

THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

*Nant Bach Windfarm,
nr Cerrigydrudion, Conwy*

ARCHAEOLOGICAL ASSESSEMENT

CPAT Report No 722.1

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Report for Dulas Ltd

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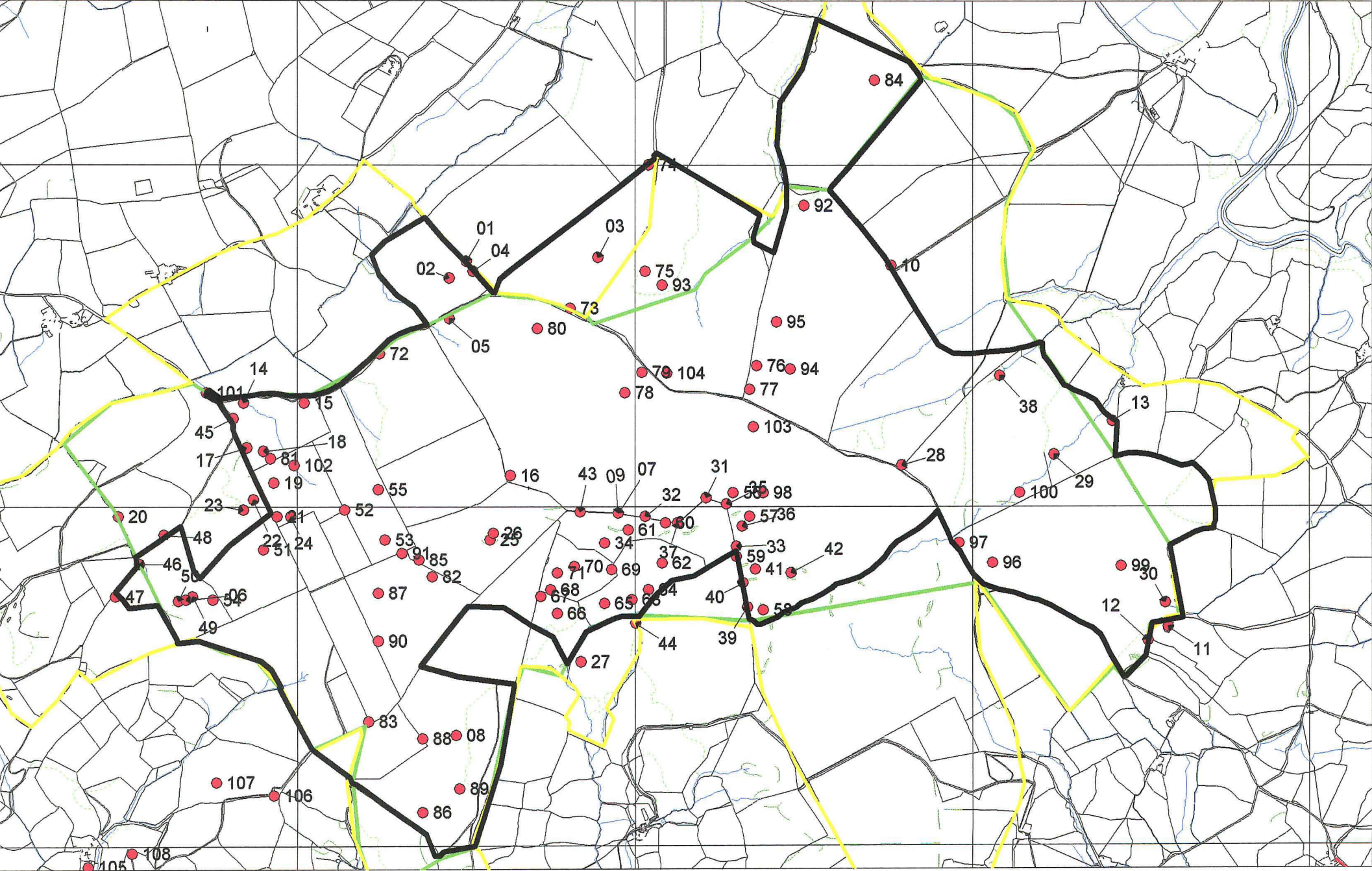
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1 ARCHAEOLOGICAL ASSESSMENT

1.1 Introduction

1.1.1 The Field Services section of the Clwyd-Powys Archaeological Trust (henceforward CPAT) was approached by Dulas Ltd in July 2004 to tender for an archaeological assessment of the Nant Bach Wind Farm proposal site (formerly known as the Mwdwl-eithin Wind Farm) within Conwy County Borough, that was to include a desk-top study and field survey, as outlined in an accompanying 'Terms of Reference'. These Terms also signalled the necessity of examining the visual impact of the proposed development on the nearby historic landscape of Mynydd Hiraethog.

1.1.2 CPAT was formally commissioned in early April 2005 to undertake the work, which was to include an Assessment of the Significance of the Impact of Development on a Historic Landscape Area (or ASIDOHL). The latter is considered in Section [] of this Environmental Statement.

1.1.3 There is a requirement under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations of 1999 to carry out Environmental Impact Assessments for most new wind farms in Wales, leading to the submission of an Environmental Statement to the local planning authority in support of the planning application for that proposal. The study that follows is intended to form the archaeological and historic landscape component of the Environmental Statement for the proposed wind farm at Nant Bach.

1.1.4 In the case of the proposed development at Nant Bach, no archaeological brief to guide the work had been prepared by the regional archaeological curator, but the processes and procedures for such assessments are now well established, and these have been followed for the current study.

1.1.5 For the purposes of the archaeological study a 'development area', incorporating the proposed locations of thirteen (13) turbines was defined by Dulas Ltd and this is shown on Figure 2, Volume 3. It extended over an area of

just over 3km² and included two access roads on to the site.

1.1.6 The desk-based element of the work was completed in May 2005 and the fieldwork in June, with further site visits in July. The draft report was also prepared during July and August.

1.2 National, Regional and Local Planning Policies

1.2.1 The archaeological resource is a material consideration in the determination of planning applications. It is explicitly stated in Planning Policy Wales (2002) that "*It is important that the historic environment – encompassing archaeology and ancient monuments, listed buildings, conservation areas and historic parks, gardens and landscapes – is protected*" (para 6.1.1). More specifically it states that "*the desirability of preserving an ancient monument and its setting is a material consideration in determining a planning application, whether that monument is scheduled or unscheduled. Where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical preservation in situ. In cases involving lesser archaeological remains, local planning authorities will need to weigh the relative importance of archaeology against other factors, including the need for the proposed development*" (para 6.5.1.).

1.2.2 Colwyn Borough Local Plan states in Policy CB12 that "*Development proposals on or in proximity to scheduled ancient monuments will be refused in cases where the development would be detrimental to the monuments or to their settings*" (1993, p.99).

1.2.3 Policy CB13 states that "*Development proposals on or in proximity to unscheduled archaeological sites will only be permitted where their effect on the sites or their setting is considered to be minimal*" (1993, p.99).

1.2.4 Finally, Policy CB14 states that *“Planning permissions for sites associated with archaeological remains will require that development takes place in a specific manner and/or that adequate time and facilities are given for the excavation and recording of the remains in advance of and/or during development”* (1993, p.99).

