

**THE CLWYD-POWYS ARCHAEOLOGICAL TRUST**

*Nant Bach Windfarm,  
nr Cerrigydrudion, Conwy*

**ASSESSEMENT OF THE SIGNIFICANCE  
OF THE IMPACT OF THE DEVELOPMENT  
ON THE HISTORIC LANDSCAPE**

**CPAT Report No 722.2**

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Report for Dulas Ltd

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# 1 HISTORIC LANDSCAPE ASSESSMENT

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## 1.1 Introduction

1.1.1 The proposed Nant Bach Wind Farm development will have a potential impact not only on some archaeological sites (see Section 00), but also more generally on the historic landscape which must be considered not only in terms of the area of the development itself but also the much larger area that surrounds it.

1.1.2 While the whole of the Welsh landscape should be considered to be important, some areas have been identified which are thought to be particularly important and/or well-preserved. These have been recorded in a Register of Landscapes of Historic Interest in Wales. The proposed development does not fall within any of the areas in the Register, but lies relatively close to one such area, with others at a greater distance.

1.1.3 The methodology for assessing the effects of proposals on the historic landscape, termed an Assessment of the Significance of the Impact of Development on a Historic Landscape Area (or ASIDOHL for short), has recently been published. The present study of the effects of the proposed wind farm development has been undertaken according to this methodology.

## 1.2 Welsh Historic Landscapes and Historic Landscape Character Areas

1.2.1 The Welsh landscape reflects the impact and influence of man from prehistoric times through to the industrial and modern era, elements from different times and of varying origins interacting to create what is truly a complex picture.

1.2.2 Some landscapes are of particular historic significance, because of what they contain or because of their state or preservation, and in recent years this fact has been recognised by the identification of 58 key historic landscapes. These are defined and described in two volumes of the Landscapes of Historic

Interest in Wales. Part 2 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, Volume 1 being the Register of Landscapes of Outstanding Historic Interest in Wales (Cadw 1998) and Volume 2 the Register of Landscapes of Special Historic Interest in Wales (Cadw 2001). Henceforward this is termed the Register.

1.2.3 In recent years studies conducted by the Welsh Archaeological Trusts throughout Wales have assessed in considerable detail the historic landscapes in the Register. The studies of many of the registered landscapes have now been completed, although some are still in progress and others have yet to be commissioned. Each study involves a detailed examination of a landscape in the Register and, on the basis of the analyses, the historic landscape is divided into a number of Historic Landscape Character Areas (henceforward termed a HLCA). Each HLCA is a discrete entity, defined by sets of characteristics: archaeological and historical attributes, or cultural associations, which distinguish it from adjacent areas. HLCAs can take diverse forms, ranging from zones of Bronze Age funerary monuments to recent industrial landscapes, and from open uplands to heavily populated settlements.

1.2.4 Historic landscape characteristics are the tangible evidence of the activities and habits of the people who occupied, developed, used and shaped the land to serve human needs in the past; they reflect the beliefs, attitudes, traditions and values of these people. They include the physical remains of all aspects of human activities and the exploitation in the past (above and below ground, known and potential), and our understanding, interpretation and even perception of those remains. They could reflect a variety of activities occurring at one time, or evolving functions in different periods of time.

1.2.5 At a landscape level, what is significant in historical terms includes field boundary patterns (whether they are regular or irregular, their size, their date etc), patterns of settlement (whether they are scattered, nucleated, their date of origin, etc), the relict remains of earlier periods which are found in upland or marginal



landscapes, the effect of 18th and 19th-century estates on the landscape, the impact of industry, of military installations and so on.

1.2.6 Thus the dominant historic themes or patterns in a locality help to define local historic character. The combination of these characteristics gives an area its local distinctiveness, and it is the definition of areas of local distinctiveness which leads to the definition of 'character areas'.

1.2.7 The staged process can be summarised as:

- One (or more) components > dominant pattern
- One (or more) dominant patterns or characteristics > coherent character
- Coherent character (with definable limits) > character area
- One or more character areas > historic landscape

### 1.3 Historic Landscapes and Planning Policies

1.3.1 The Register seeks to promote policies to preserve the character of historic landscapes, although it is non-statutory and imposes no additional planning controls, and also recognises that continuing development is a necessary part of a living landscape.

1.3.2 Notwithstanding, historic landscapes are recognised as a factor in the planning process:

*Where Environmental Assessment is necessary, the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988 require, amongst other things, the significant effects of the development on the landscape and cultural heritage to be assessed.... Factors that need to be borne in mind include the effect of the development on the overall historic integrity and coherence of the area on the Register, whether by outright removal, severance, fragmentation, or dislocation of historic elements. The*

*cumulative effects of secondary or piecemeal changes over time should also be taken into account (Cadw 1998, xxxi).*

1.3.3 Within the planning process Welsh Assembly Planning Government Planning Policy Wales (March 2002, Para. 6.5.23) states that:

*Information on the landscapes on the second part of the Register [of Landscapes, Park and Gardens of Special Historic Interest] should also be taken into account by local planning authorities in preparing UDPs, and in considering the implications of developments which are of such a scale that they would have more than local impact on an area on the Register*

1.3.4 In combination, the relatively recent emergence of the Register of Landscapes of Historic Interest in Wales and, in the absence of a unitary authority development plan for Conwy, the reliance on the Colwyn Borough Local Plan, means that there is no guidance at regional level on the use of the Register.

### 1.4 The ASIDOHL Process

1.4.1 The ASIDOHL Process is described in the *Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Processes* as a "staged process for the assessment of the significance of the impact of development on historic landscape areas on the register of landscapes of historic interest in Wales" (Cadw 2003, 15). Henceforward it is termed the Guide. The detailed exposition of the process is given in a Technical Annex within the Guide, and only relevant elements of it are referred to below.

1.4.2 The Register, as noted above, extends to 58 specific historic landscapes which are considered to be "of national importance in the Welsh context" (Cadw 2003, 9). The Guide to Good Practice is geared specifically to those 58 landscapes, but not to the many other historic landscapes in the country. Nevertheless, the impacts of a larger development lying beyond any registered historic landscape can have an



impact, albeit an indirect one, on that landscape, and it is in this context that the present study with its ASIDOHL has been conducted.

1.4.3 HLCAs form the basic unit of assessment within the ASIDOHL process. As discussed below, the contribution of each HLCA to the wider historic landscape of which it forms a part (and thus its value in ASIDOHL terms) is variable. Some are key elements, whilst others

are of only incidental importance. Each HLCA directly or indirectly affected by the proposed development is assessed individually within Stages 2-4 of the ASIDOHL. In Stage 5 the results of Stages 2-4 are combined to produce an assessment of the overall impact on the historic landscape described by the Register.

1.4.4 An ASIDOHL is structured in five stages, summarised below in Table 1.1.

**Table 1.1: The ASIDOHL Process**

Stage 1	Compilation of an introduction of essential, contextual information
Stage 2	Description and quantification of the <b>direct</b> , physical impacts on the HLCAs affected
Stage 3	Description and quantification of the <b>indirect</b> , physical and visual impacts on the HLCAs affected
Stage 4	Evaluation of the relative importance of the parts of the HLCAs affected by development in relation to: <ul style="list-style-type: none"> <li>a) the whole of the HLCA concerned</li> <li>b) the whole of the Historic Landscape</li> <li>c) the national context</li> </ul>
Stage 5	Assessment of the overall significance of development, and the effects that altering the HLCAs concerned has on the whole of the Historic Landscape
	Concluding statement

#### 1.4.5 The quantification of the results

1.4.6 Stages 2-4 of an ASIDOHL involve a grading and scoring process, in which figures are generated for the direct and indirect impacts, and for the relative importance of the HLCAs (and their individual components) within a local and national context. Following on from this, a similar grading process is adopted in Stage 5 to produce a single figure for the overall significance of the impact of the proposed development. It might be noted here that the ASIDOHL methodology as it presently exists cannot lead to the expression of any positive benefits of a development, the range of impacts being graded from Negligible to Very Severe.

