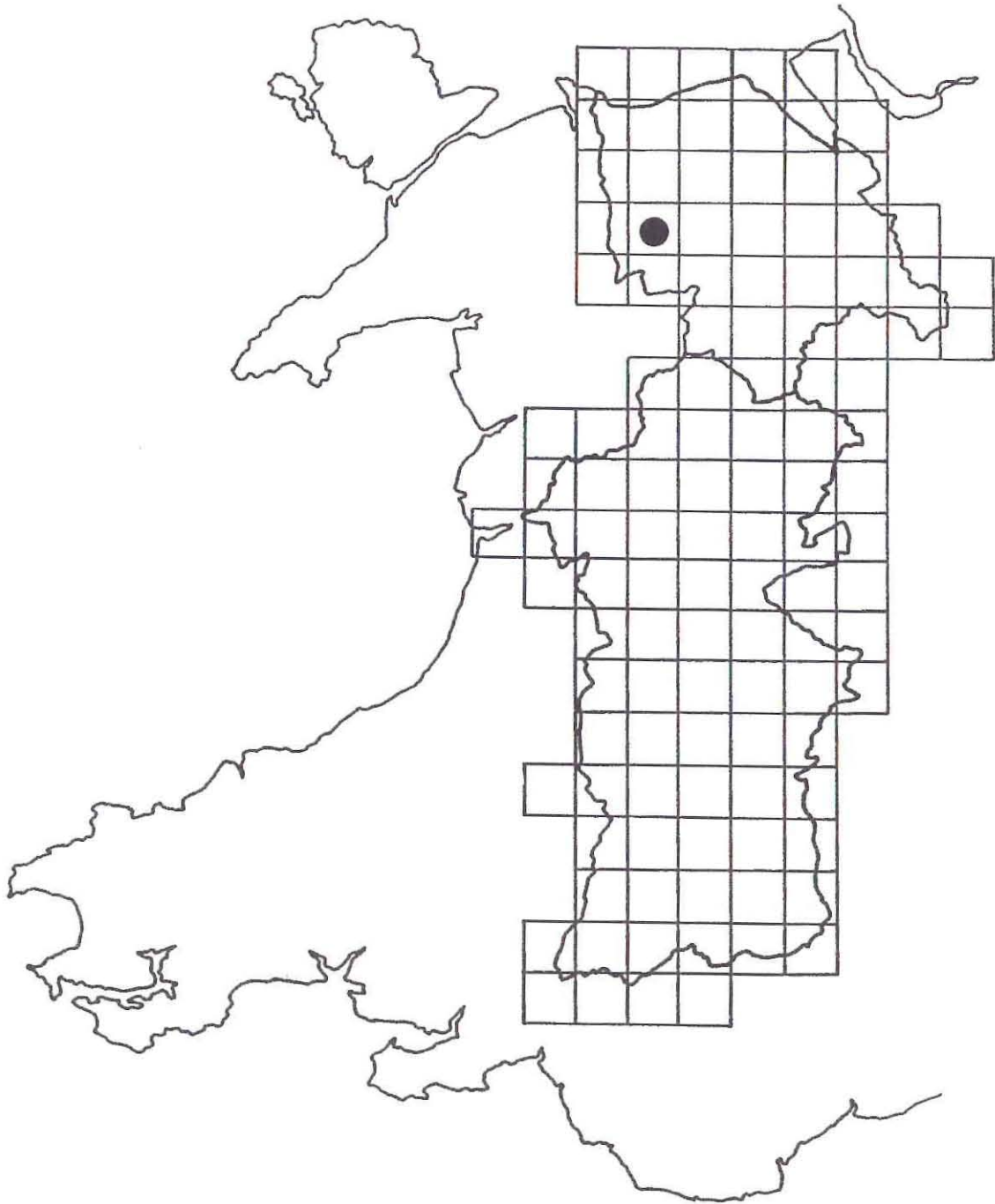


THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Pentrefoelas Windfarm, Clwyd

ARCHAEOLOGICAL EVALUATION



CPAT Report No 157

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ARCHAEOLOGICAL EVALUATION

by **R Hankinson**

November 1995

Report prepared for: Manweb Generation Holdings Ltd

The Clwyd-Powys Archaeological Trust

7a Church Street Welshpool Powys SY21 7DL

tel (01938) 553670, fax 552179

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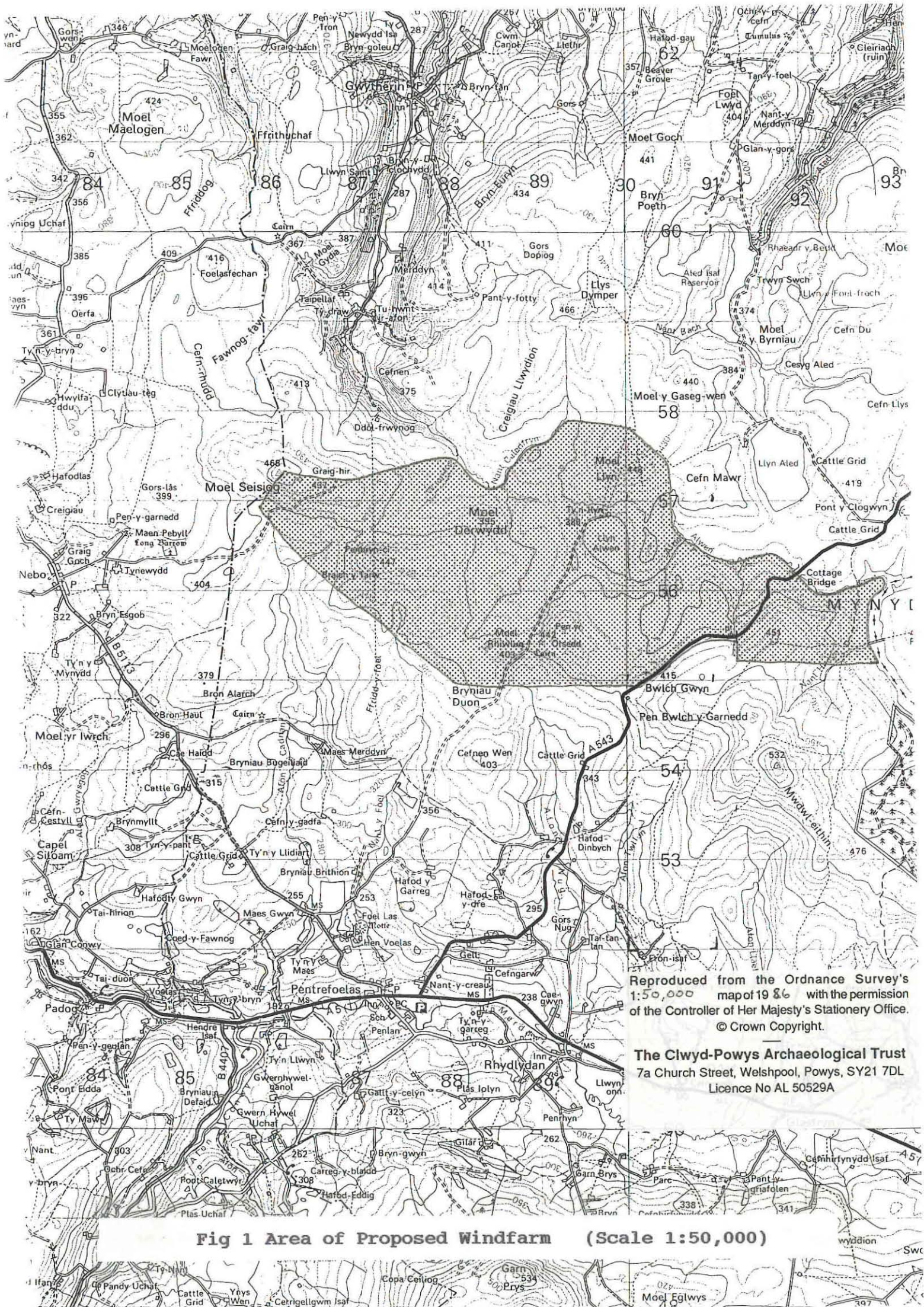


Fig 1 Area of Proposed Windfarm (Scale 1:50,000)

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The Clwyd-Powys Archaeological Trust
 7a Church Street, Welshpool, Powys, SY21 7DL
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1 Introduction

- 1.1 The Clwyd-Powys Archaeological Trust (CPAT) was commissioned in January 1994 by Manweb Generation Holdings Ltd to provide an archaeological evaluation of the proposed windfarm development situated to the north of the village of Pentrefoelas in western Clwyd and encompassing the south-western section of Mynydd Hiraethog. The evaluation, based on a specially prepared brief (CPAT EVB56) and defined in a subsequent specification (see Annex 1), was recommended by the Curatorial Section of CPAT, holders of the Regional Sites and Monuments Record for Clwyd, to allow the developer to mitigate the effects of the development on the archaeological resource of the area. It was proposed that the report, or a summary version of it, would be incorporated in the Environmental Statement which Manweb Generation Holdings Ltd were preparing in support of their planning application.
- 1.2 The fieldwork element of the evaluation was conducted during the period from January to the end of April 1994, and a provisional report (CPAT Report No 102) dealing with the area referred to in the specification was prepared in June 1994. This report deals with the windfarm as depicted on the revised site layout plan of September 1995 and was prepared at the end of October/beginning of November 1995.

