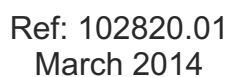




Cultural Heritage Assessment





Rhyd-y-Groes Repower Anglesey

Cultural Heritage Assessment

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March 2014

102820



Quality Assurance

Project Code	102820	Accession Code		Client Ref.	
Planning Application Ref.		Ordnance Survey (OS) national grid reference (NGR)	239281 392917		

Version	Status*	Prepared by	Checked and Approved By	Approver's Signature	Date
v03	F	AR & AMc	NMC		18/02/14
File:	S:/PROJECTS/102820/Report				
File:					
v02					
File:					
V03					
File:					
File:					

* I= Internal Draft; E= External Draft; F= Final

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Rhyd-y-Groes Repower Anglesey

Cultural Heritage Assessment

Contents

Summary.....	iv
Acknowledgements.....	vi
1 INTRODUCTION.....	1
1.1 Project background	1
1.2 The Site.....	1
2 METHODOLOGY.....	2
2.1 Scope of document	2
2.2 Aims	2
2.3 Study area.....	2
2.4 Sources.....	2
2.5 Setting.....	3
2.6 Viewshed analysis.....	4
2.7 Site visit.....	4
2.8 Assessment criteria.....	5
2.9 Chronology.....	6
2.10 Best practice	6
2.11 Assumptions and limitations.....	6
2.12 Copyright.....	7
3 PLANNING BACKGROUND.....	7
3.1 Introduction	7
3.2 Planning Policy Wales.....	7
3.3 Local Development Framework	8
3.4 Other guidance	8
4 BASELINE RESOURCE.....	8
4.1 Introduction	8
4.2 Previous studies.....	9
4.3 Statutory and local heritage designations	9
<i>Site</i>	9
<i>Study Area</i>	9
<i>Wider context</i>	9
4.4 Archaeological and historical context.....	9
<i>Palaeolithic, Mesolithic and Neolithic</i>	10
<i>Bronze Age</i>	10



	<i>Iron Age and Romano-British</i>	11
	<i>Other Prehistoric</i>	13
	<i>Early medieval and medieval</i>	13
	<i>Post-medieval</i>	14
	<i>19th century and modern</i>	14
4.5	Historic Landscape Character	15
4.6	Site visit and setting	15
5	SUMMARY OF HERITAGE ASSETS	17
5.1	Introduction	17
5.2	Known heritage assets within the Site	17
	<i>Designated heritage assets</i>	17
	<i>Non-designated heritage assets</i>	17
5.3	Potential buried archaeological remains	17
5.4	Heritage assets within the ZTV	18
	<i>Designated heritage assets</i>	18
5.5	Assessment of survival and previous impacts	18
5.6	Summary.....	18
6	IMPACTS	21
6.1	Introduction	21
6.2	Proposed development	21
6.3	Statement of impact	21
	<i>Designated heritage assets</i>	21
	<i>Archaeological potential</i>	22
	<i>Historic Landscape Character</i>	22
7	CONCLUSIONS	22
7.1	General	22
7.2	Mitigation.....	23
7.3	Bibliography	24
7.4	Historic Environment Records.....	25
7.5	Cartographic and Documentary Sources	25
7.6	Online resources	25
8	APPENDICES	27
8.1	Appendix 1: Gazetteer of Information summarised from the GATHER and other sources	27
8.2	Appendix 2: National and Local Historic Environment Policies	30
8.3	Appendix 3: Designated heritage assets within the ZTV.....	34



Rhyd-y-Groes Repower Anglesey

Cultural Heritage Assessment

List of Tables

Table 1:	Summary of Factors for Determining Significance of Heritage Assets.....	5
Table 2:	Chronological periods.....	6
Table 3:	Summary of Heritage Assets.....	19

List of Illustrations

Figure 1:	Site location, Study Area and known heritage resource (based on GATHER and other sources)
Figure 2:	Historic Maps Pre-OS
Figure 3:	Historic Maps – Ordnance Survey
Figure 4:	Zone of Theoretical Visibility, showing designated heritage assets