1.4.7 It is intended that, errors apart, all parties using the results of an ASIDOHL, whether at consultation stage or at a Public Inquiry, should be able to agree on the results of

Stages 2-4. Any latitude for reinterpretation ought to be confined to Stage 5.

1.4.8 The basic grading and scoring criteria are reproduced in the tables below. The formulae and working processes leading to the final scores in Stages 2-5 and given in the Technical Annex of the Guide, are not reproduced here, for they are not necessary except for the specialist reader of this report. However, any critique of the ASIDOHL as a methodology will inevitably require the scrutiny of the calculation process. The full methodology can be found in the Technical Annex referred to above (Cadw 2003).

#### 1.4.9 Stage 1: contextual information

1.4.10 The first stage gathers essential contextual information that forms the introduction to the report. In addition to



information such as the planning history, necessary issues such as the historical background to the area are included in the early pages of the present report as part of the general archaeological assessment of the site.

### *Summary of the development*

1.4.11 The proposed Nant Bach Wind Farm development involves the construction of a wind farm comprising thirteen turbines and associated access tracks on and around the hill known as Mwdwl-eithin (centred NGR SH 9885 4712).

### *Scope of the ASODOHL*

1.4.12 The following ASODOHL is solely concerned with the potential impact of the proposed development on historic landscapes in the region. The development area is of undoubted historic significance but its omission from the Register (1998 & 2001) reveals that it is not considered by Cadw to be of national importance in comparison with those landscapes that are registered. There is, therefore, no specific requirement to undertake a full ASODOHL within the current guidelines.

1.4.13 However, though the proposed development does not lie within the boundaries of any registered historic landscape, it will nevertheless be a prominent feature within the landscape, visible from a distance of many kilometres. As such, its impact requires consideration, specifically in relation to the nearby, registered historic landscape of Mynydd Hiraethog. The decision on a planning application for a wind farm at Tir Mostyn/ Foel Goch, Denbighshire, reinforces this point. In the Inspector's report, the effects on the Mynydd Hiraethog Historic Landscape in which it lay were considered to be of relevance, even though the development itself was permitted (National Assembly for Wales, document ref. A-PP115-07-014).

### *Historic Landscapes in the region of the Nant Bach Wind Farm development*

1.4.14 Four historic landscapes in the Register lie within the same broad area as the proposed development, and are considered in more detail below. A fifth, the Vale of Llangollen and Eglwyseg (Cadw 2001: HLW (C), 6) falls on the edge of a 20km-radius from the centre of the development area and is not considered further here.

### Mynydd Hiraethog:

1.4.15 The Mynydd Hiraethog Historic Landscape is identified and described in the Register of Landscapes of Special Historic Interest in Wales (Cadw 1998, 8: Ref. HLW (C) 5). The historic and archaeological aspects of the area are covered not only in the Register but also in the Mynydd Hiraethog Historic Landscape Characterisation report (Britnell 2002). This latter document identifies the component HLCAs, with a description of their period, components, condition, significance and value.

1.4.16 The Mynydd Hiraethog Historic Landscape lies to the north and north-west of the proposed development, its southern boundary being in places approximately 5km distant. However, the boundaries of this historic landscape (as with all others) are not strictly defined, and the HLCAs defined in the Mynydd Hiraethog Historic Landscape Characterisation project extend beyond those of Historic Landscape as published in the Register. While some HLCAs straddle the general historic landscape boundary, at least one extends well beyond its margins.

### Vale of Clwyd

1.4.17 The second historic landscape, Dyffryn Clwyd, otherwise the Vale of Clwyd (Cadw 1998, 1: Ref. HLW (C) 1), lies further to the east, at its closest point about 12.4km distant. It has been the subject of a Historic Landscape Characterisation report (Britnell and Martin 1999).

1.4.18 The historic landscape contains the River Clwyd in its broad flat base and this runs for about 30km north from the medieval town of Ruthin to join the coast at Rhyl. The valley floor is low, being nowhere more than about 40m above sea level. On the east, the vale is bounded by the Clwydian Hills which rise steeply to about 300m above sea level, their summits commanding spectacular prospects of the valley below.

1.4.19 The Zone of Visual Influence presented in Figure [redacted], Volume 3 together with selected wireframes revealed that most of the turbines within the development area will be visible from the higher slopes of the Clwydians but such is the distance involved that the visual effect will be close to negligible. It is therefore proposed



not to take the ASIDOHL further for this historic landscape on the Register.

### Berwyn

1.4.20 To the south-east lies Y Berwyn (Cadw 2001, 1: Ref HLW C 3), at its closest about 9km from the development area. The area has been the subject of a historic landscape characterisation assessment, but no report has been produced. Its uniformity means that it can be treated as a single HLCA (W Britnell: pers comm.).

1.4.21 This historic landscape on the register is a remote upland occupying the westerly slopes of the Berwyn Mountains which physically and visually divide north from mid-Wales. The area comprises tracts of rolling moorland pasture lying to the south east of the Dee valley, overlooking Llandrillo and having prospects to the Snowdonian massif beyond in the west. On the eastern fringe of this area, the central ridge of the Berwyn Mountains reaches a height of 827m OD at the summits of Cader Berwyn and Moel Sych, but westwards the ground slopes gradually in a series of ridges to between 350–450m ODI, before dropping steeply into Cwm Pennant which adjoins the area on the west.

1.4.22 The Zone of Visual Influence presented in Figure [ ], Volume 3 reveals that over much of the historic landscape, a significant number of the turbines will be visible, the only areas excepted being the several valleys that cut through the western edge of the Berwyn on their way to Cwm Pennant.

1.4.23 Nevertheless, the distance between this historic landscape and the development area is such that the visual impact will be slight. From the more southerly stretch of the central ridge only the tips of the turbines will be distantly visible and more than 15km away. At the northern edge of the historic landscape most of the turbines will be visible, but as a distant feature with very limited visual impact. It is therefore proposed not to take the ASIDOHL further for this historic landscape on the Register.

### Bala and Bala Lakesides

1.4.24 The fourth area is known as Bala and Bala Lakesides (Cadw 2001, 68: Ref HLW (Gw) 16), and at its closest lies about 9km to the

south-west. It is believed that no historic landscape characterisation report has yet been produced for this area.

1.4.25 Bala Lake is Wales' largest natural lake from which the River Dee drains eastwards, and the historic landscape includes both the lake and its immediate catchment. The valley floor is at 160m above sea level while the surrounding sides rise fairly steeply to a series of rounded hills, ridges and upland plateaux forming the foothills of the Arenig to the west and the Berwyn to the east. The valley provides a natural corridor across north Wales and its strategic importance in the past explains the succession and concentration of defensive sites and settlements located in the area.

1.4.26 This largely low-lying landscape is effectively masked from the proposed development area by the adjacent valley sides and intervening hills. The Zone of Visual Influence presented in Figure [ ], Volume 3 indicates that none of its three defined categories will have an impact on this historic landscape, and this has been confirmed by selected wireframes. As there are no obvious, potential indirect visual effects this Historic Landscape is not considered further within this report.

1.4.27 The HLCAs within the historic landscapes on the Register closest to the development area are listed in Table 1.2 overleaf.

1.4.28 To summarise, it is evident that of the historic landscape areas considered above, it is Mynydd Hiraethog that visually will be most affected by the proposed development. The distances between the proposed Nant Bach Wind Farm and the other historic landscapes are such that visual impacts will be slighter than those for Mynydd Hiraethog, and it is believed therefore that the results of the ASIDOHL for the latter should inform any consideration of the others without the need to conduct a comparable assessment.

