

Ty Isaf, Llanbrynmair, Powys Historic Environment Assessment



Report by: Trysor

For: WiNDS Ltd

July 2015



Ty Isaf, Llanbrynmair, Powys Historic Environment Assessment

By

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Trysor

Trysor Project No. 2015/468

For: WiNDS Ltd

July 2015

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Cover photograph: Looking south southwest along the former boundary bank adjacent to the proposed turbine location.

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Paratowyd yr adroddiad hwn gan bartneriad Trysor. Mae wedi ei gael yn gywir ac yn derbyn ein sêl bendith.

This report was prepared by the Trysor partners. It has been checked and received our approval.

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Croesawn unrhyw sylwadau ar gynnwys neu strwythur yr adroddiad hwn.

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1. Summary

- 1.1 This historic environment assessment has been undertaken by Trysor to examine likely impacts on the historic environment from a proposed wind turbine on land at Ty Isaf, Llanbrynmair, Powys.
- 1.2 A field visit was undertaken to examine the location of the turbine and record previously unknown historic assets. Information was also gathered on the indirect, visual impacts on historic assets within the wider landscape.
- 1.3 The assessment has studied the impacts on all recorded historic assets within an area measuring 2km in radius, focused on SN8713898383, the location of the proposed turbine. The regional Historic Environment Record and the National Monuments Record were consulted, as well as historical mapping.
 - 1.3.1 There are no Scheduled Ancient Monuments within the revised 2km radius from the proposed turbine.
 - 1.3.2 Two Listed Buildings lie within the revised 2km assessment area which would experience a Very Low, indirect, visual impact, but no impact in their setting.
- 1.4 The impact on all designated historic assets within an area between 2km and 5km in radius, focused on SN8713898383, the location of the proposed turbine was assessed.
 - 1.4.1 No Scheduled Ancient Monuments within 2km to 5km would experience any impact from the development.
 - 1.4.2 No Listed Buildings within a 2km to 5km radius would experience any impact from the development.
 - 1.4.3 There are no Registered Parks & Gardens within the 2km to 5km assessment area.
 - 1.4.4 There is one Conservation Area, Bont Dolgadfan, within a 5km radius of the proposed turbine, which would be unaffected by the development.
- 1.5 The assessment shows that the development would have some impacts on relict field boundaries, for which mitigations are recommended and include small archaeological evaluation in advance of development. Mitigation is also recommended to avoid potential impact on a former mine leat and attention is also drawn to the need to avoid any possible indirect, physical impact on the spoil tips of the disused Llanerchraur lead mine.

2. Copyright

- 2.1 Trysor holds the copyright of this report. Further copies may be made of this report without gaining permission to reproduce but it must be noted that Figures 3 and 5 include other copyrighted material and should not be copied.

3. Introduction

- 3.1 Martin Horne of WinDS Ltd, Gwelfor Castle Morris, Haverfordwest, Dyfed, SA62 5XA has commissioned Trysor heritage consultants on behalf of his client, Nicky & Aled Jarman, Ty Isaf Farm, Llanbrynmair, Powys, SY197BQ to write an Historic Environment Assessment for a proposed turbine land west of Ty Isaf.
- 3.2 Trysor prepared a specification based on the Chartered Institute for Archaeologist's *Standard and Guidance for Historic Environment Desk-based Assessment* (CIfA, 2014) as well as scope notes supplied for single turbine developments by the Development Control Archaeologist at Clwyd Powys Archaeological Trust. Clwyd Powys Archaeological Trust Heritage Management section approved the specification as fit for purpose, see Appendix A.

4. The proposed development

- 4.1 It is proposed that a single turbine, 29.5 metres to hub and 41.3 metres to the upright blade tip, is located at approximately SN8713898383 on high ground to the west of Ty Isaf Farm, see Figure 1 and Appendix E. This height of the turbine has been revised since the specification was written, see Appendix 1
- 4.2 A foundation hole, less than 10 metres square in area, will be excavated into the subsoil for the turbine base with a hard standing area to its south.
- 4.3 An existing access track up to the southwest of the development site will be used, with a new trackway, approximately 350 metres long, running up slope to the turbine.
- 4.4 The cable trench will run southeast for approximately 330 metres and from there will be carried on poles, crossing the Cae Conroy valley to connect to the National Grid close to Ty Isaf.

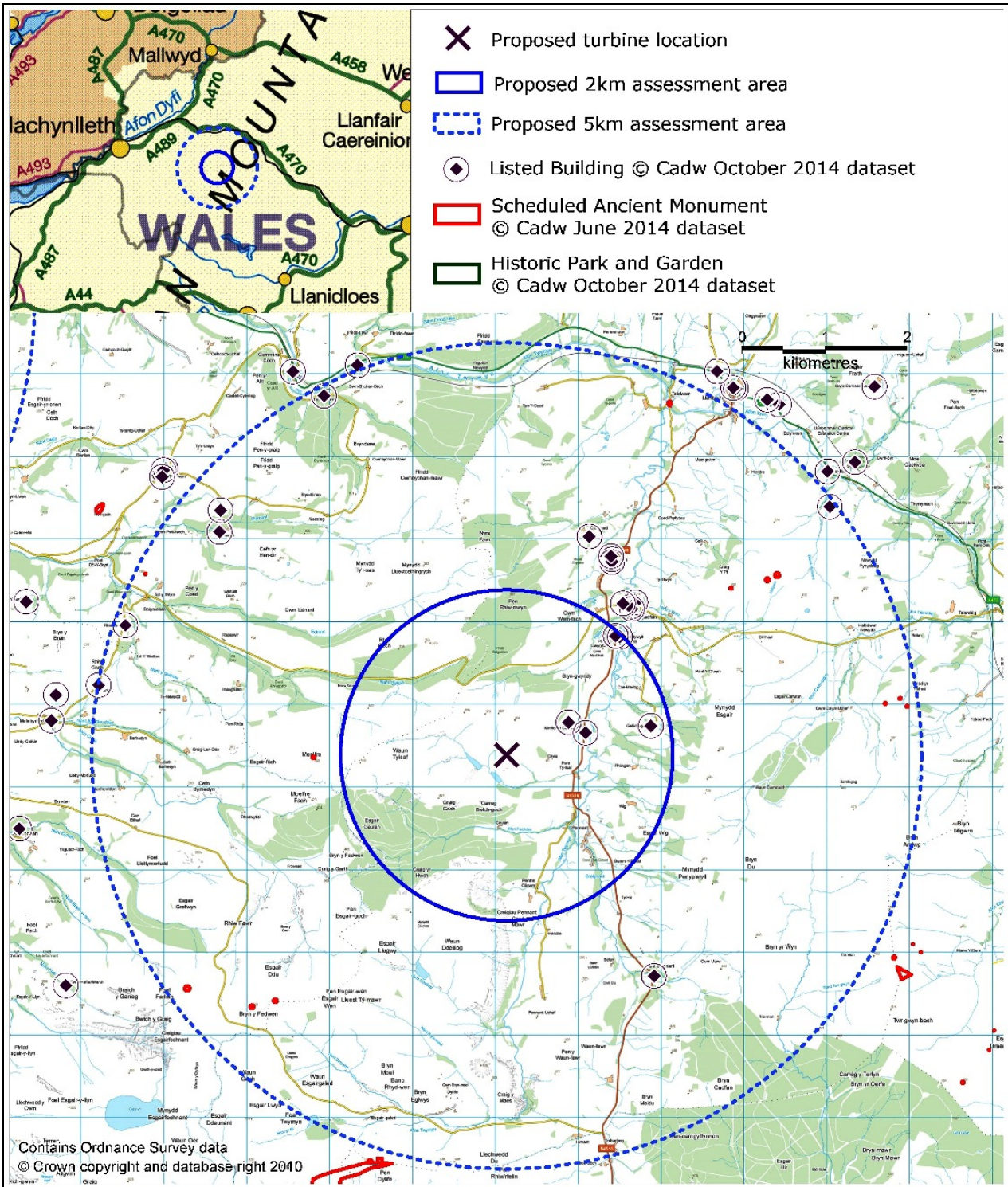


Figure 1: Location of the proposed turbine, showing the 2km, and the 2km to 5km assessment areas.

5. Methodology

- 5.1 A study area of 2km radius centred on SN87138983835, the proposed turbine site, was chosen for the initial assessment of all recorded historic assets. Some sites were excluded from further assessment where there was no intervisibility between the turbine blade tip and the site and no impact on setting, see Figure 2.
- 5.2 Data from the regional Historic Environment Record held by Clwyd Powys Archaeological Trust was acquired for the 2km assessment.
- 5.3 Historic mapping was consulted. The maps used included 19th and 20th century 1:2500 scale Ordnance Survey mapping and the Llanbrynmair parish tithe map of 1841 and accompanying tithe schedule of 1839.
- 5.4 A site visit was made to the proposed turbine site, and the surrounding area, on May 29th, 2015. Visible archaeological features within the area directly affected by the turbine proposal were searched for and any other historic assets on which there may be a direct impact recorded. The wider landscape was also studied taking note of topography, vegetation and structures.
- 5.5 The aerial photographs on Google Earth, dating to 2006 and 2010, were used to inform the assessment as well as the more recent aerial photographs on the People's Collection.
- 5.6 Elevation profiles, in conjunction with photos from the site visit, were used assess to intervisibility, views and impact on setting as well as a ZTV created by Trysor.
- 5.7 Modern mapping was used to assess current public access.
- 5.8 All information gathered during the desktop assessment and site visit was entered into a bespoke database created in Access 2003 to form an assessment dataset.
- 5.9 The dataset is the source of the material output in this report, including the GIS mapping which illustrates the location of sites in the area, and the tables and appendices which provide detailed information on the sites within the study area.
- 5.10 Each of the records in the final assessment 2km dataset was assessed for Period, Rarity, Documentation, Group Value¹, as well as Evidential Value, Historical Value, Aesthetic Value, Communal Value². Once these had been considered the significance of each site was determined and scored in accordance with the categories adopted by the Welsh

¹ Period, Rarity, Documentation and Group Value are criteria defined in the Welsh Office Circular 60/96, 1996.

² Evidential Value, Historical Value, Aesthetic Value and Communal Value are criteria defined in Cadw's Conservation Principles publication, 2011.

Archaeological Trusts i.e. Nationally Important, Regionally Important, Locally Important, Minor and Features Needing Further Investigation (Unknown), see Figure 3. Full details of this exercise are given in Appendix B.

5.11 A further area of between 2 to 5 km radius, centred on SN8713898383, was used to assess the impact on designated sites only. This area was revised to exclude sites which would not be intervisible and on which there could be no impact from further assessment.

5.12 Data supplied by Cadw was used to assess designated sites within 2 to 5km of the development site.

5.13 Separate tables were created for Listed Buildings, Scheduled Ancient Monuments giving the distance from the development, current public access and the impact on the setting of the monument.

5.14 The type of historic asset, how it lies within the landscape, distance from the development, topography, intervening structures and vegetation and current public access were assessed. This information was used to assess the impact on the setting of the historic asset (see Appendices C and D).

6. The Development Site

- 6.1 The proposed development site lies at about 280 metres in altitude, on a short and narrow ridge which juts out southwards from the southern flank of Banc Bronderwgoed, overlooking Cwm Cae Conroy. The valley below contains the remains of the Llanerchyllau Lead Mine and the Llynau Cae Conroy reservoirs, which were constructed in the 19th century to serve the nearby Ty Isaf Lead Mine, which stood further down the valley to the east. The site lies within an area of semi-improved pasture on Ty Isaf Farm. The field was named as *Ffridd* by the parish tithe survey of 1841, indicating that it was marginal land, between the mountain pasture of Banc Bronderwgoed to the west and the cultivated fields closer to Ty Isaf.
- 6.2 The underlying strata at the proposed turbine site consist of sedimentary rocks of the Blaen Myherin Mudstones Formation, laid down in a deep sea environment between 428 and 444 million years ago in the Silurian Period.

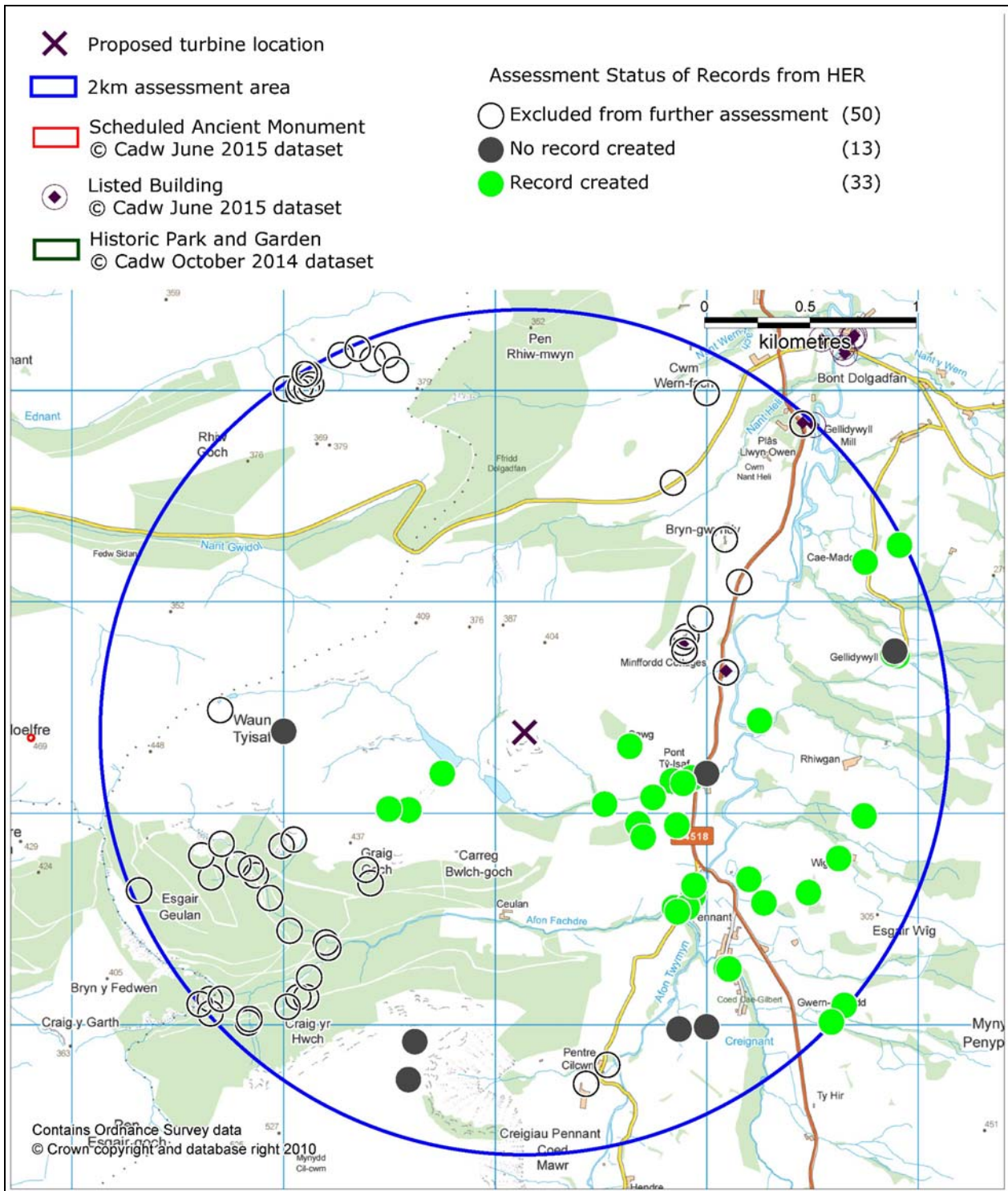


Figure 2: Sites excluded from further assessment.