2 Location, Topography and Vegetation

- 2.1 Mynydd Hiraethog in its broadest sense consists of a block of upland at the northern extremity of the Cambrian Mountains covering some 200 square kilometres of western Clwyd. It is an area which is also frequently referred to as the Denbigh Moors, though the precise geographical extent of the region is difficult to define.
- 2.2 Much of the region is above the 350m OD contour, and from it rivers descend to the Conwy valley in the west, the Elwy to the north and the Clwyd to the north-east and east. The area is dominated by a broad ridge aligned approximately on a north-west/south-east axis extending from Moel Seisiog (468m OD) in the north-west to Mynydd Poeth (417m OD) at the south-eastern end. Centrally placed along this ridge is Mwdwl-eithin (532m OD), the highest point of Mynydd Hiraethog.
- 2.3 To the north-east of this ridge there is an undulating plateau area within which are the natural headwater lakes and man-made reservoirs of Llyn Aled, Llyn Aled Isaf, Llyn Alwen, Llyn Bran and the two larger reservoirs of Alwen and Brenig. Above these are the lower summits of Moel Derwydd (395m OD), Moel Llyn (448m OD), Moel Goch (441m OD), Llys Dymper (466m OD), Moel Bengam (440m OD) and Bryn Trillyn (496m OD).
- 2.4 The main turbine line of the windfarm proposal occupies part of the ridge on the south-western edge of Mynydd Hiraethog. It runs from the A543 Denbigh-Pentrefoelas road near Bwlch Gwyn and continues in a north-westerly direction over Pen yr Orsedd, Moel Rhiwllug, and Penbryn-ci to Moel Seisiog which overlooks the village of Nebo in the Conwy Valley, some 2.5km to the west-south-west of the summit.
- 2.5 A subsidiary line of turbines is located approximately 1km to the north-east of the main section, and runs roughly parallel to it. The south-eastern end of the line begins 1km to the south of Cottage Bridge. It then crosses the A543 and travels in a north-westerly direction towards Llyn Alwen before curving to the north and finishing near the summit of Moel Llyn.
- 2.6 The windfarm substation is located to the west of Llyn Alwen and is linked to the main line of turbines by a road and cable trench following the approximate course of the track leading towards Ty'n Llyn on the northern shore of Llyn Alwen. The subsidiary line of turbines is linked to the substation by a cable trench which follows the southern shore of Llyn Alwen and a road passing to the north of the lake.
- 2.7 The area of approximately 11 sq km covered by the proposal varies in altitude from approximately 350m OD to a maximum of 468m OD at the summit of Moel Seisiog. Topographically it is an area of rounded hills of similar height separated by lower, often boggy, ground which is drained by a succession of small streams. The area is generally fairly

exposed to the elements with little natural shelter, although the ridge previously mentioned does provide some protection from the prevailing south-westerly winds.

- 2.8 A major consideration in assessing the impact of the proposal on the archaeological resource is the vegetation cover of certain areas (see below). The greater part of the area is covered by a mixture of grass and rushes, which normally display archaeological features well and allow reasonable site recognition during fieldwork. In contrast, Moel Derwydd and Penbryn-ci are largely colonised by heather, in places to a height of almost one metre: this makes site identification more difficult and may potentially lead to an artificial bias towards more prominent, stone built structures of recent date.
- 2.9 The geology of Mynydd Hiraethog consists predominantly of Silurian shales and grits whilst soils are generally low base status, poorly drained, podzols, gleys and peaty gleys derived from the Silurian drift (Ball 1960).

3 Methodology

- 3.1 The desk-top assessment of the proposal mentioned in the specification (Annex 1) was undertaken by examining available cartographic and documentary sources for the area. Included in this section of the report are references detailing previous archaeological work, both in the area of the proposal and in the surrounding uplands.
- 3.2 At the request of Manweb Generation Holdings Ltd, Stages 1 and 2 as defined in the brief and specification (Annex 1) were run in parallel. This was partially aided by the availability of earlier archaeological survey results (see para 3.4).
- 3.3 Stage 1 identified archaeological sites within the application area and was carried out by means of the transect walking techniques normally adopted by CPAT for upland surveys. Recent vertical aerial photography taken at a scale of 1:10,000 was used to determine the location of archaeological sites and to facilitate the plotting of those sites on an overlay map base (Fig 2).
- 3.4 Approximately 2 sq km of the area had been subjected to systematic archaeological survey in the recent past (Owen and Silvester 1993), using the same techniques. Consequently, Stage 1 fieldwork was restricted to the remaining area of approximately 9 sq km.
- 3.5 Stage 2, which examined in detail the ground likely to be directly affected by the windfarm development, ran concurrently with Stage 1. This enabled the preparation of appropriate mitigation strategies for each archaeological site where disturbance was thought to be a possibility. For ease of reference the accompanying base map (Fig 2) shows the positions of all features recognised during Stages 1 and 2.
- 3.6 Sites considered as being within the "zone of potential disturbance" are specified in Section 7 of this report and are designated on the basis of their presence within 50m of an element of the proposed works. Exceptions are those sites considered to be of primary importance where a distance of approximately 100m has been adopted. This is intended as a purely precautionary measure in view of the perceived significance of such sites. It is considered that sites outside the zone of potential disturbance will not be threatened by the implementation of the proposal.
- 3.7 Following the preparation of the initial archaeological report, the site was revisited when the pegging out of turbines was being undertaken by Manweb and its technical contractors. The turbine locations were chosen to minimise the risk of damage to archaeological sites, within the restrictions imposed by other factors such as environmental or constructional considerations.
- 3.8 The large area covered by the proposal necessitates consideration of the recorded archaeological sites in terms of the landscapes that they occupy. The importance assigned to such landscapes will vary according to their type and rarity and depends in part on the perception of the on-site archaeologist. In this report we have attempted an assessment of landscape survival (see below, section 6).

3.9.1 The project brief requires the identification of 'more' and 'less' archaeologically sensitive areas, within the application area. This has been attempted here. However, it should be stressed that no precise definition of "archaeologically sensitive" is given in the brief, and consequently there may be some divergence in the views of the author of this report and the archaeological curator who advises the local authority.

3.9.2 The methods adopted here to define an area of archaeological sensitivity are primarily related to those sites considered to be of importance. Such areas may contain numbers of sites or sites of significant size and are marked on the accompanying plan (Fig 2). Sites of minor interest are normally included only where they occur within a defined area. The boundary of an area will generally be between 30m and 50m from the nearest site, and is intended mainly for guidance.

3.10 *Factors affecting identification and location*

3.10.1 The location of sites on the map overlay by the use of aerial photography can lead to misplacement of sites on occasion. Common factors which cause difficulty are the initial positioning of the site on the aerial photograph, changes in the vegetation cover which may have occurred after the photograph was taken and the need to allow for distortion in the photograph itself. While these factors can be overcome to some extent, the lack of marked features (field boundaries etc) on the 1:10,000 base map in the area of the proposal has made the situation more problematical than it would be in an area of more intensively farmed land. However, the relatively small variations in height throughout most of the proposal area have enabled control points (used for the transfer of data from aerial photograph to map overlay) to be given greater separations than would normally be practicable for the accurate plotting of sites.

3.10.2 The windfarm details have been located by their individual grid references without the corroborative use of topographical features, fence lines etc, an approach which was adopted following consultation with Mr M. Blackie of Manweb Generation Holdings Ltd due to minor discrepancies between the plans and the relevant Ordnance Survey 1:10,000 maps for the area. This was the only approach possible as the turbine locations were not marked out on the ground when the fieldwork was undertaken.

4 **Desk-top Assessment**

4.1 The desk-top study examined records available at the National Library of Wales, Aberystwyth (NLW) and the Regional Sites and Monuments Record held by the Curatorial Section of the Clwyd-Powys Archaeological Trust, together with other readily accessible documentary material for the region. These additional sources are listed in Section 11.

4.2 The earliest cartographic source consulted for the area was the Ordnance Surveyor's survey drawing of 1818. This depicts a road or track from 'Pen Bwlch Garnedd' to 'Pont Heilyn', which becomes more significant in the light of the disused road (PRN 105756) discovered during the field survey. At the time this was the main route used across the area; the present main road was not shown on the drawings.

4.3.1 The 1818 drawing, revised in 1836, formed the basis of the Old Series Ordnance Survey 1 inch:1 mile map (Sheet 74 SW) of 1839. This shows the modern main road, with a turnpike gate to the south of the proposal area, clear evidence that the road was constructed between 1818 and 1836 as a toll road, replacing PRN 105756.

4.3.2 The map also shows a house, 'Nant Heilyn' (PRN 105748), within the extreme eastern part of the proposal area. The house could date to the period between 1818 and 1836 but its original exclusion is more probably due to an incomplete survey in 1818.

4.3.3 The adjacent 1 inch:1 mile map (Sheet 79 SW), published in 1840, was also based on the revision of 1836 and shows a house called 'Ty'n Lllyn' (PRN 105699) on the northern shore

of Llyn Alwen. Again this may not provide a date for its construction, only confirming that the house was present at the time of the revision.

