

BikePark Wales

Archaeological Desk-based Assessment and ASIDOHL2



Prepared for

BikePark Wales

By



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Crynodeb Anweithredol

Comisiynwyd Archaeoleg Mynydd Du Cyf gan BikePark Wales, trwy eu hasiantau The Urbanists, i gwblhau asesiad desg archeolegol ac Asesiad o'r Arwyddocâd y Datblygiad ar Tirwedd Hanesyddol (AADTH2) ar yr Ardal Ddatblygiad arfaethedig o 36 pod gweryslla a 5 cabanau, codiad y bloc cawod/toiled a'r cread o man chwarae a phicnic. Adeiladu Ardal Barcio newydd (141 o leoedd) gyda maes parcio gorlif (85 lle), ynghyd â iard cynnal a chadw llwybrau, llwybrau mynediad priffyrdd newydd, gwaith proffil daear, draeniad, isadeiledd a gwaith tirwedd yn BikePark Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tudful, CF48 1YZ.

Nodwyd yn ystod yr asesiad yr effeithiau uniongyrchol ac anuniongyrchol posibl o'r Datblygiad arfaethedig ynghyd ag asesiad o leoliad ac arwyddocâd asedau gwerth uchel.

Cafodd yr asesiad desg ei pharatoi yn unol â safonau proffesiynol y Sefydliad Siartredig Archeolegwyr a'i fwriad yw cwrdd â Safon a Chanllawiau ar gyfer Asesiadau Desg Archeolegol (2014). Paratowyd yr AADTH2 i safonau proffesiynol y Sefydliad Siartredig Archeolegwyr a'i fwriad yw cwrdd â'r Safon a'r Canllawiau a nodwyd gan CADW yn yr AADTH2 Canllawiau ar gyfer Adfer Da wrth Ddefnyddio'r Gofrestr Tirweddau o Ddiddordeb Hanesyddol yng Nghymru yn y Broses Cynllunio a Datblygu (2^{il} Argraffiad 2007).

Non-Executive Summary

Black Mountains Archaeology Ltd was commissioned by BikePark Wales, through their agents The Urbanists, to carry out an Archaeological Desk-Based Assessment and an Assessment of the Significance of Development on Historic Landscape (ASIDOHL2) on the proposed Development Area of 36 camping pods and 5 chalets, erection of shower/toilet block and creation of play and picnic Area. Construction of new parking Area (141 spaces) with overflow carpark (85 spaces), together with a trail maintenance yard, new highway access routes, ground profile works, drainage, infrastructure and landscape works at Bike Park Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tydfil, CF48 1YZ

The assessment has identified the potential direct and indirect effects of the proposed Development together with an assessment of the setting and significance of high value assets.

The archaeological desk-based assessment has been prepared to the professional standards of the Chartered Institute for Archaeologists and is intended to meet Standard and Guidance for Archaeological Desk-based Assessments (2014). The ASIDOHL2 has been prepared to the professional standards of the Chartered Institute for Archaeologists and is intended to meet Standard and Guidance set out by CADW in ASIDOHL2 Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd Edition 2007).

Summary of Assessment

A Desk-Based Assessment has identified the potential direct and indirect effects of the proposed Development together with an assessment of the setting and significance of high value heritage assets. A total of 19 heritage assets have been identified. One heritage asset has been identified within the Development Area; 'Triangulation point' (GGAT03941m), with a further seven heritage assets within a 250m (radius) Study Area. For the purposes of setting and significance of heritage assets with a value of A or higher a total of six sites have been identified within a 1km (radius) Study Area and a further five within a wider Zone of Theoretical Visibility (ZTV (Figure 2).

The potential direct impact of the development on heritage assets is confined to one asset 'Triangulation point' (GGAT03941m), however, a site visit could not locate the feature and an assumption made that it is now destroyed resulting in a reduction of the Direct Impacts to None.

The ASIDOHL2 process considered the potential effect to all landscapes on the Register resulting in the identification of just a single landscape being affected, Merthyr Tydfil (HLW(MGI)2) Landscape of Outstanding Historic Interest. The remaining landscapes on the Register were discounted as having no effect. The closest landscape being Gelligaer Common HLW (MGI) 4, 2.5km east; East Fforest Fawr and Mynydd-y-Glog HLW (MGI) 3, 14.1km northeast; The Rhondda HLW (MGI) 5, 6.5km southwest and the Blaenavon World Heritage Site HLW (Gt) 1, 12km northeast.

*The ASIDOHL2 process has identified a single direct physical impact upon the historic landscape, in the Historic Landscape Character Area (HLCA) of 072 Waunwyllt, Pen-y-lan and Graig Gethin agricultural landscape. The direct physical impact has been assessed as **Slight** with the maximum area of the historic landscape character area that could be directly affected by the proposed development representing 2.34%, which is 0.07% of the total Registered historic landscape area. The proposed development impacting a slight land loss and consequent fragmentation and/or visual intrusion causing limited numbers of key elements to be removed or changed so that group value and/or coherence and/or integrity are slightly diminished, and/or amenity value slightly reduced with a slight reduction in the overall value of the historic landscape area on the Register.*

The ASIDOHL2 process initially identified a further 44 HLCAs belonging to Merthyr Tydfil (HLW(MGI)2) as being potentially effected (indirectly) by the proposed development. This number was refined down using a combination of visibility analyses utilising computer modelling of the 2m DTM and 2m DSM LiDAR datasets to generate Zones of Theoretical Visibility (ZTVs) from and to the proposed development area, several site visits, study of contour maps, aerial photographs and taking into the consideration of existing surface features such as forestry and the built environment using digital surface models (DSM) generated by LiDAR. A single registered park and garden was identified by the ZTV analysis; Cyfarthfa Castle (PGW(Gm)1(MER) is located 3.5km to the north of the proposed development area. Three SAMs were also identified by the ZTV analysis as being potentially indirectly affected; Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573) 1.3km Northeast, the Ffos-y-fran Deserted Iron Mining Village (SAMGm496) and also at Ffos-y-fran the Sarn Howell Pond and Watercourses (SAMGm494), both c2.5km to the northeast. A further SAM was

identified by the ZTVs located on Merthyr Common (Mynydd Cilfach-yr-encil) 2.7km to the east (Merthyr Common Round Cairns SAMGm222).

While theoretically visible, it has been established that the views to and from Cyfarthfa Castle and Park (PGW(Gm)1(MER; HLCA 013), Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573; HLCA 019), The Ffos-y-fran Deserted Iron Mining Village (SAMGm496; HLCA 077), Sarn Howell Pond and Watercourses (SAMGm494; HLCA 031) and Merthyr Common Round Cairns (SAMGm222; HLCA 077) are not indirectly physically effected by the proposed development. Based on the present assessment it is considered that the proposed development will have no permanent indirect physical impact on any of the statutory designated landscapes, sites and monuments noted above. As a result, the first part of Stage 3a was not carried out. No physical change from an increased risk of exposure, increased management needs, the severance or fragmentation of related elements, frustration or cessation of historic land-use practices and the frustration of access leading to decreased opportunities for education and enjoyment of the amenity elements will occur.

*The visibility analysis identified the potential indirect visual effect for up to 44 historic landscape character areas. Following detailed assessment and site visits, it is considered that of the 44 HLCAs initially identified by ZTVs as potentially visible only 15 HLCAs (see Stage 3b assessment) had the potential for indirect (non-physical) visual impacts. The remainder disregarded because of a lack of visibility due to the inter-visibility of HLCAs and the proposed development area being obscured by the built environment, trees and vegetation and topography. The magnitude of indirect visual effects has been assessed as **Very Slight**.*

*A total of 13 HLCAs were considered for the relative importance of parts or elements of HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development. The effect to three HLCA's (HLCA 021, 037 and 048) was assessed as so imperceptible that it was considered that they will not add to the relative importance evaluation in relation to the nature and extent of the proposed development. The remaining overall (combined) averaged landscape value was assessed as **Low**.*

*The final ASIDOHL2 assessment process identified the assessment of the overall significance of the impact of development and the effect that altering the Historic Character Area(s) concerned has on the whole of the historic landscape area on the Register (CADW 2007, 28). The effect of the development on each historic landscape character area was scored and the value assessed in relation to the likely loss and consequent reduction in value of the HLCA on the Register. The results indicated that the summary of overall significance of the impact of development on the historic landscape is **Slight**. The development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.*

Acknowledgements and Copyright

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of this project. We are as ever hugely grateful to Lynne Moore of the NMR, RCAHMW, Calli Rouse of GGAT HER, Gareth Phillips of CADW, Emyr Evans of The National Library of Wales and Derek Elliott of CRAPW for their expert assistance. The copyright of this report is held by Black Mountains Archaeology Ltd, who have granted an exclusive licence to BikePark Wales and their agents The Urbanists enabling them to use and reproduce the material it contains. Ordnance Survey maps are reproduced under licence 100058761. Black Mountains Archaeology Ltd retains copyright of any annotations.

Abbreviations

- AP: Aerial Photograph
- CRAPW: Central Register of Air Photography for Wales
- GGAT Glamorgan Gwent Archaeological Trust
- HER: Historic Environment Record (curated by Dyfed Archaeological Trust)
- HLCA Historic Landscape Character Area
- LB: Listed Building
- LPA: Local Planning Authority
- NGR: National Grid Reference
- NMR: National Monuments Record (curated by RCAHMW)
- NPRN: National Primary Record Number (in NMR)
- PRN: Primary Record Number (in HER - curated by Glamorgan-Gwent Archaeological Trust)
- RCAHMW: Royal Commission on the Ancient and Historical Monuments of Wales
- SAM: Scheduled Ancient Monument

1 Introduction

1.1 Project Background and Proposals

1.1.1 Black Mountains Archaeology Ltd/ Archaeoleg Mynydd Du Cyf was commissioned by BikePark Wales through their agents The Urbanists to carry out an archaeological desk-based assessment and an Assessment of the Significance of Development on Historic Landscape (ASIDOHL2) on the proposed development of 36 camping pods and 5 chalets, erection of shower/toilet block and creation of play and picnic area. Construction of new parking area (141 spaces) with overflow carpark (85 spaces), together with a trail maintenance yard, new highway access routes, ground profile works, drainage, infrastructure and landscape works at Bike Park Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tydfil, CF48 1YZ.

1.2 Objectives

1.2.1 The purpose of a desk-based assessment as set out by the *Chartered Institute for Archaeologists* (2014) is to gain an understanding of the historic environment resource in order to formulate as required:

- an assessment of the potential for heritage assets to survive within the Area of Study.
- an assessment of the significance of the known or predicted heritage assets considering, their archaeological, historic, architectural and artistic interests.
- strategies for further evaluation whether or not intrusive, where the nature, extent or significance of the resource is not sufficiently well defined.
- an assessment of the impact of proposed Development or other land use changes on the significance of the heritage assets and their settings.
- strategies to conserve the significance of heritage assets, and their settings.
- design strategies to ensure new Development makes a positive contribution to the character and local distinctiveness of the historic environment and local place-shaping.
- proposals for further archaeological investigation within a programme of research, whether undertaken in response to a threat or not.

1.2.2 To this we can further add that the objectives of desk-based assessment are:

- An assessment of available information to determine the extent and character of heritage assets, in local, regional and national contexts.
- An assessment of the significance of heritage assets considering all of the cultural heritage values that people associate with it, or which prompt them to respond to it.
- An assessment of impact (physical or visual) on heritage assets and their setting.
- The careful consideration and presentation of mitigation recommendations aimed at reducing the impact of the Development on heritage assets and their setting.
- Finally, the presentation of this information in a written report and the preparation and deposition of an archive of data generated by the assessment in line with professional standards.

1.3 Legislative Framework

- 1.3.1 *Planning Policy Wales* (PPW 10th Edition) sets out the land use planning policies of the Welsh Government. Chapter 6 sets out the Welsh Government's policy towards the historic environment. It states "The historic environment of Wales is made up of individual historic features, archaeological sites, historic buildings and historic parks, gardens, townscapes and landscapes, collectively known as historic assets. The most important of these historic assets have statutory protection through scheduling, listing or designation as a conservation Area. Other assets are included in formal registers, which identify them as being of special historic interest. Many others make a positive contribution to local character and sense of place. Some, such as buried archaeological remains, have still to be identified. It is important to protect what is significant about these assets and sustain their distinctiveness. Historic assets should be the subject of recording and investigation when they are affected by proposals that alter or destroy them. Historic assets are a non-renewable resource." (PPW 2018, 123-129).
- 1.3.2 Underpinning PPW are a series of legislative powers and TANs. *The Planning (Wales) Act 2015* sets out a series of legislative changes to deliver reform of the planning system in Wales, to ensure that it is fair, resilient and enables Development. The 2015 Act also introduces a mandatory requirement to undertake pre-application consultation for certain types of Development. The *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016* defines in *Schedule 4(I)* the parameters and definitions for the requirement of pre-application consultation by Welsh Ministers, particularly in response to the effect of statutory designated monuments, buildings, and parks and gardens.
- 1.3.3 Any works affecting an ancient monument and its setting are protected through implementation of the *Ancient Monument and Archaeological Areas Act 1979*. In Wales the 1979 Act has been strengthened by *The Historic Environment (Wales) Act 2016*. The 2016 Act makes important improvements for the protection and management of the Welsh historic environment. It also stands at the centre of an integrated package of secondary legislation (Annexes 1-6), new and updated planning policy and advice, and best-practice guidance on a wide range of topics (TAN 24 Historic Environment). Taken together, these will support and promote the careful management of change in the historic environment in accordance with current conservation philosophy and practice. Following adoption of the TAN 24 Historic Environment on 31st May 2017, *Welsh Office Circulars 60/96 Planning and the Historic Environment: Archaeology*; *61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas*; and *1/98 Planning and the Historic Environment* have been cancelled. However, detailed advice on Environmental Impact Assessment is still contained within Welsh Office Circular 11/99 Environmental Impact Assessment.
- 1.3.4 The *Ancient Monument and Archaeological Areas Act 1979* and *The Historic Environment (Wales) Act 2016* sets out a presumption in favour of preservation *in-situ* concerning sites and monuments of national importance (scheduled/listed), and there exists in the current *Planning Policy Wales* (Chapter 6) a presumption in favour of preservation *in-situ* of all types of heritage assets.

- 1.3.5 Cadw are the Welsh Government body responsible for determining applications for Scheduled Monument Consent (SMC) and is a statutory consultee for certain types of Developments affecting Scheduled Ancient Monuments, World Heritage Sites and Registered Historic Parks, Gardens and Landscapes, Strategic Environmental Assessments and scoping opinions for Environmental Impact Assessments (PPW 2016). Cadw published their *Conservation Principles* for the sustainable management of the historic environment in Wales in 2011. These principles provide the basis upon which Cadw discharges its statutory duties, makes decisions or offers advice about changes to historic assets. Cadw further advise that the *Conservation Principles* should also be used by others (including owners, developers and other public bodies) to assess the potential impacts of a Development proposal on the significance of any historic asset/assets and to assist in decision-making where the historic environment is affected by the planning process (PPW 2016).
- 1.3.6 Important or historic hedgerows (and boundaries) are protected under *The Environment Act 1995 (section 95)*. The *Hedgerow Regulations 1997* (under the 1995 Act) provides protection and guidance for those Development/agricultural activities outside of planning. The regulations permit the removal of any hedgerow (including any length of hedgerow) for 'carrying out Development for which planning permission has been granted' provided the loss of the hedgerow has been properly assessed against the benefits of the proposed Development.
- 1.3.7 Following review in 1998, a simplified set of assessment criteria was proposed where all substantially complete boundaries (hedgerows) that predate 1845 were to be afforded consideration/protection. The Environment, Transport and Regional Affairs Committee's Report 'The Protection of Field Boundaries' 1999 was acknowledged by Government but no amendments were made to the 1997 regulations. Judicial Review of the application in 2002 of the regulations (Flintshire County Council v NAW and Mr J T Morris) has clarified the interpretation of some of the criteria (see *The Hedgerow Regulations 1997, Schedule 1, Part 2 Archaeology and History* and Section 1.5 below).

1.4 Assessment Methodology (heritage assets)

- 1.4.1 The assessment of the historic environment includes the interrogation of a number of sources (but not limited to):
- Statutory designated monuments, buildings and landscapes (including conservation Areas, parks, gardens and battlefields).
 - Regional Historic Environment Record (HER).
 - National Monuments Record (NMR).
 - Aerial photographic archives.
 - Local and national archives.
 - Cartographic and documentary sources.

- 1.4.2 Information on statutory designated sites (World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Registered Landscapes, Battlefields, Parks and Gardens) was obtained from Cadw (received 10/09/19) and accessed through Cof Cymru - National Historic Assets of Wales (a Welsh Government online mapping resource). Information recorded on the Regional Historic Environment Record (Enquiry No. 6103) and National Monuments Record (Enquiry number RC19-0562) were assessed as was collections of aerial photographs held by the Central Register of Air Photography for Wales (received 02/09/19). Cartographic Archives held by The National Library of Wales were also consulted (Request No 14903817, received 02/10/19).
- 1.4.3 The assessment reviewed the existing information pertaining to the Historic Environment based on a 250m Study Area centred on NGR SO 05160 03410. Statutory designated sites with an 'A' Value were assessed within a wider 1km Study Area for the impact to their setting together with a selection of wider sites based on 'Zone of Theoretical Visibility' (ZTV) Analysis (see Figures 1 and 2).
- 1.4.4 Important or historic hedgerows were assessed according to current legislation that details the following criteria:
- The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose, "historic" means existing before 1850.
 - The hedgerow incorporates an archaeological feature which is (a) included in the schedule of monuments compiled by the Secretary of State under Section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979(7); or (b) recorded at the relevant date in a Historic Environment Record.
 - The hedgerow (a) is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and (b) is associated with any monument or feature on that site.
 - The hedgerow (a) marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Historic Environment Record or in a document held at that date at a Record Office; or (b) is visibly related to any building or other feature of such an estate or manor.
 - The hedgerow (a) is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts; or (b) is part of, or visibly related to, any building or other feature associated with such a system, and that system (i) is substantially complete; or (ii) is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of Development control within the authority's Area, as a key landscape characteristic.
 - There are other criteria relating to rights of way and ecology.

1.4.5 Heritage assets are categorised according to the only values that are nationally agreed in the *Department of Transport/Welsh Office/Scottish Office Design Manual for Roads and Bridges Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007*, amended 2009 (DMRB 2007). A cultural heritage asset is an individual archaeological site or building, a monument or group of monuments, an historic building or group of buildings, an historic landscape etc., which, together with its setting, can be considered as a unit for assessment. Heritage assets are assessed according to the following criteria:

1.4.6 Understanding value is subjective beyond any statutory or registered designation and is based on the professional experience and knowledge of the assessor. Other factors do contribute to the overall assessment of value (and significance) of heritage assets and the assessment criteria below contributes to an overall robust assessment framework.

Value			Criteria
A*	Very High	International/National	World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.
A	High	National	Scheduled Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives.
B	Medium	Regional	Designated or undesignated assets that contribute to regional research objectives.
C	Low	Local	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
D	Negligible	Local	Assets with very little or no surviving archaeological interest.
U	Unknown	Unknown	The importance of the resource has not been ascertained.

Table 1. Factors for assessing the value of heritage assets (after Table 5.1 DMRB 2009).

Effect	Category					
	A*	A	B	C	D	U
Very High	Very Significant	Very Significant	Very Significant	Significant	Significant	Unknown
High	Very Significant	Very Significant	Very Significant	Significant	Significant	Unknown
Moderate	Very Significant	Very Significant	Significant	Significant	Slight Significance	Unknown
Low	Very Significant	Significant	Significant	Slight Significance	Slight Significance	Unknown
None	None	None	None	None	None	None

Table 2. Significance of effect to heritage assets (matrix).

- 1.4.7 The criteria below is adapted from notes made in Annex 2 of the DMRB Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007 that refer to the Scheduling Criteria as set out by the Ancient Monument and Archaeological Areas Act 1979 and The Historic Environment (Wales) Act 2016 and finally Stage 4 Evaluating Relative Importance as set out in ASIDOHL2, Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd Edition 2007). While comprehensive, the criteria should not be regarded as definitive, rather they are indicators which contribute to a wider judgement based on the professional experience of the assessor and the circumstance and context of the assessment and heritage asset. An ASIDOHL2 is a staged approach to assessing the significance of impact to historic landscapes (and constituent character Areas) as characterised in the *Register of Landscapes of Outstanding Historic Interest in Wales* (Pt 2.1, 1998) and *Register of Landscapes of Special Historic Interest in Wales* (Pt 2.2, 2001) to the method set out in the *Guide to Good Practice on Using the register of Landscapes of Historic Interest in Wales in the Planning and Development Process (revised 2nd Edition 2007)*.
- 1.4.8 **Rarity:** there are some monument categories, which in certain periods are so scarce that all surviving examples which still retain some archaeological potential should be preserved. This should be assessed in relation to what survives today, since elements of a once common type may now be rare.
- Very high: sole survivor of its type.
 - High: very few sites of this type are known.
 - Medium: the site is not unusual, but cannot be considered common.
 - Low: the site is quite common.
- 1.4.9 **Documentation and association:** the significance of a heritage asset may be enhanced by the existence of records of previous investigations or, in the case of more recent monuments, by the supporting evidence of contemporary written records. Furthermore, any important historical associations relating to the heritage asset, such as institutions, cultural figures, movements or events, will enhance value. The survival of documentation and/or historic association that increases our understanding of a heritage asset will raise its importance, though this is difficult to quantify owing to the extremely varied nature of documentary and historical material. Therefore, a professional judgment is given based on the actual amount or importance of evidence and its academic value.
- Very High: a highly significant, authentic and nationally well-known association(s) and/or complete documentary record, or exceptionally important sources available.
 - High: a significant, authentic and regionally well-known association(s) and/or considerable quantity of relevant material, or highly important sources available.
 - Moderate: an authentic, but less significant, perhaps locally well-known association(s) and/or some relevant material, or moderately important sources available.
 - Low: unauthenticated or a little known association(s) and/or little relevant material, or only modestly important sources available.

- None: no known associations and/or relevant material available.

1.4.10 **Group Value:** relates to the diversity (or similarity) of elements including their structural and functional coherence. The value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement and cemetery) or with monuments of different periods.

- Very high: largely complete interconnected complex of heritage assets or landscapes (e.g UNESCO World Heritage Site).
- High: significant survival of an interconnected complex of heritage assets.
- Moderate: some surviving elements of an interconnected complex of heritage assets; some disintegration has occurred.
- Low: single or unconnected/unrelated groups of heritage assets.

1.4.11 **Survival/Condition:** the survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be assessed in relation to its present condition and surviving features. The Historic Environment Records (HERs) of the four Welsh Archaeological Trusts note the condition of sites according to the following criteria:

- Intact: the site is intact.
- Near intact: the site is nearly intact.
- Damaged: the site has been moderately damaged.
- Near destroyed: the site has nearly been destroyed.
- Destroyed: the site has been destroyed.
- Restored: the site has been restored.
- Moved: the site has been moved (usually finds).
- Not known: the condition of the site is not known.

1.4.12 To these criteria, we can add the following assessment:

- Very Good: elements surviving in very good condition for their class.
- Good: elements surviving in good or above average condition for their class.
- Moderate: elements surviving in moderate or average condition for their class.
- Fair elements surviving in fair or below average condition for their class.
- Poor elements surviving in poor condition for their class.

1.4.13 **Direct Effects** are outcomes resulting from an assessment of the impact of the proposed Development on the heritage asset or landscape. The direct effect of a course of action (e.g. Development) can only be assessed once the assessment criteria above has been completed and potential outcomes fully understood (as far as any Development proposal or construction design is reasonably understood). The direct effect of the proposed Development on heritage assets has been assessed using the following criteria:

- Very high: total loss of the integrity of the heritage asset(s).
- High: significant loss of integrity to the heritage asset(s), significant reduction of group and rarity values.
- Moderate: some loss of integrity to heritage asset(s) and reduction in value.

- Low: slight loss of integrity to heritage asset(s) and value.
- None: no perceived or identified effect, or loss in value.
- Beneficial: Development will protect, preserve or enhance the heritage asset resulting in an increase in value.

1.4.14 Assessing **Indirect Effects (visual)** to heritage assets is intrinsically linked to setting and significance (see section 1.6). The criteria below are adapted from standard EIA evaluation criteria and Stage 3 Assessment of Indirect Impacts of Development as set out in *ASIDOHL2, Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd Edition 2007)*. Assessment is confined to sites of International, National and in some cases Regional value.

- Very severe: the key views and/or essential lines of sight to and from the heritage asset are dominated or obscured by the Development resulting in severance of cultural heritage links.
- Severe: the key views and/or essential lines of sight to and from the heritage asset are interrupted by the Development resulting in partial severance of cultural heritage links.
- Considerable: the key views and/or essential lines of sight to and from the heritage asset are significantly visible resulting in limited severance of cultural heritage links.
- Moderate: the key views and/or essential lines of sight to and from the heritage asset are visible resulting in some severance of cultural heritage links.
- Slight: the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in diminished cultural heritage links.
- Very slight: the key views and/or essential lines of sight to and from the heritage asset are noticeable resulting in little discernible severance of cultural heritage links.
- None: the key views and/or essential lines of sight to and from the heritage asset are not noticeable resulting in no severance of cultural heritage links.

1.5 Assessment Methodology (setting and significance)

1.5.1 The *Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6)* explains what **setting** is, how it contributes to the **significance** of a historic asset and why it is important. It also outlines the principles used to assess the potential impact of Development or land management proposals on the settings of World Heritage Sites, ancient monuments (scheduled and unscheduled), listed buildings, registered historic landscapes, parks and gardens, and conservation Areas. These principles, however, are equally applicable to all individual historic assets, irrespective of their designation.

1.5.2 Certain major developments require pre-application consultation with the local planning authority and, where specialist advice is required, the Welsh Ministers through Cadw. Any Development likely to directly or indirectly (visual) effect a statutory designated heritage asset or high value undesignated heritage asset and its setting will likely require 'consultation before grant of permission' under the *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016, schedule 4 (1)(i) and (ii)* if the proposed Development meets any of the following criteria:

- Development likely to affect the site of a registered historic park or garden or its setting.
- Development is within a registered historic landscape that requires an Environmental Impact Assessment and ASIDOHL2.
- Development likely to have an impact on the outstanding universal value of a World Heritage Site.
- Development is within a distance of 0.5 kilometres from any point of the perimeter of a scheduled monument.
- Development is within a distance of 1 kilometre from the perimeter of a scheduled monument and is 15 metres or more in height, or has an Area of 0.2 hectares or more.
- Development is within a distance of 2 kilometres from the perimeter of a scheduled monument and is 50 metres or more in height, or has an Area of 0.5 hectares or more.
- Development is within a distance of 3 kilometres from the perimeter of a scheduled monument and is 75 metres or more in height, or has an Area of 1 hectare or more.
- Development is within a distance of 5 kilometres from the perimeter of a scheduled monument and is 100 metres or more in height, or has an Area of 1 hectare or more.

1.5.3 An assessment of the impact of the proposed Development on the setting of the statutory designated heritage asset or high value undesignated heritage asset will be required if any of the criteria in 1.5.2 above are met. The assessment of the setting of heritage assets follows the four-stage approach detailed in the *Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6)*:

- Stage 1: Identify the historic assets that might be affected by a proposed change or Development and their significance.
- Stage 2: Define and analyse the settings to understand how they contribute to the ways in which the historic assets are understood, appreciated and experienced.
- Stage 3: Evaluate the potential impact of a proposed change or Development on those settings.
- Stage 4: Consider options to mitigate the potential impact of a proposed change or Development on those settings.

- 1.5.4 The assessment of **significance** is intrinsically linked to the setting (see paragraphs 1.5.1 to 1.5.3 above) and value (see criteria in section 1.5 above) of a heritage asset/registered landscape, park and garden.
- 1.5.5 The significance of an historic asset embraces all of the cultural heritage values that people associate with it, or which prompt them to respond to it. These values tend to grow in strength and complexity over time, as understanding deepens and people's perceptions evolve (*Conservation Principles for the sustainable management of the historic environment in Wales 2011, p10*).
- 1.5.6 There are four values that need to be considered when assessing significance and these are set out in Cadw's *Conservation Principles for the sustainable management of the historic environment in Wales*:
- 1.5.7 **Evidential value:** relates to those elements of a heritage asset that can provide evidence about past human activity, including its physical remains or historic fabric. These may be visible and relatively easy to assess, or they may be buried below ground, under water or be hidden by later fabric. These remains provide the primary evidence for when and how a heritage asset was made or built, what it was used for and how it has changed over time. The unrecorded loss of historic fabric represents the destruction of the primary evidence. Additional evidential values can be gained from documentary sources, pictorial records and archaeological archives or museum collections. To assess the significance of this aspect of an asset, all this evidence needs to be gathered in a systematic way and any gaps in the evidence identified.
- 1.5.8 **Historical value:** a heritage asset might illustrate a particular aspect of past life or it might be associated with a notable family, person, event or movement. These illustrative or associative values of a heritage asset may be less tangible than its evidential value but will often connect past people, events and aspects of life with the present. Of course, the functions of a heritage asset are likely to change over time and so the full range of changing historical values might not become clear until all the evidential values have been gathered together. Historical values are not so easily diminished by change as evidential values and are harmed only to the extent that adaptation has obliterated them or concealed them.
- 1.5.9 **Aesthetic value:** relates to the way in which people draw sensory and intellectual stimulation from a heritage asset. This might include the form of a heritage asset, its external appearance and how it lies within its setting. It can be the result of conscious design or it might be a seemingly fortuitous outcome of the way in which a heritage asset has evolved and been used over time, or it may be a combination of both. The form of an asset normally changes over time. Sometimes earlier pictorial records and written descriptions will be more powerful in many people's minds than what survives today. Some important viewpoints may be lost or screened, or access to them may be temporarily denied.
- 1.5.10 To assess this aspect of an asset, again the evidence of the present and past form must be gathered systematically. This needs to be complemented by a thorough appreciation on site of the external appearance of an asset in its setting. Inevitably understanding the aesthetic value of a heritage asset will be more subjective than the Study of its evidential and historical values.

- 1.5.11 Much of it will involve trying to express the aesthetic qualities or the relative value of different parts of its form or design. It is important to seek the views of others with a knowledge and appreciation of the heritage asset on what they consider to be the significant aesthetic values.
- 1.5.12 **Communal value:** relates to the meanings that a heritage asset has for the people who relate to it, or for whom it figures in their collective experience or memory. It is closely linked to historical and aesthetic values but tends to have additional or specific aspects. Communal value might be commemorative or symbolic. For example, people might draw part of their identity or collective memory from a heritage asset, or have emotional links to it. Such values often change over time and they may be important for remembering both positive and uncomfortable events, attitudes or periods in Wales's history. Heritage assets can also have social value, acting as a source of social interaction, distinctiveness or coherence; economic value, providing a valuable source of income or employment; or they may have spiritual value, emanating from religious beliefs or modern perceptions of the spirit of a place.
- 1.5.13 The first stage of assessing significance is by understanding the value of the heritage asset by carefully considering its history, fabric and character and then comparing these values with other similarly designated or types of heritage asset locally, regionally or if necessary nationally. The outcome of this process is a Statement of Significance, which is partly a subjective exercise based on the assessor's experience and knowledge.

2 Baseline

2.1 Location, Topography and Geology

- 2.1.1 The proposed development area is located on land adjacent to BikePark Wales (NGR SO 05160 03410). The current facilities at BikePark Wales consist of tracks and trails, a café building and car parking areas and the proposed Development Area is currently under woodland and scrub. The site is situated within Gethin Woods towards the base of the north east facing slope of Mynydd Gethin, overlooking the village of Abercanaid and the Taff valley and just within the country boundary of Merthyr Tydfil (Figures 1.1-1.3).
- 2.1.2 The geology of the proposed Development is the South Wales Middle Coal Measures Formation consisting of mudstone, siltstone and sandstone. These sedimentary rocks formed approximately 318 to 309.5 million years ago in the Carboniferous Period. These sedimentary rocks are fluvial in origin; its beds and deposits formed from detrital material reflecting a past local environment of swamps, estuaries and deltas. Overlying superficial deposits consist of Divensian and Diamecton Till; detrital sedimentary deposits formed up to 2 million years ago in the Ice Age conditions of the Quaternary Period (British Geological Survey 2019).

2.2 Conservation Areas

- 2.2.1 The Study Area does not fall within any Conservation Areas. However, there are Conservation Areas within the Merthyr Tydfil Registered Historic Landscape (HLW(MGI)2). These include Cyfarthfa (CA526) located c.3.5km to the northwest (of the Development Area) , Morgantown (CA24), Town Centre (CA26), Thomastown (CA525) all located c.3km to the north, Council and Urban Street Penydarren (CA524) located c.4km to the northeast and Dowlais (CA23) located c.4.5km to the northeast (Figure 1.2).

2.3 Registered Landscapes, Parks and Gardens, Scheduled Ancient Monuments and Listed Buildings

- 2.3.1 The Study Area is located within the CADW Landscape of Outstanding Historic Interest of Merthyr Tydfil (HLW(MGI)2). Designated in 2001, Merthyr Tydfil occupies a natural basin at the head of the Taff Valley and is celebrated as “probably the largest iron-making town in the world in the early to mid-19th Century...(that) rapidly transformed from a modest village in the 1750s to the largest town in Wales by 1801” (CADW 1998. p47). The Merthyr landscape contains a significant number of relics of this industrial past including remains of a number of “large ironworks, features relating to coal mining, waterpower leats, an early iron bridge, power and transportation systems including early tram roads, terraced industrial housing and Cyfarthfa Castle” (ibid) (Figure 1.3).
- 2.3.2 There are five further historic landscapes in the wider region of Mid Glamorgan that required consideration. These include ‘Gelli-gaer Common’ (HLW(MGI/P)4) located c.3.8km to the east (of the Development Area), ‘East Forest Fawr and Mynydd-y-Glôg’ (HLW(MGI/P)3) located c.7km to the northwest, ‘The Rhondda’ (HLW(MGI)5) located c.7km to the southwest, ‘Clydach Gorge’ (HLW(Gt)4) located 16.7km to the northeast and the World Heritage Site of Blaenavon (HLW(Gt)1) located 17km to the northeast.