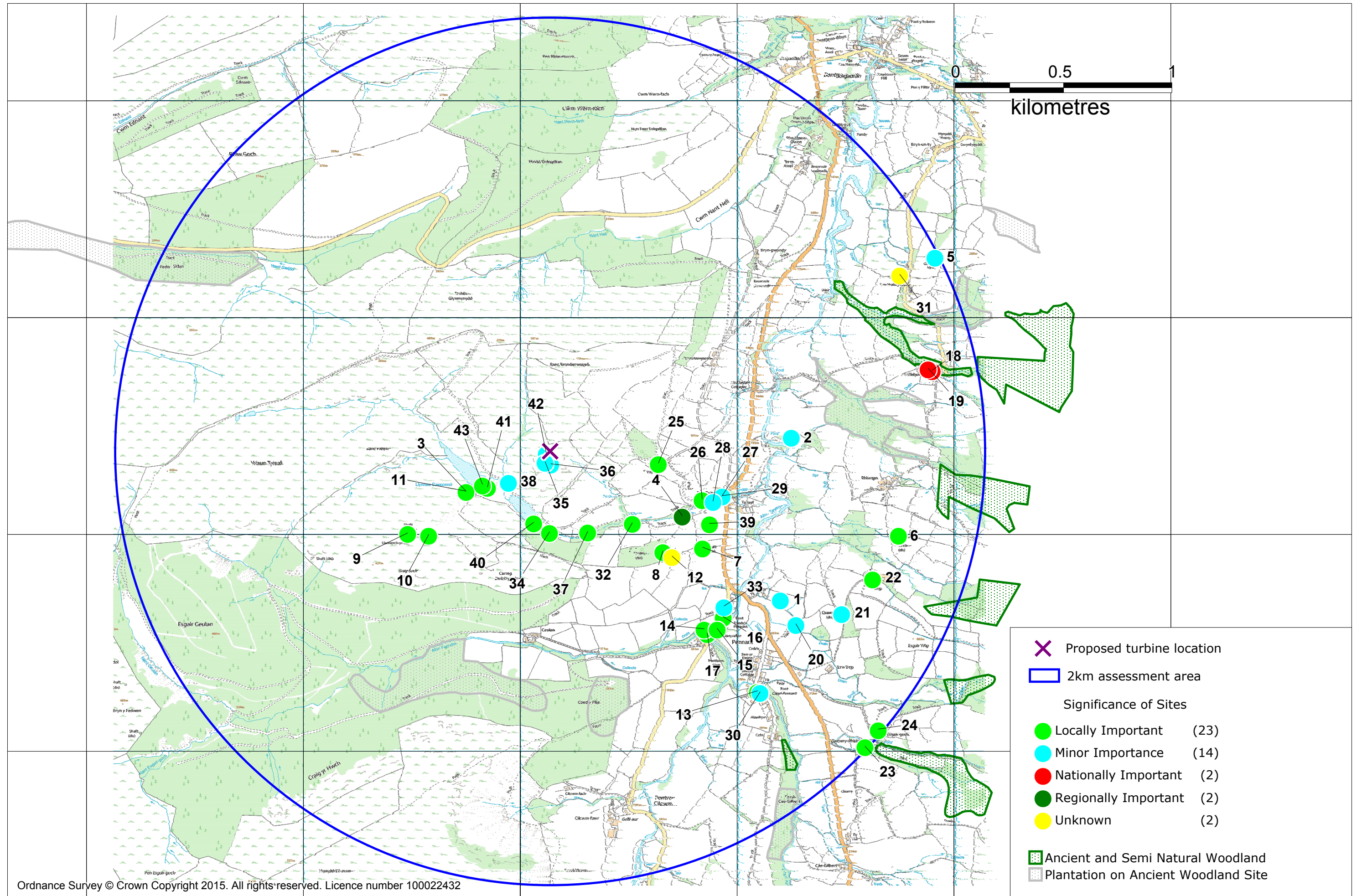


Figure 3: The 2km assessment area showing significance of sites, labelled with Project ID number

7. Archaeological Overview

7.1 Palaeolithic and Mesolithic (250,000BC – 4,000BC).

7.1.1 There are no records of artefacts, or sites, associated with the Palaeolithic period or Mesolithic period recorded in the HER within a 2km radius of the proposed turbine site.

7.2 Neolithic and Earlier Bronze Age (4,000BC – 1,500BC).

7.2.1 There are no records of sites associated with the Neolithic period recorded within the revised 2km radius assessment area. A single find of a stone axe-head of possible Neolithic date from the Llanbrynmair area (PRN 1371) may indicate that Neolithic communities existed in the wider district. This find was made in an area excluded from the 2km radius assessment area as it would be wholly unaffected by the development at Ty Isaf.

7.2.2 There are no sites of Bronze Age date recorded within 2km of the proposed turbine.

7.2.3 There are no scheduled Neolithic sites found within 5km of the proposed turbine site. There are, however, nine sites which are protected as Scheduled Ancient Monuments in this area which date to the Bronze Age, all of which are funerary monuments. These include two stone circles at Cerrig Caerau (MG066) and Lled Croen yr Ych (MG068). There are three Round Barrows or Round Barrow groups (MG107, MG108 & MG311), a Cairn Group (MG265), a single Cairn (MG209) and a Standing Stone (MG147). Round Barrows and Cairns are earthwork or stone mounds, typically raised over a single cremation burial. The cremated remains would usually be interred in funerary urn, placed within a stone cist beneath the mound. Cremations and Cremation Cemeteries can also be found in association with Stone Circles and individual Standing Stones. The number of funerary monuments of this period in the area suggest that the district was well settled and farmed, although no contemporary settlement sites have been identified at present.

7.3 Later Bronze Age and Iron Age (1,500 BC – AD43).

7.3.1 There are no records of later Bronze Age activity within the 2km assessment area, such as finds of bronze tools and weapons or archaeological evidence for Bronze Age settlement. There is also no evidence of Iron Age settlement, such as Hillforts or Defended Enclosures.

7.4 Roman (AD43 – AD410).

7.4.1 There are no confirmed records associated with the Roman period recorded within a 2km radius of the proposed turbine site. Some sources (e.g. Bick, 1977, p.23-24) suggest that the Llanerchraur/Cae Conroy Lead Mine might have been worked in Roman times.

7.4.2 There are no designated sites associated with the Roman period recorded within a 2km to 5km radius of the proposed turbine site.

7.5 Early Medieval (AD410 – AD1100).

7.5.1 There are no records associated with the Early Medieval period within the revised 2km radius assessment area.

7.5.2 There are no designated sites associated with the Early Medieval period within the revised 2km to 5km radius assessment area.

7.6 Medieval (AD1100 – AD1539).

7.6.1 There is one recorded sites in the HER within the revised 2km assessment area which has its origins in the late Medieval period. This is Gellidywyll (ID number 18) on the east side of the Twymyn river which has timber framing thought to be late Medieval although heavily modified in later centuries. There is one site within a 2km radius which has been excluded from the assessment as the local topography means it would be unaffected by the development. This is a record for the house at Bronderwgoed (PRN 42067; Listed Building number 18120), which is a 19th century remodelling of an early Post Medieval or late Medieval house. Despite the 19th century changes, there are four pairs of crucks within the house which are clearly much earlier. This is a reminder of the quality of local building in Medieval or early Post Medieval times.

7.6.2 Within a 5km radius of the proposed development lays one scheduled medieval site. This is the Motte and Bailey castle at Domen Fawr (MG065), which would not be intervisible with the proposed turbine due to the nature of the topography of the area and has been excluded from the assessment area for Scheduled Ancient Monuments.

7.7 Post Medieval & Modern (AD1539 – present day).

7.7.1 Most of the historic assets recorded within a 2km radius of the proposed turbine site date to the Post Medieval period. They represent the agricultural, industrial and social change which has significantly changed the appearance of the district during the past 200 years. They include farmsteads, farm buildings and associated structures such as sheep folds, corn and woollen mills and a significant number of lead mining features.

7.7.2 Lead mining has made a significant impact on the district and local mines include Llanerchraur and Ty Isaf lead mines (ID numbers 3 & 4), which worked on Ty Isaf land. Much of the mine complex is still recognisable in the landscape, including significant features at the upper, western part of the mine; two reservoirs and levels and building fragments along the valley towards Ty Isaf.

8. Historical overview

The recent history of Ty Isaf Farm can be traced through historic mapping and other sources. It is not known when the holding was established, but by the early 19th century it was certainly extant.

8.1 Map evidence

8.1.1 The Ordnance Survey's Original Surveyors Drawings (Machynlleth sheet), surveyed in 1834, was the first detailed map series of the whole country. It did not map field boundaries but does clearly differentiate between enclosed land, unenclosed land and woodland. This map shows that the land around the proposed wind turbine site was part of the enclosed landscape at Ty Isaf, but no real details are shown of the field system on the holding. It also shows the 'Lead Mines' at Ty Isaf slightly to the south of their present, mapped area.

8.1.2 When the Ordnance Survey published their 1 inch to 1 mile scale First Series map for the area in 1836, based on the 1834 survey, the same picture is presented with regard to the position of the farmyard. This map does not show details of the field system.

8.1.3 The first detailed map of the field system of the area is the tithe map for Llanbryn-mair, dating to 1841 (see Figure 4). This shows that the field system at the proposed turbine site and across the wider holding was already in existence. The essential character and layout of the field system within the Cae Conroy valley has survived to the present, although there has been some change to the shape and size of the fields, with some boundaries falling out of use. The tithe map shows the house and outbuildings at Ty Isaf farm as four buildings arranged around a courtyard, but names the holding as Cae Conroy. It does not show any contemporary mine workings.

8.1.4 The tithe apportionment, which accompanies the tithe map and was prepared in 1839, lists the names of fields within the parish (see Table 1 below, spellings as used on the apportionment). It records that Glyn Farm was a 456 acre holding occupied by one John Jarman and owned by Sir John Conroy, who was awarded the baronetcy of Llanbryn-mair in 1837. Conroy had played an important role in the upbringing of Princess Victoria, who became Queen in 1837. She intensely disliked Conroy who, in conjunction with her mother, was responsible for her strict upbringing. Victoria quickly excluded him from the Royal Household when she ascended to the throne.

8.1.5 Damage to the tithe map in the area of the proposed turbine make it unclear as to which field the turbine would stand in. It seems likely that it would stand in parcel number 1735, which was known as *Ffridd*. The field names have no archaeological interest.

Table 1: Field names as listed on the Llanbryn-mair parish tithe apportionment, 1839

1711	House Garden and Close	Homestead
1712	Cae crwn	Arable
1713	Cae crwn	Meadow
1714	Close	Meadow
1715	Dol y pompren	Meadow
1716	Dol bengam	Arable
1717	Dol fach	Meadow
1718	Dol wen	Arable
1719	Gwndwn mawr	Arable
1720	Gwndwn ty cefn i'r ty	Arable
1721	Cae oddiar ty	Arable
1722	Cae gwalia canol	Arable
1723	Cae gwalia pella	Arable
1724	Fedw	Arable
1725	Fedw	Pasture
1726	Fedw	Arable
1727	Fedw	Woodland
1728	Cae ryd yr ychain	Pasture
1729	Cae bach	Arable
1730	Cae poeth	Arable
1731	Cae crwn	Pasture
1732	Lled ty yn y garreg	Pasture
1733	Wood	Wood
1734	Caeau gleision	Pasture
1735	Ffridd	Pasture
1736	Ffridd newydd	Pasture
1737	Ffridd newydd	Pasture

8.1.6 The 1887 1:2500 scale Ordnance Survey map shows that the field system around the turbine site had changed since the time of the 1841 tithe map. A number of smaller fields had been amalgamated with the larger Ffridd of parcel 1735 by this time.

8.1.7 The farmyard complex, is shown in detail for the first time on this map. The house stood in its present position, with outbuildings arranged around a central yard, very comparable to the layout shown on the parish tithe map of 1841. To the north of the historic core of the farmstead stood a number of structures associated with the Ty Isaf and Llanerchraur Lead Mines (operating jointly as the Cae Conroy Lead Mine). These include settling tanks and buddles, where the final processing of ore was undertaken, as well as a 50 foot water wheel, which drove pumping engines for the mines further up the valley. The 1902 edition of the 1:2500 map shows essentially the same layout of the field system and the farmyard, although by this time the industrial structures had become disused.

8.1.8 During the 20th century the farmyard and farm building complex developed considerably, with new, larger, agricultural sheds being constructed to the southeast of the historic core of the holding. Ty Isaf is still a working farm.

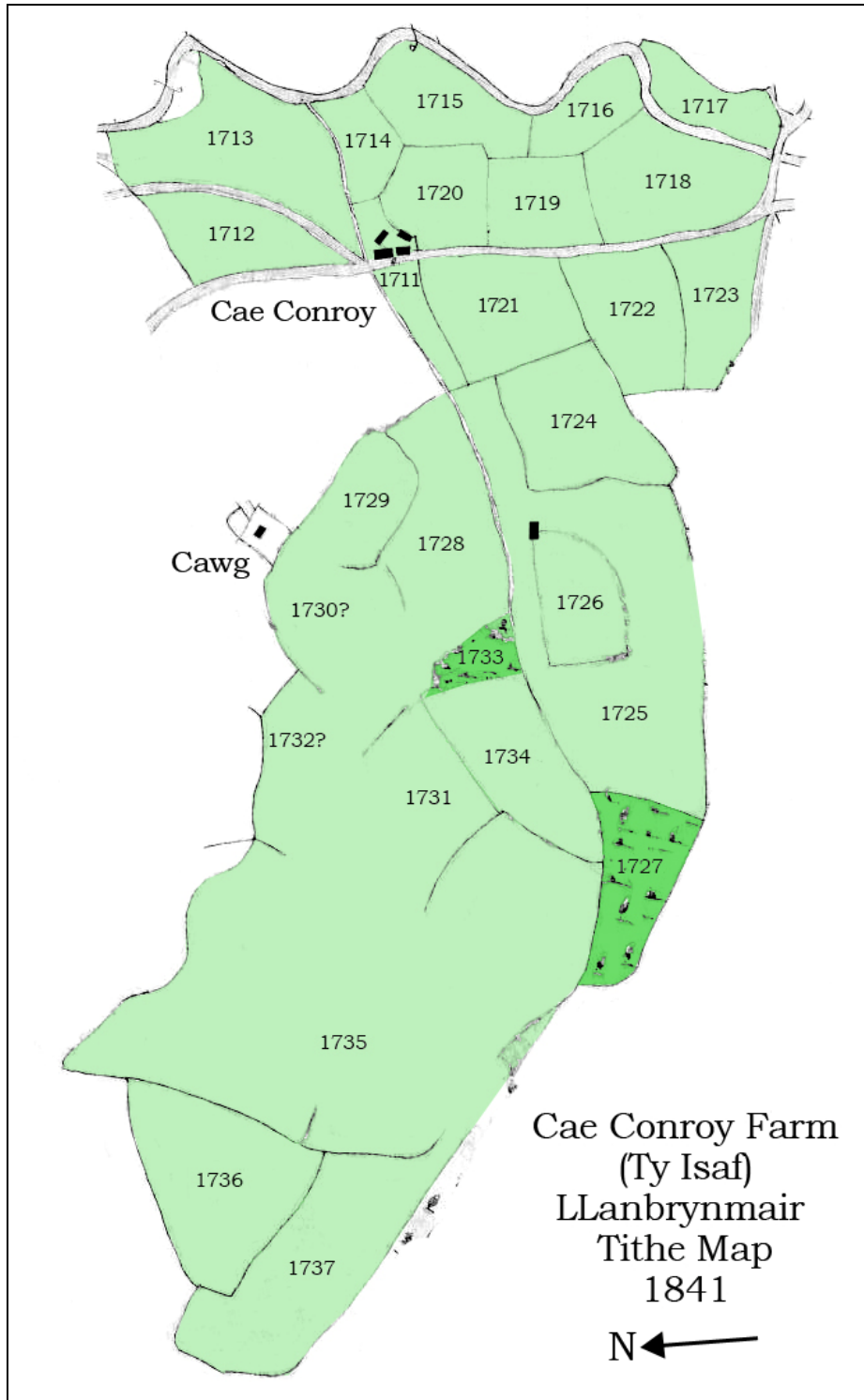


Figure 4: Proposed turbine site, parcel number 1735, as shown on the Llanbrynmair parish tithe map of 1841.

9. Impact Assessment

- 9.1 The HER enquiry for the under 2km radius area yielded 96 records.
- 9.2 The proposed development site and its environs were visited on 29th May 2015. The ground was rough pasture at the time and the surface of the field was not visible. The wider landscape context of the proposed development was also considered and the impact on the setting of designated sites. This visit was undertaken on an overcast day, with reasonable visibility.
- 9.3 Of the initial 96 records included in the HER for the 2 kilometre assessment area, 50 were excluded as there was no intervisibility and no possible impact on setting. A further 13 records were removed from the dataset; 4 were for features now identified as natural features, 2 as they were duplicate records, 5 as they had an inaccurate national grid reference and actually lay outside the study area, 1 as it was for a findspot with a four figure NGR and could not be more accurately located, brought from elsewhere and 1 as it was part of the lower part of the Ty Isaf mine and it could not be clearly identified which building the record referred to.
- 9.4 After the site visit, the historic map search, and the rapid assessment of the readily available data the final dataset for the 2km radius assessment area contained 43 records.
- 9.4.1 Ten new records were created in the project database by Trysor in order to record features close to the development area. These were for parts of the field banks within the field system and elements of the Ty Isaf/Llanerchyrour mine complexes (ID numbers 34 to 43).
- 9.5 Within the 43 records there are no Scheduled Ancient Monuments and two Listed Buildings.
- 9.6 The Direct and Indirect impact on each site was assessed taking into account both physical and non-physical impacts. Each impact was assessed within the scale Very Low, Low, Moderate, High and Very High, taken into account the significance of the site and the nature of the impact. A full table is found in Appendix B but a summary is tabulated in Table 2 below and illustrated in Figure 5.