- 4.4.1 The Tithe map for Tir yr Abad Isaf dates from 1845. Within the proposal area this shows the road noted previously in paragraph 4.2 and refers to it as the 'Old Denbigh Road'.
- 4.5.1 A book containing the Voelas Estate correspondence for 1867, includes a letter of April 4th referring to a boundary dispute between the Voelas Estate and the adjacent Crown Estate (this boundary forms the northern extent of the proposal area). The writer refers to boundary stones, stating "These stones were fixed, I believe, rather more than 20 years since". A date during the first half of the 19th century, possibly around 1840, is suggested. With the exception of PRNs 105700 and 105702, these stones or their former locations were seen to be outside the proposal area when the field survey was being carried out.
- 4.5.2 Further references to the boundary dispute in the book of correspondence for 1867 provide additional information about the date of the Voelas Estate boundary. The writer, during his discussion of the boundaries, refers to "Llewellyn's Grant" and "Voelas Manor". Some of the placenames are translated from Welsh, and it appears that the writer consulted either the grant itself or perhaps a copy. Some of the names mentioned (eg Moel Seisiog and Graighir) still exist and it seems certain that the boundary is that marked by the stones mentioned in 4.5.1. This points to a medieval boundary marked by later stones, for "Llewellyn" refers to the late 12th/13th-century Welsh prince, Llewellyn ap Iorwerth (see section 4.8.2 for corroborative evidence). The apparent retention of this boundary from the late 12th century is historically important in a Welsh context.
- 4.6 A Voelas Estate valuation of 1870 refers to various farms, the only one falling within the area being 'Nant-haulyn' (Nant Heilyn) which is described as an "old enclosure on the mountain 110 acres in extent". The house had been rebuilt in 1868 but the associated land is noted as being generally little better than the surrounding mountain.
- 4.7.1 The first edition 6 inch:1 mile Ordnance Survey maps were surveyed in 1875. More detailed than the Old Series maps, they show two houses (Ty'n Llyn and Nant Heilyn), together with a number of sheepfolds and sheep shelters. Due to the lack of detail in the earlier maps, all that can be assumed is that these sites were in existence at the time of this survey. For ease of reference the sites depicted on these maps are noted with their Primary Record Number (PRN), below.
- 4.7.2 Sheepfolds:- PRNs 105199, 105209, 105245, 105387, 105579, 105589, 105617, 105660, 105757.
- 4.7.3 Sheep shelters:- PRNs 105192, 105626.
- 4.8.1 Ellis Davies' *The Prehistoric and Roman Remains of Denbighshire* (1929) is ordered by parish. The numerous monuments described make it obvious that the parish of Pentrefoelas, in which the proposal lies, has been the scene of much prehistoric activity. Sites referred to in this work which fall within the proposal area have been included with the field survey data as they can all be found in the Regional Sites and Monuments Record.
- 4.8.2 Ellis Davies had access to "Llewellyn's Grant" mentioned in paragraph 4.5.2. In the section referring to the parish of Pentrefoelas he refers to a quern stone found at Waen Eos (PRN 100402), a place "mentioned in Llewellyn ap Iorwerth's Charter to the Abbey of Aberconway (1198)". A transcript of the relevant section was included.
- 4.9 The final source consulted for the area is the *Atlas of Cistercian Lands in Wales* (Williams 1990). The inventory of lands belonging to Aberconwy Abbey includes 'Hiraethog Grange' and the map of land holdings in north-west Wales shows the boundary as following the line of boundary stones already described.
- 4.10 As far as can be ascertained no archaeological excavations have been conducted in the area of the proposal but some important ones have taken place in the surrounding area (Allen 1979; Manley 1990). Some of the excavated sites have parallels with features recorded during the windfarm survey.

- 4.11 The sites listed in the Regional Sites and Monuments Record for the area of the proposal are the Bronze Age cairns PRNs 100400 and 100401, the Quern stone found at Waeneos (PRN 100402), and the cist cairn PRN 101307.

5 Results of Stage 1 Fieldwork (See Appendix 1)

- 5.1 The results of the Stage 1 fieldwork are presented in Appendix 1 together with the equivalent information available for previously discovered sites. The appendix lists each site with its basic details and includes a short description.
- 5.2 The project brief states that Stage 1 "should attempt to identify all sites within the application area with the primary aim of securing their preservation". The large number of sites within the application area make detailed assessments of each site impractical at this stage. Instead, utilising our own knowledge and experience of the region we have adopted a simple method of classifying individual sites based on a perception of their significance derived from a combination of fieldwork and documentary inspection. The three levels of importance are:
- (A) major importance: sites which we believe are sufficiently important to merit protection under existing criteria for scheduling ancient monuments as laid down by the Secretary of State
 - (B) regional and/or local importance: sites which have an intrinsic value in understanding landscape development and utilisation in the area
 - (C) minor interest: man-made features which in themselves are likely to provide little or no significant information on landscape development and utilisation in the area.
- 5.3 These letter codes (A, B and C) have been assigned to each site in Appendix 1. Where the significance of a site is not certain it has been designated A-B or B-C.
- 5.4 Mitigation strategies for sites within the zone of potential disturbance are considered in the recommendations for sites referred to in Stage 2. Should any other site subsequently fall within a zone of potential disturbance (for example as a result of re-siting turbines) an appropriate mitigation strategy related to its importance could then be considered.

6 Archaeological Landscapes

- 6.1 The distribution, density and nature of some archaeological remains in this part of Mynydd Hiraethog are such that it is relevant to consider them in terms of archaeological landscapes rather than simply individual sites. Where relict landscapes survive they are inevitably of some importance. Those areas of the proposal which are thought to contain coherent archaeological landscapes (see para 3.8) are set out in broad chronological order in the paragraphs below. No attempt has been made to define the extent of these landscapes on the accompanying plan (Fig 2).
- 6.2 The earliest landscape that we have recognised is represented by a group of three probable hut sites (PRNs 105743-5), thought to date to the Bronze Age. These were discovered on a spur within the curve of the northern end of the Alwen Reservoir. The sites are defined by slight sub-circular earthworks and may represent a small pastoral settlement.
- 6.3 At the head of each of the three stream valleys on the south-west facing slopes of the proposal area, to the north-west of the main road at Bwlch Gwyn, are traces of hafotai or seasonal (summer) dwellings (PRNs 105662, 105690, 105713). The dwelling which most probably existed in the Nant y Foel valley seems to have been destroyed by a later sheepfold, although its former presence is strongly suggested by an enclosure system (PRN 105690), approximately centred on the location of the sheepfold. These hafod sites are of medieval or early post-medieval date and form an interesting group relating to the grazing patterns of the

period. In particular, PRN 105662 and the surrounding enclosure PRN 105698 are excellent examples of their type.

- 6.4 As a result of their more recent development and lack of subsequent disturbance, landscapes of post-medieval origin are more readily recognisable. They can be characterised more easily and are considerably more extensive than their predecessors. The proposal area divides broadly into two zones in this period. North-east of the line of hills from Pen yr Orsedd to Moel Seisiog, where the ground is less well drained, the landscape is predominantly one of peat cutting (turbary), representing a major source of fuel for the district. To the south-west with its wide tracts of heather is what may be defined as a 'sporting landscape'. Features relating to grouse shooting, e.g lines of butts and drystone shelters used by shooting parties in bad weather, litter a landscape which in appearance has altered very little in recent times.
- 6.5 It is worth remembering, too, that this is a landscape of post-medieval pastoralism (e.g. sheepfolds, shelter walls etc), corroborated by documentary sources that reveal an upland used as summer sheep walks by the farms sheltering on the lower ground.
- 6.6 A landscape more difficult to characterise is represented by a group of more than 20 mounds (PRN 105708) located on Moel Derwydd. Their common alignment justifies their grouping, but their period and function has not been ascertained. One possibility is that they are funerary monuments of a type not previously recognised, and therefore of significant archaeological importance.

7 Predicted Impact of Proposals on the Archaeological Resource

- 7.1 The turbine, utility trench and access road corridors envisaged in the proposed development have been divided into sections and the numbers used by Manweb on their control map to distinguish each corridor have been retained to facilitate cross-referencing. The accompanying plan (Fig 2) should be consulted to obtain a more precise location for the sites recorded in each section. The nature of each site is considered in more detail in Appendix 1. For convenience, "turbine corridor" is taken to mean the turbines themselves, the utility trench linking them, and the adjacent road.
- 7.2 Sites considered within this section are those which fall within the "zone of potential disturbance" (see also paragraph 3.6) and are designated on the basis of their presence within 50m of an element of the proposed works. Exceptions are those sites considered to be of primary importance where a distance of approximately 100m has been adopted. This is intended as a purely precautionary measure in view of the perceived significance of such sites. It is considered that sites outside the zone of potential disturbance will not be threatened by the implementation of the proposal.
- 7.3 Mitigation strategies for the sites discussed in this section appear in Section 8. In addition Fig 2 defines archaeologically sensitive areas where the quality and/or quantity of the resource is such that they may provide a constraint on the windfarm proposal.
- 7.4 *Turbine Corridor 1*
- 7.4.1 PRN 105700, the site of a former marker stone, is located approximately 50m to the north of the road serving this section. The site could be one of importance in relation to the medieval land boundary mentioned in paragraph 4.5.2.
- 7.4.2 A marker stone, PRN 105702, is located approximately 40m to the north of the road serving this section. This site could also be one of importance in relation to the medieval land boundary mentioned in paragraph 4.5.2.
- 7.4.3 The cable trench serving this section passes 35m to the north of a standing stone, PRN 105710. The site may be a prehistoric standing stone or a boundary marker of post-medieval date.
- 7.4.4 The cable trench serving this section passes 45m to the east of a possible shooting butt, PRN 105712. The site is one of minor interest.
- 7.5 *Cable Trench and Access Road: Turbine Corridor 1 to Turbine Corridor 2*
- 7.5.1 PRN 105717, a small cairn of Bronze Age date, falls between the cable trench and access road. It is located 15m to the north-east of the road and 10m to the south-west of the cable trench.
- 7.5.2 The road passes 10m to the south-east of an oval earthwork, PRN 105725. The site may be an enclosure or associated with peat cutting activities.
- 7.5.3 The cable trench passes 10m to the east of PRN 105724, a pyramidal marker cairn. The site is thought to be related to grouse shooting activities and is one of a group of similar cairns in the proposal area. The cairns are of interest as a group because their precise function remains unknown.
- 7.6 *Turbine Corridor 2*
- 7.6.1 The road serving this section passes 40m to the south-west of PRN 105723, a rectangular shelter probably used by shooting parties.
- 7.6.2 The road and cable trench serving this section pass 10m to the east of PRN 105695, a marker cairn on a hill summit. The site is of minor interest.

- 7.6.3 Turbine 2.4 is situated 10m to the east of a small cairn, PRN 105694. The site is of minor interest.
- 7.6.4 Turbine 2.4 is situated 45m to the south-west of a small cairn, PRN 105693. The site is of minor interest.
- 7.6.5 Turbine 2.13 is situated 25m to the west-south-west of a small cairn, PRN 105684. The site is of minor interest.
- 7.6.6 PRN 100401, a probable ring cairn, lies 25m to the north-north-west of turbine 2.21. The site is one of importance.
- 7.6.7 The road serving this section passes 85m to the north-east of PRN 105680, a cist cairn of significant importance.
- 7.6.8 PRN 105682, a partially ruined marker cairn, is located on a rock outcrop 25m to the north-east of the road serving this section.
- 7.6.9 The end of the road serving this section lies 5m to the west of PRN 105681, a very ruinous stone and earthwork structure.