- 2.3.3 The designated Historic Landscape of Merthyr Tydfil underwent a further Historic Landscape Characterisation Assessment, carried out by Glamorgan-Gwent Archaeological Trust in 2003, which produced a total of 79 Historic Landscape Character Areas (HLCAs) (Roberts 2003).
- 2.3.4 The Development Area is located within HLCA 072 'Waunwyllt, Pen-y-lan and Graig Gethin', which is characterised as an "agricultural landscape of dispersed post-medieval settlement with upland sheep farming; irregular evolved field pattern of drystone walled enclosures largely hidden in forestry; extractive landscape associated with the steam coal trade" (Roberts 2003. p148).
- 2.3.5 Adjacent to HLCA 072, and within the 1km Study Area are three further HLCAs. The largest of these is HLCA014 'River Taff Canal and Railway Corridor' characterised as a "main north-south communication corridor canal, tramroad, industrial and public railroad corridor, 18th and 19th century extractive features, principally pits, levels and mines and associated water management features; industrial housing; important historic and cultural associations; ancient woodland" (ibid. p73). In addition, HLCA017 'Graig' which is characterised as an "early canal side colliery settlement (Glamorganshire Canal) and coal pit" (ibid. p78) and HLCA079 'A470(T) Road' which is characterised as a "north-south road transport corridor, late 20th century; former railway corridor (second half of 19th century); former industrial extractive landscape associated with the steam coal trade" (ibid. p157).
- 2.3.6 There are no Scheduled Ancient Monuments or Listed Buildings within the Development Area or the 250m Study Area. Within the 1km Study Area there are three Scheduled Ancient Monuments; 'Abercanaid Haystack Boiler' (SAMGM572, NPRN309757, GGAT02137m) located c.400m to the northeast (of the Development Area) (Plate 47), 'Vale of Neath Railway Cutting and Tunnel Portal' (SAMGM606, GGAT02500.4m, GGAT02500.5m) located c.900m to the northwest (Plate 41-43) and 'Cwm Pit' (SAMGM607, NPRN33467, GGAT02821m) located c.980m to the northwest (Plate 44).
- 2.3.7 Further Scheduled Ancient Monuments outside the 1km Study Area but still within the Zone of Theoretical Visibility (ZTV) include 'Merthyr Tramroad Tunnel' (SAMGM573) located c.1.4km to the northeast, 'Merthyr Common Round Cairns' (SAMGM222) located c.2.7m to the east and 'Ffos-y-fran Deserted Iron Mining Village' (SAMGM496) and Sarn Howell Ponds (SAMGM494) located c.2.7km to the northeast (Plate 50).
- 2.3.8 There are no Listed Buildings within the development area or the 250m study area. Within the 1km study area there 41 Grade II Listed Buildings but no Grade I Listed Buildings. These include Industrialist's houses 'Upper Abercanaid House' (LB11494) and 'Garden Walls and Gate Piers' (LB11495) located c.700m to the north of the Development Area, 'Llwyn-yr-eos House' (LB11497) located c.500m to the northeast and 'Pentrebach House' (LB11503) and 'Garden Walls' (LB11504) located c.1km to the northeast. The remainder consist of Gethin Tramway Bridge (LB81751) located c.500m to the east, 'Sion Independent Chapel' (LB21318) located c.600m to the northeast and terraced workers' housing on Quay Row in Upper Abercanaid (LB81754, LB81755, LB81753, LB11496) located c.700m to the north, River Row (LB11502, LB81724-LB81728) and Nightingale Street (LB11498-LB11501, LB81729-LB81748) in Abercanaid located c.500m to the northeast.

- 2.3.9 Further important Listed Buildings outside the 1km Study Area but still within the Zone of Theoretical Visibility (ZTV) include Grade I Listed Buildings 'Cyfarthfa Castle' (LB11396) and 'School at Cyfarthfa Castle' (LB11397) both c.3.9km to the north.
- 2.3.10 The Study Area does not include any Registered Parks and Gardens. However, within the wider HLW(MGI)2 Merthyr Tydfil Historic Landscape there are three Designated sites. These are PGW(GM)1(MER) 'Cyfarthfa Castle' (Grade II*) located c3.5km to the north of the development site, PGW(GM)70(MER) 'Cefn Coed Cemetery and Jewish Burial Ground' (Grade II) located c.5km to the north northwest and PGW(GM)69(MER) 'Aberfan Cemetery, Garden of Remembrance and Former Tips and Slide Area' (Grade II) located 1.6km to the south (CADW. 2000. p94). Both Cefn Coed Cemetery and Jewish Burial Ground and Aberfan Cemetery, Garden of Remembrance and Former Tips and Slide Area are not intervisible from the study area.
- 2.3.11 The Natural Resources Wales LANDMAP data was not consulted for this Study Area as the Historic Landscape Characterisation provides a considerably more detailed assessment of the Area.

2.4 General – Archaeological and Historical

2.4.1 Prehistoric – up to 43 AD

- 2.4.2 The earliest evidence for human activity in the study area is a Mesolithic flint scatter (GGAT00880m) located 500m to the north of the development area. The findspot consists of a group of 2-10 Mesolithic blades, flakes and microliths of more than one tool type (HER, Wymer 1977). The find is the only evidence of Mesolithic activity in the Merthyr Vale although there are many examples further afield, particularly to the west in the uplands of the Cynon Valley.
- 2.4.3 Whilst there is no Neolithic evidence within the study area there have been a number of findspots just to the west near the summit of Mynydd Merthyr. Two Neolithic arrowheads (GGAT01642m and GGAT01643m) and a Neolithic adze (GGAT01209m) were discovered during the laying of Forestry Commission tracks in the 1970s (Savory 1971, 1972, 1973). The concentration of finds here suggests Neolithic settlement activity. Indeed, further axe fragments have been discovered in Merthyr Tydfil (GGAT00478m) and further north in the Vaynor Area (GGAT00804m) and (GGAT01118m), where a Neolithic hut site was excavated 1958 (GGAT01100m).
- 2.4.4 The Merthyr Vale is home to a remarkable number of Bronze Age monuments with strings of ring cairns and burial mounds featured along the ridges of Mynydd Merthyr to the West and Mynydd Cylfach-yr-encil to the East, known collectively as the 'Merthyr Tydfil Group'. The Group contains 34 cairns, 14 of which are ring cairns (RCAHMW 1976). The 1km Study Area features a Bronze Age cist (GGAT00498m) to the south west of the Development Area, which was reported prior to 1953 but has since been lost to afforestation (GGAT HER). Just outside the Study Area to the south west are Carn Castell y Meibion Ring Cairn (SAMGM586) and Darren Fawr Ring Cairns (SAMGB287) which, though in much disturbed condition, are scheduled due to their significant archaeological potential and high group value. The Scheduled Ancient Monument 'Merthyr Common Round Cairns' (GGAT04553m, NPRN305664, SAMGM222) is located c.2.6km to the east (RCAHMW 1976).

- 2.4.5 There is no evidence for Iron Age presence within the Study Area, the nearest being c.2.5km to the north west of the Development Area where a Scheduled probable Iron Age enclosure is situated at 'Gwersyll' (GGAT00483m, NPRN305673, SAMGM239). There are a number of defensive and settlement sites in the wider Merthyr Vale Area including the hut circles and enclosures at Buarth Maen (GGAT00449m, NPRN262046, SAMGM401).
- 2.4.6 Roman & Early-medieval
- 2.4.7 Similarly, Roman evidence is absent from the Study Area and is focused on Penydarren Fort (GGAT00823m, NPRN301352), a Roman military settlement located c.3.2km to the north of the Development Area. Roman finds at nearby Glenthorne House have been interpreted as a possible cemetery linked to the fort (GGAT00479m). Further afield, a roman road (RR621, SAMGM556) between the roman fort at Cardiff and Castell Collen in Brecon runs north/ south c. 5km east of the Development Area.
- 2.4.8 Early medieval activity in Merthyr Tydfil is indicated by a number of inscribed stones, the closest being within St Tydfil's Church in Merthyr Tydfil (GGAT04660m) and another found on Mynydd Merthyr to the south of the Development Area, now kept by the National Museum of Wales (GGAT00529m). The place-name is associated with Tudfyl, the daughter of 5th century king Brychan Brycheiniog. It is believed that the place name Merthyr meaning 'Martyr', together with the presence of an inscribed stone and a 13th century account of a shrine at Merthyr (GGAT04660m) confirms a pre-Norman foundation for St Tydfil's Church (GGAT00457m, LB11449) (GGAT HER, Evans 2003).
- 2.4.9 Medieval
- 2.4.10 In the medieval period Merthyr Tydfil was in the cantref on Senghenydd, which formed a part of the Lordship of Glamorgan. The Development Site at the time would have been situated within a pastoral landscape of grazing sheep and cattle. Nearby medieval sites include Court House (GGAT00477m, NPRN18415, LB11376) in Merthyr Tydfil reported to be a 12th century manor house now incorporated within an 18th century structure. In addition, historical accounts suggest the presence of a watermill (GGAT00453m) at Merthyr Tydfil as well as a medieval bridge at Pontrhun (GGAT01816m), c.2km south east of the Development site. Further afield, the remains of long huts such as those at Cilfach-yr-encil (GGAT01723m, NPRN15375, GGAT01724, NPRN226565) offer an insight into the nature of rural upland hafodau settlement in the period (RCAHMW 1982).
- 2.4.11 Post-medieval
- 2.4.12 The Post-medieval period sees a shift from an agricultural economy in the 16th century to one dominated by industry with Merthyr Tydfil becoming the iron-producing powerhouse of the world by the end of the 19th century. It is for this reason that Merthyr Tydfil has been designated as an Outstanding Landscape of Historic Interest (CADW 1998).
- 2.4.13 *Agriculture*
- 2.4.14 A 1729 map (Figure 2) illustrates a rural landscape of upland farmsteads and mountain paths (See 2.6.1). The 1850 tithe map (Figure 4) also gives this impression with the land surrounding the Study Area recorded as predominantly pasture, with some arable and fir plantation (see 2.6.7).

2.4.15 The ruinous remains of the farmsteads of Pen-y-lan (GGAT03746m) and Graig (GGAT03753m) are situated within the 1km Study Area just to the North of the Development Area, whilst a large number of sheepfolds, including one in the 250m Study Area (GGAT03745m), are tangible evidence of the importance of sheep farming in the early Post-medieval period.

2.4.16 *Industry*

2.4.17 An earlier 1799 map (Figure 3) shows a slightly different picture with coal and iron mines illustrated on the uplands of both sides of the valley including in close proximity to the Study Area. These mines existed to service the ironworks that had been founded at Merthyr: 'Dowlais' (founded 1759) (GGAT01615m, NPRN34084), 'Cyfarthfa' (1765) (GGAT01169m, NPRN34078), 'Penydarren' (1784) (GGAT01170m, NPRN34113) and 'Plymouth' (1763) (GGAT05237m, NPRN34114). 'Cwm Pit' (GGAT02821m, NPRN33467, SAMGM607) and 'Cwm Glo (Robbins) Pit' (GGAT02826m, NPRN262079, SAMGM611), which are located within the Study Area to the north of the Development Area, are known to be early collieries and are likely to be those depicted on the map. The layout and development of these sites, and their significant historical associations, have been discussed extensively by Lawler (2000) and includes the Listed 'Base of Chimney at Cwm Pit' (LB81752).

2.4.18 The early 19th century saw the coal industry intensify in order to meet with demand, with collieries opening all over Merthyr Tyfil and the neighbouring valleys. Gethin Colliery (GGAT02191m, NPRN33486), which is situated to the southeast of the Development Area and within the 1km Study Area, is one such example. Opened in 1849 by the Cyfarthfa Iron Company, the Gethin Colliery was the first deep pit sunk with the intention of mining the steam coal located at the south end of the valley (GGAT 1996). Gethin Colliery consisted of two pits; Pit No 1 on the eastern side of Glamorganshire Canal and Pit No 2 on the western side. GGAT (1996) concludes that Gethin No 2 Pit was originally powered using a water balance lift, utilising water from Webbers Pond (GGAT, before converting to steam power in the 1860s (p5). Gethin Pit was in operation in tandem with neighbouring Castle Pit until the end of the 1920s when it was used only as a ventilation shaft, before being abandoned in the 1950s and demolished in the late 1960s. The association with the Cyfarthfa Ironworks both commercially and physically via the Gethin Railway results in a high group value for Gethin Pit and Webbers Pond (GGAT02522m, GGATE000274).

2.4.19 Of most significance for this study, the 1919 Ordnance Survey map (Figure 6) places 'Waunwylt Colliery' on, or in close proximity to, the Development Site (see 2.6.10). Whilst the features of the colliery, Level (GGAT06431m) and Airshaft (GGAT06429m), are not marked on previous maps, the 1919 map illustrates an 'Old Tramway' suggesting at least one earlier phase. The Waunwylt Level was opened in 1828 by Robert and Lucy Thomas to access the 4 foot seam of steam coal that they would sell both locally and in Cardiff. This was closely followed by the opening of Graig Pit in the 1830s (welshcoalmines.co.uk Accessed 18/09/19). As a result, they were celebrated as the "pioneers in 1828 of the South Wales Steam Coal Trade" and a memorial fountain (LB11448) was erected in the late 19th century, adjacent to St Tydfil's Church (CADW).

2.4.20 However, the 'Waunwyllt Colliery' in the Study Area does not appear on the Ordnance Survey map until 1919 showing that the site represents a later phase of industry. James (2003) states that the workings on Nant Graig were developed some time after 1898 (p.148) and the 'Welsh Coalmines' website expands that 'New' Waunwyllt Level was opened in 1909 by Thomas Merthyr Colliery Company and in 1918 employed 117 men underground and 20 on the surface before being closed on 13th July 1920 (Accessed 18/09/19).

2.4.21 *Transport*

2.4.22 In the early industrial phase of the 18th century, Merthyr Tydfil was serviced by the Cyfarthfa Canal (SAMGM467), which was cut in the late 1770s to transport coal from Cwm Pit to Cyfarthfa Ironworks (CADW) and the Glamorganshire Canal (GGAT01682.0s) opened in 1794 to transport iron to Cardiff. In addition, the Merthyr Tramroad (GGAT05202m, SAMGM573) was opened in 1802 to bypass the Glamorganshire Canal for the benefit of the ironworks on the eastern side of the valley (AIA 2003).

2.4.23 In the 19th century the canals were gradually superseded by the introduction of the railways. The Taff Valley Railway (running North/ South) was incorporated in 1836 to connect Merthyr Tydfil with Cardiff and the Vale of Neath Railway (running east/ West) was incorporated in 1846 to connect Merthyr Tydfil with the docks at Neath and Briton Ferry (Barrie 1980). Both were engineered by Isambard Kingdom Brunel. The Vale of Neath Railway route included a tunnel through Mynydd Aberdare, which is Designated as "a monument of national importance to enhance and illustrate our knowledge and understanding of the development of the transport network in South East Wales in the 19th Century" (CADW). The cutting and tunnel entrance survive within the 1km Study Area (GGAT02500.4m, SAMGM606) and are described as "unaltered since their completion and the best examples of the work of Isambard Kingdom Brunel to survive in Wales" (ibid). In addition to these large cross-country lines there were a number of smaller industrial lines such as the Gethin Line (discussed above) and the Cwm Pit Line (GGAT02858.0m).

2.4.24 *Workers' Housing and Listed Buildings*

2.4.25 In addition to the agricultural, industrial and transport sites, the Merthyr Tydfil Historic Landscape Area is characterised by a significant number of examples of workers' housing. Whilst there are no examples within the Development Area, the village of Abercanaid is within the 1km Study Area and contains a large number of Grade II listed examples. The oldest of these dating to the 1830-40s consisted of three rows of terraced cottages known as 'The Squares'. 'David Square' (GGAT01215m, NPRN18543), 'Catherine Square' (GGAT04370m, NPRN18261 and GGAT04371m, NPRN18263) and 'Henry Square' (GGAT04368m, NPRN18960 and GGAT04369m, NPRN18122) are illustrated on the 1850 tithe map, but have been demolished in favour of modern housing. However, the later c.1860s terraces, sandwiched between the river and the Glamorganshire Canal, have survived including the Grade II listed Nightingale Street, Quay Row and River Row. Further listed buildings in Abercanaid include Sion Independent Chapel (LB21318) and Industrialists' houses Pentrebach House (LB11503) and Llwyn-yr-Eos House (LB11497).

2.5 Previous Studies

- 2.5.1 There have been no recorded archaeological investigations within the Development Area itself however there have been a number of investigations within the Study Area.
- 2.5.2 A desk-based assessment was undertaken in by GGAT in 1991 (GGATE003675) in advance of land reclamation for the construction of the A470 which identified a number of industrial relics that required further assessment and recording prior to their demolition. Subsequently a detailed field survey was carried out in 1995 which included Webbers Pond (GGAT02522m, GGATE000274), which lies on the eastern edge of our 250m Study Area (GGAT, 1991) (Plate 14). Webbers Pond was found to be a large pond measuring 130 x 38m and was presumed to be for the provision of a water balance lift at Gethin No. 2 Pit (Lawler 1995).
- 2.5.3 Other features included in this Study that were within the Gethin No.2 Pit complex were Incline, Gethin No. 2 Pit (GGAT02523m, GGATE000275) Incline Haulage Engine House (GGAT02524m, GGATE000281), Winding Engine House (GGAT02525m, GGATE000282), and South (GGAT02526m, GGATE000283) and North Compressor Houses. In addition, Graig Road Railway Bridge (GGAT02521m, GGATE000280), further to the north but still within the 1km Study Area, was included in the field survey and was the subject of a further watching brief (GGATE000280). Following this detailed recording, these features were demolished in 1995 apart from Webbers Pond which survives as the site of a Nature Reserve.
- 2.5.4 A desk-based assessment was undertaken in 2000 for a large proposed Development site at Rhyd-y-Car to the north west of the current Development Area (GGATE002656). The Study collated and assessed a large number of archaeological sites and features relating to coal mining at Cwm Glo (Robbins) Pit and Cwm Du Colliery, as well as farmsteads and domestic structures, and stretches of industrial tramroads, canals and railways. Archaeological Areas 6 and 7 fall within the current 1km Study Area. Area 6 is described as 'Canal and Cwm Pit Railway Corridor characterised by substantial terraced embankments, waste tips and frequent structures' and Area 7 is described as 'GWR and Gethin Railway corridor characterised by substantial terraced embankments, with much recent reclamation' (Lawler 2000).
- 2.5.5 A further historic landscape study was undertaken in 2004 by Archaeological Investigations Ltd (E005424) covering a similar area of West Merthyr as the Rhyd-y-Car Study described above.

2.6 Cartographic Evidence

- 2.6.1 A 1729 map of South Wales shows the Area of Merthyr Tydfil in impressive detail (Figure 2). The landscape surrounding the Study Area is illustrated as mountainous uplands without the tree cover illustrated further down the valley. The substantial Taff river provides the boundary between Caerphilly Hundred to the east in which Merthyr Tydfil village is located, and Glamorgan to the west. The landscape is characterised by farmsteads and unmade roads with occasional churches, bridges and manor houses, all consistent with what was then an agrarian economy. The evidence for industry is slight and is limited to mills and coal pits, the nearest being to the north east of the Study Area on the Monmouthshire border.

- 2.6.2 A 1799 map of the County of Glamorgan shows the Merthyr Tydfil Area to be much changed (Figure 3). Coal and iron mines are marked within the vicinity of the Study Area. Further afield, the Cyfarthfa Iron works and Penydarren works are established as are 'Dowlais Furnace' and 'Plymouth Furnace'. This new industrial landscape is serviced by the 'Cyfarthfa Canal' and the 'Cardiff (Glamorganshire) Canal' located to the east of the Development Area as well as a network of turnpike routes. Merthyr Tydfil is illustrated as a market town. The present village of Abercanaid is not yet constructed.
- 2.6.3 The 1850 tithe map for the parish of Merthyr Tydfil records that the Development Area sits within three parcels of land (Figure 4). The southernmost of these was '1244, Fur Plantation' owned and kept in hand by 'Lord Dynevor and the Representatives of the Late Richards John Matthews'. North of this lay two parcels of land owned by the same but occupied by John Ward. The western of these is described as '1245, Pasture, Wood' and the eastern is described as '1246, Meadow'. The surrounding area is recorded as predominantly laid to pasture and occasional arable fields. Immediately to the north west of the Development site lie 'The Graig' and 'Pen-y-lan' Farms. To the east of the Study Area lies the Glamorganshire (Cardiff) Canal which runs parallel to the River Taff. To the north lies the Vale of Neath Railway which runs in a south west/north east direction and bounds Glynderys Pond which is marked as owned by the Canal Company.
- 2.6.4 Further afield the Plymouth Ironworks and Dyffryn Furnaces to the east and Ynys Fach and Cyfarthfa Works to the North. The tithe map does not mark the locations of coal workings, however, several parcels of land described as 'rubbish tip' are evidence of this activity in the wider Area. Also of note is the increased number of terraced worker's housing including the first rows at Llwyn-yr-Eos that would develop into the present village of Abercanaid.
- 2.6.5 The 1881 Ordnance Survey Map (1st Edition 1:2500) (Figure 5) highlights the enormous scale of development in the Merthyr Tydfil Area in the late 19th Century and how the natural basin within the Taff valley could accommodate this growth. The map shows a significant number of new collieries surrounding the Study Area that were established to provide coal to the ironworks. These include Gethin Pit, Graig Pit an Upper Abercanaid Pit to the east and Cwm Pit, Rhyd-y-Car Pit and Glyndyrys Pit to the north. The village of Abercanaid is shown to have expanded to accommodate planned streets of terraced worker's cottages as well as a school and chapel. The map also shows that the Study Area is largely cut off from this development both by topography and by the intercutting transport networks of the Glamorganshire Canal, the new Taff Vale Railway and the industrial Gethin railway on the east and the Neath Valley Railway to the north. The Development Area itself remains a fir plantation within an upland landscape of woodland and pasture.
- 2.6.6 The 1919 Ordnance Survey Map (3rd Edition 1:2500) (Figure 6) there is little change to the landscape setting of the Development Area however 'Waunwyllt Colliery' is marked in close proximity, just to the north of the River Graig. A 'Level' is illustrated from which a tramway extends to a station near Graig Cottage. In addition, there is an 'Old Tramway' indicating an earlier phase of working. An 'Airshaft' is also marked.

2.6.7 The 1957-1964 Ordnance Survey Map (4th Edition 1:2500) (Figure 7) illustrates that by this time the 'Waunwyllt Colliery' was disused with features described as 'Old Level' and 'Old Shaft' and 'disused tramway'. An area in close proximity to the Development Area is marked with various 'sinks', 'issues' and 'collects' and there are numerous slag heaps illustrated. Graig Farm and Pen-y-lan Farm are marked as 'ruins'. The wider industrial landscape has also transformed with Gethin Pit and the majority of others disused and a large factory at Pentrebach. Glamorganshire Canal is also marked as disused.

2.7 Aerial Photographic Evidence (Plates 54-57)

- 2.7.1 Aerial Photographs of the Development Area were sourced from the Central Register of Aerial Photos Wales and were found to be in line with the map evidence.
- 2.7.2 In particular, aerial photograph 3408 taken in 1951 shows the remains of Graig Farm, Waunwyllt Colliery and Gethin Pit 2 including Webbers Pond in very clear detail. The old tramroad from Waunwyllt Level to Graig can be seen where there is a very large tip adjacent to the railway. The Development Area appears to include a small copse of woodland surrounded by open heathland or pasture.
- 2.7.3 An aerial photograph dated to 1975 shows the Development Area as rather scoured pasture with much less tree cover in the surrounding area than present (Plate 54).
- 2.7.4 Further aerial photographs dated to 1990 and 2009 show the current layout of access roads. They also show the Development Area and the surrounding land becoming increasingly wooded in character.

2.8 Site Visit (Plates 1-53)

- 2.8.1 Walkover surveys were conducted on 23/09/19, 30/09/19 and 06/10/19. The Development Area, both Study Areas (250m and 1km) and the wider (historic) landscape was photographed from key views.
- 2.8.2 The site visit was unable to confirm the presence of the one heritage site located within the Development Area, 'Triangulation Point, Abercanaid' (GGAT03941m). It is assumed Destroyed by 20th century forestry plantation.
- 2.8.3 Important heritage sites within the 1km Study Area were photographed and a note on their condition made. Notably Waunwyllt Colliery (BPW01) to the north, Webbers Pond (GGAT02522m) to the southeast, Pen-y-Lan Farm (GGAT03746m) to the west and Vale of Neath Railway Tunnel (SAMGM606) and Cwm Pit (SAMGM607) and Chimney Base (LB81752) to the north.
- 2.8.4 A selection of Historic Landscape Character Areas were visited and key views to and from the Development Area were photographed.
- 2.8.5 No visual interruption or effects were noted to the viewsheds from/to the any of the sites visited due to the presence of dense tree cover.
- 2.8.6 The survey was undertaken in fair weather that deteriorated during the site visit with cloud and heavy showers. Photographs were taken in breaks in the weather and a return visit was made in some instances to ensure good visibility was recorded.

3 Identified Heritage Assets

3.1 Sites of Archaeological and Historical Interest

3.1.1 A total of 20 heritage assets have been identified for assessment. One heritage asset has been identified within the Development Area; (GGAT03941m) 'Triangulation Point, Abercanaid' with a further 5 heritage assets within a 250m (radius) Study Area; and for the purposes of the assessment of setting and significance of heritage assets with a value of A or higher, a total of 6 have been identified within a 1km (radius) Study Area and 6 within a wider range of visibility identified within the 'Zone of Theoretical Visibility' (ZTV) (See Table 3).

3.1.2 The Development Area is located within the Landscape of Outstanding Historic Interest (HLW(MGI)2) 'Merthyr Tydfil' and specifically within the Historic Landscape Character Area (HLCA072) 'Waunwylt, Pen-y-lan and Graig Gethin'.

Table 3. Identified heritage assets

Fig ID	ID	Name	NGR	Period	Type	Designation	Designation ID	Value
Within Development Area								
1	GGAT03941m	Triangulation point	SO0519503499	Post-Medieval	Trig point	None	None	D
Within 250m Study Area								
2	GGAT02522	Webbers Pond, Gethin No 2 Pit	SO05560334	Post-Medieval	Pond	None	None	C
3	GGAT03745m	Sheepfold	SO0524403173	Post-Medieval	Sheepfold	None	None	D
4	GGAT06429	Air Shaft (Waunwylt Colliery)	SO0483303481	Post-Medieval	Shaft	None	None	C
5	GGAT06430m	Structure (Waunwylt Colliery)	SO0472903388	Post-Medieval	Structure	None	None	C
6	GGAT06431	Level (Waunwylt Colliery)	SO0493403485	Post-Medieval	Level	None	None	C
7	BPW01	Tramway (Waunwylt Colliery)	SO0482303438	Post-Medieval	Tramway	None	None	C
8	BPW02	Level	SO0461703431	Post-Medieval	Level	None	None	C
Within 1km								
Class A Monuments only								
9	GGAT02137m, NPRN309757, SAMGM572	Abercanaid Haystack Boiler	SO05560376	Post-Medieval	Haystack boiler	SAM	GM572	A
10	GGAT02412m, NPRN232778, SAMGM467	Cyfarthfa Canal	SO04220549	Post-Medieval	Canal	SAM	GM467	A
11	GGAT02500.4m, SAMGM606	Vale of Neath Railway Cutting	SO0434604154	Post-Medieval	Railway Cutting	SAM	GM606 near intact	A

Fig ID	ID	Name	NGR	Period	Type	Designation	Designation ID	Value
12	GGAT02500.5m, SAMGM606	Vale of Neath Railway Tunnel	SO0434604154	Post- Medieval	Railway Tunnel	SAM	GM606 near intact	A
13	GGAT02821m, NPRN33467, SAMGM607	Cwm Pit Mine	SO044043	Post- Medieval	Colliery	SAM	GM607	A
14	GGAT02826m, NPRN262079, SAMGM611	Cwm Glo Mine (Robbins Pit)	SO03820561	Post- Medieval	Colliery	SAM	GM611	A
	Further Afield	Based on Zone of Theoretical Visibility (ZTV) Analysis. Class A Monuments Only						
15	GGAT05202m, NPRN34853, SAMGM573	Merthyr Tramroad Tunnel	SO0559804908	Post- Medieval	Tramroad Tunnel	SAM	GM573	A
16	GGAT00066m, NPRN275885, GM496	Ffos-y-fran Deserted Iron Mining Village & Sarn Howell Ponds	SO0713805678	Post- Medieval	Industrial monument	SAM	GM494 & GM496	A
17	GGAT04553m, NPRN305664, SAMGM222	Merthyr Common Round Cairns	SO0784603964	Bronze Age	Cairns	SAM	GM222	A
18	GGAT01089m, NPRN18054, LB11396	Cyfarthfa Castle	SO0418607329	Post- Medieval	Country House	Grade I	LB11396	A
19	NPRN31777, LB11397	School at Cyfarthfa Castle	SO0410807369	Post- Medieval	School	Grade I	LB11397	A
20	GGAT02442, NPRN301660, PGWGM1	Cyfarthfa Castle Park and Garden	SO0432807430	Post- Medieval	Park	Grade II*	PGWGM1	A

4 Assessment of Heritage Assets

4.1 Potential Direct Impacts of the Development on Heritage Assets

- 4.1.1 The potential impact of the proposed Development on heritage assets has been assessed using the design information provided by BikePark Wales through their agents The Urbanists. The potential direct impact of the Development on heritage assets is confined to one site (GGAT03941m) 'Triangulation Point, Abercanaid' and proposed development area lies wholly within Historic Landscape Character Area (HLCA072) 'Waunwyllt, Pen-y-lan and Graig Gethin'.
- 4.1.2 The potential direct effect on (GGAT03941m) 'Triangulation Point, Abercanaid' has been assessed as None as it was not possible to locate the heritage asset during the site visit confirmed and it is assumed destroyed by 20th century forestry plantation. The potential direct effect on the (HLCA072) 'Waunwyllt, Pen-y-lan and Graig Gethin' have been assessed as Slight (see ASIDOHL2 below). The remaining heritage assets have been assessed as having no direct effect by the proposed Development.

4.2 Potential Indirect Impacts of the Development on Heritage Assets

- 4.2.1 For the purposes of the assessment of indirect impacts from the proposed development on heritage assets only sites of International and National importance have been assessed. These sites fall within a 1km Study Area and a wider Zone of Theoretical Visibility (ZTV) and are listed in Table 3 and described in Section 2.3.6.
- 4.2.2 The following sites in the 1km study were assessed for potential indirect impacts. The site visits established no intervisibility with the proposed development area and therefore no indirect effect.
- GGAT02137m, NPRN309757, SAMGM572 Abercanaid Haystack Boiler
 - GGAT02412m, NPRN232778, SAMGM467 Cyfarthfa Canal
 - GGAT02500.4m, SAMGM606 Vale of Neath Railway Cutting
 - GGAT02500.5m, SAMGM606 Vale of Neath Railway Tunnel
 - GGAT02821m, NPRN33467, SAMGM607 Cwm Pit Mine
 - GGAT02826m, NPRN262079, SAMGM611 Cwm Glo Mine (Robbins Pit)
- 4.2.3 Historic Landscape Character Area (HLCA072) 'Waunwyllt, Pen-y-lan and Graig Gethin' has been assessed as having a Very Slight indirect effect (see ASIDOHL2 below). Whilst the development will significantly change the character within the Development Area, its immediate setting within a woodland environment minimises inter-visibility between the site and other parts of the Historic Landscape Character Area and it therefore has little effect on its agricultural and extractive character as outlined in section 2.3.3. The overall effects to this landscape are discussed in greater detail below (ASIDOHL2 section).

4.2.4 The last column "Setting Effects Y/N" identifies those heritage assets that may have indirect visual impacts to the setting of the monument (Stage 1 as set out in *Setting of Historic Assets in Wales 2017 (The Historic Environment (Wales) Act 2016, Annex 6)*).