Table 2: Impact on sites within the assessment area around the proposed turbine site

ID Number	Site Name	Site Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting
42	TY ISAF	BOUNDARY BANK (EARTHWORK)	High	None	None
36	TY ISAF	BOUNDARY BANK (EARTHWORK)	Low	Low	None
39	LLANERCHYRAUR LEAD MINE	LEAT	Low	Low	None
37	CWM CAE CONROY	TRACKWAY	Very Low	Very Low	None
38	CWM CAE CONROY	QUARRY	Very Low	None	None
3	LLANERCHYRAUR	LEAD MINE	None	Low	None
4	TYISAF LEAD MINE; CAE CONROY	LEAD MINE	None	Low	None
7	TY-ISAF SHAFT (DIS)	MINE SHAFT	None	Very Low	None
9	LLANNERCH-YR-AUR SHAFT (DIS)	MINE SHAFT	None	Very Low	None
10	LLANNERCH-YR-AUR LEVEL (DIS)	LEVEL	None	Very Low	None
18	GELLIDYWYLL HOUSE	HOUSE	None	Very Low	None
19	GELLIDYWYLL, ESTATE FARM BUILDING	FARM BUILDING	None	Very Low	None
20	WIG FARM BUILDING	FARM BUILDING	None	Very Low	None
21	WIG QUARRY	QUARRY	None	Very Low	None
22	WIG FARMSTEAD	FARMSTEAD	None	Very Low	None
23	GWERN Y FFRIDD FARMSTEAD	FARMSTEAD	None	Very Low	None
24	ESGAIR GOCH FARMSTEAD	FARMSTEAD	None	Very Low	None
34	TY ISAF LEAD MINE; CAE CONROY LEAD MINE	POND	None	Very Low	None
35	TY ISAF	QUARRY	None	Very Low	None
40	TY ISAF LEAD MINE; CAE CONROY LEAD MINE	RESERVOIR	None	Very Low	None
41	LLANERCHYRAUR LEAD MINE	SPOIL TIP	None	Very Low	None
43	TY ISAF LEAD MINE; CAE CONROY LEAD MINE	RESERVOIR	None	Very Low	None
1	PONT YR EFAIL FACH RIDGE AND FURROW	RIDGE AND FURROW?	None	None	None
2	RHIW WGAN RIDGE AND FURROW	RIDGE AND FURROW?	None	None	None
5	CAE MADOG QUARRY (DIS)	QUARRY	None	None	None
6	RHIWGAN LEVEL (DIS)	LEVEL	None	None	None
8	CAWG LEVEL (DIS)	LEVEL	None	None	None
11	LLANERCHYRAUR	LEAD MINE	None	None	None
12	TYISAF LEAD MINE	LEAD MINE	None	None	None

ID Number	Site Name	Site Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting
13	PENNANT SAWMILL	SAW MILL	None	None	None
14	PENNANT CORN MILL	CORN MILL	None	None	None
15	PENNANT FACTORY	WOOLLEN MILL	None	None	None
16	PANDY'R PENNANT MILL	FULLING MILL	None	None	None
17	PENNANT, THE KILN	KILN	None	None	None
25	CAWG FARMSTEAD	FARMSTEAD	None	None	None
26	TY-ISAF OLD SHAFT	MINE SHAFT	None	None	None
27	TY-ISAF FORD	FORD	None	None	None
28	TY-ISAF SLUICE	SLUICE	None	None	None
29	TY-ISAF FOOTBRIDGE	FOOTBRIDGE	None	None	None
30	PENNANT SAWMILL, AQUEDUCT	LEAT	None	None	None
31	CAE MADOG, SPINDLEWHORL	FIND	None	None	None
32	CAE CONROY, MAGAZINE	MAGAZINE	None	None	None
33	PENNANT ROOT STORE	VEGETABLE STORE	None	None	None

9.7 As Table 2 shows it was determined that most recorded historic assets within the 2km assessment area would not be exposed to a significant impact from the proposed turbine development. Full details of the assessment of direct and indirect impact for each of the sites in Table 1 can be found in Appendix B.

9.7.1 Twenty one historic assets would be unaffected.

9.7.2 Fifteen historic assets would experience a Very Low, indirect, visual impact, with no impact on setting. Two historic assets would experience a Low, indirect, visual impact, with no impact on their setting.

9.7.3 Five historic assets would experience some degree of direct, physical impact. These include

- a modern quarry (ID number 38) through which the access track would run. This is a minor feature and the level of impact would be Very Low.
- A post-medieval to modern trackway (ID number 37), originally a mine trackway but now used as a farm trackway. This would be used as an access track to the turbine and again the direct impact would be Very Low and associated with vehicular use.
- The leat (ID number 39) which carried water to Llanerchyrour Lead Mine appears to be close to the position of a proposed electricity pole. It could experience a Low physical, direct, impact if the pole is positioned on its course and possible Low indirect, physical impact from vehicles used to install the pole. Both impacts could be avoided with mitigation.
- The cable trench would pass through a former field boundary (ID number 36). This denuded boundary does not have a hedgerow and there would be no objection to removing a short section during the excavation of the cable trench, which could then be reinstated after the cable had been laid.
- A denuded earthwork boundary bank is found at the turbine site. It is likely that it would have to be partly removed during the excavation of the turbine base. Mitigation could include a pre-development evaluation to examine the structure of the bank.

9.8 The Cadw datasets within the 2km to 5km radius area returned another 9 Scheduled Ancient Monuments, 18 Listed Buildings and no registered Historic Parks and Gardens. The full results of this assessment are found in Appendices C and D and Figures 6 and 7 of this report.

9.9 As Table 3 in 10.2.2 shows, it was determined that none of the Scheduled Ancient Monuments within the 2km to 5km assessment area would be affected by the development as they would not be intervisible

with the turbine, due to the nature of local topography. Further details of the assessment of indirect impacts for all of the sites in can be found in Appendix C and Figure 6.

9.10 As Table 5 in 10.3.2 shows, it was determined that none of the 18 Listed Buildings within the 2km to 5km assessment area would experience an impact from the proposed turbine. Full details of the assessment of impact for Listed Buildings can be found in Appendix D and Figure 7.

9.11 There are no registered Historic Parks and Gardens within the 2 to 5km assessment area.

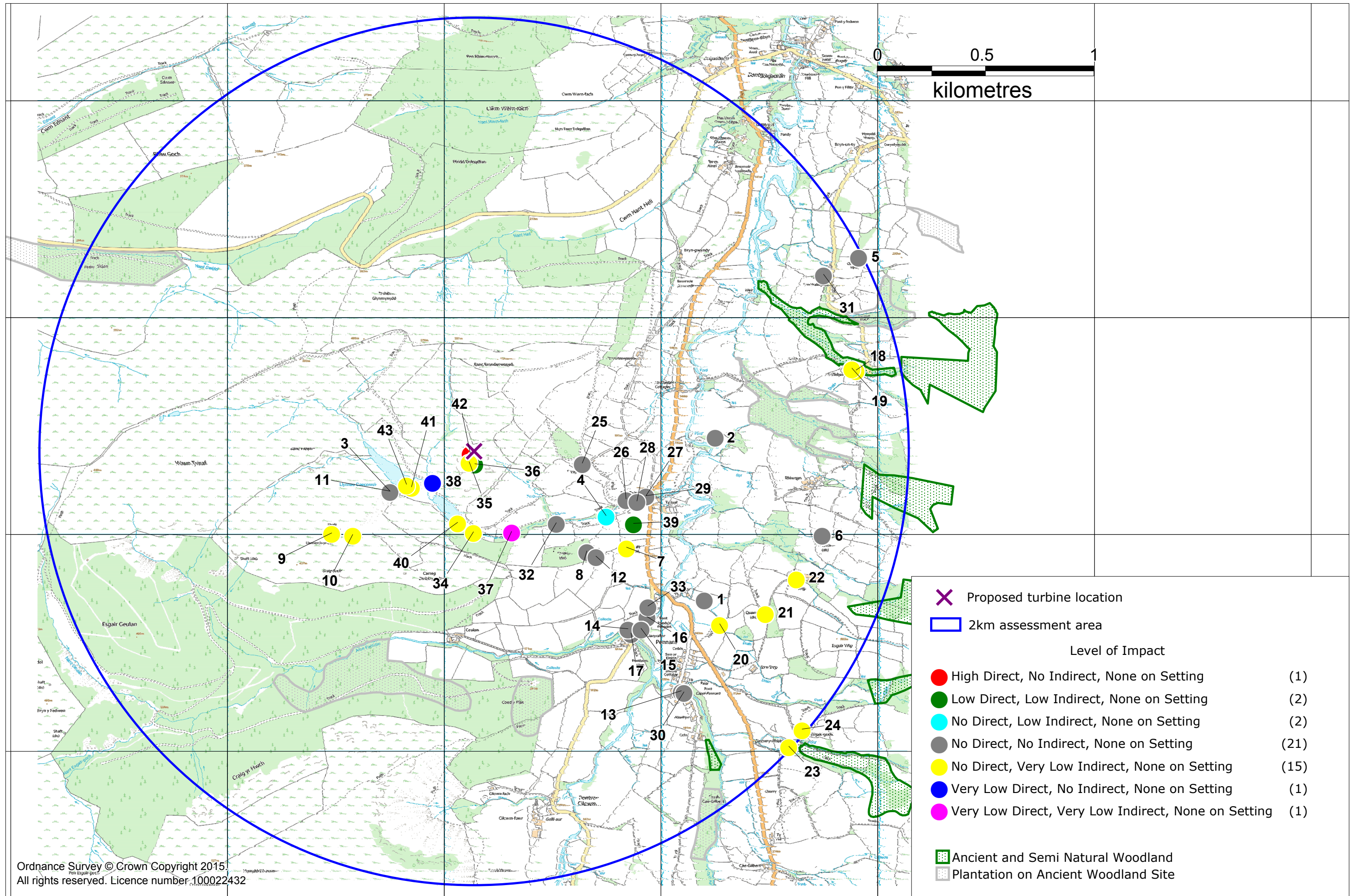


Figure 5: The 2km assessment area showing the level of impact on sites, labelled with Project ID number

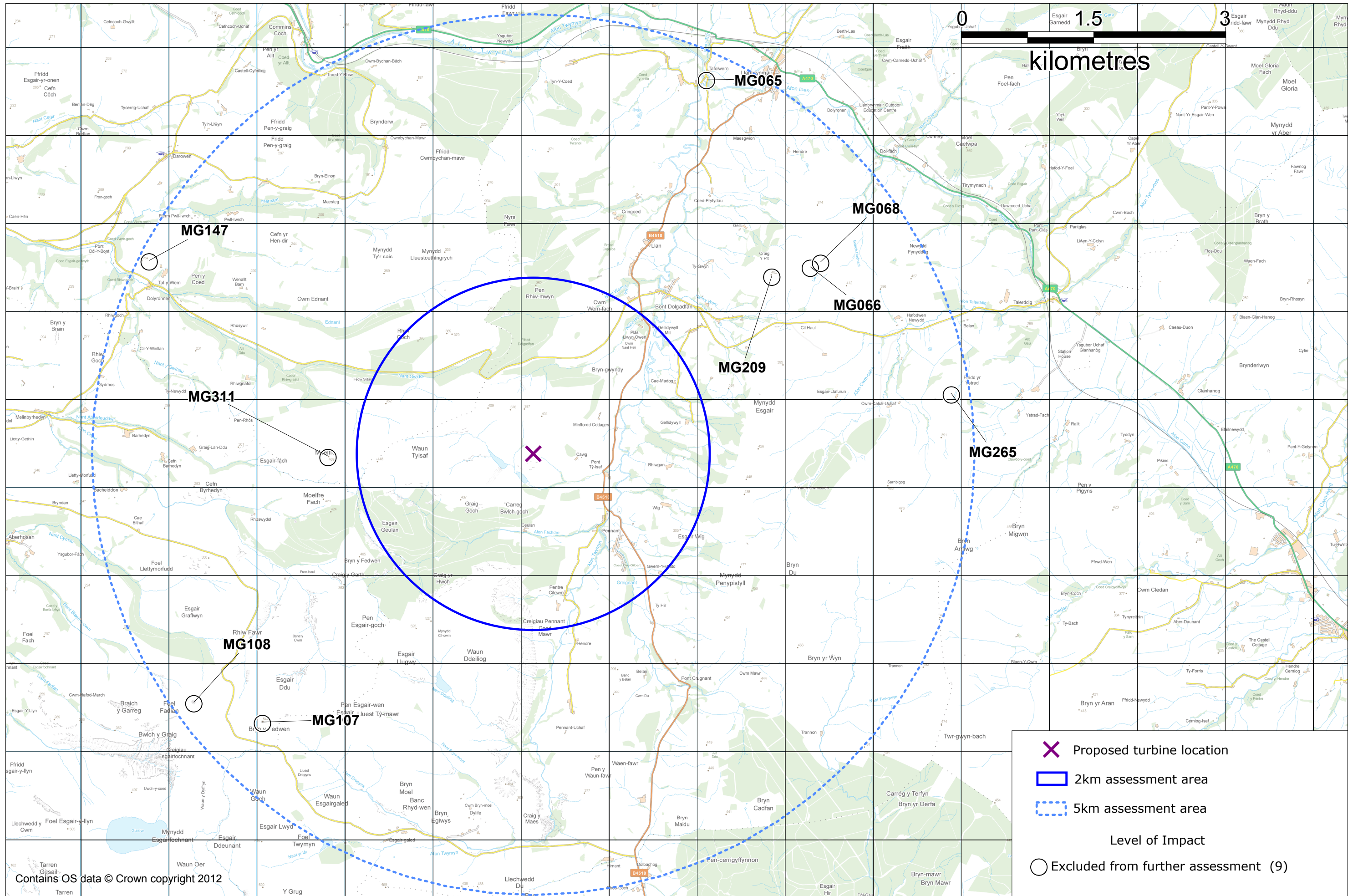


Figure 6: The 5km assessment area showing the impact on Scheduled Ancient Monuments, labelled with SAM Number

