

# Tyddyn Forgan, Gwynedd, Wales

784-B068934

## Archaeological and Heritage Desk- Based Assessment



Draft Issue

Net Zero Twenty Six Limited

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## Table of contents

<b>1.0</b>	<b>Non-technical summary</b> .....	<b>8</b>
<b>2.0</b>	<b>Introduction</b> .....	<b>8</b>
2.1	Aims and objectives.....	8
<b>3.0</b>	<b>Site location and conditions</b> .....	<b>9</b>
<b>4.0</b>	<b>Methodology</b> .....	<b>10</b>
4.1	Sources consulted .....	11
<b>5.0</b>	<b>Planning policy context</b> .....	<b>12</b>
5.1	National legislation and guidance .....	12
	Ancient Monuments and Archaeological Areas Act 1979 .....	12
	Planning (Listed Buildings and Conservation Areas) Act, 1990 .....	12
	Historic Environment (Wales) Act, 2023 .....	12
	Planning Policy Wales, Chapter 6, Historic Environment 2024, Edition 12 .....	13
	Technical Advice Note 24-The Historic Environment, 2017 .....	16
5.2	Local policy and guidance .....	16
	Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026.....	16
<b>6.0</b>	<b>Baseline data</b> .....	<b>18</b>
6.1	Designated heritage assets .....	19
6.2	Archaeological and historic background .....	24
	Archaeological background and non-designated heritage assets .....	24
	Prehistoric.....	24
	Romano-British .....	28
	Early Medieval .....	29
	Medieval .....	30
	Post-medieval, Industrial and Modern periods.....	31
	Unknown.....	33

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Previous archaeological investigations and evaluation results .....	34
6.3 Portable Antiquities Scheme.....	34
<b>7.0 Landscape characterisation.....</b>	<b>35</b>
7.1 Aerial photographs .....	35
7.2 LiDAR data .....	36
7.3 Historic Landscape Characterisation .....	36
<b>8.0 Historic mapping survey .....</b>	<b>37</b>
<b>9.0 Site walkover survey .....</b>	<b>38</b>
<b>10.0 Heritage potential and impacts.....</b>	<b>39</b>
10.1 Archaeological potential .....	39
10.2 Designated heritage assets .....	43
Earthwork 110m NW of Coed Ty Mawr (CN156) .....	43
Ty'n Llwyn Farm; Ty'n Llwyn Farm Bothy and Bakehouse Range (83169); Cartshed and Granary (83170); Cattle Sheds south-east of Yard (83279); Cattle sheds south of Yard (83280); Barn and Cowhouse at West of Yard (83281); Barn outside yard to South-West (83282); Hay Barn outside Yard to North West (83283); and the North-West range of the Yard (83284).....	43
Dinorwig Valley Registered Historic Landscape (HLW (Gw) 6).....	44
The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633).....	44
Scheduled Monuments .....	45
Vaynol Registered Park (PGW(Gd)52(GWY)) .....	46
Listed Buildings.....	46
<b>11.0 Mitigation recommendations and conclusion.....</b>	<b>47</b>
11.1 Designated heritage assets .....	47
Earthwork 110m NW of Coed Ty Mawr (CN156) .....	47

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Ty'n Llwyn Farm; Ty'n Llwyn Farm Bothy and Bakehouse Range (83169); Cartshed and Granary (83170); Cattle Sheds south-east of Yard (83279); Cattle sheds south of Yard (83280); Barn and Cowhouse at West of Yard (83281); Barn outside yard to South-West (83282); Hay Barn outside Yard to North West (83283); and the North-West range of the Yard (83284).....	47
Dinorwig Valley Registered Historic Landscape (HLW (Gw) 6).....	<b>4748</b>
The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633).....	48
Scheduled Monuments: .....	48
Vaynol Registered Park (PGW(Gd)52(GWY)) .....	<b>4849</b>
Listed Buildings.....	49
11.2 Archaeological remains .....	49
<b>References .....</b>	<b>51</b>
Legislation, policies, standards and guidance.....	51
Bibliography .....	51
Historic maps, drawings and aerial photography .....	53
Appendices	
Appendix A – Site location plan	
Appendix B – Assessment methodology	
Appendix C – Site photographs	
Appendix D – Planning policies	
Appendix E – Recorded heritage assets	
Appendix F – Historic mapping	

## Acronyms/Abbreviations

Acronyms/Abbreviations	Definition
aOD	Ordnance Datum
CIfA	Chartered Institute for Archaeologists
DBA	Desk-Based Assessment
GAT	Gwynedd Archaeological Trust
HER	Historic Environment Record
LiDAR	Laser Imaging, Detection and Ranging
NCAP	National Collection of Aerial Photography
NMP	National Mapping Programme
OSGB NGR	Ordnance Survey National Grid reference system
PPW	Planning Policy Wales
LVA	Landscape and Visual Appraisal
WHS	World Heritage Site
ZTV	Zone of Theoretical Visibility

## 1.0 Non-technical summary

This Archaeological and Heritage Desk-Based Assessment (DBA) has been prepared to support the consideration of this site for future development. This study examines the cultural heritage potential of the proposed development site and the surrounding areas. The site was found to have potential for previously unrecorded archaeological remains relating to the Roman period activity in the area to be present. This conclusion has been based on the known evidence found relating to the application site and surrounding areas, principally the two Roman roads that are recorded as crossing the site. This information is correct at the time of issue and comprises a substantive draft that will be updated when further information, which has been requested, has been received. A programme of archaeological mitigation has been advised in the form of an initial geophysical survey, which may lead to subsequent trial trenching. This can be secured by planning condition. All archaeological work shall be undertaken in accordance with the standards and guidance from the Chartered Institute for Archaeologists, and a Written Scheme of Investigation agreed in advance with the Heneb Historic Environment Officer.

## 2.0 Introduction

This DBA has been prepared by Ola Zdral, (PCIfA), Archaeological Consultant, Tetra Tech, on behalf of Net Zero Twenty Six Limited, as part of an application for temporary planning permission for a period of up to 40 years for the erection of an Energy Storage System (ESS), together with associated infrastructure, site levelling works, site access, landscaping and ancillary works on the site compound, including an associated cable route to the connection point. A full description of the proposed development can be found in the Planning, Design and Access Statement.

### 2.1 Aims and objectives

This report has been prepared in respect of the guidelines established by ClfA (2020) Standards and Guidance for Desk-Based Assessment:

This DBA will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. It will be undertaken using appropriate methods and practices which satisfy the stated aims of the



project, and which comply with the Code of Conduct and other relevant regulations of ClfA (2022, 2020). The DBA will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so) and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.

This study examines the cultural heritage potential of the proposed development site and the surrounding area. The aim of the study is to:

- Identify recorded cultural heritage sites within the site boundary and located nearby with settings and significance affected by the proposal;
- Identify the potential for previously unrecorded sites to be present within the site;
- Identify potential impacts and mitigation strategies where appropriate; and,
- Make recommendations for further work where required.

The Historic Environment (as defined by Planning Policy Wales 12, 2024), comprises all the surviving physical elements of previous human activity and illustrates how past generations have shaped the world around us. It is central to Wales's culture and its character, whilst contributing to our sense of place and identity. It enhances our quality of life, adds to regional and local distinctiveness and is an important economic and social asset.

This baseline assessment considers the heritage potential within the site itself, the surrounding area and wider local and regional context. In terms of its archaeological content, this assessment does not attempt to plot and review every archaeological find and monument; rather, it aims to examine the distribution of evidence and to use this to predict the archaeological potential of the study area and the likely impacts of the development proposals on those remains.

## 3.0 Site location and conditions

The application site is located north of the B4547, on land northwest of Seion, Llanddeiniolen, Gwynedd, Wales, LL55 3AN. The site measures 4 hectares in total (including the connecting corridor to the substation) and is centred on Ordnance Survey National Grid reference system (OSGB NGR) SH 55707 67335 and is characterised by

rough arable land, surrounded by hedges, ranging from approximately 108m above Ordnance Datum (aOD) to 111m aOD. A site location plan can be seen in Appendix A.

The site comprises an irregular polygon that lies south west of the Pentir substation, and is currently disused and roughly vegetated. The site lies south of the access road to the substation. Outside of the substation and infrastructure, the site is surrounded by arable fields with a small, wooded area to the north.

The bedrock geology of the application site comprises Minffordd Formation (interbedded sandstone and conglomerate), a sedimentary bedrock formed between 526 and 508 million years ago during the Cambrian period. This bedrock is overlain by superficial deposits at the car park (landing platform) consisting of Devensian Till, – Diamicton: a sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period (NERC, 2025).

The soil found at the site is characterised by Soilscape 19: slowly permeable wet very acid upland soils with a peaty surface, and Soilscape 6: freely draining slightly acid loamy soils (Cranfield University, 2025).

## 4.0 Methodology

An impact assessment has been carried out through the consideration of baseline conditions in relation to the elements of the scheme that could cause cultural heritage impacts. Baseline conditions are defined as the existing environmental conditions and in applicable cases, the conditions that would develop in the future without the scheme. In accordance with best practice, this report assumes that the scheme will be constructed, although the use of the word ‘will’ in the text should not be taken to mean that implementation of the scheme is certain.

The DBA has been undertaken in line with the guidelines established by ClfA (2020). Tetra Tech has developed its own heritage evaluation and assessment method using a combination of the Welsh Government’s criteria for scheduling monuments (Cadw, What is Scheduling, Annex 1), Design Manual for Roads and Bridges, Volume 11, Part 3, Section 2, HA 208/07 and Transport Analysis Guidance (TAG Unit 3.3.9, Heritage of Historic Resources Sub-Objective). Professional judgment is used in conjunction with these criteria to undertake the impact assessment. Assessment of significance will also be assessed

using the principles outlined in Cadw's 2011 Conservation Principles for the sustainable management of the historic environment in Wales, in particular, the four heritage values and how they contribute to significance. The full assessment methodology is included at Appendix B.

## 4.1 Sources consulted

A study area of 1km around the application site has been examined to assess the nature of the surrounding cultural heritage sites and place the recorded assets within their local context. This study area was defined in consultation with the Heneb Historic Environment Record. This study has taken into consideration the historical and archaeological background of the area. The sources consulted were:

- Gwynedd Archaeological Trust Historic Environment Record;
- National Monument Record of Wales (NMRW);
- Caernarfon Archives;
- Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW);
- Cadw for designated sites;
- Local Planning Authority for designated and non-designated heritage assets;
- Aerial photographs – Historic England Swindon archives, Cambridge University Collection of Aerial Photography (CUCAP) online database; the National Collection of Aerial Photography (NCAP) via Historic Environment Scotland; Britain from Above; and Google Earth;
- Historic mapping including Tithe maps and early Ordnance Survey; and,
- Secondary research including, previously completed archaeological reports for the surrounding area, regional research frameworks and grey literature and journal articles, as appropriate.

In addition to the above resources, a site walkover survey was undertaken on 31<sup>st</sup> January 2025 by Ola Zdral (PCIfA) to assess the site for potential features of archaeological or historic interest, and suitability for mitigation measures.

## 5.0 Planning policy context

### 5.1 National legislation and guidance

#### **Ancient Monuments and Archaeological Areas Act 1979**

Scheduled Monuments are designated by the Secretary of State for Culture, Media and Sport on the advice of Historic England as selective examples of nationally important archaeological remains. Under the terms of Part 1 Section 2 of the Ancient Monuments and Archaeological Areas Act 1979 it is an offence to damage, disturb or alter a Scheduled Monument either above or below ground without first obtaining permission from the Secretary of State. This Act does not allow for the protection of the setting of Scheduled Monuments.

#### **Planning (Listed Buildings and Conservation Areas) Act, 1990**

The Act outlines the provisions for designation, control of works and enforcement measures relating to Listed Buildings and Conservation Areas. Section 66 of the Act states that the planning authority must have special regard to the desirability of preserving the setting of any Listed Building that may be affected by the grant of planning permission. Section 72 states that special attention shall be paid to the desirability of preserving or enhancing the character or appearance of Conservation Areas.

#### **Historic Environment (Wales) Act, 2023**

The Historic Environment (Wales) Act, 2023 amends aspects of the Ancient Monuments and Archaeological Areas Act (1979) and Planning (Listed Buildings and Conservation Areas) Act, 1990 strengthening the protection for Scheduled Monuments and Listed Buildings and streamlining the consent process. Further changes within the Act will require either supplementary regulations or non-legislative preparations and these will be commenced and come into force by order of Welsh Ministers at an appropriate time. The further changes include a statutory register of parks and gardens, a statutory list of Welsh place names, and Heritage Partnership Agreements, amongst other measures (Welsh Government, 2016).

This legislation repealed the current legislative framework for the protection of the Welsh historic environment, primarily the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990 in Wales and replaced

the previous framework with accessible and fully bilingual law for the historic environment of Wales (Cadw, 2024).

## **Planning Policy Wales, Chapter 6, Historic Environment 2024, Edition 12**

Planning Policy Wales, Chapter 6 sets out the policy with respect to the historic environment and planning. The policy outlines four key objectives of the Welsh Government for the preservation or enhancement of the historic environment and conservation areas, the protection of archaeological remains and the safeguarding of historic buildings. The policy contains guidance for local authorities to consider when developing local plans (Section 6.1).

Chapter 6 (Distinctive and Natural Places) includes section 6.1. This section contains advice on development control policies. If development is likely to impact upon archaeological remains the guidance stresses the need for early consultation between developers and planning authorities, plus the need for an archaeological assessment to be carried out early in the process. Where nationally important remains, whether scheduled or not, and their setting are adversely affected by proposed development there should be a presumption in favour of their preservation. Where important archaeological remains may exist, field evaluation can help to define the character and extent of the remains and so assist in identifying potential options for minimising or avoiding damage. In cases involving archaeological remains of lesser importance the planning authority will need to weigh the relative importance of the archaeology against other factors, including the need for the proposed development. Where it is not feasible to preserve remains, an acceptable alternative may be to arrange prior excavation and recording of archaeological remains and the publication of the results by means of granting planning permission subject to a negative condition.

Section 6.1.4 identifies The Ancient Monuments and Archaeological Areas Act 1979, Planning (Listed Buildings and Conservation Areas) Act 1990 and Historic Environment (Wales) Act 2016 as providing the legislative framework for the protection and sustainable management of the historic environment in Wales.

Section 6.1.5 establishes a commitment where planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations.

Section 6.1.6 establishes a series of heritage-related objectives for Welsh Government. These objectives relate to designated heritage:

- 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.

Section 6.1.7 stresses the importance of the planning system in protecting, conserving, and enhancing the significance of historic assets. This role includes 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.

The responsibility of all stakeholders is stressed in conserving the historic environment: PPW states that 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 (6.1.8). This section continues to assert that “*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 new proposals*”.

Section 6.1.9 concludes that decisions made through the planning system must fully consider the impact on the historic environment and on the significance and heritage values of individual historic assets and their contribution to the character of place.

Specific sections address designated assets (Scheduled Monuments, Listed Buildings and Conservation Areas) and Historic Landscapes and World Heritage Sites (6.1.10 – 6.1.22). There should be a presumption in favour of the preservation of Listed Buildings and their setting with special regard to the desirability of preserving the features of special architectural and historic interest which they possess. Where possible the continuation or reinstatement of original building uses should be considered, however there should be flexibility to achieve an

optimum viable use which is compatible with the character. Justification for alteration or demolition of Listed Buildings should be provided with applications. Conditions may be imposed for the recording of historic buildings. Justification for alteration or demolition of Listed Buildings should be provided with applications. Conditions may be imposed for the recording of historic buildings.

There should be a presumption in favour of the preservation and enhancement of Conservation Areas and their setting with special regard to the desirability of preserving the features of special character or appearance of an area. When considering applications, the authority should consider the effect on the character or appearance from demolition, proposed development, advertisements, and trees. Article 4 directions can be made to withdraw specific development rights.

World Heritage Sites are a material consideration in determining applications and the impact of proposals on sites and their settings should be carefully considered. Parks and Gardens in the first part of the Register of Landscapes, Parks and Gardens of Special Historic Interest, and their settings, should be protected and effects on them or their setting may be a material consideration. Information on historic landscapes in the second part of the register should be considered when there would be more than a local impact on an area. Where a local planning authority has identified historic assets of local interest or produced a list of historic assets of special local interest and included a policy in its development plan for their preservation and enhancement, any supporting supplementary planning guidance will be a material consideration when determining a planning application.

Section 6.1.25 discusses the role of the planning system in dealing with undesignated assets, where planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development.

Section 6.1.26 refers to situations 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.

Section 6.1.27 states that when a 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.

Planning Policy Wales is supplemented by Welsh Government Technical Advice Note 24: The Historic Environment (2017) (TAN 24).

### **Technical Advice Note 24-The Historic Environment, 2017**

TAN 24 provides guidance on how the planning system should consider the historic environment during both the preparation of development plans and decision-making for listed building consent application and planning application affecting the historic environment, including World Heritage Sites, Scheduled Monuments, Archaeological remains, Listed Buildings, Conservation Areas, Historic Parks and Gardens, Historic Landscapes and Historic Assets of special local interest.

TAN 24 states that a heritage impact statement must form part of any listed building consent and conservation area consent, whilst Design and Access Statements may be required for planning applications that could have an impact on historic assets. It also states that for any development within the setting of a historic asset, some of the factors to consider and weigh in the assessment include:

- the significance of the asset and the contribution the setting makes to that significance;
- the prominence of the historic asset;
- the expected lifespan of the proposed development;
- the extent of tree cover and its likely longevity; and
- non-visual factors affecting the setting of the historic asset such as noise.

## **5.2 Local policy and guidance**

The application site is located within Gwynedd, and therefore is located within the district of Gwynedd Council.

### **Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026**

The Anglesey and Gwynedd Joint Local Development was formally adopted on 31 July 2017 and the majority of decisions on planning applications in the two Planning Authority



areas will be based on the contents of the Plan. The Plan deals with Anglesey and Gwynedd, but parts of Gwynedd within the Snowdonia National Park are not included.

Currently the site is governed by a joint local plan for Gwynedd and Anglesey. Cyngor Gwynedd and the Isle of Anglesey County Council agreed to cease the joint working agreement on Planning Policy matters on 31 March 2023, and the Gwynedd Planning Policy Service has been established. The process of preparing a new Local Development Plan (LDP) for the Gwynedd Local Planning Authority area only (which is the area of Gwynedd located outside the Eryri National Park) has commenced. The new LDP will cover a period between 2024 and 2039. The Anglesey and Gwynedd Joint Local Development Plan continues to provide the local policy framework for decisions on planning applications until this is adopted.

The Plan contains five policies pertaining to the historic environment:

- Policy PS 20 – Preserving and Where Appropriate Enhancing Heritage Assets.
- Policy AT 1 - Conservation Areas, World Heritage Sites and Registered Historic Landscapes, Parks and Gardens.
- Policy AT 2: Enabling Development.
- Policy AT 3: Locally Or Regionally Significant Non-Designated Heritage Assets.
- Policy AT 4: Protection Of Non-Designated Archaeological Sites And Their Setting.

The full details of the above policies can be found in Appendix D.