Fig ID	ID	Name		Period	Type	Designation	Designation ID	Value	Rarity	Documentation/Association	Group Value	Survival/Condition	Direct Effect	Significance of Direct Effect	Indirect Effect	Setting Effect Yes/No
Within Development Area																
1	GGAT03941m	Triangulation point	SO0519503499	Post-Medieval	Trig point	None	None	D	Low	Low	High	Destroyed	None	None	None	None
Within 250m																
2	GGAT02522	Webbers Pond, Gethin No 2 Pit	SO05560334	Post-Medieval	Pond	None	None	C	Medium	Moderate	None	Intact	None	None	None	None
3	GGAT03745m	Sheepfold	SO0524403173	Post-Medieval	Sheepfold	None	None	D	Low	Low	High	Unknown	None	None	None	None
4	GGAT06429	Air Shaft	SO0483303481	Post-Medieval	Shaft	None	None	C	Low	Moderate	High	Near destroyed/Poor	None	None	None	None
5	GGAT06430m	Structure	SO0472903388	Post-Medieval	Structure	None	None	C	Low	Moderate	High	Near destroyed/Poor	None	None	None	None
6	GGAT06431	Level	SO0493403485	Post-Medieval	Level	None	None	C	Low	Moderate	High	Near destroyed/Poor	None	None	None	None
7	BPW01	Tramway	SO0482303438	Post-Medieval	Tramway	None	None	C	Low	Moderate	High	Near destroyed/Poor	None	None	None	None
8	BPW02	Level	SO0461703431	Post-Medieval	Level	None	None	C	Low	Moderate	High	Near destroyed/Poor	None	None	None	None
Within 1km Based on Zone of Theoretical Visibility (ZTV) Analysis. Class A Monuments Only																
9	GGAT02137m, NPRN309757, SAMGM572	Abercanaid Haystack Boiler	SO05560376	Post-Medieval	Haystack boiler	SAM	GM572	A	High	Low	Low	Near intact/ Good	None	None	None	None
10	GGAT02412m, NPRN232778, SAMGM467	Cyfarthfa Canal	SO04220549	Post-Medieval	Canal	SAM	GM467	A	Medium	Moderate	High	Near destroyed/Poor	None	None	None	None
11	GGAT02500.4m, SAMGM606	Vale of Neath Railway Cutting	SO0434604154	Post-Medieval	Railway Cutting	SAM	GM606	A	Low	High	High	Near intact/ Moderate	None	None	None	None
12	GGAT02500.5m, SAMGM606	Vale of Neath Railway Tunnel	SO0434604154	Post-Medieval	Railway Tunnel	SAM	GM606	A	High	High	High	Intact/ Good	None	None	None	None
13	GGAT02821m, NPRN33467, SAMGM607	Cwm Pit Mine	SO044043	Post-Medieval	Colliery	SAM	GM607	A	High	Moderate	High	Near destroyed/Poor	None	None	None	None
14	GGAT02826m, NPRN262079, SAMGM611	Cwm Glo Mine (Robbins Pit)	SO03820561	Post-Medieval	Colliery	SAM	GM611	A	High	Moderate	High	Near destroyed/Poor	None	None	None	None
Further Afield Based on Zone of Theoretical Visibility (ZTV) Analysis. Class A Monuments Only																
15	GGAT05202m, NPRN34853, SAMGM573	Merthyr Tramroad Tunnel	SO0559804908	Post-Medieval	Tramroad Tunnel	SAM	GM573	A	Medium	High	High	Intact/ good	None	None	None	None
16	GGAT00066m, NPRN275885, GM496	Ffos-y-fran Deserted Iron Mining Village & Sarn Howell Ponds	SO0713805678	Post-Medieval	Industrial monument	SAM	GM494 & GM496	A	High	High	High	Near destroyed/Poor	None	None	None	None

Fig ID	ID	Name		Period	Type	Designation	Designation ID	Value	Rarity	Documentation/Association	Group Value	Survival/Condition	Direct Effect	Significance of Direct Effect	Indirect Effect	Setting Effect Yes/No
17	GGAT04553m, NPRN305664, SAMGM222	Merthyr Common Round Cairns	SO0784603964	Bronze Age	Cairns	SAM	GM222	A	Low	Low	High	Near destroyed/ Fair	None	None	None	None
18	GGAT01089m, NPRN18054, LB11396	Cyfarthfa Castle	SO0418607329	Post-Medieval	Country House	Grade I	LB11396	A	Medium	High	High	Intact/good	None	None	None	None
19	NPRN31777, LB11397	School at Cyfarthfa Castle	SO0410807369	Post-Medieval	School	Grade I	LB11397	A	Medium	High	High	Intact/good	None	None	None	None
20	GGAT02442, NPRN301660, PGWGM1	Cyfarthfa Castle Park and Garden	SO0432807430	Post-Medieval	Park	Grade II*	PGWGM1	A	Medium	High	High	Intact/good	None	None	None	None

Table 4. Assessment of direct and indirect effects on heritage assets

4.3 Setting and Significance – Stage 1

- 4.3.1 Potential indirect impacts of the Development on heritage assets are confined to the impacts upon the setting of International and National value heritage assets (A* and A class), these include Scheduled Ancient Monuments, Registered Landscapes, Parks and Gardens and sometimes Grade I and I* Listed Buildings. Grade II and II* buildings are considered if their setting includes or is included with a Registered Landscape or Park and Garden.
- 4.3.2 For the purposes of the assessment of setting and significance of heritage assets with a value of A or higher, no assets have been identified within a 250m (radius) Study Area. However, six Value A sites were considered for assessment within a 1km (radius) Study Area and a further five Value A sites located beyond 1km (radius) were considered for assessment based on Zone of Theoretical Visibility (ZTV) Analysis.
- 4.3.3 For the purposes of the assessment of setting and significance of Registered Landscapes, Parks and Gardens, the proposed development area is wholly within the Merthyr Tydfil Landscape of Outstanding Historic Interest, which is therefore considered to have a possible effect; in particular HLCA 072 ‘Waunwyllt, Pen-y-lan and Graig Gethin’.
- 4.3.4 Summary of Significance and Setting**
- 4.3.5 It is considered that there are no indirect effects to the setting or significance of the identified heritage assets noted above and detailed in Table 4. An assessment of potential landscape effects of the proposed development, in particular the direct and indirect effects to historic landscapes on the Register, have been completed below (see ASIDOHL2 section).

5 Mitigation Recommendations

- 5.1.1 The assessment has identified the potential direct and indirect effects of the proposed development together with an assessment of the setting and significance of high value heritage assets. The proposed development area contains a single identified heritage asset 'Triangulation Point, Abercanaid' (GGAT03941m), however, no trace of this site was identifiable during the site visits and it is assumed destroyed by the 20th century forestry plantation. No further archaeological sites were noted within the proposed development area, which is comprised of largely landscaped car parking originally for the Gethin Woodland site and reutilised for parking for BikePark Wales. The 20th century forestry plantation has significantly impacted upon former field boundaries within the forest with little of these features identifiable on the ground.
- 5.1.2 The potential impact of the proposed development on heritage assets is confined to one Historic Landscape Character Area (HLCA 072) 'Waunwyllt, Pen-y-lan and Graig Gethin' which has been assessed as having a Slight overall significance of the impact of development on the historic landscape.
- 5.1.3 No mitigation is deemed necessary for the potential direct effects on Triangulation Point, Abercanaid' (GGAT03941m) and (HLCA 072) 'Waunwyllt, Pen-y-lan and Graig Gethin' as it is considered unlikely that archaeological remains will be disturbed during the proposed ground works.

6 Assessment of Residual Impacts

- 6.1.1 The proposed development will involve the small loss of some forestry areas and alteration to existing car parking areas. However, the nature of the proposed development and sensitive proposals for the erection of the 36 camping pods and five chalets, shower/toilet block, play and picnic area and new parking areas within the woodland complimented by further sensitive planting will reduce any residual negative impacts.

7 Assessment of the Significance of the Impact of the Development on Historic Landscape Areas (ASIDOHL2)

7.1 Project Background

- 7.1.1 Black Mountains Archaeology Ltd/Archaeoleg Mynydd Du Cyf was commissioned by Bike Park Wales, through their agents The Urbanists, to carry out an Assessment of the Significance of Development on Historic Landscape (ASIDOHL 2) on the proposed development of 36 camping pods and five chalets, erection of shower/toilet block and creation of play and picnic area. Construction of new parking area (141 spaces) with overflow carpark (85 spaces), together with a trail maintenance yard, new highway access routes, ground profile works, drainage, infrastructure and landscape works at Bike Park Wales, Gethin Woodland Centre, Abercanaid, Merthyr Tydfil, CF48 1YZ.
- 7.1.2 The development area is located within the CADW/ICOMOS *Landscape of Outstanding Historic Interest of Merthyr Tydfil (HLW(MGI)2)*. Designated in 2001, Merthyr Tydfil occupies a natural basin at the head of the Taff Valley and is celebrated as “probably the largest iron-making town in the world in the early to mid-19th Century...(that) rapidly transformed from a modest village in the 1750s to the largest town in Wales by 1801” (CADW 1998, 47). The Merthyr landscape contains a significant number of relics of this industrial past including remains of a number of “large ironworks, features relating to coal mining, waterpower leats, an early iron bridge, power and transportation systems including early tram roads, terraced industrial housing and Cyfarthfa Castle”. The present development area is located wholly within Historic Landscape Character Area (HLCA) 072 Waunwyllt, Pen-y-lan and Graig Gethin agricultural landscape (Roberts 2003, 148).

7.2 The Register of Historic Landscapes and Historic Landscape Characterisation

- 7.2.1 CADW, and the Countryside Council for Wales (now Natural Resources Wales) with support from the four regional Welsh Archaeological Trusts (WATs), published together with the International Council on Monuments and Sites (ICOMOS UK) the first part (2.1) of the *Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales* (CADW and ICOMOS 1998). Part 1 deals with *Registered Parks and Gardens*, Part 2.1 *Landscapes of Outstanding Historic Interest* and Part 2.2 regional *Landscapes of Special Historic Interest*. CADW then implemented an ambitious programme of Historic Landscape Characterisation in the early 2000s, which was undertaken by the four regional Welsh Archaeological Trusts (WATs), which further refined the definitions and character of the constituent parts of the individual historic landscapes. Each historic landscape area being sub-divided into a number of Historic Landscape Character Areas (HLCAs).

- 7.2.2 CADW note "...the Register is a means of recognising historic landscapes as one of the nation's most valuable cultural assets, and as special, often fragile and irreplaceable, parts of our heritage". The *Historic Environment (Wales) Act 2016* provides a statutory duty to maintain the registers and the registers are key factors in the planning process. Any development likely to directly or indirectly (visual) effect a statutory designated heritage asset or high value undesignated heritage asset and its setting will likely require 'consultation before grant of permission' under the *Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016, schedule 4 (1)(i) and (ii)* if the proposed development meets any of the following criteria:
- development likely to affect the site of a registered historic park or garden or its setting.
 - development is within a registered historic landscape that requires an Environmental Impact Assessment and ASIDOHL2.

7.3 Methodology

- 7.3.1 The method for conducting an ASIDOHL2 assessment is set out by CADW in ASIDOHL2 Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (2nd Edition 2007) (Appendix V). The assessment utilises the HLCAs as a basic unit of measurement, which can be variable as each HLCA may not be entirely representative of the wider historic landscape character and value (e.g an agricultural character area forming part of an industrial historic landscape). Nevertheless, the HLCAs contribute to the value of the wider historic landscape in ASIDOHL2 terms. The ASIDOHL2 assessment is broken into five stages. Stage 1 is the compilation of contextual data, usually in the form of baseline information for an archaeological desk-based assessment (see above). Stages 2-4 assesses each HLCA for direct and indirect effects by the proposed development and Stage 5 combines the results of Stages 2-4 to produce an assessment of the overall impact on the Historic Landscape (CADW 2007, Table 1, 15).
- 7.3.2 Heritage assets are categorised according to the only values that are nationally agreed in the Department of Transport/Welsh Office/Scottish Office Design Manual for Roads and Bridges Vol. 11 Section 3 Part 2 (HA 208/07 Cultural Heritage) 2007, amended 2009 (DMRB 2007) (see Table 1 above). CADW published their Conservation Principles for the sustainable management of the historic environment in Wales in 2011. These principles provide the basis upon which CADW discharges its statutory duties, makes decisions or offers advice about changes to historic assets. CADW further advise that the Conservation Principles should also be used by others (including owners, developers and other public bodies) to assess the potential impacts of a development proposal on the significance of any historic asset/assets and to assist in decision-making where the historic environment is affected by the planning process (PPW 2016).
- 7.3.3 There are four values that need to be considered when assessing significance and these are set out in CADW's *Conservation Principles for the sustainable management of the historic environment in Wales*: Evidential value; Historical value; Aesthetic value and Communal value.

8 Assessment

8.1 Registered Landscapes, Parks and Gardens

- 8.1.1 The proposed development area lies within the *Landscape of Outstanding Historic Interest of Merthyr Tydfil (HLW(MGI)2)* (CADW/ICOMOS 1998), totalling an area approximately 47.4km² in size, and is located wholly within HLCA 072 'Waunwyllt, Pen-y-lan and Graig Gethin', which is characterised as an "agricultural landscape of dispersed post-medieval settlement with upland sheep farming; irregular evolved field pattern of drystone walled enclosures largely hidden in forestry; extractive landscape associated with the steam coal trade" (Roberts 2003, 148). The proposed development area is currently forestry parking and metalled tracks associated with its former use as Gethin Woodland Park. An area of deciduous woodland survives in the eastern part of the proposed development area. Forestry plantation planted in the 20th century dominates the remaining areas.
- 8.1.2 There is a single heritage asset identified within the proposed development area (GGATHER03941m), a trig point noted on OS 6 inch 2nd edition 1900 map. The site walkover could not find any trace of this heritage asset and it is presumed destroyed by 20th century forest plantation. Elements of the Post-medieval agricultural landscape survive just outside the proposed development area, e.g. Pen-y-lan Farm (GGATHER03746m) and Sheepfold (GGATHER03745m), as do later Post-medieval Industrial remains such as Webbers Pond, Gethin No.2 Pit (GGATHER02522m) and Waunwyllt Colliery (Level), air shaft and tramroad (GGATHER06431). There are no Scheduled Ancient Monuments (SAMs) in the proposed development area or 250m study area. A 1km buffer area was applied around the proposed development area that identified three SAMs: Abercanaid haystack boiler (SAMGm572), Vale of Neath railway cutting and tunnel portal (SAMGm606) and Cwm Pit and head of railway (SAMGm607). The site walkover established that these SAMs and their setting do not have any intervisibility with the proposed development area due to the terrain and forestry tree cover.
- 8.1.3 Visibility analysis has been carried out utilising the 2m DTM and 2 DSM LiDAR datasets (downloaded from Lle – Geo-Portal for Wales) to generate Zones of Theoretical Visibility (ZTVs) from and to the proposed development area (Figures 1.2 and 1.3). No additional registered historic landscapes are visible to or from the proposed development area. The closest registered landscapes being *Gelligaer Common HLW (MGI) 4*, 2.5km east; *East Fforest Fawr and Mynydd-y-Glog HLW (MGI) 3*, 14.1km northeast; *The Rhondda HLW (MGI) 5*, 6.5km southwest and the *Blaenavon World Heritage Site HLW (Gt) 1*, 12km northeast. A single registered park and garden was identified by the ZTV analysis; Cyfarthfa Castle (PGW(Gm)1(MER)) is located 3.5km to the north of the proposed development area. Three SAMs were also identified by the ZTV analysis as being potentially indirectly affected; Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573) 1.3km Northeast, the Ffos-y-fran Deserted Iron Mining Village (SAMGm496) and also at Ffos-y-fran the Sarn Howell Pond and Watercourses (SAMGm494), both c2.5km to the northeast.

8.1.4 A further SAM was identified by the ZVTs located on Merthyr Common (Mynydd Cilfach-yr-encil) 2.7km to the east (Merthyr Common Round Cairns SAMGm222). The SAM is comprised of six Bronze Age burial cairns aligned north-south and dispersed over several kilometres along the ridgeline of Mynydd Cilfach-yr-encil.

8.1.5 The visibility analysis (ZTVs) has identified the potential indirect effect for up to a further 44-character areas, which are listed below:

- HLCA 001 Merthyr Tydfil: Historic and Commercial Core
- HLCA 002 Williamstown, Cae-Pent-Tywyll, Tydfil's Well and Morgan Town
- HLCA 003 Penydarren Park and Gwaelod-y-Garth
- HLCA 004 Penydarren Iron Works Area
- HLCA 005 Penydarren
- HLCA 006 Merthyr Tydfil, South: Plymouth Street Area
- HLCA 007 Dowlais
- HLCA 008 Dowlais Iron Works Area
- HLCA 010 Ynys Fach Iron Works Area
- HLCA 011 Llwyn-Celyn and Ynys Fach
- HLCA 012 Cyfathfa Iron Works Cinder Tips
- HLCA 013 Cyfarthfa Castle and Park
- HLCA 014 River Taff Canal and Railway Corridor
- HLCA 015 Taff Vale Industrial and Business Parks
- HLCA 016 Upper Abercanaid
- HLCA 018 Abercanaid and Llwyn-yr-Eos
- HLCA 019 Penydarren Tramroad Corridor
- HLCA 020 Pentrebach
- HLCA 021 Clyn-Mil and Wernlas Opencast Area
- HLCA 022 Clyn-Mil, Pencoedcae and Trebeddau
- HLCA 023 Clyn-Mil Workings
- HLCA 024 Graweth and Pen-y-Lan
- HLCA 025 Nantyrolyn and Bwllfa Workings
- HLCA 026 Cilfach-yr-Encil
- HLCA 028 Taff Vale Railway Corridor
- HLCA 029 Ivor Iron Works Area
- HLCA 031 Merthyr Common Central
- HLCA 034 Thomas Town (West)
- HLCA 036 Thomas Town (East) and Penyard
- HLCA 037 Ysgubor Newydd
- HLCA 038 Mountain Hare
- HLCA 039 Ffos-y-fran
- HLCA 040 Incline Top
- HLCA 048 Cwm Blacks

- HLCA 049 Bon-y-maen
- HLCA 050 Gurnos and Galon-Uchaf
- HLCA 052 Gurnos Farm and Bunker's Hill
- HLCA 053 Y Graig, Gurnos
- HLCA 054 Lakeside Gardens
- HLCA 055 Cefn Coed-y-Cymmer
- HLCA 056 A465(T) Heads of the Valley Road
- HLCA 077 Merthyr Common
- HLCA 078 Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun
- HLCA 079 A470(T) Road

8.1.6 The full descriptions of each of these character areas can be found in the Merthyr Tydfil historic landscape characterisation report (Roberts 2003) and on the Glamorgan-Gwent Archaeological Trust's Historic Landscape Characterisation webpages, which can be found here:

8.1.7 http://www.ggat.org.uk/cadw/historic_landscape/Merthyr_Tydfil/English/Merthyr_Main.htm.

8.2 Stage 2: Assessment of Direct, Physical Impacts on the registered historic landscape

8.2.1 The proposed development area totals 3.544ha and lies wholly with HLCA 072, which has a total area of 151.2ha. The maximum area of the historic landscape character area that could be directly affected by the proposed development represents 2.34%, which is 0.07% of the total registered historic landscape area.

8.2.2 There is a single heritage asset identified within the proposed development area (GGATHER03941m), a trig point noted on OS 6 inch 2nd edition 1900 map. The site walkover could not find any trace of this heritage asset and it is presumed destroyed by 20th century forest plantation. Elements of the Post-medieval agricultural landscape survive just outside the proposed development area, e.g. Pen-y-lan Farm (GGATHER03746m) and Sheepfold (GGATHER03745m), as do later Post-medieval Industrial remains such as Webbers Pond, Gethin No.2 Pit (GGATHER02522m) and Waunwylt Colliery (Level), air shaft and tramroad incline (GGATHER06431).

Table 5. Assessment of Direct, Physical Impacts

ASIDOHL2 Stage 2: Assessment of Direct, Physical Impacts on Historic Character Area HLCA 072				
(a) Absolute Impact (Loss of Area)			Magnitude and Score	
3.544ha of a total of 4740ha = 0.07%			Very Slight - 1	
(B)Relative and Landscape Impacts (Loss of known Characteristics or Elements) and Scores				
Element / % of Loss	Category	Magnitude	Landscape Value	Landscape Visual Effect
Post-medieval agricultural and settlement landscape – less than 1%	C – 2	Very Slight – 1	Very Low – sites may be located under forestry cover, but definitive examples survive outside development area – 1	Very Slightly Reduced – 1

Post-medieval Industrial Transport Corridor, railways, tramroads and tracks – less than 1%	C – 2	Very Slight – 1	Very Low – no railways or tramroads present, sites may be located under forestry cover, but definitive examples survive outside development area – 1	Very Slightly Reduced – 1
Post-medieval Industrial Extractive Landscape – less than 1%	C – 2	Very Slight – 1	Very Low – no collieries or levels present, sites may be located under forestry cover, but definitive examples survive outside development area – 1	Very Slightly Reduced – 1
Summary of the Magnitude of Direct, Physical Impacts on Historic Character Area HLCA 072				
Score			Grading	
6			Slight	
Summary of Overall Magnitude of Direct, Physical Impacts on Historic Landscape Character Areas				
HLCA	Score		Grading	
HLCA072	6		Slight	

8.3 Stage 3: Assessment of Indirect, Physical Impacts on the registered historic landscape

- 8.3.1 Stage 3 describes and quantifies indirect impacts of the development on theoretically and physically visible registered landscapes, individual HLCAs and/or HLCAs connected by setting to HLCAs in the development area. Indirect effects are sub-divided into two potential impacts, Indirect Physical impacts and Indirect non-physical Visual impacts.
- 8.3.2 Physical impacts can result from an increased risk of exposure, increased management needs, the severance or fragmentation of related elements, frustration or cessation of historic land-use practices and the frustration of access leading to decreased opportunities for education and enjoyment of the amenity elements (CADW 2007, 20, i-v).
- 8.3.3 Visual Impacts (non-physical) can occur as a result of impacts to elements of an HLCA from which the development can be seen (views to and from) or obstructed (direct line of sight); the creation of inappropriate visual connections and finally the visual impact of the development area itself in relation to the existing historic character of the HLCA when considering its form or appearance (CADW 2007, 21, i-iv)
- 8.3.4 The magnitude of indirect impacts has been assessed using ZTVs (see above) in GIS computer modelling, several site visits, contour maps, aerial photographs and taking into consideration existing surface features such as forestry and the built environment using digital surface models (DSM) generated by LiDAR. Indirect Visual Effects have been assessed utilising the criteria set out in 1.4 above in accordance with ASIDOHL2 guidelines.

- 8.3.5 A single registered park and garden was identified by the ZTV analysis; Cyfarthfa Castle and Park (PGW(Gm)1(MER) is located 3.5km to the north of the proposed development area (HLCA 013). Three SAMs were also identified by the ZTV analysis as being potentially indirectly affected; Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573) 1.3km Northeast (HLCA 019), the Ffos-y-fran Deserted Iron Mining Village (SAMGm496; HLCA 077) and also at Ffos-y-fran the Sarn Howell Pond and Watercourses (SAMGm494; HLCA 031), both c2.5km to the northeast. A further SAM was identified by the ZTVs located on Merthyr Common (Mynydd Cilfach-yr-encil) 2.7km to the east (Merthyr Common Round Cairns SAMGm222; HLCA 077). The SAM is comprised of six Bronze Age burial cairns aligned north-south and dispersed over several kilometres along the ridgeline of Mynydd Cilfach-yr-encil. The visibility analysis (ZTVs) has also identified the potential indirect effect for up to a further 44 historic landscape character areas, which are listed above.
- 8.3.6 Indirect, Physical Impacts (a)
- 8.3.7 While theoretically visible, the views to and from Cyfarthfa Castle and Park (PGW(Gm)1(MER; HLCA 013) are obscured by the trees in the parkland and where a break in the canopy allowed the proposed development area was also obscured by 20th century forestry plantation, albeit with small treeless patches representing the larger forestry car parking. Likewise, while theoretically visible the views to and from Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573; HLCA 019) are obscured by tree cover along for the former tramroad. The mountain bike trails are visible on the mountain from the Tramroad Tunnel but the proposed development area is largely obscured by trees, with some small treeless patches representing the larger forestry car parking.
- 8.3.8 The Ffos-y-fran Deserted Iron Mining Village (SAMGm496; HLCA 077) and Sarn Howell Pond and Watercourses (SAMGm494; HLCA 031) are located on Merthyr Common some distance from the proposed development area. While some of the mountain bike trails are visible as tiny sinuous lines on the other side of the valley, the proposed development area is obscured by forestry. Likewise, the giant spoil storage tips of the Ffos-y-fran surface mine are visible from the proposed development area but the two SAMs are too distant for any meaningful views.
- 8.3.9 The six Bronze Age barrows (SAMGm222; HLCA 077) on Merthyr Common (Mynydd Cilfach-yr-encil) have commanding views over the Taff Valley. The proposed development area is some distance away and not clearly visible, although the small treeless patches representing the larger forestry car parking can just be made out with the mountain bike trails visible as tiny sinuous lines.
- 8.3.10 The proposed development area is located on the western side of the Taff Valley at a height of around 250mOD and therefore theoretically visible to a total of 44 HLCAs. The proposed development comprises 36 camping pods and five chalets, erection of shower/toilet block and creation of play and picnic area, new parking and overflow carpark. The proposed development area is currently forestry plantation and the footprint of the proposed development has been designed to be sensitive to the existing forest. Further sensitive tree planting and soft landscaping will help mitigate the proposed visual footprint within the 20th century forestry plantation. Therefore, it is considered that there will be no indirect physical impacts to the identified 44 HLCAs.

8.3.11 Based on the present assessment it is considered that the proposed development will have no permanent indirect physical impact on any of the statutory designated landscapes, sites and monuments noted above. As a result, the first part of Stage 3a has not been carried out. No physical change from an increased risk of exposure, increased management needs, the severance or fragmentation of related elements, frustration or cessation of historic land-use practices and the frustration of access leading to decreased opportunities for education and enjoyment of the amenity elements will occur (CADW 2007, 20, i-v).

8.3.12 Indirect (non-physical) Visual Impacts (b)

8.3.13 The indirect visual impacts to sites that lie with the proposed development area and 250m buffer area have been assessed above (see Table 4). A 1km study area was also applied to identify potential impacts upon the setting of International and National value heritage assets (A* and A class), these include Scheduled Ancient Monuments, Registered Landscapes, Parks and Gardens and sometimes Grade I and I* Listed Buildings. The visibility analysis (ZTVs) has identified the potential indirect effect for up to a further 44 historic landscape character areas. Indirect Visual Impacts have been assessed using ZTVs (see above) in GIS computer modelling, several site visits, contour maps, aerial photographs and taking into consideration existing surface features such as forestry and the built environment using digital surface models (DSM) generated by LiDAR. Following detailed assessment and site visits, it is considered that of the 44 HLCAs initially identified by ZTVs as potentially visible only 15 HLCAs (set out below) have the potential for indirect (non-physical) visual impacts. The remainder disregarded because of a lack of visibility due to the inter-visibility of HLCAs and the proposed development area being obscured by the built environment, trees and vegetation and topography

8.3.14 HLCAs with the potential for indirect (non-physical) visual impacts:

- HLCA 014 River Taff Canal and Railway Corridor
- HLCA 019 Penydarrren Tramroad Corridor
- HLCA 020 Pentrebach
- HLCA 021 Clyn-Mil and Wernlas Opencast Area
- HLCA 022 Clyn-Mil, Pencoedcae and Trebeddau
- HLCA 023 Clyn-Mil Workings
- HLCA 024 Graweth and Pen-y-Lan
- HLCA 025 Nantyrodyn and Bwllfa Workings
- HLCA 026 Cilfach-yr-Encil
- HLCA 031 Merthyr Common Central
- HLCA 037 Ysgubor Newydd
- HLCA 039 Ffos-y-fran
- HLCA 048 Cwm Blacks
- HLCA 077 Merthyr Common
- HLCA 079 A470(T) Road

Table 6. Stage 3b: Assessment of Indirect (non-physical) Impacts

ASIDOHL2 Stage 3b: Assessment of Indirect (non-physical) Impacts on Historic Character Areas												
HLCA	Views To/From Element Partially Altered	Magnitude & Score	Visual Connections between Related Elements occluded/obstructed	Impacts to...							Total Scores	
				Magnitude & Score	(inappropriate) Visual Connections between Elements not intended to be Inter-visible	Magnitude & Score	Development Form (scale, distribution of features)	Magnitude & Score	Development Appearance (size, shape, colour of features)	Magnitude & Score	Assessment Score (average)	Overall Magnitude of Indirect Impacts on 28 Point Scale
HLCA 014	A – 4	Very Slight – 1	None	0	None	0	4	Very Slight – 1	4	Very Slight – 1	5	$(0 + 5 = 5) 5 \times 28 \div 20 = 7$ – Slight
HLCA 019	A – 4	Very Slight – 1	None	0	None	0	4	Very Slight – 1	4	Very Slight – 1	5	$(0 + 5 = 5) 5 \times 28 \div 20 = 7$ – Slight
HLCA 020	C – 2	Very Slight – 1	None	0	None	0	2	Very Slight – 1	2	Very Slight – 1	3	$(0 + 3 = 3) 3 \times 28 \div 20 = 4$ –Slight
HLCA 021	D – 1	Very Slight – 1	None	0	None	0	1	Very Slight – 1	1	Very Slight – 1	2	$(0 + 2 = 2) 2 \times 28 \div 20 = 3$ – Very Slight
HLCA 022	C – 2	Very Slight – 1	None	0	None	0	2	Very Slight – 1	2	Very Slight – 1	3	$(0 + 3 = 3) 3 \times 28 \div 20 = 4$ –Slight
HLCA 023	D – 1	Very Slight – 1	None	0	None	0	1	Very Slight – 1	1	Very Slight – 1	2	$(0 + 2 = 2) 2 \times 28 \div 20 = 3$ – Very Slight
HLCA 024	C – 2	Very Slight – 1	None	0	None	0	2	Very Slight – 1	2	Very Slight – 1	3	$(0 + 3 = 3) 3 \times 28 \div 20 = 4$ –Slight
HLCA 025	C – 2	Very Slight – 1	None	0	None	0	2	Very Slight – 1	2	Very Slight – 1	3	$(0 + 3 = 3) 3 \times 28 \div 20 = 4$ –Slight
HLCA 026	C – 2	Very Slight – 1	None	0	None	0	2	Very Slight – 1	2	Very Slight – 1	3	$(0 + 3 = 3) 3 \times 28 \div 20 = 4$ –Slight
HLCA 031	A – 4	Very Slight – 1	None	0	None	0	4	Very Slight – 1	4	Very Slight – 1	5	$(0 + 5 = 5) 5 \times 28 \div 20 = 7$ – Slight
HLCA 037	D – 1	Very Slight – 1	None	0	None	0	1	Very Slight – 1	1	Very Slight – 1	2	$(0 + 2 = 2) 2 \times 28 \div 20 = 3$ – Very Slight
HLCA 039	A – 4	Very Slight – 1	None	0	None	0	4	Very Slight – 1	4	Very Slight – 1	5	$(0 + 5 = 5) 5 \times 28 \div 20 = 7$ – Slight
HLCA 048	D – 1	Very Slight – 1	None	0	None	0	1	Very Slight – 1	1	Very Slight – 1	2	$(0 + 2 = 2) 2 \times 28 \div 20 = 3$ – Very Slight
HLCA 077	A – 4	Very Slight – 1	None	0	None	0	4	Very Slight – 1	4	Very Slight – 1	5	$(0 + 5 = 5) 5 \times 28 \div 20 = 7$ – Slight
HLCA 079	C – 2	Very Slight – 1	None	0	None	0	2	Very Slight – 1	2	Very Slight – 1	3	$(0 + 3 = 3) 3 \times 28 \div 20 = 4$ –Slight
Combined HLCA Assessment Score and Overall Magnitude of Indirect Impacts										51 ÷ 15 = 3.4 = 3 (rounded)		Very Slight

Note. Indirect Visual Effects (magnitude and score) have been assessed based on professional judgement utilising the criteria set out in section 1.4 above and in accordance ASIDOHL2 guidelines (CADW 2007, 20-22).

8.4 Stage 4: Evaluation of Relative Importance

8.4.1 Stage 4 evaluates the relative importance of parts or elements (sites, monuments and landscapes) of HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to:

- (a) the whole of the HLCA(s) concerned, and or;
- (b) the whole of the Historic Landscape on the Register, followed by;
- (c) an evaluation of the relative importance of the HLCA(s) concerned within the national context.

8.4.2 Stage 4 should then be completed with a determination of the average, overall value of all the historic character areas (or parts thereof) affected (CADW 2007, 23-28).

8.4.3 The criteria for determining the relative importance or value (of HLCAs and their constituent elements or parts) in Stage 4, steps (a), (b) and (c) are as follows (CADW 2007, 24-25):

- Rarity
- Representativeness
- Documentation
- Group value
- Survival
- Condition
- Coherence
- Integrity
- Potential
- Amenity
- Associations

8.4.4 As noted above, the proposed development area totals 3.544ha and lies wholly with HLCA 072, which has a total area of 151.2ha. The maximum area of the historic landscape character area that could be directly affected by the proposed development represents 2.34%, which is 0.07% of the total registered historic landscape area. A further 15 HLCAs have been identified as having an indirect effect (see Stage 3). The indirect impacts to three HLCAs are imperceptible to such a degree that it is considered that they will not add to the relative importance evaluation in relation to the nature and extent of the proposed development. These are HLCA 021 Clyn-Mil and Wernlas Opencast Area, where the landscape while industrial in nature is substantially altered (20th century restored opencast); HLCA 037 Ysgubor Newydd, which is modern housing and roads and HLCA 048 Cwm Blacks reclaimed 19th century works.