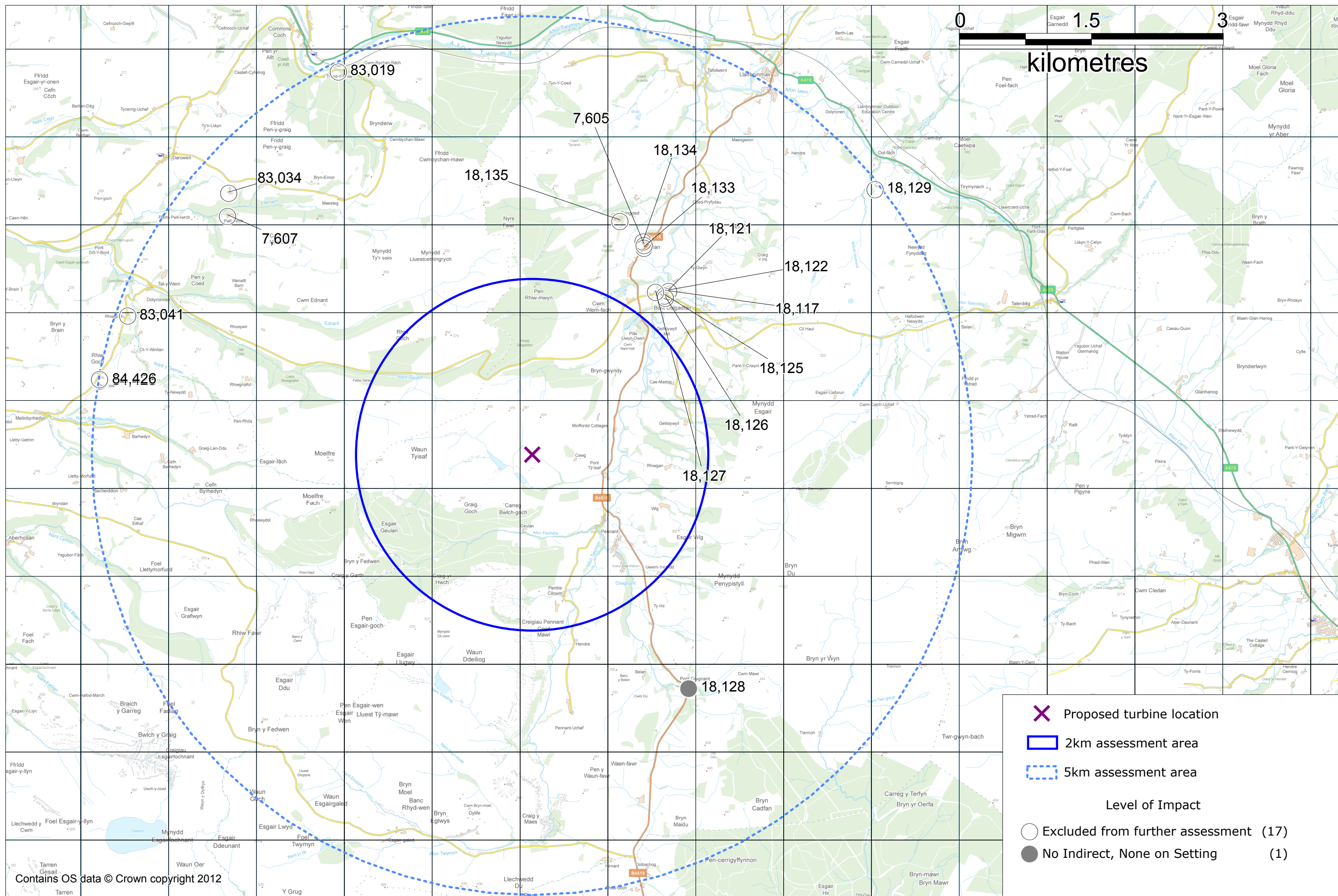


Figure 7: The 5km assessment area showing the impact on Listed Buildings, labelled with Listed Building Number

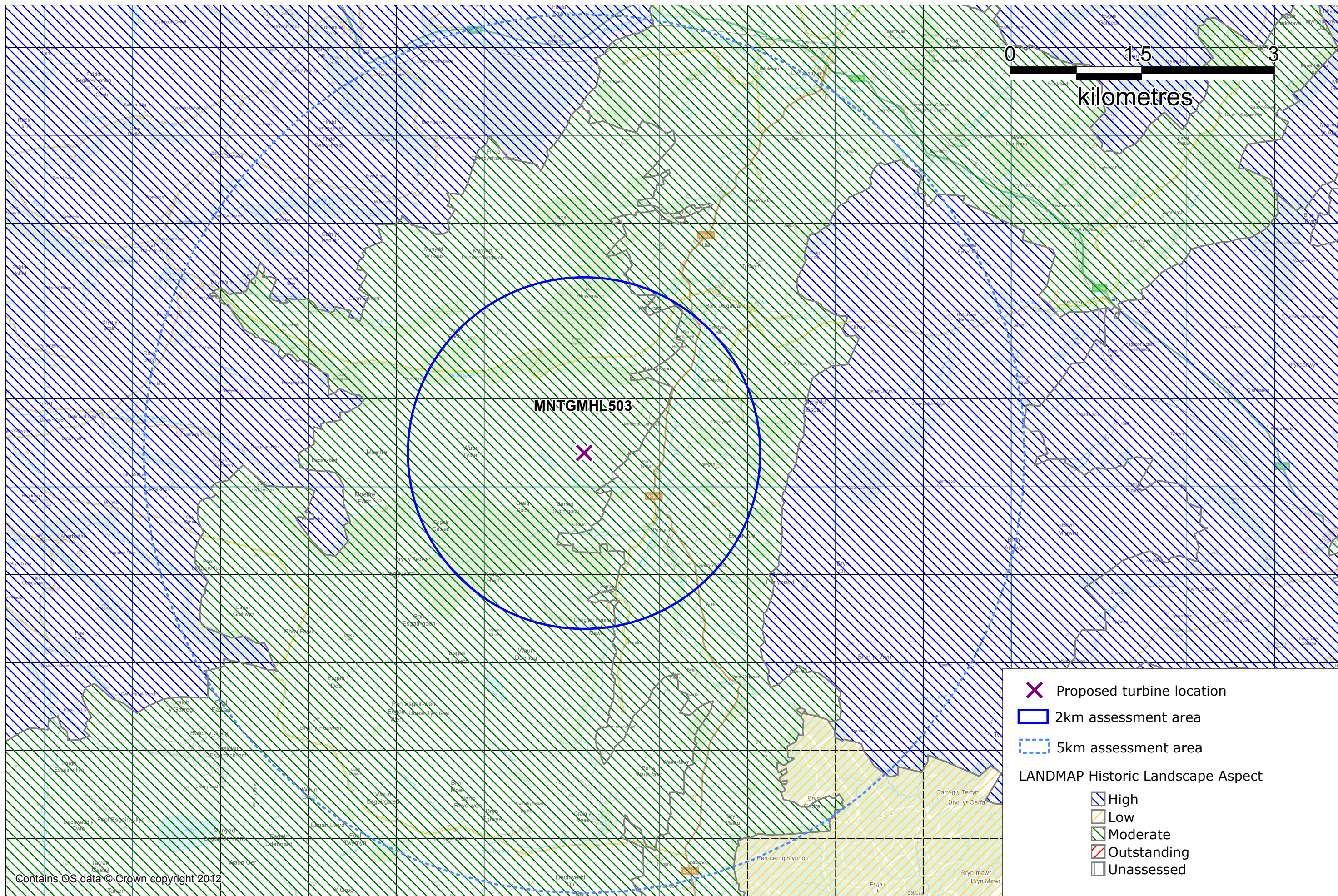


Figure 8: The 5km assessment area showing the LANDMAP Historic Landscape aspect, labelled with LANDMAP Aspect Area Number

10. Impact on Historic Environment Aspects

10.1 Following the impact assessment aspects of the historic environment around the proposed turbine site have been considered as outlined in the specification agreed by the Clwyd Powys Archaeological Trust Heritage Management Section (see Appendix A).

10.2 Scheduled Ancient Monuments and their settings

10.2.1 There are no Scheduled Ancient Monuments within the 2km assessment area.

10.2.2 There are nine Scheduled Ancient Monuments in 2 to 5km area. The nature of the local topography means that none of these would be intervisible with the turbine nor be affected in any way, see Table 3, Figure 6 and Appendix C.

Scheduled Ancient Monument number	Site Name	Site Type	NGR	Level of Indirect Impact	Level of Impact on Setting
MG065	Domen Fawr Castle Mound Tafolwern	Motte	SH891026	Excluded	Excluded
MG066	Ceffig Caerau Stone Circle	Stone circle	SH902005	Excluded	Excluded
MG068	Lled Croen-yr- Ych Stone Circle	Stone circle	SH904005	Excluded	Excluded
MG107	Bryn y Fedwen Round Barrows	Round barrow	SN841953	Excluded	Excluded
MG108	Foel Fadian Round Barrow	Round barrow	SN832955	Excluded	Excluded
MG147	Rhos-Dyrnog Standing Stone	Standing stone	SH827005	Excluded	Excluded
MG209	Yr Allor Cairn	Ring cairn	SH898004	Excluded	Excluded
MG265	Ffridd yr Ystrad Cairns	Round cairn	SN918990	Excluded	Excluded
MG311	Moelfre round barrow	Round barrow	SN848983	Excluded	Excluded

Table 3: Impacts on Scheduled Ancient Monuments in the 2 to 5km assessment area

10.3 Listed Buildings and their settings

10.3.1 There are 2 Listed Buildings within the revised 2km assessment area. These would experience a Very Low, indirect, visual impact with no impact on setting. See Table 4, Appendix B and Figures 3 and 5.

ID Number	Site Name	Site Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting
18	GELLIDYWYLL HOUSE	HOUSE	None	Very Low	None
19	GELLIDYWYLL, ESTATE FARM BUILDING	FARM BUILDING	None	Very Low	None

Table 4: Impacts on Listed Buildings in the revised 2km assessment area.

10.3.2 Within the 2km to 5km assessment area, there are a further 18 Listed Buildings. There would be no impact on any of these from the proposed turbine, see Table 5, Appendix D and Figure 7.

Listed Building number	Site Name	Grade	Level of Indirect Impact	Level of Impact on Setting
18128	Pont Creignant	II	None	None
7605	Church of St Mary	II*	Excluded	Excluded
7607	Pwlliwrch	II*	Excluded	Excluded
18117	Tremafon	II	Excluded	Excluded
18121	Bont Dolgadfan Independent Chapel, with railed forecourt	II	Excluded	Excluded
18122	Brynawel	II	Excluded	Excluded
18125	Bont Dolgadfan	II	Excluded	Excluded
18126	Glantwymyn	II	Excluded	Excluded
18127	Bethel Chapel and Forecourt Railings	II	Excluded	Excluded
18129	Diosg	II	Excluded	Excluded
18133	Sundial in the Churchyard of the Church of St Mary	II	Excluded	Excluded
18134	Hafod y Llan, also known as the Old Rectory	II	Excluded	Excluded
18135	Plas esgair	II	Excluded	Excluded
83019	Former Factory, Troed y Rhiw	II	Excluded	Excluded
83034	Pen y banc	II	Excluded	Excluded
83041	Rhiwgoch	II	Excluded	Excluded
84423	Gydrhos	II	Excluded	Excluded
84426	Multi-purpose farm building at Gydrhos	II	Excluded	Excluded

Table 5: Impacts on Listed Buildings in the 2km to 5km assessment area

10.4 Previously Recorded Non-Designated Historic Assets and Buildings and their settings

10.4.1 There are no significant impacts on Non-designated Historic Assets and Buildings within 2km of the turbine site. There would be a Low indirect visual on 2 sites and a Very Low indirect visual impact on a further eight sites. The setting of these sites would not be affected. Further details in Appendix B, Figure 3 & 5 and listed in Table 6 below.

ID Number	Site Name	Site Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting
3	LLANERCHYRAUR	LEAD MINE	None	Low	None
4	TYISAF LEAD MINE; CAE CONROY	LEAD MINE	None	Low	None
7	TY-ISAF SHAFT (DIS)	MINE SHAFT	None	Very Low	None
9	LLANNERCH-YR- AUR SHAFT (DIS)	MINE SHAFT	None	Very Low	None
10	LLANNERCH-YR- AUR LEVEL (DIS)	LEVEL	None	Very Low	None
20	WIG FARM BUILDING	FARM BUILDING	None	Very Low	None
21	WIG QUARRY	QUARRY	None	Very Low	None
22	WIG FARMSTEAD	FARMSTEAD	None	Very Low	None
23	GWERN Y FFRIDD FARMSTEAD	FARMSTEAD	None	Very Low	None
24	ESGAIR GOCH FARMSTEAD	FARMSTEAD	None	Very Low	None

Table 6: List of previously recorded, non-designated historic assets and buildings in the 2km assessment area on which there would be an impact.

10.5 Newly identified sites of historic importance

10.5.1 Ten newly recorded sites of historic importance were noted for this assessment at or near the turbine site. Details of these sites are included in Table 7, Appendix B and Figures 3 & 5.

ID Number	Site Name	Site Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting
42	TY ISAF	BOUNDARY BANK (EARTHWORK)	High	None	None
36	TY ISAF	BOUNDARY BANK (EARTHWORK)	Low	Low	None
39	LLANERCHYRAUR LEAD MINE	LEAT	Low	Low	None
37	CWM CAE CONROY	TRACKWAY	Very Low	Very Low	None
38	CWM CAE CONROY	QUARRY	Very Low	None	None
34	TY ISAF LEAD MINE; CAE CONROY LEAD MINE	POND	None	Very Low	None
35	TY ISAF	QUARRY	None	Very Low	None

ID Number	Site Name	Site Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting
40	TY ISAF LEAD MINE; CAE CONROY LEAD MINE	RESERVOIR	None	Very Low	None
41	LLANERCHYRAUR LEAD MINE	SPOIL TIP	None	Very Low	None
43	TY ISAF LEAD MINE; CAE CONROY LEAD MINE	RESERVOIR	None	Very Low	None

Table 7: Impacts on Newly Identified sites

10.6 Registered Parks & Gardens and their essential settings.

There are no Registered Park and Garden within the 2km or 5km study areas.

10.7 Registered Historic Landscapes

The development site does not lie in a Registered Historic Landscape.

10.8 Non-registered Historic Landscapes

The development site does not lie in a Special Landscape Area.

10.9 LANDMAP and landscape characterisation information

10.9.1 The proposed turbine would lie on the northeastern edge of the extensive Glasllyn LANDMAP Historic Landscape Aspect Area (MNTGMHL503), see Figure 8, which is described as;

“Moorland and marginal land west of Staylitttle partly enclosed in the post-medieval and modern periods with large irregular and straight-sided boundaries, and including small areas of registered common land in the northern part of the area. Discrete blocks of 20th-century conifer woodland. Natural, post-glacial lakes. Early settlement and land use is indicated by dispersed clusters of Neolithic to Bronze Age hilltop burial mounds and flint-scatter sites. The Roman road west of Caersws crosses the central part of the area, passing the Roman fortlet at Penycrocbren. Extensive areas late 19th and early 20th lead mining industrial remains. Later settlement and land use indicated by scattered medieval and post-medieval house sites.”

10.9.2 The overall evaluation of this aspect area is Moderate, the integrity, survival and condition are assessed as Moderate but rarity and potential as High.

10.10 Conservation Area

There is one conservation areas within the 2km to 5km radius assessment area. This covers the village of Bont Dolgadfan. There would be no views of the turbine from within this area. The turbine would also have no effect on the setting of the Conservation Area.

10.11 Tir Gofal interests or requirements

No Tir Gofal interests were identified.

10.12 Buried archaeological potential

A denuded earthwork boundary bank (ID number 42) runs through the proposed turbine site, with a similar bank at right angles to it (ID number 36). It would appear to be a post-medieval feature of limited archaeological potential. No other archaeological features were noted at the site.

10.13 Palaeoenvironmental potential

No palaeoenvironmental potential was identified at the turbine site.

10.14 Hedgerows and field patterns

10.14.1 The field system around the turbine site consists of low earthwork boundary banks which have mostly been abandoned and do not have hedgerows along them. They appear to be post-medieval in date. The fields of the wider Ty Isaf holding are relatively small to medium in size and irregular in form and have mostly been in place since at least the time of the parish tithe map of 1841.

10.15 Ancient woodland

There are four areas of Ancient and Semi-natural Woodland at the eastern side of the 2km assessment area and four Plantations on Ancient Woodland Sites (see figure 3). There would be no impact on these woodlands from the proposed turbine.

10.16 Place-names

There are no placenames of archaeological or historical significance near the proposed turbine.

10.17 Cumulative impact

The tops of two turbines in the Trannon Moor wind farm were visible to the southeast of the turbine site.

10.18 National Park

The proposed turbine does not lie close to a National Park.

11. Conclusion

11.1 The proximity of the proposed turbine to a post-medieval earthwork boundary bank (ID number 42) represents the most significant impact from this development.

11.1.1 The turbine would be likely to cut through a section of the boundary bank. Restrictions imposed by the local topography mean that there is little scope to move the position of the turbine, and even if this could be achieved, the access track and/or cable trench would still cut through the bank. The impact on the bank is assessed to be a High, direct, physical impact for this reason.

11.1.2 However, the bank appears to be post-medieval in date, no longer in use, and is considered to be of minor archaeological significance. The loss of a section of this bank could be offset by archaeological evaluation in advance of development and by taking steps to ensure that the remainder of the bank is not damaged during construction.

11.2 There would not be a significant direct, physical impact on the historic environment, or individual historic assets from the proposed development, apart from that which would be experienced by the aforementioned boundary bank (ID number 42).

11.2.1 A former mine leat at Ty Isaf (ID number 39), now disused and largely infilled, could potentially be damaged by the erection of an electricity pole on or close to its course. The electricity pole should be positioned at least 5 metres from the leat. If this is not possible, archaeological evaluation should be undertaken in advance of development to record the structure of the affected section of the leat.

