

CPAT Report No. 1823

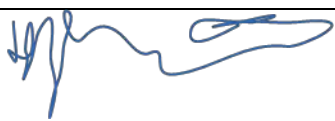
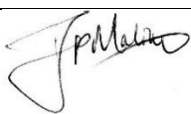
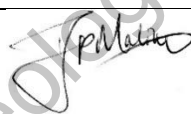
## Porth Wen, Anglesey 132kv cable

HISTORIC ENVIRONMENT APPRAISAL



YMDDIRIEDOLAETH ARCHAEOLEGOL CLWYD-POWYS  
CLWYD-POWYS ARCHAEOLOGICAL TRUST

Client name: Scottish Power Energy Networks / Manweb PLC  
 CPAT Project No: 2560  
 Project Name: Porth Wen, Anglesey 132kv cable  
 Grid Reference: SH379922  
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## Summary

A desk-based appraisal has been undertaken by Clwyd-Powys Archaeological Trust, on behalf of Scottish Power Energy Networks / Manweb PLC, in connection with a restringing of a 132 kv overhead power cable along a 2.8 km route within the circuit between Amlwch and Wylfa grid substations. The cable is mostly over pastoral land to the south-east of the nuclear power station at Wylfa and to the south of the nearby village of Cemaes. This desk-based assessment considered undesignated and designated assets within 100m of the new cables and 50m of the access routes, with a specific aim of providing information to the client so their contractors would be made aware of the location of historic assets, and thereby avoid incidental damage to them.

The study comprised analysis of spatial information for heritage assets and documentary evidence, such as early maps, to determine the impact that the proposed maintenance works would have on the historical environment. Through this assessment, 15 historic assets were identified as being in the assessment area, and data for five previously known assets was supplied by Gwynedd Archaeological Trust's Historic Environment Record. The assessment concluded that works would occur near to several of these assets, and therefore the restringing of cables along the 2.8 km route may pose a very slight risk to the heritage assets. Preservation in situ through avoidance of machinery within sensitive zones is recommended, but if the works result in any impacts, then archaeological investigation and recording is recommended.

## Crynodeb

Bu Ymddiriedolaeth Archaeolegol Clwyd-Powys yn cynnal asesiad wrth ddesg ar ran Scottish Power Energy Networks / Manweb PLC, mewn cysylltiad â gwaith ailgylmu llinell bŵer 132 kv uwchben ar hyd llwybr 2.8 km o fewn y gylchlin rhwng is-orsafoedd grid Amlwch a'r Wylfa. Mae'r cebl yn mynd yn bennaf dros dir bugeiliol i'r de-ddwyrain o'r orsaf ynni niwclear yn yr Wylfa ac i'r de o bentref Cemaes gerllaw. Bu'r asesiad wrth ddesg hwn yn ystyried asedau wedi'u dynodi a heb eu dynodi o fewn 100m o'r ceblau newydd ac o fewn 50m o'r llwybrau mynediad, â'r nod penodol o ddarparu gwybodaeth i'r cleient fel y gellid sicrhau bod eu contractwyr yn ymwybodol o leoliad asedau hanesyddol ac, felly, osgoi eu difrodi'n ddamweiniol.

Roedd yr astudiaeth yn cynnwys dadansoddi gwybodaeth ofodol am asedau treftadaeth a thystiolaeth ddogfennol, fel mapiau cynnar, i benderfynu ar yr effaith y byddai'r gwaith cynnal a chadw arfaethedig yn ei chael ar yr amgylchedd hanesyddol. Trwy'r asesiad hwn, nodwyd bod yna 15 o asedau hanesyddol yn ardal yr asesiad, a chyflenwodd Cofnod Amgylchedd Hanesyddol Ymddiriedolaeth Archeolegol Gwynedd ddata am bum ased a oedd yn anhysbys o'r blaen. Daeth yr asesiad i'r casgliad y byddai gwaith yn digwydd yn agos at nifer o'r asedau hyn, ac felly gallai ailgylmu ceblau ar hyd y llwybr 2.8 km achosi risg fach iawn i'r asedau treftadaeth. Argymhellir cadwraeth yn y fan a'r lle trwy osgoi defnyddio peiriannau o fewn parthau sensitif ond, os y bydd y gwaith yn achosi unrhyw effeithiau, yna argymhellir gwaith archwilio a chofnodi archaeolegol.

# 1 Introduction

- 1.1. This report describes the results of a Historic Environment Desk-Based Appraisal (DBA) undertaken by Clwyd-Powys Archaeological Trust (CPAT) for potential direct impacts on heritage assets during the restringing of a 132kV overhead cable at an existing 2.8 km route within the circuit between Amlwch and Wylfa grid substations. This work requires 50m buffer zones for access routes, and a 100m buffer zone around the new infrastructure and cables.
- 1.2. This DBA has been conducted on behalf of Scottish Power Energy Networks (SPEN) / SP Manweb PLC, who have asked for any known heritage assets within the assessment area to be identified so their contractors can avoid them. In July 2021 Gwynedd Archaeological Planning Services (GAPS) approved the Written Scheme of Investigation (WSI) and in September provided Historic Environment Record (HER) data.
- 1.3. The works form part of permitted development to maintain the national energy infrastructure.



Fig. 1 Location of assessment area within Anglesey

## Nature of the Scheme

- 1.4. SPEN are providing a Point of Connection (POC) to a solar park in the Rhosgoch area of Anglesey. The connection has an export capacity of 49.99MVA and import capacity of 300kVA. The POC is to the existing 132kV distribution network, thereafter the Customer is responsible for the main construction works including the laying of 132kV cables from their site to the 132kV DD Route overhead line circuit between Amlwch and Wylfa grid substations.
- 1.5. The proposed solution for SPEN, is to also construct an in-line 132kV wood pole structure (between DD19 and DD20), to allow a tee-connection, construct an All Dielectric Self Supporting (ADSS) conductor from the POC to Tower DD1 (approximately 2.8km) and complete all protection and control works to commission a triangulated protection scheme between Wylfa, Amlwch and the POC.

## 2 Historical Background

Later prehistory is particularly evident on Anglesey, and is apparent within the assessment area. Anglesey is prolific with prehistoric earthworks and megalithic monuments, and funerary sites recently have come to prominent attention due to expansive infrastructure projects. Within the assessment area however, there seems to be no evidence for barrows/cairn structures or complexes, however prehistoric curvilinear/rectilinear earthworks have been identified towards the centre of the assessment area.