8.4.5 A total of 13 HLCAs are considered below for the relative importance of parts or elements of HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development:

- HLCA 072 Waunwyllt, Pen-y-lan and Graig Gethin
- HLCA 014 River Taff Canal and Railway Corridor
- HLCA 019 Penydarrren Tramroad Corridor

- HLCA 020 Pentrebach
- HLCA 022 Clyn-Mil, Pencoedcae and Trebeddau
- HLCA 023 Clyn-Mil Workings
- HLCA 024 Graweth and Pen-y-Lan
- HLCA 025 Nantyrodyn and Bwllfa Workings
- HLCA 026 Cilfach-yr-Encil
- HLCA 031 Merthyr Common Central
- HLCA 039 Ffos-y-fran
- HLCA 077 Merthyr Common
- HLCA 079 A470(T) Road

8.4.6 HLCA 072 Waunwyllt, Pen-y-lan and Graig Gethin

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity					✓	
Representativeness			✓			
Documentation					✓	
Group value					✓	
Survival				✓		
Condition				✓		
Coherence			✓			
Integrity						✓
Potential			✓			
Amenity		✓				
Associations				✓		
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity					✓	
Representativeness					✓	
Documentation					✓	
Group value					✓	
Survival				✓		
Condition				✓		
Coherence			✓			
Integrity				✓		
Potential				✓		
Amenity		✓				
Associations				✓		
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context						
Rarity					✓	
Representativeness					✓	
Documentation					✓	
Group value					✓	
Survival				✓		
Condition				✓		
Coherence				✓		
Integrity				✓		

Potential		✓			
Amenity	✓				
Associations			✓		
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
(1 x V High @ 5) + (3 x High @ 4) + (3 x Med @ 3) + (3 x Low @ 2) + (1 x V Low @ 1) = 33 x 55 ÷ 100 = 18.15	(1 x V High @ 5) + (1 x High @ 4) + (5 x Med @ 3) + (4 x Low @ 2) = 32 x 55 ÷ 100 = 17.6	(1 x V High @ 5) + (1 x High @ 4) + (5 x Med @ 3) + (4 x Low @ 2) = 32 x 55 ÷ 100 = 17.6	(18.15 + 17.6 + 17.6) ÷ 3 = 17.78	18 – Low	

8.4.7 The historic landscape has been characterised as “Agricultural landscape of dispersed post-medieval settlement associated with upland sheep farming; irregular evolved field pattern of drystone walled-enclosures largely hidden in forestry; Ancient Woodland and 20th century forestry; extractive landscape associated with the steam coal trade” Roberts 2003, 148).

8.4.8 There is a single heritage asset identified within the proposed development area (GGATHER03941m), a trig point noted on OS 6 inch 2nd edition 1900 map. The site walkover could not find any trace of this heritage asset and it is presumed destroyed by 20th century forest plantation. Elements of the Post-medieval agricultural landscape survive just outside the proposed development area, e.g. Pen-y-lan Farm (GGATHER03746m) and Sheepfold (GGATHER03745m), as do later Post-medieval Industrial remains such as Webbers Pond, Gethin No.2 Pit (GGATHER02522m) and Waunwyllt Colliery (Level), air shaft and tramroad incline (GGATHER06431).

8.4.9 HLCA 014 River Taff Canal and Railway Corridor

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity				✓		
Representativeness				✓		
Documentation				✓		
Group value			✓			
Survival					✓	
Condition					✓	
Coherence				✓		

Integrity				✓	
Potential			✓		
Amenity			✓		
Associations			✓		
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity				✓	
Representativeness			✓		
Documentation				✓	
Group value				✓	
Survival				✓	
Condition				✓	
Coherence				✓	
Integrity				✓	
Potential			✓		
Amenity				✓	
Associations				✓	
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score		Overall Score 0 – 100
	(1 x High @ 4) + (7 x Med @ 3) + (3 x Low @ 2) = 31 x 55 ÷ 100 = 17.05	(2 x Med @ 3) + (9 x Low @ 2) = 24 x 55 ÷ 100 = 13.2	(17.05 + 13.2) ÷ 2 = 15.125		15 – Low

8.4.10 The historic landscape has been characterised as “Main north-south communication corridor canal, tramroad, industrial and public railroad corridor; 18th and 19th century extractive features, principally pits, levels and mines and associated water management features; industrial housing; important historic and cultural associations; Ancient Woodland” (Roberts 2003, 73).

8.4.11 HLCA 019 Penydarrren Tramroad Corridor

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity		✓				
Representativeness			✓			
Documentation			✓			
Group value			✓			

Survival		✓			
Condition			✓		
Coherence			✓		
Integrity				✓	
Potential	✓				
Amenity		✓			
Associations	✓				
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity	✓				
Representativeness		✓			
Documentation		✓			
Group value		✓			
Survival		✓			
Condition			✓		
Coherence			✓		
Integrity				✓	
Potential	✓				
Amenity		✓			
Associations	✓				
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(3 x V High @ 5) + (5 x High @ 4) + (2 x Med @ 3) + (1 x Low @ 2) = 43 x 55 ÷ 100 = 23.65	(3 x V High @ 5) + (5 x High @ 4) + (2 x Med @ 3) + (1 x Low @ 2) = 43 x 55 ÷ 100 = 23.65	(23.65 + 23.65) ÷ 2 = 23.65	24 – Moderate	

8.4.12 The historic landscape has been characterised as “Corridor of nationally important Penydarren Tramroad and other mineral lines, Plymouth Iron Works site; historic associations; site of industrial housing; mining features” (Roberts 2003, 80). The HLCA contains one SAM, Trevithick’s Tramroad Tunnel (SAMGm573), and despite largescale reclamation in the 1970s there remains a significant potential for buried remains of the tramroad and other elements of the Penydarren Ironworks.

8.4.13 HLCA 020 Pentrebach

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						

(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register					
Rarity				✓	
Representativeness				✓	
Documentation				✓	
Group value				✓	
Survival					✓
Condition				✓	
Coherence				✓	
Integrity					✓
Potential				✓	
Amenity				✓	
Associations				✓	
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity				✓	
Representativeness				✓	
Documentation				✓	
Group value				✓	
Survival					✓
Condition				✓	
Coherence				✓	
Integrity					✓
Potential					✓
Amenity					✓
Associations				✓	
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(9 x Low @ 2) + (2 x V Low @ 1) = 20 x 55 ÷ 100 = 11	(7 x Low @ 2) + (4 x V Low @ 1) = 18 x 55 ÷ 100 = 9.9	$(11 + 9.9) \div 2 = 10.45$	10– Low	

8.4.14 The historic landscape has been characterised as “Industrial settlement: pre-1850s isolated industrial rows with early 20th century colliery based expansion and later social housing; transport and water management features, ironmaster’s residence” (Roberts 2003, 82). Some pre-1850s housing survives but the landscape character today is largely the result of early 20th century industrial, and later 20th century social housing.

8.4.15 HLCA 022 Clyn-Mil, Pencoedcae and Trebeddau

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						

Potential					
Amenity					
Associations					
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register					
Rarity				✓	
Representativeness			✓		
Documentation				✓	
Group value			✓		
Survival					✓
Condition					✓
Coherence				✓	
Integrity				✓	
Potential				✓	
Amenity				✓	
Associations				✓	
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity				✓	
Representativeness				✓	
Documentation				✓	
Group value				✓	
Survival					✓
Condition					✓
Coherence				✓	
Integrity					✓
Potential					✓
Amenity				✓	
Associations					✓
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(2 x Med @ 3) + (7 x Low @ 2) + (2 x V Low @ 1) = x 55 ÷ 100 = 12.1	(6 x Low @ 2) + (5 x V Low @ 1) = 17 x 55 ÷ 100 = 9.35	$(12.1 + 9.35) \div 2 = \mathbf{10.725}$	11 – Low	

8.4.16 The historic landscape has been characterised as “Agricultural enclosure; site of late 18th/19th century coal and iron ore workings; site of industrial transport and water management features; post-medieval farmsteads and industrial stables; limited reclamation” (Roberts 2003, 85). The character of the landscape today is agricultural with the remnants of past industrial workings, opencast and reclamation.

8.4.17 HLCA 023 Clyn-Mil Workings

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						

Condition					
Coherence					
Integrity					
Potential					
Amenity					
Associations					
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register					
Rarity			✓		
Representativeness			✓		
Documentation			✓		
Group value			✓		
Survival				✓	
Condition				✓	
Coherence			✓		
Integrity			✓		
Potential			✓		
Amenity				✓	
Associations			✓		
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity				✓	
Representativeness				✓	
Documentation			✓		
Group value			✓		
Survival				✓	
Condition				✓	
Coherence					
Integrity				✓	
Potential				✓	
Amenity				✓	
Associations			✓		
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(8 x Med @ 3) + (3 x Low @ 2) = 30 x 55 ÷ 100 = 16.5	(3 x Med @ 3) + (8 x Low @ 2) = 25 x 55 ÷ 100 = 13.75	(16.5 + 13.75) ÷ 2 = 15.125	15 – Low	

8.4.18 The historic landscape has been characterised as “Area of enclosed upland; remains of early ironstone and coal workings, largely surface workings; industrial tramroad network and water management; Ancient Woodland; drystone and hedged bank field boundaries; close association with adjacent areas” (Roberts 2003, 86). The landscape today is agricultural but characterised by late 18th and 19th century ironstone and coal extraction and tramroad network including some very early crown patch working, associated with the Plymouth Ironworks. The area has Historic landscape connections to HLCA 22 Clyn-Mil, Pencoedcae and Trebeddau and HLCA 039 Ffos-y-fran and the Deserted Iron Mining Village and patch workings (SAMGm496).

8.4.19 HLCA 024 Graweth and Pen-y-Lan

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor

(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area					
Rarity					
Representativeness					
Documentation					
Group value					
Survival					
Condition					
Coherence					
Integrity					
Potential					
Amenity					
Associations					
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register					
Rarity			✓		
Representativeness				✓	
Documentation				✓	
Group value				✓	
Survival			✓		
Condition			✓		
Coherence				✓	
Integrity			✓		
Potential				✓	
Amenity				✓	
Associations				✓	
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity				✓	
Representativeness					✓
Documentation				✓	
Group value				✓	
Survival			✓		
Condition			✓		
Coherence				✓	
Integrity			✓		
Potential				✓	
Amenity				✓	
Associations				✓	
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(4 x Med @ 3) + (7 x Low @ 2) = 26 x 55 ÷ 100 = 14.3	(3 x Med @ 3) + (7 x Low @ 2) + (1 x V Low @ 1) = 24 x 55 ÷ 100 = 13.2	(14.3 + 13.2) ÷ 2 = 13.75	14 – Low	

8.4.20 The historic landscape has been characterised as “Surviving area of post-medieval evolved irregular small agricultural enclosures with relatively small-scale industrial influence (coal and iron ore) for the area” (Roberts 2003, 87). The landscape today is agricultural characterised by post-medieval land holdings that may have medieval origins. Some 19th and 20th industrial activity on the fringes of the character area. The area is characterised by small scale enclosure of drystone walls and isolated farmsteads that reflects the former agricultural landscape now hidden under 20th century forestry plantation, which the proposed development area lies within, HLCA 079 Waunwyllt, Pen-y-lan and Graig Gethin.

8.4.21 HLCA 025 Nantyrodyn and Bwllfa Workings

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity					✓	
Representativeness					✓	
Documentation					✓	
Group value				✓		
Survival				✓		
Condition					✓	
Coherence				✓		
Integrity			✓			
Potential				✓		
Amenity				✓		
Associations					✓	
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context						
Rarity					✓	
Representativeness					✓	
Documentation				✓		
Group value					✓	
Survival					✓	
Condition					✓	
Coherence				✓		
Integrity				✓		
Potential				✓		
Amenity				✓		
Associations					✓	

Overall Evaluation Scores				
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100
	(1 x High @ 4) + (5 x Med @ 3) + (5 x Low @ 2) = 29 x 55 ÷ 100 = 15.95	(5 x Med @ 3) + (6 x Low @ 2) = 27 x 55 ÷ 100 = 14.85	$(15.95 + 14.85) \div 2 = \mathbf{15.4}$	15 – Low

8.4.22 The historic landscape has been characterised as “Minor post-medieval enclosure and settlement (ruinous); extractive industrial landscape: trial and coal levels; agricultural/industrial tracks/possible tramway and incline corridor; Ancient Woodland” (Roberts 2003, 88). The landscape today is agricultural common land and ancient woodland characterised significant 19th and 20th industrial extractive activity.

8.4.23 HLCA 026 Cilfach-yr-Encil

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity					✓	
Representativeness					✓	
Documentation					✓	
Group value				✓		
Survival				✓		
Condition				✓		
Coherence					✓	
Integrity				✓		
Potential				✓		
Amenity				✓		
Associations					✓	
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context						
Rarity					✓	
Representativeness					✓	
Documentation					✓	
Group value				✓		
Survival				✓		
Condition				✓		
Coherence					✓	
Integrity					✓	

Potential				✓	
Amenity				✓	
Associations				✓	
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score		Overall Score 0 – 100
	(6 x Med @ 3) + (5 x Low @ 2) = 28 x 55 ÷ 100 = 15.4	(3 x Med @ 3) + (8 x Low @ 2) = 25 x 55 ÷ 100 = 13.75	(15.4 + 13.75) ÷ 2 = 14.575		15 – Low

8.4.24 The historic landscape has been characterised as “Surviving area of pre-industrial evolved irregular small agricultural enclosures with little industrial influence” (Roberts 2003, 90). The landscape today is agricultural characterised by post-medieval land holdings and enclosure in the early 19th century. There is little industrial activity in the area. The area is characterised by small scale enclosure of drystone walls and isolated farmsteads that reflects the former agricultural landscape now hidden under 20th century forestry plantation, which the proposed development area lies within, HLCA 079 Waunwyllt, Pen-y-lan and Graig Gethin.

8.4.25 HLCA 031 Merthyr Common Central

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity	✓					
Representativeness		✓				
Documentation		✓				
Group value		✓				
Survival					✓	
Condition					✓	
Coherence		✓				
Integrity				✓		
Potential		✓				
Amenity		✓				
Associations	✓					
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context						
Rarity		✓				
Representativeness		✓				
Documentation		✓				

Group value		✓			
Survival				✓	
Condition				✓	
Coherence		✓			
Integrity			✓		
Potential		✓			
Amenity		✓			
Associations	✓				
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(2 x V High @ 5) + (6 x High @ 4) + (1 x Med @ 3) + (2 x Low @ 2) = 41 x 55 ÷ 100 = 22.55	(1 x V High @ 5) + (7 x High @ 4) + (1 x Med @ 3) + (2 x Low @ 2) = 40 x 55 ÷ 100 = 22	$(22.55 + 22) \div 2 = \mathbf{22.25}$	22 – Moderate	

8.4.26 The historic landscape has been characterised as “Nationally important Industrial landscape; water management and extractive features associated with the Dowlais and Penydarren Ironworks; industrial and post-medieval upland settlement; transport networks — industrial and public rail; area of industrially altered common” (Roberts 2003, 96). The landscape today has been substantially altered by the Ffos-y-fran surface mine with the almost complete removal of all archaeological and historical features, including the Dowlais Free Drainage System (DFDS), crown patch workings, ironstone mines and later collieries. However, pockets of original industrial features do survive, such as those at the Sarn Howell Ponds (SAMGm494), which include the restored DFDS aqueduct (GGAT02761m) and the Deserted Iron Mining Village and patch workings (SAMGm496). This area also includes a brick works, the remains of the Penydarren Incline engine house and a section of the Great Western and Rhymney Railway’s Taff Bargoed Joint Line.

8.4.27 HLCA 039 Ffos-y-fran

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity		✓				
Representativeness			✓			

Documentation		✓			
Group value		✓			
Survival				✓	
Condition				✓	
Coherence		✓			
Integrity			✓		
Potential		✓			
Amenity		✓			
Associations	✓				
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity		✓			
Representativeness		✓			
Documentation		✓			
Group value		✓			
Survival				✓	
Condition				✓	
Coherence		✓			
Integrity			✓		
Potential		✓			
Amenity		✓			
Associations	✓				
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(2 x V High @ 5) + (6 x High @ 4) + (1 x Med @ 3) + (2 x Low @ 2) = 41 x 55 ÷ 100 = 22.55	(1 x V High @ 5) + (7 x High @ 4) + (1 x Med @ 3) + (2 x Low @ 2) = 40 x 55 ÷ 100 = 22	(22.55 + 22) ÷ 2 = 22.25	22 – Moderate	

8.4.28 The historic landscape has been characterised as “Nationally important Industrial landscape associated with the Dowlais Ironworks; industrially altered upland Common: intensive area of extractive features predominantly early to mid 19th century coal and ironstone workings along mineral outcrop, primarily levels and pits, also early remains of crown pit workings, and patch workings; transport networks; industrial and public rail, drainage features: the Dowlais Free Drainage System; industrial settlement: includes scheduled Ffos-y-fran Iron Worker’s settlement” (Roberts 2003, 109). The landscape today has been substantially altered by the Ffos-y-fran surface mine with the almost complete removal of all archaeological and historical features, including the Dowlais Free Drainage System (DFDS), crown patch workings, ironstone mines and later collieries. However, pockets of original industrial features do survive, such as those at the Sarn Howell Ponds (SAMGm494), which include the restored DFDS aqueduct (GGAT02761m) and the Deserted Iron Mining Village and patch workings (SAMGm496).

8.4.29 HLCA 077 Merthyr Common

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						

Rarity					
Representativeness					
Documentation					
Group value					
Survival					
Condition					
Coherence					
Integrity					
Potential					
Amenity					
Associations					
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register					
Rarity		✓			
Representativeness	✓				
Documentation					✓
Group value		✓			
Survival			✓		
Condition			✓		
Coherence		✓			
Integrity		✓			
Potential	✓				
Amenity	✓				
Associations				✓	
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context					
Rarity		✓			
Representativeness		✓			
Documentation					✓
Group value			✓		
Survival				✓	
Condition				✓	
Coherence			✓		
Integrity			✓		
Potential		✓			
Amenity		✓			
Associations				✓	
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score	Overall Score 0 – 100	
	(3 x V High @ 5) + (4 x High @ 4) + (2 x Med @ 3) + (1 x Low @ 2) + (1 V Low @ 1) = 40 x 55 ÷ 100 = 22	(4 x High @ 4) + (3 x Med @ 3) + (3 x Low @ 2) + (1 V Low @ 1) = 32 x 55 ÷ 100 = 17.6	(22 + 17.6) ÷ 2 = 19.8	20 – Moderate	

8.4.30 The historic landscape has been characterised as “an important relict pre-historic funerary and ritual landscape: Bronze Age Cairns; Common Land; open mountain sheepwalk, little above ground industrial exploitation” (Roberts 2003, 155). The area today remains an open upland common and has changed little in millennia. The area is characterised by statutory designated (six round barrow cairns SAMGm222) and non-designated Bronze Age barrows and represents the significant survival of a preserved prehistoric landscape. Later medieval pillow mounds (GGAT01361m) were built amongst the cairns representing dynamic agricultural exploitation of the area in addition to sheep husbandry, which dominated the uplands of the south Wales valleys at this time.

8.4.31 HLCA 079 A470(T) Road

Evaluation of the Relative Importance of the HLCA						
Criteria ↓	Value →	V High/V Good	High/Good	Mod/Med	Low	V Low/Poor
(a) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape Character Area						
Rarity						
Representativeness						
Documentation						
Group value						
Survival						
Condition						
Coherence						
Integrity						
Potential						
Amenity						
Associations						
(b) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the whole of the Historic Landscape on the Register						
Rarity				✓		
Representativeness				✓		
Documentation				✓		
Group value			✓			
Survival					✓	
Condition					✓	
Coherence				✓		
Integrity					✓	
Potential				✓		
Amenity				✓		
Associations				✓		
(c) HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development in relation to the relative importance of the HLCA(s) concerned within the national context						
Rarity					✓	
Representativeness				✓		
Documentation					✓	
Group value					✓	
Survival					✓	
Condition					✓	
Coherence					✓	
Integrity					✓	
Potential				✓		
Amenity					✓	

Associations				✓	
Overall Evaluation Scores					
(a)	(b)	(c)	Equation Score		Overall Score 0 – 100
	(1 x High @ 4) + (7 x Med @ 3) + (3 x Low @ 2) = 31 x 55 ÷ 100 = 17.05	(2 x Med @ 3) + (9 x Low @ 2) = 24 x 55 ÷ 100 = 13.2	(17.05 + 13.2) ÷ 2 = 15.125		15 – Low

8.4.32 The historic landscape has been characterised as “North-south road transport corridor, late 20th century; former railway corridor (second half of 19th century); former industrial extractive landscape associated with the steam coal trade” (Roberts 2003, 157). Important 20th century communication (road and rail) corridor replacing 18th and 19th century road and rail (and tramroad) lines that interconnected the various industrial processing and extractive works including Gethin No.2 Pits (GGAT02191m) and associated incline, engine houses, ponds etc located just outside the study area.

Table 7. Summary of the overall averaged historic landscape in relation to the development.

Overall Evaluation Scores for Historic Landscape Character Areas Affected by the Development	
HLCA	Overall Value
HLCA 072 Waunwylt, Pen-y-lan and Graig Gethin	18 – Low
HLCA 014 River Taff Canal and Railway Corridor	15 – Low
HLCA 019 Penydarrren Tramroad Corridor	24 – Moderate
HLCA 020 Pentrebach	10 – Low
HLCA 022 Clyn-Mil, Pencoedcae and Trebeddau	11 – Low
HLCA 023 Clyn-Mil Workings	15 – Low
HLCA 024 Graweth and Pen-y-Lan	14 – Low
HLCA 025 Nantyrodyn and Bwllfa Workings	15 – Low
HLCA 026 Cilfach-yr-Encil	15 – Low
HLCA 031 Merthyr Common Central	22 – Moderate
HLCA 039 Ffos-y-fran	22 – Moderate
HLCA 077 Merthyr Common	20 – Moderate
HLCA 079 A470(T) Road	15 – Low
Average Evaluated Landscape Value in Relation to the Development	
Overall Total Value	Grade
216 ÷ 13 = 16.61	17 - Low

8.5 Stage 5: Assessment of Overall Significance of Impact

8.5.1 The following stage combines the results of Stages 2 to 4 to produce an ‘assessment of the overall significance of the impact of development and the effect that altering the Historic Character Area(s) concerned has on the whole of the historic landscape area on the Register’ (CADW 2007, 28). The effect of the development on each historic landscape character area is scored and the value assessed in relation to the likely loss and consequent reduction in value of the HLCA on the Register. The results are set out in the following table:

Table 8. Overall Significance of the Impact of Development on Landscapes of Historic Interest

Summary of the Overall Significance of the Impact of Development on Landscapes of Historic Interest				
HLCA	Value of Historic Character Area (based on stage 4 results)	Impact of Development (based on stages 2 & 3 results)	Reduction of Value of the Historic Landscape Area on Register	Overall significance of impact
HLCA 072 Waunwyllt, Pen-y-lan and Graig Gethin	<p>Low</p> <p>Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p> <p>SCORE: 3</p>	<p>Low</p> <p>Slight land loss and consequent fragmentation and/or visual intrusion causing limited numbers of key elements to be removed or changed so that group value and/or coherence and/or integrity are slightly diminished, and/or amenity value slightly reduced.</p> <p>SCORE: 3</p>	<p>Low</p> <p>Development impact on key elements is such that there is slight reduction in the overall value of the historic landscape area on the Register.</p> <p>SCORE: 3</p>	9 – Slight
HLCA 014 River Taff Canal and Railway Corridor	<p>Low</p> <p>Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p> <p>SCORE: 2</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p> <p>SCORE: 1</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p> <p>SCORE: 1</p>	4 – Slight
HLCA 019 Penydarrren Tramroad Corridor	<p>Medium</p> <p>Key elements of varying intrinsic importance and/or condition and/or group value, and /or generally typical of this or other historic landscape areas on the Register.</p>	<p>Low</p> <p>Slight land loss and consequent fragmentation and/or visual intrusion causing limited numbers of key elements to be removed or changed so that group value and/or coherence and/or integrity are slightly diminished, and/or amenity value slightly reduced.</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p>	8 – Slight

	SCORE: 5	SCORE: 2	SCORE: 1	
HLCA 020 Pentrebach	<p>Low</p> <p>Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p>	4 – Slight
HLCA 022 Clyn-Mil, Pencoedcae and Trebeddau	<p>Low</p> <p>Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p>	4 – Slight
HLCA 023 Clyn-Mil Workings	<p>Low</p> <p>Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p>	5 – Slight
HLCA 024 Graweth and Pen-y-Lan	<p>Low</p> <p>Key elements of low to moderate importance and/or condition</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of</p>	5 – Slight

	and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register. SCORE: 3	intrusion causing negligible changes to elements and their values. SCORE: 1	the historic landscape area on the Register remains essentially unchanged. SCORE: 1	
HLCA 025 Nantyrolyn and Bwlfa Workings	Low Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register. SCORE: 3	Very Low Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values. SCORE: 1	Very Low Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged. SCORE: 1	5 – Slight
HLCA 026 Cilfach-yr-Encil	Low Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register. SCORE: 3	Very Low Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values. SCORE: 1	Very Low Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged. SCORE: 1	5 – Slight
HLCA 031 Merthyr Common Central	Medium Key elements of varying intrinsic importance and/or condition and/or group value, and /or generally typical of this or other historic landscape areas on the Register. SCORE: 6	Very Low Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values. SCORE: 1	Very Low Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged. SCORE: 1	8 – Slight

<p>HLCA 039 Ffos-y-fran</p>	<p>Medium</p> <p>Key elements of varying intrinsic importance and/or condition and/or group value, and /or generally typical of this or other historic landscape areas on the Register.</p> <p>SCORE: 6</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p> <p>SCORE: 1</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p> <p>SCORE: 1</p>	<p>8 – Slight</p>
<p>HLCA 077 Merthyr Common</p>	<p>Medium</p> <p>Key elements of varying intrinsic importance and/or condition and/or group value, and /or generally typical of this or other historic landscape areas on the Register.</p> <p>SCORE: 6</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p> <p>SCORE: 1</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p> <p>SCORE: 1</p>	<p>8 – Slight</p>
<p>HLCA 079 A470(T) Road</p>	<p>Low</p> <p>Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p> <p>SCORE: 2</p>	<p>Very Low</p> <p>Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values.</p> <p>SCORE: 1</p>	<p>Very Low</p> <p>Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.</p> <p>SCORE: 1</p>	<p>4 – Slight</p>

4.1.1 As noted in the methodology (CADW 2007, 30) scores have not been combined and averaged out for the Historic Landscape Character Areas to allow the end user to note whether there is any reduction in values to the Register and constituent parts. Nevertheless, the results indicated in the table above would suggest that the summary of overall significance of the impact of development on the historic landscape is **Slight**.

4.2 ASIDOHL2 Concluding Statement

- 4.2.1 The proposed development consists of construction of 36 camping pods and five chalets, erection of shower/toilet block and creation of play and picnic area. construction of new parking area (141 spaces) with overflow carpark (85 spaces), together with a trail maintenance yard, new highway access routes, ground profile works, drainage, infrastructure and landscape works at Bike Park Wales, Gethin Woodland Centre. The proposed development area was formerly the Gethin Woodland car park and is currently a world class mountain biking centre.
- 4.2.2 The development area is located within the CADW/ICOMOS Landscape of Outstanding Historic Interest of Merthyr Tydfil (HLW(MGI)2). Designated in 2001, Merthyr Tydfil occupies a natural basin at the head of the Taff Valley and is celebrated as “probably the largest iron-making town in the world in the early to mid-19th Century...(that) rapidly transformed from a modest village in the 1750s to the largest town in Wales by 1801” (CADW 1998, 47). The Merthyr Tydfil landscape contains a significant number of relics of this industrial past including remains of a number of “large ironworks, features relating to coal mining, waterpower leats, an early iron bridge, power and transportation systems including early tram roads, terraced industrial housing and Cyfarthfa Castle and Park”. The development area is located wholly within Historic Landscape Character Area (HLCA) 072 Waunwyllt, Pen-y-lan and Graig Gethin agricultural landscape.
- 4.2.3 The ASIDOHL2 process considered the potential effect to all landscapes on the Register resulting in the identification of just a single landscape being affected, Merthyr Tydfil (HLW(MGI)2) Landscape of Outstanding Historic Interest. The remaining landscapes on the Register were discounted as having no effect. The closest landscape being *Gelligaer Common HLW (MGI) 4*, 2.5km east; *East Fforest Fawr and Mynydd-y-Glog HLW (MGI) 3*, 14.1km northeast; *The Rhondda HLW (MGI) 5*, 6.5km southwest and the *Blaenavon World Heritage Site HLW (Gt) 1*, 12km northeast.
- 4.2.4 The ASIDOHL2 process has identified a single direct physical impact upon the historic landscape, in the Historic Landscape Character Area (HLCA) of 072 Waunwyllt, Pen-y-lan and Graig Gethin agricultural landscape. The direct physical impact has been assessed as **Slight** with the maximum area of the historic landscape character area that could be directly affected by the proposed development representing 2.34%, which is 0.07% of the total Registered historic landscape area. The proposed development impacting a slight land loss and consequent fragmentation and/or visual intrusion causing limited numbers of key elements to be removed or changed so that group value and/or coherence and/or integrity are slightly diminished, and/or amenity value slightly reduced with a slight reduction in the overall value of the historic landscape area on the Register.

- 4.2.5 The ASIDOHL2 process initially identified a further 44 HLCAs belonging to Merthyr Tydfil (HLW(MGI)2) as being potentially effected (indirectly) by the proposed development. This number was refined down using a combination of visibility analyses utilising computer modelling of the 2m DTM and 2m DSM LiDAR datasets to generate Zones of Theoretical Visibility (ZTVs) from and to the proposed development area, several site visits, study of contour maps, aerial photographs and taking into the consideration of existing surface features such as forestry and the built environment using digital surface models (DSM) generated by LiDAR. A single registered park and garden was identified by the ZTV analysis; Cyfarthfa Castle (PGW(Gm)1(MER)) is located 3.5km to the north of the proposed development area. Three SAMs were also identified by the ZTV analysis as being potentially indirectly affected; Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573) 1.3km Northeast, the Ffos-y-fran Deserted Iron Mining Village (SAMGm496) and also at Ffos-y-fran the Sarn Howell Pond and Watercourses (SAMGm494), both c2.5km to the northeast. A further SAM was identified by the ZTVs located on Merthyr Common (Mynydd Cilfach-yr-encil) 2.7km to the east (Merthyr Common Round Cairns SAMGm222).
- 4.2.6 While theoretically visible, it has been established that the views to and from Cyfarthfa Castle and Park (PGW(Gm)1(MER); HLCA 013), Merthyr Tramroad Tunnel (Trevithick's Tunnel) (SAMGm573; HLCA 019), The Ffos-y-fran Deserted Iron Mining Village (SAMGm496; HLCA 077), Sarn Howell Pond and Watercourses (SAMGm494; HLCA 031) and Merthyr Common Round Cairns (SAMGm222; HLCA 077) are not indirectly physically effected by the proposed development. Based on the present assessment it is considered that the proposed development will have no permanent indirect physical impact on any of the statutory designated landscapes, sites and monuments noted above. As a result, the first part of Stage 3a was not carried out. No physical change from an increased risk of exposure, increased management needs, the severance or fragmentation of related elements, frustration or cessation of historic land-use practices and the frustration of access leading to decreased opportunities for education and enjoyment of the amenity elements will occur.
- 4.2.7 The visibility analysis identified the potential indirect visual effect for up to 44 historic landscape character areas. Following detailed assessment and site visits, it is considered that of the 44 HLCAs initially identified by ZTVs as potentially visible only 15 HLCAs (see Stage 3b assessment) had the potential for indirect (non-physical) visual impacts. The remainder disregarded because of a lack of visibility due to the inter-visibility of HLCAs and the proposed development area being obscured by the built environment, trees and vegetation and topography. The magnitude of indirect visual effects has been assessed as **Very Slight**.
- 4.2.8 A total of 13 HLCAs were considered for the relative importance of parts or elements of HLCAs which may be directly or indirectly, wholly or partially, affected by the proposed development. The effect to three HLCA's (HLCA 021, 037 and 048) was assessed as so imperceptible that it was considered that they will not add to the relative importance evaluation in relation to the nature and extent of the proposed development. The remaining overall (combined) averaged landscape value was assessed as **Low**.

4.2.9 The final ASIDOHL2 assessment process identified the assessment of the overall significance of the impact of development and the effect that altering the Historic Character Area(s) concerned has on the whole of the historic landscape area on the Register (CADW 2007, 28). The effect of the development on each historic landscape character area was scored and the value assessed in relation to the likely loss and consequent reduction in value of the HLCA on the Register. The results indicated that the summary of overall significance of the impact of development on the historic landscape is **Slight**. The development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged.