11.2.2 A second boundary bank (ID number 36) near the turbine site would also experience a direct, physical impact as the cable trench would cross it. The bank is post-medieval in date, denuded and no longer in use. It is of minor archaeological interest. A narrow section of this bank would be lost when the cable trench is excavated. It is suggested that an archaeological evaluation trench across this section of bank, in advance of development, would allow the structure of the bank to be examined and a comparison to be made with that of bank ID number 42. This, along with the reinstatement of the affected section of the bank, after the cable has been laid, would be sufficient mitigation.

11.2.3 Two further features have been assessed as being likely to experience a direct impact. One is the post-medieval/modern trackway (ID number 37) which runs up the Cae Conroy valley from the road near Ty Isaf to the former Llechyraur mine site. This was originally used by the mine, when it was operating in the 19th century, but has now been resurfaced and widened in places to serve as a farm track

and will be used to access the turbine site. The second feature is a modern quarry working (ID number 38), which was used to source stone for use on the farm in the 20th century. The farm trackway already runs through the quarry and would be used to access the turbine site. In both instances the use of this trackway would amount to a Very Low, direct, physical impact, but this would be considered acceptable and not require archaeological mitigation.

11.3 There would not be a significant indirect, visual impact on the historic environment, or individual historic assets from the proposed turbine.

11.3.1 Two non-statutory historic assets would experience a Low, indirect, visual impact from the turbine. These are the sites of the Llanerchraur and Ty Isaf Lead Mines (ID numbers 3 & 4). Fifteen non-statutory historic assets would experience a Very Low, indirect, visual impact from the turbine.

11.3.2 Two Listed Buildings within a 2km radius would experience a Very Low, indirect, visual impact from the turbine. These are Gellidywyll farmhouse and outbuilding (ID numbers 18 & 19). There would be no impact on key views or the settings of these buildings.

11.3.3 No Scheduled Ancient Monuments within 2km would be affected by the proposed turbine.

11.3.4 No Scheduled Ancient Monuments within a 2km to 5km radius would be affected by the proposed turbine.

11.3.5 There are no Registered Parks & Gardens within a 5km radius of the proposed development.

11.3.6 There is one Conservation Area, Bont Dolgadan, within a 5km radius of the proposed turbine. The turbine would not be visible from this location and would have no impact on the setting of the Conservation Area.

11.4 The proposal does not appear to impact on the spoil tip of the Llanerchraur Lead Mine (ID number 41), but any disturbance of this tip should be avoided.

11.5 Apart from the post-medieval boundary bank, ID number 42, there is no evidence to suggest that there are further buried archaeological features at the turbine site. Archaeological mitigations are suggested in points 11.1.2, 11.2.1 & 11.2.2 with regard to impacts on other features. Figure 9 below records the locations of the features mentioned in this section.

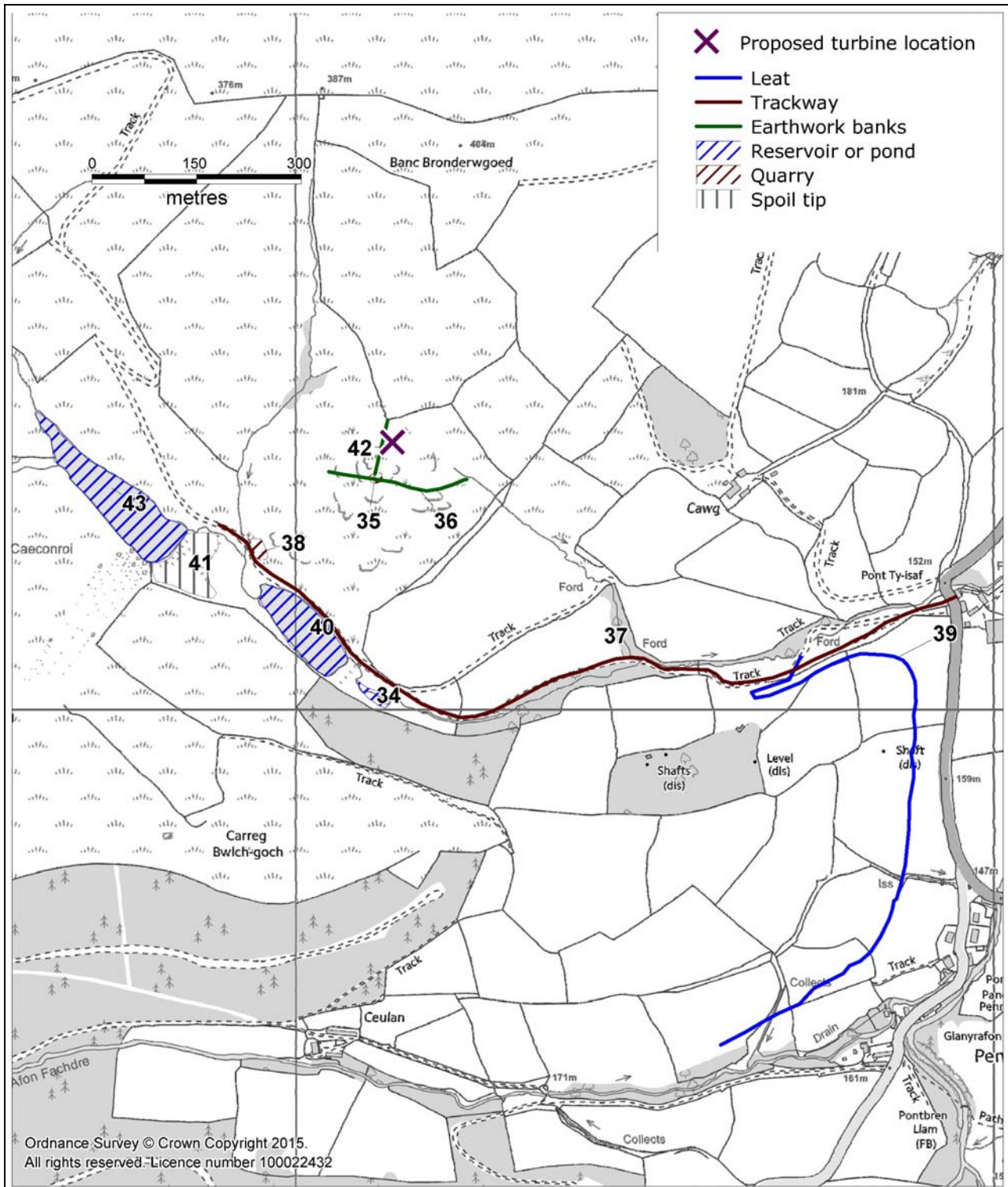


Figure 9: A location map of historic assets which would experience some impact from the proposed turbine development

12. Reporting

12.1 Copies of this report will be provided to the client, The National Monument Record and the Regional Historic Environment Record.

13. References

13.1 Map sources

Ordnance Survey, 1834, 2" to 1 mile Original Surveyors drawing, St Asaph Sheet

Ordnance Survey, 1836, 1" to 1 Mile. Sheet 60

Ordnance Survey, 1887, 1:2500, 1st edition

Ordnance Survey, 1902, 1:2500 2nd edition

Llanbryn-mair parish tithe map 1841 and apportionment, 1839

13.2 Web-based materials

Historic England, 2015, *The Setting of Heritage Assets Historic Environment Good Practice Advice in Planning Note 3*

RCAHMW, Historic Wales Portal

Research Framework for the Archaeology of Wales, www.archaeoleg.org.uk

13.3 Published sources

Bick, D.E., 1977, *The Old Metal Mines of Mid Wales, Part 4: West Montgomeryshire*

Cadw, 2011, *Conservation Principles for the sustainable management of the historic environment of Wales,*

Cadw & CCW, 2007, *Guide to the Good Practice on using the Register of Landscapes of Historic Interest in Wales in the planning and development process.*

Welsh Office, 1996, *Planning and the Historic Environment: Archaeology*
Welsh Office Circular 60/96

13.4 Unpublished sources

Trysor, 2015, *Specification for an Historic Environment Assessment for Ty Isaf, Llanbryn-mair, Powys.*

13.5 Data Sources

Clwyd Powys Archaeological Trust, Historic Environment Record, data received 01/06/2015

Cadw, Listed Building all-Wales dataset, created June 2015

Cadw, Parks and Gardens all-Wales dataset, created October 2014

Cadw, Scheduled Ancient Monument all-Wales dataset, created June 2015

14. Reliability & Limitations of Sources

- 14.1 In line with the requirements of the ClfA Standards & Guidance notes for undertaking Desk-based Assessments (Point 3.3.6), the following observations on the usefulness and reliability of the sources used have been made.
- 14.2 The cartographic sources used include a range of Ordnance Survey maps produced during the 19th and 20th centuries, all of which provided sufficiently clear and accurate representations of the evolving landscape of the assessment area. The earliest map source was the 1834 Ordnance Surveyors Original Surveyors Drawings, of which an adequate, digital copy is available through the British Museum website. The Llanbrynmair parish tithe map (1841) was a good map source, although it is partly damaged in the area of the proposed turbine, where the details of field numbers and some boundaries have been lost. It was possible to reconstruct the map to an acceptable degree by using later Ordnance Survey maps and modern aerial photographs. Field names and land use details area included on the accompanying tithe schedule, dated to 1839, as well as ownership and tenancy details.
- 14.3 Historical sources are available which relate to the history of the lead mines of Ty Isaf and Llanerchyrour which worked in the Cae Conroy valley in the 19th century. Most useful is D.E. Bick's volume on the metal mines of Western Montgomeryshire (Bick, 1977).
- 14.4 The main source of data for the assessment was the Clwyd Powys HER. The National Monuments Record for Wales was also used.
- 14.4.1 HER data supplied by the Clwyd Powys Archaeological Trust found to be of limited use. The district appears to be substantially under-recorded. The revised assessment area included 46 HER sites. Of these 13 records were discarded as they were either natural features (4), wrongly located (5), duplicate records (2), a findspot with a 4-figure grid reference (1) or unidentifiable (1). Three of the sites which were retained required amended grid-references to accurately locate them. One site, a kiln at Pennant (ID number 17) had no reference as to what sort of kiln it had been in the record.
- 14.4.2 The HER had a confused and scant record for both the Llanerchyrour and Ty Isaf Lead Mines, which rate amongst the most successful and interesting mining complexes in the region. No clear description was provided of their history. There was no source given for a record of Roman mining at Ty Isaf. The HER has no detailed record of the substantial surviving remains within the landscape, which extend along the Cae Conroy valley and over the hills to the south and west.

14.4.3 The National Monuments Record is available online, through Coflein. It was found that the NMR contains very few records within the assessment area and was of limited use for this assessment.

14.4 Cadw's Listed Buildings descriptions were accessed via the Historic Wales Portal where necessary. These records were found to be informative and accurate.

14.5 Google Earth aerial images of the assessment area were also used online. These date to 2006 and 2009 and provide good coverage for the whole assessment area.

Jenny Hall & Paul Sambrook
Trysor, July, 2015

Appendix A: Specification

**SPECIFICATION FOR AN HISTORIC ENVIRONMENT ASSESSMENT
FOR A TURBINE AT TY ISAF, LLANBRYNMAIR, POWYS**

1. Introduction

1.1 Martin Horne of WinDS Ltd, Gwelfor Castle Morris, Haverfordwest, Dyfed, SA62 5XA has commissioned Trysor heritage consultants on behalf of his client, Nicky & Aled Jarman, Ty Isaf Farm, Llanbrynmair, Powys, SY197BQ to write an Historic Environment Assessment for a proposed turbine land west of Ty Isaf.

1.2 Scope notes supplied for single turbine developments by the Development Control Archaeologist at Clwyd Powys Archaeological Trust have been used to guide this specification as well as the Chartered Institute for Archaeologists *Standard and Guidance for Historic Environment Desk-based Assessment* (CIfA, 2014)

2. The proposed development

2.1 It is proposed that a single turbine, 24.3 metres to hub and 36.3 metres to the upright blade tip, is located at approximately SN8713898383 on high ground to the west of Ty Isaf Farm.

2.2 A foundation hole, less than 10 metres by 10 metres in plan, will be excavated for the turbine base through the subsoil.

2.3 An existing access track up to the southwest of the development site will be used, with a new trackway, approximately 350 metres long, running up slope to the turbine.

2.4 The cable trench will run southeast for approximately 360 metres and from there will be carried on poles.

3. Planning context of the proposed development

3.1 A planning application has not been submitted for this turbine.

3.2 This assessment would be to provide sufficient information on the potential historic environment resource, and the effect of the turbine on this resource, to allow an informed decision about the impact of the proposal.

4. Objective of the specification

4.1 The objective of this specification is to outline the method to be used for the assessment in order to identify any potential historic environment dimension associated with the proposed planning applications, in line with the scope notes supplied for single turbine developments by Mark Walters of Clwyd Powys Archaeological Trust

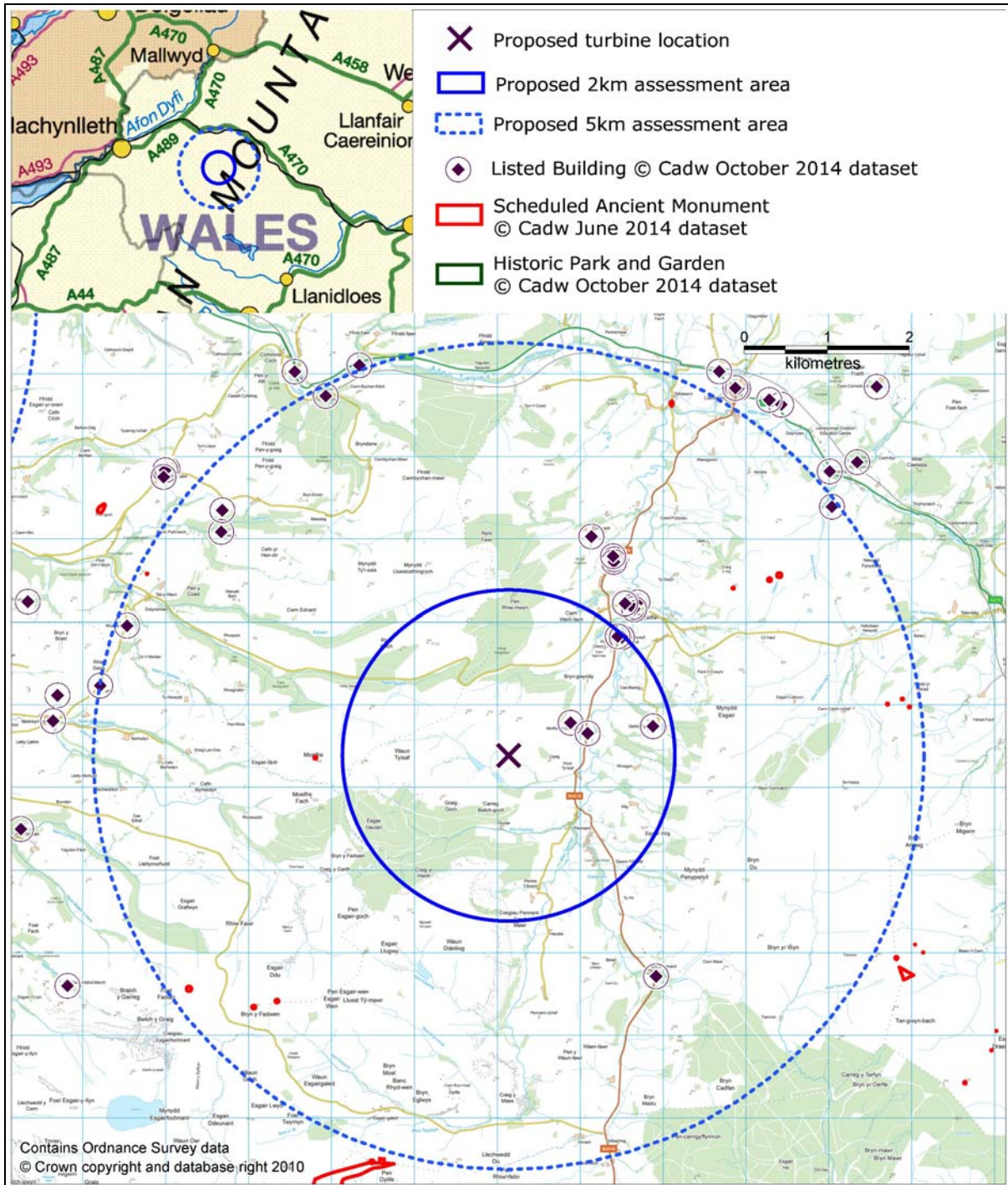


Figure 1: The proposed location of the turbine and the proposed areas of the assessment.