7.7 *Cable Trench and Access Road: Turbine Corridor 2 to Windfarm Substation*

- 7.7.1 The track leading to Ty'n Llyn, which will be used as the access road for this section, passes within 10m of the bank defining the oval enclosure PRN 105698 at two locations. The enclosure is of major importance, and may well be related to the medieval hafod site PRN 105662 which it surrounds.
- 7.7.2 PRN 105664, a drystone built shelter located on a ridge, is situated 25m to the south-east of the road.
- 7.7.3 The intended line of the road has been altered by Manweb Generation Holdings to take account of the possible cairn, PRN 105671, which lies alongside the present track to Ty'n Llyn. The road should now pass 25m to the north-west of the site.

7.8 *Access Road: Windfarm Substation to Turbine Corridor 5*

- 7.8.1 The possible house platform, PRN 105675, is situated 50m to the east of the road. The road alignment has been chosen to protect this site and the drystone walled field associated with Ty'n Llyn (PRN 105699).

7.9 *Cable Trench: Windfarm Substation to Turbine Corridor 5*

- 7.9.1 The cable trench passes 20m to the south of the drystone walled sheepfold, PRN 105669.

7.10 *Access Road: Turbine Corridor 3 (Turbines 1-15) to Road joining Turbine Corridor 2 and Windfarm Substation*

- 7.10.1 The road passes approximately 50m to the north-east of the Bronze Age cairn, PRN 100400.
- 7.10.2 The road passes 50m to the north-north-east of the Bronze Age cairn, PRN 105657.

7.11 *Turbine Corridor 3 (Turbines 1-15)*

- 7.11.1 The cable trench serving this section passes 10m to the east of PRN 105665, a standing stone of unknown date. Turbine 3.6 is located 40m away, to the south-east. The site may belong to the prehistoric period.
- 7.11.2 A cairn, PRN 105658, lies 5m south of the road serving this section, 15m east of the cable trench, and 20m to the north-west of turbine 3.7. The site is of minor interest.
- 7.11.3 The cable trench serving this section passes 10m to the north-east of the ruinous drystone walled shelter, PRN 105656.
- 7.11.4 PRN 105655, a columnar marker cairn, is situated 40m to the south-west of the cable trench serving this section. The site is easily visible.
- 7.11.5 PRN 105654, a small shelter wall, is situated 20m to the south-west of the cable trench serving this section. The site is of minor interest.
- 7.11.6 PRN 105201, a turf built enclosure, possibly of post-medieval date is situated 10m to the east of Turbine 3.14 and 15m to the north of the cable trench serving this section. It is quite low and may not be easily visible.
- 7.11.7 PRN 105200, a sub-circular earthwork thought to have been used as a shelter, is situated 40m to the north of the road serving this section.

7.12 *Turbine Corridor 5*

- 7.12.1 The cairn PRN 105204, lies on a local summit and its grid reference suggests that it is located 10m to the south of turbine 5.16. However, at the time of the site visit referred to in paragraph 3.7, the markers for turbines 5.16 and 5.17 were positioned such that they were approximately equidistant from the site. It would therefore appear that the site may have been incorrectly located during the original field survey. A date has not been attributed to this site but it could represent a prehistoric burial.

7.13 *Cable Trench and Access Road: Turbine Corridor 5 to Turbine Corridor 6*

- 7.13.1 No archaeological features were identified within this section.

7.14 *Turbine Corridor 6*

- 7.14.1 No archaeological features were identified within this section.

7.15 *Cable Trench: Turbine Corridor 6 to Turbine Corridor 3 (Turbines 16-20)*

- 7.15.1 No archaeological features were identified within this section.

7.16 *Access Road: Turbine Corridor 6 to Turbine Corridor 3 (Turbines 16-20)*

- 7.16.1 No archaeological features were identified within this section.

7.17 *Turbine Corridor 3 (Turbines 16-20)*

- 7.17.1 The cross-shaped sheep shelter, PRN 105212, is located 20m to the north-east of the road serving this section.

7.17.2 PRN 105211, a ruined structure which may have been used as a shelter by shooting parties is situated 5m to the west of the road serving this section, and 25m north-east of turbine 3.17.

7.18 *Cable Trench and Access Road: Turbine Corridor 3 (Turbines 16-20) to Construction Compound*

7.18.1 The sheepfold, PRN 105209, is located 15m east of the road and 20m north-east of the construction compound.

7.19 *Cable Trench: Construction Compound to Turbine Corridor 7*

7.19.1 No archaeological features were identified within this section.

7.20 *Access Road: A543 to Turbine Corridor 7*

7.20.1 No archaeological features were identified within this section.

7.21 *Turbine Corridor 7*

7.21.1 The road and cable trench serving this section cut through a well-preserved length of a road, PRN 105756, which may have originated in the Roman period, and appears to have been abandoned in the early 19th century.

7.21.2 The road serving this section passes 50m to the south and west of PRN 105566, a probable burial cist of prehistoric date. The site is one of importance.

7.21.3 PRN 105755, an earthwork of unknown date, is probably a peat mound. It is situated 5m to the south-west of the cable trench serving this section.

7.21.4 A mound, PRN 105567, of similar appearance to PRN 105755, is situated 50m to the south-south-west of the cable trench serving this section.

7.22 *Ancillary Works (quarries etc)*

7.22.1 The possible use of on-site quarries and other ancillary works related to the construction of the windfarm is a factor which should be taken into account when assessing the impact of the proposal.

8 Recommended Mitigation Measures

8.1 In this section various mitigating strategies are recommended for those sites which are within the "zone of potential disturbance" (see paragraph 7.2), and may consequently be subject to disturbance or accidental damage during implementation of the windfarm proposals if no specific mitigation strategy is adopted. The sites are followed by the paragraph number relating to the section of the proposal which may affect them, as specified in Section 7.

8.2 An important consideration in assessing the archaeological data recovered during this project is the vegetation cover of certain areas. For the most part this is sufficiently low for field survey techniques to discover the presence of sites. Moel Derwydd and Penbryn-ci, however, have a dense cover of heather and this will almost inevitably render some sites invisible (see section 2.8). Accordingly, there is a potential for the disturbance of monuments which were not recognised during the field survey and it may be necessary to consider methods which would rectify the situation where extensive tracts of heather are involved. One possible solution would involve the mowing of heather in the path of the proposed works, followed by field walking of the mown areas; if any sites were revealed further mitigation would then be required.

8.3 In addition to the sites identified during the field survey, it is possible that there are sites within the proposal area for which no surface traces remain. It is impossible to quantify this possibility and further investigation in such remote and difficult terrain is unlikely to be productive. However, in order to recover any archaeological information which may be revealed during the construction phase of the proposal, a watching brief should be carried out at that time.

8.4 Sites of importance which should be fenced off prior to implementation of the proposal in order that accidental damage may be avoided.

PRN 105700 (7.4.1)

PRN 105702 (7.4.2)

PRN 105723 (7.6.1)

PRN 100401 (7.6.6)

PRN 105680 (7.6.7)

PRN 105681 (7.6.9)

PRN 105698 (7.7.1) - A fence from SH 8855 5485 to SH 8880 5530, immediately to the east of the trackway would be required.

PRN 105664 (7.7.2)

PRN 105671 (7.7.3)

PRN 105675 (7.8.1)

PRN 105669 (7.9.1)

PRN 100400 (7.10.1)

PRN 105657 (7.10.2)

PRN 105200 (7.11.7)

PRN 105204 (7.12.1) - The site should be fenced around to a distance of 10m from its centre and its correct grid reference should be ascertained.

PRN 105212 (7.17.1)

PRN 105209 (7.18.1)

PRN 105566 (7.21.2)

8.5 Sites of minor interest or possible local importance, which are considered as being within the zone of potential disturbance. These should be marked by a post to signify that they are archaeological sites; this is considered sufficient to minimise the likelihood of accidental damage during the site works. In view of their lesser status fencing is thought to be unnecessary.

PRN 105710 (7.4.3)

PRN 105712 (7.4.4)

PRN 105724 (7.5.3)

PRN 105695 (7.6.2)

PRN 105694 (7.6.3)

PRN 105693 (7.6.4)

PRN 105684 (7.6.5)
PRN 105682 (7.6.8)
PRN 105658 (7.11.2)
PRN 105655 (7.11.4)
PRN 105654 (7.11.5)
PRN 105567 (7.21.4)

8.6 Sites of regional and/or local importance which require an adjustment to the line of the relevant section of the proposal. It is strongly recommended that these sites should be avoided in the final layout of the windfarm. They should also be fenced off in order to prevent accidental damage during construction work. A preferred option for the adjustment to the relevant corridor is given below.

PRN 105717 (7.5.1) -The proposed cable trench and access road should be moved 25m to the north of the site.

PRN 105725 (7.5.2) - The proposed road should be moved 15m further to the east of the site.

PRN 105665 (7.11.1) - The proposed road should be moved 10m further to the east.

PRN 105656 (7.11.3) -The proposed cable trench should be moved 10m further to the north-east.

PRN 105201 (7.11.6) - The proposed turbine 3.14 and the cable trench in its vicinity should be moved 25m north of the site in line with the position of the access road.

PRN 105211 (7.17.2) - The proposed road should be moved 15m further to the east.

PRN 105755 (7.21.3) - Owing to the element of uncertainty about the nature of this site it would be preferable for the proposed cable trench to be moved 15m further to the north-east.

8.7 Sites of importance which, it is believed, cannot be avoided by the proposal and which therefore require preservation by record (ie archaeological excavation) before they are disturbed by the site works. We recommend the excavation of trenches across these linear features at the points where they will be destroyed before the contractors commence work, using standard archaeological excavation and recording methods, and publication to an appropriate level. The resultant excavation archive, consisting of written records, drawings and perhaps finds, should be housed with an appropriate curator on completion of the work. Any part of a site in this section which is not to be excavated should be fenced to prevent damage occurring during construction works.