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6 Appendices

6.1 Appendix I Figures

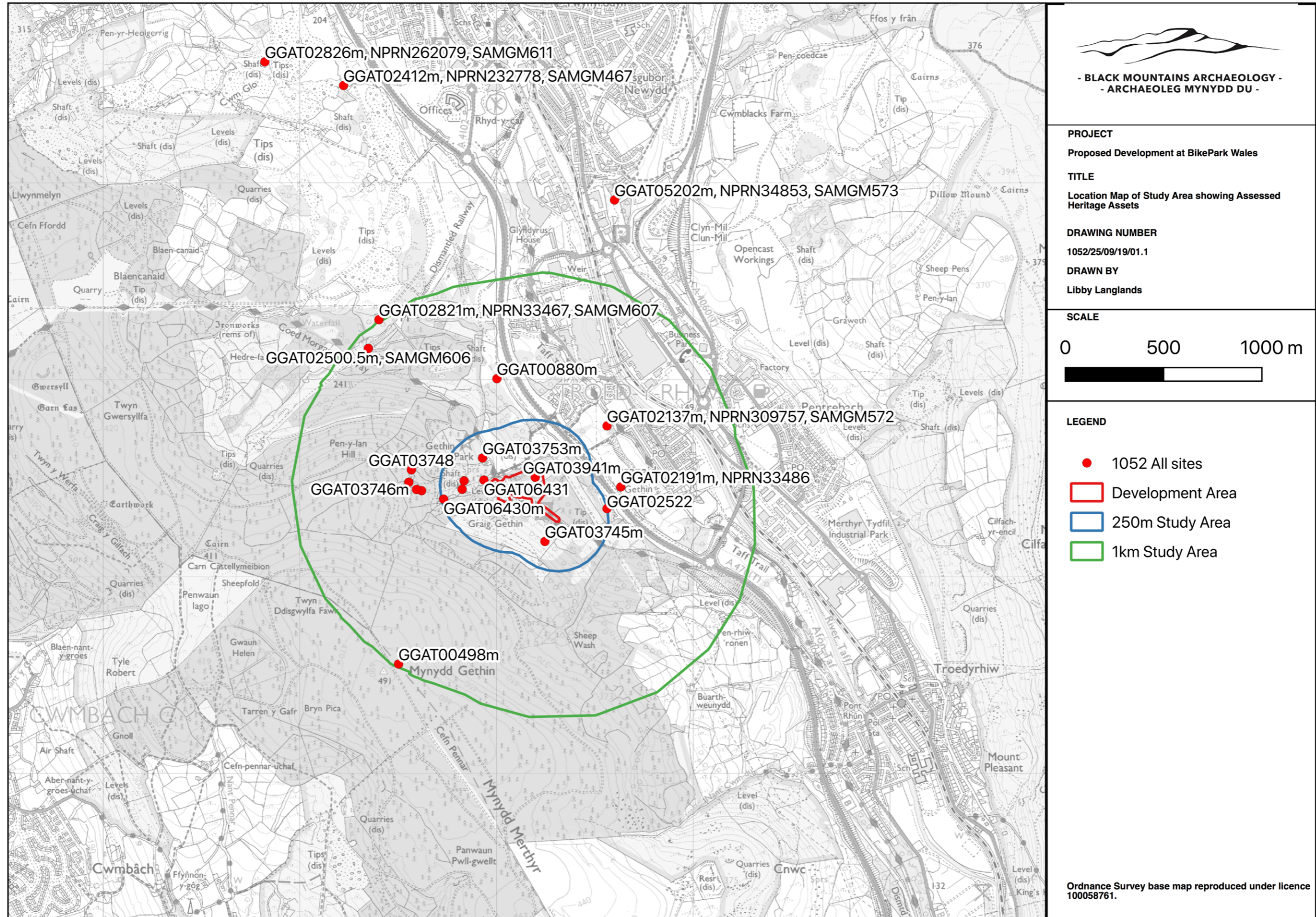


Figure 1.1

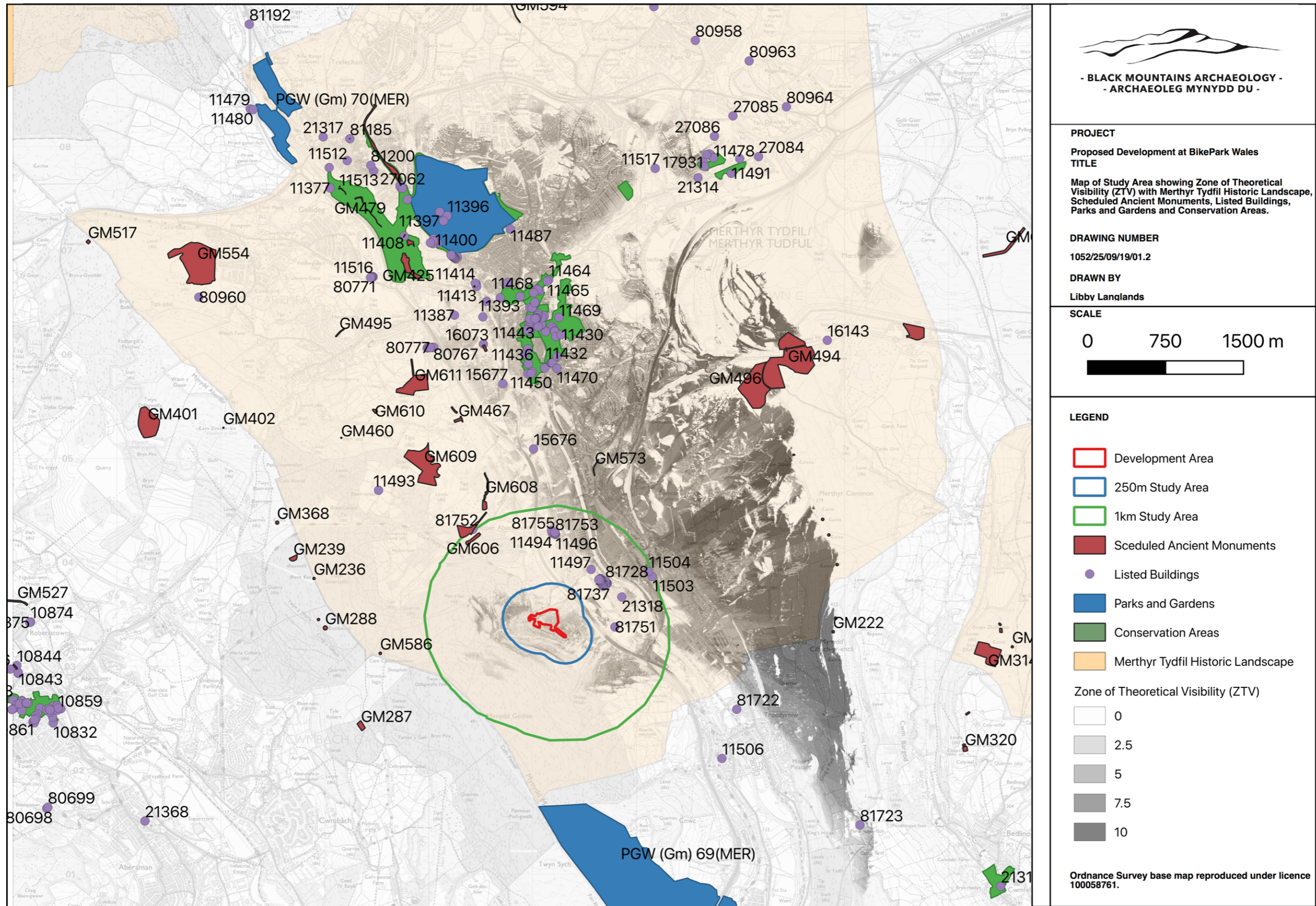


Figure 1.2

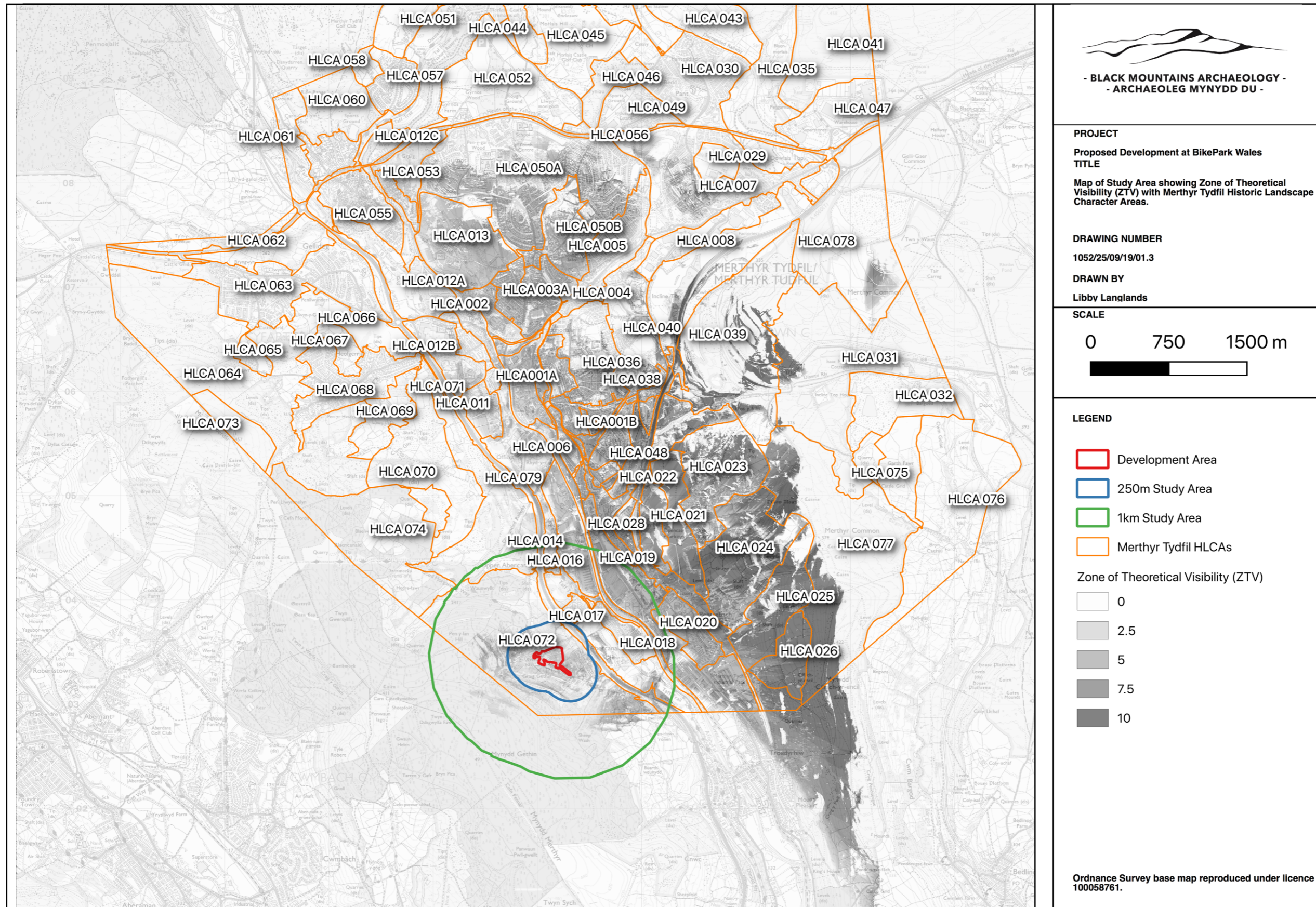


Figure 1.3



Figure 2. Detail of 'A New and Accurate Map of South Wales containing the counties of Pembroke, Glamorgan, Carmarthen, Brecknock, Cardigan and Radnor wherein are exactly laid down and delineated from an actual survey and admeasurement all the towns, villages, churches, chaples, gentlemen's seats'. Emanuel Bowen, 1729. Published by Owen and Bowen, London.' (©NLW)

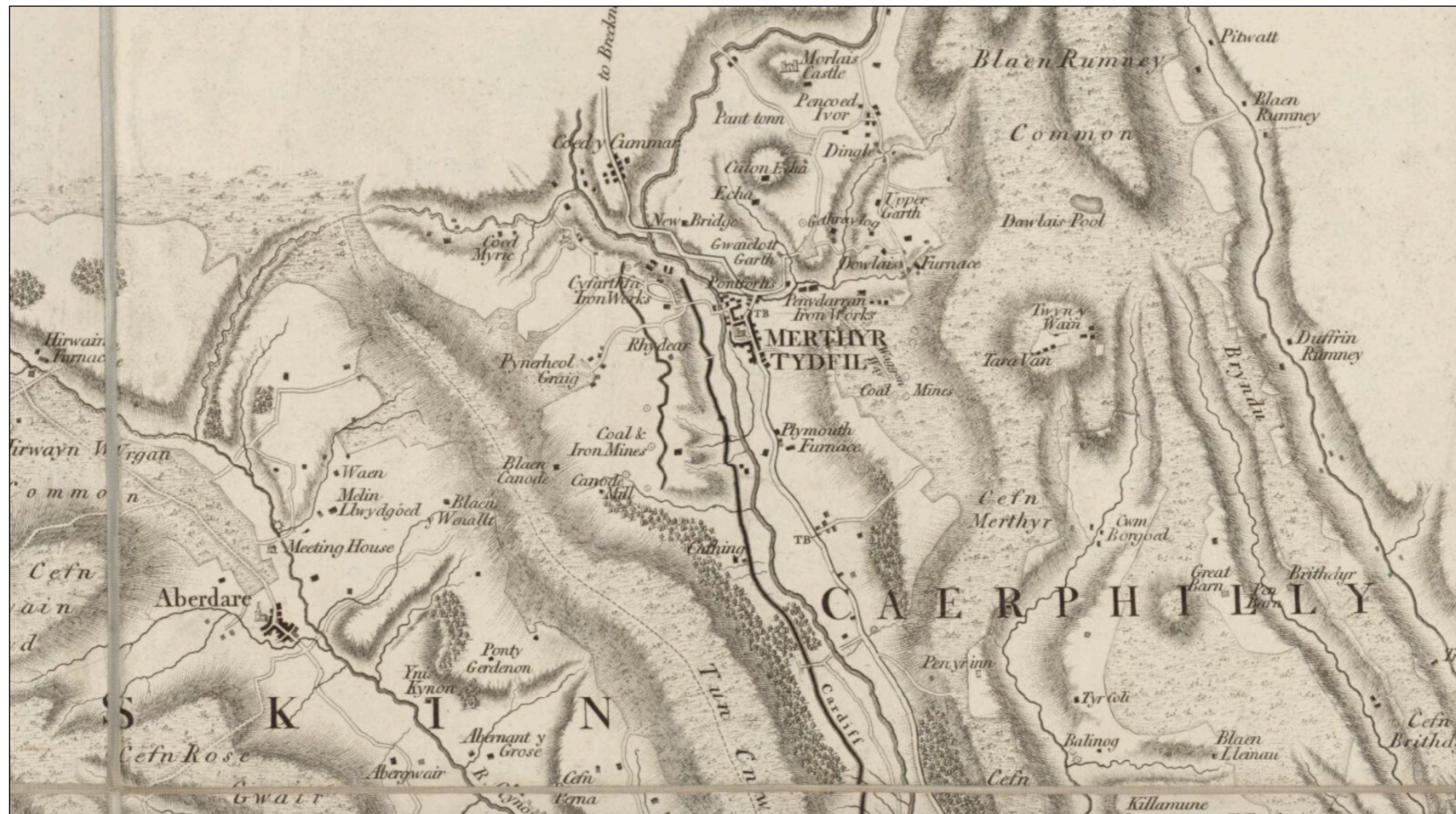


Figure 3. 'A map of the County of Glamorgan: from an actual survey, by George Yates of Liverpool: on which are delineated the course of rivers, and navigable canals; with the roads, parks, gentleman's seats, castles, woods, etc. George Yates, John Cary and William Daniel Conybeare. J. Cary, London (181 Strand) May 21st 1799.' (©NLW)

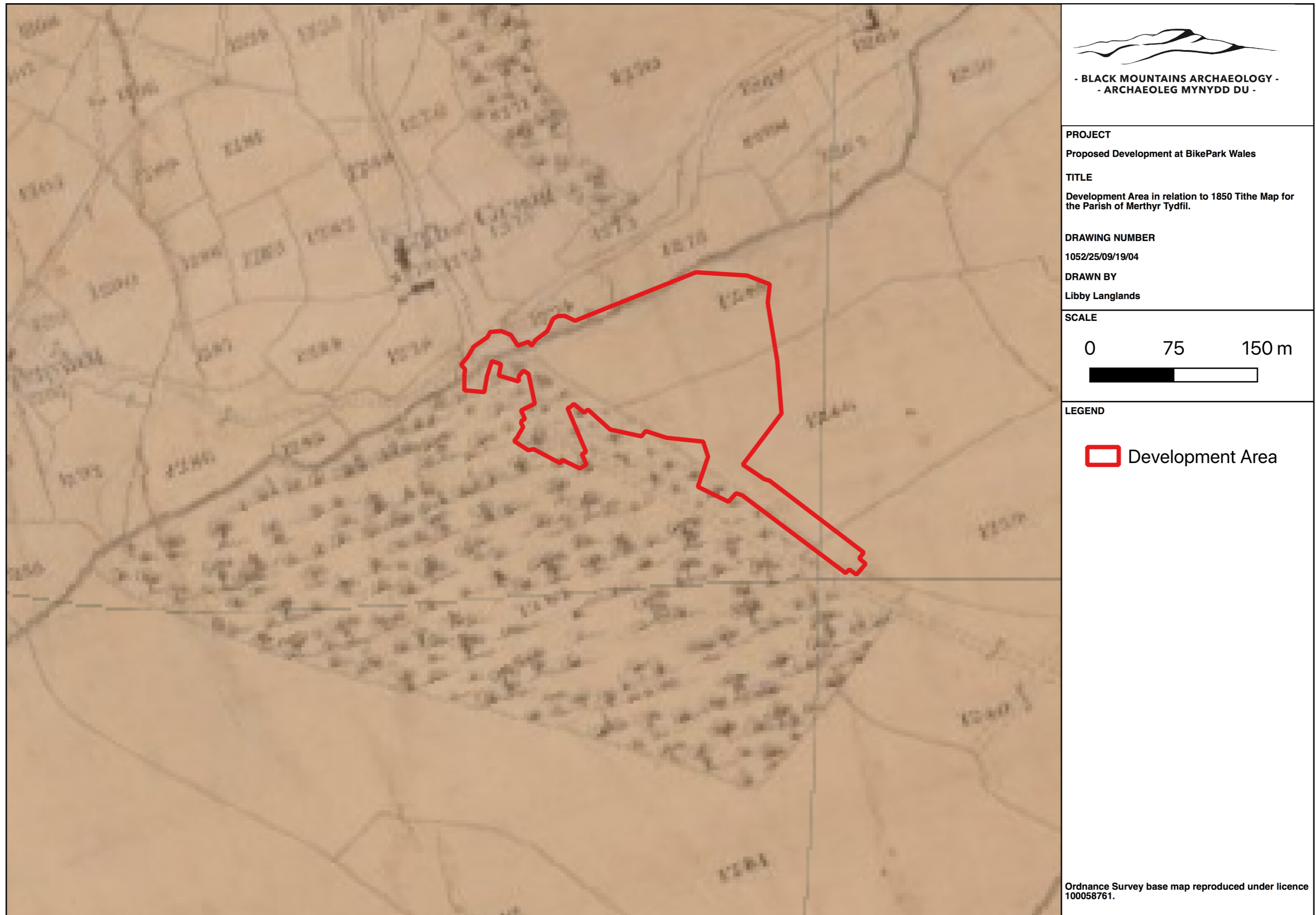


Figure 4

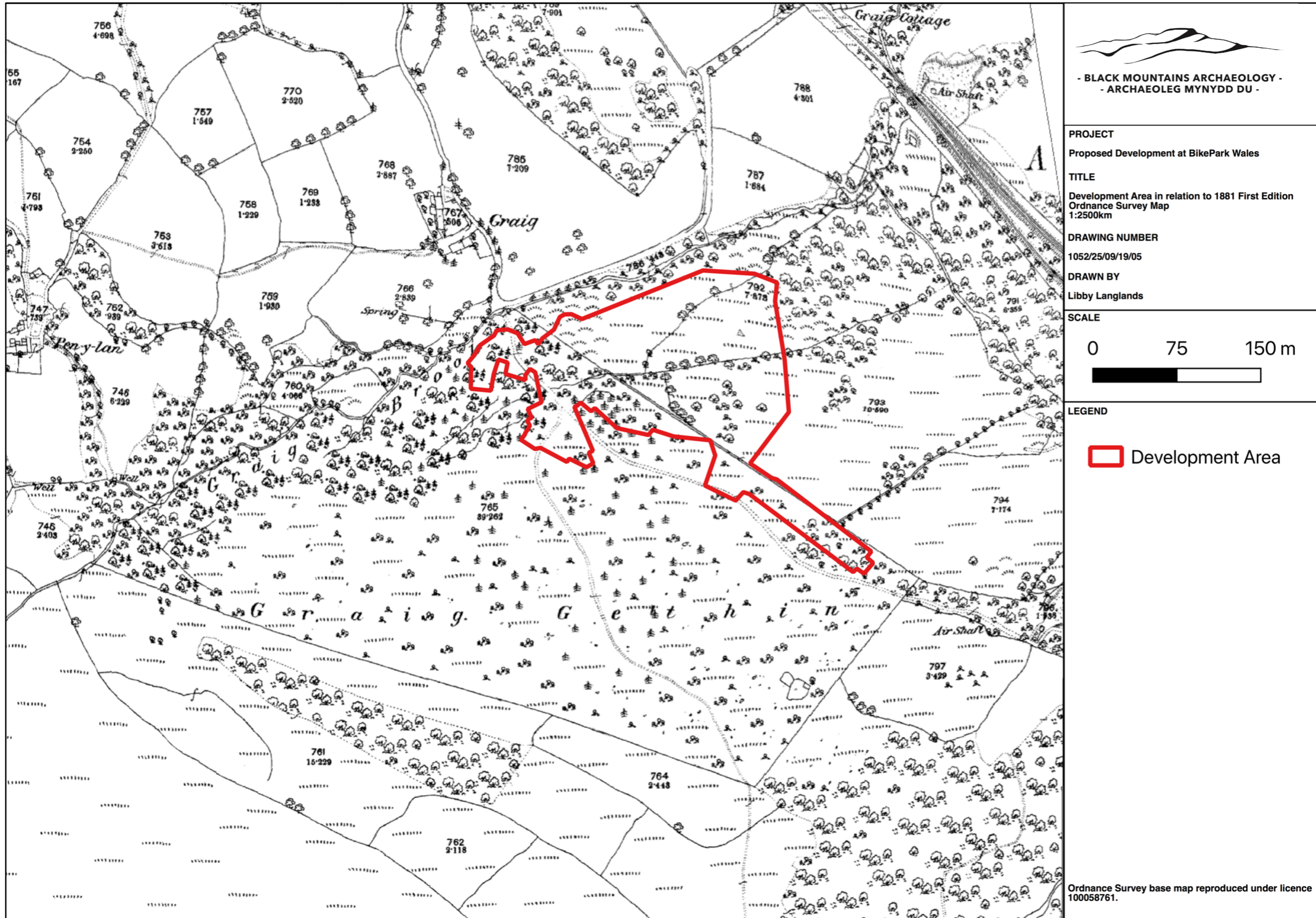


Figure 5

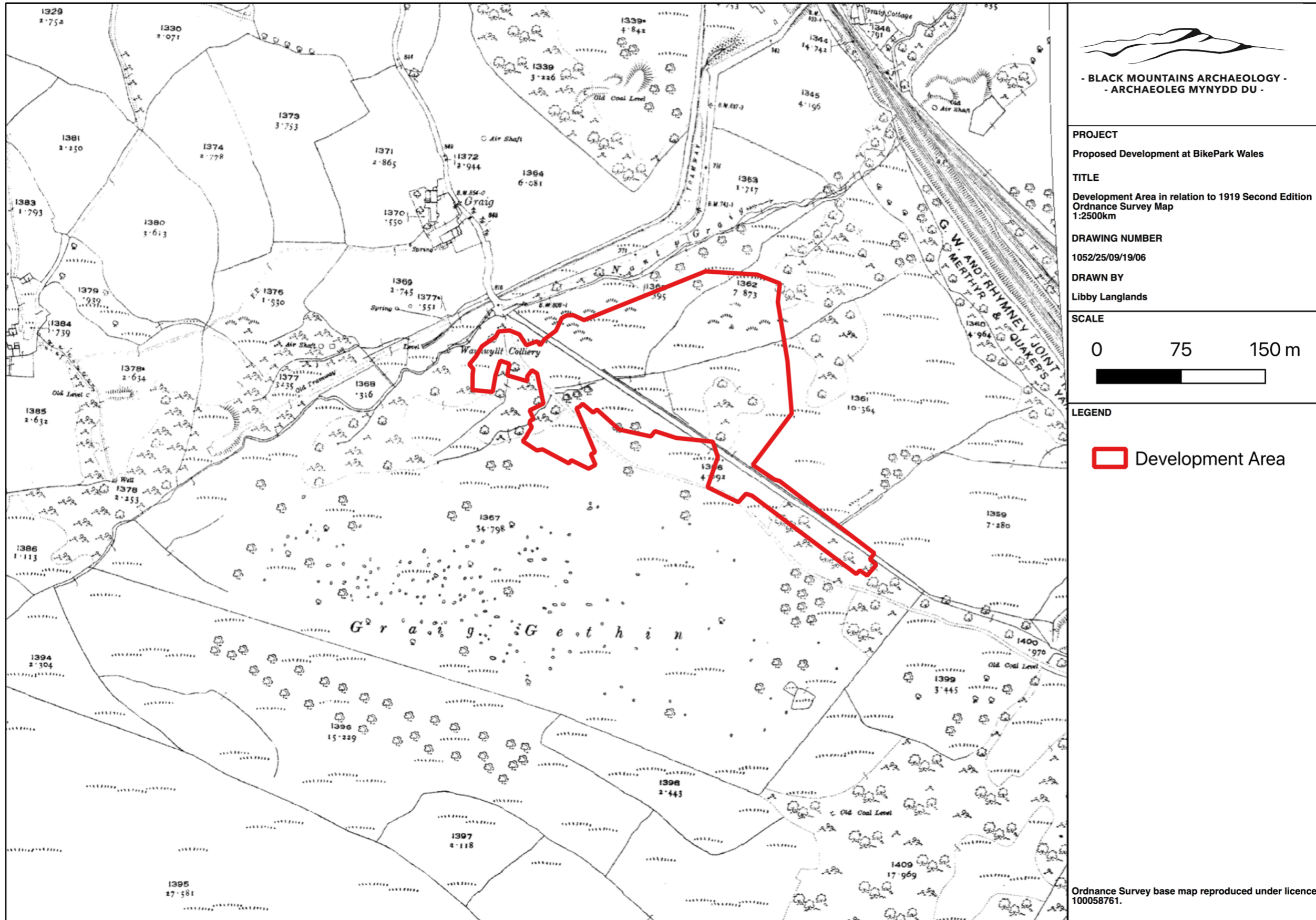


Figure 6

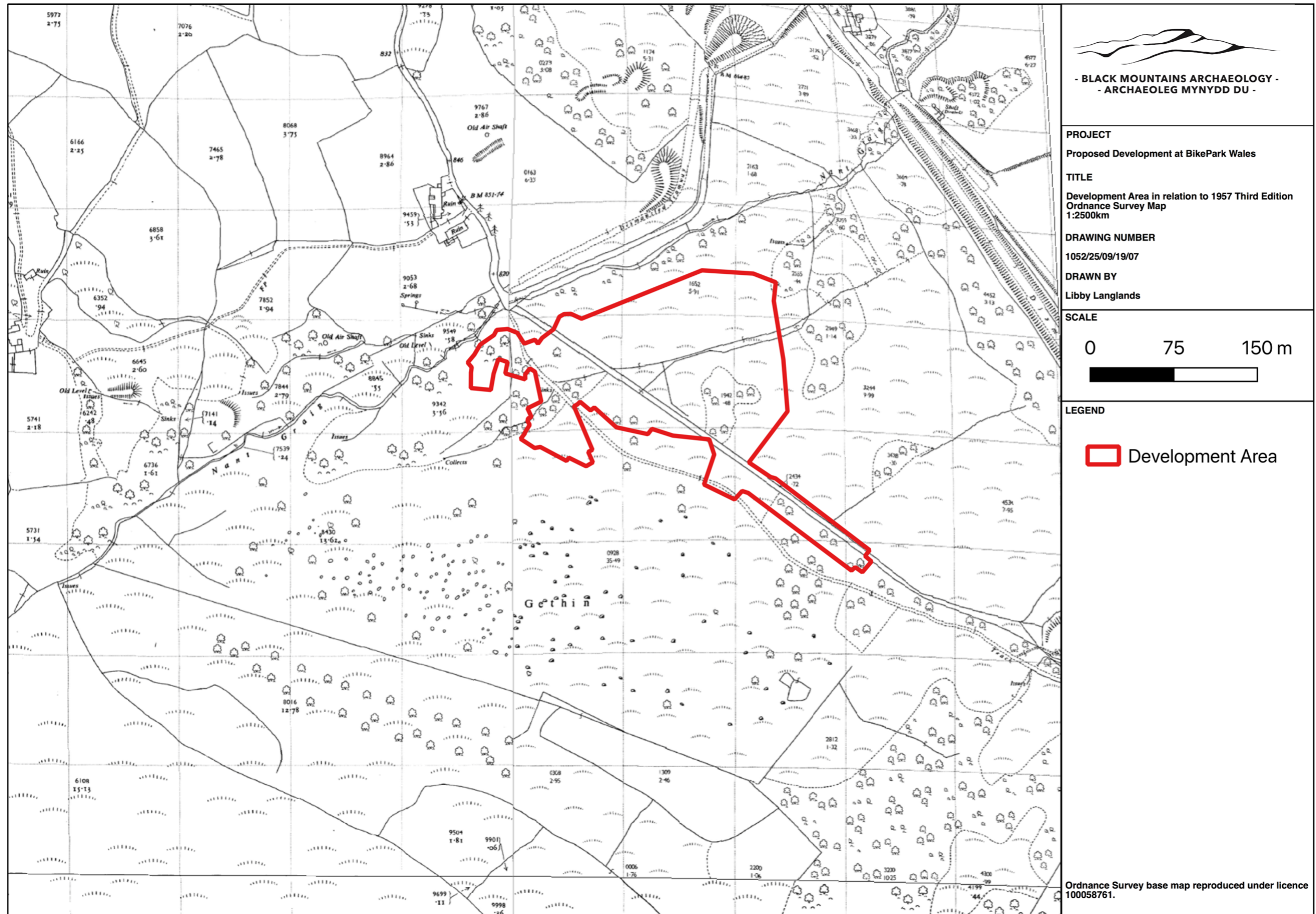


Figure 7

6.2 Appendix II Aerial Photographs

6.2.1 The following is a list of the aerial photographs with coverage of the Study Area held by the Central Registry of Air Photography for Wales (CRAPW). The images largely followed the chronology of historic maps. No new heritage assets were identified.

Table 9. Aerial photographic search results

WO no	Sortie No	Date	Ph type
5086	3G/TUD/T19 PART II	03/8/45	B&W
196	C.P.E/UK/2326 PART II	26/9/47	B&W
198	C.P.E/UK/2326 PART II	26/9/47	B&W
3408	58/676	12/05/51	B&W
0189	F21.58.RAF.1110	05/05/53	B&W
Unmarked photo			B&W
V	OS/63/74	31/05/63	B&W
7167175	71/67	23/07/67	B&W
Unmarked photo			B&W
75 037	WILD 687	24/04/75	B&W
1741	No 667	19/05/77	B&W
201	196	10/06/84	B&W
202	54	10/6/84	B&W
86188	WILD 13095	09/09/86	B&W
0196	900424	24/04/90	B&W
Unmarked photo			Colour
Unmarked photo			Colour
Unmarked photo			Colour
Unmarked photo			Colour

6.3 Appendix III Tithes Apportionment

Table 10. Apportionments relating to the Tithes Map of the Parish of Merthyr Tydfil, Glamorgan 1850.

Parcel Number	Landowners	Occupiers	Name and Description of Lands and Premises	State of Cultivation	Quantities in Statute Measure			Amount of Rent- charge apportioned upon the several Lands, and to whom payable						
					A.	P.	R.	Payable to Vicar			Payable to Appropriator			
								£ P	S		£ P	S		
1244	Dynevor Lord and the Representatives of the late Richard John Matthews	Dynevor Lord and the Representatives of the late Richard John Matthews	Farm Name Abernant Gething Field Name Fur Plantation	Fur Plantation	-	-	-	-	-	-	-	-	-	-
1245	Dynevor Lord and the Representatives of the late Richard John Matthews	John Ward	Abernant Gething Coed Llwyn Crwn	Pasture, Wood	7	1	33	-	-	-	-	-	-	-
1246	Dynevor Lord and the Representatives of the late Richard John Matthews	John Ward	Abernant Gething Waun Griffith	Meadow	10	2	10	-	-	-	-	-	-	-

Note. Quantities and Measures are listed in Acres, Roods and Perches (A.R.P.). An acre is 4,840 square yards. A rood is a rectangular Area one furlong (10 chains or 40 rods/perches) long by one rod wide. There are 40 perches to a rood, and 160 perches to an acre. The amount (£) due is listed in Pounds, Shillings and Pence (£sd).

Plan of the Parish of Merthyr Tydfil in the County of Glamorgan , 1850. Michael Nunan and John Williams of Hendrescythan. National Library of Wales [99355055502419](#)

6.4 Gazetteer of New Heritage Assets

ID: BPW01 **Enw:** tramffordd

NGR: SO0482303438 **Math:** tramffordd **Statws:** Dim **Cyfnod:** Ôl-ganoloesol

Disgrifiad:

Wedi'i farcio fel 'Hen Tramffordd' ar yr 1919 2^{il} argraffiad o'r Map OS 1:2500. Yn gysylltiedig â 'Siafft Aer' (GGAT06429m), 'Lefel' (GGAT06431m) a 'Strwythur' (GGAT06430m) ynghyd â ffurfio 'Glofa Newydd Waunwyllt'. Cafodd Glofa Newydd Waunwyllt ei agor yn 1909 gan Cwmni Glofa Thomas Merthur ac yn 1918 cyflogedwyd 117 o ddynion dan ddaear a 20 ar yr arwyneb cyn gauodd ar y 13^{eg} Iau 1920 (Welshcoalmines.co.uk cyrchwyd 18/09/19).

