | 535m NW |
| 24130 | Findspot | Possible mount. Undated | 775m E |
| 28863 | Well | Undated | 785m S |
| 28867 | Building | Llys Gwynt House and Outbuildings, Llanddeiniolen | 825m SW |
| 28868 | Horse Gin | Possible. Undated | 825m SW |
| 28869 | Enclosure | Undated | 445m S |
| 28871 | Quarry | Possible. Undated | 665m S |
| 3178 | Field System | Prehistoric | 1,100m N |
| 32824 | Findspot | Bronze Age flanged axehead | 940m E |
| 33 | Findspot | Undated arrow-sharpening stone | 685m NE |
| 34 | Cairn | Roman clearance cairn | 835m N |
| 38 | Stone | Undated boundary marker | 875m S |
| 4 | Settlement | Prehistoric hut circle settlement | 620m NW |
| 41 | Stone | Undated boundary marker | 1,100m E |
| 42 | Stone | Undated boundary marker | 1,085m E |
| 43 | Stone | Undated boundary marker | 405m SW |
| 56142 | Building | North-east of Pen-y-graig. Post Medieval | 890m SW |
| 58 | Cropmark | Circular. Undated | 175m W |
| 76093 | Findspot | Various multi-period finds | 210m SW |
| 791 | Mound | Undated | 970m E |
| 792 | Settlement | Roman hut circle settlement and field system | 890m N |
| 82 | Findspot | Undated quernstone | 815m N |
| 90521 | Features | Undated agricultural features including trackways and boundaries, identified by a geophysical survey | 825m NW |

| | | | |
|-------|-----------------|---|-----------|
| 90522 | Features | Possible features identified by a geophysical survey and evaluation | 825m NW |
| 90523 | Trackway | Undated. Identified by a geophysical survey | 180m N |
| 90524 | Natural Feature | Identified by a geophysical survey | 125m N |
| 90553 | Pit | Undated. Identified by evaluation | 1,125m NW |
| 90555 | Pit | Undated. Identified by evaluation | 1,110m NW |
| 90556 | Field Boundary | Undated. Identified by evaluation | 1,110m NW |
| 90557 | Field Boundary | Undated. Identified by evaluation | 1,110m NW |
| 90558 | Pit | Undated. Identified by evaluation | 960m NW |
| 90559 | Structure | Prehistoric. Two post holes which may represent a structure | 970m NW |
| 90560 | Linear Feature | Prehistoric. Identified by evaluation | 970m NW |
| 90578 | Roman Road | A road of possible Roman date | 555m SE |
| 90579 | Quarry Pits | Likely associated with the nearby Roman road | 555m SE |
| 90580 | Pits | Undated. Two pits of unknown function, identified by evaluation | 555m SE |

HER Events

| ID | Year | Description | Location |
|-------|--------|---|----------|
| 40406 | 1997-8 | FIELD SURVEY. Deserted Rural Settlement in Eastern Caernarvonshire | n/a |
| 40495 | 1999 | DBA. Pentir-Wylfa Overhead Line Refurbishment | n/a |
| 40538 | 2005 | SURVEY. Roman Roads in North-West Wales | n/a |
| 40542 | 2007 | SURVEY. Roman Roads in North-West Wales (Revision 4) | n/a |
| 40543 | 2009 | PROJECT. Roman Military Sites 2008: The Roman Road Between Segontium and Aber | n/a |
| 40544 | 2004 | SURVEY. Roman Roads in North-West Wales | n/a |
| 40782 | 1998 | SURVEY. Hut Circle Settlement Survey | n/a |
| 40783 | 1985 | FIELD VISIT. Cn 175 Fmw Site Visit | n/a |
| 40784 | 1991 | FIELD VISIT. Cn 175 Fmw Site Visit | n/a |
| 40785 | 1996 | FIELD VISIT. Cn 175 Fmw Site Visit | n/a |
| 40803 | 1976 | EXCAVATION. Prn 34 Excavation | n/a |
| 41519 | 1979 | FIELD SURVEY. Fieldwork and Excavation Along the Route of a Gas Pipeline from Pentir to Llanfairpwll | n/a |
| 41520 | 1979 | FIELD SURVEY. Fieldwork and Excavation Along the Route of a Gas Pipeline from Pentir to Llanfairpwll | n/a |
| 41521 | 1990 | WATCHING BRIEF. Gors y Brithdir, Pentir | n/a |
| 41522 | 1994 | FIELD VISIT. Cn 203 Fmw Site Visit | n/a |
| 41523 | 1996 | FIELD VISIT. Cn 203 Fmw Site Visit | n/a |
| 41524 | 1989 | FIELD VISIT. Cn 203 Fmw Site Visit | n/a |
| 44126 | 2009 | DBA. Tir Gofal Management Plan | n/a |
| 44226 | 2008 | METAL DETECTING. Pentir | n/a |
| 44557 | 2010 | DESK BASED RESEARCH. Early Celtic Societies in North Wales | n/a |
| 44558 | 2014 | DBA. Glastir Private Woodland Management Polygonisation | n/a |
| 44846 | 2014 | SCOPING STUDY. Medieval and Post-Medieval Agricultural Features in North-West Wales. Report on Scheduling Enhancement Study: Part 1: Report and Gazetteer | n/a |
| 44985 | 2013 | EXCAVATION. Dolgarrog to Pentir Overhead Powerline | n/a |
| 45025 | 2013 | DBA. Scottish Power Energy Networks: Dolgarrog to Pentir 132Kv Overhead Powerline Refurbishment | n/a |
| 45041 | 2010 | DBA. Prehistoric, Roman and Other Sites. Monument Evaluation, 2008-10. Part 1: Report and Gazetteer | n/a |
| 45055 | 2017 | EVALUATION. North Wales Connection Project: Wylfa to Pentir, Anglesey and Gwynedd | n/a |
| 45406 | 2019 | VISUAL IMPACT ASSESSMENT. Maes Bleddyn Rachub Gwynedd. Scheduled Monument Setting Impact Assessment | n/a |
| 45493 | 2018 | METAL DETECTING. Llanddeiniolen, Beaumaris and Llanfair-mathafarn-eithaf | n/a |
| 45705 | n/a | METAL DETECTING. North West Wales | n/a |
| 45947 | 2017 | GEOPHYSICAL SURVEY. North Wales Connection Project Anglesey and Gwynedd | n/a |
| 45965 | 2020 | MANAGEMENT EVENT. HER Evidence Data Cleansing Exercise | n/a |

Appendix 2

1984 Aerial Photograph





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