Plates

Plate 1:	Panoramic mosaic from the NW edge of site
Plate 2:	Panoramic mosaic at the Eastern end of the site
Plate 3:	Panoramic mosaic at the western edge of site
Plate 4:	View towards the site from Werthyr Standing Stone
Plate 5:	View of Werthyr earthworks
Plate 6:	Ephemeral earthworks south of WA 48
Plate 7:	Low earthworks, likely to be ridge and furrow, NW of WA 52
Plate 8:	View towards the site from close to Pen-y-Morwyd Barrow
Plate 9:	View towards the site from the Church of St Peirio
Plate 10:	Aerial photo of the site at Werthyr taken from the east
Plate 11:	Aerial photo of the site at Werthyr taken from the NE

Front Cover Coloured Map of Anglesey, 1607



Rhyd-y-Groes Repower Anglesey

Cultural Heritage Assessment

Summary

Wessex Archaeology was commissioned by Natural Power Consultants to carry out an cultural heritage assessment of land east of Cemaes, Anglesey, Wales, centred on National Grid Reference (NGR) 239281 392917. This assessment will support a planning application for the replacement of 24 existing wind turbines with up to 19 new turbines to be submitted to IACC. The proposed new turbines will be significantly larger than the existing array, with a maximum tip height of 93 m compared to the current turbines which have a tip height of 46 m above ground level.

The aims of this study were to assess the known and potential heritage resource within the site and the surrounding area, and to assess the likely impacts of the proposed development on this resource. The Gwynedd Archaeological Trust Historic Environment Record (GATHER) was consulted within a 1 km Study Area around the site in order to provide the context for the discussion and interpretation of the known and potential resource. An initial GIS Viewshed Analysis based on the 'worst case scenario' of 19 turbines at 93m tip height was carried out within a 10 km radius from the site, based on a Zone of Theoretical Visibility (ZTV) generated in the project GIS, with designated heritage assets within it identified. The ZTV was then tested during the site visit in order to establish whether the development would be likely to result in adverse impacts to the settings of designated heritage assets within the wider landscape. This assessment was undertaken based on an indicative turbine array, in order to inform the final design of the array.

The construction of the proposed development has the potential to result in the damage to or loss of buried archaeological features, particular relating to Bronze Age funerary practices, Iron Age/Romano-British settlement and agricultural activity and medieval and later farmstead and agricultural practices, which may be present within the site. This could in turn result in a total or partial loss of significance of these heritage assets. This adverse effect would be permanent and irreversible in nature. Measures to mitigate this impact might include either mitigation by design or an appropriate programme of archaeological fieldwork and recording.

The site lies within the Rhosbeirio historic landscape as defined by LANDMAP (Thompson 2000). Evidence examined for this assessment indicates its present character has changed little since the 19th century when significant enclosure was undertaken either by parliamentary act or private agreement. With the exception of the wind turbines, now clearly part of the character area, the landscape's present character has changed little since the 19th century when significant enclosure was undertaken either by parliamentary act or private agreement. Before this the site's character was defined in the post-medieval period when it was enclosed into large fields after presumably having been open land during the medieval period. The major change in the HLC has been the introduction of numerous wind turbines and electricity pylons.

It is considered that the installation of up to nineteen replacement turbines within the site should not be considered to have a significant impact on the historic landscape character of the site providing there are no planned wholesale changes to landscape divisions or boundaries. The current wind farm has been in place for over 20 years, and the repowering will not alter the physical impact on the landscape significantly, although the scale of the new turbines will add to

the visual dominance of the turbines over the post-medieval and 19th century agricultural historic character which is still overt and visible.