### **1.4.29 Mynydd Hiraethog Historic Landscape: description and identification of key characteristics**

1.4.30 Mynydd Hiraethog, otherwise known as the Denbigh Moors, is situated at the northern end of the Cambrian Mountains and forms a



bleak and deserted area of rolling moorland, generally between 400m and 500m above OD. The registered landscape forms only the central and western portions of a greater upland massif that comprises a large, and in Wales an

increasingly rare survival of an uninterrupted extent of heather moorland that was deliberately managed and maintained as a grouse moor and a shooting estate in the early part of the 20th century (Cadw 2001, 9).

**Table 1.2: HLCA's proximate to the Nant Bach Wind Farm proposal**

HLCA Number	HLCA area	Historic Landscape	Minimum distance from development area
1106	Moel Rhiwllug	Mynydd Hiraethog	6.6km
1111	Alwen Reservoir	Mynydd Hiraethog	4.9km
1110	Bryn y Gors-goch	Mynydd Hiraethog	5.2km
1112	Brenig Reservoir	Mynydd Hiraethog	5.9km
1113	Maen-llwyd	Mynydd Hiraethog	6.0km
1108	Tan-y-graig	Mynydd Hiraethog	8.7km
1102	Creigiau Llwydion	Mynydd Hiraethog	11.4km
1105	Llyn Alwen	Mynydd Hiraethog	11.8km
1025	Eyarth	Dyffryn Clwyd	12.4km
1028	Llanfair Dyffryn Clwyd	Dyffryn Clwyd	12.8km
?	Y Berwyn	Y Berwyn	9.3km
?	Bala and Bala Lakesides	Bala and Bala Lakesides	9.3km

1.4.31 This moorland landscape, like many other areas of Wales, has its origins in the upland economies of the Neolithic and Bronze Age, if not earlier. Each of the local summits within the landscape is topped by groups of Bronze Age burial cairns which presumably attest to wider activity at this time, the evidence of which is now masked by the modern landscape. There is no evidence for associated settlements, although groups of later, prehistoric-type settlements have been found in that eastern part of Hiraethog that lies outside the registered historic landscape. The areas around Llyn Aled and Aled Isaf reservoir have yielded large quantities of worked flint dating from the Mesolithic period through to the Bronze Age.

1.4.32 The prehistoric landscape of the uplands was modified subsequently through continued seasons of summer grazing, based on temporary summer settlements or *hafotai* sited in the valleys and along the edges of the moor. In times of population pressure or better climate, some of these sites might have been occupied on a permanent basis, and there are several *hafod* sites which had become permanently settled in the post-medieval period. Much of the area was subject to peat extraction in the last century, and the remains of cuts and drying stacks are still present, as are the remains of the post-medieval

farmsteads whose occupants had exploited the peat.

1.4.33 On the Denbigh Moors, this earlier landscape in turn was swept away, and is overlain by the remnants of a regime of managed heather moorland imposed on it in the early years of the 20th century. While this landscape is a relatively modern creation, the large uninterrupted extent surviving is none the less rare in Wales and therefore historically valuable; elsewhere much of this managed heather grouse moor has been done away with in the last 50 years. Much of this survival is due to the creation of a shooting estate by Viscount Devonport between 1908 and 1925. Spread over the area are the remains of dug-out and drystone shooting butts and shelters, together with field walls, boundary markers and earthworks which probably date from this period. This area also boasts the ruined shooting box at Gwylfa Hiraethog, an elaborate lodge built in 1908–11 to accommodate shooting parties. The structure, which replaced an earlier timber lodge specially imported from Norway, and still known locally as Plas Pren, is reputed to have been the highest inhabited house in Wales and to have had the widest views of any house in Britain. The ruins still form a prominent landmark which are visible across the area from several directions.



1.4.34 The Brenig reservoir, built between 1973 and 1976, and its surrounding forestry, which also contains a number of Bronze Age and post-medieval sites, dominates the landscape from the south. Many of the sites close to, or flooded by, the reservoir were excavated prior to its construction and a sample have now been reconstructed as part of an archaeological trail. The management of water resources is also an important theme in characterisation, and a function of Hiraethog described here, for the landscape contains the catchment for the earlier Alwen reservoir built between 1911 and 1916 to supply water to

Birkenhead Corporation, and the smaller reservoirs of Llyn Aled and Llyn Aled Isaf built in the 1930s to supply water to the coastal holiday resort of Rhyl.

#### 1.4.35 Historic landscape themes in Mynydd Hiraethog

##### *Key characteristics*

1.4.36 Cadw *et al* (1998, xxii) have distinguished a set of criteria for assessing the special historic interest of a landscape and these are shown in Table 1.3.

**Table 1.3: Historic Landscapes' criteria for special historic interest**

<p>(1) <i>Intensively developed or extensively remodelled</i> Landscapes in which development or change as a result of human activity (land use) has been so intense, resulting in substantial alterations to the natural (landform) and semi-natural (land cover) elements: large towns, cities, conurbations, industrial area, large-scale civil engineering projects, landscapes showing endeavour on a grand scale.</p>
<p>(2) <i>Period</i> Landscapes in which development or change as a result of human activity has been arrested at one or more stages and subsequent material alterations restricted: relict (or fossil) landscapes showing human activity within one or more periods, perhaps abandoned or essentially unchanged after the principal activity ceased.</p>
<p>(3) <i>Historic diversity/ multiperiod</i> Landscapes in which development or change as a result of human activity continues, and into which past evidence from more than one period has become cumulatively assimilated with the natural (landform) and semi-natural (land cover) elements, with particular regard for those areas in which evolution over time is shown by a variety of archaeological or historic features with one or more of the following attributes:</p> <ul style="list-style-type: none"> <li>• different forms of the same type or class of feature</li> <li>• range of different features</li> <li>• density of related features</li> <li>• particular group value</li> <li>• continuity through several periods</li> <li>• features relating to the development of a particular theme or process</li> </ul>
<p>(4) <i>Buried/Subsumed or destroyed</i> Landscapes whose past use may usually only be inferred by historical (documentary) or archaeological (remote or intrusive) methods of investigation.</p>
<p>(5) <i>Cultural merit</i> Landscapes with historic (events, traditions, legends, folklore), artistic, literary, architectural, technological, religious, or other important cultural association, either singly or in combination.</p>

1.4.37 On the basis of the description in the previous section Mynydd Hiraethog can be seen as a landscape of special historical interest that fulfils to a greater or lesser degree all of the criteria (in Table 1.3).

## 1.5 Stage 2: Direct impacts of development

### 1.5.1 Introduction

1.5.2 Stage 2 in the ASIDOHL process describes and quantifies in as far as this is



possible, the direct, physical impact of the development on one or more HLCAs.

1.5.3 In the specific case of the Nant Bach Wind Farm, the proposed development falls outside the boundaries of the historic landscape on the Register, as has already been indicated above. As a consequence there are no direct effects to be considered within this ASIDOHL.

1.5.4 However, the classificatory systems used are relevant to later sections of the ASIDOHL and so the statements in the Technical Annex in the Guide are given here.

1.5.5 Direct physical impacts are quantified

and expressed in three ways, namely:

- a) in absolute terms, expressed as a percentage of the area of land that is directly affected
- b) in relative terms, expressed as a percentage of key elements that are directly affected
- c) in landscape terms, expressed by statements concerning the extrinsic value of elements that are directly affected

1.5.6 Table 1.4 displays the criteria for assessing the magnitude of the direct effects of a proposed development on an historic landscape in absolute and relative terms – steps (a) and (b) above.