PRN 105756 (7.21.1)

9 Conclusions

- 9.1 This report only considers mitigation measures for those sites within the area specified as the "zone of potential disturbance" (see paragraph 3.6). Any subsequent revisions to the site plan may mean that sites outside this area become affected by the proposal.
- 9.2 Some consideration has been given to the visual impact that the windfarm proposals would have on the setting of the archaeological sites identified within the Pentrefoelas area, though this was not a specific requirement of the brief. Any assessment of visual impact will inevitably be subjective - there is no satisfactory yardstick to determine the degree of intrusion of a development on either individual or on groups of monuments. It is clear, however, that many of the archaeological sites on Mynydd Hiraethog, and particularly those of relatively recent date, were constructed and used in a landscape which was very little different from that of today. Consequently, the imposition of structures and services that are alien to this unimproved moorland, will inevitably have an adverse effect on the setting of the monuments, though in this respect the archaeological resource is only a single element of several that contribute to an appreciation of this landscape.

10 Acknowledgements

- 10.1 The writer would like to thank the staff of the following organisations for their help and assistance:

The National Library of Wales, Aberystwyth

The Regional Sites and Monuments Record, Clwyd-Powys Archaeological Trust, Welshpool

11 References

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- 1840 Ordnance Survey 1 inch:1 mile map (Sheet 79 SW) (See Margary below)
- 1845 Tithe Survey: Tir yr Abad Isaf Parish: National Library of Wales
- 1847 Tithe Survey: Cerrigydrudion Parish: National Library of Wales
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- 1879 Ordnance Survey 1:10,560 map (1st edition): Denbighshire 14 NE: National Library of Wales
- 1879 Ordnance Survey 1:10,560 map (1st edition): Denbighshire 16 SE: National Library of Wales
- 1879 Ordnance Survey 1:10,560 map (1st edition): Denbighshire 17 SW: National Library of Wales
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11.2 *Documentary Sources*

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Annex 1

PROPOSED WINDFARM AT PENTREFOELAS, CLWYD

SPECIFICATION FOR ARCHAEOLOGICAL EVALUATION TO BE CONDUCTED BY CLWYD- POWYS ARCHAEOLOGICAL TRUST

1.0 Background

1.1 The proposed windfarm on Mynydd Hiraethog, north of Pentrefoelas extends over an area of some 1950 hectares of upland in western Clwyd. The irregular area runs on a broad north-west/south-east axis and is centred at SH 8956. On the basis of the current plan, the windfarm will incorporate 155 masts, together with the associated works and services that constitute its infrastructure.

1.2 It is a region whose high archaeological potential was sampled in 1992 by CPAT, but most of the land proposed for inclusion in the windfarm has never been subjected to archaeological scrutiny and the actual total of archaeological sites and their associated landscapes remains to be assessed.

1.3 On the recommendation of the Curatorial Section of the Clwyd-Powys Archaeological Trust who function as a regional archaeological curator and joint holder of the Clwyd County Sites and Monuments Record a two-stage archaeological evaluation is to be conducted. It is proposed that this will be incorporated in the Environmental Statement on the windfarm being prepared by Manweb Generation Holdings Ltd.

2.0 Objectives

2.1.1 The objective of Stage 1 of the evaluation is to establish from a combination of fieldwork and desk-top study all sites of archaeological interest in the area around the proposed windfarm, together with those places likely to contain environmental archaeological deposits.

2.1.2 The fieldwork element of the evaluation is designed to record in appropriate detail the archaeology and environmental archaeological deposits of the area.

2.1.3 The analysis and integration of data from the desk-top and fieldwork programmes will aim to provide a firm basis for assessing the archaeological implications of the windfarm scheme.

2.2.1 The objective of Stage 2 is to examine in detail each area of ground likely to be disturbed through either temporary or permanent works associated with the windfarm construction.

2.2.2 The subsequent report will provide appropriate recommendations for the preservation or investigation of any archaeology thought likely to be affected by works associated with the windfarm.

3.0 Methods

3.1 The desk-top assessment will involve the examination of primary and secondary source material including early maps, aerial photography where easily available and the Clwyd Sites and Monuments Record.

3.2 Fieldwork will take the form of a structured and methodical field examination of all parts of the area likely to be affected by the windfarm proposals, adopting well-tried and proven transect walking techniques employed by CPAT on previous upland projects. Where areas are known to have been covered in the past by systematic fieldwork to the standard required by the brief, the proposed programme will be adjusted to avoid unnecessary duplication of effort, whilst ensuring the validity of the original observations.

3.3 To comply with the requirements of Stage 2, those areas of ground likely to be disturbed by the erection of wind turbines or affected by ground disturbances associated with the development of the

windfarm will be examined more thoroughly to ascertain the nature and significance of any archaeology within, or in the immediate vicinity of, those areas.

3.4 It must be appreciated that in the absence of ground markers for the turbine sites and the service lines, it will be necessary to extrapolate these details from the 1:10000 plan made available by the client which states clearly 'Preliminary Site Layout Subject to Change'. Apart from the difficulties in precisely translating what is shown on a map of this scale to the ground, final locations may be determined on the basis of as yet unavailable site-specific data, and fundamental changes in the layout may require further archaeological input. In addition the possibility that some of the 'areas of temporary disturbance' (as defined in the Brief, Stage 2 i) may not have been defined even on the map at this early stage in the project should also be noted.

3.5 Following the programme outlined in Sections 3.1 - 3.3 an analysis of the desk-top and fieldwork data accompanied by an appropriate plan of the whole area will be prepared as a draft report for the client. Archaeologically sensitive areas will be defined and the overall archaeological implications of the scheme will be summarised.

3.6 Those sites recognised during the Stage 2 survey will be considered in more detail in the same report and appropriate recommendations will be submitted to enable to developer to consider suitable mitigation strategies.

3.7 All of the above proposals are essentially non-interventionist in nature. Until the archaeology has been defined on the ground it will not be possible to determine whether interventionist techniques such as trial excavation or sampling will be required to assess the significance of that archaeology. Such additional works will have to be covered as a separate issue, the resources for which will need to be considered at a subsequent time.

4.0 Resources and Programming

4.1 The desk-top assessment and fieldwork will be conducted by a team of two experienced field archaeologists from CPAT under the supervision of the Deputy Director of that organisation.

4.2 All report preparation will be completed by the same field archaeologists who conducted the fieldwork.

R. J. Silvester
23 November 1993

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100400	Pen yr Orsedd Cairn / Bronze Age Sub-circular cairn, 10.0m N/S x 11.0m E/W x 0.6m high. Appears to show signs of robbing. Situated on terrace above moderate N facing slope.	SH89005547	B
100401	Moel Rhiwlug Cairn / Bronze Age Approximately circular low ring of stones, c. 5.0m diameter x 0.3m high. Partially overgrown and not well defined. Situated on level terrace to NNW of summit.	SH88475541	B
100402	Waeneos Quern / Prehistoric ? Find location of lower quern stone. Discovered during ditching in vicinity of Waeneos. Documentary reference only.	SH87855675	C
101307	Moel Seisiog Cist cairn / Bronze Age Circular cairn, 5.2m diameter x 0.4m high, with cist near centre, 0.7m NNW/SSE x 0.4m. Edge of cairn defined by set stones angled outwards on NW side, stones less apparent on other sides. Cist robbed with capstone displaced to S. SMR states that in 1912 site was used as a peat stack and was scattered. Situated on a slight W facing slope.	SH86395688	B
105199	Bwlch Gwyn Sheepfold / Post medieval Group of drystone sheepfolds, 26m NW/SE x 15m NE/SW x 1.3m high (up to 2m in places). Some additions shown by butt joints. Sheep dip, set in concrete in one pen. Probably used until recently. Situated on NE facing slope and set back into rocks.	SH90095518	B
105200	Bwlch Gwyn Shelter / Undated Sub-circular earthwork, 5.5m x 4.9m x 0.3m high. Perhaps associated with banks (enclosures ?) to E and made visible by its regularity. Gap on NW side not necessarily original. Situated on ridge crest.	SH89955523	B
105201	Bwlch Gwyn Hut platform ? / Undated Rectangular earthwork with rounded corners, 9.0m x 4.6m (externally) x 0.3m high. Large gap at S end. Situated on edge of boggy area, just to W of ridge crest.	SH89875514	B
105202	Bwlch Gwyn Shelter / Post medieval Sub-rectangular drystone structure, 3.6m E/W x 3.1m N/S (externally) x 0.5m high max. Very broad walls with large slabs acting as facing stones. Perhaps associated with PRN 105203. Situated on E facing slope below crest.	SH90275533	B
105203	Bwlch Gwyn Shelter / Post medieval Irregularly shaped shelter, max diameter 4.3m x 0.8m high. One side curved, one angled with entrance on downhill (E) side. Set into rock outcrop, just below top of ridge.	SH90265535	B
105204	Llyn Alwen Cairn / Undated Circular cairn, 1.7m diameter x 0.3m high. Stones mostly uncovered by vegetation (possible marker	SH90255636	B-C

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cairn ?). Situated on highest point of ridge.