Tramffordd wedi goroesi yn ysbeidiol fel sarn/pant bas yn rhedeg de-orllewin/gogledd-ddwyrain o Strwythur (GGAT06430m) (a allai fod yn dŷ troellog posibl), cyn rhedeg in cyfochrog gyda (ac i'r gogledd o) 'Lefel' (GGAT06431m) tuag at Fferm Graig lle mae'r map OS yn dangos ei fod yn plygu i'r gogledd-ddwyrain tuag at domenni ger Pwll Graig. Lle mae'n croesi Nant Graig, cafodd dau drac rheilffordd eu hailddefnyddio a gosod yn fertigol i'r ddaear, o bosibl fel rhan o strwythur pont.

Yn cynrychioli enghraifft o nodweddion echdynnol a nodwedddwyd yn HLCA072 Waunwyllt, Pen-y-lan a Graig Gethin.

Wedi'i leoli'n fras ar linell y cyfuchliniau 300m ar top o'r llethr a 250m ar waelod lle mae'n uno â'r ffordd fynediad i Fferm Gethin.

ID: BPW01 **Name:** Tramway

NGR: SO0482303438 **Type:** Tramway **Status:** None **Period:** Post-medieval

Description:

Marked as 'Old Tramway' on 1919 2nd Edition OS 1:2500 Map. Associated with 'Airshaft' (GGAT06429m), 'Level' (GGAT06431m) and 'Structure' (GGAT06430m) together forming 'New Waunwyllt Colliery'.

Welshcoalmines.co.uk reports that "New Waunwyllt Colliery was opened in 1909 by Thomas Merthyr Colliery Company and in 1918 employed 117 men underground and 20 on the surface before being closed on 13th July 1920" (Accessed 18/09/19).

Tramway survives intermittently as a causeway/ shallow holloway running southwest/northeast from Structure (GGAT06430m), (which may be a possible winding house), before running parallel with '(and to the north of) Level (GGAT06431m) towards Graig Farm where the OS map shows that it dog-legs northeastwards towards tips near Graig Pit. Where it crosses Nant Graig, two reused railway tracks have been set vertically into the ground, possibly as part of a bridge structure.

Represents example of extractive features characterised within HLCA072 Waunwyllt, Pen-y-lan and Graig Gethin.

ID: BPW02 **Enw:** Lefel

NGR: SO0461703431 **Math:** Lefel **Statws:** Dim **Cyfnod:** Ôl-ganoloesol

Disgrifiad:

Hen Lefel c.200m i'r gorllewin o'r Glofa Newydd Waunwyllt 'Lefel' (GGAT06431m). O bosib rhan o'r un cymhleth. Wedi'i dorri'n wastad i gyfeiriad y gorllewin, roedd rhywfaint o waith maen yn weladwy yn awgrymu bwa gwaith maen.

Mae'r Lefel wedi'i lleoli ar waelod ffin cae hynafol yn arwain i fynny 'Fferm Pen-y-Lan' (GGAT03746m) gerllaw. Hefyd yn agos i 'Tŷ Bach Carreg Sych' (GGAT 03747m) sy'n fwy tebygol o fod yn tŷ powdr yn gysylltiedig â'r gwaith echdynnu cyfagos.

Yn cynrychioli enghraifft o nodweddion echdynnol a nodwedddwyd yn HLCA072 Waunwyllt, Pen-y-lan a Graig Gethin.

Wedi'i leoli'n fras ar linell cyfuchlin 340m.

ID: BPW02 **Name:**

NGR: SO0461703431 **Type:** Level **Status:** None **Period:** Post-medieval

Description: Old Level c.200m to the west of New Waunwyllt Colliery 'Level' (GGAT06431m). Possibly part of the same complex. Level cut in a westerly direction, some faced masonry was noted suggestive of a masonry archway.

The Level is located at base of ancient field boundary leading up to nearby 'Pen-y-lan Farm' (GGAT03746m). Also in close proximity to 'Drystone Toilet' (GGAT 03747m) which is more likely to be a Powder House related to the nearby extractive workings.

Represents example of extractive features characterised within HLCA072 Waunwyllt, Pen-y-lan and Graig Gethin.

6.5 Appendix IV Plates



Plate 1. South east facing general view of the car park within the development site.



Plate 2. East facing general view of the car park within the development site.



Plate 3. South west facing view of a modern trackway within the Development Area.



Plate 4. North east facing view of a modern trackway within the Development Area.



Plate 5. Site of Triangulation Point (GGAT03941m) within the Development Area.



Plate 6. West facing view towards BikePark Wales from the Site of the Triangulation Point (GGAT03941m) within the Development Area.



Plate 7. South east facing view of the Development Area.



Plate 8. East facing view of the Development Area.



Plate 9. East facing view of the Development Area adjacent to the access road.



Plate 10. South east facing view of the Development Area from the access road.



Plate 11. General view of the Development Area from the access road.



Plate 12. North facing view toward Development Area from Sheepfold (GGAT03745m).



Plate 13. South facing view of Sheepfold (GGAT03745m).



Plate 14. North west facing view of Webbers Pond (GGAT02522m).



Plate 15. South west/ north east aligned wall lining the northern bank of Nant Graig within Waunwyllt Colliery.



Plate 16. North east facing view of south west/north east aligned 'Tramway' (BPW01) within Waunwyllt Colliery.



Plate 17. South west facing view of south west/north east aligned 'Tramway' (BPW01) within Waunwyllt Colliery.



Plate 18. North east facing view of south west/ north east aligned Tramway (BPW01) within Waunwyllt Colliery showing reused railway track where the feature crosses Nant Graig.



Plate 19. South west facing view of 'Airshaft' (GGAT06429m) within Waunwyllt Colliery.



Plate 20. South west facing view of Level (GGAT06431m) within Waunwyllt Colliery.



Plate 21. North facing view of Level (GGAT06431m) within Waunwyllt Colliery.



Plate 22. South east facing view of structural remains of 'Structure' (GGAT06430m) at western terminus of 'Old Tramway' within Waunwyllt Colliery.



Plate 23. Wider east facing view of structural remains of 'Structure' (GGAT06430m) at western terminus of 'Old Tramway' within Waunwyllt Colliery.



Plate 24. South facing detail of metalwork within structural remains of 'Structure' (GGAT06430m) at western terminus of 'Old Tramway' within Waunwyllt Colliery.



Plate 25. North east facing view of demolition rubble associated with structural remains of 'Structure' (GGAT06430m) at western terminus of 'Old Tramway' within Waunwyllt Colliery.



Plate 26. North west facing view of a high platform at the terminus of the 'Old Tramway' within Waunwyllt Colliery.



Plate 27. North east facing view of Trial Level to the south west of Waunwyllt Colliery.



Plate 28. South east facing view of Old Level (BPW02) close to Pen-y-lan Farm.



Plate 29. South east facing detail of Old Level (BPW02) close to Pen-y-lan Farm (GGAT03746m) showing structural masonry.



Plate 30. North west facing view of Field Boundary leading to Pen-y-lan Farm (GGAT03746m).



Plate 31. Detail of post-medieval pottery found adjacent to Field Boundary leading to Pen-y-lan Farm (GGAT03746m).



Plate 32. North west facing detail of probable Drystone Toilet (GGAT03747m) in association with Old Level (BPW02) close to Pen-y-lan Farm (GGAT03746m).



Plate 33. North west facing view of Pen-y-lan Farm.



Plate 34. West facing view of Pen-y-lan Farm.



Plate 35. South facing view of Barn associated with Pen-y-lan Farm.



Plate 36. North west facing view of Barn associated with Pen-y-lan Farm.



Plate 37. South east facing view of Trackway leading away from Barn associated with Pen-y-lan Farm.



Plate 38. North west facing view of trackway away from the Development Area.



Plate 39. North facing view of trackway away from the Development Area.



Plate 40. North west facing view of a hollow way leading away from the Development Area.



Plate 41. South west facing view of Neath Valley Railway Tunnel and Cutting.



Plate 42. South west facing detail of the Neath Valley Railway Tunnel.



Plate 43. North East facing view of the Neath Valley Railway Cutting.



Plate 44. South facing view of Cwm Pit Chimney Base.



Plate 45. South facing view towards Development Area from Cyfarthfa Castle (LB11396).



Plate 46. South facing view towards Development Area from Cyfarthfa Park (PGW GM1).



Plate 47. West facing view of Abercanaid Haystack Boiler (GM572)



Plate 48. West facing view towards the Development Area from Abercanaid Haystack Boiler (GM572)



Plate 49. South west facing view towards the Development Area from Abercanaid (HLCA018).



Plate 50. View from FFos-y-fran Village and Patchworkings (SAM GM496)



Plate 51. View from Sarn Howell Ponds (SAM GM494)



Plate 52. East facing view from the BikePark Wales Uplift Track towards the Development Area.



Plate 53. North east facing view from the BikePark Wales Uplift Track.



Plate 54. Aerial photo dated to 1951 showing the Development Area (Middle Left). (©CRAPW)



Plate 55. Aerial photo dated to 1975 showing the Development Area (Bottom Left). (©CRAPW)

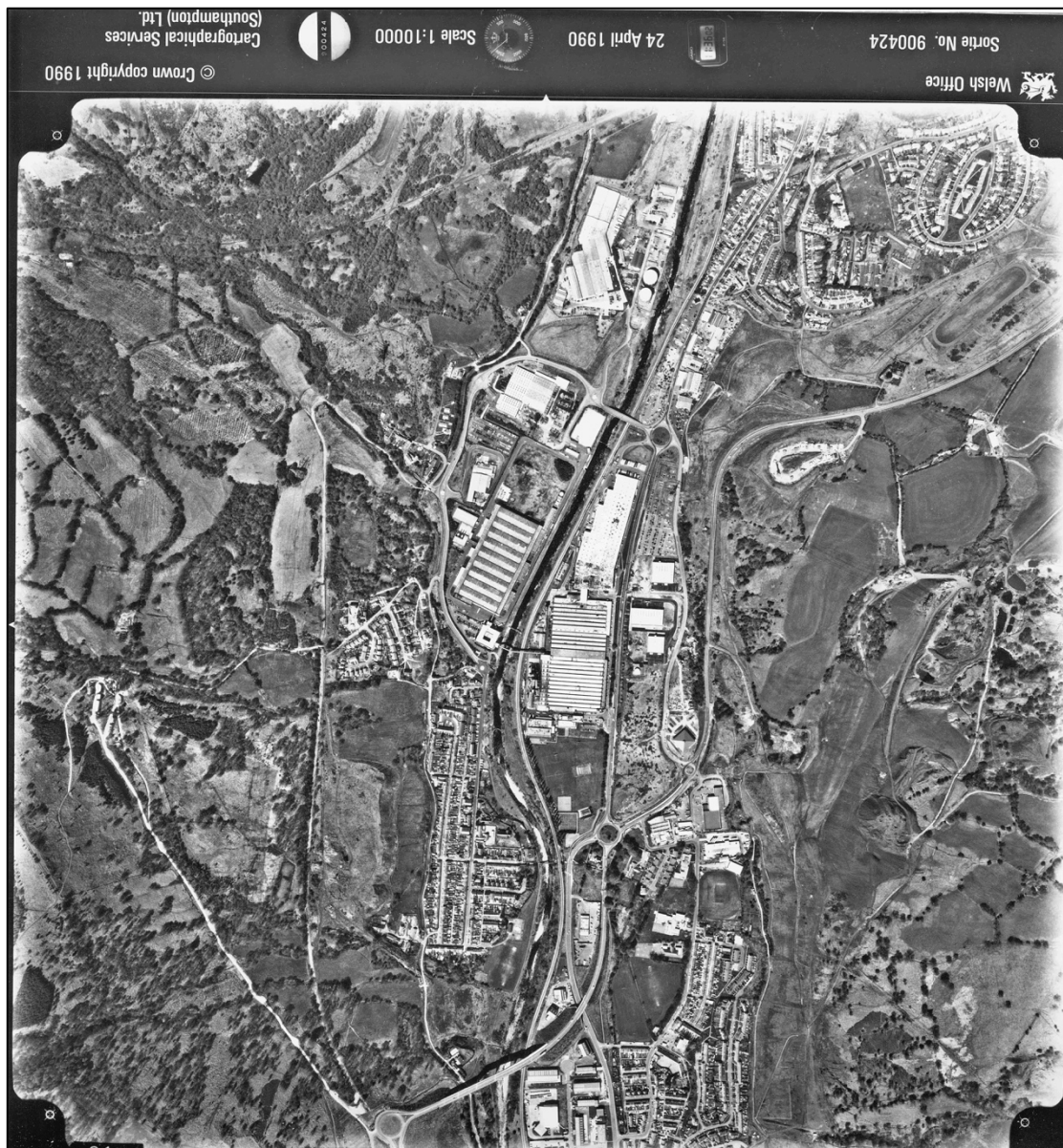


Plate 56. Aerial photo dated to 1990 showing the Development Area (Middle Left). (©CRAPW)



Plate 57. Aerial photo dated to 2009 showing the Development Area (Bottom Left). (©CRAPW)

6.6 Appendix V. CADW. 2007. *'Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (revised 2nd Edition)'*.

GUIDE TO GOOD PRACTICE ON USING
THE REGISTER OF LANDSCAPES OF
HISTORIC INTEREST IN WALES IN THE
PLANNING AND DEVELOPMENT PROCESS

REVISED (2ND) EDITION INCLUDING REVISIONS TO THE
ASSESSMENT PROCESS (ASIDOHL2)



Cyngor Cefn Gwlad Cymru
Countryside Council for Wales



Llywodraeth Cynulliad Cymru
Welsh Assembly Government



Cadw, Welsh Assembly Government, Plas Carew, Unit 5/7 Cefn Coed, Parc Nantgarw, Cardiff CF15 7QQ. Tel 01433 33 6600

Countryside Council for Wales, Maes-y-Ffynnon, Penrhosgarnedd, Banor, Gwynedd LL57 2DW. Ffôn 01248385500

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Cover photograph: View east towards Angle bay in the Milford Haven historic landscape, with Angle village and its medieval strip fields (centre right) and Chapel Bay Fort (centre left) overlooking the coast (© RCAHMW).

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GUIDE TO GOOD PRACTICE ON USING THE REGISTER OF LANDSCAPES OF HISTORIC INTEREST IN WALES IN THE PLANNING AND DEVELOPMENT PROCESS

This Guide to Good Practice relates to the non-statutory *Register of Landscapes of Historic Interest in Wales*. The Register's principal sponsors, Cadw and the Countryside Council for Wales, have prepared it with the assistance of the four Welsh Archaeological Trusts. The Guide is non-statutory and advisory only. It is intended to assist local planning authorities to decide how much weight to give to information in the Register when determining planning applications. It is also intended to assist others involved in the planning and development process in Wales, particularly developers preparing Environmental Impact Assessment statements, to bring forward plans and proposals that are likely to have the least possible adverse impact on historic landscape areas on the Register.

The Guide comes in two sections. The first, 'Planning for Historic Landscapes', describes the background to the Register, the follow-up programme of Historic Landscape Characterization in the areas identified on it, the general principles underpinning the identification and conservation of historic landscapes, and the suggested use of the Register within the planning process and other assessment decision procedures not promoted through the Town and Country Planning Acts. The second section of the guide consists of a Technical Annex that sets out a staged process for assessing the significance of the impact of development on historic landscape areas on the Register (ASIDOHL2). It is recommended that assessments be routinely undertaken in the circumstances described above and in accordance with the suggested use of the Register described in the Guide.

Note on the Revised (2nd) Edition

The experience gained since the publication of the first edition of the Guide in 2003 has necessitated the publication of a revised, second edition, containing amendments and improvements. Users of the Guide have also contributed a number of helpful suggestions that have been incorporated. The principal changes are to be found in the formulae and grading systems used in Stages 2–4 of the ASIDOHL process described in the Technical Annex in the second section of the Guide. To differentiate this from that in the first edition, this will now be known as ASIDOHL2. The changes have been introduced to ensure that development impacts are treated more fairly and consistently, because there were anomalies present in some of

the formulae and score ranges used in the first version of the process. The structure of the ASIDOHL process and the body of the text, however, remain essentially unchanged. The planning and development process, to which the advice in the Guide applies, also remains largely unchanged. The first section of the Guide, on Planning and Historic Landscapes, therefore, contains only minor changes and amendments to bring that section up to date.

The sponsors are pleased that in the four years since the first appearance of the Guide in 2003, the ASIDOHL process has become increasingly recognized and accepted as a useful tool in Environmental Impact Assessments (EIA). However, experience shows that misunderstandings can still arise later on in the planning process after Environmental Statements have been completed, for example when planning applications or appeals have

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become subject to Public Inquiries. These could have been avoided had more use been made of the advice available from the sponsors on the scope of the ASIDOHL assessments. The sponsors feel that their advice is best sought at the beginning of the planning process before an ASIDOHL assessment is commissioned (for example at the scoping stage in an EIA). This would ensure that agreement is reached on the nature and range of the impacts that should be considered in the assessment; which and how many Historic Character Areas should be taken into account, and whether there are any special elements or characteristics within them of which particular note should be taken.

The test by which the sponsors judge an ASIDOHL2 assessment when giving their advice to planning authorities is that it should contain sufficient information for the 'responsible authority', in the case of EIA, or an

Inspector in the case of a Public Inquiry, to come to a balanced view in determining the planning application or appeal concerned. This relates not only to the appropriate range of impacts and Historic Character Areas being identified at the start of the ASIDOHL process, but also to the provision of sufficient written justification for scores given in the various stages of the process as an assessment is compiled. The onus, therefore, is on developers to ensure that the sponsors consider the ASIDOHL assessment satisfies this test. The sponsors accept that further advice may be needed concerning particular stages or points in the ASIDOHL process as assessments are compiled, and reference is made to this in the Technical Annex. This or any other advice concerning the Guide can be sought at any time from the contacts listed in the Appendix.

LANDSCAPE AREAS



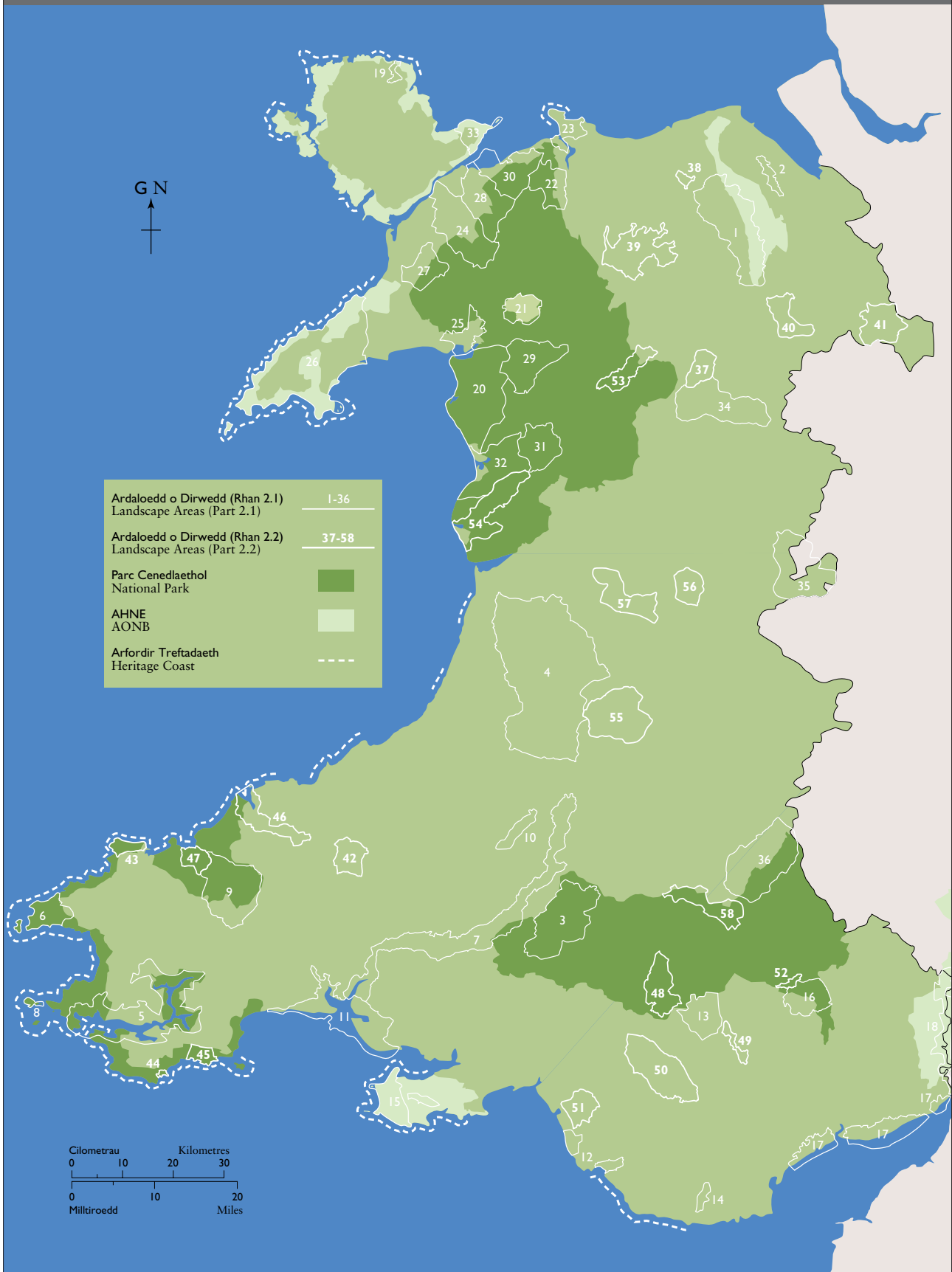
View across archaeological excavations in advance of developments at Parc Bryn Cegin, Llandygai, near Bangor, in the Ogwen Valley historic landscape. Behind can be seen the Llandygai Industrial Estate, where archaeological excavations in advance of its construction, in 1966–67, revealed important evidence of occupation and ceremonial activities dating back to the Neolithic period (© RCAHMW).

- | | |
|---|--|
| 1. Vale of Clwyd HLW (C) 1 | 1. Dyffryn Clwyd HLW (C) 1 |
| 2. Holywell Common and Halkyn Mountain HLW (C) 2 | 2. Comin Treffynnon a Mynydd Helygain HLW (C) 2 |
| 3. Black Mountain and Mynydd Myddfai HLW (D) 1 | 3. Y Mynydd Du a Mynydd Myddfai HLW (D) 1 |
| 4. Upland Ceredigion HLW (D) 2 | 4. Ucheldir Ceredigion HLW (D) 2 |
| 5. Milford Haven Waterway HLW (D) 3 | 5. Moryd Aberdaugleddau HLW (D) 3 |
| 6. St Davids Peninsula and Ramsey Island HLW (D) 4 | 6. Penrhyn Tyddewi ac Ynys Dewi HLW (D) 4 |
| 7. Tywi Valley HLW (D) 5 | 7. Dyffryn Tywi HLW (D) 5 |
| 8. Skomer Island HLW (D) 6 | 8. Ynys Selyf HLW (D) 6 |
| 9. Preseli HLW (D) 7 | 9. Preseli HLW (D) 7 |
| 10. Dolaucothi HLW (D) 8 | 10. Dolaucothi HLW (D) 8 |
| 11. Taf and Tywi Estuary HLW (D) 9 | 11. Aber Afonydd Taf a Thywi HLW (D) 9 |
| 12. Merthyr Mawr, Kenfig and Margam Burrows HLW (MGI) 1 | 12. Twyni Merthyr Mawr, Cynffig a Margam HLW (MGI) 1 |
| 13. Merthyr Tydfil HLW (MGI) 2 | 13. Merthyr Tudful HLW (MGI) 2 |
| 14. Llanarfarn, Vale of Glamorgan HLW (SGI) 1 | 14. Llanarfarn, Bro Morgannwg HLW (SGI) 1 |
| 15. Gower HLW (WGI) 1 | 15. Gŵyr HLW (WGI) 1 |
| 16. Blaenavon HLW (Gt) 1 | 16. Blaenafon HLW (Gt) 1 |
| 17. Gwent Levels HLW (Gt) 2 | 17. Gwastadeddau Gwent HLW (Gt) 2 |
| 18. Lower Wye Valley HLW (Gt) 3 | 18. Pen Isaf Dyffryn Gwy HLW (Gt) 3 |
| 19. Amlwch and Parys Mountain HLW (Gw) 1 | 19. Amlwch a Mynydd Parys HLW (Gw) 1 |
| 20. Ardudwy HLW (Gw) 2 | 20. Ardudwy HLW (Gw) 2 |
| 21. Blaenau Ffestiniog HLW (Gw) 3 | 21. Blaenau Ffestiniog HLW (Gw) 3 |
| 22. Lower Conwy Valley HLW (Gw) 4 | 22. Pen Isaf Dyffryn Conwy HLW (Gw) 4 |
| 23. Creuddyn and Conwy HLW (Gw) 5 | 23. Creuddyn a Chonwy HLW (Gw) 5 |
| 24. Dinorwig HLW (Gw) 6 | 24. Dinorwig HLW (Gw) 6 |
| 25. Aberglaslyn HLW (Gw) 7 | 25. Aberglaslyn HLW (Gw) 7 |
| 26. Llein and Bardsey Island HLW (Gw) 8 | 26. Llŷn ac Ynys Enlli HLW (Gw) 8 |
| 27. Nantlle Valley HLW (Gw) 9 | 27. Dyffryn Nantlle HLW (Gw) 9 |
| 28. Ogwen Valley HLW (Gw) 10 | 28. Dyffryn Ogwen HLW (Gw) 10 |
| 29. Trawsfynydd Basin and Cwm Prysor HLW (Gw) 11 | 29. Bro Trawsfynydd a Chwm Prysor HLW (Gw) 11 |
| 30. North Arllechwedd HLW (Gw) 12 | 30. Gogledd Arllechwedd HLW (Gw) 12 |
| 31. Vale of Dolgellau HLW (Gw) 13 | 31. Bro Dolgellau HLW (Gw) 13 |
| 32. Mawddach HLW (Gw) 14 | 32. Mawddach HLW (Gw) 14 |
| 33. Penmon HLW (Gw) 15 | 33. Penmon HLW (Gw) 15 |
| 34. Tanat Valley HLW (P/C) 1 | 34. Dyffryn Tanad HLW (P/C) 1 |
| 35. Vale of Montgomery HLW (P) 2 | 35. Bro Tefaldwyn HLW (P) 2 |
| 36. Middle Wye Valley HLW (P) 3 | 36. Canol Dyffryn Gwy HLW (P) 3 |
| 37. Berwyn HLW (C) 3 | 37. Y Berwyn HLW (C) 3 |
| 38. Lower Elwy Valley HLW (C) 4 | 38. Pen Isaf Dyffryn Elwy HLW (C) 4 |
| 39. Denbigh Moors HLW (C) 5 | 39. Mynydd Hiraethog HLW (C) 5 |
| 40. Vale of Llangollen and Eglwyseg HLW (C) 6 | 40. Dyffryn Llangollen ac Eglwyseg HLW (C) 6 |
| 41. Maelor HLW (C) 7 | 41. Maelor Saesneg HLW (C) 7 |
| 42. Drefach and Felindre HLW (D) 10 | 42. Dre-fach a Felindre HLW (D) 10 |
| 43. Pen Caer: Garn Fawr and Strumble Head HLW (D) 11 | 43. Pen Caer: Garn Fawr a Phen Strwmwll HLW (D) 11 |
| 44. Stackpole Warren HLW (D) 12 | 44. Cwningar Ystagwll HLW (D) 12 |
| 45. Manorbier HLW (D) 13 | 45. Maenorbŷr HLW (D) 13 |
| 46. Lower Teifi Valley HLW (D) 14 | 46. Pen Isaf Dyffryn Teifi HLW (D) 14 |
| 47. Newport and Carningli HLW (D) 15 | 47. Trefdraeth a Charningli HLW (D) 15 |
| 48. East Fforest Fawr and Mynydd-y-glôg HLW (MGI) 3 | 48. Dwyrain Fforest Fawr a Mynydd-y-glôg HLW (MGI) 3 |
| 49. Gelli-gaer Common HLW (MGI) 4 | 49. Gwaun Gelli-gaer HLW (MGI) 4 |
| 50. The Rhondda HLW (MGI) 5 | 50. Y Rhondda HLW (MGI) 5 |
| 51. Margam Mountain HLW (WGI/MGI) 2 | 51. Mynydd Margam HLW (WGI/MGI) 2 |
| 52. Clydach Gorge HLW (Gt) 4 | 52. Cwm Clydach HLW (Gt) 4 |
| 53. Bala and Bala Lakesides HLW (Gw) 16 | 53. Y Bala a Glannau Tegid HLW (Gw) 16 |
| 54. Dysynni Valley HLW (Gw) 17 | 54. Dyffryn Dysynni HLW (Gw) 17 |
| 55. Elan Valley HLW (P) 4 | 55. Cwm Elan HLW (P) 4 |
| 56. Caersws Basin HLW (P) 5 | 56. Bro Caersŵs HLW (P) 5 |
| 57. Clywedog Valley HLW (P) 6 | 57. Dyffryn Clywedog HLW (P) 6 |
| 58. Middle Usk Valley: Brecon and Llangorse HLW (P) 7 | 58. Canol Dyffryn Wysg: Aberhonddu a Llan-gors HLW (P) 7 |

THE LANDSCAPE AREAS AND LOCAL AUTHORITIES



THE LANDSCAPE AREAS, NATIONAL PARKS,
 AREAS OF OUTSTANDING NATURAL BEAUTY AND HERITAGE COASTS



PLANNING FOR HISTORIC LANDSCAPES



An aerial view of the lagoons and reedbeds of the Gwent Levels Wetland Reserve created to replace habitats lost when the Cardiff Bay Barrage was constructed. The reserve has been successfully integrated into the pattern of the Gwent Levels historic landscape (© RCAHMW).

1.0 Background to the Register of Landscapes of Historic Interest in Wales

1.1 The whole of the Welsh landscape can be said to be historic, with human activity often having been at the heart of its creation. The nature of its terrain, the stewardship exercised over the centuries by generations of landowners and farmers, along with only limited intensive cultivation and urbanization, have produced ideal conditions that have favoured the survival of much of the historic character of the Welsh landscape. However, since the beginning of the twentieth century, the scale and pace of change has intensified, and as we enter the twenty-first century, the historic character of the landscape is increasingly under pressure from a variety of new changes as older features are renewed or replaced, or when new features, often with very different characteristics, have to be introduced to meet modern needs.

1.2 Against this background and to be better informed about how to accommodate necessary change in a way that is sensitive to the historic character of landscape, Cadw, the Countryside Council for Wales (CCW) and the International Council on Monuments and Sites (ICOMOS UK) decided to collaborate to produce the Register of Landscapes of Historic Interest in Wales as a means of identifying, and to provide information on, the most important and best-surviving historic landscapes in Wales. The Royal Commission on the Ancient and Historical Monuments of Wales, the four Welsh Archaeological Trusts and the Welsh local authorities also collaborated in the project.

1.3 The Register has been issued in two parts, covering thirty-six 'outstanding' and twenty-two 'special' historic landscape areas, and forms Part 2 of the wider exercise to compile an overall Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. For the purpose of this Guide, therefore, the term 'historic landscape' refers to an area identified on the *Register of Landscapes of Outstanding Historic Interest in Wales* (published as Part 2.1, by Cadw, in 1998, ISBN 1 85760 007 X), or on the *Register of Landscapes of Special Historic Interest in Wales* (published as Part 2.2, by Cadw, in 2001, ISBN 1 85760 187 4). The Guide does not deal with Part 1 of the Register, which is concerned with historic parks and gardens.

1.4 It is hoped that the greater account that has been taken of historic landscapes generally since the Register, and then the Guide, were first published, can be sustained in landscape planning, management, conservation, enhancement and interpretation, and in providing opportunities for access and recreation. In raising awareness of the historic significance and importance of the Welsh environment overall, use of the Register and this Guide should also encourage everyone

concerned to give greater weight to historic landscape issues alongside the more traditional and long-established conservation issues.

1.5 At the same time, the Register recognizes that landscapes are dynamic, living systems fashioned to meet current, mainly economic, needs and that what exists today is largely a created landscape, produced through human endeavour since the beginning of farming in this country. Landscapes, therefore, will continue to change, and need to change, so the intention is not to fossilize them, or to prevent them from being altered, but rather to manage them in ways that will allow the key historic elements or characteristics from the past to be retained while still meeting modern needs.

1.6 All landscape areas identified on the Register are of national importance in the Welsh context. The difference between the landscapes of outstanding historic interest featured in Part 2.1, and the landscapes of special historic interest featured in Part 2.2, therefore, is one of degree, and not quality of historic interest. The distinction was established by expert consensus following the scoring thresholds set for the selection of areas to be included on the Register. The scoring thresholds were verified by field assessments and are described in detail in the introduction to the Register. In summary, the distinction is intended to reflect the fact that the landscapes of special historic interest are generally smaller in size and have fewer selection criteria against which they could be justified, compared to the landscapes of outstanding historic interest. The distinction, however, should not cause the former to be considered of less value than the latter, and so far as the advice on the use of the Register is concerned, both categories should be treated in the same way.

1.7 Further information on the background to the creation of the Register, its methodology and its role, can be found in the introduction to Part 2.1, with a supplement of additional, updated information included in the introduction to Part 2.2.

1.8 Cadw has also published a more general guide to historic landscapes intended to raise awareness of their existence and importance amongst a wider audience (*Caring for Historic Landscapes*, Cardiff, 2003).