**Table 1.4: Summary of Key Characteristics of the Mynydd Hiraethog Historic Landscape**

Key Characteristics	Criteria No. from Table
Bronze Age funerary, ritual and domestic landscapes	2, 3
Medieval and post-medieval settlements and field systems	2, 3
Post-medieval peat cutting and other extractive works	2
Communications	
Historic associations with the early 20 <sup>th</sup> -century shooting estate	5
20 <sup>th</sup> -century water resources and their management	1,2,3,4

1.5.7 The intrinsic importance or status of each element or characteristic affected should also be briefly described, together with a statement of intrinsic importance or status using the same categories as those given in the *Cadw: Welsh Historic Monuments draft Archaeology and the Trunk Road Programme in Wales: a Manual of Best Practice*. These are based in turn - with the exception of Category E - on those given in the Department of Environment, Transport and Regions' *Design Manual for Roads and Bridges* Volume 11 Section 3 Part 2 (1993). Category U (also termed category E in some comparable classifications) has been introduced to cover archaeological sites and monuments whose existence went unacknowledged in the Design Manual.

1.5.8 They are:

- Category A: site or element of national importance
- Category B: site or element of regional importance

- Category C: site or element of local importance
- Category D: site or element of minor importance
- Category U: site or element of unknown significance

1.5.9 Table 1.5 displays the criteria for expressing the magnitude of the direct effects of a proposed development in landscape terms – step (c) above. This aspect is considered in two stages. Firstly, the value of each affected element to the HLCA is assessed. Secondly, the effect of the loss (or partial loss) of that element or characteristic to the HLCA is considered: for example, how much does the loss of element X (or part thereof) diminish the value of Y as a landscape?

**Table 1.5: Criteria for Assessing the Magnitude of Direct Effect on Landscape Value**

Element – value to the HLCA	Landscape Value Effect
Very High	Lost
High	Substantially Reduced
Medium	Moderately Reduced
Low	Slightly Reduced
None	Unaffected

1.5.10 The key to the ASIDOHL process is its scoring system, through which the overall magnitude on an HLCA can be expressed (see Table 1.6). The scores for each affected element are added together and then the total averaged. To this mean figure is added the score for the

magnitude of absolute impact (the total area of the HLCA to be affected). This produces a final figure, which provides a measure of the overall magnitude of direct, physical impacts. Scores are then graded against the 24-point scale shown in Table 1.7.

**Table 1.6: Direct Physical Impacts - grades and scores**

Impacts and Element Sensitivity	Score
---------------------------------	-------



Direct physical impacts – absolute	
Very Severe	6
Severe	5
Considerable	4
Moderate	3
Slight	2
Very Slight	1
Direct physical impacts – relative	
Very Severe	6
Severe	5
Considerable	4
Moderate	3
Slight	2
Very Slight	1
Site Category	
A	4
B	3
C	2
D	1
U	1
Direct physical impacts – landscape value	
Very High	4
High	3
Medium	2
Low	1
None	0
Landscape value Effect	
Lost	4
Substantially reduced	3
Moderately reduced	2
Slightly Reduced	1
Unaffected	0

**Table 1.7: Overall Magnitude of Direct Physical Impacts**

Score	Grading
21-24	Very Severe
17-20	Severe
13-16	Considerable
9-12	Moderate
5-8	Slight
1-4	Very Slight

## 1.6 Stage 3: Indirect impacts of development

1.6.1 Stage 3 of the ASIDOHL reports,

describes and quantifies in an as objective a way as possible, the indirect impacts of the developments on all HLCA's affected. Indirect impacts are classified as both physical (Stage 3a) and visual (Stage 3b).

### 1.6.2 Indirect physical effects

1.6.3 Indirect, physical effects are characterised as:

(i) An increased risk of exposure, erosion, disturbance, decay, dereliction or any other detrimental physical change to elements, consequent to development.

(ii) Related to (i), the likelihood of increased management needs to maintain elements as, for example, through altered habitats, water levels, increased erosion, new

access provision, etc., consequent to development.

(iii) The severance, fragmentation, dislocation or alteration of the functional connections between related elements, for example, a field system becomes ‘severed’ from its parent farmstead by an intervening development.

(iv) The frustration or cessation of historic land use practices; for example, it becomes more difficult or impossible to manage an area in a traditional manner as a result of development.

(v) The frustration of access leading to decreased opportunities for education, understanding or enjoying the amenity of elements, consequent to development.

1.6.4 The proposed development falls outside the boundaries of any historic landscape on the Register. As a consequence there are no indirect physical effects to be considered within this ASIDOHL.

### 1.6.5 Indirect visual effects

1.6.6 Indirect visual (non-physical) impacts are categorised as:

(i) Visual impact on elements from which a development can be seen (considered up to its maximum height). Impacts can be on ‘views to’ or ‘views from’ elements, and should be assessed with particular reference to key historic viewpoints and essential settings. These should be considered in relation to a site’s original character and function as well as to the vantage points and visual experience of a visitor today.

Determining these aspects in relation to field monuments can be difficult, especially where the key historic viewpoints and essential settings recognised today may be different to those that were important to the original builders or inhabitants of a site. However, it might be possible to make reasonable assumptions on the basis of what is known archaeologically, or historically, about how certain types of monuments originally functioned, or were regarded. Key viewpoints should also include those that subsequently became adopted as such, for example, the historic, artistic, viewpoints of

a site, or those that were deliberately created as features in historic parks and gardens.

(ii) Impact on the visual connections between related elements, by occlusion, obstruction, etc. For example, what might have been an essential line of sight between historically linked defensive sites becomes blocked or impaired by an intervening development.

(iii) Conversely, the creation of inappropriate visual connections between elements not intended to be inter-visible originally, by the removal of intervening structures, barriers, shelters, screening or ground.

(iv) Visual impact of the development itself considering:

- (a) its form – the scale, number, density, massing, distribution, etc. of its constituent features;
- (b) its appearance – the size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.7 For each category of indirect visual impact the magnitude is graded in similar fashion to direct physical impacts (Table 1.6) ranging from Very Severe to Very Slight. The assessment of severity is based on the professional judgement of the assessor rather than on fixed criteria. The magnitudes are scored between 6 and 1, in line with the scale for direct physical impacts (as given in the second row of Table 1.6 above).

1.6.8 A further factor that might be taken into account is the relevance of any visual impact. Certain monuments within a landscape were deliberately sited in order to have a prominent position from which they could see and/or be seen. The views from, and towards, a Bronze Age funerary landscape, are one example where the viewshed is considered to be of critical importance. Conversely, other landscapes might be considered to be more inward looking, where external perceptions were not of any great significance; quarrying and agriculture are two examples of activities that are less viewshed-critical. However, it should be stressed that there



is no consideration of this particular factor within the present ASIDOHL guidelines.

1.6.9 For the purposes of this report, and in keeping with earlier ASIDOHL reports undertaken elsewhere, the relevance of visual impact is graded as High, Medium or Low.

1.6.10 Assessments are generally confined to the key elements identified during characterisation within the affected areas, i.e. Category A (nationally important) and B (regionally important) sites as defined above in para 6.1.7 (Cadw 2003, 21).

1.6.11 The overall magnitude of indirect impacts are also graded in a similar fashion to the overall magnitude of direct impacts, using the 24-point scale shown in Table 1.6.

1.6.12 The Zone of Visual Influence presented in Figure [redacted], Volume 3 depicts in map form those areas up to 20km distant from the central of the development area, where a) at least the tips of five proposed turbines will be visible; b) where the tips of between 6 and 10 proposed turbines will be visible; and c) where the tips of between 11 and 13 proposed turbines will be visible. In practice beyond a distance of 15km, visual assessments are not generally considered to be worthwhile (The Landscape Institute & Institute of Environmental Management and Assessment 2002). While the ASIDOHL methodology includes no recommendations for the maximum distance for measurement of visual impacts, the figure of 15 km has been adopted for the purposes of the present report.

1.6.13 The ZVI analysis is based solely on contour data and does not take into account the mitigating effects on the visual impact of the proposal from any existing buildings and more relevantly in the case of this largely rural area, from tree or hedgerow cover. Thus it presents an unrealistic (and worst case) scenario.