1.3 Geographical Location and Associated Aspects

1.3.1 The site of the proposed Nant Bach Wind Farm occupies part of a ridge of high ground, lying four (4) kilometres to the east-south-east of Cerrigydrudion and centred at SH98954698, the summit of the hill being known at the present day as Mwdwl-eithin. On the south side, the area curves around the head of the valley containing Nant y Blodau, a tributary of Afon Ceirw, while on the north side, the slopes fall more gently towards Afon Alwen and its tributary, Nant yr Odyn. The highest point in the area is the summit of Mwdwl-eithin, at 470m OD, and the vast majority of the land lies above 350m OD. Only at the extreme northern end of the area does the ground descend further, to 280m OD, alongside the small stream of Nant Bach which gives its name to the proposed development.

1.3.2 The proposed wind turbines are set between 2.5 km and 4 km of Cerrigydrudion village and at heights generally between 380m and 400m OD. Michael. Consistency in kilometres/km see above 1.3.1

1.3.3 Much of this block of upland has seen considerable agricultural improvement during the 20th century, and now appears as well-grassed upland pasture. The improvement process has included the clearance of surface stone and the reduction of some of the natural irregularities in the topography. Undulating ground levels and terraces of natural origin are still visible, however, and occasionally rock outcrops are visible, suggesting that the pasture often covers only a thin layer of soil. A number of the tributaries of the Ceirw and Alwen rise in the area, and around them the land is often more poorly drained, giving rise to boggy ground and rush infestation. Only one block of ground, occupying the upper northern slopes of Mwdwl-eithin, has survived as unimproved heather

moorland and even this is enclosed by fences.

1.3.4 The underlying rocks of the area are generally siltstones and mudstones belonging to the Ashgill and Caradoc Series of Ordovician rocks (source: BGS Geological Map of Wales). The soils derived from this underlying geology are largely well-drained, fine loamy or silty soils of the Manod Soil Association, although the higher part of the proposal area is also occupied by loamy upland soils with a wet peaty surface horizon, belonging to the Hafren Soil Association (source: Soil Survey of England and Wales map and legend; Rudeforth *et al* 1984, 105; 183).

1.4 Methodology

1.4.1 The aims of the assessment of the Nant Bach wind farm area were:

- a) to identify and record the archaeology within the development area defined by Dulas Ltd, and also identify any larger areas of archaeological sensitivity;
- b) to evaluate the importance of what had been identified (both as a cultural landscape and as the individual elements which make up that landscape);
- c) to produce specific recommendations about the siting of turbines and other elements of the wind farm infrastructure where these might have an impact on archaeological sites or areas of sensitivity, in order to inform, where appropriate, the final layout proposal;
- d) to consider the essential setting of any archaeology that was located, depending on its perceived significance; and
- e) to conduct an ASIDOHL to determine the impact of the proposed development on the nearby, registered historic landscape of Mynydd Hiraethog (see Section [] of this ES).

1.4.2 The assessment comprised an initial desk-top study consisting of the consultation of maps, computer records, written records and reference works, contained within a number of archives and repositories: the regional Historic Environmental Record (HER) held by the Clwyd-Powys Archaeological Trust in

Welshpool; the County Archives Service for Denbighshire in Ruthin; the National Library of Wales in Aberystwyth; and the National Monuments Record, a department of the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), also in Aberystwyth. In addition, the RCAHMW provided access to vertical aerial photography held by themselves and by the Central Register of Air Photography for Wales, a section of the Welsh Assembly in Cardiff. Lists supplied by Cadw: Welsh Historic Monuments were consulted for information relating to scheduled ancient monuments, one of which was located within the development area.

1.4.3 The second element of the assessment was a field (or walkover) survey. This allowed both a review of those sites and features already known or believed to exist, and also for a record to be prepared of any previously unidentified sites or features encountered during the walkover survey. Special emphasis was placed on those areas where turbines and other infrastructure elements were proposed. It was not feasible to examine, in the field, sites of archaeological and historic landscape interest which lay beyond the boundaries of the development area. Any records of these which appear in this report are derived from information gleaned during the initial desk-top study.

1.4.4 A visual search was also made for areas within the development area that might contain surface or sub-surface deposits with palaeoenvironmental potential, *i.e.* tracts of ground where peat deposits may contain microscopic remains such as pollen which offer a guide to the nature of the landscape and its vegetation in past centuries. It is evident that some soils with a peaty surface do exist on the higher ground, as well as boggy areas colonised by rushes and coarse grass where streams rise, and there are also further boggy areas to both the west and more particularly the east of Mwdwl-eithin itself, though these are not likely to be disturbed by the wind farm proposal. The level of land improvement which has taken place on and around Mwdwl-eithin means that there is only rather limited palaeoenvironmental potential elsewhere in the proposed development area.

1.4.5 The survey was carried out on foot and

consisted of an examination of the area in a systematic manner. Wherever possible, regular transects were walked, and the field pattern was such that the ground could be covered in this way in as an efficient a manner as possible. The sites of archaeological and historic landscape interest which were discovered during the survey were located with acceptable accuracy by establishing the relative positions of the sites to mapped boundaries and by the use of hand-held Global Positioning System (GPS) equipment.

1.4.6 All of the sites recorded during the desk-top and field survey exercises were entered into a Foxpro database and, where appropriate, mapped in relation to the proposal area using the Mapinfo software package. On the accompanying figure(s) sites and features of archaeological and historic interest are distinguished by a single dot which gives no guide to the overall size of the site that it denotes, while significant linear features or larger areas of activity are appropriately represented according to their nature.

1.4.7 Only those archaeological sites which are within, or in a few instances very near to, the development area have been shown on the accompanying plan. An extract of the information within the database is included in this report in sub-Section [1.7.3]. These are specifically sites within the development area, but a few of those which lie around the proposal are also included, particularly where they might be useful in providing some level of context to other known sites.

1.4.8 The archaeological sites which have been identified during the assessment have been listed using a simple numbering system, from 1 to 104, to facilitate their depiction on the site plan. A sequence of primary record numbers (PRNs) has also been allocated to the sites, in order that they can be incorporated into the regional Historic Environment Record at an appropriate time in the future: a concordance of the two sets of numbers is given in Appendix []..

1.4.9 The nature of the ASIDOHL process and its implementation are considered separately in Section [] of this Environmental Statement.

1.5 Archaeological and Historical Background

1.5.1 This sub-Section provides a brief summary of the archaeology and history of the development area and its surrounds, to enable the findings of the assessment to be placed in a wider context. PRNs are given for sites where further information relating to them is held in the regional HER.

1.5.2 Prehistoric Era (10,000BC – AD 43)

1.5.3 Remarkably, for an upland area of north Wales such as this, little can be said about prehistoric settlement, burial and ritual. There is the one burial cairn (site no 7) within the development area which is assumed to be of Bronze Age date, although this attribution would be confirmed only in a future excavation; and there is also a stone setting (site no 8) which is, according to tradition, a portion of stone circle, although the evidence is not particularly convincing. If genuine it is likely to have a late Neolithic or Bronze Age origin.