Direct evidence of settlement activity in the Roman period is currently absent from the assessment area, and is relatively rare in Anglesey as a whole, though Romano-British settlements are found elsewhere on the island. The Menai Strait was clearly a focus for Roman activity and this is illustrated by the discovery of the Roman settlement at Tai Cochion (PRN 28425), on the Anglesey side of the strait some 8.5km to the south-west of the Britannia Bridge. The discovery of Roman copper ingots (PRN 38250) by divers in the strait suggests that it was used by shipping in the period. Northern Anglesey has relatively little evidence of Roman occupation or activity, but there is a possibility of Roman presence in the area; in 1990 a possible Roman fortlet was identified at Cemlyn Bay in the cropmarks during a drought.

The medieval period is well represented topographically on Anglesey, however northern Anglesey is generally less well understood than the more populated parts to the south. Recent excavations have revealed early medieval cemeteries around Wylfa Nuclear Power Station as well as possibly post-Roman settlements towards the west of Cemlyn. There is a possible martyrium at a cemetery site excavated in 2018 near Trywn Wylfa/Wylfa Head. Hagiographically, post-Roman and medieval saints have established several church sites in the area near to the assessment area, such as the churches at Llanbadrig and Rhosbeirio. Both church sites are said to be early medieval; the current structures, however, are significantly later.

The most obvious features both within and immediately outside the assessment area are field systems, most of which have probably existed in their current state since late to post-medieval times, but may be significantly older. The farmsteads and farm complexes associated with these field systems are seen in features that may still exist in the assessment area today; animal pens such as drystone sheepfolds as well as functional outbuildings may still be present.

Many post-medieval churches and places of worship are near to the assessment area, such as Capel Bethesda outside of Cemaes as well as its associated burial ground, however, this has fallen out of use as a place of worship. Today the area has many post-medieval farms and modern housing, some of which exist within the assessment area.

## 3 Results of Desk Based Assessment

- 3.1. The DBA was conducted from the CPAT Field Services offices in accordance with the Chartered Institute for Archaeologists' (CIfA) *Standard and Guidance for Historic Environment Desk-Based Assessment* (2014) (but with no walkover survey). Analysis of historic mapping has identified several sites (CPAT numbers Table 3-1). Data have been purchased from Gwynedd Archaeological Trust's Historic Environment Record (HER) and are presented in Table 3-2. All assets are numbered on Drawing 1, an A3 map at the end of this report, and are shown schematically on Fig. 2.

IMPORTANCE	CPAT_ No.	SITE_NAME	DESCRIPTION	NGR	EASTING	NORTHING
Low	1	Tan-y-fron	Named house(s) on 1st and 2nd edition OS maps	SH3649193072	236491	393072
Medium	2	Burial Ground	Cemetery that appears on 1st and 2nd edition OS maps	SH3650793088	236507	393088
Negligible	3	Sheepfold	Possible sheepfold, appears on 1st Edition OS map	SH3656593019	236565	393019
Negligible	4	Well	Well that appears on 1st and 2nd edition OS maps	SH3646892955	236468	392955
Low	5	Mersey Villa	Named house on 2nd edition OS maps.	SH3690192935	236901	392935
Low	6	Môr-annedd	Named house on 2nd edition OS map	SH3688792950	236887	392950
Negligible	7	Sheepfold	Possible sheepfold associated with Cefn-helyg farmstead, appears on 1st and 2nd edition OS maps	SH3654092769	236540	392769
Low	8	Cefn-helyg	Named farmstead and associated structures, appears on 1st and 2nd edition OS map	SH3651792760	236517	392760
Negligible	9	Whim; Cefn-helyg	Circular feature possibly being a whim to Cefn-Helyg farmstead, appears on 1st and 2nd edition OS maps	SH3651292741	236512	392741
Negligible	10	Sheepfold	Possible sheepfold associated with Cefn-helyg farmstead, appears on 1st and 2nd edition OS maps	SH3657892724	236572	392737
Low	11	Tai'r-lôn (East)	Named houses spread over two sites. Appears on 1st and 2nd edition OS maps.	SH3671292816	236712	392816
Low	12	Tai'r-lôn (West)	Named houses spread over two sites. Appears on 1st and 2nd edition OS maps.	SH3669592785	236695	392785
Negligible	13	Sheepfold	Possible sheepfold, only appears on 1st edition OS map	SH3683092681	236830	392681
Negligible	14	Well	Well; appears on 2nd edition OS map.	SH3819392211	238193	392211
Low	15	Shop-y-goeden	Named site that appears on 1st and 2nd edition OS Map.	SH3890892033	238908	392033

Table 3-1 Historic assets identified by CPAT from historic mapping



PRN	Site_Name	Period	NGR	Easting	Northing
7695	Capel Bethesda, Cemaes	POST MEDIEVAL	SH36539308	236530	393080
84120	Curvilinear Earthwork, North of Carrog	UNKNOWN; PREHISTORIC	SH3748492334	237484	392334
84121	Curvilinear Earthwork, North of Carrog	UNKNOWN	SH3725392438	237253	392438
84103	Quarry, North of Cae'r Mynach	POST MEDIEVAL	SH3784592255	237845	392255
84122	Rectilinear Earthwork, Possible, North of Carrog	UNKNOWN	SH3716092360	237160	392360

3.2. Table 3-2 Table of Assets from Gwynedd Archaeological Planning Services (GAPS)

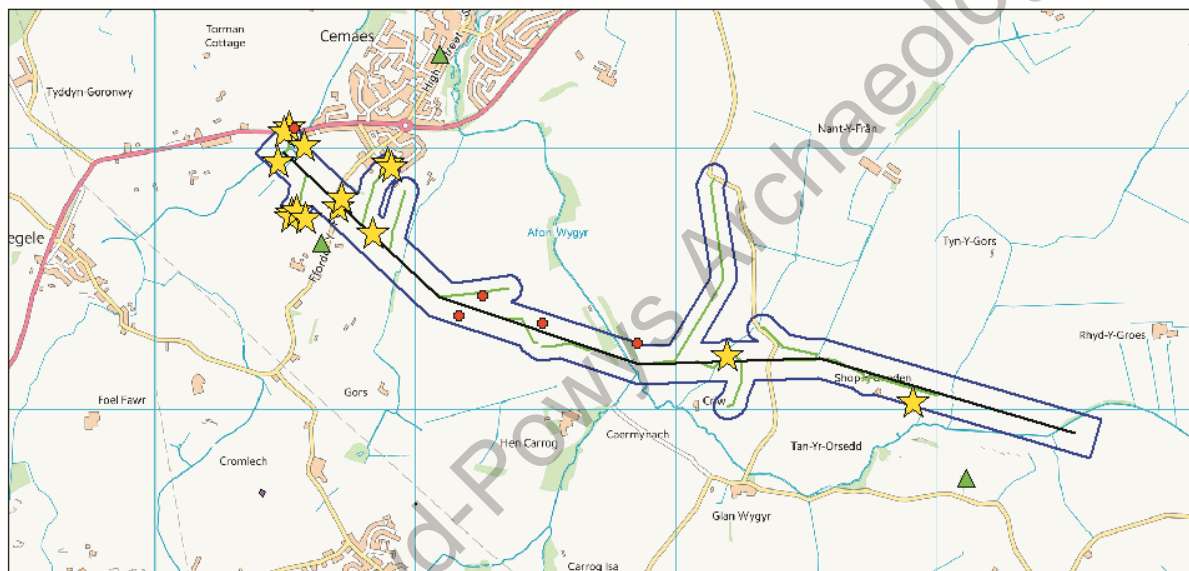


Fig. 2 Cable route location plan: HER PRN shown as points, CPAT historic assets as stars, and listed buildings as triangles