5. Scope of Work

5.1 The assessment will initially consider known historic assets within a 2 km radius circle centred on SN8713898383 (see Figure 1). This study area may be revised once the importance, proximity and intervisibility of the sites have been established. The impact on designated sites will be considered within a 5km radius circle.

5.2 The following components of the historic environment will be considered, where relevant;

- a. Scheduled Ancient Monuments (SAMs) and their settings.
- b. Non-scheduled ancient monuments and their settings,
- c. Newly identified sites of historic importance
- d. Listed buildings and their settings.
- e. Non statutory Buildings of Local Importance, where this information is readily available and relevant to the proposed development.
- f. Registered Parks and Gardens and their essential settings.
- g. Registered Historic Landscapes
- h. Non-registered historic landscapes
- i. Buried archaeological potential
- j. Palaeoenvironmental potential
- k. Hedgerows and field patterns
- l. Ancient woodland
- m. Place-name evidence
- n. Cumulative impacts, e.g. wind turbines in close proximity, which will require a separate study.
- o. Any Tir Gofal/Glastir interests or requirements
- p. LANDMAP and landscape characterisation information

5.3 An assessment will be made of the development's possible impact on all known archaeological and historic sites recorded in the Regional Historic Environment Record (HER), the National Monuments Records (NMR), the National Museum of Wales' Artefact Records, and Cadw's SAM and Listed Building registers within the revised study area.

5.4 This assessment will be based on criteria guided by *Welsh Office Circular 60/96* and the ASIDOHL2 Process outlined in the *Guide to Good Practice on using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process* and Historic England, 2015, *Historic Environment Good Practice Advice In Planning Note 3 The Setting of Heritage Assets*

5.5 Historic Ordnance Survey maps and title map will be consulted to guide the assessment, as well as accessible on-line aerial photographs.

5.6 Elevation profiles, in conjunction with photos from the site visit and aerial photos, will be used assess to intervisibility, views and impact on setting. ZTV and photomontages supplied by the client will be used if available. If ZTV is not yet available Trysor will create their own.

5.7 A site visit will be carried out in accordance with Chartered Institute for Archaeologists' *Standard and Guidance for an Historic Environment Desk-based Assessment* (CIfA, 2014). The site visit will be record any unknown features in the vicinity of the proposed development. It will also assess the condition of known historic assets and an examination and record will be made of the nature of adjacent field boundaries. In addition, if practical the field will be informally fieldwalked to enable recovery and

recording of any artefacts. A rapid record of features will be made, including a written description on pro-forma record sheets.

5.8 Colour digital photographs will be taken, using a 16M pixel camera. A written record will be made on site of the photographs taken. Appropriate photographic scales will be used.

6. Reporting

6.1 A written report will be submitted to the client to inform the current planning application. The report will include;

- a. a non-technical summary
- b. a site location plan
- c. a bibliography
- d. a limited gazetteer of all historic assets included in the assessment giving significance and impact, with descriptions.
- e. an assessment of the value and significance of each historic asset
- f. an assessment of the impact of the proposed development on the historic assets of the study area – impacts will be assessed whether negative or positive, direct or indirect.
- g. statement of the local and regional context of the historic assets identified as have being impacted on by the development.
- h. statement on reliability of resources used during assessment.

6.2 The report will be guided by the requirements of Annexe 2 of the Chartered Institute for Archaeologists' *Standard and Guidance for an Historic Environment Desk-based Assessment* (CIfA, 2014). Copies of the report will be provided to the client, the Regional Historic Environment Record and the National Monuments Record.

7. Sources

Cadw & CCW, 2007, *Guide to Good Practice on using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process – Revised (2nd) edition including revision to the assessment process (ASIDOHL2)*.

Chartered Institute for Archaeologists, 2014, *Standard and Guidance for an Historic Environment Desk-based Assessment*, revised December 2014.

CPAT, 2014, Letter to planning officer, dated 09 December 2014

Historic England, 2015, *Historic Environment Good Practice Advice In Planning Note 3 The Setting of Heritage Assets*

Welsh Office Circular 60/96; *Planning and the Historic Environment: Archaeology* (1996)

8. Health & Safety

8.1 Trysor will undertake a risk assessment in advance of any field visit in accordance with their health and safety policy.

9. Dissemination

9.1 A summary of the work undertaken and its findings will be submitted to *Archaeology in Wales* if appropriate. Paper copies of the report will be submitted to the regional Historic Environment Record, as well as the National Monument Record as well as in pdf format.

10. Archive

10.1 The paper archive will be deposited with the National Monuments Record, including a copy of the final report. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken. Photographs will be supplied in TIFF format in a file size greater than 11MB, following the standard required by the RCAHMW.

11. Resources to be used

11.1 Two members of staff will undertake the assessment. They will be equipped with standard field equipment, including digital cameras, GPS and first aid kits. Trysor have access to the computer hardware and software required to deliver the completed final report and archive to a professional standard.

12. Qualification of personnel

12.1 Trysor is a Registered Organisation with the Chartered Institute for Archaeologists and both partners are Members of the Chartered Institute for Archaeologists, www.archaeologists.net

12.2 Jenny Hall (BSc Joint Hons., Geology and Archaeology, MCIfA) had 12 years excavation experience, which included undertaking watching briefs prior to becoming the Sites and Monuments Record Manager for a Welsh Archaeological Trust for 10 years. She has been an independent archaeologist since 2004 undertaking a variety of work that includes upland survey, desk-based appraisals and assessments, and watching briefs.

12.3 Paul Sambrook (BA Joint Hons., Archaeology and Welsh, MCIfA, PGCE) has extensive experience as a fieldworker in Wales. He was involved with Cadw's pan-Wales Deserted Rural Settlements Project for 7 years. He also undertook Tir Gofal field survey work and watching briefs. He has been an independent archaeologist since 2004 undertaking a variety of work including upland survey, desk-based appraisals/assessments, and watching briefs.

13. Insurance & Professional indemnity

13.1 Trysor has Public Liability and Professional Indemnity Insurance.

14. Project identification

14.1 The project has been designated Trysor Project No. 2015/468

Jenny Hall & Paul Sambrook
Trysor
May 2015

**Appendix B:
Site Gazetteer
within 2 kilometres**

ID number: 1 PONT YR EFAIL FACH RIDGE AND FURROW
RIDGE AND FURROW?

HER PRN: 4834

NMR NPRN:

NGR: SN88209770 Grid reference taken at centre of site

Period: Medieval; Post Medieval **Broadclass:** Agriculture and Subsistence

Form: Earthwork **Condition:** Near Destroyed

Site Status:

	SAM number:	LB number:	grade:
Trysor Description:			

Rarity: Common

Reference:

Group Value: None

Evidential Value: Possible ridge and furrow in a field

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: These possible cultivation ridges have been noted in a low-lying field to the eastern side of the Afon Twymyn.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact:

ID number: 2 RHIW WGAN RIDGE AND FURROW
RIDGE AND FURROW?

HER PRN: 4836

NMR NPRN:

NGR: SN88259845 Grid reference taken at centre of site

Period: Medieval; Post Medieval **Broadclass:** Agriculture and Subsistence

Form: Earthwork **Condition:** Near Destroyed

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Possible ridge and furrow in a field

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: These possible cultivation ridges have been noted in a low-lying field to the eastern side of the Afon Twymyn.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: There is no evidence in this field on modern aerial photographs.

ID number: 3 LLANERCHYRAUR
LEAD MINE

HER PRN: 5941

NMR NPRN:

NGR: SN86759820 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Structure

Condition: Damaged

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Not rare in region

Reference:

Group Value: Associated with the Ty Isaf lode and the Ty Isaf Lead Mine

Evidential Value: Many surviving features in the landscape, including building bases, spoil tips, levels and shafts

Historical Value: Associated with Sir John Conroy, Baronet of Llanbrynmair

Aesthetic Value: None

Communal Value: None

Setting: This 19th century lead mine retains many impressive features, high up in the Cae Conroy valley. These include open levels and shafts, an open stope, substantial spoil tips which cascade down the steep valley slope. Two large reservoirs also still survive close to the mine site, and supplied the Ty Isaf and Llanerchyrour mines. In terms of modern setting the industrial heritage of the valley is still evident.

Significance: Regionally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Low
Intervisibility; The construction of an access track could impact on the spoil tips. The tips should not be used as a source of stone.

Level of Impact on Setting: None

Comment on Impact: The turbine would not directly impact on the lead mine, but would be visible from it. The associated access track and cable trench should not impact on the lead mine, but care must be taken that the spoil tips at the eastern side of the mine complex are not disturbed by any upgrading or extension of the existing track.

ID number: 4 TYISAF LEAD MINE; CAE CONROY
LEAD MINE

HER PRN: 18998 **NMR NPRN:**
NGR: SN8774798087 Grid reference taken at centre of site
Period: Post Medieval **Broadclass:** Industrial
Form: Structure **Condition:** Damaged
Site Status:

Trysor Description: **SAM number:** **LB number:** **grade:**
It is evident from the description of David Bick (1977) that there were early workings at Ty Isaf mine, opened by 19th century miners. The dating of any earlier workings is not understood, despite the find of a small pig of lead at the mine in the 1800s which was purported to be of Roman origin.

It is known that Thomas Bonsall drove a new level at Ty Isaf in 1805, but the context of this event is not fully understood. He was followed by Job Sheldon, who managed the mine for a Flintshire company. Then in 1829, Sir John Conroy took possession of the mine, shortly after purchasing his Llanbrynmair estate. Thereafter, the name Cae Conroy seems to have become associated with Ty Isaf farm and the nearby lead mine. The farm is named as Cae Conroy on the 1841 parish tithe map, for example. Conroy also owned the adjacent Llanerchyrour Lead Mine, which was worked alongside Ty Isaf.

Under Conroy's ownership, the mine was developed and proved to be a highly successful venture. He put the mine up for sale in 1867, by which time a 40' water wheel was working at the crushing mill and a 50' water wheel near the farmhouse driving the pumping system via a series of flat rods.

Conroy eventually sold the mine for £50,000 in 1870, by which time the Ty Isaf ore body was said to have failed. The Conroy Lead Mines Company put the site up for sale again, along with the adjacent Llanerchyrour Lead Mine.

Some lead ore was raised at Ty Isaf in 1873 but the mine seems to have ceased work around that time. It is shown as an intact complex on the 1887 1:2500 inch Ordnance Survey map, which would have been surveyed some years earlier. This map may simply show that much of the Cae Conroy Lead Mines complex was still in use during the 1870s and into the 1880s to serve the Llanerchyrour workings further to the west.

Llanerchyrour had closed in 1873, but some further ore was raised in 1875-1877 and 1879-1881, after which the mine was closed. During this period the 50 foot water wheel at Ty Isaf farm was used to provide motive power for pumping engines at Llanerchyrour, via an unusual wire rope system passing through the Middle Adit of Ty Isaf mine.

Rarity: Not rare in region

Reference:

Group Value: Associated with the Ty Isaf lode and the Llanerchyrour Lead Mine

Evidential Value: Scant remains present in landscape; Historic mapping

Historical Value: Associated with Sir John Conroy, Baronet of Llanbrynmair

Aesthetic Value: None

Communal Value: None

Setting: This lead mine was worked in the 19th century via a series of shafts and levels in a minor tributary valley of the Afon Twymyn. The main activity seems to have been just to the south of the valley in the early 19th century but in the heyday of the mine, under the ownership of Sir John Conroy, the complex was expanded and workshops and a crushing mill were built close to the stream on the valley floor, with a large wheelpit, settling tanks and buddles located just to the north of Ty Isaf farm, in the Twmyn valley. Relatively little of this complex survives today, much of it hidden in the partly wooded tributary valley.

Significance: Regionally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Low
Possible impacts from work on any access track improvements

Level of Impact on Setting: None

Comment on Impact: It is unlikely that the turbine itself would be visible from the Ty Isaf mine, but the access track may pass close to the complex, along the existing farm track. Care would have to be taken that no surviving elements of the mine complex are degraded or destroyed by any work to upgrade the track.

ID number: 5 CAE MADOG QUARRY (DIS)
QUARRY

HER PRN: 22097

NMR NPRN:

NGR: SN8891299281 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Disused

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This minor quarry is shown on late 19th century Ordnance Survey maps, situated in an elevated position on a west facing slope above the Twymyn valley. It was worked in the corner of a pasture field. The quarry was disused by the early 20th century and is now hidden in woodland.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: Trees growing the quarry would block views of the turbine.

ID number: 6 RHIWGAN LEVEL (DIS)
LEVEL

HER PRN: 22098

NMR NPRN:

NGR: SN8874497999 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Not known

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common in the locality

Reference:

Group Value: Unknown

Evidential Value: Historic mapping. Some earthwork features visible on aerial photographs

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This minor lead mine working is first shown on the 1901 1:2500 scale Ordnance Survey map. It was a level driven into the west-facing valley slope on the eastern side of the Twymyn valley, within a post-medieval field parcel. The site is now hidden in a small wooded parcel.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: Trees and mature hedgerows around this site are likely to block views towards the turbine.

ID number: 7 TY-ISAF SHAFT (DIS)
MINE SHAFT

HER PRN: 22099

NMR NPRN:

NGR: SN8784197941 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Structure

Condition: Disused

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: Part of the Ty Isaf Lead Mine

Evidential Value: Earthwork remains

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 19th century shaft was worked as part of the Ty Isaf Lead Mine and its position was geologically determined. Situated in a pasture field.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The turbine would be visible from this location but would only cause a minimal visual impact.

ID number: 8 CAWG LEVEL (DIS)
LEVEL

HER PRN: 22100

NMR NPRN:

NGR: SN8765897924 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Disused

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: Part of the Ty Isaf Lead Mine

Evidential Value: Earthwork remains

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 19th century level was worked as part of the Ty Isaf Lead Mine and its position was geologically determined. Situated in a pasture field.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: This feature lies in woodland and trees would block views of the proposed turbine.

ID number: 9 LLANNERCH-YR-AUR SHAFT (DIS)
MINE SHAFT

HER PRN: 22101

NMR NPRN:

NGR: SN8648198007 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Structure

Condition: Disused

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common in the locality

Reference:

Group Value: Part of the Llanerchyrour Lead Mine

Evidential Value: Disused working

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 19th century shaft was worked as part of the Llanerchyrour Lead Mine and its position was geologically determined.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The turbine would be visible from this location but would only cause a minimal visual impact. The turbine would stand on much lower ground, over 130m below the level of the shaft.

ID number: 10 LLANNERCH-YR-AUR LEVEL (DIS)
LEVEL

HER PRN: 22102 **NMR NPRN:**
NGR: SN8657898000 Grid reference taken at centre of site
Period: Post Medieval **Broadclass:** Industrial
Form: Earthwork **Condition:** Not known
Site Status:

SAM number: **LB number:** **grade:**
Trysor
Description:

Rarity: Common in the locality

Reference:

Group Value: Part of the Llanerchyrour Lead Mine

Evidential Value: Disused working

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 19th century level was worked as part of the Llanerchyrour Lead Mine and its position was geologically determined.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The turbine would be visible from this location but would only cause a minimal visual impact. The turbine would stand on much lower ground, over 80m below the altitude of the level.

ID number: 11 LLANERCHYRAUR
LEAD MINE

HER PRN: 23423 **NMR NPRN:**
NGR: SN86759820 Grid reference taken at centre of site
Period: Modern **Broadclass:** Industrial
Form: Structure **Condition:** Damaged
Site Status:

Trysor Description: **SAM number:** **LB number:** **grade:**
A Mr R. Higgins tried to rework the tips of Llanerchyrour in 1951 and undertook a trial on the site. He installed a dressing plant, apparently at the site of the Ty Isaf mine, further to the west and lower down the valley from the Llanerchyrour tips. This was powered by a diesel engine. The results were poor and the project was quickly abandoned. It is not clear where this dressing plant was placed or if any of the building remains on site now are associated with this development.

Rarity: Not common

Reference:

Group Value: On the site of the earlier Llanerchyrour Lead Mine

Evidential Value: Documentary sources

Historical Value: Mentioned in historical sources

Aesthetic Value: None

Communal Value: None

Setting: The exact location of the mid-20th century dressing plant is not known and no identifiable evidence was noted in the field. No assessment of setting can be made.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The exact location of the mid-20th century dressing plant is not known and no identifiable evidence was noted in the field. No impact assessment can be made, but if the dressing plant was at the site of the Ty Isaf mine, as described by CPAT in the HER record for Llanerchyrour Mine, the turbine would not have any impact on any remains.