1.6.14 Computer-generated wireframes were generated on request by Dulas Ltd, to assist the assessment of the visual impact on historic landscape areas, and a sample is included in Appendix [redacted] for illustrative purposes.

1.6.15 In order further to inform the assessment a visit was undertaken by CPAT to the proposed development area, and to parts of the Mynydd

Hiraethog Historic Landscape area from which the wind turbines might be visible. Illustrative photographs were taken (using a Fuji digital camera with a conventional lens). Site visits have confirmed what appears to be evident from the Ordnance Survey maps, namely that some view lines of the development will be restricted by the woodland plantations of Clocaenog. Such constraints are however, limited.

1.6.16 As noted above, the proposed development does not fall within the boundaries of any Historic Landscape. As a consequence there are no issues of intra-area visibility, which would have required consideration had the turbines been sited within an HLCA. The only issue that requires analysis is that of 'views towards' the development from the Historic Landscape.

1.6.17 The Mynydd Hiraethog Historic Landscape incorporates fifteen HLCAs, mostly though not always in their entirety, in as much as some of the defined HLCAs extend well beyond the mapped bounds of the historic landscape shown in the Register (see 1.4.16, above). Five HLCAs lie within 5-6.5km of the development area, and only one in the extreme north-west of the historic landscape is wholly beyond 15km. More than 80% of the historic landscape lies within 15km of the development area.

1.6.18 The ZVI and field visits indicate that the turbines will be visible from large parts of the historic landscape, although the undulating nature of the Hiraethog plateau and the conifer plantations will provide some screening.

1.6.19 There is thus a visual impact for all but one of the fifteen HLCAs, though in some cases the development will be very distant.

#### *Moel Rhiwllug HLCA (1106).*

1.6.20 Heather moorland subdivided polygonal enclosures in the later 18th or early 19th century and managed as part of a shooting estate in later 19th and in 20th century, with scattered prehistoric funerary monuments and medieval and later seasonal settlement evidence. Fuller descriptions of the characteristics are given in Britnell 2002, 50.

1.6.21 There are two scheduled monuments in the area, both prehistoric funerary monuments,



on Moel Rhiwlug and by Nant Heilyn, and several others such as the Cefn-y-Gadfa Stone Rows just outside it. There is also one listed building, Tyrpeg Mynydd, close to the boundary of the HLCA. A large number of other archaeological sites have also been identified, many of them of minor interest such as small quarries, clearance and marker cairns, shooting butts, boundary stones, sheepfolds and shelters and occasional *hafod* sites, although a few might be considered to be of regional significance.

1.6.22 This is a very large area of about 29km<sup>2</sup>, most though not all of which lies within the area in the Register. The closest it comes to the development area is about 6.6km. The ZVI indicates that significant parts of this HLCA, lying north-west of the Nant Bach development area may be visually affected up to a distance of 15km and more, but equally there are large tracts where because of the lie of the ground few if any turbines will be visible. Thus the high ground of the ridge, also confusingly termed Mwdwl-eithin, at the south-east end of the HLCA, would have view of the proposed development but would shield slightly lower ground further to the north-east.

1.6.23 Sub-section 1.6.2 above outlines the categories of indirect visual (non-physical) effects. The indirect visual effects of the proposed wind farm development on HLCA 1106 are considered to fall into two of these categories:

i) views of the development from key viewpoints, primarily archaeological sites, and

iv) (a) its form in terms of density, massing and distribution and (b) its appearance in terms of size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.24 Both categories of impact have the potential to alter the key views from, and the essential settings of, HLCAs within the Historic Landscape. As shown in Table 1.8, the relevance of impacts is variable, and this is reflected in the scores for magnitude. In no instance will the turbines become the dominant visual feature from the historic landscape, and their impact will diminish for those parts of HLCA 1106 furthest from the development. The overall magnitude of indirect impacts is calculated as Slight to Moderate.

**Table 1.8: Assessment of Indirect Visual Effects on Moel Rhiwlug (HLCA 1106)**

Characteristic	Impacts	Relevance of impact	Category and Score	Magnitude and Score
Bronze Age funerary and ritual landscapes	i) Alteration in views from funerary and ritual monuments. ii) Small-scale change to essential settings	High	A – 4 to B – 3	Moderate – 3
Bronze Age or later prehistoric domestic landscapes	Small-scale change to essential settings	Low	A – 4 to B – 3	Moderate – 3
Medieval/post-medieval settlements (seasonal and permanent) and field systems	Small-scale change to essential settings	Low	B/C	Slight – 2
18 <sup>th</sup> /19 <sup>th</sup> century pastoral exploitation	Small-scale change to essential settings	Low	C/D	Slight – 2
Communications: medieval and post-	Alteration in views from historic	Medium	B/C	Slight – 2



medieval roads	communication arteries			
19 <sup>th</sup> /20 <sup>th</sup> -century shooting estate	Small-scale change to essential settings	Low	C/D	Slight – 2
Subsistence exploitation of peat, stone etc	Small-scale change to essential settings	Low	C/D	Slight – 2
	Development form			Slight – 2
	Development appearance			Slight – 2

### *Alwen Reservoir HLCA (1111)*

1.6.25 A 20th-century reservoir superimposed upon a medieval and later enclosed landscape. It was built between 1911 and 1916 and confined by a concrete dam, and extends over an area of 1.7km<sup>2</sup>. Prehistoric sites were identified during its construction.

1.6.26 There are no scheduled monuments within the HLCA and only one listed structure, namely the reservoir dam.

1.6.27 It must be pointed out that there is an interpretative conflict here in as much as it is the 20th-century reservoir itself together with its dam and the waterworks in the valley below it that constitute this particular HLCA. If this is treated as an historic landscape in its own right, which is the implication of the historic landscape assessment, it would score extremely highly using the criteria listed above, and potentially create a bias in the ultimate scoring system (stage 5). An alternative view would be to see the reservoir as but a single element in a larger historic landscape area, but this would necessitate combining two or more already defined HLCAs (and in the case of the Alwen Reservoir would have to take in land on its south-west side which had not previously been characterised or defined), something that the ASIDOHL process could accommodate, but which would also confuse the existing system. For the purposes of this assessment, the Alwen

Reservoir HLCA is treated as an entity, but with the earlier landscape which it submerged also being taken into account and used in criteria scoring.

1.6.28 Sub-section 1.6.5 above outlines the categories of indirect visual (non-physical) effects. The indirect visual effects of the proposed wind farm development on HLCA 1111 are considered to fall into two of these categories:

i) views of the development from key viewpoints, primarily archaeological sites, and

iv) (a) its form in terms of density, massing and distribution and (b) its appearance in terms of size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.29 While both categories of impact have the potential to alter the key views from, and the essential settings of, HLCAs within the Historic Landscape, the turbines will not appear as a dominant visual feature from the historic landscape. The overall magnitude of indirect impacts is calculated as Slight. The ZVI indicates that this HLCA is in a relatively low-lying part of the historic landscape and is complete shielded from the development area by intervening higher ground as well as by woodland.

**Table 1.9: Assessment of Indirect Visual Effects on Alwen Reservoir HLCA (1111)**

Characteristic	Impacts	Relevance of Impact	Category and Score	Magnitude and Score
Bronze Age or later landscape (submerged)	Minimal change to submerged setting	Very Low	U	Not assessed
20 <sup>th</sup> -century	Small-scale	Low	B	None – 1



reservoir	change to essential settings			
	Development form			None – 1
	Development appearance			None – 1

### ***Bryn y Gors-goch HLCA (1110)***

1.6.30 A modern coniferous forest plantation which overlies a relict medieval and later enclosed landscape of scattered farmsteads with associated field systems and stone quarrying.

1.6.31 This afforested area covers about 14km<sup>2</sup>, and extends to the north of the Alwen reservoir and west of the Brenig reservoir, on predominantly south- and east-facing slopes of Hiraethog. There are no scheduled monuments or listed buildings within the HLCA and the existing archaeology lies beneath the woodland cover.