### 3.3. Chronological development of study area

3.3.1. There are several examples of prehistoric assets and sites within the assessment area. Notably, three earthwork features are present towards the centre of the area to the west of Afon Wygyr (PRN 84120, 84121, 84122). This implies possible prehistoric activity and even settlements may exist, especially Bronze Age activity; during the Early to Middle Bronze Age, curvilinear structures predominate and their existence within the assessment area suggests more prehistoric features may exist.

3.3.2. The assessment area is devoid of any Roman features or known heritage assets that can be identified as Roman. It is possible there may be unknown Roman activity due to the presence of the nearby potential fortlet at Cemlyn Bay (see above), however there are currently no signs of Roman presence within the assessment area.

3.3.3. During the medieval era, enclosures became much more extensive and field systems become much more established and some remain extant. The field systems within the



assessment area may be medieval (or even older). However, the archaeological remains of field systems can be limited and difficult to conserve. Besides these field systems and farming structures, there are only a few other signs of medieval activity; a site designated as an "old quarry" (PRN 84103) has been identified as probably post-medieval, but may have been exploited earlier than this. There is only limited documentary evidence for it in the form of early OS maps.

3.3.4. Within the assessment area, the most obvious features are of post-medieval and modern date. In terms of preservation, these periods are probably the most obvious for producing surviving features that may impact progress for SPEN. Several buildings within the assessment area have been identified as having post-medieval and early modern structures, such as sheepfolds and farm outbuildings associated with farmsteads. The above mentioned "old quarry" (PRN 84103) is believed to be post-medieval, and may include some currently unidentified features near to the remains of the quarry site. There are several wells that are present on old OS maps (CPAT\_NUMBER 04, CPAT\_NUMBER 14), but disappear from records in later periods, and these were probably still in use during the post-medieval period but fell out of use by the modern era. With the exception of the implications of light industry from the old quarry, the overwhelming trend of post-medieval remains in this area seems to be for typically agricultural and functional rural buildings and structures.

3.3.5. As expected, most of the buildings through the assessment area are early modern to present day. There are several notable buildings from the past 2 centuries, most notably the Calvinistic place of worship known as Capel Bethesda in Cemaes (PRN 7695). It falls within the northern area of the restringing project, and has an attached burial ground. The current building is from the 1860s, and it also once served as a school for the local area. There are several small settlements that are within the assessment area and may have historical value as buildings characterising the locality. This may be apparent at farmsteads such as at Cefn-helyg, Tai'r Lôn, and Shop-y-Goeden (CPAT\_NUMBERS 8, 11/12, 15). Modern houses are present throughout the assessment area.

### 3.4. Historical mapping

3.4.1. Historical records such as tithe maps may provide an insight into heritage assets and potentially historically significant sites within the assessment area. The local tithe maps proved to be limiting in how much information could be obtained from them. Figure 3 shows a tithe map from 1845 and clearly show some form of land parcelling which may be partially based on field systems that were firmly established before the production of this map. They may also preserve smaller parcels of land focussing on population centres, as can be seen around Cemaes and Rhosbeirio on the above map.



Fig. 3 North half of a tithe map for The Parish of Llanbadrig from 1845, sharpened by 50%