1.5.4 The recognition of what may be a burnt mound does, however, provide a little further information about the prehistoric era, for these are usually interpreted as prehistoric cooking places, the burnt stones being a by-product of the cooking process. Such cooking places do not in themselves mean that prehistoric man settled permanently on the hill, but rather that itinerant groups visited the hill, perhaps for hunting purposes. Permanent settlement might probably have been at lower levels, just as it was in the later prehistoric era when the hillfort of Caer Caradog was constructed on the periphery of the lower hill of Y Drum, a kilometre or so to the north-west of the development area. However, the absence of visible traces of settlement must not be taken as incontrovertible evidence that prehistoric communities avoided the ridge for settlement purposes, for ground improvement may have removed the surface traces. The scheduled sites of Tyddyn Tudur 2.5km to the north and perhaps at Bryn Teg, 2km to the north-west, indicate the presence of settlements protected by banks and ditches, but others may not have been surrounded by earthworks in this way. Then, the traces of such activity may only be revealed in the form of debris scatters, particularly flints, during ground disturbance

works

1.5.5 Roman Period (AD 43 – 410)

1.5.6 Virtually nothing of Roman date is known in the immediate area. The only exception may be the proposed Roman road (site no 45) that ran from Rhyn Park near Oswestry to Caer Llugwy in Gwynedd (Waddelove 1999, 37). It supposedly followed the northern side of the valley of Afon Ceirw which itself runs round the base of the Mwdwl Eithin massif, before running tangentially up the hillside to cut across the south-western quadrant of the development area. It must be stressed, however, that the Roman origin of this line with its intermittent earthwork components has yet to be confirmed by other road specialists.

1.5.7 Medieval Period (410 - 1500)

1.5.8 There are few known remains of medieval settlement in the immediate vicinity of the study area. St Mary Magdalene church in Cerrigydrudion is certainly a medieval foundation, and might be earlier. A claim that it was founded by Evan ap Llewelyn in AD 440 should be treated with circumspection, but its earlier name of Llanfair Faellen (Thomas 1911, 139) could nevertheless imply an earlier medieval beginning. Much the same is true of St Michael's church at Llanfihangel Glyn Myfyr, a kilometre or so to the north. Whether settlement developed around these churches in the Middle Ages is impossible to determine, but there must be a reasonable likelihood of it.

1.5.9 Furthermore, there must also have been isolated farms in the area during this period. These would probably have been below the ridge in the valleys where later farms still function, rather than on the hilltop itself, but again only speculation is possible. More likely, however, is that the Mwdwl-eithin ridge was used for seasonal grazing with stock being taken up on to the hill from the farmsteads down in the valleys for the summer months. In this case temporarily occupied dwellings known as *hafotai* might have been established on the hill although it has not proved possible to identify any remains. Modern farms retaining the term 'hafod' in their names – Hafotty Llysan, Hafotty-gelynen and Hafod – probably originated as temporary dwellings before later

becoming permanently occupied.

1.5.10 Folklore

1.5.11 There are folkloric traditions that associate the burial of Merlin (of Arthurian legend) in what would be classed the early medieval or early Christian era, with the Mwdwl-eithin ridge and more particularly with Cader Dinmael, the name now given to the south-eastern crest of the ridge which falls just outside the development area. However, earlier published Ordnance Survey maps depict Cader Dinmael immediately to the west of Mwdwl-eithin. Quite what feature the Ordnance Survey applied the name to is unclear, while the Ordnance Surveyors' survey maps which can be broadly attributed to the first quarter of the 19th century, appear to show that the whole hill was known as Cader Dinmael and this in turn might be taken to indicate that the name Mwdwl-eithin as applied to this hill is of fairly recent origin.

1.5.12 Any consideration of Merlin should be seen in the context of the ever-growing literature on Arthurian and related topics. How much weight is attached to what has been written on such topics in the recent past is a matter for personal preference and belief. Even to summarise what has been written would take a chapter of this volume. We may, however, quote Geoffrey Ashe who wrote at the beginning of the modern era of enthusiasm for such matters: *"Although [Merlin] was invented by Geoffrey [of Monmouth in the 12th century], the invention was not quite devoid of factual basis. There was a northern British bard named Myrddin, whose name Geoffrey used... Myrddin flourished around the year 573, when he was involved in a battle near Carlisle. If he met Arthur at all, he can only have done so as a boy in the commander's advanced years. Even apart from magic, his legendary role is impossible"* (Ashe 1971, 55)

1.5.13 Claims that there were standing stones and the like on Mwdwl Eithin which became associated with the legend can be summarised as follows:

- Griffith Hiraethog, a local bard, in the 16th century wrote of a megalith called the Bard's Stone associated with a stone ring or ring cairn forming a small round grave. He added that Merlin's grave was

located within the township of 'Llysan y Lleian'.

- In the 1690s, a local correspondent of Edward Lhuyd, one of the leading antiquaries of his day, sketched two sets of four upright stones on Mwdwl Eithin, and claimed that others might have been removed. It has since been suggested that these resembled chambers of a prehistoric long cairn. Lhuyd may have transformed this information into 'five or six stones forming a surrounding enclosure'.
- The Royal Commission on the Ancient and Historical Monuments of Wales in the early 20th century considered, on the basis of Griffith Hiraethog's statement, that 'a famous menhir or standing stone called the Bard Stone' stood close to Hafotty Llysan, lower down a valley on the east side of the development area.

1.5.14 From these references it is not clear whether either the visible cairn on the top of Mwdwl-eithin (site no 7) or the unproven stone circle (site no 8) is believed to be Merlin's Grave, and if so whether this is anything more than a convenient geographical association.

1.5.15 Post-medieval Period (1500 - the Present)

1.5.16 Only in the post-medieval centuries is it possible to identify some of the activity that occurred on the ridge. From the farms in the valleys such as Blodnant and Ty-mawr, enclosures were taken in from the open hill, probably in the post-medieval period but perhaps before. None of these fall within the development area, but in some places they are very close. The access track coming in from the north-west does, however, pass through this type of landscape in the vicinity of Ffridd-isaf, as does the south-western approach past Ty-gwyn. Some though not necessarily all of these enclosures were bounded by stone-revetted banks, distinguishable from the later stone walls.

1.5.17 New cottages and dwellings may also have been established on the edge of the open hill in the post-medieval centuries, without necessarily the permission of the landowner. Such encroachments as they were called may be

the origin of such places as Bryn-fynnon and Castell beyond the southern edge of the development area, the latter a fairly common name for an encroachment dwelling.

1.5.18 At the time of the Tithe map, almost all of the development area was still open hill, and probably subject to common rights, with possibly the only enclosed part being the protruding tract of land beside Nant Bach on the north-east side which was part of the Bodtegir Estate. The whole hill was seemingly tithed as a single unit. This is confirmed by the Bodtegir atlas of c.1813 which also shows the Nant Bach enclosure as the most distant one on the estate. The track that will be upgraded coming in from the north-west was one of the original approaches from the lower lands.

1.5.19 However, by 1875 when the hill was fully surveyed by the Ordnance Survey, much of Mwdwl-eithin had been enclosed as a result of the enclosure award and allotments of 1865. Only the top remained as open ground. Regular enclosures had been carved out of the west side above the cottage called Ty'n-y-gors, and other areas to the north and south had been divided up into large enclosures, although these appear to have remained largely unimproved.