2.0 Suggested use of the Register within the planning and development process

2.1 This Guide and the following Technical Annex are primarily aimed at the assessment of individual projects and the development control process. They do not specifically apply to the assessment of development plans and the Strategic Environmental Assessment of plans and programmes, for example, Unitary or Local Development Plans,

Transport Plans, the Trunk Road Programme, and so on; nevertheless, such plans and programmes should acknowledge and make reference to the principles involved and the need to consider historic landscape issues. The Guide and Technical Annex do not, at this stage, address the issue of longer-term, cumulative impact of development or change in historic landscapes. This would require a process of strategic, long-term assessment and monitoring, enabling pressures, stresses and risks to be identified and, ultimately, the establishment of indicators and ‘limits of acceptability’ and ‘most favoured status’ of the landscape areas on the Register. The sponsoring bodies hope that this Guide and Technical Annex will be used as a tool to start and underpin that process.

2.2 Advice on listed buildings and conservation areas in the planning process is given in Welsh Office Circulars 61/96 *Planning and the Historic Environment: Historic Buildings and Conservation Areas* and 1/98 *Planning and The Historic Environment: Directions by the Secretary of State for Wales*; and in Welsh Assembly Government *Planning Policy Wales*, March 2002, paragraphs 6.5.7 to 6.5.13 and paragraphs 6.5.14 to 6.5.21. Listed buildings and conservation areas often form integral elements, or sometimes, key characteristics, in historic landscapes. However, the advice in this Guide does not affect or alter the provisions of these documents, which should continue to be applied to listed buildings and conservation areas within historic landscape areas on the Register.

2.3 Advice on the role of World Heritage Sites in the planning process is given in Welsh Office Circular 61/96 *Planning and the Historic Environment: Historic Buildings and Conservation Areas*, paragraphs 13, 14 and 15; and in Welsh Assembly Government *Planning Policy Wales*, March 2002, paragraphs 6.5.22. Most World Heritage Sites in Wales are within historic landscapes; however, the advice in this Guide does not affect or alter the provision of these documents, which should continue to be applied to the World Heritage Sites within historic landscape areas on the Register.

2.4 Advice on the role of archaeology in the planning process is given in Welsh Office Circular 60/96 *Planning and the Historic Environment: Archaeology*, and in Welsh Assembly Government *Planning Policy Wales*, March 2002, paragraphs 6.5.1 to 6.5.6. Archaeological sites often form integral elements, or sometimes, key characteristics, in historic landscapes. However, the advice in this Guide does not affect or alter the provisions of these documents, which should continue to be applied to archaeological sites within historic landscape areas on the Register.

2.5 Information on how the Register may be used is set out, in detail, in its introduction, with a supplement of additional,

updated information included in the introduction to Part 2.2. It is important, however, to emphasize that the Register does not impose statutory controls and areas on it are not ‘designated’. The latest guidance given to planning authorities on the use of the Register is set out in Welsh Assembly Government *Planning Policy Wales*, March 2002, paragraph 6.5.23 which states:

‘Information on the landscapes on the second part of the Register should also be taken into account by local planning authorities in preparing UDPs and emerging Local Development Plans, 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.’

2.6 Such developments should be considered on a case-by-case basis, but generally may be defined as, but are not confined to:

- major communications schemes (road, rail, sea, air, or inland waterway);
- quarrying and opencast mining;
- major settlement;
- major leisure developments;
- large-scale industrial, processing, manufacturing or commercial expansion;
- large-scale landfill and reclamation, waste disposal or recycling schemes;
- major drainage, coastal defence and flood prevention works;
- power generation, storage and distribution projects;
- major water abstraction, treatment or supply schemes;
- other similar, large-scale infrastructure projects;
- afforestation or other extensive agricultural land use changes;
- intensive agriculture or aquaculture projects.

2.7 Information on the Register should also be taken into account when considering developments that are not in themselves large-scale or extensive, but are of a radical nature and likely to cause unacceptable change when considered in relation to the nature and quality of the existing key historic elements or characteristics in the landscape area on the Register.

2.8 Certain types of developments require Environmental Impact Assessment (EIA) to be undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999–SI 1999 No 293 (EIA Regulations). Guidance on the application of the EIA Regulations in Wales is given in Welsh Office Circular 11/99 *Environmental Impact Assessment*. EIA Regulations Schedule 4 (as reproduced in Circular 11/99, p. 47, Annex C) sets out the information to be included in an Environmental Statement, section 3 of which requires:

‘A description of the aspects of the environment likely to be significantly affected by the development... including the architectural and archaeological heritage, and landscape.’

This includes the historic landscape areas on the Register.

2.9 With rare exception all developments of the type listed in 2.6 will *de facto* require EIA because of their nature and scale. In other cases, each development will be considered for EIA on its own merits, and the more environmentally sensitive the location, the more likely it is that the effects will be significant and will require EIA. The fact that a location occurs within a historic landscape area on the Register should be considered as increasing its overall environmental sensitivity and, consequently, the necessity for EIA as required in EIA Regulations Schedule 3 in respect of ‘landscapes of historical, cultural or archaeological significance’ (Circular 11/99, p. 46, Criterion 2 (c) (viii)). Planning or other competent authorities should take this into account when screening applications to determine the need for EIA with, if required, advice from Cadw, CCW and the Welsh Archaeological Trusts.

2.10 In the light of the Rochdale ruling (High Court: *Crown v. Rochdale Metropolitan Borough Council, 7/5/1999*), when EIA is required, fixed development within a historic landscape area on the Register requires a meaningful assessment process that is identified when the EIA is scoped. When EIA is required for a development within a historic landscape area on the Register, therefore, planning or other competent authorities in agreeing the scope of works should require assessors to use the methodology set out in the Technical Annex for assessing the significance of the impacts of the proposal on the historic landscape area.

2.11 Where EIA is not necessary, it is a matter for the discretion of the planning or other competent authority to determine the level of an Assessment of the Significance of the Impact of Development on Historic Landscape areas on the Register (ASIDOHL2) it considers desirable when considering a development proposal which is of such a scale, or of a radical nature, that it is likely to have more than local impact on an area on the Register. A particular development may be considered to require the full ASIDOHL2 process outlined in the Technical Annex or, alternatively, the nature of the development may require the application of only part of the ASIDOHL2 process. Detailed advice should be obtained from Cadw, CCW and the Welsh Archaeological Trusts.

2.12 Whereas the advice in this Guide and Technical Annex is designed to assist the process of establishing interests and assessing the significance of impacts,

it does not provide options for the consideration of any mitigation or positive benefits that may be offered through the restoration or enhancement of elements. These issues should be separately assessed, preferably relying on the results of a completed ASIDOHL2 exercise (see Technical Annex, ‘Mitigation’, p. 30).

3.0 The Historic Landscape Characterization programme

3.1 In parallel with the creation of the Register, Cadw and the Welsh Archaeological Trusts are undertaking a follow-up programme of Historic Landscape Characterization in Wales. The programme gathers together more detailed information about each area on the Register, and it is designed to cater for a variety of needs, but primarily to provide information for landscape conservation and management as, for example, may be required in the Tir Gofal agri-environment scheme.

3.2 Information is gathered in such a way as to be compatible and interchangeable with the historic landscape aspect in CCW’s *LANDMAP* programme, so that the results of a characterization study can be directly fed into a *LANDMAP* exercise and vice versa. In so far as this Guide is concerned, information from characterization should always be used for an ASIDOHL2, as set out in the Technical Annex to this Guide.

3.3 CCW, University College, Dublin and Brady Shipman Martin, Dublin, working in partnership, with funds from the INTERREG II European Regional Aid Fund, have produced a *Guide to Best Practice in Seascape Assessment* (The Marine Institute, Dublin, 2001). Seascapes assessment takes account of historical and cultural issues and it is intended that assessment studies will eventually be available for the whole of the Welsh coastline. Organizations or individuals undertaking ASIDOHL2 in coastal areas should contact CCW for details of the latest seascape information available. Also relevant in this context is the *Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascape and Visual Impact Report* (Report by Enviros Consulting for the Department of Trade and Industry, 2005).

4.0 How Historic Character Areas are identified

4.1 The characterization process divides each landscape area on the Register into a number of smaller, more discrete, geographical areas of broadly consistent historic character called ‘Historic Character Areas’. These areas are defined according to their key historic elements or characteristics, for example, an area might be physically characterized by

a particular form of historic settlement or land use pattern, or it might have distinctive historic buildings, archaeological sites or traditional field boundaries, or it might contain important ancient habitats, and so on. Alternatively, an area might not have any strongly definitive physical characteristics, but instead it might have significant historic documentary evidence relating to it, or have important historic associations, and so on.

4.2 All of these elements or characteristics can occur either singly or in combination. In some cases, an area might be characterized by a range of elements that are not necessarily similar, but together demonstrate a particular land use theme or process; for example, defence, industry, communications, land enclosure, landscape planning or ornamentation, and so on. One theme may be dominant or several might have been at work at the same, or at different times. Grouping elements and characteristics together under land use themes greatly increases our capacity to understand the historical development of the landscape. The understanding we gain is a key characteristic in its own right and one of the principles that underpins the identification of historic landscapes (section 6.2).

5.0 Getting information on Historic Landscape Characterization and Historic Character Areas

5.1 The characterization programme is progressing towards coverage of all areas on the Register. Its results are available on the Welsh Archaeological Trusts' websites, as well as in paper volumes available for inspection at the offices of the Welsh Archaeological Trusts and Cadw. Relevant addresses are given in the Appendix.

5.2 In the few historic landscape areas on the Register where characterization reports are not yet available, and where an ASIDOHL2 is required, it is recommended that an ASIDOHL2 should be undertaken in relation to 'Provisional Historic Character Areas'. Provisional Historic Character Areas are identified during the preparation of characterization reports and the Welsh Archaeological Trusts can supply details of these. Where characterization reports are not yet available, but a *LANDMAP* exercise has been undertaken, the Level 4 'historic landscape aspect areas' identified in *LANDMAP* may qualify as Provisional Historic Character Areas, subject to the endorsement of the Trust concerned. Where Provisional Historic Character Areas have not yet been identified, the Trusts can advise on a suitable methodology, or can be commissioned to identify Provisional Historic Character Areas as a prerequisite for an ASIDOHL2.

6.0 Key principles underpinning the identification of historic landscapes

6.1 This Guide and the advice in it have to be considered in the context of the three key principles underpinning the identification of historic landscape areas on the Register, namely:

6.2 The Register promotes the conservation of the key characteristics of historic landscapes as those landscapes evolve. While the Register recognizes that historic landscapes must inevitably evolve to meet the needs of the people who sustain and live in them, it is hoped that this can be achieved with the fullest possible regard for the conservation of their key historic characteristics. Here, the term 'characteristics' is taken in the broadest sense. It includes not only the physical elements of the past that survive, like individual sites, monuments or other features noted in section 4.0, but also the spaces in between and the resulting patterns formed in the landscape. The survival and appreciation of these spatial characteristics is crucial because, like the land use themes identified during characterization, they greatly increase our capacity to understand how individual sites or monuments functioned and how they were related physically, visually and through time. How much and how well we are able to understand and appreciate the historical meaning and significance of the landscape is a key characteristic in its own right. This ties in with the second principle.

6.3 The conservation of historic landscapes is about ensuring the transfer of maximum historic meaning and value when contemplating landscape change. Our capacity to understand and appreciate the historical development of the landscape should not be thwarted by inappropriate or insensitive change. This carries with it the need to assess the potential effects of a development, in terms of any lasting alteration it will cause, in relation to the whole of the historic landscape on the Register, not just the elements or characteristics directly affected in the 'footprint' area. This ties in with the third principle.

6.4 Key historic characteristics within historic landscapes, like historic buildings or archaeological sites, are irreplaceable. Their removal, loss, degradation, fragmentation, or dislocation cannot be mitigated in the same way as a habitat or a natural feature might be restored or recreated. The effects of direct, physical impacts are irreversible, but equally damaging, indirect impacts can occur through the severance or disruption of the functional or visual connections between elements, or

through the consequential degradation of the visual or other amenity of elements, or through a combination of these factors. This relates back to the second principle because, through indirect impacts, developments can have an adverse effect on the amenity and value of the landscape well beyond the site of the development itself. Piecemeal development over time can have an equally adverse effect resulting from a cumulation, or a combination of direct and indirect impacts.

7.0 Guidance on determining landscape edges and on the status of recent elements or characteristics in the landscape areas on the Register

7.1 It is widely accepted that it is difficult to determine precise edges to landscapes. Although landscapes are real in the sense that they are made up of solid objects and spaces, they are also subjective and their extents as humanly perceived, will invariably involve a degree of individual opinion or expediency. Towards the limits of any given area of interest in a landscape, therefore, the question can always be asked whether a particular element is included or excluded. These constraints apply to the landscape areas on the Register.

7.2 In order to assist planning authorities and others who require more precision in their work, this section gives guidance about determining the edges of the landscape areas on the Register, the edges of the Historic Character Areas identified by characterization and the relationship between the two.

7.3 A pragmatic and common sense approach was adopted for determining the broad extents of the landscape areas on the Register. The methodology is explained in detail in the introduction to the Register (Part 2.1, pp. xxx–xxxii, ‘Defining the areas’). In summary, the nature of the historic interest concerned determined the extent of the landscape areas on the Register and, in many cases, because of Wales’s varied topography, the landscape areas coincided with the physical limits of natural features like mountains, valleys, basins, promontories and so on.

7.4 By their very nature and much smaller scale, the edges of Historic Character Areas will be drawn to coincide with the geographical or physical limits of their characteristics. In most cases, this will have the effect of producing precise edges that can be shown as hard lines on maps. However, these should not be taken as representing the edges of the landscape areas on the Register.

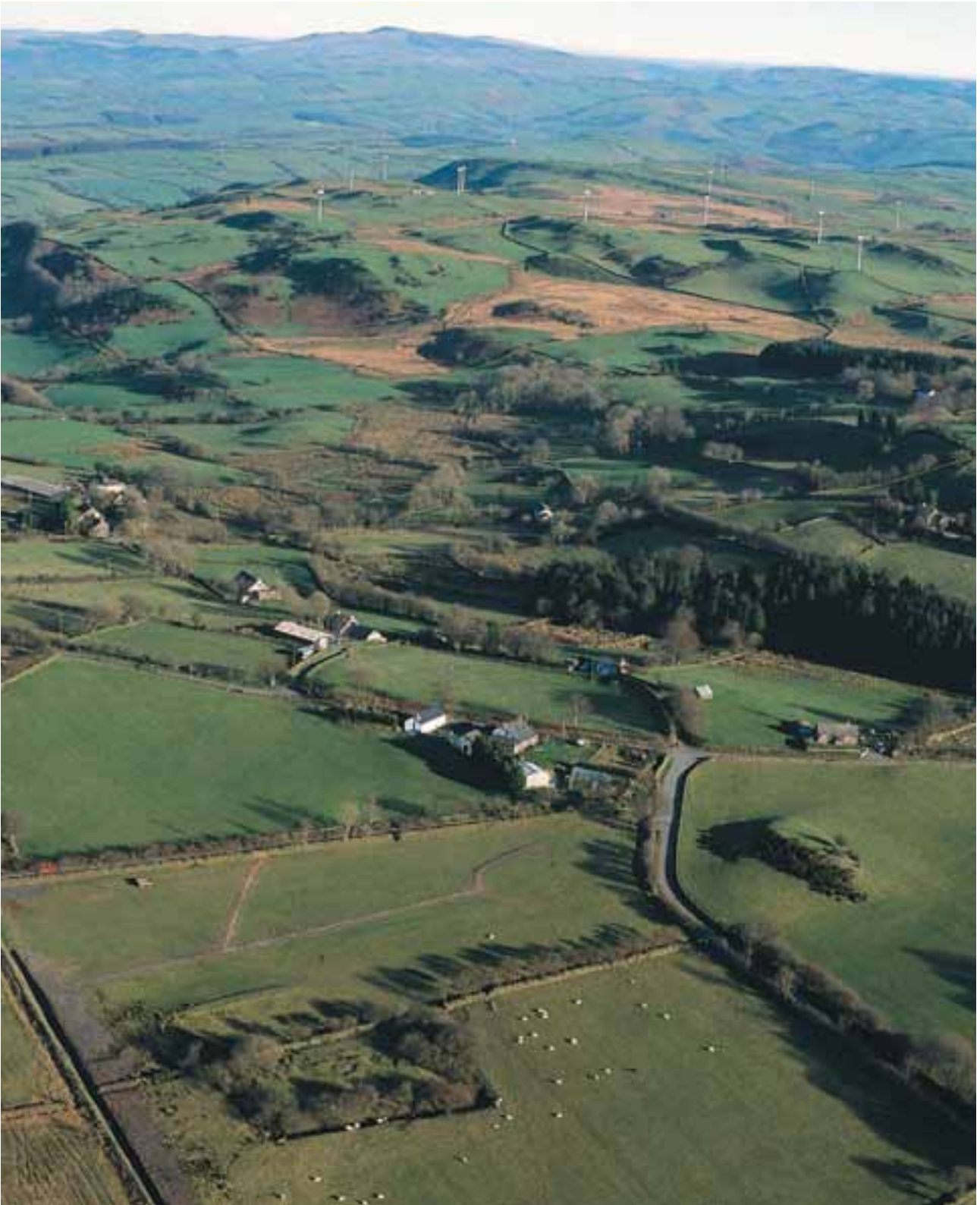
7.5 Although there may appear to be a coincidence in their edges, the characterization programme has shown that in some landscape areas on the Register, particularly those identified under Criterion 3 — Historic diversity/ Multiperiod, Historic Character Area edges can fall outside the extent of the landscape area on the Register. This is because Historic Character Areas are identified at a much smaller scale and at a much greater level of detail than was possible for the landscape areas on the Register, and where there is a great degree of diversity, edges can be drawn at a number of places depending on which characteristic is selected as being the most dominant.

7.6 In order to resolve this potential ambiguity, the following guidance is offered. In planning terms, the status of the Register is non-statutory, and this includes information from characterization that is intended to support the Register. The extent of the landscape areas on the Register and Historic Character Areas are, therefore, indicative and advisory only.

7.7 It will be a matter for the planning or other competent authority undertaking an EIA, or the Public Inquiry Inspector concerned, to determine where a precise edge should be drawn. All the evidence available in the Register, the relevant characterization report and any relevant work done subsequently should be carefully considered and weighed against the nature and extent of the proposed development and its predicted impact on the landscape area on the Register. The guiding principle is that where drawn edges are required, they should be as consistent as possible with the maintenance of those historic elements or characteristics that demonstrate the outstanding or special interest of the landscape area on the Register.

7.8 Another potential ambiguity or misunderstanding can arise over the presence in landscape areas on the Register of recent elements or characteristics that may be of little, if any, historic interest. As excluding these elements or characteristics would have been impossible and rather meaningless in landscape terms, the Register adopted a pragmatic approach by assuming that ‘history started yesterday’ (Part 2.1, p. xxii, ‘Criteria for landscapes of outstanding or special historic interest’). While this assumption may be theoretically correct, it is not really helpful in planning terms. Reference to recent elements or characteristics in landscape areas on the Register, therefore, should not be interpreted as placing undue weight on their intrinsic importance, but rather as focusing on their wider role in contributing to landscape diversity and continuity over a much longer time span. It will, therefore, be a matter for the planning or other competent authority undertaking an EIA, or the Public Inquiry Inspector concerned, to decide on a case-by-case basis what emphasis to place on the contribution made by recent elements or characteristics to the landscape areas on the Register.

TECHNICAL ANNEX



Windfarms, like this one at Llangwryfon in the Upland Ceredigion Historic Landscape, are one of the types of development within an area on the Register requiring an ASIDOHL2 assessment. The Trefenter medieval moated site, which is a scheduled ancient monument, can be seen in the foreground (© RCAHMW).

THE ASIDOHL2 PROCESS: 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

Introduction

The staged process recommended in this Technical Annex for the assessment of the significance of the impact of development on historic landscape areas on the Register (ASIDOHL2), is intended to be used by archaeologists with historic landscape expertise or for landscape practitioners familiar with landscape approaches to the historic environment.

Guidance on the application of the process and on the technical steps involved should be sought in the first instance from the Welsh Archaeological Trusts. They will also be able to advise on the latest revisions and provide, through their websites, blank proformas of the tables used at each stage of the assessment process.

It is intended that the process will continue to be regularly updated to reflect practical experience gained.

To this end, the sponsoring bodies would welcome any comments or suggestions on its operation.

In most cases, an assessment can be primarily based on a desk-top study and analysis of all the relevant information, supported by site visit(s) (including, where necessary, fieldwork to establish the ‘Provisional Historic Character Areas’ noted in section 5.2) and the production of a written report. These guidelines apply to these cases only. In all other cases where, for example, substantial departures from the guidelines may be required, it is recommended that any changes and variations are discussed and agreed in advance with Cadw, CCW and the curatorial section of the relevant Welsh Archaeological Trust.

Taking the Historic Character Areas derived from the characterization programme as the ‘building blocks’ of the historic landscape areas on the Register, it is recommended that the ASIDOHL2 process and report should be structured into five main stages:

TABLE 1

ASSESSMENT OF THE SIGNIFICANCE OF THE IMPACT OF DEVELOPMENT ON HISTORIC LANDSCAPE AREAS ON THE REGISTER OF LANDSCAPES OF HISTORIC INTEREST IN WALES — ASIDOHL2

SUMMARY OF STAGES

STAGE 1	Compilation of an introduction of essential, contextual information.
STAGE 2	Description and quantification of the direct, physical impacts of development on the Historic Character Area(s) affected.
STAGE 3	Description and quantification of the indirect impacts of development on the Historic Character Area(s) affected.
STAGE 4	Evaluation of the relative importance of the Historic Character Area(s) (or part(s) thereof) directly and/or indirectly affected by development in relation to: <ul style="list-style-type: none"> (a) the whole of the Historic Character Area(s) concerned, and/or (b) the whole of the historic landscape area on the Register, followed by (c) an evaluation of the relative importance of the Historic Character Area(s) concerned in the national context, and a determination of the average overall value of all the Historic Character Areas (or parts thereof) affected.
STAGE 5	Assessment of the overall significance of impact of development, and the effects that altering the Historic Character Area(s) concerned has on the whole of the historic landscape area on the Register.

STAGE 1 Contextual information

The first stage of the ASIDOHL2 process is to gather essential, contextual information that should provide and form the introduction to the report. This information should include:

- (a) A brief summary description of the development, with a map at the appropriate scale showing its location in relation to the historic landscape area on the Register.
- (b) A statement about the context in which the ASIDOHL2 is being done, for example, as part of EIA, a feasibility study for development, as part of evidence to be presented at a Public Inquiry etc.
- (c) If relevant, a brief summary of the planning history of the site (details of any previous permissions, appeals etc.).
- (d) References to any related assessments, for example, a *LANDMAP* study, an archaeological assessment under the provisions of Welsh Office Circular 60/96, EIA, or a previous assessment etc.
- (e) A summary of the national, regional and local planning policies in relation to historic landscapes in the development area (Welsh Assembly Government planning guidance, Unitary Development Plans, emerging Local Development Plans, etc.)
- (f) In the relevant cases, an indication of the provisional status of any Historic Character Areas (see section 5.2).
- (g) An indication of the confidence levels of the data upon which the ASIDOHL2 is based and any resulting limits assigned to impact predictions, either because of techniques used or because of the limits of information available, timing or personnel used, inability to gain access to the land or data involved, and whether there are any contingent, or other, liabilities, issues of confidentiality, copyright relating to the data etc.
- (h) A statement on the qualifications and experience of the person(s) responsible for undertaking the ASIDOHL2 and a full declaration of the nature of any contractor–client relationships.
- (i) A description of the process used, work undertaken, the area over which impacts have been assessed, sources consulted, site visits etc., and an indication of the ASIDOHL2 stages undertaken.

Copies of the historic landscape citation in the Register, the descriptions of the Historic Character Area(s) affected and any other relevant supporting information, maps, photographs etc. should normally be included as appendices to the ASIDOHL2 report.

STAGE 2 Assessment of direct, physical impacts of development

The second stage of the ASIDOHL2 process and report should describe and, as far as possible, quantify the direct, physical impacts of the development on the Historic Character Area(s) affected using the following framework.

A map should be provided at the appropriate scale showing the precise location and extent of the development, including any preliminary site works or supporting infrastructure necessary, in relation to the Historic Character Area(s) directly affected.

Where there are large amounts of information or clarity is an issue, supplementary map(s) can be provided to show the location of Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Parks and Gardens of Special Historic Interest, and any other coincident statutory, nature conservation or landscape designations; the location of any known, non-scheduled archaeological sites and monuments, non-listed historic buildings or structures; traditional boundaries, or any other key historic elements or characteristics identified in the characterization report. Wherever possible, the Primary Record Numbers (PRNs) assigned in the regional Historic Environment Records maintained by the Welsh Archaeological Trusts, should be quoted. (The distinction between elements and characteristics is not critical. In the context of an ASIDOHL2 exercise and its constituent stages, they are not mutually exclusive and reference is drawn to the definitions set out in sections 4.1, 4.2 and 6.2.) Direct, physical impacts should be described and quantified in three ways, namely:

(a) In absolute terms

This should be expressed as a statement indicating the actual percentage or proportion of the surface area of the Historic Character Area that is directly affected, for example, ‘55% (or just over half) of the area of Historic Character Area X will be permanently lost or removed by development.’ (In some cases, the percentage surface area affected could be greater than the physical extent of the development if, for example, a construction land-take greater in area than, or separate from, the development site is required for extensive preliminary site works, ancillary developments or supporting infrastructures.)

(b) In relative terms

This should be expressed with statements indicating the percentages or proportions of the known resource (i.e. the key elements or characteristics identified by characterization) that will be permanently lost or removed by development, for example, ‘In Historic Character Area X, 25% (or a quarter) of, for example, the number of known archaeological sites;

the extent of historic land use or pattern in area A; the length of linear feature B, and so on, will be permanently lost or removed by development.

In both (a) and (b), the overall magnitude of direct, physical impacts should be graded as:

TABLE 2

ASIDOHL2 STAGE 2: GRADES OF DIRECT PHYSICAL IMPACTS

75–100%	permanently lost or removed	Very Severe;
50–74%	permanently lost or removed	Severe;
30–49%	permanently lost or removed	Considerable;
15–29%	permanently lost or removed	Moderate;
5–14%	permanently lost or removed	Slight;
0–4%	permanently lost or removed	Very Slight.

The intrinsic importance or status of each element or characteristic affected should also be assessed and briefly described and recorded using the categories adopted by the Welsh Archaeological Trusts, namely:

Category A Sites and Monuments of National Importance

This includes Scheduled Ancient Monuments (SAMs), Grade I and II* (and some Grade II) Listed Buildings and sites of similar quality, i.e. those which would meet the requirements for scheduling or listing at the top two grades. There is a presumption in favour of preservation of all such sites and their settings should they come under threat. Such sites might include those that survive principally as buried remains.

Category B Sites and Monuments of Regional Importance

This includes sites that would fulfil the criteria for listing at Grade II (if a building), but not for scheduling (if a relict archaeological site). Nevertheless, such sites are of particular importance within a regional context and, if threatened, should ideally be preserved in situ, although complete excavation and/or recording may be an acceptable alternative. Most sites of archaeological and/or historical interest will fall within this category.

Category C Sites / Features of Local Importance

This category includes components of the historic environment (such as walls, gateposts, tracks etc.) that help define local distinctiveness and character. They may not be of sufficient importance to justify a recommendation for preservation if threatened, but they nevertheless have an interest and

importance in their local context.

Category D Minor and Damaged Sites / Features

This category includes sites / features which are of minor importance or so badly damaged that too little remains to justify their inclusion in a higher category. Rapid recording, either before or during destruction, is usually sufficient for this category of site.

Category U Sites / Features Needing Further Investigation

Sites / features whose character, importance or location is undetermined are placed in this category. They include buried sites and known underground features identified from archival evidence and retrospective map analysis, sites with no defined physical presence such as find spots, sites noted but not accurately located in antiquarian references, sites known only from place-name evidence and other sites reported at the specified location, but cannot be verified by archaeological fieldwork. They will require further work before they can be allocated to Categories A–C.

Where large areas are involved, or where there is a high concentration of elements as, for example, in industrial or urban areas, it is suggested that groups of similar, or related, elements are brought together and considered as a single element or characteristic, provided this is clearly stated in the report. The emphasis should be on Category A and B and closely linked, or groups of, Category C sites.

(c) In landscape terms

As well as the intrinsic importance or value recorded in step (b), account should also be taken of the extrinsic importance of elements or characteristics within the landscape of the Historic Character Area. Extrinsic importance reflects the contribution the individual element or characteristic makes to the value of the Historic Character Area as a whole. The Historic Character Area will have a value in excess of the combined values of the individual elements or characteristics that make it up, on the basis that ‘the sum of the whole is greater than the sum of the individual parts’. Elements or characteristics need not necessarily be similar, and may even be quite diverse, but as part of a landscape, they will have a measure of extrinsic, as well as of intrinsic, importance.

Extrinsic importance is not to be confused with the ‘Group Value’ of closely related elements or characteristics in Historic Character Areas where a single land use theme or process is dominant. Group value relates to mainly functional links and interconnections that occur between individual elements, and will depend on how well the links have survived.

Examples would be groups consisting of elements with a similar morphology, chronology and function (e.g. a cairnfield), or of elements with a dissimilar morphology, but sharing a clear past interconnectivity (e.g. an ironworks and its related water management system, adits/levels/ mineshaft, tramroad/railway, waste tips and perhaps also workers' housing).

Clearly, the distinction between 'Extrinsic Importance' and 'Group Value' will to some extent depend on the scale and level of detail at which (a) elements or characteristics and (b) Historic Character Areas have been identified. However, in this stage of the ASIDOHL2 process, the emphasis should be on determining the extrinsic, or landscape value of elements or characteristics, whether or not they are individually made up of groups of smaller-scale features that have a high, intrinsic group value. However, high intrinsic group value may well enhance an element's extrinsic, or landscape importance overall, especially in areas with a high density of related features.

The extrinsic, or landscape importance of the elements identified should be graded as 'Very High'; 'High'; 'Considerable'; 'Medium'; 'Low', or 'Very Low'; together with an indication of the type of group to which it belongs, for instance, as in the examples given above.

The effect the development would have on the extrinsic importance of the element or characteristic as a whole should then be assessed. This should reflect what effects the loss of element X (or part thereof) would be on the landscape of Historic Character Area Y where X is found. In other words, by how much does the loss of X diminish the value of Y as a landscape? Effects should be graded as a 'Landscape Value' that is 'Lost'; 'Substantially Reduced'; 'Considerably Reduced'; 'Moderately Reduced'; 'Slightly Reduced', or 'Very Slightly Reduced'.

In order to determine the overall magnitude of direct, physical impacts on a Historic Character Area, and for the results to be transparent and meaningful for planning and development purposes, impact magnitudes should be weighed up with element sensitivity (i.e. an element's intrinsic and extrinsic importance or status), using the following scoring system:

TABLE 3
ASIDOHL2 STAGE 2: 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	6
High	5
Considerable	4
Medium	3
Low	2
Very Low	1
Landscape value effect	
Lost	6
Substantially Reduced	5
Considerably Reduced	4
Moderately Reduced	3
Slightly Reduced	2
Very Slightly Reduced	1

The results for each Historic Character Area affected could be summarized in a table, for example:

TABLE 4

ASIDOHL2 STAGE 2: ASSESSMENT OF DIRECT, PHYSICAL IMPACTS ON HISTORIC CHARACTER AREA X

ABSOLUTE IMPACT (LOSS OF AREA)
48 ha, 55% area

MAGNITUDE & SCORE
Severe – 5

RELATIVE AND LANDSCAPE IMPACTS (LOSS OF KNOWN ELEMENTS OR CHARACTERISTICS) & SCORES

ELEMENT / % LOSS	CATEGORY	MAGNITUDE	LANDSCAPE VALUE	LANDSCAPE VALUE EFFECT
Tramway R – 0.3km length, 15%	B – 3	Moderate – 3	High – part of quarry complex G – 5	Slightly Reduced – 2
Field System Y – 2.3 ha, 85%	C – 2	Very Severe – 6	High – part of settlement cluster P – 5	Substantially Reduced – 5
Hut Platforms A – 4 sites, 30%	A – 4	Considerable – 4	Medium – part of settlement R – 3	Moderately Reduced – 3
Crop-mark complex B – 1.0 ha, 65%	A (SAM) – 4	Severe – 5	High – part of ritual complex T – 5	Lost – 6
Ancient Woodland C – 0.3 ha, 3%	B – 3	Very Slight – 1	Very low – 1	Very Slightly Reduced – 1

Template available at www.cadw.wales.gov.uk

The scores for each element (i.e. Status [Category] + Magnitude + Landscape Value + Landscape Value Effect) are added up to produce a combined total. This figure is then divided by the number of elements identified, in order to obtain an average figure. In the example shown above this would be:

$$(3+3+5+2) + (2+6+5+5) + (4+4+3+3) + (4+5+5+6) + (3+1+1+1)$$

Divided by 5 = 14.2

This average score is then added to the score for the magnitude of absolute impact, which in this case is 5:

$$14.2 + 5 = 19.2, \text{ rounded off to the nearest whole number} = 19$$

On a 28-point scale, which is the maximum possible, this figure provides a measure of the overall magnitude of direct, physical impacts on Historic Character Area X. Scores are then graded according to the following scale:

TABLE 5

ASIDOHL2 STAGE 2: OVERALL MAGNITUDE OF DIRECT PHYSICAL IMPACTS

SCORE	GRADING
24–28	Very Severe
19–23	Severe
14–18	Considerable
9–13	Moderate
4–8	Slight
0–3	Very Slight

In the example shown, therefore, a score of 19 equates with a ‘Severe’ overall magnitude of direct, physical impact on Historic Character Area X.