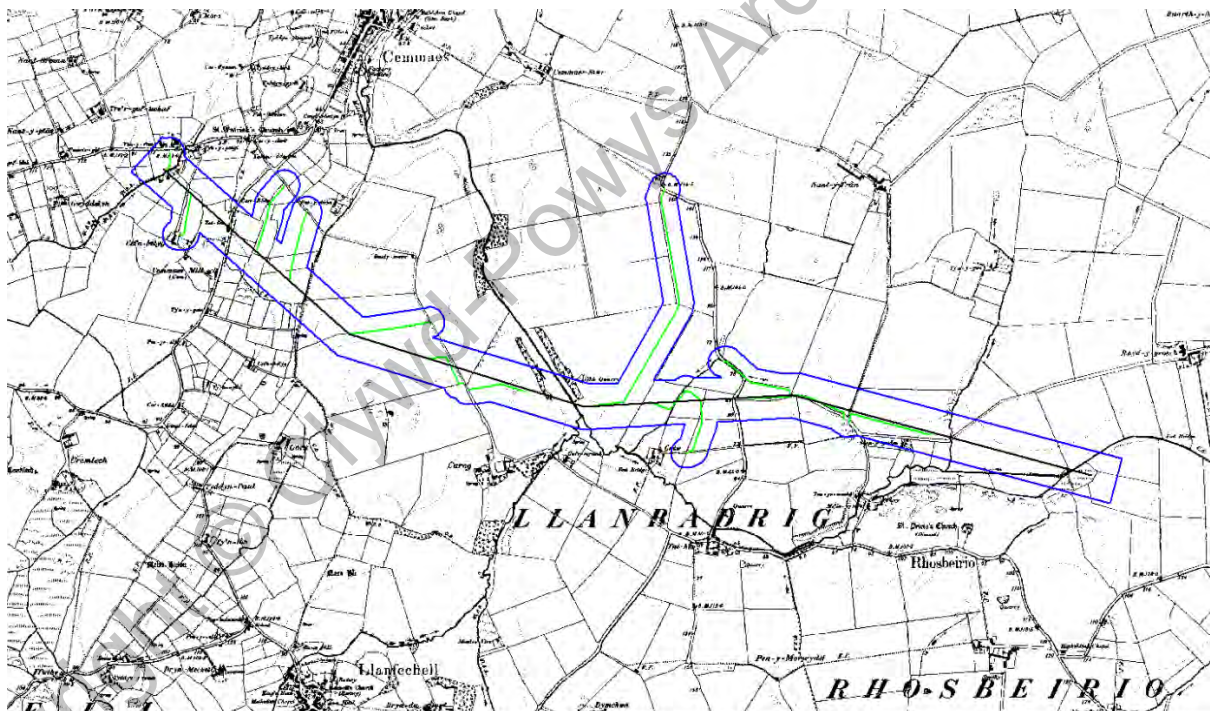


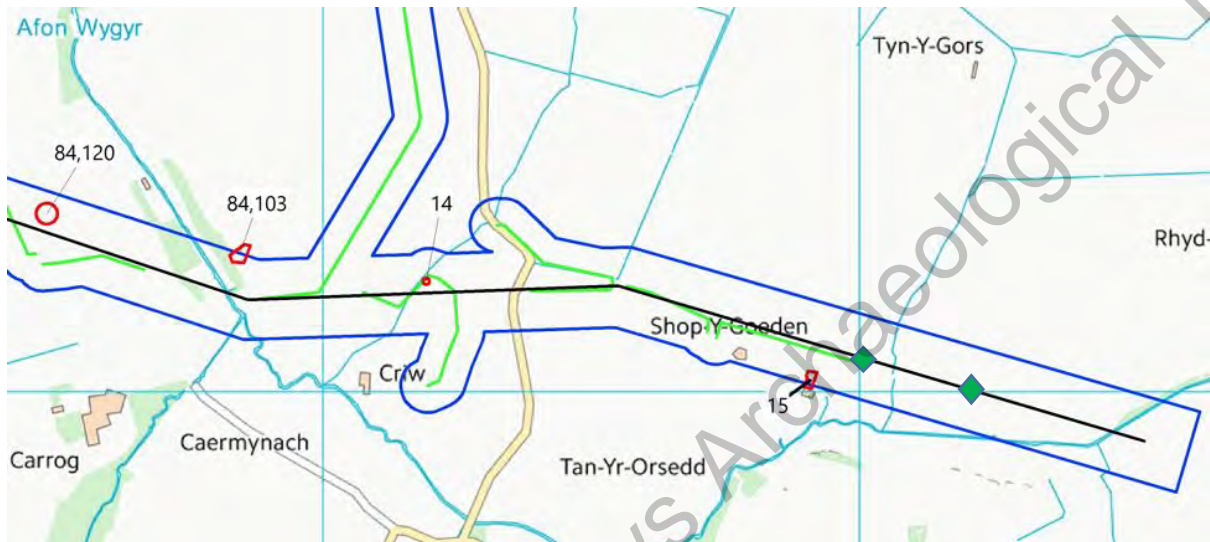
Fig. 4 2<sup>nd</sup> Edition OS Map featuring the current site access routes and buffer zones

3.4.2. 1<sup>st</sup> and 2<sup>nd</sup> edition Ordnance Survey ('OS') maps provide a useful resource in understanding the historical environment of an area. Fig. 4 shows the site access routes and buffer zones over a 2<sup>nd</sup> Edition OS map, which shows hamlets and farmsteads dotted through the assessment area. By comparing the 1<sup>st</sup> and 2<sup>nd</sup> edition maps, features may be made obvious or can disappear between editions, or be revealed in later editions as surveyors notice features. Individual surveyors may have changed their criteria and idiosyncratically decided to include a feature that may have been excluded in previous editions.

3.4.3. The map resources available have shown that the area has been predominantly rural and agricultural for at least 2 centuries. There are built-up villages with larger residential districts but nothing considerably large within the assessment area; only the edge of villages, small hamlets, and farmsteads. By comparing this with modern OS maps, the likelihood of hitting documented features can be ascertained.

## 4 Impact Assessment

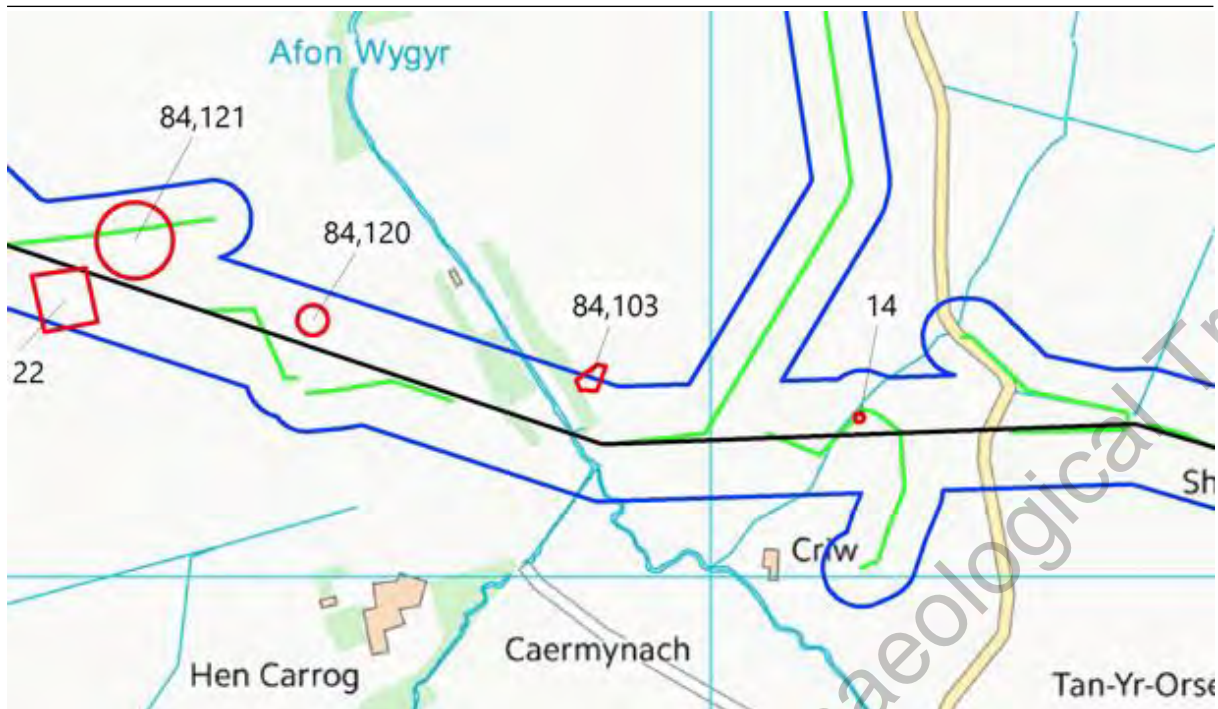
### 4.1. Specific impact areas



*Fig 5 Eastern area showing approximate locations of pylons DD19 and DD20 (Green diamonds) that require groundworks, and nearby historic assets as red polygons*

4.1.1. At the eastern part of the assessment area, there is a plan to install a wooden pole between DD19 and DD20. In terms of possible impact this may have on heritage assets, there is only one potential site that may be impacted, which can be seen in Figure 5. Shop-y-goeden (CPAT\_NUMBER 15) is a small hamlet or homestead that has potentially post-Mediaeval structures, and is within 100 metres of any groundworks that may be undertaken towards DD19 and DD20, as well as being within 50 metres of the access route that will be used. The buildings at Shop-y-goeden are of low heritage significance, but may produce unexpected features or require archaeological mitigation if work is too disruptive of the style and context that characterise the building.