1.6.32 The ZVI indicates that significant parts of this HLCA lying north-west of the development area may be visually affected up to a distance of 15km and more, but in view of its nature the effect is considered not to be of significance.

1.6.33 As with the Alwen Reservoir (above) there is an issue of interpretation here, for the woodland block (with two small cleared areas and a lake on its edges) constitutes this particular HLCA. If this is treated as an historic landscape in its own right, which is the implication of the historic landscape assessment, it would score extremely highly using some of the criteria listed above, and potentially create a bias in the ultimate scoring system (stage 5). As with the Alwen Reservoir, it might be possible to see the plantation as a single element in a larger historic landscape area, but this could require the amalgamation of several existing

HLCAs, something that the ASIDOHL process could accommodate, but which would also confuse the existing system. For the purposes of this assessment, the Bryn y Gors-goch HLCA is treated as an entity, but with the earlier landscape beneath the plantations also being taken into account and used in criteria scoring.

1.6.34 Sub-section 1.6.5 above outlines the categories of indirect visual (non-physical) effects. The indirect visual effects of the proposed wind farm development on HLCA 1106 are considered to fall into two of these categories:

i) views of the development from key viewpoints, primarily archaeological sites, and

iv) (a) its form in terms of density, massing and distribution and (b) its appearance in terms of size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.35 Both categories of impact have the potential to alter the key views from, and the essential settings of, HLCAs within the Historic Landscape. As shown in Table 1.10, the relevance of impacts is variable, and this is reflected in the scores for magnitude.

1.6.36 However, the presence of the woodland plantations will effectively screen the development from both the characteristics below and their individual elements and consequently the overall magnitude of indirect impacts is calculated as Very Slight.

**Table 1.10: Assessment of Indirect Visual Effects on Bryn y Gors-goch HLCA (1110)**

Characteristic / Components	Impacts	Relevance of impact	Category and Score	Magnitude and Score
Bronze Age burial mounds on Gorsedd Bran	i) Alteration in views from funerary and ritual monuments. ii) Small-scale	High	A – 4 to	Very slight – 1



	change to essential settings		B – 3	
Medieval/post-medieval settlements (seasonal and permanent) and field systems	Small-scale change to essential settings	Low	B/C	Very slight – 1
19 and 20 <sup>th</sup> century small-scale industrial exploitation	Small-scale change to essential settings	Low	C/D	Very slight – 1
	Development form			Slight – 2**
	Development appearance			Slight – 2**

### ***Brenig Reservoir HLCA (1112)***

1.6.37 A large later 20th-century reservoir, confined by an earth dam, and set in a broad valley towards the eastern edge of Mynydd Hiraethog is superimposed upon a medieval and later landscape of farmsteads and fields. In the 1970s it submerged a Bronze Age round barrow and several medieval and later farmsteads with their fields, and now represents an important present-day leisure resource. There are no scheduled ancient monuments or listed buildings in this drowned landscape, and little data on the state of the unexcavated features of archaeological interest that lie beneath the reservoir. Only the reservoir itself, which constitutes the HLCA, will be affected for the ZVI analysis indicates that some turbines will be visible from much of the reservoir area. The reservoir infrastructure apart, there is no visual impact that needs to be taken into account.

1.6.38 As with the Alwen Reservoir above (sub-Section 1.6.25), there are interpretative issues relating to HLCAs here, and the same solution has been adopted.

1.6.39 Sub-section 1.6.2 above outlines the categories of indirect visual (non-physical) effects. The indirect visual effects of the proposed windfarm development on HLCA 1111 are considered to fall into two of these categories:

i) views of the development from key viewpoints, primarily archaeological sites, and

iv) (a) its form in terms of density, massing and distribution and (b) its appearance in terms of size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.40 While both categories of impact have the potential to alter the key views from, and the essential settings of, HLCAs within the Historic Landscape, the turbines will not appear as a dominant visual feature from the historic landscape. The overall magnitude of indirect impacts is calculated as Slight.

### ***Maen-llwyd HLCA (1113)***

1.6.41 The character area comprises heather moorland with some improved grassland, partly divided into large polygonal enclosures of 18th to 19th-century date, Bronze Age funerary and ritual landscape, enclosed medieval sheepcotes, medieval and later *hafotai* and farmsteads. Fuller descriptions of the characteristics are given in Britnell 2002, 50.

1.6.42 This is one of the smaller areas within the Mynydd Hiraethog historic landscape, extending over nearly 7km<sup>2</sup>. It lies on the eastern fringe of the historic landscape, on the north and north-east sides of the Brenig reservoir. It includes several summits, including Bryn Maen, Tir Mostyn and Foel Goch, and views are predominantly focussed inwards towards the valley of the Afon Fechan, now drowned by the reservoir. The historic landscape characterisation report notes that ‘in view of its elevation .... it includes a surprisingly full



record of settlement and land use from early prehistoric times up to the recent past, some of which has left visible traces in the modern landscape' (Britnell 2002, 68). It includes several scheduled ancient monuments including cairns, but also the Hen Ddinbych medieval grange and one listed building, Bwlch-du. Prehistoric occupation is evidenced from excavation, but there appear to be very few surface traces of this activity.

1.6.43 The ZVI indicates that the eastern lobe of this HLCA (on the east side of Llyn Brenig) will be relatively unaffected visually by the development, although some of the turbines will be visible from the heights of Marial Gwyn and a small number could be visible from a limited patch of ground to the west of Hen Ddinbych, unless the views are shielded by forestry. In contrast much of the western lobe (north-west of the reservoir) will have views down the Brenig valley to the development area, although there are rather fewer archaeological sites in this portion of the HLCA.

1.6.44 Sub-section 1.6.2 above outlines the categories of indirect visual (non-physical) effects. The indirect visual effects of the proposed wind farm development on HLCA 1113 are considered to fall into two of these categories:

i) views of the development from key viewpoints, primarily archaeological sites, and

iv) (a) its form in terms of density, massing and distribution and (b) its appearance in terms of size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.45 Both categories of impact have the potential to alter the key views from, and the essential settings of, HLCAs within the Historic Landscape. As shown in Table 1.11, the relevance of impacts is variable, and this is reflected in the scores for magnitude. In no instance will the turbines become the dominant visual feature from the historic landscape, and their impact will diminish for those parts of HLCA 1111 furthest from the development. The overall magnitude of indirect impacts is calculated as Slight to Moderate.

### ***Tan-y-graig HLCA (1108)***

1.6.46 This is an area of scattered post-medieval farmstead encroachments on sheltered south-facing slopes in the centre of the historic landscape area. It includes some drained and improved land and small conifer plantations, with one patch of heather moorland on the Cerrig Caws ridge. The HLCA occupies an area of just under 6km<sup>2</sup>. It contains two listed buildings – an agricultural range at Tan-y-graig and a barn at Llaethwryd, but no scheduled ancient monuments. Almost all of the archaeological records for this HLCA relate to post-medieval farming, and subsistence activities such as peat cutting.

1.6.47 The ZVI indicates that some parts of this HLCA will have views of varying numbers of turbines, whilst other parts will be shielded by higher ground.

1.6.48 Sub-section 1.6.2 above outlines the categories of indirect visual (non-physical) effects. The indirect visual effects of the proposed windfarm development on HLCA 1108 are considered to fall into two of these categories:

i) views of the development from key viewpoints, primarily archaeological sites, and

iv) (a) its form in terms of density, massing and distribution and (b) its appearance in terms of size, shape, colour, fabric, etc. of its constituent features, in relation to the existing historic character of the area.

1.6.49 Both categories of impact have the potential to alter the key views from, and the essential settings of, HLCAs within the Historic Landscape. As shown in Table 1.12, the relevance of impacts is variable, and this is reflected in the scores for magnitude. In no instance will the turbines become the dominant visual feature from the historic landscape, and their impact will diminish for those parts of HLCA 1106 furthest from the development. The overall magnitude of indirect impacts is calculated as Slight to Moderate.