This assessment has established that there is an archaeological interest within the site. This is defined as the potential for the presence of buried archaeological remains, in particular relating to Bronze Age funerary practices, Iron Age/Romano-British settlement and agricultural activity and medieval and later farmstead and agricultural practices. Previous archaeological excavations (Wessex Archaeology 2007) within the site indicate that any archaeological remains uncovered are likely to be well preserved due to a lack of previous disturbance.

It is considered that the proposed development has the potential to have an adverse effect on the setting of the designated heritage assets within the Study Area. In particular, two Scheduled Monuments - Werthyr Standing Stone (**WA9**) and Pen-y-Morwyd round barrow (**WA7**) - are considered to be sensitive receptors to the proposed wind farm repowering. The intervisibility of place appears to have been an important concept in prehistory with monuments and settlements often placed in areas of prominence with clear lines of sight between each other.

The erection of up to nineteen new wind turbines with a maximum tip height of 93 m may have an adverse effect on this intervisibility and the setting of the site as a whole within the wider prehistoric landscape. However, given that there is already an existing and ongoing impact from the current turbines, it is believed that a sensitive design of the new turbine array should ensure that any adverse effects on the setting of the designated assets can be minimised to an acceptable level.

The two Grade II Listed Buildings within the Study Area – at Cemaes Mill and the Church of St Peirio are also considered to be sensitive receptors to the proposed wind farm repowering. Within the wider 10km area, a further thirty five designated heritage assets have been identified where there is a potential for intervisibility with the development. The proposed turbine array and associated design should avoid any impacts on these monuments either through sensitive design or mitigatory landscaping. In particular the design should seek to minimise any impacts on the setting of Amlwch and Parys Mountain Landscape of Outstanding Historic Interest, the registered garden at Cestyll and on the settings of the Scheduled Monuments (with particular regard to the intervisibility between prehistoric barrows and standing stones) as well as the Listed Buildings (and in particular the setting of the numerous Listed churches in the list).

The presence, location and significance of any buried heritage assets within the site cannot currently be confirmed on the basis of the available information. In order to clarify the likely impact of the proposed repowering development on this buried resource, Gwynedd Archaeological Planning Services (GAPS) have indicated that in order to clarify the nature of the buried resource prior to the submission of the planning application, a programme of geophysical survey and archaeological evaluation (trial trenching) will be required.

The precise scale, scope and nature of any further such archaeological works should be agreed through consultation with the development control archaeologist at the Gwynedd Archaeological Planning Service.



Rhyd-y-Groes Repower Anglesey

Cultural Heritage Assessment

Acknowledgements

This project was commissioned by Natural Power Consultants Ltd and Wessex Archaeology is grateful to Ffion Edwards in this regard. Wessex Archaeology would also like to thank Gwynedd Archaeological Trust for supplying the Historic Environment Record data.

The report was researched and compiled by Andrew Reid and Amy Farrington McCabe. The walkover survey was undertaken by Andrew Reid and visits to the National Monument Record of Wales and the National Library of Wales were undertaken by Nicholas Cooke. The illustrations were prepared by Andrew Reid and Ken Lymer. Nicholas Cooke managed the project on behalf of Wessex Archaeology.

Rhyd-y-Groes Repower Anglesey

Cultural Heritage Assessment

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology was commissioned by Natural Power Consultants to carry out a cultural heritage assessment of land at east of Cemaes, Anglesey, Wales, centred on National Grid Reference (NGR) 239281 392917 (hereafter 'the site', **Figure 1**). This is intended to inform an Environmental Statement in support of the submission of a planning application and to provide an assessment of the baseline data against which informed decisions can be made regarding the final design of the turbine array.
- 1.1.2 Gwynedd Archaeological Planning Service (GAPS), acting as an archaeological advisor to the Isle of Anglesey County Council (IACC), was requested to provide a screening opinion on the development. GAPS advised that an archaeological assessment, comprising a desk-based study and a walkover survey, are required in order to provide an assessment of impacts of the development upon the historic environment resource (Ref. 0823je02/D1701). They further advised that a geophysical survey and an archaeological evaluation of the site would be required in order to supply sufficient information regarding the buried archaeological remains to support the planning application.
- 1.1.3 This assessment will support a planning application for the replacement of 24 existing wind turbines with up to 19 new turbines to be submitted to IACC.