*Fig. 6 Centre of assessment area, red polygons indicating historic assets identified by the study*

4.1.2. Towards the centre of the assessment area (Figure 6) in the fields near the Afon Wygyr, several sites were identified by GAPS and may be at risk of being damaged by access routes. PRN 84121 is a potential curvilinear earthwork and is recorded as being within 15 metres of the access route. However, it is described as being a 100 m earthwork that is bisected by two field boundaries, and so the likelihood of the access route damaging the earthwork, based on this projected size, is high. Likewise with the two other earthworks, PRN 84120 and PRN 84122, the possibility is present of the access routes intersecting an earthwork. The second curvilinear earthwork (PRN 84120) is within 35 metres of the cable route and within 60 metres of the access route, and it is stated to be 35 m in diameter so this distance may be considerably less (Figure 7). In this central area, there is also a potential well (CPAT\_NUMBER 14) that may exist in the path of the access route to the north of Crw. This well is currently of unknown period but only appears on the 2<sup>nd</sup> edition OS maps. It may have gone unidentified in earlier maps or it could be a relatively modern structure.

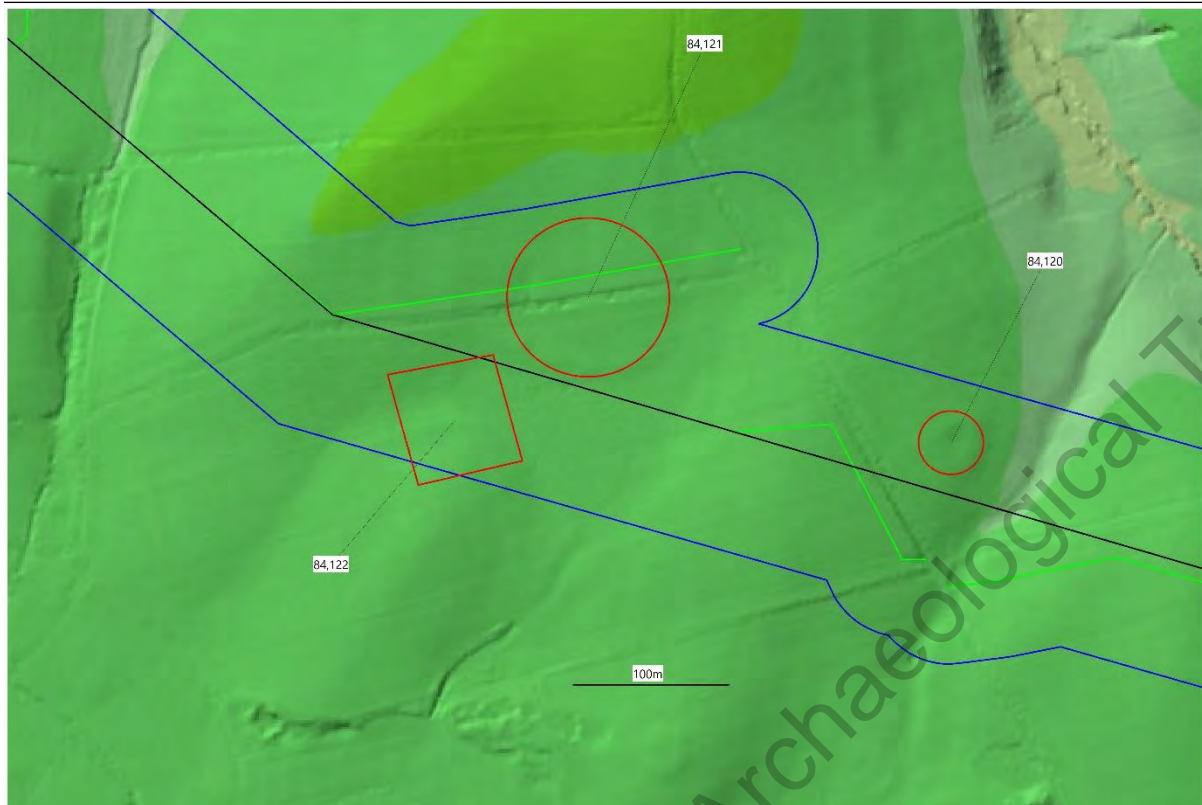


Fig 7 Lidar imagery showing the low earthworks and cable route within the central zone

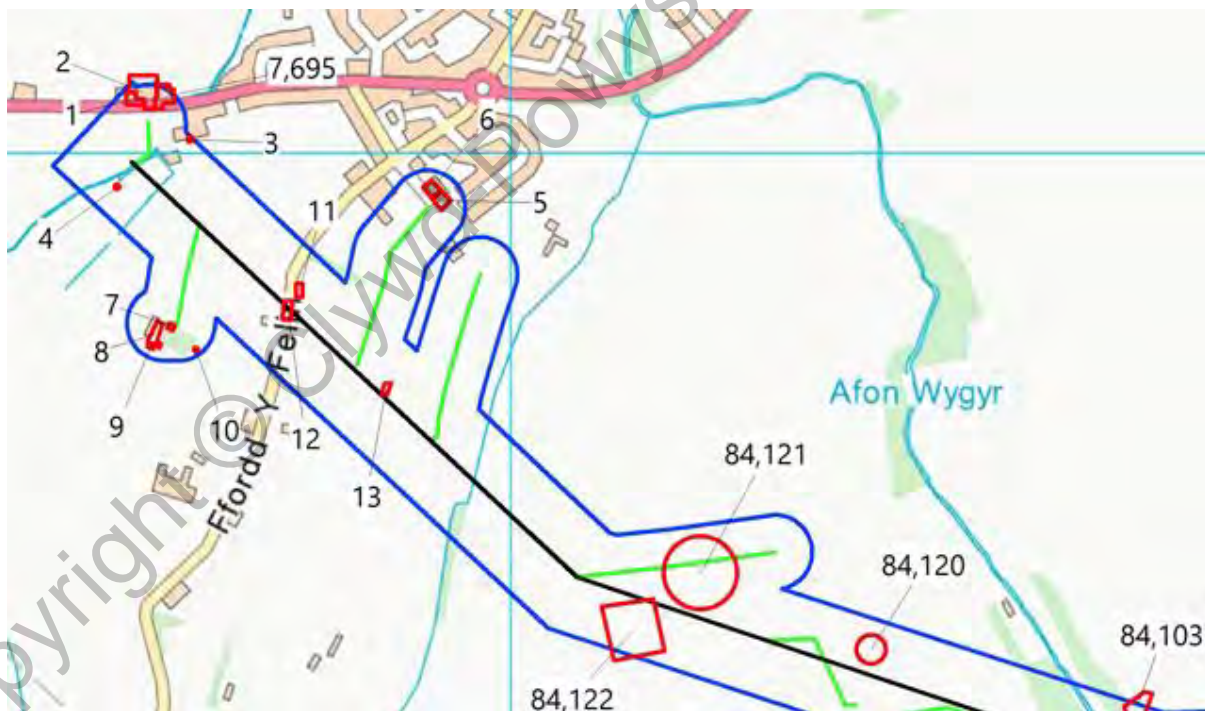


Fig. 8 Western part of assessment area with red polygons indicating historic assets