## 1.7 Stage 4: Evaluation of relative importance

1.7.1 Stage 4 of the ASIDOHL process evaluates the relative importance of each HLCA (or a part thereof), directly or indirectly affected by the development, in relation to:

a) the whole of the HLCA

b) the whole of the specific Historic Landscape of which the HLCA forms a part

followed by an evaluation of:

c) the relative importance of the HLCA within the national context

1.7.2 The criteria for determining the relative importance or value of the HLCAs and their component elements are as follow:

- Rarity in terms of period or date, and as a component of the landscape. This should be expressed in relation to what survives today, since elements of a once common landscape may now be rare.
- Representativeness - this should be considered because a landscape that is common can still be of national importance if, in the light of other criteria, it contains a particularly representative range of elements.
- Documentation - the survival of the documentation that increases our understanding of the landscape will raise its importance
- Group value - this relates to diversity (or similarity) of elements including the structural and functional coherence
- Survival relates to the degree of survival or elements in the landscape
- Condition relates to the condition of elements in the landscape
- Coherence relates to how well the historic meaning and significance of the landscape is articulated by the historic themes (that is the historical processes

and patterns that have created the individual elements within it).

- Integrity- the importance of a landscape may be enhanced by its integrity that relates to the survival of its original character or form
- Potential - relates to the potential within the landscape for future historic landscape analysis.
- Amenity - relates to the potential value of elements to be developed as a public educational and recreational amenity.
- Associations - a landscape might have important historic associations with particular figures or institutions.

1.7.3 Each criterion is graded as Very High, High, Moderate, Low or Poor. Criteria values in steps (a), (b) and (c) are scored as shown below in Table 1.11.

**Table 1.11: Stage 4 evaluation scores**

Criterion value	Score
Very High/Good	4
High/Good	3
Moderate/Medium	2
Low	1
Poor/None	0

1.7.4 These scores enable a figure to be calculated that reflects the relative importance of individual HLCA elements and entire HLCAs in terms of the immediate Historic Landscape and the national context.

1.7.5 The final part of Stage 4 is to determine the average, overall value of all the HLCAs (or parts thereof) affected. This is achieved by combining the scores in steps (a), (b) and (c); once again the calculations are not rehearsed below, but the average overall figure is graded as shown below in Table 1.12.

**Table 1.12: Stage 4 - grades of overall value**

Score	Grading
80-100	Very High
60-79	High

**Table 1.16: Evaluation of the importance of Brenig Reservoir HLCA (1112) in relation to the whole of Mynydd Hiraethog Historic Landscape and in the national context**

Criterion	Value V. Good	High / Good	High / Mod/ Med	Low Poor / V None	High / V Good	High / Good	Mod/ Med	Low Poor / None
	(b) whole of historic character area			(c) Evaluation of the relative importance of the HLCA in the national context				
RARITY			X				X	
REPRESENTATIVENESS			X				X	
DOCUMENTATION		X					X	
GROUP VALUE		X					X	
SURVIVAL				X	X			
CONDITION			X		X			
COHERENCE			X					X
INTEGRITY				X				X
POTENTIAL				X				X
AMENITY				X		X		
ASSOCIATIONS		X						X



40-59	Considerable
20-39	Moderate
5-19	Low
1-4	Negligible

1.7.6 As noted above the ASIDOHL guidelines suggest that the evaluation of relative importance of parts/elements/components, or the whole of, a particular HLCA should be made in relation to a) the whole of that HLCA; b) the whole historic landscape on the Register; and c) the area in the national context of all the areas on the Register.

1.7.7 Of these, a) is not considered to be appropriate in this particular assessment as each HLCA is already being treated as a unit and that it is the visual aspect alone that is under consideration.

1.7.8 The author considers that stage c) is difficult to implement objectively and effectively because it requires an analysis of many other Welsh landscapes at a level of detail comparable to the ASIDOHL of this small area. This is not really practicable at present, as it requires access to comparative data that are not available at a national level, not least because some similar landscapes on the register have not yet been characterised, and also a range of knowledge which few if any assessors could aspire to. Consequently, stage c) can only be a qualified attempt to meet the requirements of the ASIDOHL process.

1.7.9 Based on the checklists in the tables on

the following pages Table 1.13 to Table 1.2018, grades have been accorded to each HLCA as required by the ASIDOHL, as presented in Table 1..

## 1.8 Stage 5: Assessment of overall significance of impact

1.8.1 This final stage combines the results of Stages 2-4 to produce an assessment of the overall significance of the impact of the development, and the effects that altering the HLCA concerned will have on the whole of the Historic Landscape as identified in the Register. This is determined by setting out and scoring the value of the affected HLCA against the effect caused by the development and the consequent reduction in value caused by the proposed development to the Historic Landscape.

1.8.2 Stage 5 summarises the findings from earlier parts of the process by focussing on three specific issues:

- Impact caused by development (based on Stages 2 & 3 results)
- Value of HLCAs (based on Stage 4 results)
- Reduction of value of the Historic Landscape

**Table 1.13: Evaluation of the importance of Moel Rhiwllug HLCA (1106) in relation to the whole of the Mynydd Hiraethog Historic Landscape and in the national context**

Criterion	Value V. High / Good	High / Mod / Low	Poor / None	V. High / Good	High / Mod / Low	Poor / None
	(b) whole of historic character area			(c) Evaluation of the relative importance of the HLCA in the national context		
RARITY		X			X	
REPRESENTATIVENESS	X				X	

DOCUMENTATION	X	X
GROUP VALUE	X	X
SURVIVAL	X	X
CONDITION	X	X
COHERENCE	X	X
INTEGRITY	X	X
POTENTIAL	X	X
AMENITY	X	X
ASSOCIATIONS	X	X



**Table 1.6: Evaluation of the importance of Alwen Reservoir HLCA (1111) in relation to the whole of the Mynydd Hiraethog Historic Landscape and in the national context**

Criterion	Value V. High / Good	High / Mod / Good	Low / Med	Poor / V None	High / Mod / Good	Low / Med	Poor / V None
(b) whole of historic character area (c) Evaluation of the relative importance of the HLCA in the national context							
RARITY		X				X	
REPRESENTATIVENESS			X			X	
DOCUMENTATION			X			X	
GROUP VALUE			X			X	
SURVIVAL		X			X		
CONDITION		X			X		
COHERENCE			X				X
INTEGRITY				X			X
POTENTIAL				X		X	
AMENITY			X		X		
ASSOCIATIONS				X			X

**Table 1.15: Evaluation of the importance of Bryn y Gors-goch HLCA (1110) in relation to the whole of the Mynydd Hiraethog Historic Landscape and in the national context**

Criterion	Value V. Good	High / Mod / Good	High / Mod / Med	Low	Poor / V None / Good	High / Mod / Good	High / Mod / Med	Low	Poor / V None
(b) whole of historic character area (c) Evaluation of the relative importance of the HLCA in the national context									
RARITY			X						X
REPRESENTATIVENESS				X			X		
DOCUMENTATION				X				X	
GROUP VALUE				X				X	
SURVIVAL				X			X		
CONDITION				X				X	
COHERENCE				X					X
INTEGRITY					X				X
POTENTIAL				X					X
AMENITY					X			X	
ASSOCIATIONS				X					X



**Table 1.17: Evaluation of the importance of Maen-llwyd HLCA (1113) in relation to the whole of the Mynydd Hiraethog Historic Landscape and in the national context**