1.5.20 Boundaries were marked by natural stones and, in places, piles of stones, and the Ordnance Survey surveyors also recorded hillocks occasionally, though these were presumably natural.

1.5.21 Sheepfolds lay around the edge of the high ground suggesting that in the 19th century and probably in earlier centuries, stock grazing was the most significant activity on Mwdwl-eithin as it was on many other Welsh uplands.

1.5.22 One of the main features of the landscape on Mwdwl-eithin is the large number of stone quarries which can be found throughout the development area. It seems most probable that these were excavated to provide stone for the walls which characterise much of the locality and apparently represent the enclosure of the common referred to above.

1.5.23 Since enclosure, the hill of Mwdwl-eithin has undergone fairly widespread agricultural improvement. Some tracts of heather moorland survive, but these are

surrounded by pasture fields. Field surfaces have also been smoothed out, and the dumps of stone removed as part of this process during improvement are often found in quarry hollows. Much of this stone clearance is likely to date to the second half of the 20th century, but there are a small number of partially grass-covered clearance cairns which may date back to earlier phases of clearance.

1.6 The Historic Landscape

1.6.1 The landscape of the block of upland centred on Mwdwl-eithin and spreading down its slopes is essentially one that has been created and modified during the last two to three centuries. The regular appearance of the enclosures and fields testify to the changes that have occurred as a result of agrarian practice, first the stone walls, and more recently the wire and post fences. These changes have been sufficiently fundamental to remove many traces of earlier landscapes. Certainly, whatever the configuration of the much earlier, prehistoric landscape, all but fragmentary reminders of it have disappeared, isolated spots in a much altered landscape.

1.6.2 This area has no historic landscape designation, but lies immediately to the south-east of the Denbigh Moors Landscape of Special Historic Interest, whose southern border is within a few miles of the proposal area (Cadw 2001, 8). It is likely therefore that elements of the wind farm may be visible from the Denbigh Moors landscape area. An assessment of potential effects on the Mynydd Hiraethog Landscape of Special Historic Interest is presented in Section [] of this ES.

1.7 Archaeological Sites and their Significance

1.7.1 This sub-Section relates to the sites identified within the proposed development area. The type, period and location of each site is given, together with a brief description of its nature and appearance. Each site of archaeological interest within the development area, identified during the desktop and field surveys, has been provisionally classified according to its perceived significance as it

appears to us at the present time. The categories, with the exception of Category E, are based on those given in the Department of Environment, Transport and Regions' Design Manual for Roads and Bridges Volume 11 Section 3 Part 2 (1993), which provides a standard for assessments of this type. Category E (the equivalent of category U in some comparable classifications) has been introduced to cover archaeological sites and monuments whose existence went unacknowledged in the Design Manual. The categories are defined below.

- Category A sites are those believed by CPAT to be of primary significance, either potentially of national importance or already designated by CADW: Welsh Historic Monuments as being of scheduled ancient monument status. It is presumed that sites in this category will be preserved and protected in situ. One site in this category has been identified in the proposal area.
- Category B sites are sites of regional importance. These sites are not of sufficient importance to justify scheduling, but are nevertheless important in aiding the understanding and interpretation of the archaeology of the region. Preservation in situ is the preferred option for such sites, but if loss or damage is unavoidable, appropriate detailed recording must be undertaken. No sites in this category have been identified in the proposal area.
- Category C sites are sites of local importance. These sites are of lesser

importance, but are nevertheless useful in aiding the understanding and interpretation of the archaeology of the local area. They are not normally of sufficient importance to justify preservation if threatened, but they do merit adequate recording in advance of loss or damage. Eleven sites in this category have been identified in the proposal area.

- Category D sites are either sites of minor importance or those which are so badly damaged that too little now remains to justify their inclusion in a higher grade. Rapid recording is usually considered sufficient in the event that such sites are threatened by development. Seventy-six sites in this category have been identified in the proposal area.
- Category E sites are sites which have been identified, but whose importance cannot be assessed from fieldwork and desk-top study alone. An archaeological evaluation would generally be required to categorise such a site more accurately if the proposal was likely to affect it in any way. Three sites in this category have been identified in the proposal area.

1.7.2 A total of 104 sites have been recorded in the project database, but nine of these, which are adjacent to the proposal area, have not been visited and therefore are not designated within to the above categories. Details of all sites, including these nine, are provided on the following pages in Site number order.

1.7.3 Gazetteer of Sites

Site No 01	Name Nant yr Odyn quarry I	NGR SH98504772
Type Quarry	Period 19th Century	Status D

Quarry shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. No visible trace of a quarry. Its position is crossed by a modern farm road and the site has probably been filled in.

Site No 02	Name Nant yr Odyn quarry II	NGR SH98454767
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Type Quarry **Period** 19th Century **Status D** Quarry shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. No trace of the quarry was found in an improved field. Probably filled in.

Site No 03 **Name** Mwdwl-eithin quarry I **NGR** SH98894773

Type Quarry **Period** 19th Century **Status D**

Oval quarry, on N-facing slope, shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. Largely filled-in by boulders cleared from the remainder of the field during improvement, also farm waste material. Measures 18m N/S by 12m and 1.0m deep.

Site No 04 **Name** Mwdwl-eithin quarry II **NGR** SH98524769

Type Quarry **Period** 19th Century **Status D**

Quarry shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. No visible trace of the quarry survives, its location is crossed by a modern farm track and it seems likely that it has been filled in.

Site No 05 **Name** Mwdwl-eithin quarry III **NGR** SH98454755

Type Quarry **Period** 19th Century **Status D**

Quarry shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. Cut into NW-facing scarp, with spoil on downslope side. Measures 15m NW/SE by 6m and 2.5m deep.

Site No 06 **Name** Hafod quarry I **NGR** SH97674672

Type Quarry **Period** 19th Century **Status D**

Quarry shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. Reasonably large oval scoop in a small hillock. Rock scarp visible on W side. Spoil heaps mostly on N and E. Measures 40m E/W by 30m and 2m deep.

Site No 07 **Name** Mwdwl-eithin cairn **NGR** SH98954698

Type Round barrow (cairn) **Period** Bronze Age **Status A**

Circular cairn of partially turf-covered stones. Now appears as a rough platform with hints of a bank at its S and W edges. However, it seems more likely that the upper part of the cairn has been truncated, causing its present appearance. Perhaps stone was taken for wall building in the 19th century. Triangulation pillar (Sit No 09) at the centre. Measures 14.6m in diameter by 1.2m high. The site is traversed from east to west by a post and wire fence.

Site No 08 **Name** Blodnant stone circle **NGR** SH98474633

Type Stone circle ? **Period** Unknown **Status E**

An early record refers to six stones that appear to be glacial erratics fortuitously set in an arc of a circle. There was no sign of another cairn or barrow so it was concluded that it was not a circle of artificial origin. The five, six or even seven visible stones might form part of a circle, running from the NE, through the N and W, to the WSW side of a hypothetical centre. The location on a

locally rounded, but otherwise flat summit is not particularly promising, but it would not be wise to reject completely the site's authenticity. A detailed, measured survey of the stone positions might help to determine whether there is actually any regularity to their layout. There are no stones to the E and only a natural outcrop near the centre. It is likely that, prior to clearance, there was plenty of naturally occurring surface stone in the area and the arrangement of stones might therefore be fortuitous. Overall diameter is perhaps 35m, stones up to 0.6m high.