4.1.3. The assessment area's western part (Figure 8) is dense in potential assets due to it being nearer residential areas and a farm. The houses at Tai'r Lôn (CPAT\_NUMBER 11/12) are directly underneath the cable that will be restrung, but will not have any access routes established around the structures, reducing risks posed to it. This also applies to a

structure that has been identified as a potential sheepfold (CPAT\_NUMBER 13). The farm at Cefn Helyg (CPAT\_NUMBERS 7, 8, 9, 10) may potentially have several farm structures still present that predate the modern era. A significant risk to archaeology could arise during the use of this access route. There are potential sheepfolds and a possible whim present at the farm, however the significance of the archaeology itself here is localised and low, if not negligible. The farmhouse itself may be of local significance, but further investigation would be required to ascertain this.

- 4.1.4. In terms of access, there is no significant risk to any building along the roads in the western part. The buildings at Capel Bethesda (PRN 7695) and associated burial ground (CPAT\_NUMBER 2), whilst locally important, is sufficiently mitigated by the presence of tarmacked road that the installation of access routes would in likelihood not cause damage. This may also apply to the buildings identified as Môr-annedd and Mersey Villa (CPAT\_NUMBERS 5, 6); access via a modern tarmacked road should mitigate any risk to these buildings.

## 5 Conclusions

### 5.1. Discussion: synthesis of known and potential of the archaeological resource

The risk to the archaeological resource is minimal to the western and eastern parts of the assessment area. However, the access routes in the centre of the area are at high risk of truncating or damaging potential prehistoric earthworks. Further investigation into the earthworks present in this area would mitigate risk of losing a potential insight into the understanding of prehistoric Anglesey. The nature of earthworks as an archaeological resource would require a careful approach to reconciling access routes with preserving or investigating the archaeological resource present.

The potential damage to farm complexes should be considered, as several of the farms present in the area have been identified as at least being pre-modern era. These should be investigated to confirm their age, and their value within the historic environment. Farm outbuildings of unknown age are also at risk of being damaged by access routes, and these should be recorded if still present, as they may provide insight into ancient local economy and agricultural practices.

### 5.2. Recommendations for protection of heritage assets

Some of the archaeological resource in this area is of potentially high value. It is recommended that the earthworks should be avoided and routes be redirected to avoid them. Signage and barrier fencing could be erected around them if this would help contractors in identifying archaeologically sensitive zones. If threatened by the proposed activities, however, then any structures associated with pre-modern farms should be recorded by a photo building survey, and any surviving farmhouses along the access routes and restraining corridor, such as Cefn Helyg, that may predate the modern era, should be subjected to a Level 2 building survey. The other smaller sites that seem near to the access routes, such as the well, should be located and recorded in order to understand their value and ascertain whether they are of archaeological significance.

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### 5.3. Conclusions

Restricting and access routes would appear to avoid most of the historic assets, but there might need to be some redirection under guidance from archaeologists in order to avoid damaging prehistoric archaeology. Mitigation in the form of thorough recording may be required if harm to sites is unavoidable.

## 6 Sources

Gwynedd Archaeological Trust Historic Environment Record

### **Cartographic sources**

1845 Tithe apportionment map for Llanbadrig Parish

1886-7 Ordnance Survey 1:2500 1<sup>st</sup> edition Anglesey

1899 Ordnance Survey 1:2500 2<sup>nd</sup> edition Anglesey



## Appendix 1: CPAT WSI 2560rev1

### 1 Introduction

- 1.1. The Field Services Section of the Clwyd-Powys Archaeological Trust has been instructed by Mark Foden, on behalf of Scottish Power Energy Networks (SPEN) / SP Manweb PLC, to undertake a desk based appraisal in connection with the restringing of a 132kv overhead cable at an existing 2.8 km route of several pylons within the circuit between Amlwch and Wylfa grid substations (Central NGR SH379922) (Figure 1).



Figure 1 Location of proposed works with centre of east-west route arrowed

- 1.2. SPEN have described the project as their part of a commitment to connect a solar farm into the national grid. SPEN are providing a Point of Connection (POC) to a solar park in the Rhosgoch

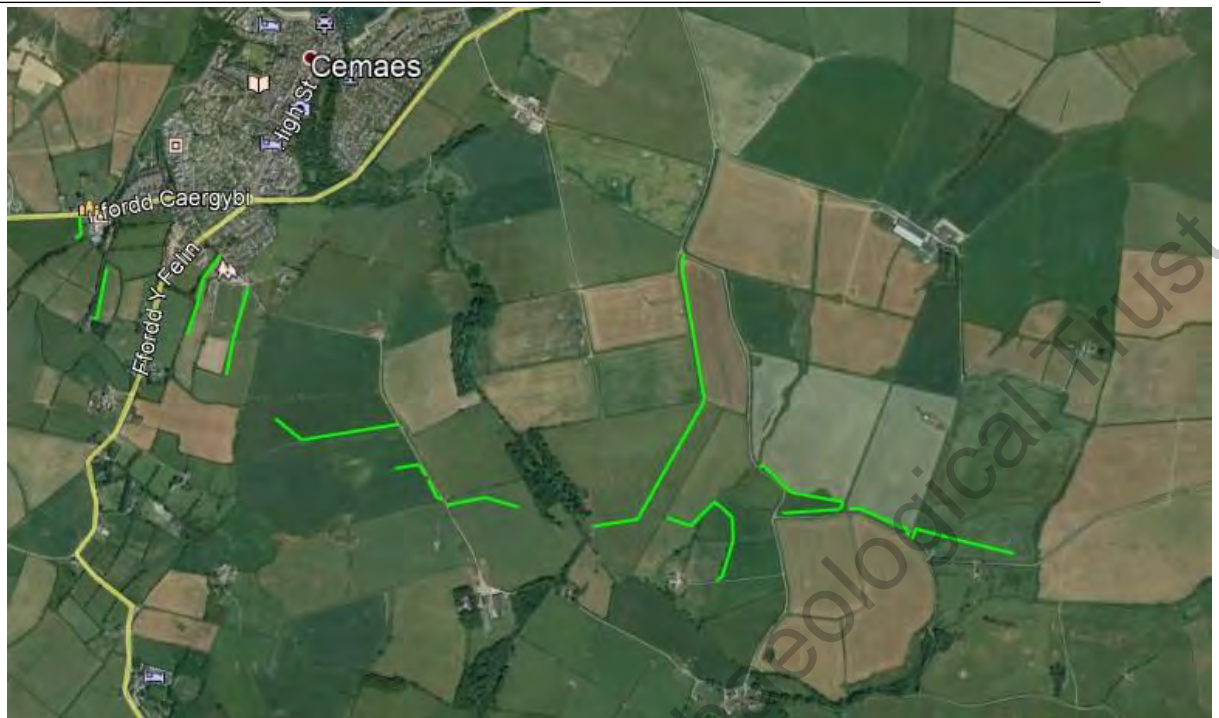
area of Anglesey. The POC is to the existing 132kV distribution network, thereafter the Customer is responsible for the main construction works including the laying of 132kV cables from their site to 132kV DD Route overhead line circuit between Amlwch and Wylfa grid substations.