1.2 The Site

- 1.2.1 The site is located in northern Anglesey between the village of Cemaes in the west and Werthyr farm, 1.8 km south-west of the village of Amlwch. It is bounded to the north by farmland and the A5025.
- 1.2.2 The site comprises an irregular plot of land approximately 287 hectares in area containing numerous fields. A pre-existing wind farm erected in the 1990s, comprising 24 turbines with a hub height of 31 m and a tip height of 46 m is contained within the site boundary. The site is surrounded by agricultural land, with several scattered farmsteads directly bounding the site or within 500 m.
- 1.2.3 The site at its western end lies at approximately 21 m above Ordnance Datum (aOD) before steadily rising to the east over a distance of 600 m to 43 m aOD where it remains relatively level before sharply rising to 53 m aOD then peaking at 58 m aOD approximately in the centre of the site. The land then quite sharply falls away to 45 m aOD before rising briefly to 48 m aOD, then falls gradually to 40 m aOD. It rises once again at its eastern end to a height of 54 m aOD.
- 1.2.4 The site is underlain by a Mica Schist and Psammite bedrock belonging to the New Harbour Group and superficial deposits of Diamicton (British Geology Survey).

2 METHODOLOGY

2.1 Scope of document

2.1.1 This assessment was requested by the Client in order to determine, as far as is possible from existing information, the nature, extent and significance of the Historic Environment and to assess the potential impact of development on the Heritage Assets that embody that significance.

2.1.2 The Historic Environment, as defined in Planning Policy Wales (PPW 2014): Chapter 6, comprises:

'archaeology and ancient monuments, listed buildings, conservation areas and historic parks, gardens and landscapes.'

2.1.3 In the Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw 2011), the Historic Environment is further defined as:

'all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed'.

2.1.4 Conservation Principles (Cadw 2011) defines a Heritage (Historic) Asset as:

'an identifiable component of the historic environment. It may consist or be a combination of an archaeological site, a historic building or a parcel of historic landscape. Nationally important historic assets will normally be designated'.

2.2 Aims

2.2.1 The specific aims of this assessment are to:

- *outline the known and potential heritage assets within the site based on a review of existing information within a Study Area extending 1 km from the site boundary;*
- *assess the significance of known and potential heritage assets through weighted consideration of their valued components; and*
- *assess the impact of potential development or other land changes on the significance of the heritage assets and their settings.*

2.3 Study area

2.3.1 The recorded historic environment resource within a 1 km Study Area around the site was considered in order to provide a context for the discussion and interpretation of the known and potential resource within the site (**Figure 1**).

2.4 Sources

2.4.1 A number of publicly accessible sources of primary and synthesised information were consulted. Sources consulted comprise:

- *The Gwynedd Archaeological Trust Historic Environment Record (GATHER), comprising a database of all recorded archaeological sites, find spots, and archaeological events within the county;*

- *National heritage datasets including the Cadw Historic Assets, the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) National Monuments Record of Wales (NMRW), available via Coflein, and the Historic Environment Records of the Welsh Archaeological Trusts, available via Archwilio;*
- *Historic manuscripts, surveyed maps, and Ordnance Survey maps held at the Anglesey Archives and National Library of Wales;*
- *Relevant primary and secondary sources held at GAT, Anglesey Archives and in Wessex Archaeology's own library. Both published and unpublished archaeological reports relating to excavations and observations in the area around the site were studied.*

2.4.2 A bibliography of documentary, archive, and cartographic sources consulted is included in the **References** section of this report.