Site No 09 **Name** Mwdwl-eithin Triangulation Station **NGR** SH98954698

Type Triangulation pillar **Period** 19th Century **Status** C

Triangulation station on top of Mwdwl Eithin, shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. Consists of a square plan concrete triangulation pillar set in the centre of the scheduled cairn (Site No 07). Ordnance Survey BM No S8554. Surrounded by stone cleared from field. Measures 0.6m by 0.6m and 1.1m high.

Site No 10 **Name** Mwdwl-eithin sheepfold **NGR** SH9975947707

Type Sheep fold **Period** Post Medieval **Status** D

Sheepfold shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875, approximately 420m south-west of Bodtegir. No surviving trace of this site.

Site No 11 **Name** Hafotty'r-bwlch-chwa **NGR** SJ00584664

Type Building **Period** Post Medieval ? **Status** Not recorded

Farm or cottage shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. A distant view suggests that this may belong to the long-house tradition, but is very ruinous. The site lies outside the boundary of the development area.

Site No 12 **Name** Hafotty'r Gader **NGR** SJ00524660

Type Building **Period** Post Medieval **Status** E

Farm or cottage shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. The only possible surviving feature of this site is an angled length of bank, measuring 20m N/S by 10m and 0.3m high, which adjoins the modern fence. Remainder of site possibly lost to land improvement.

Site No 13 **Name** Nant-y-geuryd spring **NGR** SJ0041547248

Type Spring **Period** Unknown **Status** D

Spring marked on 1963 6 inch and 2001 digital OS maps. This is a natural spring with a rushy gully leading NW to the nearby stream. Three flat slabs are laid across its upper part, presumably to aid access over the section of wet ground, although there seems to be a channel beneath them. Slabs measure 2m NW/SE by 1m overall.

Site No 14 **Name** Mwdwl-eithin enclosure **NGR** SH97844730

Type Drainage feature **Period** 19th Century **Status** D

A small enclosure of uncertain function, but seemingly straddling a stream, shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. No trace of the feature survives. A bank runs along the SW side of the stream for c.15m but this looks to be material removed in clearing out the stream. Drains can be seen emptying into the stream and the land around has been improved.

Site No 15	Name Mwdwl-eithin quarry V	NGR SH98024730
Type Quarry	Period 19th Century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Site consists of a series of adjoining quarry scoops around the N and NW sides of a low hillock. Stone used in nearby walls.		
Site No 16	Name Mwdwl-eithin quarry VI	NGR SH98634709
Type Quarry	Period 19th Century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Approximately circular, and adjoining a field boundary. The boundary is fenced, but a section of wall runs N and SE from this position, both ends petering out. The quarry was probably dug for walling stone, the wall being started but never completed. Measures 10m in diameter by 3m deep.		
Site No 17	Name Mwdwl-eithin quarry VII	NGR SH97854717
Type Quarry	Period 19th Century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Linear arrangement following the crest of a scarp slope. Stone used in nearby boundaries. Measures 30m NE/SW by 10m and 2m deep.		
Site No 18	Name Mwdwl-eithin quarry VIII	NGR SH97904716
Type Quarry	Period 19th Century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Consists of an oval scoop cutting an earlier trackway (Site 81). Measures 17m E/W by 6m and 1.2m deep.		
Site No 19	Name Mwdwl-eithin quarry IX	NGR SH97934707
Type Quarry	Period 19 th century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. This is a linear cutting into the side of an outcrop, and is now filled with agricultural rubbish.		
Site No 20	Name Ty'n-y-gors	NGR SH97474697
Type Building	Period Unknown	Status D
Cottage shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. This site lies outside the boundary of the development.		
Site No 21	Name Mwdwl-eithin quarry X	NGR SH97944697
Type Quarry	Period 19 th century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. On the ground, a small linear quarry cut into an outcrop. Immediately to the NE the ground levels out to create a platform but this is probably a natural phenomenon.		

Site No 22	Name Mwdwl-eithin quarry XI	NGR SH97874702
Type Quarry	Period Unknown	Status Not recorded
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. This site lies outside the boundary of the development.		
Site No 23	Name Mwdwl-eithin quarry XII	NGR SH97844699
Type Quarry	Period Unknown	Status Not recorded
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. This site lies outside the boundary of the development.		
Site No 24	Name Mwdwl-eithin quarry XIII	NGR SH97964697
Type Quarry	Period Unknown	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. A medium-sized quarry, partially filled with agricultural debris.		
Site No 25	Name Mwdwl-eithin quarry XIV	NGR SH98574690
Type Quarry	Period Unknown	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. The site was not found at this location. Possibly an extension of Site No 26.		
Site No 26	Name Mwdwl-eithin quarry XV	NGR SH98584692
Type Quarry	Period 19th Century	Status D
Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Consists of a quarried scarp running ENE/WSW for 50m on S side of a natural hillock. Averages 7m wide and up to 2m deep.		
Site No 27	Name Mwdwl-eithin stone I	NGR SH98844654
Type Stone	Period Unknown	Status Not recorded
Stone shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Significance uncertain. This site lies outside the boundary of the development.		
Site No 28	Name Mwdwl-eithin stone II	NGR SH99794712
Type Stone	Period 19th Century ?	Status D
Boundary stone shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. No visible trace of the stone survives at this location.		
Site No 29	Name Nant-y-geuryd, well	NGR SJ0024247151
Type Well	Period 20th Century	Status D

Well marked on 1963 6 inch OS map. Square in shape with concrete surrounds and capping. Measures 2m by 2m and fenced off. Probably a local domestic water supply.

Site No 30 **Name** Moel-chwa well **NGR** SJ0057246711

Type Spring **Period** Unknown **Status** D

Well shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. No physical remains were apparent at the given location, which is on the edge of a wet area.

Site No 31 **Name** Mwdwl-eithin, large stone **NGR** SH9921047025

Type Boundary stone ? **Period** Post Medieval ? **Status** D Boundary stone, perhaps a large natural boulder, shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. A 'Large Stone' also marked on 1963 6 inch OS map in line of field boundary across the ridge of Mwdwl-eithin. Possibly a boundary stone or standing stone. No trace of the stone was seen at either of the possible locations.

Site No 32 **Name** Mwdwl-eithin stone VI **NGR** SH99034697

Type Stone **Period** Unknown **Status** D

Boundary feature, described as pile of stones, shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. No trace of any stones, bar some recent clearance, survive in the area.

Site No 33 **Name** Mwdwl-eithin stone VII **NGR** SH99304688

Type Stone **Period** Unknown **Status** D

Boundary feature, described as small white stone, shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. Stone is a small boulder of quartz, 0.3m across. Possibly a fortuitous conjunction with the boundary.

Site No 34 **Name** Mwdwl-eithin quarry XVI **NGR** SH98914689

Type Quarry **Period** Unknown **Status** D

Quarry shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. No evidence of a quarry at this location. Perhaps the reference relates to one of the other quarries in the locality.