Criterion	Value V. High / Good	High / Mod / Med	Low	Poor / None	Value V. High / Good	High / Mod / Med	Low	Poor / None
(b) whole of historic character area (c) Evaluation of the relative importance of the HLCA in the national context								
RARITY		X				X		
REPRESENTATIVENESS		X				X		
DOCUMENTATION			X				X	
GROUP VALUE		X					X	
SURVIVAL		X					X	
CONDITION		X					X	
COHERENCE			X					X
INTEGRITY		X						X
POTENTIAL		X				X		
AMENITY		X					X	
ASSOCIATIONS		X						X

**Table 1.2018: Evaluation of the importance of Tan-y-graig HLCA (1108) in relation to the whole of the Mynydd Hiraethog Historic Landscape and in the national context**

Criterion	Value V. High / V. Good	High / Good	Mod/ Med	Low	Poor / None	V High / V Good	High / Good	Mod/ Med	Low	Poor / None
	(b) whole of historic character area					(c) Evaluation of the relative importance of the HLCA in the national context				
RARITY				X					X	
REPRESENTATIVENESS		X							X	
DOCUMENTATION				X				X		
GROUP VALUE		X					X			
SURVIVAL			X					X		
CONDITION			X					X		
COHERENCE		X					X			
INTEGRITY				X					X	
POTENTIAL			X					X		
AMENITY				X					X	
ASSOCIATIONS				X						X

**Table 1.21: Grades Accorded to each HLCA as required by ASIDOHL**

Area	Score	Grade
Moel Rhiwllug HLCA (1106)	48	Considerable
Alwen Reservoir HLCA (1111)	40	Considerable
Bryn y Gors-goch HLCA (1110)	21	Moderate
Brenig Reservoir HLCA (1112)	37	Moderate
Maen-llwyd HLCA (1113)	60	High
Tan-y-graig HLCA (1108)	43	Considerable



1.8.3 Each criterion is graded as Very High, High, Medium, Low or Very Low. Although scoring is used extensively in Stages 2-4, it is stated in the Guide that the scores from these stages should not be directly combined or 'converted' to determine the Stage 5 score. Rather, the final assessments are based on professional interpretation and judgement. This approach enables the data to be assessed more flexibly, and for significant 'highs' and 'lows' to be considered, rather than merely the average figures. The overall significance of impact score is graded as shown in Table 1.20.

**Table 1.20: Overall Significance of Impact**

Score	Grading
26-30	Very Severe
21-25	Severe
16-20	Fairly severe
10-15	Moderate
4-9	Slight
1-3	Negligible

1.8.4 In this final stage, the benefits, advantages and improvements that the development may offer are also determined.

**Table 1.21: Final Gradings for HLCAs**

HLCA	Value – based on Stage 4	Impact based on Stages 2 & 3	Reduction of value of the historic landscape area on the Register
<b>Moel Rhiwlug (1106)</b>	<b>Medium</b> Key elements include scattered prehistoric funerary monuments; post-medieval enclosures and elements of a shooting estate. <b>Score - 5</b>	<b>Low</b> Visual impact only. Moderate level for an impact over much of the area <b>Score - 3</b>	<b>Low</b> Development impact on key elements is low on the overall value of the registered historic landscape. Only reduction is through visual impact. <b>Score - 2</b>
<b>Total score: 10</b> <b>Overall significance of impact: Moderate</b>			
<b>Alwen Reservoir (1111)</b>	<b>Medium</b> Key elements are the reservoir itself and its associated features <b>Score – 5</b>	<b>Very Low</b> Slight visual impact; views largely screened <b>Score - 1</b>	<b>Very Low</b> Area remains virtually unchanged <b>Score – 0</b>
<b>Total score: 6</b> <b>Overall significance of impact: Slight</b>			
<b>Bryn y Gors-goch (1110)</b>	<b>Low</b> Key elements is the afforested area; medieval and post-medieval seasonal and permanent occupation <b>Score - 3</b>	<b>Very Low</b> Slight visual impact; views largely screened <b>Score - 1</b>	<b>Very Low</b> Area remains virtually unchanged <b>Score – 0</b>
<b>Total score: 4</b> <b>Overall significance of impact: Slight</b>			
<b>Brenig Reservoir (1112)</b>	<b>Medium</b> Key elements are the reservoir itself and its associated features	<b>Low</b> Visual impact only. Moderate level for an impact over much of the area	<b>Low</b> Development impact on key elements is low on the overall value of the registered historic landscape. Only reduction is through

	Score - 5	Score - 2	visual impact. Score - 2
<b>Total score: 9</b> <b>Overall significance of impact: Slight</b>			
<b>Maen-llwyd (1113)</b>	<b>High</b> Key elements from the prehistoric funerary landscape, through medieval pastoral features to later farmsteads  <b>Score - 7</b>	<b>Low</b> Visual impact only. Moderate level for an impact over some of the area  <b>Score - 2</b>	<b>Low</b> Development impact on key elements is low in the overall value on the registered historic landscape. Only reduction is through intermittent visual impact. <b>Score - 2</b>
<b>Total score: 11</b> <b>Overall significance of impact: Moderate</b>			
<b>Tan-y-graig (1108)</b>	<b>Medium</b> Key element is the post-medieval farming landscape  <b>Score - 4</b>	<b>Low</b> Visual impact only. Moderate level for an impact over some of the area  <b>Score - 2</b>	<b>Low</b> Development impact on key elements is low on the overall value of the registered historic landscape. Only reduction is through visual impact. <b>Score - 2</b>
<b>Total score: 6</b> <b>Overall significance of impact: Slight</b>			

1.8.5 Taking into account the above assessments it is considered that cumulatively, across the registered landscape of Mynydd Hiraethog, the reduction in the value as a result of the construction of the Nant Bach Wind Farm will be low.

1.8.6 The impacts are entirely visual in their nature, reflecting the views of the proposed development from within the various HLCAs. Of the six areas considered here, the visual impact on two of them will be negligible, because of their nature and surrounding screening, while the impact on the others will be low or in two cases on the lower side of moderate. There is no reason to believe that the other HLCAs that go to make up this registered Historic Landscape will be affected to any greater degree.

1.8.7 In summary, then, this report suggests that the proposed wind farm at Nant Bach will have a low effect or impact upon the registered Historic Landscape. It will visually affect some areas more than others but the effect will in all cases be limited, and the consequences are not

considered to be significant.

## 1.9 Benefits and Advantages of the Proposed Development

1.9.1 No benefits or advantages to the region's historic landscapes or to their individual components have been identified in the proposed development.

## 1.10 ASIDOHL Concluding Statement

1.10.1 The proposed Nant Bach Wind Farm does not lie in an area that appears in the Register of Landscapes of Special Historic Interest in Wales, but there are four such areas between 5km and 15km of it, and a fifth about 20km away.

1.10.2 Of the four, one – Bala and Bala Lakesides – is very low-lying and the proposed development will be effectively masked by



natural landforms from any viewpoint within it. Two others – The Berwyn and the Vale of Clwyd – are sufficiently distant from the proposed development for the visual effect to be very slight, and in the case of the former there will be some additional screening by the Mwdwl-eithin ridge. The closest registered Historic Landscape is Mynydd Hiraethog which in places is no more than 5km to the north and north-west of the development area.

1.10.3 The Mynydd Hiraethog Historic Landscape consists of fifteen historic landscape character areas, and six of those, generally the ones closest to the proposed development area, have been assessed in this ASIDOHL.

1.10.4 None of these six Historic Landscape Character Areas is subject to any direct or indirect physical impacts, but the size and form of the proposed turbines does mean that the character areas will be subject to visual impacts. These impacts will arise from the long-range appearance of the development as viewed from within the various character areas, and the fact that these areas have long and varied histories associated with, and fashioned by, human activity, a fact that is reflected in the surviving archaeological record. Of the six, the overall significance of the impact is judged to be moderate in two cases, and slight in the remaining four. On this basis the significance of the impact on the registered Historic Landscape as a whole is considered to be slight.

1.10.5 No perceptible benefits have been identified, either to the historic landscape as whole or to historic elements within it that might accrue from the proposed development.