## 6.0 Baseline data

**Table 1:** Archaeological time periods

Period	Description	Date range
Palaeolithic and Mesolithic	The Palaeolithic is divided into the Lower, Middle and Upper Palaeolithic, and is characterised by hunting practices and flint tools. The Mesolithic is often characterised by the microlithic flint industry and a gradual move towards cultivation and domestics.	Up to 5,000 BCE
Neolithic	A period typically associated with the appearance of large ritual and ceremonial monuments in the landscape, and a reliance on cultivation practices and domestics, as well as the first appearance of pottery in the archaeological record.	5,000 BCE to 2,200 BCE
Bronze Age	The period is subdivided into the Early, Middle and Late Bronze Age, and is typically characterised by the appearance of bronze metalworking in the archaeological record, a change in domestic and ceremonial architecture, and increased agricultural activity and land management.	2,200 BCE to 750 BCE
Iron Age	The Iron Age is characterised by increasing evidence for land management and the use of iron, as well as defensive monuments such as hillforts and oppida. There is also increased evidence for continental influences in the pre-conquest period.	750 BCE to 43 CE
Romano-British	Traditionally, the Romano-British period begins with the Roman invasion in 43 CE and ends with the emperor Honorius directing Britain to see to its own defence in 410 CE. The period is characterised by military operations, the establishment of central civitates for instance, while on a regional scale, vernacular architecture and traditions persisted.	43 CE to c. 350 CE
Early medieval	Following the breakdown of Roman rule, Wales retained a number of British characteristics including Christianity despite pressure from incoming Irish and Saxons. Gwynedd and Powys were two powerful polities during this period which vied for supremacy whilst, along with Gwent in the south, resisted the growing influence of Anglo-Saxon kingdoms such as Mercia and Wessex.	350 CE to 1050 CE
Later medieval	The later medieval period commences with the arrival of the Normans, includes the Age of the Princes and culminates with the Dissolution of the Monasteries and the passing of the Laws in Wales Acts of 1535 and 1542.	1050 CE to 1540 CE

	Following the Norman conquest of England and parts of Wales, castles were established as a sign of power, and often provided the focus of royal and ecclesiastical centres. More and more marginal land was also exploited to support agriculture and expanded industry.	
Post-medieval	The post-medieval period is an age of transition between the medieval world and the Industrial and Agricultural revolutions of the 18 <sup>th</sup> and early 19 <sup>th</sup> century. The Dissolution of the Monasteries saw wholesale transfers of land into Royal and private hands, buildings were demolished, religious artefacts destroyed and social life irrevocably altered, marking an abrupt end to the Middle Ages. The period is characterised by the expansion of economy and industry that contributed to the onset of industrialisation, although activity was typically centred on small workshops and 'cottage' industries. For many, ordinary life was disrupted by conflict culminating in the Civil Wars.	c. 1540 CE to 1750 CE
Industrial	The catalyst for the Industrial Revolution was steam and coal driven technology, and led to the establishment of large factories, foundries and works. The growing demand for resources such as coal also led to the establishment of canals to more effectively link mines to industrial centres, while the 'Turnpike Acts' allowed new roads to be established. By the 19 <sup>th</sup> century, the establishment of the railway further transformed the landscape, and as well as mineral resources, also carried passengers.	1750 CE to 1900 CE
Modern	Warfare is perhaps the most enduring image of 20 <sup>th</sup> century Britain, bringing about major economic and social changes, as well as defensive and commemorative structures. Extant military structures and defence landscapes survive in many parts of the country. Mass transport, the creation of a National Health Service, mass leisure and cultural life beyond an elite may also all be seen as factors shaping landscape and material culture in this period, as may mass migration, as part of the post-Imperial settlement.	1900 CE onwards

## 6.1 Designated heritage assets

A study area of 1km around the application site has been examined to assess the nature of the surrounding cultural heritage assets and place the recorded sites within their context. There are eight Grade II Listed Buildings and one Scheduled Monument within 1km of the site. A further search area of 3km was undertaken for designated assets to understand the potential impact upon the setting of these assets.

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

Details of the designated heritage assets can be seen in Appendix E and their locations are shown on Figure 2/2a. Bracketed numbers within the text refer to the identifiers within the table and on Figure 2/2a in Appendix E.

### **Designated assets within 1km of the site**

There is one Scheduled Monument within the 1km study area; A rectangular Earthwork 110m NW of Coed Ty Mawr (CN156). This lies 0.71km south of the site. These are the remains of a well-preserved medieval moated homestead. There are two ditches and a central bank with traces of an external bank on the northeast and southwest sides. The interior of the ditched area is 42m by 34m. This site retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits.

There are eight Grade II Listed Buildings within the study area, and all are associated with Ty'n Llwyn Farm. All of these lie 0.5km-0.65km east of the site and compose integral parts of an exceptionally complete and large-scale planned farmstead, which retains good estate character. These listed buildings are the Ty'n Llwyn Farm Bothy and Bakehouse Range (83169), Cartshed and Granary (83170), Cattle Sheds south-east of Yard (83279), Cattle sheds south of Yard (83280), Barn and Cowhouse at West of Yard (83281), Barn outside yard to South-West (83282), Hay Barn outside Yard to North West (83283), and the North-West range of the Yard (83284).

Ty'n Llwyn was a farm on the Vaynol estate of Thomas Assheton Smith. Map evidence suggests that a small, early farm (in existence by c.1780) was replaced by a larger-scale farmstead between c.1820 and c.1830, though perhaps reconstructed as a model farmstead by its most notable tenant, John Owen. The farmhouse and a barn at the south-west of the site appear to occupy the site of the earlier buildings, but the architectural evidence suggests that the farm was essentially laid out as a new model holding.

In 1853, the tenancy was taken on by John Owen, who farmed here until 1868: In that year, he was evicted for his Liberal political convictions (voting for Love Jones Parry of Madryn in the 1868 election), which placed him at odds with the Toryism of his landlord. John Owen was a Calvinistic Methodist preacher and a pioneering farmer and writer on agriculture. He

invested considerably in the improvement of the land at Ty'n Llwyn. 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.

### **Designated assets between 1km and 3km Study Area of the site.**

One World Heritage Site, sixteen Scheduled Monuments, one Registered Park and Garden, three Grade I Listed Buildings, six Grade II\* Listed Buildings, ninety-one Grade II Listed Buildings, and three Conservation Areas are recorded within the 1-3km study area of the site.

### **The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633)**

The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633) lies 2.8km east of the site. This area was designated in 2021. The Outstanding Universal Value (OUV) of the six areas of this Site derives from the exceptional exemplification of an industrial landscape which has been profoundly shaped by quarrying and mining slate, and transporting it for national and international markets. The site exhibits an important interchange of human values, particularly in the period from 1780 to 1940, on developments in architecture and technology. It is an outstanding example of a type of landscape which illustrates, in a dramatic way, the “combined works of nature and of man” through the large-scale exploitation of natural resources. Although the area is small, in the late 19th century the region produced about a third of the world output of roofing slates and architectural slabs.

This site contains many elements that cohere into the industrial landscape. The element of the Heritage Site that passes closest to the proposed development is the railroad and railway that transported the slate to the private harbour at Port Penrhyn. This element of the Site is also partially recorded as a Scheduled Monument; Penrhyn Quarry Railway (CN417), which lies the same distance from the site. This was developed during the 1870's to replace the Penrhyn Quarry Railroad (CN415). It is almost 10km in length, and was designed by Charles Easton Spooner.

## **Scheduled Monuments**

Fodol Ganol Enclosed Hut Group (CN175) lies 1.2km northwest of the site. 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.

Gors y Brithdir Enclosed Hut Group & Ancient Fields (CN203) lies 1.3km northwest of the site. Castell Llanddeiniolen (CN197) lies 1.97km southwest of the site. The monument comprises the remains of a defensive site, which resembles a medieval ringwork, although it may be prehistoric in origin. It is situated on a hill of glacial drift c.7.5m to 9m above the road. Coed Nant-y-garth standing stone (CN375) lies 1.78km northeast of the site.

Dinas Dinorwic Camp (CN017) is an Iron Age hillfort 1.92km south of the site. This is located on one summit of a ridge, and comprises an inner wall surrounded by two massive ramparts of earth and rubble.

Goetre Uchaf Round Barrow (CN376) lies 2.3km northwest of the site. This comprises of a probable Bronze Age barrow.

Glascoed Round Cairn (CN150) and Glascoed Ancient Village (CN060) lie 2.49-2.65km south of the site. The cairn dates to the Bronze Age and the village comprises an enclosed hut group probably dating to the Iron Age or Romano-British period.

Gerlan Hut Group (CN192) lies 2.8km east of the site. The monument consists of a well-preserved group of stone huts: 6 roughly circular structures, with boulder-faced stone walls, of probable Romano-British date.

The Enclosed Hut Group southwest of Bronydd (CN227), Enclosed Hut Group North East of Cae'r Mynydd (CN225), Enclosed Hut Group South West of Cae'r Mynydd (CN226) lie 2.95km southwest of the site. These comprise Iron Age-Roman enclosures. Pen-y-Gaer lies 2.95km south of the site (CN149). This prehistoric enclosure is rectangular in shape.

Cae Metta Hut Group (CN168) and Cefn Mawr Hut Group (CN200) both lie 2.98km south of the site and are Iron Age to Romano-British in date.

## **Registered Historic Parks and Gardens**

The Vaynol/Y Faenol (PGW(Gd)52(GWY)) Grade I Registered Landscape Park lies 2km north-east of the site. Vaynol is located on the Menai Strait to the south-west of Bangor and dates to the late sixteenth and early seventeenth century. It is registered for its well-preserved walled and terraced Elizabethan garden which survives at the centre of a superb, walled, coastal landscape park, with recently restored lake, in an outstanding setting with the Strait on one side and Snowdonia on the other. There are also later formal gardens and kitchen gardens, a large model farm, various park buildings including a mausoleum, viewing tower and boat house, and good surviving plantings along the main drive. There is important group value with a number of buildings in and around the estate (Significantly; LB4173, LB 4166).

## **Listed Buildings**

There are forty-three Listed Buildings associated with the Vaynol estate, 2.04-2.8km north-west of the site. Three Grade I Listed; Six Grade II\* Listed; Thirty-four Grade II Listed, and are recorded in more detail in Appendix E.

Closest to the site in Pentir, there are a cluster of Grade II Listed Buildings in Pentir, 1.2-1.8km east of the site. As above, all are Grade II Listed (3673, 18904, 18905, 18928).

The Church of St Deinol (14927) and a milestone (22631) lie southwest of the site, 1.7km and 2.8km respectively.

The Road Bridge over former Padarn Railway (18346) and the Engine Shed on former Padarn Railway (18355) lie 2.06km east of the site. Caerhun MC Chapel (18906) lies 1.99km northwest of the site, and Pant-y-Cyff (23383) 2.57km west of it.

A further group of Grade II Listed Buildings is recorded 2.4km west of the site at Aber Pwll. These are Clae Glas (18347, 18348, 18349, 18350, 18351), Singrig (18340, 18353, 18354), Y Fron (18339), and the Port Church and Port Church House (18345), and the Telephone Call-box at north end of bridge over disused railway (01248 670285, 4147).

Fifteen assets are recorded in Glasinfryn, 2.8km north-east of the site. All of these are recorded as Grade II Listed.

Grade II Listed Tros-y-canol (4144) lies 2.99km north of the site.

Two Grade II Listed Buildings are also recorded in Rhiwlas, 2.55km south-east of the site (22640, 22647).

A further cluster of eight buildings is recorded at Y Felinheli; All are Grade II Listed, and lie 2.95-3.0km west of the site.

### **Conservation Areas**

Three Conservation Areas are also recorded within the study area, 2.3km-2.9km north-west to north-east of the site (WAL/GWYN/30, WAL/GWYN/4, WAL/GWYN/5).

## **6.2 Archaeological and historic background**

### **Archaeological background and non-designated heritage assets**

The Heneb Historic Environment Record holds details for a total of eleven recorded archaeological findspots (excluding repeated designated assets), as well as two roads, and eight archaeological events, within the 1km study area. The details of sites can be seen in Appendix E and on Figures 3, 4 and 5. Gwynedd Council does not currently maintain a local list. The Royal Commission on the Ancient and Historical Monuments of Wales was also examined, but all assets were duplicates of those recorded by the Historic Environment Record (HER).

The Heneb Historic Environment Record identifies a segment of a Roman Road within the site (17566), running from Segontium to Canovium. This line is projected, from documentary sources with the condition and the precise route of the road unknown (HER, 2025).

There is also another segment of a Roman Road recorded within the site, also from Segontium to Canovium (17834, 90578). This is recorded from cropmarks, and visible as a parch mark on RCAHMW AP 2006/2807 (Hopewell, 2009; HER, 2025). These roads were identified as part of a field survey (40543).

An enclosure of unknown date is also recorded immediately adjacent to the site, south of the B457 (28869) (HER, 2025). It is uncertain whether this extends into the site.

### **Prehistoric**

Across Britain, the main evidence for the Palaeolithic period is stone tools, with evidence in North West Wales being relatively scant. Much of the evidence from this period has been



discovered in caves, due to preservation bias, including some of the earliest evidence in Wales, comprising early Neanderthal bones and stone tools discovered in Pontnewydd Cave, Denbighshire (Dinnis and Ebbs, 2013). Sites such as Kendricks Cave & Upper Kendricks Cave (93671, 300812) are located close to the coast, and particularly concentrated in the Great Orme, approximately 26km northeast of the site. However, the Palaeolithic in this period is not well understood. Sites are typically recognised from lithic scatters, often found within river gravels and terraces, as well as caves and rock shelters in some areas. The geography of known remains is often highly regionalised, as sediments from the period have often been destroyed or reworked by natural processes. In the north of Britain, material is generally not well preserved, as much of the region would have been inhospitable during the glacial extremes of the period; however, the coastline may have been exploited for its natural resources during warmer interglacial periods. At the beginning of the Palaeolithic period, Conwy Bay was probably dry land and covered with trees in the intermittent warmer periods.

Like the Palaeolithic period, the Mesolithic is characterised by ephemeral traces of activity; sites are principally recognised from concentrations of lithics, as the temporary settlements used by these communities left little other trace in the landscape, although there is much more evidence than that dated to the Palaeolithic. Settlement is thought to have remained concentrated in coastal areas and river valleys. It is very rare to find *in situ* evidence for Mesolithic settlement sites. Early Mesolithic activity in the form of scattered artefacts below later remains is evident at Parc Bryn Cegin, Llandegi, 4.6km north of the site (Kenney, 2008). However, evidence for Mesolithic activity has been highly dependent upon concentrations of archaeological fieldwork within particular parts of the landscape, and the visibility of material may have been impacted upon by coastal and sea-level changes. At Trwyn Du in Anglesey (302323), approximately 20km west of the site, a Bronze Age cairn was discovered, with an underlying layer containing many worked flint 'microliths'. Radio-carbon results from burnt hazelnut fragments in this layer indicate a date in the seventh millennium BC, in the Mesolithic period. The flints are believed to have come from glacial drift in the river valleys, due to the site being located far from the coast in this period (Dyfed Archaeology, 2024).

The Neolithic was a period of increasingly permanent human occupation, although seasonal mobility and the exploitation of wild resources continued throughout the period.

Mortuary monuments, along with the introduction of pottery, domesticates and arable farming practices mark the beginning of the Neolithic period, and the construction of large ceremonial monuments arguably marks a clear change in ideology from the preceding Mesolithic period. Common Neolithic ceremonial monuments in the region include Atlantic Passage Tombs and other chambered tombs, as well as henges. Many of these are located in Anglesey to the west of the site, as these graves are often found in places facing the Irish Sea. (Ross, 2014). There are several examples of decorated passage graves, particularly from Anglesey, with clear parallels to Irish megalithic art. Bryn Celli Ddu Chambered Tomb (93827), is one such example, that lies 5.6km west of the site. This is a Late Neolithic passage grave of the European Atlantic tradition, restored in the early 20<sup>th</sup> century and is considered one of the finest of its kind in Wales. It is part of a later tradition of passage graves, and thought to have been a small stone circle within a ditch that was later transformed into a grave (Burrows, 2010).

A Late Neolithic ceremonial complex comprising two henges, a cursus and other smaller features is present at Parc Bryn Cegin, Llandegi, 4.6km north of the site. The first excavations occurred in 1966 and 1967, and further excavations have taken place over the last two decades, leading to the site being one of the best excavated Neolithic sites in North West Wales. Evidence ranges in date from the Mesolithic to potential Early Iron Age and Romano-British activity, indicating a remarkable continuity of occupation. A further early medieval inhumation cemetery was created over the cursus, containing at least 62 graves (Kenney, 2008). In addition, more practical extractive activity took place in the hills above Penmaenmawr at the Graig Lwyd 'axe factory' (407068), which produced hammerstones and axe heads from outcrops of igneous rock that have since been found across Wales and England, indicating reasonably intense activity across this area, and connectivity with the rest of the country.

The Bronze Age is characterised by significant changes in material culture, and in domestic and ceremonial architecture. The introduction of bronze metalworking is traditionally associated with the appearance of Beaker culture. Mortuary ceremonies also change emphasis in this period, with a shift from the large communal complexes and inhumations of the Neolithic to individual cremations and round barrow cemeteries. One example of this change in burial culture is the Goetre Uchaf Barrow (CN376) 2.5km north of the site.

Across Britain, the Bronze Age is also associated with increased agricultural activity and enclosures, in addition to improved cultivation techniques, particularly in the Middle and Late periods. This also includes evidence for clearance cairns, particularly in upland locations, which are traditionally associated with Bronze Age improvement of land for grazing or cultivation. The increased clustering of people into bigger settlements by conquest or defence led to an intensification of exploitation of the land (Ross, 2014). In North Wales, the remarkable Great Orme copper mine is thought to be the largest prehistoric mine in Western Europe, and lies approximately 30km northeast of the site, with many miles of tunnels.

By the Iron Age, the landscape saw increasing evidence for field systems and defended sites, and much stronger evidence for continental influences than earlier periods. The period is also marked by evidence for the appearance of iron technology in the archaeological record. The first true swords and items of serious weaponry also appear during this period. Perhaps the most characteristic monument which appeared in the landscape of Britain during the Iron Age is the hillfort. These defended sites, often located on the edges of the natural plateaus and escarpments, may have originated in the late Bronze Age, and some may have continued in use into the Roman period. Relatively little excavation has been undertaken at these sites and therefore their individual histories are not always understood. One pre-eminent example of a hillfort in this region is the Tre'r Cieri Hillfort, which dominates the Llyn Peninsula, and lies on the easternmost summit of the three-peaks of Yr Eifl. This stone walled hillfort contains over 158 dwellings, and shows signs of Romano-British occupation as well (Smith and Hopewell, 2018).

There is evidence for an extensive spread of prehistoric settlement and associated field systems in the Arfan area, although many of them have not been studied extensively (GAT, 2025a). The area can be characterised by a mixture of many small, defended homesteads with a number of larger small forts, with some stronger than others. Large forts dominate eastern Llŷn and Anglesey (Ibid.). Dinas Dinorwig hillfort lies 2.1km south of the site, on the summit of a long ridge running northeast-southwest. It is an extensive multi-vallate hillfort, with massive ramparts of earth and rubble, enclosing an area of one hectare. There also appears to be a cultural contrast with the Borders and England, where large multivallate forts are typical, although this may be due to a survival bias due to smaller hillforts in other areas being cleared in the course of arable farming (Smith, 2018).

There is much less visibility in how the dead were treated during this period, which may be connected to climactic changes. There is a possibility that the dead were now cremated and committed to rivers and other water features due to the high amount of high-status metalwork that has been discovered in these places. However, much of the information that remains about the 'Celts' was written by the Romans, and as such is of dubious trustworthiness.

There is one asset attributed to the prehistoric period but without specific dating - a prehistoric hut circle settlement 0.6km south-west of the site (11). This lies on the east end of a spur and is a circular enclosure with huts within.

## **Romano-British**

Despite the far-reaching conquest of the Romans in Britain, Wales was never completely conquered in the same way as the heavily Romanised south of England. The Romans reached the Welsh borders in 48 CE, five years after invading Britain. The Roman military base in Caerleon (then: Isca) dates from 75 CE. From here, a network of forts and fortlets were established, stretching north to Caernarfon and Anglesey. The closest Romano-British fort lies south of the site, close to Caernarfon, 8km south of the site. This is an auxiliary fort that overlooks the Menai Strait and is the most north-westerly fort in the Roman empire. This was connected to the conquest of the local area and connected by a network of forts to Caerleon. Which helped establish a network of control over the area. There are also a number of Roman features on Anglesey, but few in the area immediately surrounding the site.

The Romans quashed the British tribal resistance of the Ordovices and Silures in 77 CE, and then the governor Agricola went on to conquer Anglesey, which was then known as Mona. The tribal divisions of Wales are known largely due to the Roman reporting of them, which under modern study has significant discrepancies. The Ordovices tribe inhabited the land from the North Coast down to Montgomeryshire. The Deceangli and Gangani were also present in the north west at this time, but precise boundaries and relationships are unclear (Williams, 2015).

In Tre'r Cieri, Roman occupation is evident, but it is thought that Roman influence on the lives of everyday people in Northern Wales was slight, although camps and roads were present throughout the region, such as at Camp Hill Earthwork, 5.6km north of the site

(302712). However, over three hundred years of occupation, Brythonic did adopt Latin loan words, and there was stylistic influence on art at the time. The influence of Christianity, which in other parts of the Empire was felt much earlier, did not make itself known until after the fall of the Empire in this region.

In Samuel Lewis's *Topographical Dictionary of Wales* (1849), Lewis records that a Roman presence is known in the area (Llandeniolen), including a camp thought to be along the path to Segontium at Dinas Dinorwig, which is now known to be of Iron Age date.

In addition to the aforementioned Roman roads located within the site, there are the remains of quarry pits 0.1km north of the site (90579). This pit was a visible earthwork, with significant quantities of stone suggesting that road stone was quarried here.

## Early Medieval

The early medieval period may be compared to the early prehistoric period in terms of its archaeological visibility within the region although, paradoxically, an area that showed relatively little Roman influence during the period of Roman rule preserved a number of Romano-British traits including Christianity and language afterward. It seems likely that Gwynedd had been a Roman *civitas* but, by the mid-5<sup>th</sup> century CE, had become a kingdom and had emerged as a major Welsh polity that was seeking to expand its influence both in Wales and across Anglo-Saxon England and the North.

In the 7<sup>th</sup> century CE, the Northumbrian king Aethelfrith had been rapidly expanding influence across England, and eventually came to Wales, taking possession of Gwynedd and Anglesey. Later Cadwallon ap Cadfan, allied with Penda, king of the pagan Mercians, reclaimed Gwynedd, but failed to conquer the Northumbrians. Instead, this failed assault re-established Northumbria but also marked the beginning of the rise of Mercia.