105205	Bwlch Gwyn Peat platform / Post medieval Slightly raised platform, 10.2m x 5.5m x 0.3m high. Surrounded by rushes on all sides, with peat cuts in vicinity. Situated on much waterlogged, gentle WNW facing slope.	SH90615571	B
105206	Llyn Alwen Hafod ? / Medieval-Post medieval Rectangular drystone walled structure, 6.2m NW/SE x 3.5m NE/SW x 1.0m high. Facing stones visible internally on long sides, interior choked with rubble. Enclosure on SE defined by low stone wall, 8.4m NW/SE x 4.6m NE/SW. Situated in broad depression on SE facing slope.	SH90495640	B
105207	Afon Alwen Sheep shelter / Post medieval L-shaped drystone wall, 3.5m x 2.9m x 0.8m high. Roughly constructed. Situated on edge of boggy area against SW facing slope.	SH90535660	B-C
105208	Afon Alwen Sheep shelter / Post medieval L-shaped drystone wall, 3.5m x 3.5m 0.8m high. N arm curved and more ruinous. Situated on E facing slope above area of bog.	SH90735616	B-C
105209	Afon Alwen Sheepfold / Post medieval Drystone walled sheep pens, 17m x 11m. Roughly designed. Situated on gentle N facing slope.	SH91205558	B
105210	Afon Alwen Peat cutting / Post medieval Curved bank left by removal of peat, 22m diameter x 0.3m high. Suggests different method of peat cutting. Part of larger turbary complex. Situated on gentle N facing slope.	SH90915557	C
105211	Afon Alwen Shooting shelter ? / Post medieval Heap of stones, 3.6m x 3.2m x 0.8m high max. Some stones on edge on W side, line of stones on E side. Square plan structure shown at this location on Ordnance Survey 1:10,560 map of 1963. Situated on moderate SE facing slope.	SH91095580	B
105212	Afon Alwen Sheep shelter / Post medieval ? Cross shaped earthwork, each arm 8m-9m long x up to 2.6m wide. Hollow in centre with some stone visible nearby. Situated on ridge crest, highest point to S.	SH91045594	B
105213	Afon Alwen Banks / Undated Two roughly parallel banks, 26m long x 0.4m high. Banks butt up to streamwhere edge of watercourse is revetted with stone. Situated on flat boggy ground adjacent to tributary of Afon Alwen.	SH91325602	B
105215	Esgynfa Gwgan Shelter / Post medieval ? Low elliptical bank, 7m x 6m. Turf construction. Situated on flat ground with natural rock outcrop	SH90035767	B

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below on SW side.

105216	Cefn Mawr Platform / Undated Sub-circular platform of peat, 8.0m x 6.0m x 0.3m high. Slight linear hollow at N end. Situated on flat ground with boggy area to E.	SH90395747	B
105217	Llyn Alwen Structure ? / Undated Several layered flat slabs forming a right-angle, 0.8m x 0.8m x 0.4m high. A curious and unidentified feature. Situated on gentle S facing slope just below terrace.	SH89955709	B
105566	Bwlch-y-garnedd Cist Burial ? / Bronze Age ? Probable cist burial, 7.5m E/W x 3.0m N/S. Stone slabs visible near centre of low mound. Slabs rest on stone and are partially turf covered. Situated on level ground, 6m to N of track.	SH91785547	A-B
105567	Bwlch-y-garnedd Peat mound / Post medieval Probable peat mound, 8m NW/SE x 4m NE/SW x 0.4m high. Situated on slight SE facing slope near area of peat cutting.	SH91755533	B-C
105568	Bwlch-y-garnedd Cairn / Undated Circular cairn, 2.9m diameter x 0.2m high. Mostly turf covered but some well set stones visible. Situated on level plateau.	SH91495517	B
105569	Cottage bridge Peat mound / Post medieval Very distinct rectangular mound, 25m NW/SE x 6m NE/SW x 0.7m high. Probably a peat mound as situated in extensive area of peat cutting activity. Situated on slight NW facing slope.	SH91565607	B-C
105570	Afon Alwen Cairn / Undated Circular cairn, 2.5m diameter. Some stone exposed centrally. Probably clearance. Situated on moderate NW facing slope above bog.	SH91475596	B-C
105571	Bwlch-y-garnedd Cairn / Undated Circular cairn, 3.0m diameter x 0.4m high. Mostly turf covered, but some fairly large stone visible centrally. Probably clearance. Situated on slight NW facing slope.	SH91355519	B-C
105648	Pen yr Orsedd Standing stone / Undated Triangular shaped upright stone, 0.54m high x 0.50m wide x 0.17m thick. Aligned ENE/WSW. Situated on E facing slope of slight NE/SW ridge.	SH89615539	B
105649	Pen yr Orsedd Quarries / Post medieval Group of small stone quarries, largest having an area of c. 80 sqm. Substantial amounts of stone left unused, perhaps intended for abortive walling scheme. Situated on E facing slopes of Pen yr	SH89465558	C

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105650	Pen yr Orsedd Shooting shelter / Post medieval Nearly square drystone walled structure, 2.6m N/S x 2.9m E/W x 1.6m high. Well constructed, with entrance on E. W wall tumbled (due to collapse of fireplace ?). Walls probably stand to near original height. Built into base of E facing slope.	SH89365557	B
105651	Pen yr Orsedd Cist burial ? / Bronze Age ? Group of laid slabs, 2.5m NE/SW x 2.4m NW/SE x 0.5m high. Function unclear. Situated immediately to W of rock outcrop on moderate SW facing slope.	SH89155519	A-B
105652	Pen yr Orsedd Shelter wall / Post medieval Length of curved walling, 5.6m N/S x 0.6m high. Situated on moderate SW facing slope.	SH89155529	C
105653	Pen yr Orsedd Burial site ? / Undated Circular feature consisting of apparently set stone, c. 1.8m diameter x 0.3m high. Central area grassed with some stone underneath. Situated on less angled part of fairly steep SW facing slope.	SH89515504	B
105654	Pen yr Orsedd Shelter wall / Modern Length of walling, 1.5m E/W x 0.6m wide x 1.0m high max. 4 courses of stone to E of rock outcrop. Situated on S side of local summit.	SH89465519	C
105655	Pen yr Orsedd Marker cairn / Post medieval Columnar marker cairn, 1.2m basal width x 2.1m high max. Situated on rock outcrop of local summit.	SH89425522	B-C
105656	Pen yr Orsedd Shelter / Post medieval Ruinous drystone walled structure, 5.7m N/S x 4.0m E/W. Possibly originally square in shape. Walling visible on E side. Situated on W side of local summit above steep W facing slope.	SH89265535	B
105657	Pen yr Orsedd Cairn / Bronze Age Cairn, 4.0m diameter x 0.4m high. Probably circular, appears to have outer ring enclosing central mound of stone (1.0m diameter). Situated on slight S facing slope.	SH89205535	B
105658	Pen yr Orsedd Cairn / Post medieval Cairn, 1.3m diameter x 0.6m high. Possibly a marker. Situated close to local summit.	SH89275539	C
105659	Pen yr Orsedd Marker cairn / Post medieval Square plan pillar cairn, 0.7m basal width x 1.0m high. Situated to S of local summit overlooking S facing slopes.	SH88985533	B-C

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105660	Moel Rhiwlug Sheepfold / Post medieval Drystone walled 3-unit sheepfold, 20.5m NE/SW x 8.1m NW/SE. Largest unit to SW earliest, with others butted up to it. Entrances located at E corner, creeps near N and S corners. Later units may have extended further to NE originally - ruined wall ends visible. Situated on S facing slope at head of valley.	SH88785517	B
105661	Pen yr Orsedd Cairn ? / Bronze Age ? Sub-circular heap of stone, c. 2.5m diameter x 0.5m high max. Stones appear to tip toward centre. Possibly of natural origin. Situated on SW facing slope.	SH89295498	B-C
105662	Moel Rhiwlug Hafod / Medieval Rectangular earthwork structure with some visible walling stone, 9.4m NW/SE x 5.1m NE/SW x 0.4m high. Terraced into slope on long axis with entrance on NE side. Babk immediately to SW, 9.4m long x 2.7m wide x 0.5m high may have provided protection from prevailing winds. Very probably associated with surrounding enclosure bank PRN 105698. Situated at head of valley on SE facing spur.	SH88755510	A
105663	Pen yr Orsedd Hut ? / Post medieval Probably rectangular drystone walled structure, 4.3m NE/SW x 3.5m NW/SE x 0.6m high. Ruinous but with some visible walling. Entrance at S or SW. Situated near foot of steep W facing slope.	SH89055566	B
105664	Pen yr Orsedd Shooting shelter ? / Post medieval Sub-triangular drystone walled structure, 2.2m N/S x 2.1m E/W x 1.7m high max. Built on and against rock outcrop at N end, entrance at S. Situated below crest of E/W ridge on S side.	SH89035570	B
105665	Pen yr Orsedd Standing stone / Prehistoric ? Standing stone, 0.63m high x 0.70m wide x 0.20m thick. Aligned N/S. Situated 50m W of summit on W facing slope.	SH89245548	B
105666	Pen yr Orsedd Marker cairn / Post medieval Pyramidal marker cairn, 1.3m x 1.2m x 0.9m high. Situated on local summit.	SH89415563	B-C
105667	Pen yr Orsedd Shelter / Post medieval Ruinous drystone walled structure, 4.0m NE/SW x 3.2m NW/SE x 0.5m high. Area of structure defined by walling and tumbled stone but shape unclear - possibly ovoid. Situated on NE facing slope.	SH89455567	B
105668	Pen yr Orsedd Marker cairn / Post medieval Probable basal course of pyramidal marker cairn, 1.0m x 0.6m x 0.4m high. Situated on N facing rocky outcrop.	SH89555576	B-C

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105669	Llyn Alwen Sheepfold / Post medieval Sub-rectangular drystone walled structure, 3.9m NW/SE x 2.6m NE/SW x 1.0m high. NW wall curved and possibly later in date. Built against bank on SW, entrance on SE. Situated by S shore of Llyn Alwen.	SH89895619	B
105670	Llyn Alwen Stone setting / Modern D-shaped setting of loose stones, 8.0m max diameter. 13 stones, each < 0.4m in size. Situated 30m to N of low summit.	SH89425630	C
105671	Pen yr Orsedd Cairn ? / Bronze Age ? Possible cairn, 6.0m diameter x c. 1.0m high. Composed of rounded stones with central depression. Possibly damaged by adjacent trackway, but may be contemporary dump of stone (some material on surface is recent in date). Situated on NW facing slope.	SH89155600	B-C
105672	Nant Caledfryn Marker cairn / Post medieval Rectangular plan cairn, 1.3m E/W x 0.8m N/S x 0.6m high. Scatter of stones to S and SE. Probably remains of pyramidal marker. Situated on slight S facing slope below local summit.	SH88855729	B-C
105673	Nant Goch Peat mound / Post medieval Peat mound, 7.0m E/W x 4.5m N/S x 1.2m high max. Some stones lying on surface at S and W sides. Small peat cut to SE. Situated on moderate W facing slope above stream.	SH88705664	B-C
105674	Nant Goch Peat mound / Post medieval Peat mound, 6m E/W x 4m N/S x 0.6m high. No sign of associated cutting. Situated on S facing slope.	SH88785662	C
105675	Llyn Alwen House platform ? / Medieval ? Possible rectangular house platform, 7.5m N/S x 3.5m E/W x 2.0m deep max. Cut into slope above lake and apparently truncated by trackway. Slight possibility of connection between track and feature. Situated on steep E facing slope overlooking Llyn Alwen.	SH89495671	B
105679	Moel Rhiwlug Cairn ? / Undated Oval shaped heap of stone, 2.5m NW/SE x 2.0m NE/SW x 0.3m high. Largely turf covered and may be clearance but proximity to Cist cairn PRN 105680 suggests caution. Situated on level area below local crest.	SH88295515	B-C
105680	Moel Rhiwlug Cist cairn / Bronze Age Approximately circular mound, c. 8.0m diameter x 0.6m high. Part of cist showing in centre, aligned NW/SE. Cist appears to have been robbed and then backfilled as stones protrude at odd angles. Situated on NW facing slope.	SH88245518	A-B