ID number: 12 TYISAF LEAD MINE
LEAD MINE

HER PRN: 23471 **NMR NPRN:**
NGR: SN87709790 Grid reference taken at centre of site
Period: Roman? **Broadclass:** Industrial
Form: Documentary Evidence **Condition:** Not known
Site Status:

SAM number: **LB number:** **grade:**
Trysor Description: It is thought that Ty Isaf Lead Mine, also known as Cae Conroy, had Roman origins. In 1829, Sir John Conroy, who had purchased the estate took control of the mine, as well as the neighbouring Llanerchyrour mine. Richard Williams (History of the Parish of Llanbrynmair), records that a small pig of lead was found at Ty Isaf when foundations were being dug for a new blacksmith's workshop. This lead pig was said to be of Roman date. David Bick refers to this discovery and also records a tradition of unknown source that 19th century miners had encountered 'Roman' workings underground (1977, p.23 and 24). The assumptions of a Roman date for both the find and earlier workings cannot be verified.

Rarity: Rare, if proven

Reference:

Group Value: Potentially part of a multiperiod lead mine complex

Evidential Value: Documentary sources

Historical Value: Recorded by David Bick and Richard Williams, the parish historian

Aesthetic Value: None

Communal Value: None

Setting: This record is based on a single find of a lead pig and a tradition of earlier workings at the mine, for which no assessment of setting can be made.

Significance: Unknown

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The record refers to underground workings and a find which has been removed, on which there would be no impact from the turbine.

ID number: 13 PENNANT SAWMILL
SAW MILL

HER PRN: 26731

NMR NPRN:

NGR: SN8809497279 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Building

Condition: Modernised

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Not rare

Reference:

Group Value: Part of Pennant village

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: The sawmill operated in a small building just to the south of Pennant village during the first half of the 20th century, closing in 1953. The building has now been considerably modernised and is used as a dwelling.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: Mature trees to the northwest of the old sawmill would be likely to block views of the proposed turbine.

ID number: 14 PENNANT CORN MILL
CORN MILL

HER PRN: 26732 **NMR NPRN:** 40199

NGR: SN8784897565 Grid reference taken at centre of site

Period: Post Medieval **Broadclass:** Industrial

Form: Building **Condition:** Destroyed

Site Status:

	SAM number:	LB number:	grade:
Trysor Description:			

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 18th century corn mill stood alongside the Afon Fachdre just above its confluence with the Afon Twymyn. The mill was a ruin by the later 20th century and cleared away for a new house site. The building does not survive therefore.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: This building does not survive and its site has been built over.

ID number: 15 PENNANT FACTORY
WOOLLEN MILL

HER PRN: 26733

NMR NPRN:

NGR: SN8790897567 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Building

Condition: Converted

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Not rare

Reference:

Group Value: None

Evidential Value: Standing building, converted into a dwelling

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This woollen mill was probably built in Pennant village by the early 19th century. It is shown on late 19th and early 20th century Ordnance Survey maps but closed during the 20th century and was converted into a private dwelling.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: Trees and rising ground to the northwest would block any views of the proposed turbine.

ID number: 16 PANDY'R PENNANT MILL
FULLING MILL

HER PRN: 37423 **NMR NPRN:** 41052

NGR: SN8793697621 Grid reference taken at centre of site

Period: Post Medieval **Broadclass:** Industrial

Form: Building **Condition:** Damaged

Site Status:

SAM number: **LB number:** **grade:**

**Trysor
Description:**

Rarity: Not raer

Reference:

Group Value: A historic building in Pennant village

Evidential Value: Standing building, historical mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 18th and 19th century fulling mill was founded alongside the confluence of the Twymyn and Fachdre rivers. The building now serves as a private dwelling.

Significance: Locally Important

**Any Direct
Impact?:** No
None

**Any Indirect
Impact?:** No
None

**Level of Impact
on Setting:** None

**Comment on
Impact:** Rising ground behind the former Pandy would block views of the proposed turbine.

ID number: 17 PENNANT, THE KILN
KILN

HER PRN: 39896

NMR NPRN:

NGR: SN8786297546 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Building

Condition: Converted

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Not rare

Reference:

Group Value: None

Evidential Value: Historic mapping. Recorded in detail by Cambrian Archaeological Projects in 2004

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This former kiln, of 19th century date, stood at the roadside in Pennant village. In modern times it has been extended and converted into a dwelling.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The kiln has been greatly modified. There would be no view of the turbine from this location and no impact caused by the development.

ID number: 18 GELLIDYWYLL HOUSE
HOUSE

HER PRN: 42070

NMR NPRN:

NGR: SN8890098758 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Domestic

Form: Building

Condition: Intact

Site Status: Listed Building

SAM number:

LB number: 18123 **grade:** II

**Trysor
Description:**

Rarity: Common

Reference:

Group Value: House in a farm complex

Evidential Value: Standing building, in use

Historical Value: Described by Cadw for listing purposes. Associated with the Winteringham Stable Estate in the early 20th century

Aesthetic Value: The core of the building is medieval, but the external walls were replaced in the 18th century

Communal Value: None

Setting: This farmhouse is found on the valley slope to the eastern side of the Twymyn valley. It stands alongside a minor road, within a farmyard context. Behind the house, to the north, is a strip of woodland along a minor valley. The house faces south, across the yard towards an outbuilding. A fine early 20th century outbuilding lies to the west of the house, and is described by Cadw as being important to its setting.

Significance: Nationally Important

**Any Direct
Impact?:** No
None

**Any Indirect
Impact?:** Yes
Very Low
Intervisibility

**Level of Impact
on Setting:** None

**Comment on
Impact:** The proposed turbine would be visible to the west-southwest but only cause a minimal visual impact. The turbine would not impact on key views of the house, gained looking north or northwest, and would not affect the farmyard setting of the dwelling.

ID number: 19 GELLIDYWYLL, ESTATE FARM BUILDING
FARM BUILDING

HER PRN: 42071

NMR NPRN:

NGR: SN8888198767 Grid reference taken at centre of site

Period: Modern

Broadclass: Agriculture and Subsistence

Form: Building

Condition: Intact

Site Status: Listed Building

SAM number:

LB number: 18124 **grade:** II

Trysor

Description:

Rarity: Common

Reference:

Group Value: Farm outbuilding in a farm complex

Evidential Value: Standing building, in use

Historical Value: Described by Cadw for listing purposes. Associated with the Winteringham Stable Estate in the early 20th century

Aesthetic Value: Listed as a good example of an improved agricultural estate building of the period

Communal Value: None

Setting: This farm outbuilding is found on the valley slope to the eastern side of the Twymyn valley. It was built in the first decade of the 20th century. It stands alongside a minor road, within a farmyard context. Behind the building, to the north, is a strip of woodland along a minor valley. The building faces east, across the yard towards the farmhouse.

Significance: Nationally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The proposed turbine would be visible to the west-southwest from the rear of the building but only cause a minimal visual impact. The turbine would not impact on key views of the building, gained looking west or northwest, and would not affect its farmyard setting.

ID number: 20 WIG FARM BUILDING
FARM BUILDING

HER PRN: 55178

NMR NPRN:

NGR: SN8827197588 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Agriculture and Subsistence

Form: Building

Condition: Intact

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping. Standing building

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This small shed or field barn stands alongside an old trackway. It is shown on the 1887 1:2500 scale Ordnance Survey map. In modern times a much larger agricultural shed has been built onto its southern side.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The proposed turbine would be visible across the valley from this location but would only cause a minimal visual impact. A much larger modern farm shed now stands attached to the southern side of this building.

ID number: 21 WIG QUARRY
QUARRY

HER PRN: 55179 **NMR NPRN:**
NGR: SN8848297637 Grid reference taken at centre of site
Period: Post Medieval **Broadclass:** Industrial
Form: Earthwork **Condition:** Disused
Site Status:

SAM number: **LB number:** **grade:**
Trysor
Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Disused quarry

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This small quarry was worked alongside the access lane to Wig Farm in the 19th century. It is long disused and is now used by the farm as a storage area.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The proposed turbine would be visible across the valley from this location but would only cause a minimal visual impact.

ID number: 22 WIG FARMSTEAD
FARMSTEAD

HER PRN: 55180

NMR NPRN:

NGR: SN8862597798 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Agriculture and Subsistence

Form: Building

Condition: Intact

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Working farmstead

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This farmstead is found on the valley slope to the eastern side of the Twymyn valley. Late 19th and early 20th century Ordnance Survey maps show the house at the eastern side of the farmyard and two outbuildings to the west of the yard. The western pair of buildings seems to still be present, but the original farmyard is now mostly covered by ranges of 20th century farm sheds. A new house has been built to the southwestern side of the farmyard complex, facing west.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The proposed turbine would be visible across the valley from parts of the holding but would only cause a minimal visual impact.

ID number: 23 GWERN Y FFRIDD FARMSTEAD
FARMSTEAD

HER PRN: 55181

NMR NPRN:

NGR: SN8859097023 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Agriculture and Subsistence

Form: Building

Condition: Intact

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This small farmstead is situated on the valley slope to the western side of the Twymyn valley, close to the neighbouring farmstead of Gwern y Ffridd. It is not clear whether Esgair Goch is still in use.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Possible intervisibility

Level of Impact on Setting: None

Comment on Impact: The turbine may be visible from here but mature trees close to the farm buildings are likely to screen the view.

ID number: 24 ESGAIR GOCH FARMSTEAD
FARMSTEAD

HER PRN: 55182

NMR NPRN:

NGR: SN8865197102 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Agriculture and Subsistence

Form: Building

Condition: Not known

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This small farmstead is situated on the valley slope to the western side of the Twymyn valley, close to the neighbouring farmstead of Gwern y Ffridd. It is not clear whether Esgair Goch is still in use.

Significance: Locally Important

**Any Direct
Impact?:** No
None

**Any Indirect
Impact?:** Yes
Very Low
Possible intervisibility

**Level of Impact
on Setting:** None

**Comment on
Impact:** The turbine may be visible from here but mature trees close to the farm buildings are likely to screen the view.

ID number: 25 CAWG FARMSTEAD
FARMSTEAD

HER PRN: 55964

NMR NPRN:

NGR: SN8763798329 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Agriculture and Subsistence

Form: Building

Condition: Intact

Site Status:

SAM number:

LB number:

grade:

**Trysor
Description:**

Rarity: Common

Reference:

Group Value: None

Evidential Value: Standing buildings, in use

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: Cawg sits in a sheltered hollow on the east-facing valley slope of the Twymyn valley. It has a small wooded area upslope to the west. It sits within a post-medieval field system and its access lane runs downslope to the northeast to join the road.

Significance: Locally Important

**Any Direct
Impact?:** No
None

**Any Indirect
Impact?:** No
None

**Level of Impact
on Setting:** None

**Comment on
Impact:** The woodland behind the farmyard would be likely to block views of the turbine. Cawg is not highly visible in the landscape and it would not appear that the turbine would affect views of the property or its setting.

ID number: 26 TY-ISAF OLD SHAFT
MINE SHAFT

HER PRN: 55965

NMR NPRN:

NGR: SN8783998164 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Damaged

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common in the locality

Reference:

Group Value: Part of the Ty Isaf mine complex

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: An old shaft shown on the 1887 1:2500 Ordnance Survey map just above the north bank of the Cae Conroy stream. A modern farm track seems to cross the location now and the shaft may have been destroyed or damaged.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The shaft may have been infilled by the construction of a modern track. The turbine would have no impact on the feature.

ID number: 27 TY-ISAF FORD
FORD

HER PRN: 55966

NMR NPRN:

NGR: SN8793198179 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Transport

Form: Structure

Condition: Destroyed

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This ford crossed the stream to the west of Ty Isaf farm. The road has been bridged in the 20th century.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: This feature does not survive but the turbine would not be visible from this point.

ID number: 28 TY-ISAF SLUICE
SLUICE

HER PRN: 55967

NMR NPRN:

NGR: SN8788998154 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Structure

Condition: Destroyed

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: Part of the Ty Isaf mine complex

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This sluice controlled the intake of water from the stream to feed a leat that supplied the processing area of the Ty Isaf lead mine.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: This feature does not appear to survive but the turbine would not be visible from this point.

ID number: 29 TY-ISAF FOOTBRIDGE
FOOTBRIDGE

HER PRN: 55968

NMR NPRN:

NGR: SN8793198179 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Transport

Form: Structure

Condition: Destroyed

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This footbridge crossed the stream to the west of Ty Isaf farm. The road has been bridged in the 20th century.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: This feature does not survive but the turbine would not be visible from this point.

ID number: 30 PENNANT SAWMILL, AQUEDUCT
LEAT

HER PRN: 87201

NMR NPRN:

NGR: SN8810697274 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Structure

Condition: Near Destroyed

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Common

Reference:

Group Value: None

Evidential Value: Historic mapping

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This short leat took water from the Afon Crygnant to supply the sawmill at Pennant village. It has long been disused. An extension to the southeastern gable of the sawmill has destroyed part of its course.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The proposed turbine would not be visible from this location and would have no impact upon it.

ID number: 31 CAE MADOG, SPINDLEWHORL
FIND

HER PRN: 97022

NMR NPRN:

NGR: SN88759920 Grid reference taken at centre of site

Period: Prehistoric?; Post Medieval? **Broadclass:** Object

Form: Finds only **Condition:** Not known

Site Status:

SAM number: **LB number:** **grade:**
Trysor
Description:

Rarity: Not rare

Reference:

Group Value: None

Evidential Value: Find only

Historical Value: None

Aesthetic Value: Possible prehistoric spindlewhorl

Communal Value: None

Setting: The precise findspot of this artefact is not known. The artefact has been removed.

Significance: Unknown

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The precise findspot of this artefact is not known. The artefact has been removed.

ID number: 32 CAE CONROY, MAGAZINE
MAGAZINE

HER PRN: 125960

NMR NPRN:

NGR: SN8751798054 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Structure

Condition: Intact

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Not rare

Reference:

Group Value: Part of the Ty Isaf mine complex

Evidential Value: Standing building

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This small stone building stands along the trackway to the west of the Ty Isaf mine complex. It was built in the 19th century and stands in good condition today, still in use as a shed.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: This building still stands. It is found in the wooded valley to the west of the Ty Isaf mine complex. Trees would block the view towards the proposed turbine.

ID number: 33 PENNANT ROOT STORE
VEGETABLE STORE

HER PRN: 128001

NMR NPRN:

NGR: SN87949767 Not accurate

Period: Post Medieval

Broadclass: Agriculture and Subsistence

Form: Structure

Condition: Not known

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

Rarity: Not rare

Reference:

Group Value: None

Evidential Value: Oral history

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: The grid-reference for this site is not precise enough to identify the exact location of the feature.

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The grid-reference for this site is not precise enough to identify the exact location of the feature.

ID number: 34 TY ISAF LEAD MINE; CAE CONROY LEAD MINE
POND

HER PRN:

NMR NPRN:

NGR: SN8713598012 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Water Supply and Drainage

Form: Earthwork

Condition: Disused

Site Status:

SAM number:

LB number: 0 **grade:**

Trysor Description: This small pond was created in the mid-19th century below a pair of reservoirs which would have supplied water to the Ty Isaf mine further down the valley. The pond measured approximately up to 50 metres by 20 metres with a earth and stone dam at its eastern end. It no longer fills to capacity and is a much less smaller body of water.

Rarity: Not rare

Reference:

Group Value: Part of the Ty Isaf mine complex

Evidential Value: Reservoir still visible

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This pond was created in the middle of Cwm Cae Conroy to supply water to the Ty Isaf mine. It is located just down the valley from two larger reservoirs from which water was channelled into this pond. The feature survives to the present day.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The turbine would be visible from this location but would cause minimal visual impact and would not impact on key views or the setting of the pond with reference to the mine complex.

ID number: 35 TY ISAF
QUARRY

HER PRN:

NMR NPRN:

NGR: SN8711598335 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Disused

Site Status:

SAM number:

LB number:

0 grade:

Trysor

Description:

A small, shallow quarry cut into the southern end of a short ridge jutting out of the southern side of Banc Bron-derwgoed. It measure about 15 metres by 15 metres and faces southwards.

Rarity:

Common

Reference:

Group Value:

None

Evidential Value:

Disused quarry hollow

Historical Value:

None

Aesthetic Value:

None

Communal Value:

None

Setting:

A quarry cut into the southern end of a short ridge jutting out of the southern side of Banc Bron-derwgoed, overlooking Cwm Cae Conroy.