The 8<sup>th</sup> and 9<sup>th</sup> saw Gwynedd embroiled in a struggle for supremacy of the Welsh Marches with Mercia and Powys culminating in the conquest of Powys by Rhodri the Great. Following Rhodri's death in battle against Ceolwulf II of Mercia, the control of Gwynedd over other Welsh kingdoms diminished. In addition, increasing pressure from Viking raids and settlement in Anglesey and other parts of Gwynedd changed the nature of society within the polity.

In the 10<sup>th</sup> and 11<sup>th</sup> centuries, Gwynedd was still a very significant kingdom within England and the wider British Isles. Hywel Dda, already king of Deheubarth, usurped the throne of

Gwynedd in 924 and established control over much of Wales, something that was not seen again until the reign of Gruffydd ap Llywelyn who ruled all of Wales from 1055 to 1063.

The only nearby urban settlement from before the Modern period in the area is the city of Bangor, approximately 2km north of the site. This was established as an ecclesiastical centre in the sixth century, although it was slow to develop from the early Christian core of the city. Early Medieval Wales was also known as the age of saints, as Christianity grew in prominence during this period, and was highly influential upon the development of the landscape.

This can be seen in Speed's map of 1610 (Speed, 1611). Bangor was significant as the seat of the Bishop and of the Dean and Chapter but didn't develop significantly further until the 18<sup>th</sup> century. The Church continued to be a significant landowner into the Medieval period, after which their holdings shrank significantly (GAT, 2025a).

Written sources are rare from this period, but one remaining account is that of the monk Gildas, contemporary to around 540 BCE. The moral diatribe of 'On the Fall and Conquest of Britain' places the blame for the disasters of the Anglo-Saxon invasions at the feet of the British people, naming a number of them, including Maelgwn Gwynedd, King of Anglesey. In addition to Anglesey, Maelgwn's territory included part of the mainland over the Menai Strait (Ross, 2014). This account gives an insight into the turbulence of this period in North West Wales.

No assets are recorded within the study area for this period.

## Medieval

The Norman Conquest provides a firm date for the commencement of the later medieval period across England and documentary evidence becomes increasingly important through the period.

The North-Western Wales landscape was divided into *cantrefi* ('hundreds') and commotes. Welsh kings continued to struggle for dominance over their neighbouring kingdoms and Wales as a whole following the death of Gruffydd ap Llywelyn. However, the policies of William I regarding Wales led to the establishment of lordships with Norman barons installed on the Welsh border, who thereafter became the Marcher Lords. These seigniorial

lands had deliberately undefined western borders, leading to expansion policies into Wales on the part of both English kings and the Marcher Lords.

By 1086, Norman lords operating from the earldom of Chester claimed extensive parts of North Wales but, by 1100, Gwynedd was in native hands again (Stephenson 2019: 9-10). The Domesday book records Robert of Rhuddlan as paying £40 for land tenure of north Wales. He possessed Gwynedd, and its King Gruffud ap Cynan was imprisoned by the Earl of Chester for twelve years. He eventually escaped and resumed rule of Gwynedd. Due to the position of North Wales at this time, much of it was not included in the Domesday Survey. Raids and attempts at colonisation from Ireland also continued during this period. From the frontier Lordships, much of Wales was conquered despite consistent attempts to drive the Normans out. This excluded Gwynedd, where Gruffud ap Cynan ruled for many years. His territory spanned four *cantrefi*, and then was defiantly expanded to include Ceredigion.

By 1282, however, Edward I of England had conquered the Kingdom of Gwynedd. Though the Princes of Gwynedd no longer ruled in Wales, a class of Welsh gentry families, or *uchelwyr*, emerged to take on local leadership of their communities. The Gruffydd family of Penrhyn were one of the most powerful examples of these families. They acquired land across Anglesey and Caernarfonshire, building the Penrhyn estate across the 1300s–1600 CE. This was one of two great estates established in the area surrounding the site; the wealthier Penrhyn estate, and the Vaynol estate. The latter was established in the late sixteenth to early seventeenth century by the Williams family. The site lies within Llanddeiniolen, where the Williams family initially established themselves. ‘Vaynol’ is an anglicisation of ‘Y Faenol’ or Maenol (Tree, 2004/2005).

Place-name can also be used as evidence to understand the history of places. The site sits within the parish of Llanddeiniolen, which takes its name from St. Deinol, one of the earliest Welsh saints. This place-name is first attested in 1284 (Seintiau, 2025).

There are no assets recorded of this date within the study area.

## **Post-medieval, Industrial and Modern periods**

The post-medieval period is an age of transition between the medieval world and the Agricultural and Industrial revolutions of the 18<sup>th</sup> and early 19<sup>th</sup> century, being one of deep-rooted change. The population of England nearly doubled between 1541 and 1651,

followed by a period of slow growth before accelerating again in the late 18<sup>th</sup> century. It saw the transition from an agricultural economy to industrial; shifting from a rural population to urban, from horsepower to water then steam, and finally, internal combustion and the rise of consumerism, with today's urban and rural landscape being laid out.

The aforementioned Vaynol estate expanded in the seventeenth century, when William Williams was appointed High Sheriff of Caernarfonshire in 1598 and created Baronet in 1622. However, in 1696, Williams died childless and left his estate to the Crown. The estate then passed to the crown, and was granted by William III to John Smith, Speaker of the House of Commons. He described the estate as "a tract of bogs and stones" (Tree, 2004). This then passed to his son's nephew, Thomas Assheton, who became Thomas Assheton-Smith. The estate eventually passed to the Duff family, which sold most of their interest in the land in the 1960's. The land around The Vaynol Estate had a significant impact upon landscape change at this time. The earliest maps are of surveys carried out in 1777. Later surveys of 1869 show very regular patterns of enclosure. Parliamentary enclosure of 1808 benefitted the Vaynol Estate significantly. However, the small-holdings of quarrymen on the commons remained. Thomas Assheton-Smith III confirmed that to an extent this was to avoid creating nucleated communities of landless men (GAT, 2025a).

Bangor expanded in the 18<sup>th</sup> century, partially indicated by the number of inns increasing in the centre, in addition to increasing in importance as a posting centre. The slate industry and the Penrhyn family assisted the development of the city from 1780 onwards. Despite this, much of Bangor consisted of slum properties owned by the Dean and Chapter, whose inhabitants depended on Church charities. These remained until an ambitious programme of social housing in the inter-war period (GAT, 2025a).

The chief industry of the seventeenth and eighteenth centuries in North-West Wales was slate mining and quarrying, the impacts of which can still be seen on the landscape today in the form of vast quarries. Penrhyn Quarry remains operational to this day. Other industries were also established, such as corn and wool milling, and copper and metal mining.

Partially due to this resource extraction, the rudimentary nature of the road network began to change, and a network of turnpike roads from 1750 made travelling the country easier for goods and passengers. This was rapidly followed by the development of the railway network for the same reasons (Ross, 2014). Mining work was extremely hard and often poorly paid, leading to a number of revolts and strikes in the nineteenth and twentieth



centuries. Nucleated settlements in the area are largely of nineteenth century origin, and are thought to be established by smaller estates and freehold farmers, in conflict with the larger Penrhyn and Vaynol estates.

In Samuel Lewis's *Topographical Dictionary of Wales* (1849) there is a description of the parish of Llanddeiniolen, in which the site lies; *'uninteresting and unpleasing: scarcely a tree is to be seen on any of the farms; the farmhouses are commonly of a very mean description, and the fences, of loose stones, have a cold and cheerless appearance'*.

The First World War expanded industrial production in Wales. Mines, railways and engineering were placed under state control, and women took up the industrial roles of men that went to war. Welsh support for the war was high, and, generally, the expansion of industry brought greater prosperity to Wales, although the subsequent post-war depression also had a severe impact (Ross, 2014).

The re-armament and the Second World War led to a revival of industry, and introduced the development of a number of defensive sites to the area. The Air Ministry established a site at Dinorwic Quarry, and a substantial bomb store was set up in one of the abandoned pits at Glyn Rhonwy Quarry. Both lie approximately 7km southeast of the site. Meanwhile, a large chemical weapons facility was developed at Rhydymwyn, near Mold.

In addition to industry, which has had a fundamental impact upon the landscape, tourism has been a significant element in the local economy since the late eighteenth century, due to the picturesque landscape and the increased trend for travelling at this time. The area continues to be popular with tourists and outdoor sportspeople today, although the site and its surrounds are not a focal point for tourism. Despite the past of North Wales being heavily shaped by industry, Gwynedd remains in many places rural and thinly populated. In areas such as that surrounding the site, the fields remain largely unchanged from the time of enclosure.

The only assets recorded to the post-medieval period are those of the Tyn Llywn Farmhouse (65179, 65155, 65181, 65180, 65152, 65149, 65159, 65151).

There are no assets recorded of industrial or modern date within the study area.

## Unknown

There are six assets of unknown date, and one of an unspecified multiperiod date.

Possible quarry pits are recorded 0.05km north of the site (90580) and 0.07km east of the site (28871). These lie in close proximity to the known Roman quarrying activity, and may, therefore, be of similar date.

A well lies 0.25km east of the site, recorded on historic mapping (28863).

An undated Stone (Boundary Marker), Near Cae Gwydryn (43) is recorded 0.28km west of the site.

A multiperiod findspot lies 0.38km west of the site (76093). No further details are provided.

An unknown mound (791) is also recorded from documentary evidence 0.56km north of the site.

### **Previous archaeological investigations and evaluation results**

The Heneb HER does not provide shapefiles for archaeological events within the study area. Only those with a grid reference within 1km of the site are included in this summary.

A 2008 field survey is also recorded of the Roman Road Between Segontium and Aber is recorded within the boundaries of the site (40543).

Tir Gofal Management Plan (44126) is recorded 0.5km south of the site. Gwynedd Archaeological Trust carried out a desk-based assessment there in 2009.

The Roman Roads in North-West Wales Project took place between 2004-2005 and continued the 2002 project of examining the Roman military road network across North West Wales. This was also revised in 2007 (HHER, 2025, 40544, 40542, 40538).

Scottish Power Energy Networks: Dolgarrog to Pentir 132Kv Overhead Powerline Refurbishment lies 0.7km north of the site (45025, 45026). This desk-based assessment was prepared in 2013.

Metal Detecting Use at Llanddeiniolen, Beaumaris and Llanfair-mathafarneithaf (45493), is recorded 1km west of the site, but the results of this are not recorded.

### **6.3 Portable Antiquities Scheme**

The Portable Antiquities Scheme Website was consulted for finds within the area of Tyddyn Forgan. The closest postcode to the centre of the proposed application site (LL55 3AN) was used to utilise the postcode search function. This search yielded one result though results from a free search of 'Tyddyn Forgan' have also been included to provide a greater

understanding of the archaeology within the wider area. The results can be viewed in Appendix E.

## 7.0 Landscape characterisation

### 7.1 Aerial photographs

Available aerial photographs were consulted on Google Earth. There were no images of the site on the National Collection of Aerial Photography (NCAP), Cambridge Air Photos, or Britain from Above. The details of the aerial photographs viewed are listed in the references.

Aerial photographs were available from 1969, on the Welsh Government website (DataMapWales, 2025). These record the Pentir substation as already being in existence, as is the road south of the site. The remainder of the site remains as largely unchanged fields, although the forest to the east of the site.

The next available photographs are from 2006. There is a thin band of forest to the south-east of the site, while the remainder is covered in uneven vegetation and scrubland. There is an irregular band of more rich vegetation that leads north-west to south-east. This may indicate archaeological remains along this route, or a geological change. A ditched feature is also evident from east to west at the southern end of the site. This aligns with what is labelled as a drainage ditch on modern mapping. The fields surrounding the site are largely agricultural.

Aerial photographs from 2006 were also viewed which clearly show cropmarks indicating the presence of a Roman road through the site (RCAHMW AP 2006/2807, Hopewell, 2009).

There are no visible changes upon the aerial mapping until 2017. Immediately south of the site, and south of the B4547, an angular cropmark feature is visible that may be related to the enclosure recorded by the HER.

With the exception of features previously recorded by the NMP, no further features of archaeological potential were noted. The site also appears more thickly vegetated, except for the aforementioned band that leads north-west to south-east, which appears to have been cleared, perhaps as an access track. No further changes are visible until the modern day.

No other previously unrecorded or potential archaeological features were identified.

## 7.2 LiDAR data

LiDAR coverage of the site was accessed via the Environmental Agency and the composite dataset coverage of the proposed development was available at 1m spatial resolution, and the Digital Terrain Model (DTM) LiDAR tiles were viewed using ArcMap in order to use hill-shade analysis to bring out the detail of potential archaeological features. The data viewed is presented in Figure 6, Appendix E.

There are a number of agricultural features within the site, that correspond to ditched features and vegetation overlying the site, which is currently composed of rough pastureland.

## 7.3 Historic Landscape Characterisation

The site lies entirely within the northern edge of the Dinorwig Valley Registered Historic Landscape (HLW (Gw) 6), which is a non-statutory designated landscape. This is the north-west portion of the Snowdonian massif. The Padarn and Peris lakes open onto the Arfonian Plateau. These landscape features characterise the area. The area has also retained considerable evidence for late prehistoric land use and settlement, and for medieval land holdings. These earlier patterns have been overlaid by the extensive remains of 19<sup>th</sup> and 20<sup>th</sup> centuries slate quarries, their associated settlements and transport infrastructure, which now in many ways dominate this region. This extractive activity is strongly linked to the Vaynol Estate and supports the OUV of the WHS.

Historic Landscape Characterisation data was provided by the Heneb Historic Environment Record, and is presented in Figure 4 in Appendix E.

The site lies within the character area of improved fields above Pentir (54). This area is characterised by large, regularly laid out fields with estate farmhouses and gamekeepers' dwellings (GAT, 2025b). This indicates the site lies within land that is largely characterised by post-medieval enclosure.

Immediately north and west of the site lies the Arfon Plateau (36). The rolling landscape of the Arfon plateau is largely made up of improved pasture, most of which was formerly Vaynol land. The pattern of substantial nineteenth century farmhouses and outbuildings is typical of the estate. There is also a pattern of prehistoric settlements dispersed across the

landscape, usually in the corners of fields. Some fields display a curvilinear pattern characteristic of prehistoric land management (GAT, 2025c).

## 8.0 Historic mapping survey

A selection of historic maps, including the early Ordnance Survey maps and the Parish of Llanddeniolen, County Carnarvon tithe map were viewed in the Caernarfon Archives during the preparation of this report. A Groundsure Report of Ordnance Survey maps was also obtained. A selection of maps are presented in Appendix E. Due to copyright issues it has not been possible to reproduce all images here.

The earliest available mapping of the site is the map of the parish of Llanddeiniolen, in the County of Carnarvon (1839). The site lies on the very edge of the parish, on the border between Llanddeiniolen and Bangor. The site does not appear to have any apportionments. The land is recorded at this time to be boggy and stony, and therefore undesirable for agriculture, and may have been enclosed later.

The 1888 County Series (1:10,560) mapping of the site records the proposed development as lying on marshy land. The site had now been enclosed. Tyddyn Forgan Farmstead is established to the east of the site. Ty'n Llwyn gors Covert lies along the northern portion of the site, which lies along the road. Ty'n Llwyn farmhouse also lies to the west of the site. A series of pathways are also recorded, passing north-east and north-west. A line passes east to west, which may indicate the line of the drainage ditch visible on aerial photography. The roadway south of the site has also been established. The wider area consists of patchwork fields, with some forested areas.

The first visible changes at this level of detail are recorded by the 1973-1976 National Grid mapping (1:10,000). This records some trees at the southern end of the site, and the establishment of the Pentir substation to the north of the site. The road south of the site has also been formalised and connects to a roundabout south-east of the site.

No further visible changes are present on the site or its immediate surroundings until the modern day.

## 9.0 Site walkover survey

A site walkover survey was undertaken on Friday 31<sup>st</sup> of January 2025 by Ola Zdral, Archaeological Consultant. The weather was intermittently cloudy and glaringly sunny, with hazy cloud impeding broader visibility, although there was clear visibility across the site. A selection of photographs taken during the site walkover survey are presented in Appendix C.

The site comprises of a rough, field south west of the Pentir substation. It has a boundary of thin trees to the south of the site (Photograph 12). The site lies lower than the artificial mound north of the site (Photograph 8).

An enclosure of unknown date is recorded south of the site by the Heneb HER (28869). However, the land at this location had been subject to extensive groundworks, which are likely to have truncated any previous archaeological remains (Photograph 14). There are no above-ground remains that appear to be associated with the Roman roads running through the site.

The site was heavily vegetated with brambles and other wetland vegetation (Photograph 5). However, there was a consistent presence throughout the site of large and small rocks, potentially associated with the quarrying north of the site. A banked stone wall lies to the north of the site. It is uncertain whether this is of modern date or not, as it respects the modern fence-line (Photograph 8). These stone scatterings may also be associated with the drainage ditch that lies on the southern end of the site (Photograph 9). The earthworks comprise two parallel ditches, which are overgrown, and waterlogged at the base in areas. There has been an amount of previous disturbance to the site, as indicated by the electrical infrastructure likely to be associated with the substation which also may have produced the scattered stones (Photograph 15).

The designated assets of Ty'n Llwyn Farm were visited but could not be accessed due to being private property.

There were no further potential archaeological features or deposits identified during the walkover survey.

## 10.0 Heritage potential and impacts

### 10.1 Archaeological potential

There is considered to be low potential for archaeological remains of Palaeolithic and Mesolithic date to be present within the application site. Evidence for Palaeolithic activity is limited in North-West Wales, largely known from flint scatters and caves. The Mesolithic is more well known, mostly from flint scatters.

There is considered to be a low potential for archaeological remains of Neolithic or Bronze Age date to be present within the application site, due to the lowland nature of the site, and most evidence being limited to chance finds despite the growing body of evidence of settlements, tombs, and henges in proximity to the site.

There is considered to be a low potential for archaeological remains of Iron Age date to be present within the application site. Little is known of the Iron Age within the region due to the scarcity of evidence outside of highland hillforts. Generally, recorded archaeology from this period is settlement cropmarks from aerial photography, although within the surrounding landscape, approximately 2km south, is the Scheduled Monument of Dinas Dinorwig Hillfort (95283).

There is an enclosure of unknown date recorded immediately adjacent to the site, south of the B457 (28869). This is thought to be of potentially prehistoric date, and may extend within the site, although previous excavations associated with the intervening roadway and substation may have truncated or removed any previous archaeological remains. There is therefore moderate potential for archaeological remains of potentially prehistoric date.

There is considered to be a high potential for archaeological remains of Roman date to be present within the application site. There are two potential Roman roads recorded within the site (17566, 17834), one from documentary sources and the other from cropmarks. Both are recorded to run from Segontium to Canovium (17834, 90578). There is also a Roman extractive pit located just north of the site, thought to potentially serve as a source for road stone (90579). There is potential for this activity to extend into the proposed development, but would have limited evidential value.

There is considered to be a low potential for archaeological remains of early medieval date to be present within the application site. The period is still poorly understood and lacking archaeological evidence. Some evidence may be gleaned from place names.

There is considered to be a low to moderate potential for archaeological remains of medieval to post-medieval date onwards to be present within the application site, with the evidence within the study area is generally limited to small-scale agricultural use, and the Ty'n Llwyn Farm.

The boggy and waterlogged nature of the site indicates that where archaeological remains may be present, there may be high levels of preservation.

There is good cartographic coverage of the application site, showing that it has been considered a boggy area since the earliest available mapping, and largely disused, excepting perhaps some pasturing. Aerial photography clearly shows the presence of the Roman road on the eastern end of the site. The surrounding areas were predominantly used for agricultural activity from the Industrial period onwards. The archaeological potential and impacts at different sections within the application site is considered in more detail in the table 1 below.