2.5 Setting

2.5.1 In addition to the 1 km Study Area, the wider visual setting of the site was also considered for the purposes of this Study. A GIS Viewshed Analysis was carried out within a 10 km radius from the site, based on a Zone of Theoretical Visibility (ZTV) built using an indicative turbine array of 19 turbines with a 93m tip height in the Project GIS. Designated heritage assets which lay within the ZTV, comprising Scheduled Monuments, Grade I and II* Listed Buildings and Registered Parks and Gardens and Landscape of Outstanding Historic Interest, were identified (**Appendix 3**).

2.5.2 Any indirect impacts resulting from the proposed development upon the settings of these monuments was then assessed during the site visit (see below).

2.5.3 Guidance has been produced by English Heritage on *Wind Energy and the Historic Environment* (2005) which, although not directly applicable to Wales, nonetheless sets out principles of relevance to the proposed development. The Guidance outlines six factors which should be considered when assessing setting with reference to wind farm developments:

- **Visual dominance:** Wind turbines are far greater in vertical scale than most historic features. Where an historic feature (such as a hilltop monument or fortification, a church spire, or a plantation belonging to a designed landscape) is the most visually dominant feature in the surrounding landscape, adjacent construction of turbines may be inappropriate.
- **Scale:** The extent of a wind farm and the number, density and disposition of its turbines will also contribute to its visual impact.
- **Intervisibility:** Certain archaeological or historic landscape features were intended to be seen from other historic sites. Construction of wind turbines should respect this intervisibility.
- **Vistas and sight-lines:** Designed landscapes invariably involve key vistas, prospects, panoramas and sight-lines, or the use of topography to add drama. Location of turbines within key views, which may often extend beyond any designated area, should be avoided.
- **Movement, sound or light effects:** The movement associated with wind turbines as well as their scale may be a significant issue in certain historic settings. Adequate distance should always be provided between important historic sites and wind turbine

developments to avoid the site being overshadowed or affected by noise and shadow flicker effects.

- **Unaltered settings:** The setting of some historic sites may be little changed from the period when the site was first constructed, used or abandoned. Largely unaltered settings for certain types of sites, particularly more ancient sites, may be rare survivals and especially vulnerable to modern intrusions such as wind turbines. This may be a particular issue in certain upland areas.

2.5.4 Any indirect impacts resulting from the proposed development upon the settings of these designated heritage assets, with particular reference to the six factors outlined above, was assessed during the site visit (see below).

2.6 Viewshed analysis

2.6.1 Viewshed analysis is a commonly applied visibility analysis technique where the output produces a Zone of Theoretical Visibility (ZTV) mapping the area which theoretically shares intervisibility with the site. The ZTV provides a means of modelling where in the landscape a theoretical observer would be able to see a target point within the site based on a digital terrain map (DTM). This is calculated using:

- *The Landform Panorama DTM, a 'bare earth' terrain model of 50m horizontal resolution provided by Landform Panorama.*
- *A series of 20 target point heights, positioned in a grid formation within the site boundary, set to 93m representing the approximate height of the proposed development.*
- *Observer heights were set to 1.6m representing the eye height of an average person.*

2.6.2 Since this process is based on a 'bare-earth' model which takes no account of surface forms and features (including trees, vegetation, buildings and other structures) the inclusion of a heritage asset within the ZTV should not be conflated with 'real-world' intervisibility.

2.6.3 The value of the ZTV is as an aid to identifying an area within which heritage assets and settings possessing views that contribute to their significance may be effected by the proposed development.

2.7 Site visit

2.7.1 The site was visited on February 4th 2014. The aim of the visit was to assess the general aspect, character, condition and setting of the site and to identify any potential impacts not evident from secondary sources. Weather conditions initially comprised heavy rain and hail to begin with, clearing later in the visit, punctuated by frequent rain showers. A fieldwork record comprising digital photography is held in the project archive.

2.7.2 The site visit also aimed to identify any designated heritage assets within the wider setting of the site which might be considered potential sensitive receptors to the proposed development, by comparing the ZTV to the actual views available of the landscape surrounding the site. Any heritage assets which had been identified as located within the ZTV were assessed to see if intervisibility could in fact be established. Note was made of any intervening vegetation, housing or landscape features which may have prevented meaningful views between the site and the monument in question.