Site No 35 **Name** Mwdwl-eithin, stone I **NGR** SH9927147007

Type Boundary stone ? **Period** Post Medieval ? **Status** D

Boundary stone, perhaps a natural boulder, shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. A 'Stone' is marked on 1963 6 inch OS map in line of field boundary across the ridge of Mwdwl-eithin. Possibly a boundary stone or standing stone. No trace of a stone survives at this location.

Site No 36 **Name** Mwdwl-eithin, small white stone **NGR** SH9931846940

Type Boundary stone ? **Period** Post Medieval ? **Status** D

'Small White Stone' marked on 1963 6 inch OS map in line of field boundary across the ridge of Mwdwl-eithin. Possibly a boundary stone or standing stone. There are a series of quartz boulders on the fence line at this point, individually up to 1.0m across.

Site No 37	Name Mwdwl-eithin, white stones	NGR SH9912646950
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Type Rock outcrop	Period Undated	Status D
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Boundary marker, described as white stones, shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. 'White stones' marked on 1963 6 inch OS map in line of field boundary across the ridge of Mwdwl-eithin. The site is a natural rock outcrop containing some quartz. Not artificial but perhaps used to mark boundary. Measures 1.0m across.

Site No 38	Name Nant-y-geuryd, stone	NGR SJ0008047380
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Type Boundary stone ?	Period Post Medieval ?	Status D
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'Stone' to west of Nant-y-geuryd marked on 1963 6 inch OS map. Possibly a boundary stone. No physical remains of the stone at the given location. Some cleared stone in the vicinity.

Site No 39	Name Mwdwl-eithin, little hillock	NGR SH9933446698
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Type Hillock	Period Undated	Status D
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'Little Hillock' marked on 1963 6 inch OS map in line of field boundary across the ridge of Mwdwl-eithin. This is a natural landform on the ridge. Other similar topographical features in the locality.

Site No 40	Name Mwdwl-eithin, hillock I	NGR SH9932046771
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Type Hillock	Period Undated	Status D
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Hillock marked on 1963 6 inch OS map in line of field boundary across the ridge of Mwdwl-eithin. This is a natural landform on the ridge. Other similar topographical features in the locality.

Site No 41	Name Mwdwl-eithin, stone II	NGR SH9935746811
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Type Boundary stone ?	Period Post Medieval ?	Status D
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'Stone' marked on 1963 6 inch OS map just to the east of the field boundary across the ridge of Mwdwl-eithin. Possibly a boundary stone or standing stone. No evidence of the stone was found at the given location. Perhaps subsequently removed or a natural landform.

Site No 42	Name Mwdwl-eithin, stones III	NGR SH9946246801
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Type Boundary stone ?	Period Post Medieval ?	Status D
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'Stone' marked on 1963 6 inch OS map just to the east of the field boundary across the ridge of Mwdwl-eithin. Site not found at this location. Probably a natural landform used as a boundary feature.

Site No 43	Name Mwdwl-eithin, hillock II	NGR SH9883746984
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Type Hillock	Period Undated	Status D
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A 'Hillock' is marked on the 1963 6 inch OS map on the line of field boundary across the ridge of Mwdwl-eithin. This is a landform that was probably used to help define the boundary in question.

Site No 44	Name Mwdwl-eithin spring	NGR SH9900246652
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Type Spring	Period Unknown	Status Not recorded
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Spring marked on 1963 6 inch OS map. This site lies outside the boundary of the development.

Site No 45	Name Rhyn Park/Caer Llugwy road	NGR SH9781047255
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Type Road	Period Roman	Status E
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Predicted line of Roman road, perhaps about 5m wide. The line of a possible Roman road running out of the valley of Afon Ceirw and traversing western slope of Mwdwl Eithin before dropping down to the lane past Ty-mawr and Caer Caradog was described by E. Waddelove (1999, 48). He sees its line adopted by a stone wall across the crest of the ridge, and is also followed by a trackway, and is now a public footpath. There are a variety of curving linear hollows in one field, most of which are almost certainly natural drainage lines. However, there is evidence of a man-made terrace beside one field boundary (SH 98124656), and this gives way further to the south-east to what appears almost to be a low *agger*. Yet no evidence to corroborate the Roman interpretation/dating has been identified, and the integrity of this Roman road needs to be confirmed by other specialists.

Site No 46	Name Tyn-y-gors sheepfold	NGR SH9753246827
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Type Sheepfold	Period 19th Century	Status C
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Sheepfold shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. Slightly curved rectilinear shape adjoining a boundary wall. Two lumps of cinder in the wall which forms the W side of the fold, so evidently no earlier than the 19th century. Entrance at N end, one creep visible at S end. Storage hole in W wall. Measures 11m N/S by 5m and up to 1.4m high.

Site No 47	Name Ty'n-y-gors structure	NGR SH9746146731
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Type Barn ?	Period Post Medieval ?	Status D
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Square structure of unknown function shown on 1st Edition of the Denbighshire 1:2500 Ordnance Survey map surveyed in 1875. The earlier Tithe map suggests that this was a small encroachment, an irregularly triangular field impinging on the waste with a building inside it, perhaps a barn rather than a cottage. No surviving traces of the structure are visible. A short section of c.4m wide bank runs SE, probably representing the old common boundary.

Site No 48	Name Hafod trackway I	NGR SH9760546915
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Type Trackway	Period Post Medieval ?	Status D
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Trackway marked on 1st edition (1880) and 1963 6 inch OS maps. The line of the track is defined by the public footpath running ENE/WSW. Little physical trace of the route bar tyre tracks and gates in the walls at either end of its course in this field. Approximately 2m wide.

Site No 49	Name Hafod trackway II	NGR SH9769046731
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Type Trackway	Period Medieval ?	Status D
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Trackway marked on 1st edition (1880) and 1963 6 inch OS maps. No surviving visible trace of this feature. Presumably lost due to land improvement. May have only been designed for access between fields and so perhaps of the 19th century.

Site No 50	Name Mwdwl-eithin quarry IV	NGR SH9764846717
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Type Quarry	Period 19th Century	Status D
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Quarry shown on 1st Edition of the Denbighshire 1:10560 Ordnance Survey map surveyed in 1875. Represented by a sub-circular scoop near top of small hillock. Material used for stone walls in vicinity so 19th century date likely. Measures 10m in diameter by 1.2m deep.

Site No 51	Name Hafod quarry IV	NGR SH97904687
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Type Quarry	Period 19th Century	Status D
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Series of quarry scoops, up to 3m deep, in a NW-facing scarp slope. Stone used in nearby boundary walls which are probably 19th century enclosures. Overall area 30m NE/SW by 15m.

Site No 52	Name Hafod sheep shelter	NGR SH98144699
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Type Sheep shelter	Period Post Medieval	Status C
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Cross-shaped sheep shelter which has subsequently become the focus of intersecting boundaries. Shelter is of drystone construction while the boundaries are either fences or banks with fences on their crest. The E arm survives as a ruinous wall ending at a post suggesting that a fence once continued in this direction. Only the S arm is in good condition. Each arm is approximately 8m long and up to 1.2m high.

Site No 53	Name Hafod pond	NGR SH98264690
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Type Pond	Period 19th Century ?	Status D
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Sub-circular hollow with a flat base. Probably a spring which has been made into a pond by the addition of a bank at the exit of the small rivulet, but this has eroded and it no longer holds water. Measures approximately 10m in diameter and up to 1.5m deep.