- 1.3. Existing 132kV overhead lines run from DD1 to DD 23 (Figure 2). There will be access and above ground works along the line, with no intrusive works or excavations except for the area marked in the circle around DD19 on the attached plan. As the project involves working on an existing OHL route, the potential impact is primarily for access except in area around DD19.



Figure 2 Detail showing the existing overhead line and buffer zone, with DD19 circled

- 1.4. SPEN will construct a single in-line 132kV wooden pole structure (between DD19 and DD20), to allow a tee-connection, to accommodate an All Dielectric Self Supporting (ADSS) conductor from the POC to Tower DD1 (approximately 2.8km) and complete all protection and control works to commission a triangulated protection scheme between Wylfa, Amlwch and the POC.
- 1.5. Access routes to the line to conduct the overhead works are shown on Figure 3. These are existing and although it is not expected that construction activities for the access tracks will be necessary, there will be traffic along them by the machinery involved in the works



*Figure 3 Access routes shown in green against satellite imagery*

- 1.6. The access routes have been assigned 50m buffer zones and the cables themselves have a 100m buffer zone around the new infrastructure, and SPEN have asked that any known heritage assets within these zones are identified.
- 1.7. The impact for most of the works would be minimal, but at DD19 physical impacts from groundworks would comprise drilling a post-hole to receive the timber post, and surface disturbance from the related machinery around it. The access routes have been flagged up to be included in the desk study so that vehicles using them can be made aware of any constraints, and therefore avoid inadvertently damaging any known archaeological remains.

### **Purpose of this WSI**

- 1.8. This Written Scheme of Investigation (WSI) details the methodology for completing a desk-based assessment, which is seen as the first phase of a potential programme of archaeological investigation, designed to establish the baseline conditions and provide recommendations for any further stages of assessment and/or mitigation which may be required.

### **Brief overview of archaeological background**

- 1.9. The route lies within an area known for its prehistoric remains. Excavations at Carrog within cropmarks of a small hilltop enclosure (HER 7362), uncovered pits with worked flint and pottery of Early Neolithic type (Smith 2011, 9)<sup>1</sup>. Three ring-ditches in proximity (HER 29454) suggest the presence of a barrow cemetery during the Bronze Age, lying south of the route, whilst a Bronze Age cremation urn was found in the 19<sup>th</sup> century to the north of the alignment at Plas Penrhyn (HER 3050). Close to this location copper cakes dated to the Roman period have been found. During medieval and post-medieval times the route lay amidst farm land, with dispersed farmsteads.

<sup>1</sup> Smith, G., 2011, *Evaluation Excavation at a Prehistoric Hilltop Enclosure at Carrog, Llanbadrig, Anglesey*



## 2 Aims and Objectives

2.1. The aims of this desk based assessment are:

- to make full and effective use of existing information to establish the archaeological significance of the study area;
- to assess the impact of the development proposals on surviving monuments or remains; and
- to help inform future decision making, design solutions and potential mitigation strategies.

2.2. The objectives of this assessment are:

- to reveal by means of a desk-based study, the nature, condition, significance and, where possible, the chronology of the cultural heritage within the area of the proposed development in so far as these aims are possible;
- to record any heritage assets identified during the assessment;
- to prepare a report and constraint mapping outlining the results of the assessment.
- to identify any further stages of assessment which may be required
- to provide data to SPEN so assets are avoided and design mitigation as appropriate

## 3 Methodology

3.1. The assessment will be guided by the Chartered Institute for Archaeologists' (CIfA) Standard and Guidance for Historic Environment Desk-based Assessment (2020).

### Desk Based Assessment

3.2. Stage 1 of the assessment will involve the examination of all the readily available online primary and secondary documentary, cartographic, pictorial, and photographic sources at the following repositories (subject to access in accordance with Coronavirus control measures):

- the regional Historic Environment Record
- Anglesey Record Office, Llangefni.
- Caernarfon Record Office
- Bangor University
- Cadw for data on designated and registered heritage assets.

3.3. The assessment will consider:

- The nature, extent and degree of survival of archaeological sites, structures, deposits and landscapes within the study area through the development of an archaeological deposit model. The deposit model will reflect accurately the state of current knowledge and provide a research agenda for further work if necessary
- The significance of any remains in their context both regionally and nationally.
- The history of the site.
- The assessment of any environmental, faunal, artefactual and geotechnical deposits through existing data or inference.
- The potential impact of any proposed development on the setting of known sites of archaeological importance
- The potential for further investigative work including recommendations where appropriate for a methodology for non-intrusive survey and/or intrusive evaluation to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development and/or an appropriate mitigation strategy.

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## GIS Data

- 3.4. A GIS data set will be prepared for the project to provide locational details and other relevant information for each heritage asset. This will be made available to the client in an agreed format.