2.8 Assessment criteria

2.8.1 Assessment of the significance of a site sets out to identify how particular parts of a place and different periods in its evolution contribute to, or detract from, identified heritage values associated with the site. This approach considers the present character of the site based on the chronological sequence of events that produced it, and allows management strategies to be developed that sustain and enhance the significance of heritage assets.

2.8.2 Significance (within the historic environment) is defined in Conservation Principles (Cadw 2011) as:

'The sum of the cultural heritage values, often set out in a Statement of Significance.'

2.8.3 Current national guidance for the assessment of the significance of heritage assets is based on criteria provided by Cadw in the document *Conservation Principles for the Sustainable Management of the Historic Environment in Wales* (2011). Within this document significance is weighed by consideration of the potential for the asset to demonstrate the following value criteria:

- **Evidential value.** *Deriving from the potential of a place to yield evidence about past human activity.*
- **Historical value.** *Deriving from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative.*
- **Aesthetic value.** *Deriving from the ways in which people draw sensory and intellectual stimulation from a place.*
- **Communal value.** *Deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values, but tend to have additional and specific aspects.*

2.8.4 The overall significance of heritage assets and their settings is decided in line with criteria laid out in **Table 1** below:

Table 1: Summary of Factors for Determining Significance of Heritage Assets

Significance	Factors Determining Significance
International	World Heritage Sites Assets of recognised international importance Assets that contribute to international research objectives
National	Scheduled Ancient Monuments Grade I and Grade II* Listed Buildings Grade I and Grade II* Registered Parks and Gardens Landscapes of Outstanding or Special Historic Interest Undesignated assets of the quality and importance to be designated Assets that contribute to national research agendas

Significance	Factors Determining Significance
Regional	Grade II Listed Buildings Grade II Registered Parks and Gardens Assets that contribute to regional research objectives
Local	Locally listed buildings Assets compromised by poor preservation and/or poor contextual associations Assets with importance to local interest groups Assets that contribute to local research objectives
Negligible	Assets with little or no archaeological/historical interest or too badly damaged to justify their inclusion at a higher grade
Unknown	The importance of the asset has not been ascertained from available evidence

2.9 Chronology

- 2.9.1 Where referred to in the text, the main archaeological periods are broadly defined by the following date ranges:

Table 2: Chronological periods

Palaeolithic	900,000 – 9500 BC
Early Post-glacial	9500 – 8500 BC
Mesolithic	8500 – 4000 BC
Neolithic	4000 – 2200 BC
Bronze Age	2200 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – 410
Early Medieval	AD 410 – 1085
Medieval	1085 – 1500
Post-medieval	1500 – 1800
19th century	1800 – 1899
Modern	1900 – present day

2.10 Best practice

- 2.10.1 This assessment has been carried out in accordance with the Institute for Archaeologists' *Standard and Guidance for desk based assessment* (IfA 1994, revised November 2012).

2.11 Assumptions and limitations

- 2.11.1 Data used to compile this report consists of secondary information derived from a variety of sources, only some of which have been directly examined for the purposes of this Study. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate.
- 2.11.2 The records held by the GATHER are not a record of all surviving heritage assets, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. The information held within it is not complete and does not preclude

the subsequent discovery of further elements of the historic environment that are, at present, unknown.

2.12 Copyright

- 2.12.1 This report may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

3 PLANNING BACKGROUND

3.1 Introduction

- 3.1.1 There is national legislation and guidance relating to the protection of, and proposed development on or near, important archaeological sites or historical buildings within planning regulations as defined under the provisions of Planning Policy Wales (2012). In addition, local authorities are responsible for the protection of the historic environment within the planning system.
- 3.1.2 The following section provides details of the national, regional and local planning and legislative framework governing the treatment of archaeological remains within the planning process.