Site No 54	Name Hafod quarry II	NGR SH97754672
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Type Quarry	Period 19th Century	Status D
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Circular quarry scoop in N-facing slope of hillock. Stone used in nearby stone walls. Measures 7m in diameter and 2m deep.

Site No 55	Name Hafod quarry III	NGR SH98244705
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Type Quarry	Period 19th Century	Status D
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Amorphous oval hollow, 8m across and 1m deep. Probably a quarry hollow as some stone is visible in its base, but the stone is not of good quality and perhaps abandoned.

Site No 56	Name Mwdwl-eithin quarry XXII	NGR SH99294704
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Type Quarry	Period 19th Century	Status D
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Series of quarry scoops occupying a NE-facing slope. Spoil on lower sides. Overall area 20m NW/SE by 10m and 1.5m deep.

Site No 57 **Name** Mwdwl-eithin quarry XVII **NGR** SH99344697

Type Quarry **Period** 19th Century **Status** D
 Series of quarry scoops and quarried scarps, centred at the given NGR. Overall area approximately 60m NE/SW by 20m and 1.5m deep.

Site No 58 **Name** Blodnant quarry I **NGR** SH99384669

Type Quarry **Period** 19th Century **Status** D
 Quarry cut into E-facing scarp. Plenty of bare rock visible. Overall area 20m in diameter and 3.5m deep.

Site No 59 **Name** Blodnant boundary stone **NGR** SH99304685

Type Boundary stone **Period** Post Medieval ? **Status** D
 Edge-set slab situated on fence line. Probably a boundary marker, but not previously recorded from OS mapping. Measures 1.1m long by 0.2m and 0.5m high.

Site No 60 **Name** Mwdwl-eithin boundary stone (site) **NGR** SH99094695

Type Boundary stone (site) ? **Period** Post Medieval ? **Status** D
 Small scoop, 1.5m in diameter, with a low arc of stones and spoil on its N side. Stones up to 0.6m long. Possibly the site of a boundary stone which has been removed. Overall dimensions of earthworks 3.0m N/S by 1.5m.

Site No 61 **Name** Mwdwl-eithin hut **NGR** SH98984693

Type Building **Period** Post Medieval **Status** C
 Very ruinous remains of a small square building/hut, located on a shelf of the S-facing slope. Walls visible on W, N, E and S sides, but stone is very shattered. Not far from the top of the ridge so its function is difficult to understand, perhaps a shelter of some kind. Entrance not easily identifiable but perhaps on S side. Measures 4.0m N/S by 4.0m and 0.5m high. Walls 0.5m wide.

Site No 62 **Name** Mwdwl-eithin quarry XVIII **NGR** SH99084683

Type Quarry **Period** 19th Century **Status** D
 Series of quarry scoops and scarps on S-facing slope below ridge crest. Bounded by given NGR, SH 99144685, SH 99054688, and SH 99034685. Workings up to 4m deep.

Site No 63 **Name** Blodnant quarry II **NGR** SH98994672

Type Quarry **Period** 19th Century **Status** D
 Area of quarry scoops bounded by given NGR, SH 99024671, and SH 99014673. Up to 1.5m deep.

			(3m)			
73	Quarry	D	Potential impact from adjacent road improvement (7m)	Minor significance	Permanent	Nothing
79	Quarry	D	Potential impact from adjacent road improvement (18m)	Minor significance	Permanent	Nothing
83	Earthwork dam	D	Potential impact from adjacent sub-station	Minor significance	Permanent	Avoid
97	Quarry	D	Potential impact from adjacent road improvement (12m)	Minor significance	Permanent	Nothing

1.9.6 General Mitigation Strategies

1.9.7 Cultural material of many periods tends to get 'captured' in the topsoil. It is suggested that during the construction phase of the wind farm, and particularly during topsoil stripping and when ground disturbance of any kind occurs, an archaeological watching brief is maintained on the site to identify any material and or features that are uncovered.

1.9.8 Any disturbance to field boundaries should be monitored, and this applies particularly to the stone walls that are a feature of the area. Where these are perceived to be significant, historically or morphologically, the recording of appropriate sections may be necessary.

1.9.9 In addition to the potential physical impacts on sites of archaeological interest, there will also be a visual impact on the scheduled ancient monument within the development area, and the majority of those similarly designated monuments within 5km of it. The next sub-Section examines the potential visual impact on a sample of the sites so designated.

1.9.10 Scheduled Ancient Monuments and their Settings

1.9.11 The impact of the proposed Nant Bach

Wind Farm development on nationally designated archaeological sites and their settings is referred to above ([para 2.1 and 2.2](#)). While no physical impact on any scheduled ancient monument is envisaged, it is clear that there will be a visual impact. And while the monument itself can usually be well-defined, both from its physical remains and from the envelope drawn around it on the map by the statutory authority, there is, however, no statutory definition of setting.

1.9.12 'Setting' might be considered to be no more than the historic feature itself, together with the curtilage or ancillary land associated with it; it might be the ground that surrounds the historic feature such as the field it lies in or the hillslope on which it lies; it might be the whole valley or plateau on which the feature lies; it might even be the whole parish or perhaps even more.

1.9.13 In Wales, Cadw (2003, 20) states, within the ASIDOHL process (for which see Section []) "*setting should not be interpreted too narrowly, and for the purposes of [the] process, impacts on settings will be categorised as 'indirect' impacts*".

1.9.14 'Setting' is generally taken to mean the modern setting of a historic feature, not the original setting, contemporary with the use of the building or monument. That it is not quite as

clear cut as this, however, is suggested by Cadw's statement that *"The [visual] impact might be on 'views to' or 'views from' these elements, and it should be assessed with 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 from those that were important to the original builders or inhabitants of a site"* (Cadw 2003, 21).

1.9.15 Indirect (non-physical) visual impacts are defined as occurring when a development is intervisible with a historic feature. The impact may be seen in terms of both 'views from' and 'views to' the historic feature, and in relevant cases key historic viewpoints looking over specific historic features may need to be assessed. It may, too, be necessary to take account of interruptions to the visual connections between related historic features, and conversely the creation of inappropriate visual connections by the removal of intervening structures, barriers or ground.

1.9.16 Method of Assessment

1.9.17 No detailed guidelines specific to an assessment methodology of the visual impact on historic features have been produced by Cadw or other national agencies, as far as can be established.

1.9.18 The methodology adopted here is based on those used for recently completed statements prepared for similar wind farm developments elsewhere in Wales and England. It also utilises the Guide to Good Practice for assessing landscapes of historic interest produced by Cadw and the Countryside Council for Wales in conjunction with ICOMOS UK (Cadw et al 2003). Their guidelines were developed to promote good practice in the use of the two volumes of the Register of Landscapes of Historic Interest in Wales (Cadw 1998 and Cadw 2001). The guidelines are concerned primarily with historic landscapes rather than specific historic features which represent elements of those landscapes. Nevertheless, some aspects of the ASIDOHL process can be

usefully adopted, and specifically, the section on the assessment of indirect visual effects (2003, 21) offers a useful starting point in the assessment of impacts on historic features that are on, or at some distance from, the development site.

1.9.19 This assessment is based on information provided by the regional Historic Environment Record (HER) which includes data on Scheduled Ancient Monuments that originated with Cadw.