## Baseline Report

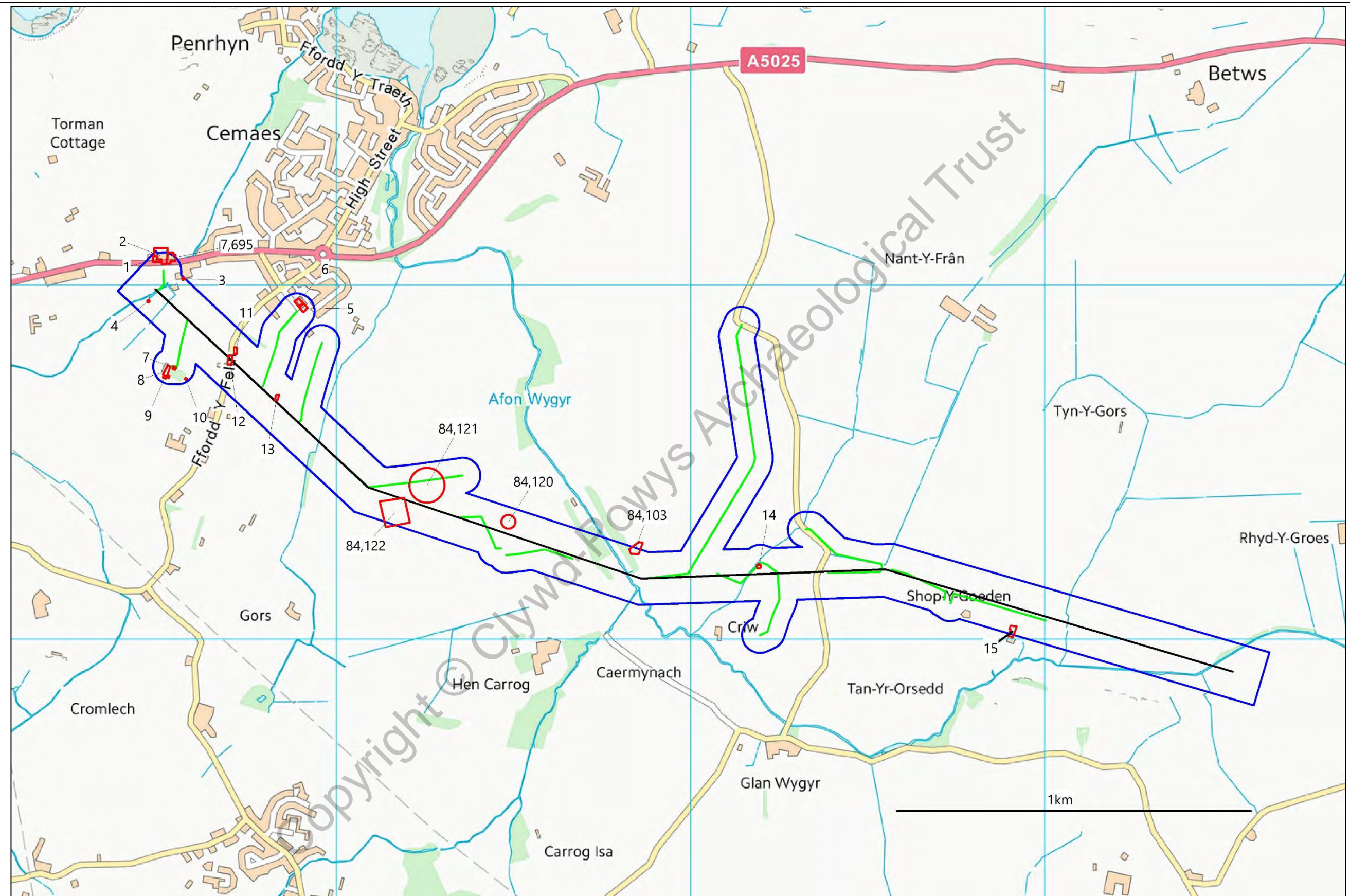
- 3.5. This will involve the collation of data detailed above, summarizing the history of the site and the state of current knowledge regarding the nature, extent and degree of survival of the cultural heritage within the development area. This will include an assessment of the significance of any remains in a regional and national context and an assessment of the potential impacts of the development on both physical remains and their setting. The report will also offer mitigation strategies to ensure that the cultural heritage remains as unaffected as possible.
- 3.6. The study will include an assessment of the potential for further archaeological investigation and give recommendations for an appropriate future strategy. The methodology for any subsequent phase of the archaeological programme will consider the possibility of using of the following techniques:
- field survey
  - geophysical survey
  - archaeological historic building recording / survey
  - a programme of trenching and/or test pitting
  - a programme of strip, map and sample in areas of identified potential
  - design modification to preserve remains in situ
  - archaeological excavation of identified remains
  - archaeological watching brief on construction works
- 3.7. An attempt will be made to indicate areas of greater or lesser archaeological significance and the assets should be ranked in level of overall archaeological importance (locally, regionally and nationally).
- 3.8. Relevant aerial photographs, re-plots and historic maps may be included where appropriate, subject to any copyright restrictions. The report will include a location plan, together with mapping depicting the distribution of assets within the development area. A gazetteer of assets will be included as an appendix, including details of NGR, site type, period and significance.
- 3.9. The final report will include the following:
- a location plan
  - all identified features and significant finds plotted on an appropriately scaled overall plan
  - a gazetteer of all located sites with full dimensional and descriptive detail including grid reference and, where possible, period
  - a full bibliography of sources consulted

## 4 RESOURCES AND PROGRAMMING

- 4.1. The assessment will be undertaken by a team of skilled archaeologists under the overall supervision of Tim Malim, CPAT's Principal Archaeologist who is also a member of the Chartered Institute for Archaeologists (CIfA). CPAT is also a CIfA Registered Organisation (RAO No 6) and as such agrees to abide by their *Code of Conduct* (2020) and the *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (2020).
- 4.2. The desk study will be undertaken by Harri Twigg, a project archaeologist with CPAT, and GIS analysis and plotting will be completed by Richard Hankinson, Senior Archaeologist.
- 4.3. The desk-based assessment will be undertaken during September 2021. Date of construction activities have not yet been confirmed but are anticipated for the autumn of 2021.
- 4.4. All report preparation will be completed by or with the assistance of the same field archaeologist(s) who conducted the assessment.
- 4.5. CPAT is covered by appropriate Public and Employer's Liability insurance, as well as Professional Indemnity insurance.
- 4.6. The project will conform as and where appropriate to the following standard professional guidelines:
  - English Heritage, 1991. *Management of Archaeological Projects* (MAP2).
  - English Heritage, 2008. *Geophysical Survey in Archaeological Field Evaluation*
  - Historic England, 2015. *Understanding Historic Buildings: A guide to good recording practice*.
  - Historic England, 2015. *Management of Research Projects in the Historic Environment* (MORPHE).
  - The Chartered Institute for Archaeologists, 2020. *Code of Conduct*.
  - The Chartered Institute for Archaeologists, 2020. *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*.
  - The Chartered Institute for Archaeologists, 2020. *Standard and Guidance for Historic Environment Desk-Based Assessment*.
  - The Chartered Institute for Archaeologists, 2020. *Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures*.
  - The Chartered Institute for Archaeologists, 2020. *Standard and Guidance for Archaeological Field Evaluation*.
  - The Chartered Institute for Archaeologists, 2020. *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*.
  - The Chartered Institute for Archaeologists, 2020. *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*.

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A3 Drawing 1: Heritage assets within the assessment area (HER PRNs and CPAT gazetteer)