**Table 1:** Summary of the potential, heritage value and anticipated magnitude of impact for known and unknown heritage assets

Potential Archaeology	Description and value	Magnitude of Impact
<p>Previously unrecorded archaeological remains</p>	<p>There is a low to moderate potential for previously unrecorded archaeological remains and deposits; lowland sites have little recorded archaeological activity, and few remains have been found within the study area.</p> <p>It is anticipated that previously unrecorded remains and deposits could include:</p> <p>Prehistoric activity associated with the past use of the landscape, in particular from the Neolithic and Bronze Age periods. There is low to moderate potential for remains associated with an enclosure of unknown date recorded immediately adjacent to the site, south of the B457 (28869). If present, the value of such remains would depend on the preservation and presence, as they could provide information about the past local environment and may range from modest value and local to regional importance.</p> <p>Romano-British activity associated with the Roman roads recorded within the site (17566, 17834), one from documentary sources and the other from cropmarks. Both are recorded to run from Segontium to Canovium (17834, 90578). Roman extractive pit located just north of the site (90579) may have extended within the site of the proposed development. If present, the value of such remains will depend on their character, extent and preservation, as well as their relationship with the Roman sites, and may range from modest to high evidential value and local to regional importance.</p> <p>There is little evidence within the site of early medieval, medieval and post-medieval activity.</p> <p>It is likely that any evidence for Industrial to Modern period use of the site will be associated with the drainage and management of the site, or with the modern substation considering historical mapping</p>	<p>The development proposals are likely to have up to a <b>large negative</b> magnitude of unmitigated impact upon any remains present, depending on the location, preservation, character and extent of remains. This magnitude can be reduced by mitigation to a slight adverse effect.</p>

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	and available archaeological evidence. Where present, such features are likely to be for limited evidential value and local interest depending on character and preservation.	
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## 10.2 Designated heritage assets

### **Earthwork 110m NW of Coed Ty Mawr (CN156)**

This Scheduled Monument lies 0.71km south of the site. This site includes the remains of a well-preserved medieval moated homestead. There are two ditches and a central bank with traces of an external bank on the northeast and southwest sides. The interior of the ditched area is 42m by 34m. This site retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits.

Due to the slight undulations in the landscape, and the low-lying natures of both the proposed development and the Scheduled Monument, it is considered that the setting of the asset will not be impacted, due to the lack of intervisibility. This is underpinned by the bare earth zone of theoretical visibility produced in the Landscape and Visual Appraisal (LVA) (Tetra Tech, 2025). There will be no impacts upon this asset.

### **Ty'n Llwyn Farm; Ty'n Llwyn Farm Bothy and Bakehouse Range (83169); Cartshed and Granary (83170); Cattle Sheds south-east of Yard (83279); Cattle sheds south of Yard (83280); Barn and Cowhouse at West of Yard (83281); Barn outside yard to South-West (83282); Hay Barn outside Yard to North West (83283); and the North-West range of the Yard (83284).**

This group of eight Grade II Listed assets compose the Ty'n Llwyn farm, on the Vaenol estate of Thomas Assheton Smith. They have a strong complementary group value, and lie 0.5km-0.65km north-east of the site.

This farmstead is thought to originate between c. 1820 and c. 1830, though perhaps reconstructed as a model farmstead by tenant John Owen, and invested considerably in the improvement of the land at Ty'n Llwyn. 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.

These Grade II Listed comprise integral parts of mutually-supporting setting. The wider setting for the assets comprises the enclosed agricultural farmland, interspersed with some smaller wooded areas. The views of the proposed development are currently screened by a forested area, as well as by the Pentir substation, which is situated on an artificially

elevated mound. The asset could not be fully visited due to being private property, but was viewed from the road. It is considered that there is some possibility for intervisibility, due to the proximity of the asset to the site, which is underpinned by the bare earth ZTV produced in the Landscape and Visual Appraisal (Tetra Tech, 2025). There is a greater possibility for intervisibility in the winter with thinner vegetation. Furthermore, the proposed development should be considered in its context as a semi-industrial landscape, located next to an extant substation. As a result, it is considered that there is potential for the proposed development to cause no more than minor negative impacts upon the setting of the asset.

### **Dinorwig Valley Registered Historic Landscape (HLW (Gw) 6)**

The site lies entirely within this non-statutory designated landscape. This is a non-statutory designated landscape. This is the north-west portion of the Snowdonian massif. The Padarn and Peris lakes open onto the Arfonian Plateau. These landscape features characterise the area. The area has also retained considerable evidence for late prehistoric land use and settlement, and for medieval land holdings. These earlier patterns have been overlaid by the extensive remains of 19<sup>th</sup> and 20<sup>th</sup> centuries slate quarries, their associated settlements and transport infrastructure, which now in many ways dominate the area.

There will be a direct physical impact upon this Landscape. This will include the introduction of further development to roughly vegetated and boggy land that is characteristic of the area. The physical impact will be limited to a small portion of the proposed development, and an individual field far from the landscape features that bring value to the Landscape. The proposal is for a duration of 40 years, which in the lifespan of the landscape is not a significant portion of time. Furthermore, the shape or composition of the fieldscape will not be altered. It is considered that the impact upon this Historic Landscape will be negligible.

### **The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633)**

The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633) lies 2.8km east of the site. The Outstanding Universal Value (OUV) of the six areas of this Site derives from the exceptional exemplification of an industrial landscape which has been profoundly shaped by quarrying and mining slate, and transporting it for national and international markets.

The site exhibits an important interchange of human values, particularly in the period from 1780 to 1940, on developments in architecture and technology. The element of the World Heritage Site that lies within 3km of the proposed development is the railroad and railway that transported the slate to the private harbour at Port Penrhyn. This element of the Site is also partially recorded as a Scheduled Monument: Penrhyn Quarry Railway (CN417), which lies the same distance from the site (2.8km east). This was developed during the 1870's to replace the Penrhyn Quarry Railroad (CN415).

The bare earth zone of theoretical visibility (ZTV) produced for the site in the LVA indicates that there will be no intervisibility between the site and the World Heritage Site (Tetra Tech, 2025). Furthermore, there are no functional ties between the site and this asset. The remainder of the World Heritage Site components lie at an even greater distance from the site. Therefore, it is considered that the Outstanding Universal Value of the site will not be affected by the proposed development.

## **Scheduled Monuments**

The following Scheduled Monuments are considered to share no visibility or association with the proposed development, in addition to lying at a sufficient distance that the field that the proposed development lies within does not comprise part of the setting that enhances the significance and understanding of the Monuments. These are: Gerlan Hut Group (CN192); Coed Nant-y-garth standing stone (CN375); Goetre Uchaf Round Barrow (CN376); I Glascoed Round Cairn (CN150); Glascoed Ancient Village (CN060); Enclosed Hut Group southwest of Bronydd (cCN227); Enclosed Hut Group North East of Cae'r Mynydd (CN225); Enclosed Hut Group South West of Cae'r Mynydd (CN226); Pen-y-Gaer lies 2.95km south of the site (CN149); Cae Metta Hut Group (CN168); Cefn Mawr Hut Group (CN200).

There is a low potential for intervisibility from a small number of Scheduled Monuments: particularly Castell Llanddeiniolen (CN197) Dinas Dinorwic Camp (CN017) due to their elevated nature overlooking the landscape, in addition to Gors y Brithdir Enclosed Hut Group & Ancient Fields (CN203); Fodol Ganol Enclosed Hut Group (CN175).

However, some potential for a small amount of intervisibility does not equate to a significant impact upon the setting of these assets. The proposed development must be considered in the context of its placement in an intensively utilised landscape, with the backing of the

Pentir substation and associated infrastructure. Therefore, it is considered that the slight potential intervisibility would have a negligible effect on the setting of the aforementioned Scheduled Monuments due to the distance from their immediate setting, and semi-industrial and intensively utilised surrounds of the proposed development.

### **Vaynol Registered Park (PGW(Gd)52(GWY))**

The Vaynol Grade I Landscape Park lies 2km northeast of the site. Vaynol is located on the Menai Strait to the south-west of Bangor. The Park has an outstanding setting, which includes the Strait on one side and Snowdonia on the other. Parts of the Park are also a Conservation Area. The bare earth zone of theoretical visibility produced in the Landscape and Visual Appraisal (Tetra Tech, 2025) confirms there will be no intervisibility with the proposed development, and have no other interconnectivity to link the setting.

### **Listed Buildings**

It is not considered that there is any utility in individually describing every one of the three Grade I Listed Buildings, six Grade II\* Listed Buildings, and ninety-one Grade II Listed Buildings, in addition to the three Conservation Areas.

The closest is a number of these Grade II Listed Buildings associated with the village of Pentir. There could be a potential for some slight intervisibility if all vegetation and intervening features were removed from the distance between the site and the assets, but currently there is no intervisibility between the two. Additionally, the setting of these assets is the village of Pentir, rather than the fieldscape surrounding the site. Any intervisibility must also be considered against the background of the existing substation and electricity pylons, which are much more obtrusive in the landscape.

All of the Grade I and Grade II\* Listed Buildings, in addition to approximately half of the Grade II buildings are recorded as in or immediately surrounding the Vaynol Estate. These are considered to have a strong group value, and support each other's setting, as does the Park. These assets have no intervisibility with the proposed development, nor any further association and as such are considered to not be impacted by the proposed development physically or in their setting.

A concentration of fifteen Grade II Listed buildings are recorded in Glasinfryn, 2.8km north-east of the site. There is a Conservation Area located here as well. There is no intervisibility

or connection to the land surrounding the site due to the distance. It is considered that these buildings will not be impacted by the proposed development for those reasons.

A further group of Grade II Listed Buildings are recorded 2.4km west of the site at Aber Pwll, and a further eight buildings are recorded at Y Felinheli; All are Grade II Listed, and lie 2.95-3.0km west of the site. These lack any intervisibility with the site, and are too far removed to consider the site a part of their setting.

## 11.0 Mitigation recommendations and conclusion

### 11.1 Designated heritage assets

#### **Earthwork 110m NW of Coed Ty Mawr (CN156)**

This Scheduled Monument lies 0.71km south of the site. It is considered that the setting of the asset will not be impacted, due to the lack of intervisibility. This is underpinned by the bare earth ZTV produced in the Landscape and Visual Appraisal (Tetra Tech, 2025). There will be negligible negative impacts upon this asset, and therefore no mitigation is recommended.

**Ty'n Llwyn Farm; Ty'n Llwyn Farm Bothy and Bakehouse Range (83169); Cartshed and Granary (83170); Cattle Sheds south-east of Yard (83279); Cattle sheds south of Yard (83280); Barn and Cowhouse at West of Yard (83281); Barn outside yard to South-West (83282); Hay Barn outside Yard to North West (83283); and the North-West range of the Yard (83284).**

The potential for minor negative impacts to the setting of the above assets has been identified. It is recommended that screening methods are employed where possible in the form of trees and vegetation, in addition to sympathetic design; however, the public benefit of the proposed development may also be determined to outweigh minor negative adverse effect.

As stated previously, the locations of these assets can be found on Figure 2/2a in Appendix E, with the details in the table in Appendix E.

#### **Dinorwig Valley Registered Historic Landscape (HLW (Gw) 6)**

The site lies entirely within this non-statutory designated landscape.

There will be a direct physical impact upon this Landscape. This will include the introduction of further development to roughly vegetated and boggy land that is characteristic of the area. The physical impact will be limited to a small portion of the proposed development, and will be for a duration of 40 years, which in the lifespan of the landscape is not a significant portion of time. The shape or composition of the fieldscape will not be altered. It is considered that the impact upon this Historic Landscape will be negligible.

An assessment of the visual impact of the proposed development upon this Registered Historic Landscape has been included in the Landscape and Visual Assessment (LVA).

### **The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633)**

The World Heritage Site of The Slate Landscape of Northwest Wales - Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn (1633) lies 2.8km east of the site.

The bare earth ZTV produced in the LVA for the site indicates that there will be no intervisibility between the site and the World Heritage Site (Tetra Tech, 2025). Furthermore, there are no functional or conceptual ties between the site and this asset. Therefore, it is considered that the Outstanding Universal Value of the site will not be affected by the proposed development. Due to the lack of impact upon the setting, there is no mitigation recommended.

### **Scheduled Monuments:**

There is a low potential for intervisibility from a small number of Scheduled Monuments: Particularly Castell Llanddeiniolen (CN197) Dinas Dinorwic Camp (CN017) due to their elevated nature overlooking the landscape, in addition to Gors y Brithdir Enclosed Hut Group & Ancient Fields (CN203); Fodol Ganol Enclosed Hut Group (CN175).

The slight potential intervisibility would have a negligible effect on the setting of the aforementioned Scheduled Monuments due to the distance from their immediate setting, and semi-industrial and intensively utilised surrounds of the proposed development. No mitigation measures are recommended.

### **Vaynol Registered Park (PGW(Gd)52(GWY))**



The Vaynol Grade I Landscape Park lies 2km north-east of the site. Due to the lack of intervisibility and any historical connections with the site resulting in negligible impacts upon the setting, no mitigation is recommended.

## Listed Buildings

The most likely receptors of the designated assets is a number of Grade II Listed Buildings associated with the village of Pentir. There is a potential for some slight intervisibility if all vegetation and intervening features were removed from the distance between the site and the assets, but currently there is no intervisibility between the two. Additionally, the setting of these assets is the village of Pentir, rather than the wider post-medieval enclosure fieldscape surrounding the site. Any intervisibility must also be considered in light of the existing substation and electricity pylons, which have already introduced Modern power infrastructure into the landscape.

It is not considered that any of the remaining three Grade I Listed Buildings, six Grade II\* Listed Buildings, and ninety-one Grade II Listed Buildings, in addition to the three Conservation Areas settings will be significantly impacted due to the distance and lack of thematic or historical connectivity with the site. Therefore, no mitigation is recommended.

## 11.2 Archaeological remains

The potential for archaeological remains within the proposed development is high. These primarily are associated with the Roman roads recorded by the Heneb HER within the site. The proposed design of the ESS intersects the western Roman road, indicating a high likelihood of this asset being truncated or destroyed in the course of the proposed development. There is low potential for unrecorded archaeological remains associated with the undated enclosure south of the site (28869).

The site has also remained largely undisturbed from the time of the earliest available mapping, until any auxiliary works connected with the substation took place. The site also remains relatively waterlogged, indicating potential for high levels of preservation of remains, where present.

It is recommended that consultation is undertaken with the Heneb Historic Environment Officer in the first instance, as this will guide the requirement for further archaeological work. Any further archaeological work should be undertaken in accordance with the

standards and guidance from the Chartered Institute for Archaeologists, and a Written Scheme of Investigation agreed in advance with the Heneb Historic Environment Officer.

A preliminary programme of geophysical survey to be undertaken on the ESS site is advised to better understand the location and nature of potential remains located within the ESS site. However, it is understood that due to the waterlogged nature of the site, it may be difficult to carry out a geophysical survey and this should form the basis of discussions with Heneb and a suitably experienced geophysical surveyor.

A programme of trial trenching, may be required, based on either the results of the geophysical survey or, where geophysical survey is not considered suitable, to inform decision making based on the archaeological potential of the site.

Archaeological work should be undertaken in accordance with the standards and guidance from the Chartered Institute for Archaeologists, any requirements stipulated by the local authority, and a Written Scheme of Investigation agreed in advance with the Heneb Historic Environment Officer. It is considered that a secured programme of archaeological investigation, recording and publication as a condition of any planning permission would satisfy the PPW 12 (2024) requirement for the significance of heritage assets to be lost (wholly or in part) to be recorded in a manner proportionate their importance and the impact, and to make this publicly accessible, and would further enable the significance of non-designated heritage assets within the site to be understood and hence balanced against the scale of loss. Assuming appropriate archaeological mitigation is secured, the proposal is also considered to comply with local policy.

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## Historic maps, drawings and aerial photography

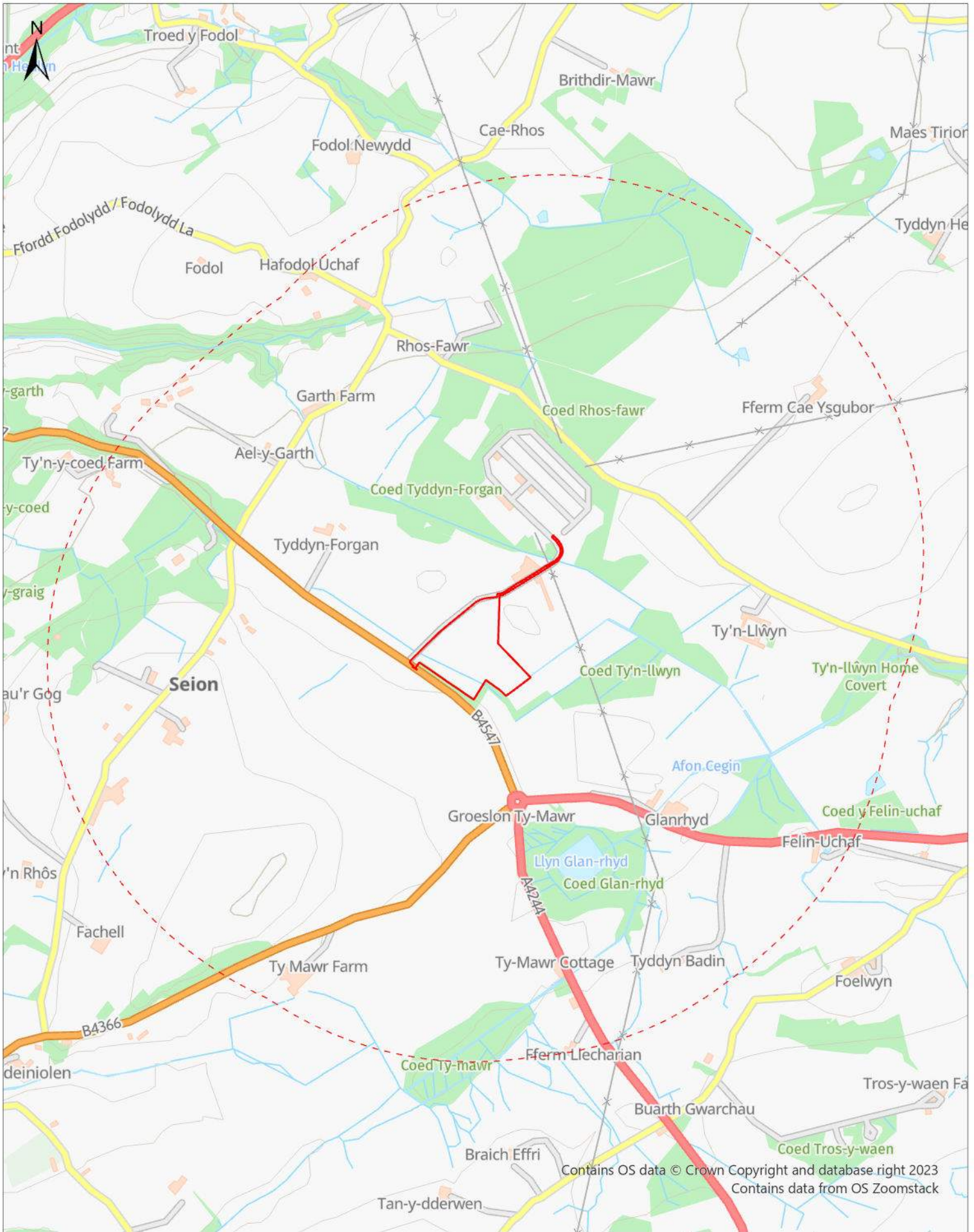
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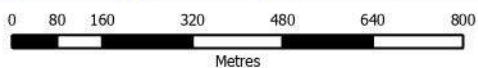
# Appendices

## Appendix A – Site location plan





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Sheet Size: **A4** Scale of Original: **1:13,419**

Client: **Net Zero Twentysix Limited**

Project: **Tyddyn Forgan ESS**

<b>OZ</b> Created:	<b>MB</b> Checked:	<b>February 2025</b> Date:	<b>V2</b> Version:
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Title: **Site Location Plan**

Office: <b>4154</b>	Project No: <b>784-B068934</b>	Figure No: <b>1</b>
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Revisions:

Revision	Date	Revision Notes	Drawn	Inspected
01	11.01.24	First Issue	HL	RW
02	06.01.25	Applicant Amended	JC	NW
03	16.01.25	Legend/Title Amended	HL	JH
04	14.02.25	Layout Change	RR	JH
05	18.02.25	RLB Adjusted	RR	JH
06	24.02.25	SUDS Pond Added	CS	JH

LEGEND:

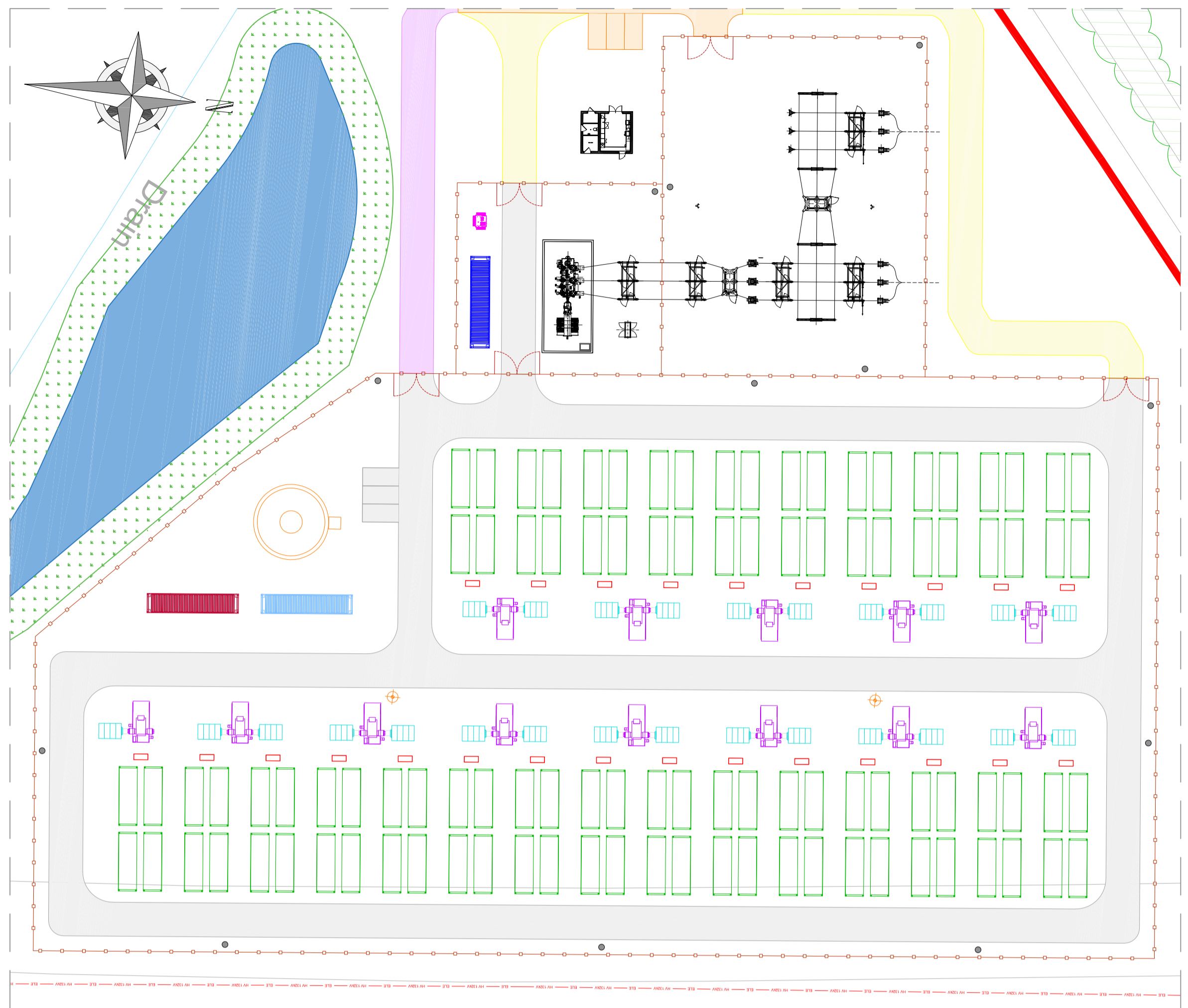
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	PLANNING APPLICATION BOUNDARY
	MAINTENANCE ACCESS
	SITE ACCESS
	DNO ACCESS
	EMERGENCY ACCESS
	SECURITY FENCELINE
	ELE - HV - ELE - HV - EXISTING O/H HV CABLE
	ELE - HV 132kV - ELE - EXISTING UIG 132 kV CABLE
	ROMAN ROAD

SITE INFRASTRUCTURE:

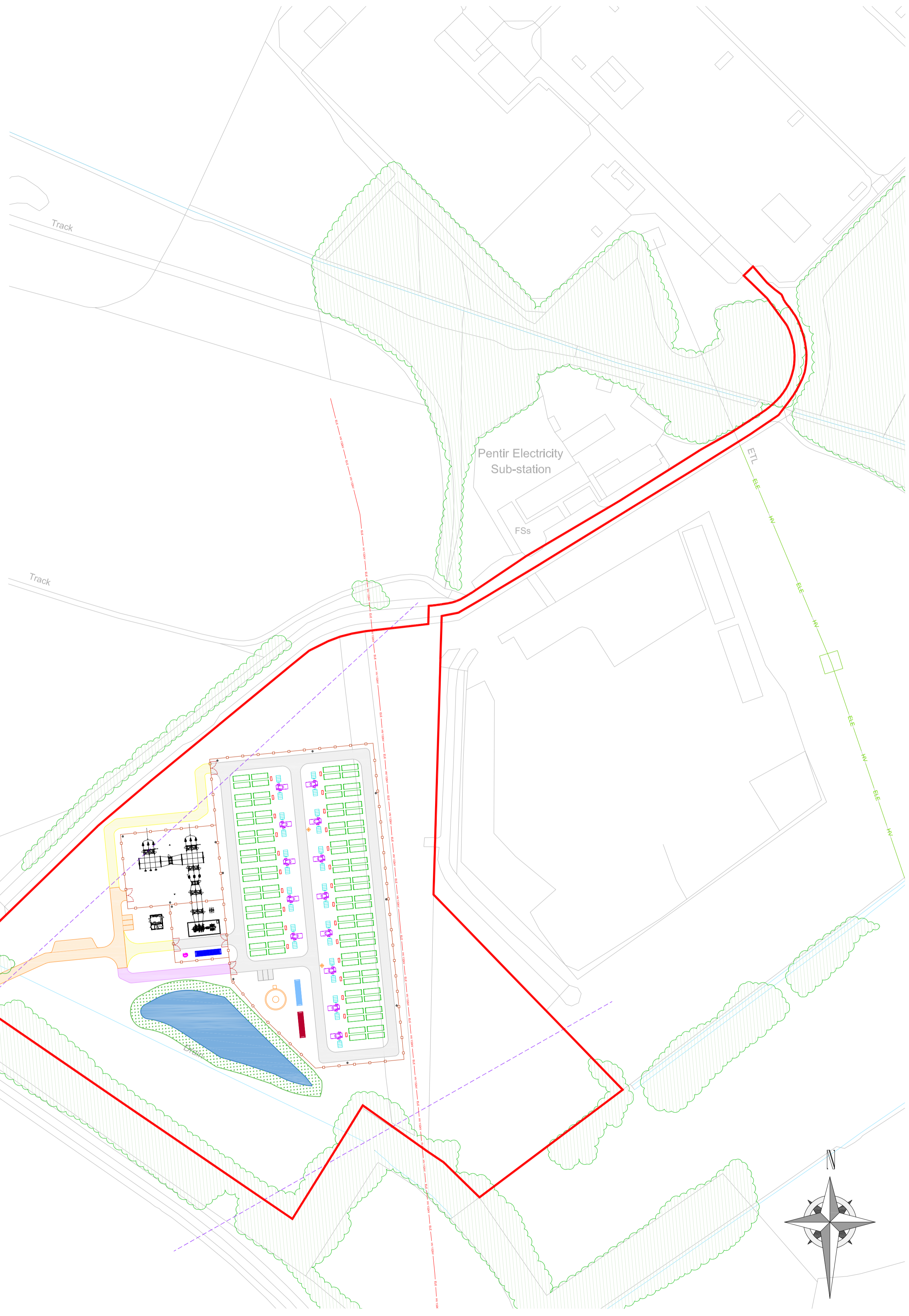
	SECURITY GATE		TWIN SKID (TX)
	132kV SUBSTATION		ESS UNIT
	CCTV CAMERA		SCS INVERTER
	AUX TRANSFORMER		ESS INTERFACE CABINET
	240,000l WATER TANK		40FT STORAGE CONTAINER
	DNO CONTROL ROOM		40 FT CUSTOMER SWITCHGEAR
	WATER HYDRANT		40FT WELFARE OFFICE
	SUDS POND		

VEGETATION:

	EXISTING VEGETATION
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**2** ESS SITE  
 Scale: 1:500@A1  
 SCALE 1:500



**1** TYDDYN FORGAN ESS - PROPOSED SITE LAYOUT PLAN  
 Scale: 1:1250@A1

Project:  
**Tyddyn Forgan**  
**Caernarfon**  
**LL55 3AN**

Applicant:  
  
**Net Zero Twentysix Limited**  
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 Mob: +44 (0) 7814439910

Status:  
**PLANNING**

Drawing Title:  
**Tyddyn Forgan ESS**  
**Proposed Site Layout Plan**

Drawn: HL	Checked: RW	First Issued: 11.01.2024
Project Code: <b>FST016</b>		Drawing Number: <b>PL-01</b>
Sheet Size: <b>A1</b>	Scale: <b>A.N</b>	Revision: <b>06</b>

SCALE 1:1250

## Appendix B – Assessment methodology

## Historic Environment Impact Assessment Methodology

Tetra Tech's evaluation and assessment criteria have been developed using a combination of the Secretary of State's criteria for Scheduling Monuments (Scheduled Monument Statement, Annex 1), Design Manual for Roads and Bridges, Volume 11, Part 3, Section 2, HA 208/07 and Transport Analysis Guidance (TAG Unit 3.3.9, Heritage of Historic Resources Sub-Objective). Professional judgement is used in conjunction with these criteria to undertake the impact assessment, as well as complimentary good practice guidance including Conservation Principles for the Sustainable Management of the Historic Environment in Wales (2011) and outlined in Technical Advice Note 24 (Evidential, Historical, Aesthetic and Communal).

### Value

The table below provides guidance on the assessment of significance for all types of heritage assets, including archaeological sites and monuments, historic buildings, historic landscapes and other types of historical site, such as battlefields, parks and gardens. The table considers both designated and non-designated heritage assets.

Value	Examples
Very High	<p>World Heritage Sites, Scheduled Monuments of exceptional quality, or assets of acknowledged international importance or assets that can contribute to international research objectives.</p> <p>Grade I Listed Buildings and built heritage of exceptional quality.</p> <p>Grade I Registered Parks and Gardens and historic landscapes and townscapes of international sensitivity, or extremely well-preserved historic landscapes and townscapes with exceptional coherence, integrity, time-depth, or other critical factor(s).</p>
National/ High	<p>Scheduled Monuments, or assets of national quality and importance or assets that can contribute to national research objectives.</p> <p>Grade II* and Grade II Listed Buildings, Conservation Areas with very strong character and integrity, other built heritage that can be shown to have exceptional qualities in their fabric or historical association.</p> <p>Grade II* and II Registered Parks and Gardens, Registered Battlefields and historic landscapes and townscapes of outstanding interest, quality and importance, or well preserved and exhibiting considerable coherence, integrity time-depth or other critical factor(s).</p>

Value	Examples
Regional/ Medium	<p>Designated or undesignated assets of regional quality and importance that contribute to regional research objectives.</p> <p>Grade II Listed Buildings of modest preservation or integrity. Locally Listed Buildings, other Conservation Areas, historic buildings that can be shown to have good qualities in their fabric or historical association.</p> <p>Grade II Registered Parks and Gardens and Registered Battlefields of poorer preservation or integrity. Designated or undesignated special historic landscapes and townscapes with reasonable coherence, integrity, time-depth or other critical factor(s).</p> <p>Assets that form an important resource within the community, for educational or recreational purposes.</p>
Local/ Low	<p>Undesignated assets of local importance.</p> <p>Assets compromised by poor preservation and/or poor survival of contextual associations but with potential to contribute to local research objectives.</p> <p>Historic (unlisted) buildings of modest quality in their fabric or historical association.</p> <p>Historic landscapes and townscapes with limited sensitivity or whose sensitivity is limited by poor preservation, historic integrity and/or poor survival of contextual associations.</p> <p>Assets that form a resource within the community with occasional utilisation for educational or recreational purposes.</p>
Negligible	<p>Assets with very little or no surviving cultural heritage interest.</p> <p>Buildings of no architectural or historical note.</p> <p>Landscapes and townscapes that are badly fragmented and the contextual associations are severely compromised or have little or no historical interest.</p>

## Impact

The magnitude of the potential impact is assessed for each site or feature independently of its significance. Magnitude is determined by considering the predicted deviation from baseline conditions. The magnitude of impact categories are adapted from the Transport Assessment Guidance (TAG Unit 3.3.9) and Design Manual for Roads and Bridges, Volume 11, Part 3, Section 2, HA 208/07.

Impact	Typical Criteria Descriptors
Substantial	<p>Impacts will act to damage or destroy cultural heritage assets; result in the loss of the asset and/or quality and integrity; cause severe damage to key characteristic features or elements; almost complete loss of setting and/or context of the asset. The assets integrity or setting is almost wholly destroyed or is severely compromised, such that the resource can no longer be appreciated or understood. (Negative).</p> <p>The proposals would remove or successfully mitigate existing damaging and discordant impacts on assets; allow for the restoration or enhancement of characteristic features; allow the substantial re-establishment of the integrity, understanding and setting for an area or group of features; halt rapid degradation and/or erosion of the heritage resource, safeguarding substantial elements of the heritage resource. (Positive).</p>
Moderate	<p>Substantial impact on the asset, but only partially affecting the integrity; partial loss of, or damage to, key characteristics, features or elements; substantially intrusive into the setting and/or would adversely impact upon the context of the asset; loss of the asset for community appreciation. The assets integrity or setting is damaged but not destroyed so understanding and appreciation is compromised. (Negative).</p> <p>Benefit to, or restoration of, key characteristics, features or elements; improvement of asset quality; degradation of the asset would be halted; the setting and/or context of the asset would be enhanced and understanding and appreciation is substantially improved; the asset would be bought into community use. (Positive).</p>
Slight	<p>Some measurable change in assets quality or vulnerability; minor loss of or alteration to, one (or maybe more) key characteristics, features or elements; change to the setting would not be overly intrusive or overly diminish the context; community use or understanding would be reduced. The assets integrity or setting is damaged but understanding and appreciation would only be diminished not compromised. (Negative).</p> <p>Minor benefit to, or partial restoration of, one (maybe more) key characteristics, features or elements; some beneficial impact on asset or a stabilisation of negative impacts; slight improvements to the context or setting of the site; community use or understanding and appreciation would be enhanced. (Positive).</p>
Negligible / No Change	<p>Very minor loss or detrimental alteration to one or more characteristics, features or elements. Minor changes to the setting or context of the site. No discernible change in baseline conditions (Negative).</p> <p>Very minor benefit to or positive addition of one or more characteristics, features or elements. Minor changes to the setting or context of the site No discernible change in baseline conditions. (Positive).</p>

Magnitude (scale of change) is determined by considering the predicted deviation from baseline conditions. Quantifiable assessment of magnitude has been undertaken where possible. In cases where only qualitative assessment is possible, magnitude has been defined as fully as possible.

Any embedded mitigation is considered in the impact assessment and this is clearly described in this section (cross referring the development description). Therefore, the magnitude of the impacts described in the impact assessment will be considered stated before and after additional mitigation has been taken into account.

Impacts may be of the following nature and will be identified as such where relevant:

- Negative or Positive.
- Direct or indirect.
- Temporary or permanent.
- Short, medium or long term.
- Reversible or irreversible.
- Cumulative.

For the purpose of this Desk-Based Assessment, negligible negative impacts/no change are not considered to amount to any material harm to designated heritage assets. Moderate-slight negative impacts to designated heritage assets are considered to be 'less than substantial harm'. Substantial negative impacts are considered to amount to 'substantial harm' to designated heritage assets. These impacts are as defined in *Conservation Principles for the Sustainable Management of the Historic Environment in Wales* (2011) and Technical Advice Note 24 terms.

When considering development proposals that affect scheduled monuments or other nationally important archaeological remains, there should be a presumption in favour of their physical preservation in-situ. In cases involving less significant archaeological remains, local planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development.

**Determining Significance of Effect on Cultural Heritage Sites** (Highways Agency (2007) Design Manual for Roads and Bridges, Volume 11, Part 3, Section 2, HA 208/07, Table 11.3)

Sensitivity of Receptor	Magnitude				
	Major	Moderate	Minor	Negligible	No change
Very High	Very Large	Large / Very Large	Moderate / Large	Slight	Neutral
High	Large / Very Large	Moderate / Large	Moderate / Slight	Slight	Neutral
Medium	Moderate / Large	Moderate	Slight	Neutral / Slight	Neutral
Low	Slight / Moderate	Slight	Neutral / Slight	Neutral / Slight	Neutral
Negligible	Slight	Neutral / Slight	Neutral / Slight	Neutral	Neutral



**Determining Significance of Effect on Cultural Heritage Sites** (Highways Agency (2007) Design Manual for Roads and Bridges, Volume 11, Part 3, Section 2, HA 208/07, Table 11.3)

Sensitivity of Receptor	Magnitude				
	Major	Moderate	Minor	Negligible	No change
Very High	Very Large	Large / Very Large	Moderate / Large	Slight	Neutral
High	Large / Very Large	Moderate / Large	Moderate / Slight	Slight	Neutral
Medium	Moderate / Large	Moderate	Slight	Neutral / Slight	Neutral
Low	Slight / Moderate	Slight	Neutral / Slight	Neutral / Slight	Neutral
Negligible	Slight	Neutral / Slight	Neutral / Slight	Neutral	Neutral

## Appendix C – Site photographs



Photograph 1: North-east facing photograph of site.



Photograph 2: West facing photograph of main site area.



Photograph 3: South facing view of the site, towards the road.



Photograph 4: Path of less vegetation through the site, facing north-west.



Photograph 5: Overview of the site, facing south.



Photograph 7: Photograph from northern edge of the site, facing the mounded substation grounds.



Photograph 8: North facing shot of substation and stone wall at edge of site.



Photograph 9: South facing photograph of drainage ditch at southern end of site.



Photograph 10: Northwest facing photograph of site.



Photograph 11: South facing photograph of site along road.



Photograph 12: South-east facing photograph of site overview.



Photograph 13: Southwest facing photograph of Ty'n Llwyn Farm complex.





Photograph 14: South facing photograph from the southern edge of the site, showing disturbance to the south of site, in addition to views around the site.



Photograph 15: North-east facing photographs of electrical infrastructure on the site.



## Appendix D – Planning policies

## **Anglesey and Gwynedd Joint Local Development Plan 2011 - 2026 Written Statement 31 July 2017**

### **Policy PS 20: Preserving And Where Appropriate Enhancing Heritage Assets**

#### Policy

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).

### **Policy AT 1: Conservation Areas, World Heritage Sites And Registered Historic Landscapes, Parks And Gardens**

#### Policy

Proposals within or affecting the setting and/ or significant views into and out of Conservation Areas, World Heritage Sites and Registered Historic Landscapes, Parks and Gardens shown on the Constraints Map must, where appropriate, have regard to:

1. Adopted Conservation Area Character Appraisals, Conservation Area Plans and Delivery Strategies.
2. World Heritage Site Management Plans.

3. The register of landscape, parks and gardens of special historic interest in Wales. proposals should be supported by a heritage impact assessment, where appropriate.

## **Policy AT 2: Enabling Development**

### Policy

Enabling development which aims to secure the preservation and/or alternative use of a listed building or a building that makes a significant positive contribution to the character of a conservation area or a Registered Historic Landscape, Park and Garden will be granted provided all the following criteria can be met:

1. It will not materially harm the heritage values of the heritage asset or its setting
2. It avoids detrimental fragmentation of management of the historic asset.
3. It will secure the long-term future of the heritage asset and, where applicable, it's continued use for a sympathetic purpose.
4. It is necessary to resolve problems arising from the inherent needs of the heritage asset, rather than the circumstances of the present owner, or the purchase price paid.
5. Sufficient subsidy is not available from any other source.
6. It is demonstrated that the amount of enabling development proposed is the minimum necessary to secure the future of the heritage asset, and that it causes minimal harm to other public interests.
7. The public benefit of securing the future of the heritage asset through such enabling development decisively outweighs the disbenefits of breaching other public policies.

Proposals will be subject to an agreed programme of works. The condition or state of restoration of the building or feature must be in accordance with the programme of works prior to the enabling development's occupation.

## **Policy AT 3: Locally Or Regionally Significant Non-Designated Heritage Assets**

### Policy

Proposals will be required to conserve and seek opportunities to enhance buildings, structures and areas of locally or regionally significant non-designated heritage assets, which create a sense of local character, identity and variation across the Plan area, by:

1. The sympathetic re-use of redundant and under-used historic buildings and areas that are consistent with their conservation;
2. Ensuring that all development within the Plan area's historic public realm, including transport and infrastructure work, is sympathetic to the historic environment;
3. Appropriate siting, massing, form, height, scale, detail and use of local materials.

#### **Policy AT 4: Protection Of Non-Designated Archaeological Sites And Their Setting**

Proposals which may have a significant adverse impact on sites that are of potential national archaeological importance and their setting, or are of acknowledged local heritage importance, including sites of industrial archaeology that are not scheduled and their settings will:

1. Be assessed in terms of the intrinsic importance of the 'site' and the potential extent of harm.
2. Require, where appropriate, either an archaeological assessments and/ or field evaluation by an archaeological body or a professionally qualified archaeologist in order to determine the archaeological impact of the proposed development before the Planning Authority determines the application.

A proposal which affects locally important archaeological remains will only be granted if the need for the development overrides the significance of the archaeological remains.

Where proposals are acceptable, a condition will be attached to the permission stating that no development should take place until an agreed programme of archaeological work has taken place.