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105681	Moel Rhiwlug Shelter / Medieval ? Rectangular stone and earthwork structure, 5.0m N/S x 3.5m E/W x 0.5m high. Appears to have roughly triangular annexe cut into slope on W side. Walls poorly defined. Situated on fairly level area beneath steep SE facing slope.	SH88645522	B
105682	Moel Rhiwlug Marker cairn / Post medieval Partially ruined rectangular based cairn, 0.7m x 0.9m x 0.6m high. Some tumbled stone to W. Situated on rock outcrop to E of summit.	SH88605527	B-C
105683	Moel Rhiwlug Cist Burial ? / Bronze Age ? Group of laid slabs generally orientated NW/SE, c 3.0m NE/SW x 2.3m NW/SE. Mostly covered with mossy turf but some gaps can be seen. Situated at base of moderate N facing slope on edge of bog.	SH88335548	A-B
105684	Moel Rhiwlug Cairn / Post medieval Cairn of tumbled stones, 1.5m diameter x 0.5m high. Situated on local summit.	SH87995583	C
105685	Moel Rhiwlug Marker cairn / Post medieval Pillar shaped cairn, 0.5m x 0.5m x 1.1m high. Situated on SE facing slope.	SH88055582	B-C
105686	Moel Rhiwlug Sheepfold / Post medieval Rectangular drystone walled sheepfold, 7.0m E/W x 5.7m N/S x 1.3m high max. Shedding wall, 6.3m long, extends from NE corner by entrance. Probably 2-phased as lower part of walls well constructed, upper part merely piled stone. Situated on level shelf below steep E facing slope.	SH88065580	B
105687	Moel Rhiwlug Peat platform / Post medieval Approximately oval stone setting, 11.0m N/S x 3.5m E/W x 0.3m high max. Within set stones are loose stones possibly used as weights. Situated on N spur of Moel Rhiwlug.	SH88635570	B
105688	Moel Rhiwlug Shelter / Post medieval Approximately rectangular shelter, 7.2m N/S x 6.3m E/W x 1.0m high max. Constructed of peat. Entrance at NE corner. Situated on moderate E facing slope above bog, near tip of N spur of Moel Rhiwlug.	SH88775583	B
105689	Nant y Foel Shooting butt ? / Post medieval Linear collection of stone, 3m E/W x 1m N/S x 0.6m high. No obvious structure. Situated on moderately steep W facing slope.	SH87645560	C
105690	Nant y Foel Field System / Medieval Approximately oval enclosure with internal divisions, c. 800m N/S x 400m E/W. Banks up to 3m wide x 1.2m high. Seems likely that there would have been an associated dwelling - possibly on site of sheepfold marked on modern Ordnance Survey 1:10,000. Situated on both sides of Nant y Foel	SH87505550	A-B

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below head of valley.

105691	Nant y Foel Cairn / Post medieval Heap of stones, 1.0m x 0.6m x 0.5m high. Situated on local summit.	SH87685560	C
105692	Nant y Foel Marker cairn / Post medieval Rectangular based cairn, 1.0m x 0.6m x 1.0m high. Situated on angular rock outcrop of local summit.	SH87725559	B-C
105693	Penbryn-ci Cairn / Post medieval Cairn, 1.1m diameter x 1.0m high. Situated on rock outcrop overlooking S facing slope.	SH87345629	C
105694	Penbryn-ci Cairn / Post medieval Cairn, 0.9m N/S x 0.6m E/W x 0.9m high. Composed of few stones, mostly long and supporting each other in near upright positions. Situated on stony outcrop overlooking S facing slope.	SH87285626	C
105695	Penbryn-ci Marker cairn / Post medieval Pillar cairn. 1.1m x 1.0m x 1.2m high. Surrounded by scatter of stone. Situated on summit.	SH87175633	B-C
105696	Braich y Tarw Shelter / Post medieval Ruinous sub-square drystone structure, 6.0m NE/SW x 5.5m NW/SE. Shelter of later date built within E part, 3.0m x 2.9m x 1.2m high. Situated at head of shallow valley on NW facing slope.	SH87055620	B
105697	Braich y Tarw Peat mounds / Post medieval Two mounds of peat, A 16m E/W x 4m N/S x 0.3m high, B 10m E/W x 3.5m N/S x 0.2m high. May overlie platforms. Situated on crest of broad N/S aligned saddle.	SH87275596	C
105698	Moel Rhiwlug Field System / Medieval Oval enclosure defined by earthwork bank, 500m N/S x 400m E/W. Almost certainly associated with PRN 105662. Situated at head of valley.	SH88805500	A
105699	Ty'n Llyn Farm / Post medieval Intact stone built farmhouse, 11.5m x 5m. Five further buildings associated with house including a rectangular boathouse marked on Ordnance Survey 1:10,560 map surveyed in 1875. Sub-rectangular drystone walled field adjoins to W. Recently constructed sheepfold within complex. Situated on N shore of Llyn Alwen.	SH89795685	B
105700	Moel Seisiog Boundary marker / Post medieval Circular setting of stones, 1.2m diameter. 2 raised above ground level and leaning against each other. Probably disturbed setting for marker stone. Situated on broad E/W ridge by fence.	SH86395728	B

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105701	Moel Seisiog Shooting butt ? / Post medieval Length of wall, 2.5m NE/SW x 0.5m wide x 0.3m high. Situated on slight S facing slope above area of bog.	SH86565724	C
105702	Graig-hir Boundary marker / Post medieval Recumbent marker stone, 0.64m long x 0.25m wide x 0.15m thick. Originally held in position by setting of 3 stones. Situated on level area of broad E/W ridge by fence.	SH86755723	B
105703	Graig-hir Quarries / Post medieval Group of at least 6 small quarries, max area 70 sqm x 2m deep. Situated on S facing slope of E/W ridge.	SH87005725	C
105704	Moel Derwydd Peat mound / Post medieval Sub-rectangular peat mound, 20.7m E/W x 7.5m N/S x 0.8m high. Trackway leads to site from S. One of a group. Situated on slight E facing slope.	SH88475657	B-C
105705	Moel Derwydd Peat mound / Post medieval Sub-rectangular peat mound, 14.4m E/W x 6.6m N/S x 0.7m high. Trackway leads to site from S. One of a group. Situated on slight E facing slope.	SH88495659	B-C
105706	Moel Derwydd Peat mound / Post medieval Sub-rectangular peat mound, 13.5m E/W x 7.0m N/S x 0.7m high. Trackway leads to site from S. One of a group. Situated on slight E facing slope.	SH88485660	B-C
105707	Moel Derwydd Shooting butt ? / Post medieval Arc of stones, 3m max diameter x 0.3m high. Largely overgrown. Situated on moderate SE facing slope.	SH88385659	C
105708	Moel Derwydd Burial mounds ? / Undated Group of at least 20 mounds, max 4.0m N/S x 1.5m E/W x 0.6m high. Approximate area covered by group, 0.02 sq km. All mounds aligned N/S and composed of earth and stone, often with hollow on W side. Some mounds probably hidden under dense heather. Situated on and near crest of NE/SW ridge.	SH88175642	A
105709	Moel Seisiog Peat platform / Post medieval Long oval mound, 11m N/S x 4m E/W x 0.6m high. Loosely set stones form line on S and W sides. Situated at edge of crest above S facing slope.	SH86405708	B
105710	Moel Seisiog Standing stone / Undated Well set upright stone, 0.84m NE/SW x 0.24m thick x 0.65m high. Situated on gentle E facing slope.	SH86475713	B-C

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105711	Moel Seisiog Shooting butt ? / Post medieval Low wall of coursed stone, 1.9m N/S x 0.6m wide x 0.3m high. Situated on crest overlooking W facing slope.	SH86495702	C
105712	Moel Seisiog Shooting butt ? / Post medieval Slightly curved low wall, 2.4m E/W x 0.6m wide x 0.4m high. Situated on edge of crest overlooking S facing slope.	SH86655700	C
105713	Moel Seisiog Hafod / Medieval-Post medieval Rectangular structure, 8.5m E/W x 4.8m N/S x 0.4m high. Walls probably of drystone construction but now largely turf covered. Platform 1m square butts onto S side (site of doorway ?). Possible entrance at E end but this may only be gap in remains of walling. Situated at base of steep S facing slope.	SH86355706	B
105714	Moel Seisiog Shelter / Post medieval Ruined drystone walled structure, 5.0m NE/SW x 2.4m NW/SE x 0.6m high max. Platform built on slope covered largely with demolition rubble - some traces of walling. Situated near base of steep SW facing slope.	SH86185710	B
105715	Moel Seisiog Shelter / Post medieval Rectangular drystone walled structure, 3.0m NW/SE x 2.4m NE/SW x 1.0m high max. Gap at NW end sealed by edge set slab. Situated on small shelf on steep W facing slope.	SH86035706	B
105716	Moel Seisiog Caim / Bronze Age Sub-circular caim, 4.5m N/S x 4.1m E/W x 0.4m high. No visible features. Situated on moderate W facing slope.	SH86275695	B
105717	Wauneos Caim / Bronze Age Caim, 2.8m diameter x 0.4m high. Partially turfed over with central depression. Situated on slight S facing slope.	SH87135675	B
105718	Penbryn-ci Hut platform ? / Undated Oval shaped earthwork bank, 5.0m NE/SW x 4.0m NW/SE x 0.2m high max. Interior levelled. Possibly associated with peat cutting. Situated on slight crest above NE facing slope.	SH87285661	B
105719	Moel Derwydd Caim / Post medieval Caim, 1.5m diameter x 0.5m high. Composed of large roughly heaped stones. Situated on small hummock above moderate N facing slope.	SH87925672	C
105720	Moel Derwydd Shooting butt ? / Post medieval Slightly curved length of low wall, 4m N/S x 0.6m wide. Situated on fairly level ground.	SH88085631	C