STAGE 3 Assessment of indirect impacts of development

Clearly, a finite area of land will be directly and physically affected by a development, but a much greater area will be indirectly affected through the fragmentation of Historic Character Areas, visual intrusion and encroachment that could devalue the historic landscape area on the Register as a whole. The importance of ‘setting’ is a well-established criterion in the assessment of the significance of impact of development on Scheduled Ancient Monuments and Listed Buildings, and the same criterion should be applied to Historic Character Areas and to historic landscape areas on the Register.

There is no statutory definition of setting, but it could be considered as having two principal dimensions. Firstly, there is the immediate or essential setting which, in the case of a building, would be the ancillary land used with it or the curtilage. Secondly, there is the wider setting that, in the case of a building, may or may not be legally attached to it, may or may not be used with it, and is often part of the built environment or part of the countryside. Settings may not be as easily defined for field monuments, but it may be possible to make reasonable inferences based on archaeological, or historical, information. Setting should not be interpreted too narrowly, and for the purposes of this process, impacts on settings will be categorized as ‘indirect’ impacts.

The third part of the ASIDOHL2 report should, therefore, describe and quantify as objectively as possible the indirect impacts of the development on all Historic Character Areas affected.

Indirect impacts can be categorized as being mainly physical or visual in nature.

(a) Indirect, physical impacts

These can occur to elements in a Historic Character Area

as a result of one, or a combination, of the following factors:

- (i) An increased risk of exposure, erosion, disturbance, decay, dereliction or any other detrimental physical change to elements, during or 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., during or 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. This includes ‘severance’ from related elements in adjacent, or other, geographically removed but still functionally linked, Historic Character Areas, which large-scale developments might cause in archaeologically or historically complex landscapes.
- (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, during or consequent to development.

Each category of indirect, physical impact identified should be described and an assessment made of its severity, based on professional judgement, and graded as follows: ‘Very Severe’; ‘Severe’; ‘Considerable’; ‘Moderate’; ‘Slight’, or ‘Very Slight’. In order to determine the overall magnitude of indirect, physical impacts on a Historic Character Area, impact magnitudes should be weighed up with element sensitivity (i.e. an element’s intrinsic importance or status), using the same grades and scores as for Stage 2 (i.e. the first three ranges in Table 3, p. 18).

The results for each Historic Character Area affected could be summarized in a table, for example:

TABLE 6

ASIDOHL2 STAGE 3: ASSESSMENT OF INDIRECT, PHYSICAL IMPACTS ON HISTORIC CHARACTER AREA Y

IMPACTS	CATEGORY & SCORE	MAGNITUDE & SCORE
Increased risk of erosion to element J	B – 3	Moderate – 3
Increased management needs for element K	C – 2	Slight – 2
Functional connection between elements J & K disrupted	A – 4	Severe – 5
Traditional land use of area L ceased	A – 4	Very Severe – 6
Amenity value of element M reduced	C – 2	Moderate – 3

The scores for each element (i.e. Status + Magnitude) are added up to produce a combined total. This figure is then divided by the number of elements identified in order to obtain an average figure. In the example shown above, this would be:

$$(3+3) + (2+2) + (4+5) + (4+6) + (2+3)$$

Divided by 5 = 6.8

This average score will be required at the end of Stage 3 in order to calculate the overall magnitude of indirect impacts on the Historic Character Area.

(b) Indirect (non-physical) visual impacts

These can occur to elements as a result of one, or a combination, of the following factors:

(i) Visual impacts on elements from which a development can be seen (considered up to its maximum height). The 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 recognized 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, an essential line of sight between historically linked defensive sites will become 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 in relation to the existing historic character of the area considering:

- its form — the scale, number, density, massing, distribution etc., and if appropriate, the movement of its constituent features;
- its appearance — the size, shape, colour, fabric etc. of its constituent features.

This section is aimed at assessing to what extent the development constitutes a visual intrusion or encroachment, and to what extent that affects the area’s historic character.

NOTE: The Landscape Institute and the Institute of Environmental Management and Assessment have jointly published *Guidelines for Landscape and Visual Impacts Assessment* (E. & F. N. Spon Press, London, 2002, second edition). This may usefully be consulted; however, software packages are now available that can make use of OS digital data to produce 360-degree view-shed analysis, 3-D virtual representations and so on (e.g. Vertical Mapper for MapInfo; Visual Nature Studio 2 etc.). In complicated cases, or where the development is on a very large scale, it may be necessary to use the services of a professional landscape architect to undertake a full visual impacts assessment.

Each type of indirect, visual impact identified should be described using maps, figures, diagrams, elevations and photographs (photo montages may be particularly useful) as necessary. Assessment should be generally confined to the key elements identified during characterization within the affected area(s), i.e. Category A and B sites and closely linked, or groups of, Category C sites (as defined in Stage 2 above), with an assessment of the severity of impact based on professional judgement, and graded as follows: ‘Very Severe’; ‘Severe’; ‘Considerable’; ‘Moderate’; ‘Slight’, or ‘Very Slight’. Development form and appearance should be similarly graded.

In order to determine the overall magnitude of the indirect, visual impacts on a Historic Character Area, impact magnitudes should be weighed up with element sensitivity (i.e. an element’s intrinsic importance or status), using the same grades and scores as for Stage 2 (i.e. the first three ranges in Table 3, p. 18). Development form and appearance are graded in relation to the average value of element sensitivity for the Historic Character Area.

The results for each Historic Character Area affected could be summarized in a table, for example:

TABLE 7

ASIDOHL2 STAGE 3: ASSESSMENT OF INDIRECT, VISUAL IMPACTS ON HISTORIC CHARACTER AREA Y

IMPACTS	CATEGORY & SCORE	MAGNITUDE & SCORE
Views to element N partially blocked	A – 4	Slight – 2
Views from element P disrupted	B – 3	Severe – 5
Small-scale change to essential settings of element R	A – 4	Slight – 2
Visual connection between elements T and S occluded	B – 3	Very Severe – 6
Development form	3.5*	Severe – 5
Development appearance	3.5*	Moderate – 3

*Average value of element sensitivity – $(4+3+4+3) \div 4 = 3.5$

The scores for each element (i.e. Category + Magnitude) are added up to produce a combined total. This figure is then divided by the total number of elements identified, including development form and appearance, in order to obtain an average figure. In the example shown above, this would be:

$$(4+2) + (3+5) + (4+2) + (3+6) + (3.5+5) + (3.5+3)$$

Divided by 6 = 7.33

This average score is then added to the score for the indirect, physical impacts, which in the calculation on p. 21 came to 6.8:

$$7.33 + 6.8 = 14.13$$

This figure is on a scale of 1–20, which is made up of the 10 maximum possible average scores for indirect, physical impacts and the 10 maximum possible average scores for indirect, visual impacts. Unfortunately, this scale cannot conveniently be divided into six whole number ranges as is the case with the 28-point scale used in Stage 2 (Table 5, p. 19). To overcome this difficulty, the average score is simply multiplied by 28 and then divided by 20, to convert it to the 28-point scale.

The calculation is as follows:

$$14.13 \times 28$$

Divided by 20 = 19.78, rounded off to the nearest whole number = 20

This score provides a measure of the overall magnitude of indirect (physical and visual) impacts on the Historic Character Area, which is then graded according to the same scale as used in Stage 2, namely:

TABLE 8

ASIDOHL2 STAGE 3: OVERALL MAGNITUDE OF INDIRECT IMPACTS

SCORE	GRADING
24–28	Very Severe
19–23	Severe
14–18	Considerable
9–13	Moderate
4–8	Slight
0–3	Very Slight

In the examples shown, therefore, a score of 20 equates with a ‘Severe’ overall magnitude of indirect, physical impact on Historic Character Area Y.

The types of indirect impacts described above are by no means exhaustive, and there may be others specific to particular kinds of development that should also be taken into account and assessed. Each impact identified should be described and quantified as objectively as possible, with written descriptions supported by diagrams or photographs, particularly for visual impacts. Where accurate quantification is impossible, a professional judgement should be given.

Because there is the potential for the full range of indirect impacts not to be recognized and for some of the Historic Character Areas affected to be missed and not taken into account, it is strongly recommended that all the impacts and areas are identified and agreed in advance with Cadw, CCW and the curatorial section of the relevant Welsh Archaeological Trust.

STAGE 4 Evaluation of relative importance

The fourth stage of the ASIDOHL2 process and report should evaluate the relative importance of the Historic Character Area(s) (or part(s) thereof) directly and/or indirectly affected by development in relation to:

- (a) the whole of the Historic Character Area(s) concerned, and/or
 - (b) the whole of the historic landscape area on the Register;
- followed by,
- (c) an evaluation of the relative importance of the Historic Character Area(s) concerned in the national context.

Stage 4 should then be completed with a determination of the average, overall value of all the Historic Character Areas (or part(s) thereof) affected.

Which evaluation steps have to be done and how much input is required will depend on the scale of the development in relation to the nature and extent of the affected Historic Character Area(s) and the historic landscape area on the Register. For example, if a development directly affects an entire Historic Character Area, then only evaluation steps (b) and (c) need to be done. The complexity of the Historic Character Area(s) in terms of the variety of characteristics and numbers of elements affected will also influence the amount of input required.

In cases where both steps (a) and (b) have to be done, evaluating relative importance is necessary because it may well be that the relative importance of an element within the Historic Character Area differs from its relative importance within the overall historic landscape area on the Register. For example, a particular element could be abundant and fairly representative of the Historic Character Area as a whole, but might be quite rare in relation to the whole of the historic landscape area on the Register. Clearly, if an entire Historic Character Area is directly affected with the complete loss of all its constituent elements, then step (a) would not apply.

It is likely that evaluation scores (see 'Guidance on Evaluation' below) could be influenced by a number of factors. The relative size and number of Historic Character Areas within the historic landscape area on the Register, and the number of Historic Character Areas affected in relation to the total number of Historic Character Areas within the historic landscape area on the Register, could all have some bearing on the values determined.

Where the historic landscape area on the Register is very large and diverse, it may be difficult to reach an accurate assessment of value without undertaking extra work that may be beyond the scope of an ASIDOHL2. Under these circumstances, evaluation might be made simpler and easier by 'breaking up' particularly large historic landscape areas on the Register into a number of smaller areas comprising groups of Historic Character Areas. These smaller areas could be identified on the basis of the Register's selection criteria, topographical units or particular land use themes etc. Conversely, where a group of small, tightly drawn Historic Character Areas occurs as, for example, in an industrial or urban area, then for evaluation purposes, the group can be considered as a single Historic Character Area. Whatever means is chosen for the particular case concerned, this should be clearly explained and justified in the ASIDOHL2 report.

With regard to evaluation step (c), 'national context' should be taken to refer to the historic landscape areas on the Register, not the whole of Wales. Although all historic landscapes on the Register are of national importance, being either of outstanding or of special historic interest, some component Historic Character Areas may be of even greater significance, because of the range or the quality of the elements they contain, the presence of designated elements within them, their relationship with other Historic Character Areas, their status as a key component in the historic landscape area on the Register, or because of a combination of these factors. Generally, these Historic Character Areas will be pre-eminent and easily recognized, for example, they might be within a World Heritage Site or they might contain a large well-known monument in state care, Listed Building or Scheduled Ancient Monument and its settings, or a historic park or garden etc.

Evaluation step (c) should not be regarded as downgrading of certain areas: it is simply acknowledging that within a landscape that is all of national importance, some areas, elements or characteristics may well be of greater value than others. It should therefore be possible to determine Historic Character Area value as being somewhere in the range between what might be considered to be the 'baseline' value of the whole historic landscape area on the Register (i.e a value on a par with their nationally important status) and the even higher value of the most significant or pre-eminent Historic Character Area(s) within the same historic landscape area.

Guidance on Evaluation

This section gives a list of criteria that may be applied in evaluation steps (a)–(c), although depending on individual circumstances, not all criteria will be universally applicable (Welsh Office Circular 60/96, *Planning and the Historic Environment: Archaeology*, p. 15, Annex 3, 'Secretary of State's Criteria for Scheduling Ancient Monuments').

However, because some Scheduled Ancient Monument (SAM) criteria are more relevant to sites than to landscapes, not all SAM criteria will be applicable to all the evaluation steps. For the same reason, not all SAM criteria will be applicable to all historic characteristics, or Historic Character Areas affected. As there are no hard and fast rules, it will be a matter of professional judgement as to which criteria to select and to apply. Further advice may be sought from Cadw, CCW and the Welsh Archaeological Trusts.

With respect to the evaluation of individual criteria, in most cases, the different grades of values will have to be qualitative as few, if any, national data sets exist to enable quantitative grades of values to be determined. This will be particularly true for evaluation step (c). There may also be cases where the ranges or the grades of values suggested below will require adjustment to reflect local conditions such as, for example, high numbers of elements present, etc. The ranges or grades of values selected will have to be based on professional judgement and justified in the ASIDOHL2 report.

The SAM-based evaluation criteria set out below are derived from criteria applied in a historic landscape assessment of part of the Gwent Levels landscape of outstanding historic interest (Welsh Office, M4 Relief Road Magor to Castleton — Stage 2 Assessment, Draft Report for Consultation by Ove Arup and Partners, April 1998/Amended October 1998, Appendix 2 — *The Historic Landscape* by S. Rippon), and from work by the Gwynedd Archaeological Trust.

N.B. Depending on which evaluation step is being undertaken, ‘elements’ include ‘characteristics’, and ‘landscape’ includes ‘Historic Character Area’ in the following list.

Criteria for determining relative importance or value in Stage 4, steps (a), (b) and (c)

Rarity in terms of period or date, and as a component of the landscape. This should be assessed in relation to what survives today, since elements of a once common type of landscape may now be rare.

Very High	sole survivor of its type in the landscape;
High	only two or three similar historic elements in the landscape;
Moderate	fewer than five broadly similar elements in the landscape;
Low	more than five broadly similar elements in the landscape;
None	commonplace throughout the landscape.

Representativeness should also be considered, in that an example of 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.

Very High	contains all the elements that characterize the landscape;
High	contains most of the elements that characterize the landscape;
Moderate	contains about half of the elements that characterize the landscape;
Low	contains some of the elements that characterize the landscape;
None	sole example of the element and, therefore, not representative.

Documentation The survival of documentation that increases our understanding of a landscape will raise its importance, though this is difficult to quantify owing to the extremely varied nature of documentary material. Therefore, a professional judgment is given based on the actual amount or importance of material and its academic value.

Very High	complete documentary record, or exceptionally important sources available;
High	a considerable quantity of relevant material, or highly important sources available;
Moderate	some relevant material, or moderately important sources available;
Low	little relevant material, or only modestly important sources available;
None	no relevant material available.

Group Value relates to the diversity (or similarity) of elements including their structural and functional coherence. To some extent, the group value of individual elements will have been taken into account in Stage 2, where the links between closely related elements as, for example, between the separate features that make up a quarrying or mining site, can enhance the intrinsic or landscape value of an element or characteristic. At Stage 4, the group value relationship is usually wider and more likely to be between whole groups of related elements as, for example, in a quarrying or mining complex that includes the associated settlements, transport systems as well as the processing sites etc. Clearly, there will be instances within Historic Character Areas in which elements or groups are linked to others not directly affected by development, or situated in adjoining Historic Character Areas. ‘Group Value’ is also likely to be more applicable to areas identified under the Register’s first and second selection criteria, namely, ‘Intensively developed or extensively remodelled’ or ‘Period’ landscapes.

Very High	contains six or more linked elements or groups;
High	contains four or five linked elements or groups;
Medium	contains three or four linked elements or groups;
Low	contains two or three linked elements or groups;
None	i.e. a single or any number of unlinked elements or groups.

Survival relates to the degree of survival of elements in the landscape. In instances where the original extent or numbers are known (for example, traditional field boundaries for which there may be detailed mapped evidence), it may be possible to measure this quantitatively.

- Very Good more than 80% of elements surviving;
- Good between 60% and 79% of elements surviving;
- Moderate Between 40% and 59% of elements surviving;
- Fair Between 20% and 39% of elements surviving;
- Poor Under 20% of elements surviving.

Condition relates to the condition of elements in the landscape.

- Very Good elements surviving in very good condition for their class;
- Good elements surviving in good or above average condition for their class;
- Moderate elements surviving in moderate or average condition for their class;
- Fair elements surviving in fair or below average condition for their class;
- Poor elements surviving in poor condition for their class.

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. It may well be that historical processes and patterns have been maintained, or continue, so that the landscape retains much of its original function, thus enhancing its coherence. Clearly discernible or dominant themes can increase the coherence and importance of a landscape.

- Very High dominant historic theme(s) present — landscape retaining its original function;
- High dominant historic theme(s) present — landscape of high articulation, but original function has ceased;
- Moderate historic theme(s) present, — landscape of moderate articulation;
- Low historic theme(s) present, but weak — landscape of low articulation;
- Very Low historic theme(s) suppressed by later changes.

Integrity The importance of a landscape may be enhanced by its integrity that relates to the survival of its original character or form. The resulting visibility and legibility of the landscape's component elements will enhance its amenity value. Greater visibility and legibility generally increase the potential for the historic landscape to be easily understood by the non-specialist.

- Very High elements retaining their original character, highly visible and easily understood;
- High elements retaining much of their original character, visible and fairly easily understood;

- Moderate elements retaining some of their original character, visible, but not easily understood;
- Low elements not readily visible and difficult to understand;
- Very Low elements hardly visible and very difficult to understand.

Potential relates to the potential within the landscape for future historic landscape study and analysis.

- Very High wide-ranging scope for future historic landscape study and analysis;
- High considerable scope for future historic landscape study and analysis;
- Moderate some scope for future historic landscape study and analysis;
- Low little scope for future historic landscape study and analysis;
- Very Low very little scope for future historic landscape study and analysis.

Amenity relates to the potential value of elements to be developed as a public educational and recreational amenity.

- Very High wide-ranging scope for elements to be developed as a public educational and recreational amenity;
- High considerable scope for elements to be developed as a public educational and recreational amenity;
- Moderate some scope for elements to be developed as a public educational and recreational amenity;
- Low little scope for elements to be developed as a public educational and recreational amenity;
- Very Low very little scope for elements to be developed as a public educational and recreational amenity.

Associations A landscape or an area or element within it might have important historic associations with, for example, particular institutions, cultural figures, movements or events etc. Often, however, there are no physical remains, or it may be difficult to tie an association to a particular place, feature or element, with only documentary or oral sources available. Owing to the complex nature of associations, therefore, they are impossible to quantify, so an assessment is made based upon professional judgement.

- Very High a highly significant, authentic and nationally well-known association(s);
- High a significant, authentic and regionally well-known association(s);
- Moderate an authentic, but less significant, perhaps locally well-known association(s);
- Low unauthenticated or a little known association(s);
- None no known association(s).

The evaluation of steps (a) and (b) should comprise written statements and justifications for the values ascribed to each criterion, followed by a concluding statement for either step (a) or (b). The statement should reflect the general level of values across all criteria, and note any particularly significant ‘Highs’ or ‘Lows’.

The evaluation of step (c) should comprise written statements and justifications for the values ascribed to each criterion, followed by a concluding statement. The statement should reflect the general level of values across all criteria, and note any particularly significant ‘High’ or ‘Low’ scores.

Evaluation results for steps (a) and (b) could be summarized in a table, for example:

TABLE 9

ASIDOHL2 STAGE 4: EVALUATION OF THE RELATIVE IMPORTANCE OF THE PART OF HISTORIC CHARACTER AREA X DIRECTLY AND/OR INDIRECTLY AFFECTED BY DEVELOPMENT

VALUE:	V HIGH/ V GOOD	HIGH/ GOOD	MOD/ MED	LOW	V LOW/ POOR	V HIGH/ V GOOD	HIGH/ GOOD	MOD/ MED	LOW	V LOW/ POOR
in relation to:	(a) WHOLE OF HISTORIC CHARACTER AREA					(b) WHOLE OF HISTORIC LANDSCAPE AREA ON THE REGISTER				
CRITERION:										
RARITY	✓						✓			
REPRESENTATIVENESS		✓						✓		
DOCUMENTATION				✓					✓	
GROUP VALUE		✓					✓			
SURVIVAL		✓						✓		
CONDITION	✓					✓				
COHERENCE		✓						✓		
INTEGRITY	✓					✓				
POTENTIAL			✓					✓		
AMENITY		✓						✓		
ASSOCIATIONS				✓					✓	

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Evaluation results for step (c) could be summarized in a table, for example:

TABLE 10

ASIDOHL2 STAGE 4: EVALUATION OF THE RELATIVE IMPORTANCE IN THE NATIONAL CONTEXT, OF THE HISTORIC CHARACTER AREAS DIRECTLY AND/OR INDIRECTLY AFFECTED BY DEVELOPMENT

VALUE:	V HIGH/ V GOOD	HIGH/ GOOD	MOD/ MED	LOW	V LOW/ POOR	V HIGH/ V GOOD	HIGH/ GOOD	MOD/ MED	LOW	V LOW/ POOR
in relation to:	HISTORIC CHARACTER AREA X					HISTORIC CHARACTER AREA Y				
CRITERION:										
RARITY	✓						✓			
REPRESENTATIVENESS				✓				✓		
DOCUMENTATION		✓							✓	
GROUP VALUE			✓			✓				
SURVIVAL		✓					✓			
CONDITION		✓					✓			
COHERENCE			✓				✓			
INTEGRITY			✓					✓		
POTENTIAL	✓					✓				
AMENITY				✓				✓		✓
ASSOCIATIONS				✓						

Template available at www.cadw.wales.gov.uk

Criteria values in steps (a), (b) and (c) should be scored as follows:

TABLE 11

ASIDOHL2 STAGE 4: EVALUATION SCORES

CRITERION VALUE	SCORE
Very High / Good	5
High / Good	4
Moderate / Medium	3
Low	2
Very Low / Poor	1

In the examples (Tables 9 and 10 above), therefore, the relative importance, at the steps indicated, of Historic Character Areas X and Y would be:

Table 9, Historic Character Area X at step (a) –

$(3 \times \text{V High @ } 5) + (5 \times \text{High @ } 4) + (1 \times \text{Medium @ } 3) + (2 \times \text{Low @ } 2) = 42$ out of a possible maximum of 55 (i.e. $11 \times \text{V High @ } 5$)

and at step (b) –

$(2 \times \text{V High @ } 5) + (2 \times \text{High @ } 4) + (5 \times \text{Medium @ } 3) + (2 \times \text{Low @ } 2) = 37$ on the same scale.

Table 10, Historic Character Area X at step (c), i.e. its value in the national context –

$$(2 \times \text{V High @ } 5) + (3 \times \text{High @ } 4) + (3 \times \text{Medium @ } 3) + (3 \times \text{Low @ } 2) = 37 \text{ on the same scale;}$$

and for Historic Character Area Y at the same step –

$$(2 \times \text{V High @ } 5) + (4 \times \text{High @ } 4) + (3 \times \text{Medium @ } 3) + (1 \times \text{Low @ } 2) + (1 \times \text{V Low / Poor @ } 1) = 38 \text{ on the same scale.}$$

If ten, rather than the maximum of eleven, criteria had been applied, then the maximum score would have been 50 (i.e. 10 x V High @ 5); and in the case of nine criteria – 45 (i.e. 9 x V High @ 5); eight criteria – 40, and so on.

The final part of Stage 4 is to determine the average, overall value of all the Historic Character Areas (or part(s) thereof) affected.

This is done by combining the scores of steps (a), (b) and (c) together (or just (b) and (c) if (a) has not been applied). However, because of the disparity between score ranges that can result from different numbers of criteria being applied, the scores have to be converted to a scale of 1–100, which in the case of Historic Character Areas X and Y above would be as follows:

$$\text{Historic Character Area X at step (a): } (42 \div 55) \times 100 = 76.36$$

$$\text{Historic Character Area X at step (b): } (37 \div 55) \times 100 = 67.27$$

$$\text{Historic Character Area X at step (c): } (37 \div 55) \times 100 = 67.27$$

$$\text{Historic Character Area Y at step (c) = } (38 \div 55) \times 100 = 69.09$$

The average, overall value of all the areas (and parts thereof), affected in this example, on a scale of 1–100 would, therefore, be:

$$(76.36 + 67.27 + 67.27 + 69.09) \div 4 = 69.99, \text{ rounded off to the nearest whole number, i.e. } 70.$$

In a real case, the total number of areas (and parts thereof) affected could be considerably higher than the four hypothetical areas used in the examples above.

This average, overall value, or combined evaluation figure for Stage 4 would then be graded as follows:

TABLE 12

ASIDOHL2 STAGE 4: GRADES OF OVERALL VALUE

80–100	Very High
60–79	High
40–59	Considerable
20–39	Moderate
5–19	Low
0–4	Very Low

STAGE 5 Assessment of overall significance of impact

Once the direct and indirect impacts of development have been described and, as far as possible, quantified, in Stages 2 and 3, and the relative and the average overall values of the area(s) affected established in Stage 4, the fifth and final stage of the ASIDOHL2 process can be undertaken. This final stage should combine the results of Stages 2 to 4 to produce an assessment of the overall significance of the impact of development and the effect that altering the Historic Character Area(s) concerned has on the whole of the historic landscape area on the Register. This is determined by separately setting out and scoring the value of each of the Historic Character Areas affected in relation to the effect caused by the development and the consequent reduction in value of the historic landscape area on the Register, using the following model:

TABLE 13

ASIDOHL2 STAGE 5: SUMMARY OF THE OVERALL SIGNIFICANCE OF THE IMPACT OF DEVELOPMENT ON LANDSCAPE OF HISTORIC INTEREST ‘A’

VALUE OF HISTORIC CHARACTER AREA (based on STAGE 4 results)	IMPACT OF DEVELOPMENT (based on STAGES 2 & 3 results)	REDUCTION OF VALUE OF THE HISTORIC LANDSCAPE AREA ON REGISTER
<p>Very High Key elements of very high intrinsic importance and/or condition and/or group value, and/or not found elsewhere in this or other historic landscape areas on the Register. SCORE: 9 or 10</p>	<p>Very High Critical land loss and consequent fragmentation and/or visual intrusion causing key elements to be removed or so changed that detailed descriptions no longer apply, and/or amenity value is totally lost. SCORE: 9 or 10</p>	<p>Very High Development impact on key elements is such that the overall value of the historic landscape area on the Register is diminished to the point that its future inclusion on the Register may need to be reviewed. SCORE: 9 or 10</p>
<p>High Key elements of high intrinsic importance and/or condition and/or group value, and/or uncommon elsewhere in this or other historic landscape areas on the Register. SCORE: 7 or 8</p>	<p>High Substantial land loss and consequent fragmentation and/or visual intrusion causing key elements to be removed or changed so that group value and /or coherence and/or integrity are significantly diminished, and/or amenity value greatly reduced. SCORE: 7 or 8</p>	<p>High Development impact on key elements is such that the overall value of the historic landscape area on the Register is significantly reduced. SCORE: 7 or 8</p>
<p>Medium Key elements of varying intrinsic importance and/or condition and/or group value, and /or generally typical of this or other historic landscape areas on the Register. SCORE: 4, 5 or 6</p>	<p>Medium Moderate land loss and consequent fragmentation and/or visual intrusion causing some key elements to be removed or changed so that group value and/or coherence and /or integrity are diminished, and/or amenity value reduced. SCORE: 4, 5 or 6</p>	<p>Medium Development impact on key elements is such that there is some, but still appreciable, reduction in the overall value of the historic landscape area on the Register. SCORE: 4, 5 or 6</p>
<p>Low Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register. SCORE: 2 or 3</p>	<p>Low Slight land loss and consequent fragmentation and/or visual intrusion causing limited numbers of key elements to be removed or changed so that group value and/or coherence and/or integrity are slightly diminished, and/or amenity value slightly reduced. SCORE: 2 or 3</p>	<p>Low Development impact on key elements is such that there is slight reduction in the overall value of the historic landscape area on the Register. SCORE: 2 or 3</p>
<p>Very Low Elements untypical of the historic landscape area on the Register and/or changed through modern development. SCORE: 1</p>	<p>Very Low Marginal land loss and consequent fragmentation and/or visual intrusion causing negligible changes to elements and their values. SCORE: 1</p>	<p>Very Low Development impact on key elements is such that the value of the historic landscape area on the Register remains essentially unchanged. SCORE: 1</p>
<p>Total score for Historic Character Area:</p>	<p>Overall significance of impact for Historic Character Area:</p>	

In a real case, the Historic Character Areas and their key elements or characteristics should be named, with short statements justifying the values and scores given, based on the key results from Stages 2 to 4. However, the table should neither be too long nor complicated; its purpose is to provide an essential concluding summary and digest of the whole ASIDOHL2 process, as well as setting out the overall significance of impact of development on a landscape area on the Register.

Although scoring has been used extensively in Stages 2, 3 and 4, it is not recommended that the scores from these stages are directly combined or ‘converted’ to determine the final scores in this table. Rather, this should be a matter of professional interpretation and judgement, based on carefully weighing up all the scores in the preceding Stages, noting averages as well as any significant ‘Highs’ or ‘Lows’.

Excepting errors, it is generally expected that all parties using the results of an ASIDOHL2, including at a Public Inquiry, should be able to agree on the results of Stages 2 to 4, with any latitude for re-interpretation of results confined to Stage 5.

The score for the overall significance of impact of development on the historic landscape area, as calculated for each Historic Character Area listed in Table 13, is graded as follows:

TABLE 14

ASIDOHL2 STAGE 5: OVERALL SIGNIFICANCE OF IMPACT

SCORE	GRADING
26–30	Very Severe
21–25	Severe
16–20	Fairly Severe
10–15	Moderate
4–9	Slight
0–3	Very Slight

The score and grade are entered into the last row in Table 13, p. 29 and the procedure repeated for every Historic Character Area affected. Scores should not be combined and averaged out for all the Historic Character Areas affected, but they should be shown separately, to allow developers, planning authorities or Public Inquiry Inspectors to guide development into those Historic Character Areas where the least reduction in the value of the historic landscape area on the Register is caused.

Mitigation

In Stage 5, ASIDOHL2 sets out to determine the gross (absolute) impact of development on a landscape area on the Register. It is critically important to establish this, as unlike a habitat or other forms of amenity, historic landscapes are a finite and irreplaceable resource. This is not intended to ignore or downgrade the fact that a development can offer mitigation or provide positive benefits that can be weighed up against the gross impact to achieve a lesser net (relative) impact on the historic landscape. Mitigation or positive benefits, advantages, improvements or amelioration that a development claims to offer in terms of conservation work, improving access and increasing opportunities for study, research etc., should be described, qualified and quantified in a separate section at the end of Stage 5. It will then be a matter for the planning authority or Public Inquiry Inspector concerned to determine what weight they should be given.

ASIDOHL2 Concluding Statement

The ASIDOHL2 report should be completed with a concluding statement drawing all the salient points together in a description that qualifies and quantifies the overall significance of impact of development on the historic landscape as accurately and as objectively as possible. This statement should reflect the range of impacts calculated for the individual Historic Character Areas in Table 13, p. 29, as well as a professional judgement as to how much the development would change our capacity to understand and appreciate the landscape’s historical meaning and significance, and thereby its overall value in line with the scores in the right hand column of Table 13, p. 29. The statement should also include any other important, or overriding, fact that was not, or could not be, mentioned or accounted for in the ASIDOHL2 process, for example, an extant planning permission for a similar development in an adjacent Historic Character Area.

The Concluding Statement will be a key part of the ASIDOHL2 report, to which most reference will be made, particularly in a Public Inquiry, when it may be part of a Proof of Evidence submitted to the Inquiry. It is essential, therefore, to write the concluding statement in a clear and concise style that can be easily understood by the non-specialist and the Public Inquiry Inspector alike. In complicated cases, or when it aids clarity, a glossary should be compiled to explain in simple language the meaning of the terms and words used in the ASIDOHL2 report to describe historic landscapes. Historic landscape terminology can be academically obscure to the non-specialist, or have an entirely different meaning in a planning context, which can cause unnecessary confusion. Brevity will also be essential with succinct statements summarising the overall results of the assessment.

APPENDIX

List of organizations from whom further information and advice may be sought about this Guide and the Register and the areas it includes:

Countryside Council for Wales

Maes y Ffynnon, Penrhosgarnedd, Bangor
Gwynedd LL57 2DW
Tel 01248 385500
www.ccw.gov.uk

Cadw

Welsh Assembly Government,
Plas Carew, Unit 5/7 Cefn Coed
Parc Nantgarw, Cardiff CF15 7QQ
Tel 01443 33 6000
www.cadw.wales.gov.uk

Dyfed Archaeological Trust (Cambria Archaeology)

The Shire Hall, Carmarthen Street, Llandeilo
Carmarthenshire SA19 6AF
Tel 01558 823131
www.acadat.com

Clwyd-Powys Archaeological Trust

7a Church Street, Welshpool
Powys SY21 7DL
Tel 01938 553670
www.cpat.org.uk

Glamorgan-Gwent Archaeological Trust

Heathfield House,
Heathfield
Swansea SA1 6EL
Tel 01792 655208
www.ggat.org.uk

Gwynedd Archaeological Trust

Craig Beuno, Garth Road, Bangor
Gwynedd LL57 2RT
Tel 01248 352535
www.heneb.co.uk



**- BLACK MOUNTAINS ARCHAEOLOGY -
- ARCHAEOLEG MYNYDD DU -**

Yn rhan o'n hawydd i wella ansawdd ein gwasanaeth, rydym yn croesawu unrhyw adborth y gallwch ei ddarparu.

As part of our desire to improve our quality of service we welcome any feedback you are able to provide.

Archaeoleg Mynydd Du Cyf/Black Mountains Archaeology Ltd

Swyddfa Gofrestredig/Registered Office. Unit 23 The Innovation Centre, Festival Drive, Victoria Business Park, Ebbw Vale NP23 8XA

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