## Appendix E – Recorded heritage assets

**Designated Heritage Sites (Cadw/Heneb Historic Environment Record)**

Identifier	Record Type	Grid Reference	Description	Period
<b>Designated Heritage Assets</b>				
83169	Grade II Listed Building	SH 56527 67409	Ty'n Llwyn Farm - Bothy and Bakehouse Range to NE of Yard	Industrial
83170	Grade II Listed Building	SH 56534 67388	Ty'n Llwyn Farm - Cartshed and Granary	Industrial
83279	Grade II Listed Building	SH 56517 67350	Ty'n Llwyn Farm - Cattle Sheds at SE of Yard	Industrial
83280	Grade II Listed Building	SH 56482 67357	Ty'n Llwyn Farm - Cattle Sheds at S of Yard	Industrial
83281	Grade II Listed Building	SH 56478 67396	Ty'n Llwyn - Barn and Cowhouse at W of Yard	Industrial
83282	Grade II Listed Building	SH 56458 67367	Ty'n Llwyn Farm - Barn outside yard to SW	Industrial
83283	Grade II Listed Building	SH 56483 67428	Ty'n Llwyn Farm - Hay Barn outside Yard to NW	Industrial



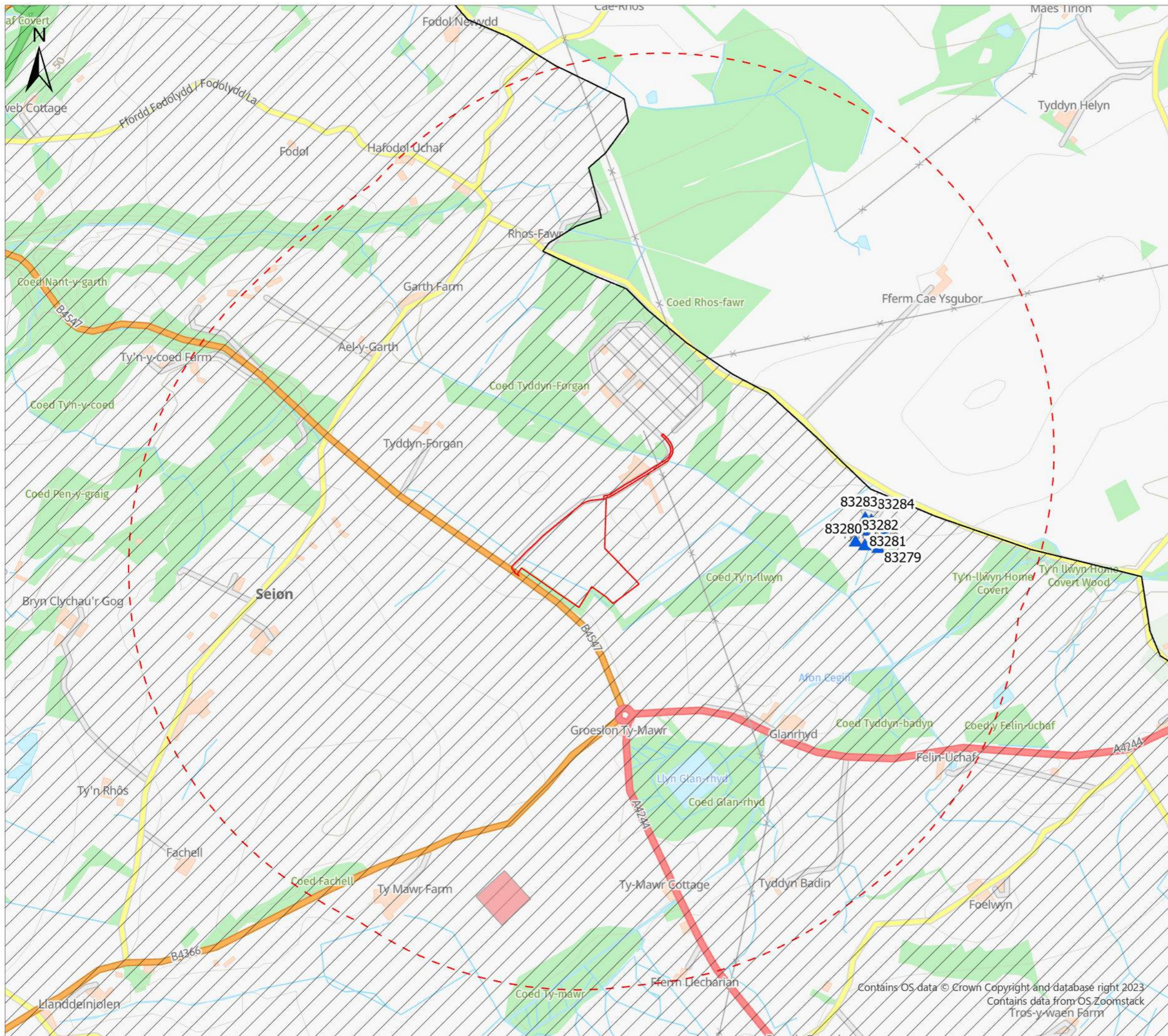
Tyddyn Forgan, Gwynedd, Wales

Archaeological and Heritage Desk-Based Assessment

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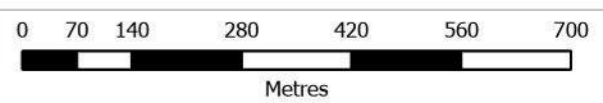
83284	Grade II Listed Building	SH 56499 67422	Ty'n Llwyn Farm - NW range of Yard	Industrial
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**Legend**

- Site Boundary
- Study Area
- Scheduled Ancient Monuments
- ▲ Listed Buildings
- Historic Landscapes



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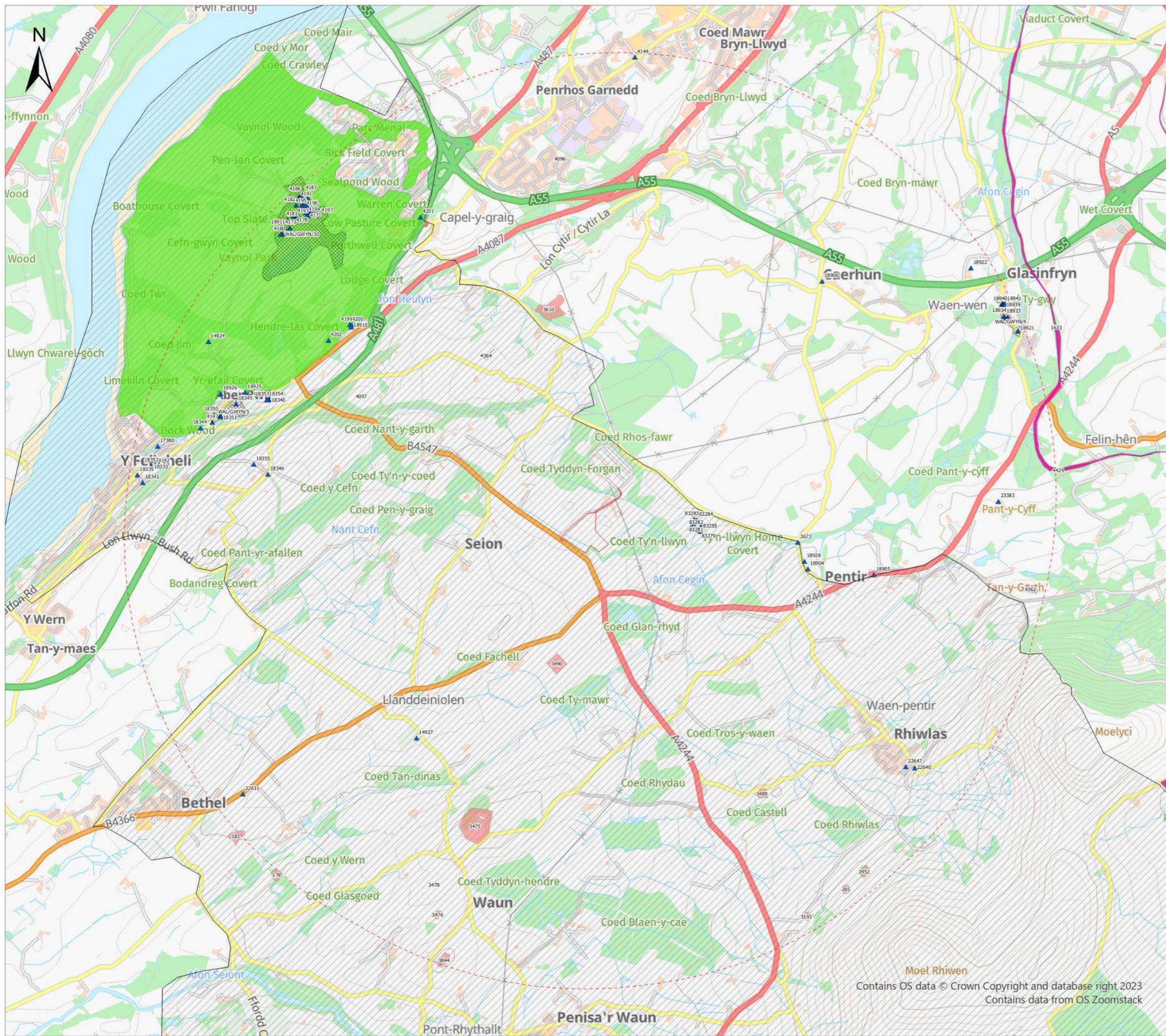
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Project: **Tyddyn Forgan ESS**

Title: **Designated Assets**

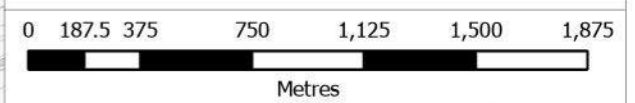
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Tros-y-waen Farm



**Legend**

- Study Area
- Site Boundary
- World Heritage Site
- Scheduled Ancient Monument
- Conservation Area
- Listed Buildings
- Registered Park and Gardens
- Historic Landscapes



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Project: **Tyddyn Forgan ESS**

Title: **Designated Assets 3km**

Office: <b>4154</b>	Project No: <b>784-B068934</b>	Figure No: <b>2a</b>
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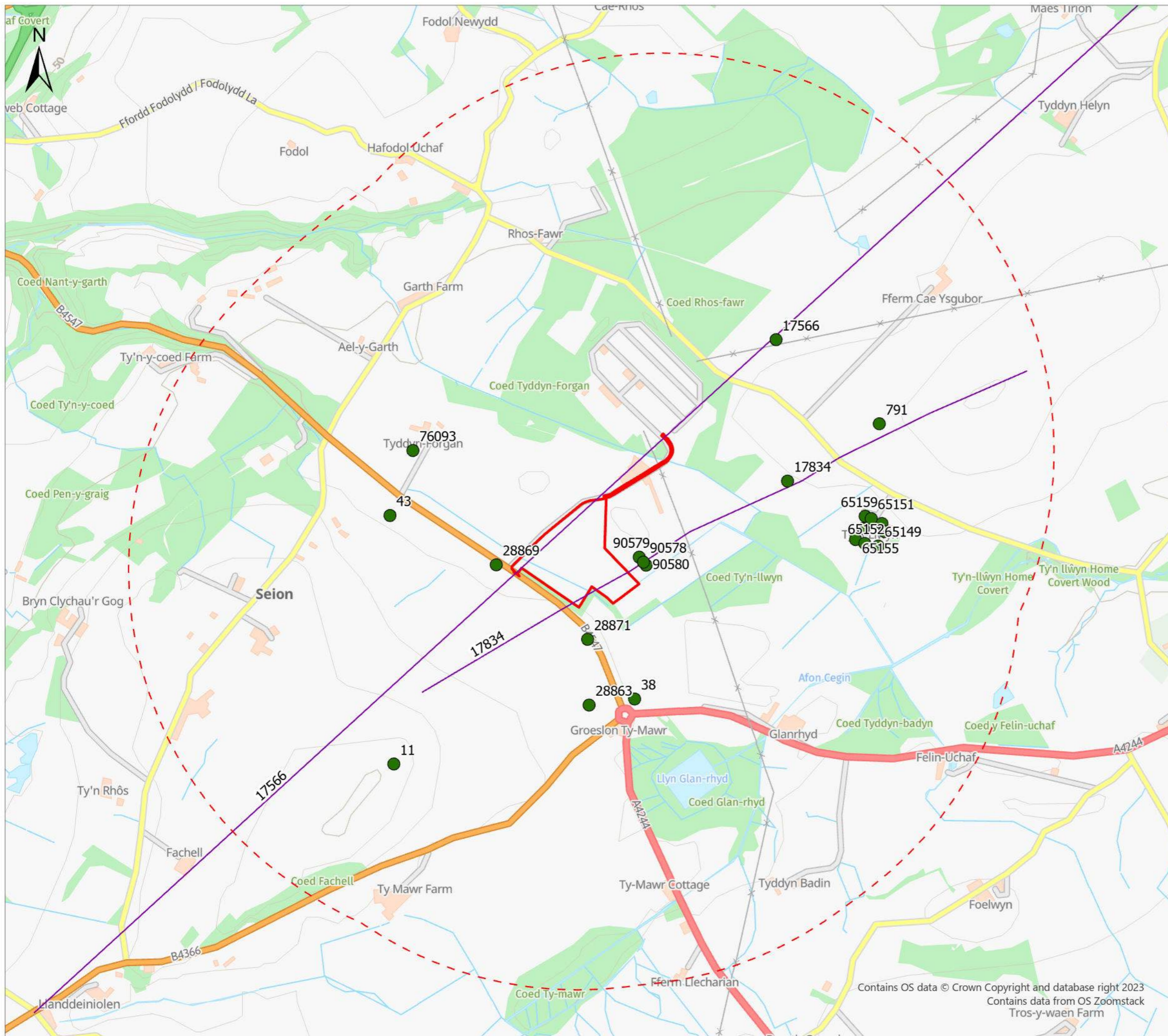
**Non-designated recorded heritage assets (Heneb Historic Environment Record)**

Identifier	Record Type	Description	Period
<b>Recorded Heritage Assets (by period)</b>			
11	Hut Circle Settlement	Hut Group (Enclosed), North-East of Ty-Mawr	Prehistoric
17566	Road	Part of Roman Road, Segontium - Canovium	Roman
17834	Road	Part of Roman Road, Segontium - Canovium	Roman
90579	Extractive Pit	Quarry Pits, Remains of, Pentir	Roman
90578	Road	Roman Road, Part of, Possible, Pentir	Roman
65179	Barn	Ty'n Llwyn - Barn and Cowhouse at W of Yard	Post Medieval
65155	Barn	Ty'n Llwyn Farm - Barn outside yard to SW	Post Medieval
65181	Bothy	Ty'n Llwyn Farm - Bothy and Bakehouse Range to NE of Yard	Post Medieval
65180	Cart Shed	Ty'n Llwyn Farm - Cartshed and Granary	Post Medieval
65152	Cattle Shelter	Ty'n Llwyn Farm - Cattle Sheds at S of Yard	Post Medieval
65149	Cattle Shelter	Ty'n Llwyn Farm - Cattle Sheds at SE of Yard	Post Medieval
65159	Barn	Ty'n Llwyn Farm - Hay Barn outside Yard to NW	Post Medieval
65151	Farm Building	Ty'n Llwyn Farm - NW range of Yard	Post Medieval
76093	Findspot	Various Finds, Llanddeiniolen	Multiperiod
28863	Well	Well, North-West of Groeslon Ty Mawr	Unknown
28869	Enclosure	Enclosure, North-East of Llys Gwynt	Unknown
791	Mound	Mound, N of Ty'n Y Llwyn	Unknown

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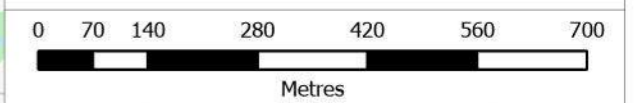
90580	Pit	Pits, Pentir	Unknown
28871	Quarry	Quarry, Possible, North-West of Groeslon Ty Mawr	Unknown
43	Boundary Marker	Stone (Boundary Marker), Near Cae Gwydryn	Unknown
38	Boundary Marker	Stone (Boundary Marker), Near Groeslon	Unknown

---



**Legend**

- Site Boundary
- Study Area
- Roman Road
- HER Asset Point



<b>OZ</b> Created:	<b>MB</b> Checked:	<b>February 2025</b> Date:	<b>V2</b> Version:
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Sheet Size: **A3**      Scale of Original: **1:9,644**

Client: **Net Zero Twentysix Limited**

Project: **Tyddyn Forgan ESS**

Title: **Non-Designated Assets**

Office: <b>4154</b>	Project No: <b>784-B068934</b>	Figure No: <b>3</b>
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Tros-y-waen Farm

Tyddyn Forgan, Gwynedd, Wales

Archaeological and Heritage Desk-Based Assessment

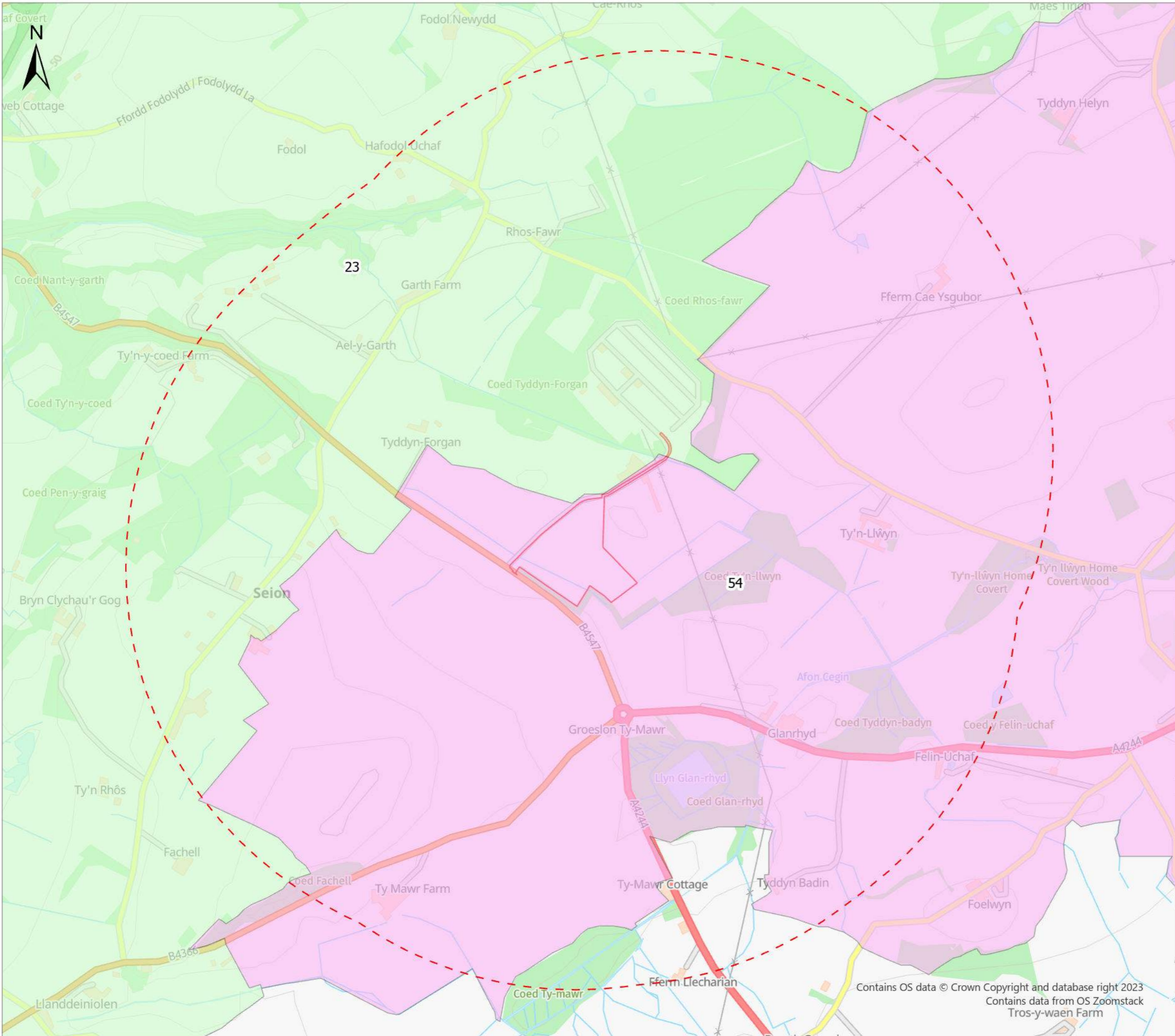
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### Portable Antiquities Scheme

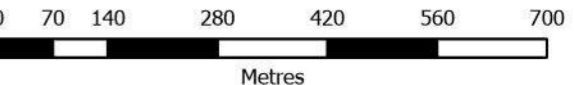
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LVPL1113	Flat Axehead	Small flat axe head. Slight chip in blade end. Slightly swollen butt end. Good condition, slightly pitted. Retains some original patina.	Postcode	Bronze Age