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105721	Moel Derwydd Fold / Medieval-Post medieval Ruinous sub-rectangular, drystone walled structure, 6m NW/SE x 4m NE/SW x 0.6m high. Constructed of large stones with tumble at SE end. Situated on slight SE facing slope.	SH88065629	B
105722	Penbryn-ci Sheepfold / Post medieval Rectangular drystone walled structure, 7.8m N/S x 5.2m E/W. Entrance on E side with adjacent curved shedding wall in poor condition. Situated at base of N facing slope.	SH86885658	B
105723	Penbryn-ci Shooting shelter / Post medieval Ruined drystone walled hut, 3.0m E/W x 2.7m N/S x 2.0m high max. Entrance on E side, interior filled with rubble. Heap of stone against outside of W wall, fireplace within. Part of cast iron fire grate loose within. Situated on shelf on N facing slope.	SH87205649	B
105724	Penbryn-ci Marker cairn / Post medieval Pyramidal marker cairn, 0.6m N/S x 0.8m E/W x 1.2m high. Possibly rebuilt, probably standing to its full height. Situated on N facing slope above shelf.	SH87135650	B-C
105725	Penbryn-ci Enclosure ? / Undated Sub-rectangular or elongated oval earthwork bank, 13.6m E/W x 8.8m N/S x 0.3m high. Possible entrance at E end, arc of stones within W end. Possible similar feature to NW. May be associated with peat cutting. Situated on W end of low ridge within boggy area.	SH87165662	B
105726	Penbryn-ci Sheepfold / Post medieval Drystone walled 3-unit sheepfold, 31.5m E/W x 9.2m N/S (max) x 1.5m high. Shedding wall 18.4m long extends from NE corner. Mostly intact. Situated on shelf on moderately steep N facing slope.	SH87235652	B
105727	Penbryn-ci Marker cairn / Post medieval Basal courses of pyramidal marker cairn, 0.6m x 0.6m x 0.5m high. Situated on N facing slope immediately below steeper N facing slope.	SH87275648	B-C
105728	Penbryn-ci Marker cairn / Post medieval Pyramidal marker cairn, 0.7m x 0.7m x 1.0m high. Some tumbled stone. Situated on moderate N facing slope.	SH87305646	B-C
105729	Penbryn-ci Marker cairn / Post medieval Pyramidal marker cairn, 0.9m x 0.9m x 1.1m high. Situated on fairly steep N facing slope.	SH87345649	B-C
105730	Penbryn-ci Fold / Medieval-Post medieval Sub-oval drystone walled fold, 6.5m N/S x 5.2m E/W x 1.0m high max (0.3m high generally). In very ruinous state apart from section of walling on N side - this has probably been rebuilt at a later date. Situated in hollow on N facing slope.	SH87435646	B

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105731	Penbryn-ci Fold / Post medieval Rectangular drystone walled fold, 7.7m N/S x 6.7m E/W x 1.3m high max. Entrance on S, no internal divisions apparent. Walls roughly faced but completely tumbled in places. Situated on moderate N facing slope below steeper N facing slope.	SH87495646	B
105732	Penbryn-ci Cairn / Post medieval-Modern Cairn composed of upright long stones, 1.0m diameter x 0.9m high. Stones loosely set and resting against each other - self supporting. Situated on gentle NW facing slope.	SH86905646	C
105733	Penbryn-ci Peat platform / Post medieval Elongated oval ring of peat, 11m NE/SW x 4.5m NW/SE x 0.3m high. Situated on gentle NW facing slope.	SH86915649	B-C
105734	Penbryn-ci Shooting butt ? / Post medieval Short length of ruinous walling, 2.2m E/W x 1.2m N/S x 0.6m high. Situated at base of S facing slope of E/W ridge.	SH86835651	C
105735	Penbryn-ci Shelter walls / Post medieval Group of 3 drystone built shelter walls, max 2m long x 0.8m high. Built amongst area of large scree. Situated on S facing slope of E/W ridge.	SH86885650	C
105736	Penbryn-ci Shelter wall / Post medieval Line of roughly piled stones, 3m N/S x 0.6m wide x 0.6m high max. Adjacent to rock outcrop. Situated on N facing slope of E/W ridge.	SH86865654	C
105737	Moel Seisiog Shooting butt ? / Post medieval Length of walling, 1.5m N/S x 0.4m wide x 0.3m high. Further course below ground level. Situated on E facing slope above bog.	SH86625653	C
105738	Moel Seisiog Peat mound / Post medieval Peat mound, 12m NE/SW x 5m NW/SE x 0.6m high. 3 stones aligned NW/SE at SW end. Situated on SW facing slope.	SH86555646	B-C
105739	Moel Seisiog Peat mound / Post medieval Oval mound of peat, 7.7m E/W x 5.8m N/S x 0.8m high. Some loose stone near W edge. Situated at base of S facing slope near bog.	SH86475658	B-C
105741	Cottage Bridge Shelter ? / Post medieval ? Sub-rectangular or ovoid stone setting, 3.8m E/W x 3.3m N/S x 0.3m high. Built against large erratic stone. No obvious entrance. Situated below NE facing slope on edge of boggy area.	SH92015596	B

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105742	Cottage Bridge Fold ? / Post medieval ? Possible dwelling or fold, 6m x 6m x 0.3m high. Single course of stone present which may define the outer wall of a square structure, with a concentration of stone towards the NE side. Located at bottom of N facing slope, bog to N and NE.	SH92045596	B
105743	Alwen Reservoir Hut platform / Undated Probable site of circular structure. Defined by near circular gully, 8.0m outer diameter x up to 0.2m deep, not visible for short distance on SE side (entrance ?). Interior appears to have been partially levelled. Probably related to PRNs 105744 and 105745. Situated on gentle SE facing slope overlooking Alwen Reservoir.	SH92735602	A
105744	Alwen Reservoir Hut platform / Undated Probable site of circular structure. Defined by apparently circular gully, 8.0m outer diameter x up to 0.2m deep, possibly with a low bank on its outside. E section of gully missing, possibly due to weathering. Probably related to PRNs 105743 and 105745. Situated on gentle SE facing slope overlooking Alwen Reservoir.	SH92705603	A
105745	Alwen Reservoir Hut platform / Undated Probable site of circular structure. Shown by well defined sub-circular gully, 8.0m outer diameter x 0.3m deep. Interior appears to have been partially levelled. Probably related to PRNs 105743 and 105744. Situated on gentle E facing slope overlooking Alwen Reservoir.	SH92675593	A
105746	Nant Heilyn Shooting butt / Post medieval Circular structure, 3.8m diameter x 0.4m high. Defined by circular depression with an arc of slightly disturbed stones on its S side, few stones elsewhere. Situated on slight SE facing slope above area of bog.	SH92625551	B
105747	Nant Heilyn Shooting butt / Post medieval Circular structure, 4.2m diameter x 0.4m high. Defined by circular depression with an arc of well set stones on its S side, no visible stones elsewhere. Situated 6.5m NW of PRN 105746, on slight SE facing slope above area of bog.	SH92605550	B
105748	Nant Heilyn Farmstead / Post medieval Farmstead known as 'Nant Heilyn'. Stone built house and outbuildings in poor condition, sheepfold and handling pens to SE in good condition. Focal point for system of field boundaries. Situated in shallow valley to N of stream of same name.	SH92525543	B
105749	Nant Heilyn Caim / Prehistoric ? Small cairn, 3.0m diameter. More recent stone on top of low original cairn (clearance ?). Situated on crest of E/W ridge.	SH92275568	B-C
105750	Nant Heilyn Kerb circle / Prehistoric Group of large, flat and edge set stones arranged in an ovoid pattern. Local area appears to have	SH92355543	A

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been levelled. Situated on E facing slope adjacent to trackway (PRN 105756).

105751	Afon Alwen Shelter / Post medieval ? Drystone built shelter, 5m x 2m. 2 tolerably defined sides with tumbled stone in interior, built against S side of very large boulder. Situated on fairly steep N facing slope.	SH92055579	B
105754	Cottage Bridge House platform / Medieval ? Sub-rectangular house platform, 10.9m N/S x 7.0m E/W. Slight banks to N and S, deeply cut into slope on E to depth of 2.5m. Situated on W facing slope overlooking main A543 road.	SH91665600	B
105755	Bwlch-y-garnedd Peat mound / Post medieval Sub-rectangular mound, 13.0m N/S x 7.6m E/W. Probably of peat and related to adjacent extensive area of peat cutting. Situated on level ground to S of local summit.	SH91705540	B-C
105756	Bwlch-y-garnedd Road / Roman ? Road or trackway, 4.4m wide, defined by parallel ditches, 1.2 - 1.3m wide x c. 0.4m deep. Changes direction at crest of ridge (for which grid reference given). Disturbed by later activity to E and SW. Appearance at crest of ridge suggestive of Roman date, cartographic evidence suggests that it became disused between 1818 and 1839. Road travels from Bwlch-y-garnedd in NE direction to grid reference given and then turns in E direction, passing Nant Heilyn.	SH91705545	A-B