3.2 Planning Policy Wales

- 3.2.1 The Planning Policy Wales (PPW) was published by the Welsh Government in March 2002 and was last updated in February 2014. This document provides advice on all aspects of planning policy in Wales and detailed advice on the historic environment in the planning process is contained in 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: Directions by the Secretary of State for Wales.*

- 3.2.2 PPW Chapter 6: Conserving the historic environment sets out the principal national guidance on the importance, management and safeguarding of heritage assets within the planning process.

- 3.2.3 The aim of PPW Chapter 6 is to ensure that Local Planning Authorities, developers and owners of heritage assets adopt a consistent and holistic approach to their conservation and to reduce complexity in planning policy relating to proposals that affect them.

- 3.2.4 To summarise, government guidance provides a framework which:

- *recognises that heritage assets are a non-renewable resource;*
- *requires an assessment and/or evaluation of the historic environment resource affected by the proposals and an impact assessment of the proposed development on the importance of the heritage assets;*

- *takes into account the desirability of preserving and enhancing the importance of heritage assets and their setting;*
- *places weight on the conservation of designated heritage assets (which include World Heritage Sites, Scheduled Monuments, Listed Buildings, Historic Landscapes, Parks and Gardens, or Conservation Areas);*

3.3 Local Development Framework

3.3.1 The site is located within the administrative boundaries of the Isle of Anglesey County Council (IACC). IACC is in the process of preparing its Local Development Plan (LDP), which, when adopted, will replace the current development plan framework. Until the new LDP is completed, the planning policies included in the Gwynedd Structure Plan (1993) and Ynys Môn Local Plan (1996), remain in force (Saved Policies). These are supported by a number of Supplementary Planning Guidance documents including one draft document on Onshore Wind Energy.

3.3.2 Policies relating to heritage which are relevant to the present scheme are presented in **Appendix 2**.

3.4 Other guidance

3.4.1 This report has also been prepared with regards to guidance on development within the historic environment both in Wales and the wider United Kingdom, including;

- *Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw 2011)*
- *Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process (Cadw 2007)*
- *Standard and Guidance for Archaeological Desk-based Assessment (IfA 1994, revised November 2012)*
- *LANDMAP: Historic Landscape Guidance (CCW 2003)*
- *Guidelines for Landscape and Visual Impact Assessment, second edition (The Landscape Institute 2002)*
- *The Setting of Heritage Assets (English Heritage 2011a)*
- *Seeing History in the View (English Heritage 2011b)*
- *Design Manual for Roads and Bridges, vol. 11, section 3, part 2: HA 208/07 Cultural Heritage (Highways Agency 2007)*

4 BASELINE RESOURCE

4.1 Introduction

4.1.1 The following section provides a brief summary of the archaeological and historical development within the site and the 1 km Study Area, compiled from sources listed above. The aim is to establish the known and potential resource which could be affected by the development.

- 4.1.2 All heritage assets identified within the Study Area (some 56 in all) are listed in **Appendix 1**. The GATHER and RCAHMW entries are listed by number within the text and are illustrated in **Figure 1**. Entries are given a **WA** prefix in the text for ease of reference.

4.2 Previous studies

- 4.2.1 There have been numerous archaeological investigations carried out within the Study Area. Before the installation of the current wind farm a short archaeological evaluation was carried out which included a desk-based assessment, geophysical survey and watching brief (Ovenden & Stephen 1992 & GAT 1994). A further excavation was carried out by 'Time Team' and recorded by Wessex Archaeology in 2007 alongside a further geophysical survey (GSB 2007). Another excavation was carried out at an enclosure at Carrog (Smith 2011).
- 4.2.2 A number of desk-based assessment, monument surveys, mining surveys and reports on aerial photography are also recorded within the Study Area.

4.3 Statutory and local heritage designations

Site

- 4.3.1 There are no designated heritage assets within the Site itself.