**Legend**

- Site Boundary
- 54
- 23
- <all other values>
- Study Area



<b>OZ</b> Created:	<b>MB</b> Checked:	<b>February 2025</b> Date:	<b>V2</b> Version:
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Client: **Net Zero Twentysix Limited**

Project: **Tyddyn Forgan ESS**

Title: **Historic Landscape Characterisation**

Office: <b>4154</b>	Project No: <b>784-B068934</b>	Figure No: <b>4</b>
------------------------	-----------------------------------	------------------------

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**Legend**

255 0 255 0 255 0 255 0

Site Boundary

0 15 30 60 90 120 150


Metres

<b>OZ</b> Created:	<b>MB</b> Checked:	<b>February 2025</b> Date:	<b>V1</b> Version:
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Client: **Net Zero Twentysix Limited**

Project: **Tyddyn Forgan ESS**

Title: **LIDAR**

Office: <b>4154</b>	Project No: <b>784-B068934</b>	Figure No: <b>5</b>
------------------------	-----------------------------------	------------------------

## Appendix F – Historic mapping



*Plate 1: 1839 Tithe map of the parish of Llanddeiniolen, in the County of Carnarvon. (1 Inch to 8 Chains) (Lloyd)*

Tyddyn Forgan, Gwynedd, Wales

Archaeological and Heritage Desk-Based Assessment

---

**Site Details:**

Tyddyn Forgan

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**Report Ref:** GS-NMI-RUK-QZ1-M29  
**Grid Ref:** 255758, 367416

**Map Name:** County Series

**Map date:** 1888

**Scale:** 1:10,560

**Printed at:** 1:10,560



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 Edition N/A  
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 Edition N/A  
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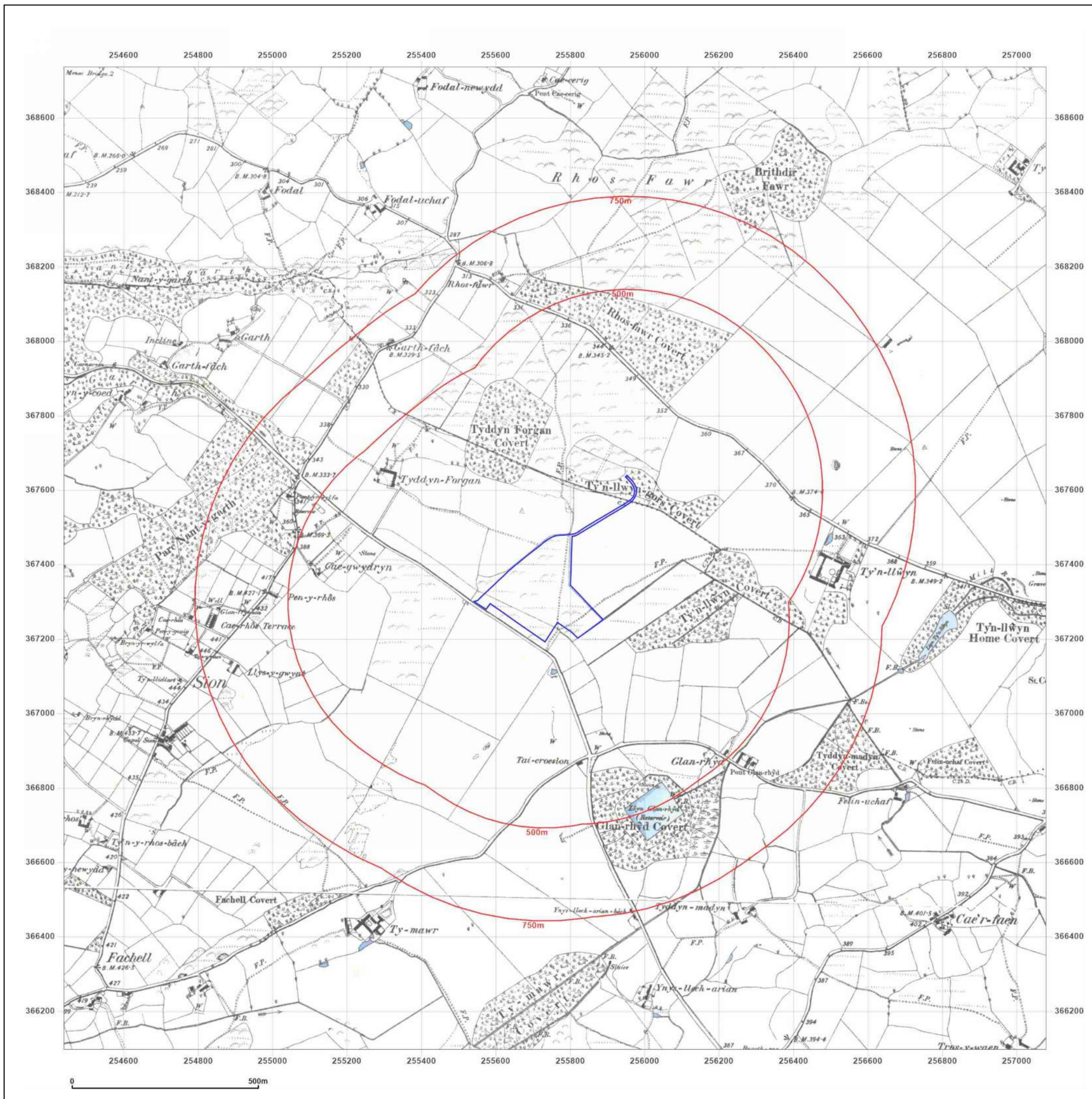


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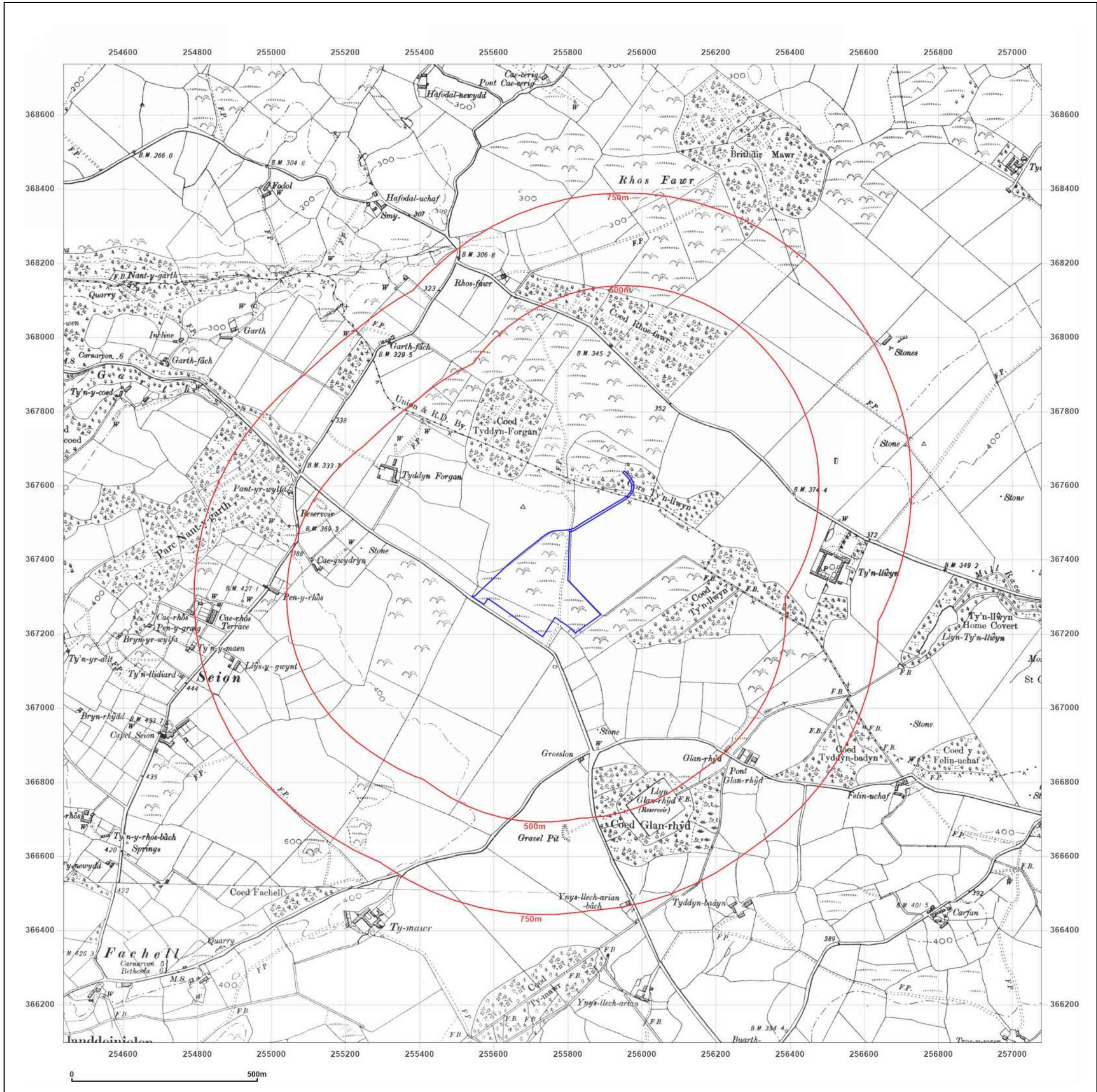


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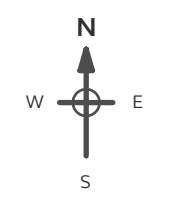
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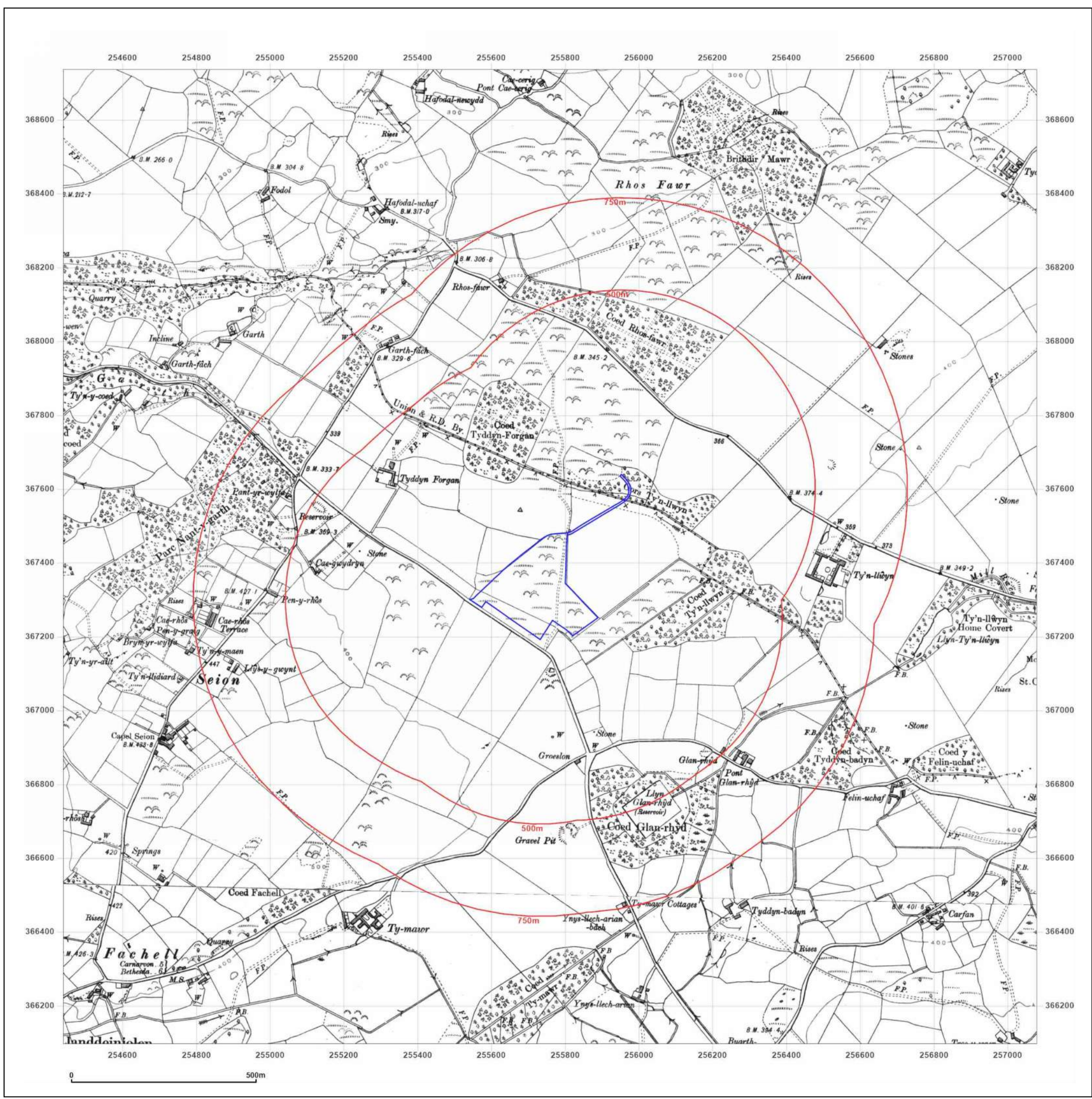


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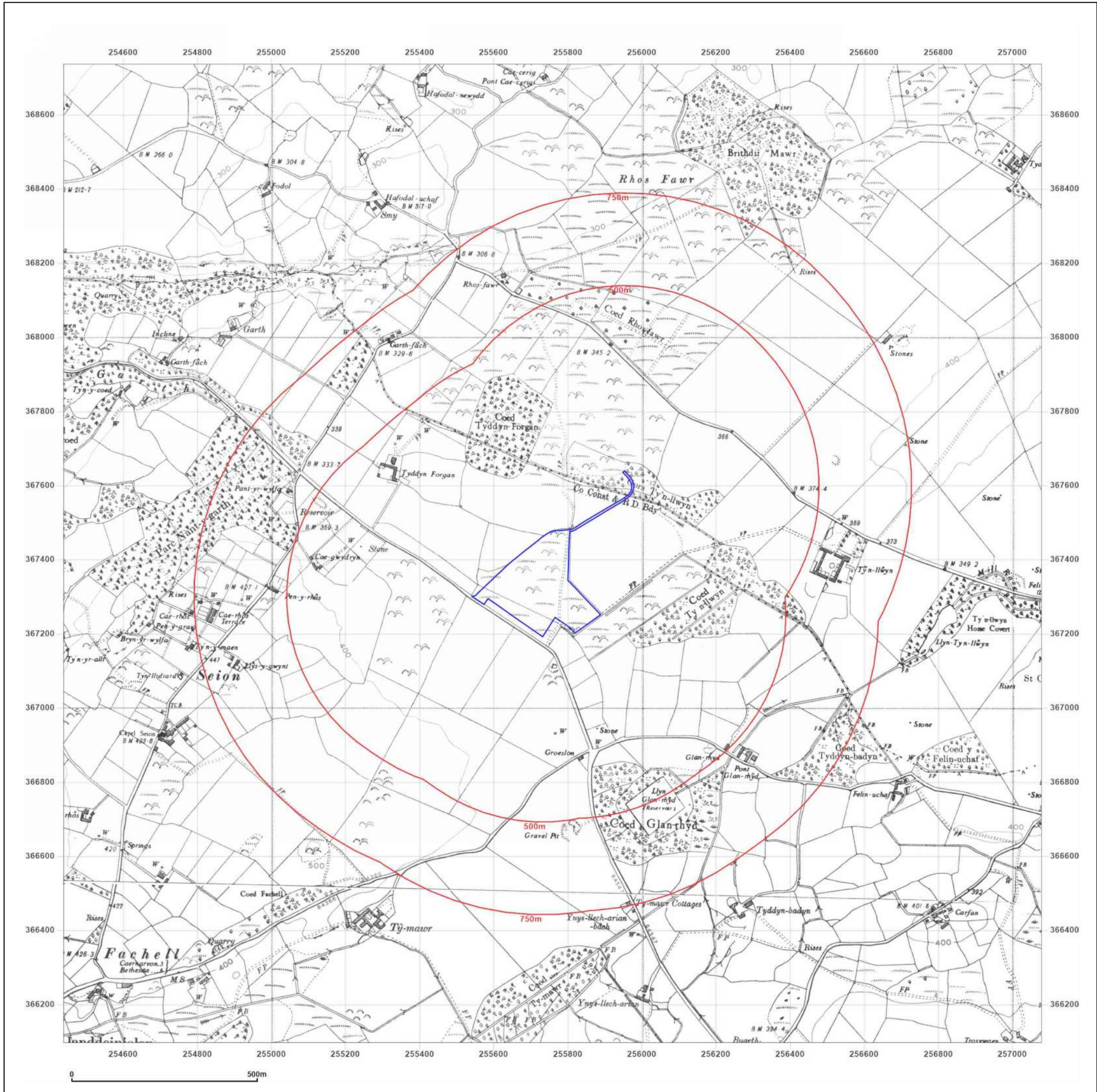


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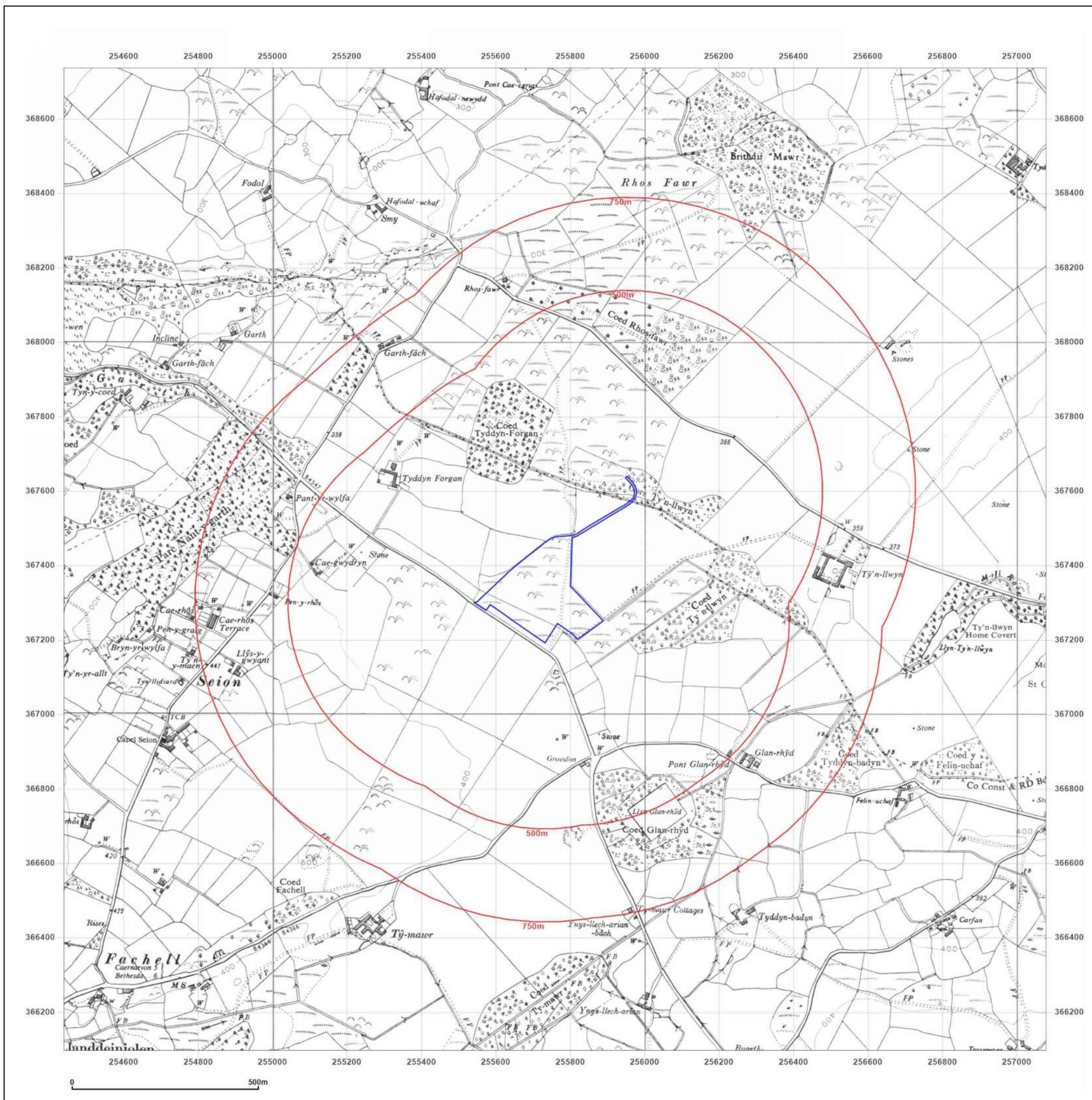