1.9.20 The method of assessment has involved a range of techniques (see Appendix [redacted]). Fieldwork was conducted August 2005. All site work was conducted from public highways and public rights of way, and no views were sought from privately owned land. Computer-generated wireframes were generated by Dulas Ltd on request, to assist the assessment of the visual impact on historic features, and a sample are included in Appendix [redacted] for illustrative purposes.

1.9.21 On the basis of information provided by the HER, it has been established that there is one Scheduled Ancient Monument within the development area, and a further eight SAMs within 5km of the development area. As a sample the impact of the proposed development on the one monument within the development area and three beyond it are considered here.

1.9.22 Assessment of Scheduled Ancient Monuments

Mwdwl-eithin cairn

1.9.23 This Scheduled Ancient Monument (SAM De281) is a circular cairn of partially turf-covered stones, surmounted by a triangulation pillar (see above, site no 7). It is assumed to be of Bronze Age date, by analogy with other excavated, hill-top cairns, but has not itself been excavated. It is prominently sited on the crest of the Mwdwl-eithin ridge, and was undoubtedly designed to be seen from the surrounding lower lands, as well as perhaps being a place from which the surrounding landscape could be observed.

1.9.24 Its setting must be identified as the hilltop on which the cairn sits.

1.9.25 The location of the nearest proposed turbine is about 450m away to the north-north-east, and all elements of the wind farm will be visible from the cairn. On the cairn itself, the directions where there will be no visual impact from the wind farm are to the south and south-east. Anyone observing the cairn from the north, west and east will be faced with turbines in front of the cairn. However, it should be noted that it is the setting of the cairn, rather than the cairn itself, a relatively slight feature, that will be visible from a distance.

1.9.26 The cairn has a very high value in terms of its sensitivity as a result of its scheduled status. The visual impact on this site is assessed as of very high magnitude. The overall magnitude of impact on the cairn and its setting is thus judged to be very high.

Pen-y-Gaer Camp (Caer Caradog)

1.9.27 The defended enclosure known variously as Pen-y-gaer Camp and Caer Caradog is a scheduled ancient monument (SAM De011). It is a prehistoric fortification, somewhat damaged, consisting of an enclosure defended by a bank and ditch. It is presumably of the pre-Roman Iron Age, and part was excavated in 1963/4.

1.9.28 It is located on the western spur of the hill known as Y Drum and obtains good views of much of the surrounding landscape including to the south-east where the boundary of development area is about 1.1km away.

1.9.29 The immediate setting of this Scheduled Ancient Monument is the spur on which it lies together with the surrounding ground, particularly the lower lands to the west where Cerrigydrudion now lies, but also to the east which was the direction from which the enclosure was approached.

1.9.30 There will be uninterrupted views of the proposed turbines from much of the enclosure and from some of the ground that surrounds it (please see Wireframe [], Appendix []), the nearest turbine being about 1.5km from the enclosure itself. However, the ground drops away on the west side of the enclosure, so that the wind farm turbines will not be detectable from beyond the hillfort on this side, and this also means that views of the hillfort and its spur setting from the west, with the wind farm as a

back drop, will only be intermittent, except where those views are very distant.

1.9.31 From some parts of the wind farm itself, the enclosure and its setting will be clearly visible.

1.9.32 Its scheduled status means that the defended enclosure has a very high value in terms of its sensitivity. Because of the openness of the landscape, the visual impact on this site is assessed as of high magnitude, and the overall magnitude of impact on the barrow and its setting is thus judged to be high.

Maesmor Hall Mound

1.9.33 The mound by Maesmor Hall is a Scheduled Ancient Monument (SAM De149). It comprises an earthwork some 35m long which has been considered as a medieval castle motte in the past. However, not everybody is in agreement with this view and at least one commentator has considered it to be largely a natural mound, which was transformed into a garden feature in the post-medieval era. Its curious shape does indeed appear to favour a non-defensive origin.

1.9.34 The setting of this monument is the valley floor of Afon Ceirw, the area that it might have been designed to control, if indeed it does represent a medieval castle site. It is, however, overlooked by the steep hillsides to the north and south.

1.9.35 The boundary of the development area at its closest lies 2km to the north-west and the nearest turbine is about 2.4km away in the same direction. Most of the turbines, however, are screened from the mound by the heights of Cader Dinmael and Mwdwl-eithin, and the Wireframe [], Appendix [] suggests that only two turbines will be visible, and for one of these only the blades. Similar limitations apply to the immediate setting of the monument. Further screening is provided by the deciduous woodland around the earthwork and also in its general vicinity.

1.9.36 The scheduled status of the mound confirms its very high value in terms of visual sensitivity. However, the visual impact is calculated to be of no more than low magnitude, and the overall magnitude of impact on the moat and its setting is judged to be of minor

significance.

Tyddyn Tudur Enclosure

1.9.37 This defended enclosure is scheduled as De253. It is assumed to be of late prehistoric, probably Iron Age, date and consists of a circular earthwork about 50m in diameter and what appears to be a contemporary field system appended to it.

1.9.38 It is located on fairly level ground that is dropping gradually eastwards to the Alwen valley, and this position provides it with generally good views in most directions. The setting of this Scheduled Ancient Monument is this gentle eastern slope which would have provided the agricultural environment in which the enclosure functioned. The boundary of the development area is about 1.9km away, and the nearest proposed turbine about 2.3km, both to the south-east.

1.9.39 Virtually all of the proposed turbines will be visible from the enclosure and the ground that surrounds it (please see Wireframe [], Appendix []). From some parts of the wind farm itself, the position of the enclosure will be visible, although at such a distance not the earthwork itself which is now an insubstantial feature.

1.9.40 Its scheduled status means that the enclosure has a very high value in terms of its sensitivity. Because of the openness of the landscape, the visual impact on this site is assessed as of high magnitude, and the overall magnitude of impact on the enclosure and its setting might be judged to be of high significance. However, the slightness of the earthwork remains make it difficult to appreciate the character of this site and thus its setting, and consequently the overall magnitude of impact might more reasonably be assessed to be of moderate significance.

1.9.41 The impacts on those scheduled ancient monuments that have been assessed range from very high significance to moderate significance. No obvious mitigation can be suggested to limit the impact on such designated features of national importance.

1.10 Conclusions

1.10.1 A detailed assessment of the archaeological resource in the development area around the hill known as Mwdwl-eithin, through a combination of desk-top analysis and field survey, has demonstrated that while there is a significant number of features in the area, most of which had previously not been recorded, many are of little more than local interest.

1.10.2 There is a single scheduled ancient monument (a hill-top cairn) within the development area and several other protected sites within a few kilometres of its boundary. There will be visual impacts on almost all of these monuments, but it is not possible to identify any means of reducing those impacts.

1.10.3 The construction of the proposed Nant Bach Wind Farm will have no more than a limited impact on the archaeology of this area. Many of the records relate to small quarries which are extremely common both on this hill and elsewhere in the area. A few of the quarries may be damaged or destroyed, but such losses are not considered to be of any great significance, and some trackways which formerly were of more importance than they are today will also be modified.

1.10.4 A watching brief conducted by a competent archaeological contractor is recommended during the construction works to ensure that any archaeological features or deposits are identified during ground disturbance.

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