Significance:

Minor Importance

Any Direct

Impact?:

No

None

Any Indirect

Impact?:

Yes

Very Low

Intervisibility

**Level of Impact
on Setting:**

None

**Comment on
Impact:**

The proposed turbine would cause a minimal visual impact to this minor feature.

ID number: 36 TY ISAF
BOUNDARY BANK (EARTHWORK)

HER PRN:

NMR NPRN:

NGR: SN8714198336 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Monument (By Form)

Form: Earthwork

Condition: Denuded

Site Status:

SAM number:

LB number: 0 **grade:**

Trysor

Description:

This earthwork boundary bank runs roughly east to west and is now a denuded feature, no more than 0.5 metres, and up to 1.5 metres wide. The bank appears to be shown on the 1841 parish tithe map as part of the field system on Ty Isaf farm, although the relevant section of the map is damaged and most of the bank is not visible. It is no longer used as a field boundary.

Rarity:

Common

Reference:

Group Value:

Part of the field system on Ty Isaf farm

Evidential Value:

Denuded and disused field boundary bank

Historical Value:

Shown on 1841 tithe map

Aesthetic Value:

None

Communal Value:

None

Setting:

Part of the post-medieval field system on Ty Isaf farm, on a southeast facing slope to the northern side of Cwm Cae Conroy

Significance:

Minor Importance

Any Direct Impact?:

Yes

Low

The cable trench would cut across this bank

Any Indirect Impact?:

Yes

Low

Intervisibility

Level of Impact on Setting:

None

Comment on Impact:

The cable trench would cross the line of the bank. There is no hedgerow on the bank and suitable mitigation would be to restore the affected section of bank after laying the cable.



Plate 1: A view of boundary bank ID number 36, looking east-southeast. This is the upper section of the bank, which would not be affected by the development.

ID number: 37 CWM CAE CONROY
TRACKWAY

HER PRN:

NMR NPRN:

NGR: SN8731198014 Grid reference taken at point along linear site

Period: Post Medieval

Broadclass: Transport

Form: Earthwork

Condition: Modernised

Site Status:

SAM number:

LB number:

0 grade:

Trysor

Description:

This trackway is shown on late 19th century Ordnance Survey maps as connecting mine workings at both Llanerchyrour and Ty Isaf Lead Mines, which were mined jointly as part of the Cae Conroy Lead Mine, with the crusher house and dressing floors further down the valley to the west, as well as to the public road system. It is still in use as a farm track, although it has been remetalled and improved in modern times.

Rarity:

Common

Reference:

Group Value:

Part of Ty Isaf farmstead

Evidential Value:

Existing trackway

Historical Value:

None

Aesthetic Value:

None

Communal Value:

None

Setting:

This track runs along the bottom of the Cae Conroy valley, parallel to, and to the north of, the stream.

Significance:

Locally Important

Any Direct

Impact?:

Yes

Very Low

Will be used as an access track

Any Indirect

Impact?:

Yes

Very Low

Intervisibility

**Level of Impact
on Setting:**

None

**Comment on
Impact:**

This track will be used to access the turbine site and will be intervisible with the turbine in places, but the impacts will be very low in view of the current good condition of the trackway and the small scale of the turbine.

ID number: 38 CWM CAE CONROY
QUARRY

HER PRN:

NMR NPRN:

NGR: SN8694698242 Grid reference taken at centre of site

Period: Modern

Broadclass: Industrial

Form: Earthwork

Condition: Intact

Site Status:

SAM number:

LB number:

0 grade:

Trysor

Description:

This small quarry would appear to have been used in modern times to obtain stone for use on Ty Isaf farm. A modern trackway runs into the quarry connecting it with the farm, further down the valley to the southeast. The quarried area measures 25 metres long by up to 14 metres wide.

Rarity:

Common

Reference:

Group Value:

Part of Ty Isaf farmstead

Evidential Value:

Existing quarry

Historical Value:

None

Aesthetic Value:

None

Communal Value:

None

Setting:

This quarry has been worked into an outcrop to the northern side of the Cae Conroy valley, opposite the workings and tips of the old Llanerchraur Lead Mine. It lies alongside the modern track connecting it to Ty Isaf farm.

Significance:

Minor Importance

Any Direct

Impact?:

Yes

Very Low

The access track to the turbine site would pass through the quarried area

Any Indirect

Impact?:

No

None

**Level of Impact
on Setting:**

None

Comment on

Impact:

The access track to the turbine site would cross the quarried area, following an existing, modern track. More stone might be quarried for track building purposes, but as this is an intermittently worked quarry the impacts on it are negligible.



Plate 2: A view of quarry ID number 38, looking east. The access trackway would run through the gate in the foreground.

ID number: 39 LLANERCHYRAUR LEAD MINE
LEAT

HER PRN:

NMR NPRN:

NGR: SN8787398051 Grid reference taken at point along linear site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Near Destroyed

Site Status:

SAM number:

LB number:

0 grade:

Trysor Description: This 19th century mine leat carried water from Cwm Fachdre, to the south, and ran for 1.2km to feed the Ty Isaf lead mine.. Today the line of the leat has almost been lost through the improved pasture fields to the south and south east of the mine.

Rarity: Not rare

Reference:

Group Value: Part of the Ty Isaf mine complex

Evidential Value: Reservoir still visible

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This 19th century mine leat carried water from Cwm Fachdre, to the south, and ran for 1.2km to feed the Ty Isaf lead mine. Today the line of the leat has almost been lost through the improved pasture fields to the south and south east of the mine.

Significance: Locally Important

Any Direct Impact?: Yes
Low
A new electricity pole may stand on the line of the leat

Any Indirect Impact?: Yes
Low
Intervisibility. Damage by vehicles erecting electricity poles.

Level of Impact on Setting: None

Comment on Impact: A new electricity pole is proposed to stand close to the line of the leat. It should either be located off the line of the leat or a pre-development archaeological evaluation should be undertaken on the affected part of the leat. Care should also be taken during the erection of the pole not to damage the leat with vehicular activity.

ID number: 40 TY ISAF LEAD MINE; CAE CONROY LEAD MINE
RESERVOIR

HER PRN:

NMR NPRN:

NGR: SN8706298056 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Water Supply and Drainage

Form: Earthwork

Condition: Intact

Site Status:

SAM number:

LB number:

0 grade:

Trysor

Description:

This reservoir was created in the mid-19th century as one of a pair of reservoirs which would have supplied water to the Ty Isaf mine further down the valley. The reservoir measures approximately up to 160 metres by 60 metres and has a earth and stone dam at its eastern end. Water flows out of the reservoir via a stone-lined channel from the northern end of the dam, feeding into a smaller pond immediately down the valley.

Rarity:

Not rare

Reference:

Group Value:

Part of the Ty Isaf mine complex

Evidential Value:

Reservoir intact

Historical Value:

None

Aesthetic Value:

None

Communal Value:

None

Setting:

This reservoir was created at the western, upper end of Cwm Cae Conroy to supply water to the Ty Isaf mine. It survives to the present day.

Significance:

Locally Important

Any Direct

Impact?:

No

None

Any Indirect

Impact?:

Yes

Very Low

Intervisibility

**Level of Impact
on Setting:**

None

**Comment on
Impact:**

The turbine would be visible from this location but would cause minimal visual impact and would not impact on key views or the setting of the reservoir with reference to the mine complex.



Plate 3: A view of the lower Cae Conroy mine reservoir (ID number 40), looking southeast. The trackway ID number 37, which is the proposed access track to the turbine site, is visible at the right-hand side of the photograph.

ID number: 41 LLANERCHYRAUR LEAD MINE
SPOIL TIP

HER PRN:

NMR NPRN:

NGR: SN8684998219 Grid reference taken at centre of site

Period: Post Medieval

Broadclass: Industrial

Form: Earthwork

Condition: Near Intact

Site Status:

SAM number:

LB number:

0 grade:

Trysor

Description:

This large spoil tip appears to be associated with a level at the Llanerchyrour Lead Mine, which was working in the mid-19th century. The phasing of the mine is unclear, based on historic map evidence, but the level seems to be shown as active on the 1st edition 1:2500 scale Ordnance Survey map. This map shows that the level was located close to the southern end of the dam on the upper Ty Isaf Lead Mine reservoir. It was also close to the buildings of the dressing floor of Llanerchyrour, to which it was linked by a tramway. A large tip which cascades down from an earlier level at the top of the slope and has gradually slid downhill under gravity, has now buried the level entrance. Nevertheless, the spoil tip from this lower level is still intact and was dumped along the southern side of the upper reservoir, and largely obscures its dam. This indicates that the level post-dates the construction of the dam. The original tip lines are still visible across the top of the spoil tip.

Rarity: Not rare

Reference:

Group Value: Part of the Llanerchyrour mine complex

Evidential Value: Surviving spoil tip

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This spoil tip dates to the mid-19th century and represents material mined from a lower level of the Llanerchyrour Lead Mine. It was dumped alongside an earlier reservoir dam across the bottom of the Cae Conroy valley. The spoil tip is largely intact although mid-20th century reworking attempts and modern farm activity has made some impact on it, with a farm track now skirting its southern side.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility. Possible quarrying of stone for track construction.

Level of Impact on Setting: None

Comment on Impact: The proposed turbine should only cause a minimal visual impact to this spoil tip and leave it physically undisturbed. The turbine wouldn't affect the key views or interrupt its relationship with associated mining features.



Plate 4: A view of the Llanerchryaur spoil tip ID number 41, looking southwest. The lower part of the tip lies close to the proposed access track to the turbine site.

ID number: 42 TY ISAF
BOUNDARY BANK (EARTHWORK)

HER PRN:

NMR NPRN:

NGR: SN8712098375 Grid reference taken at point along linear site

Period: Post Medieval **Broadclass:** Monument (By Form)

Form: Earthwork **Condition:** Denuded

Site Status:

SAM number: **LB number:** 0 **grade:**

Trysor Description: This earthwork boundary bank runs north-northeast to south-southwest along the crest of a short ridge which extends southwards from the southern side of Banc Bron-derwgoed. The bank is very denuded, no more than 0.5 metres, and up to 1.5 metres wide.

The bank is not shown on the 1841 parish tithe map or later Ordnance Survey maps. It would appear to be an earlier subdivision of a field dating before the 1840s.

Rarity: Common

Reference:

Group Value: Part of the post-medieval field system on Ty Isaf farm

Evidential Value: Denuded earthwork

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This bank is part of a post-medieval field system. It is denuded and not visible in the landscape.

Significance: Minor Importance

Any Direct Impact?: Yes
High
Direct, physical impact

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Comment on Impact: The turbine foundation is likely to cut through a section of this bank which would also be crossed by the access track to the site.



Plate 5: A view of boundary bank ID number 42, looking north-northeast

ID number: 43 TY ISAF LEAD MINE; CAE CONROY LEAD MINE
RESERVOIR

HER PRN: **NMR NPRN:**

NGR: SN8682698231 Grid reference taken at centre of site

Period: Post Medieval **Broadclass:** Water Supply and Drainage

Form: Earthwork **Condition:** Intact

Site Status:

SAM number: **LB number:** 0 **grade:**

Trysor Description: This reservoir was created in the mid-19th century as one of a pair of reservoirs which would have supplied water to the Ty Isaf mine further down the valley. It is situated close to the processing area of the Llanerchyrour Lead Mine, but there is no evidence on the ground or on historic maps of water from this reservoir powering waterwheels at that mine. The reservoir measures approximately up to 280 metres by 75 metres and has a earth and stone dam at its eastern end. The spoil tips from the processing area of Llanerchyrour mine have been dumped over the dam.

Rarity: Not rare

Reference:

Group Value: Part of the Ty Isaf mine complex

Evidential Value: Reservoir intact

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This reservoir was created at the western, upper end of Cwm Cae Conroy to supply water to the Ty Isaf mine. It survives to the present day.

Significance: Locally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Very Low
Intervisibility

Level of Impact on Setting: None

Comment on Impact: The turbine would be visible from this location but would cause minimal visual impact and would not impact on key views or the setting of the reservoir with reference to the mine complex.

**Appendix C:
Scheduled Ancient Monuments
within 2km to 5km**

Scheduled Ancient Monument number	Site Name	Site Type	NGR	Distance from turbine	Public Access	Setting	Comment on Impact	Level of Indirect Visual Impact	Level of Impact on Setting
MG065	Domen Fawr Castle Mound Tafolwern	Motte	SH891026					Excluded	Excluded
MG066	Ceffig Caerau Stone Circle	Stone circle	SH902005					Excluded	Excluded
MG068	Lled Croen-yr-Ych Stone Circle	Stone circle	SH904005					Excluded	Excluded
MG107	Bryn y Fedwen Round Barrows	Round barrow	SN841953					Excluded	Excluded
MG108	Foel Fadian Round Barrow	Round barrow	SN832955					Excluded	Excluded
MG147	Rhos-Dyrnog Standing Stone	Standing stone	SH827005					Excluded	Excluded
MG209	Yr Allor Cairn	Ring cairn	SH898004					Excluded	Excluded
MG265	Ffridd yr Ystrad Cairns	Round cairn	SN918990					Excluded	Excluded
MG311	Moelfre round barrow	Round barrow	SN848983					Excluded	Excluded

**Appendix D:
Listed Buildings
within 2km to 5km**

Listed Building number	Site Name	Easting	Northing	Grade	Distance from turbine	Public Access	Setting	Comment on Impact	Level of Indirect, Visual Impact	Level of Impact on Setting
7605	Church of St Mary	288412	300782	II*					Excluded	Excluded
7607	Pwlliwrch	283670	301114	II*					Excluded	Excluded
18117	Tremafon	288688	300251	II					Excluded	Excluded
18121	Bont Dolgadfan Independent Chapel, with railed forecourt	288699	300267	II					Excluded	Excluded
18122	Brynawel	288692	300260	II					Excluded	Excluded
18125	Bont Dolgadfan	288643	300209	II					Excluded	Excluded
18126	Glantwymyn	288654	300180	II					Excluded	Excluded
18127	Bethel Chapel and Forecourt Railings	288543	300248	II					Excluded	Excluded
18128	Pont Creignant	288919	295739	II	3.2km to the southeast of the turbine	On a public road	This bridge carries the public road over the Creignant stream within a steep-sided, wooded valley.	Woodland around the bridge would block any view of the proposed turbine. There would be no impact of views of the bridge or its setting.	None	None
18129	Diosg	291041	301418	II					Excluded	Excluded
18133	Sundial in the Churchyard of the Church of St Mary	288410	300750	II					Excluded	Excluded
18134	Hafod y Llan, also known as the Old Rectory	288400	300820	II					Excluded	Excluded
18135	Plas esgair	288137	301057	II					Excluded	Excluded
83019	Former Factory, Troed y Rhiw	284932	302756	II					Excluded	Excluded
83034	Pen y banc	283684	301374	II					Excluded	Excluded
83041	Rhiwgoch	282534	299981	II					Excluded	Excluded
84423	Gydrhos	282216	299241	II					Excluded	Excluded
84426	Multi-purpose farm building at Gydrhos	282213	299257	II					Excluded	Excluded

**Appendix E:
Plan of Development
from Client**

QAS 156117 100KVA - 3-Phase Generation

All positions approximate

Wayleave

Witness Testing
Overhead Line Survey
Traffic Management

New 200KVA
Transformer on
New H Pole

200Amp C/out &
CT Metering Panel

287138, 298383

Lay Only 100m x
185 XLPE cable

New Term Pole

HV straight Joint

5 x Inter Pole
T-Off Pole
2 x Section Poles
Term Pole

HV straight Joint

1960m x 50ASCR
Cable

1018970181F-SECTIONALISER

1018970181F-SECTIONALISER

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1018970181F-SECTIONALISER

1018970181F-SECTIONALISER

Customer Works
Customer to carry out all excavation
Customer to contact supplier for meter installation

SP Works

Install 200KVA 3-Phase Transformer on new H Pole
Lay only 110M x 185 XLPE HV Cable
Lay only 10m x 95 Wave Form LV cable
Terminate onto new Terminal Pole
Dig 11 x Pole Holes
Install 2 x Intermediate Poles
Install 2 section Angle Poles
Install 3 x Intermediate Poles
2 x Stay wires
T-Off Pole
1960m x 50ASCR Overhead Line
200AMP C/out
CT Metering panel
Install HV Fuse Unit on Pole 57 with 3 x 25A S2 Smart Links
2 x HV Joints
Hand Deliver HV outage Cards to customers
Hiab x 2
Engineer, Craftsman & Project Co-ordinator