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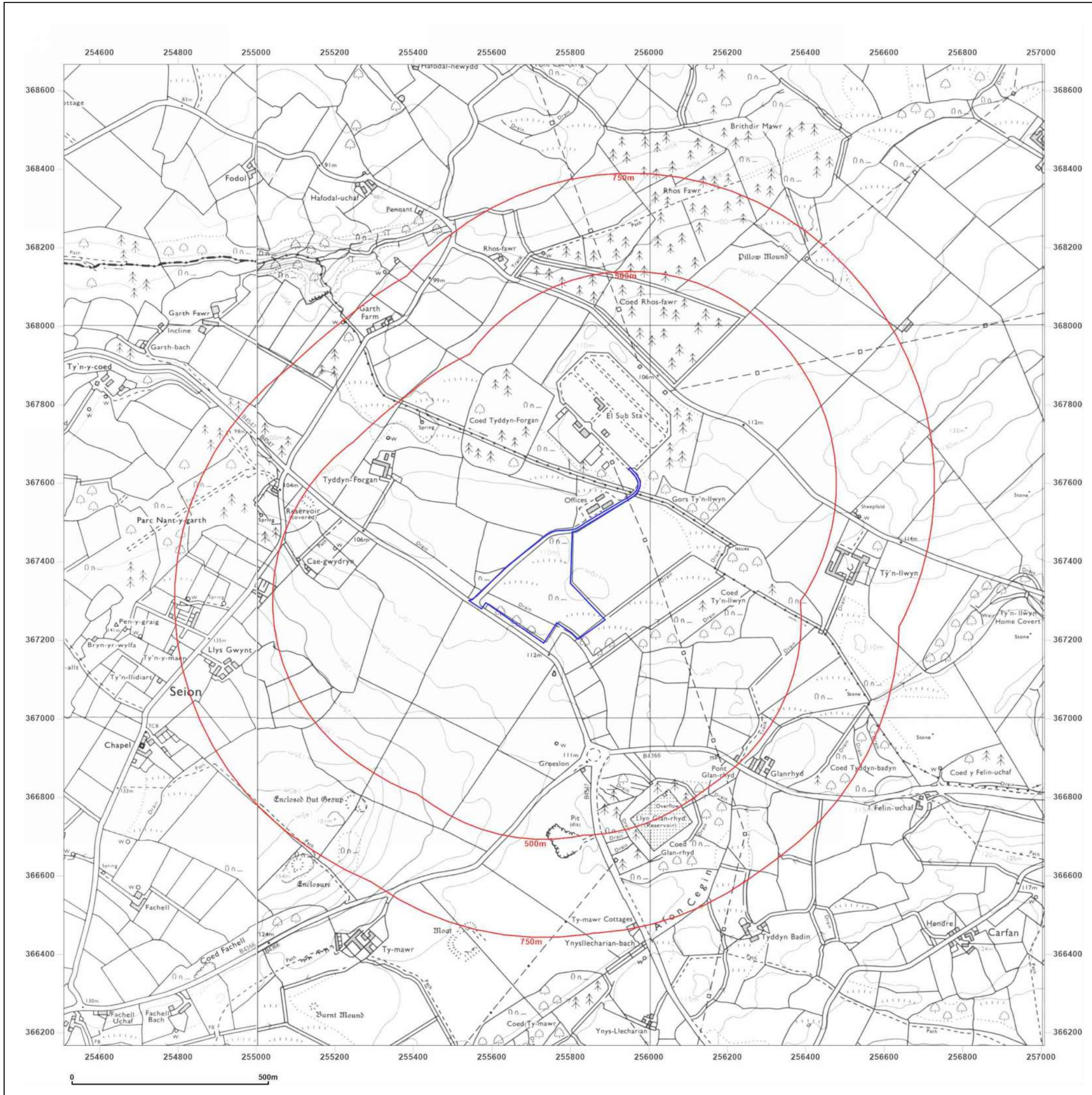


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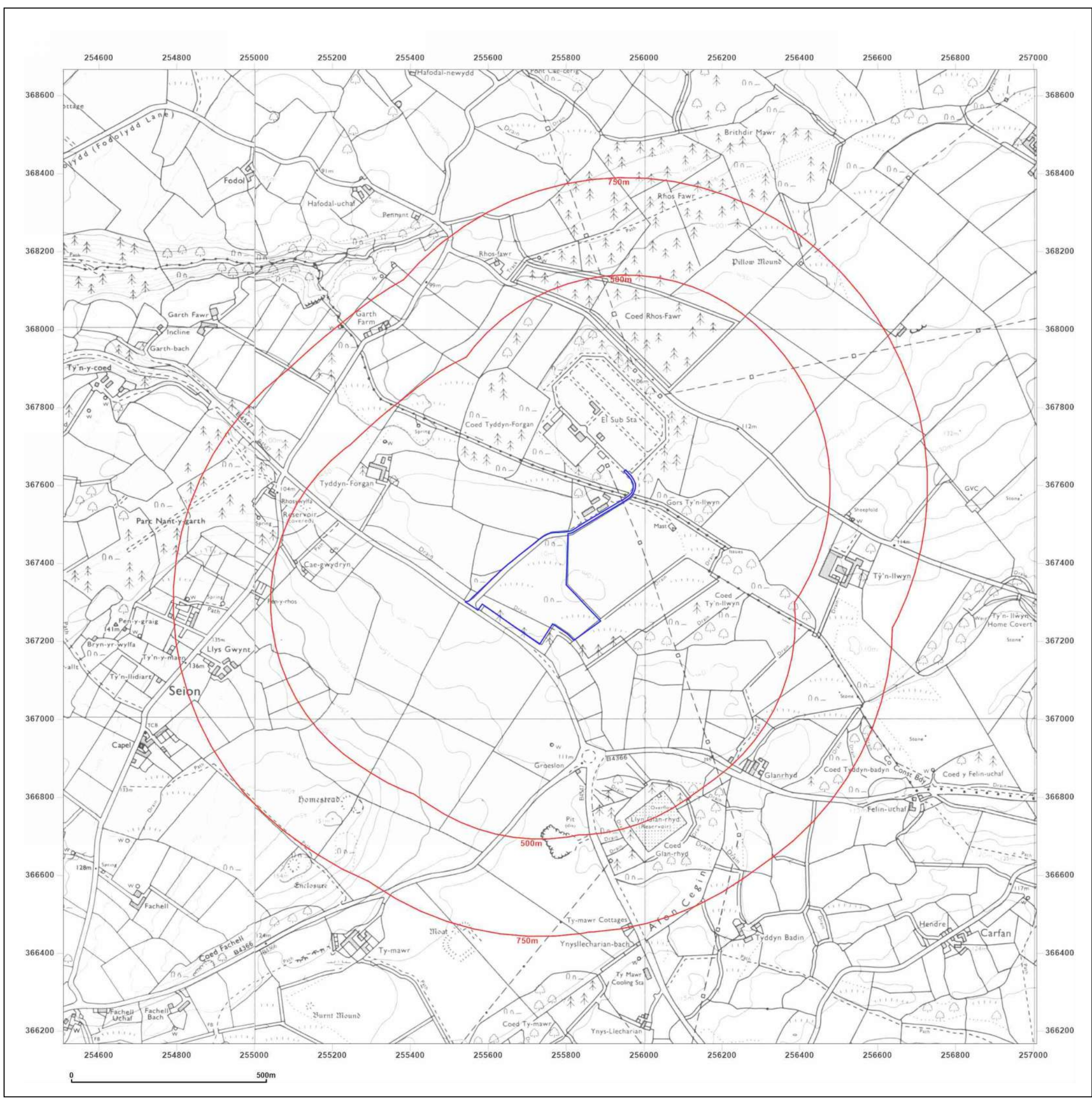


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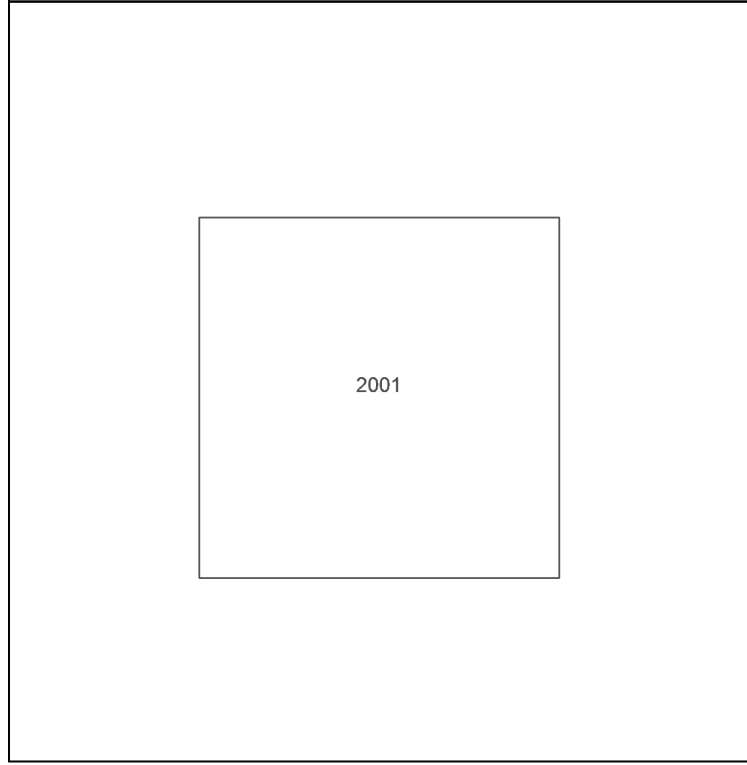
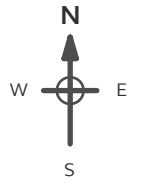
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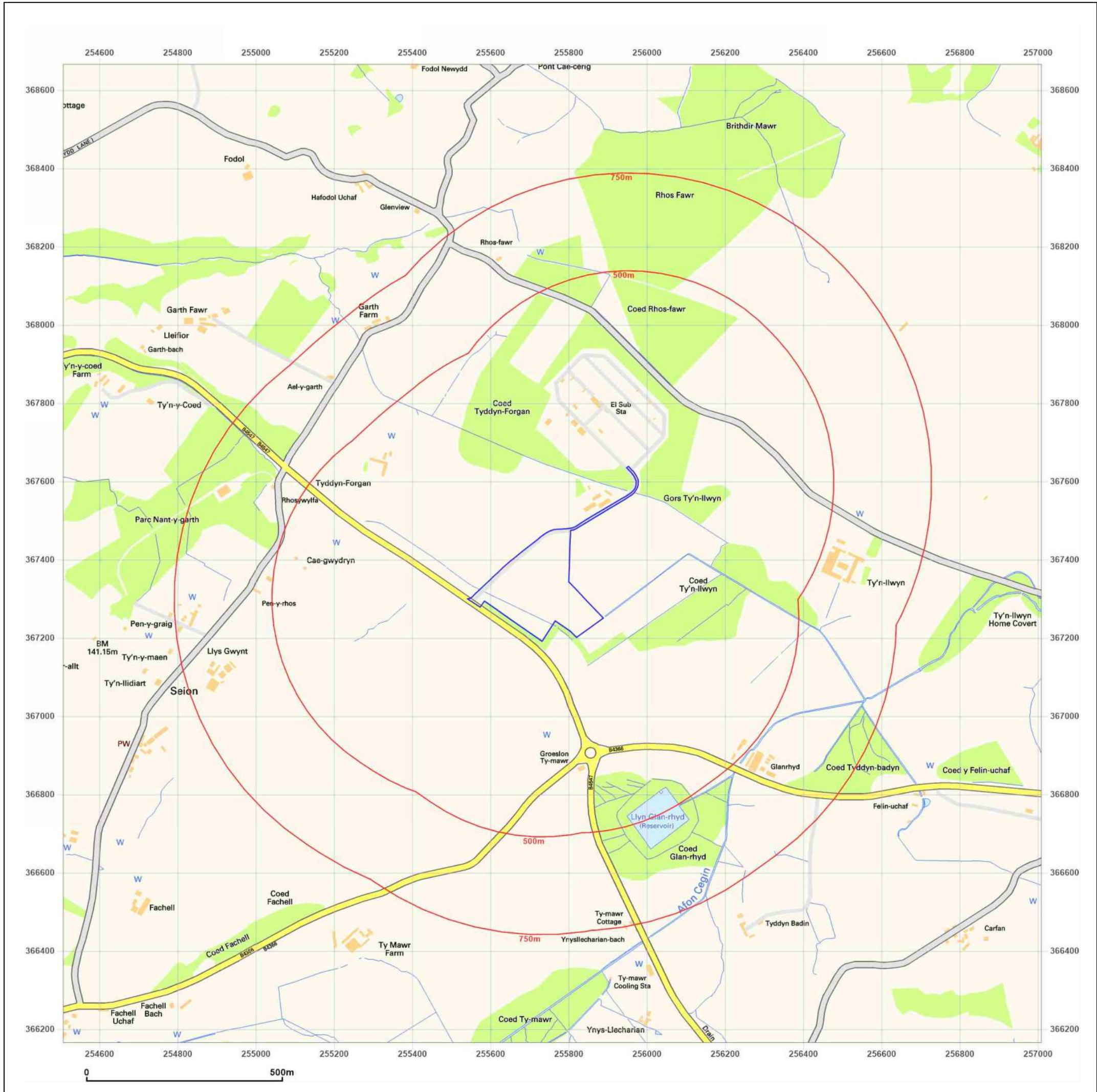


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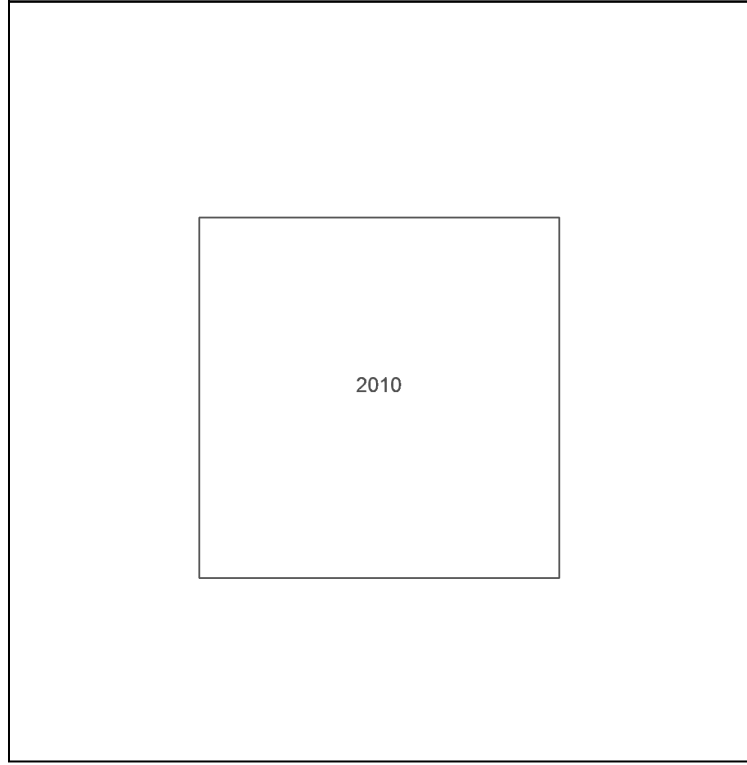
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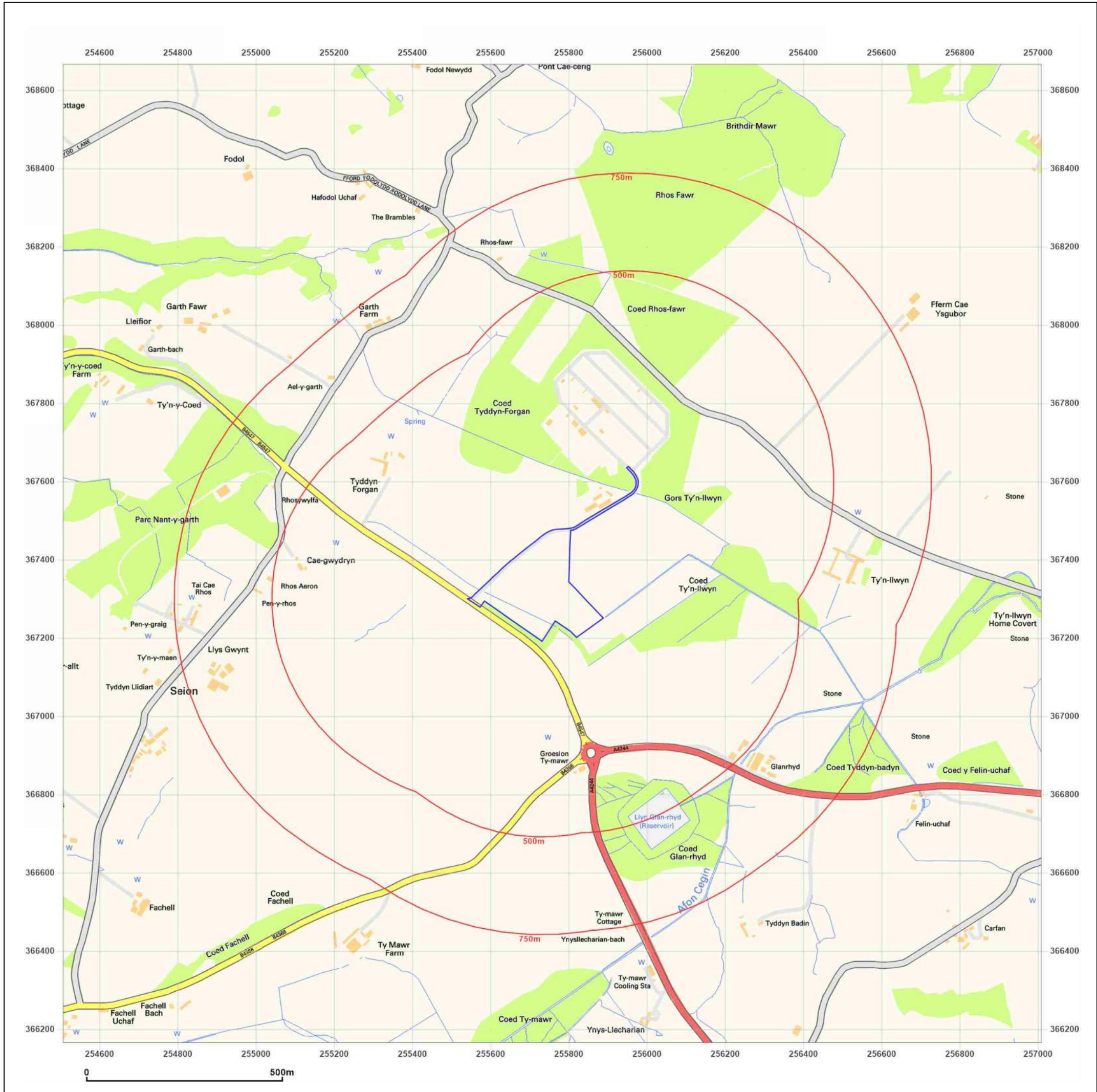


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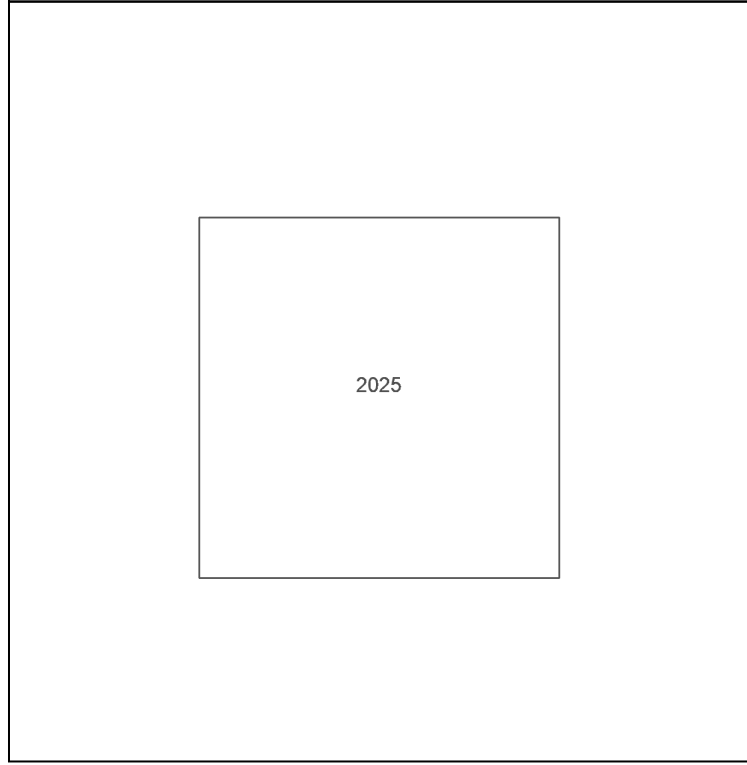
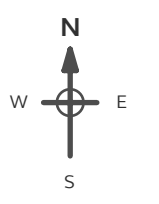


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