Study Area

- 4.3.2 There are two Scheduled Ancient Monuments within the Study Area but outside the site. The Werthyr Standing Stone (**WA 9**), located approximately 240 m north of the site at its eastern end, and Pen-y-Morwyd Round Barrow (**WA 7**), located approximately 925 m south of the site close to Criw Farm.
- 4.3.3 There are three Grade II Listed Buildings recorded within the Study Area. Tŷ Cefn (**WA 43**), a 19th century cottage located approximately 645 m west of the site, Cemaes Windmill (**WA 28**), a post-medieval mill approximately 900 m west of the site at its western end and the medieval Church of St Peirio (**WA 24**), approximately 850 m south of the site.
- 4.3.4 An examination of historic cartographic sources, in conjunction with the site visit, has identified that the hedgerows within the boundaries of the site are marked as boundaries on the mid-19th century Tithe maps (**Figure 2**). As a result, these hedgerows are considered to be historically *Important*, as defined by the *Hedgerows Regulations 1997* (amended 2002).

Wider context

- 4.3.5 The Viewshed Analysis identified that a number of additional designated heritage assets within the site's wider context were located within the 10 km preliminary ZTV (**Figure 4**, **Appendix 3**).

4.4 Archaeological and historical context

- 4.4.1 The following section provides a brief summary of the archaeological and historical development of the site and the Study Area, compiled from the sources listed above. The potential for the likelihood of as yet unrecorded archaeological remains within the site is informed by the consideration of the known heritage assets (56 in all) recorded within the 1 km Study Area surrounding the site, in conjunction with the geology and topography of the area.
- 4.4.2 The archaeological records obtained from GATHER and other sources are illustrated in **Figure 1** and listed in **Appendix 1**.

Palaeolithic, Mesolithic and Neolithic

- 4.4.3 At present, no evidence of Palaeolithic activity from Anglesey has been uncovered, with the first indications of human occupation on the island dating to the Mesolithic period (Aldhouse-Green 2000). Although there are no sites or finds recorded in the Study Area from the Mesolithic period, shallow pits found during excavations at Carrog (**WA 1**) were broadly of a type found at some Mesolithic camp sites; however no firm dating evidence was uncovered to confirm this (Smith 2011, 9).
- 4.4.4 The Neolithic period saw considerable changes in how land was used by human populations. The advent of farming required a more sedentary lifestyle leaving evidence of settled occupation including pottery and the construction of dwellings, and more importantly, megalithic monumental tombs, often burial chambers for multiple deceased (Lynch 2000a). Excavations at Carrog on the site of a small hilltop enclosure (**WA 1**) uncovered pits containing pieces of worked flint and chert as well as pottery of Early Neolithic type (Smith 2011, 9). Some of the pits contained charcoal likely to have come from hearths which when radiocarbon dated provided a date of approximately 4000 Cal BC (*ibid*).

Bronze Age

- 4.4.5 The Bronze Age was a period of particular importance on Anglesey with extensive evidence of human activity across the island. The early Bronze Age saw funerary activities move inland from the coastal areas with individual burials, furnished with grave goods, adopted over the communal burials used in earlier periods (Lynch 2000b). Settlement evidence is often sporadic but increases during the Late Bronze Age and into the Early Iron Age (Longley 2003).
- 4.4.6 One of the most important Bronze Age sites on Anglesey lies approximately 3.4 km south-east of the eastern end of the site; the copper mines at Parys Mountain. Originally considered to be Roman in origin, excavations in the 1990s and early 2000s established a layer of charcoal dated to between 2000 – 1500BC within which lay stone hammers and associated tools. This conclusively shows the mines at Parys Mountain to be one of the earliest examples of Bronze Age mining in Britain (Berks 2010, 2).
- 4.4.7 Within the western half of the site, a fragmented late Bronze Age urn (**WA 8**) containing burnt bones was found uncovered in antiquity, although no further information is available on the find, and the precise location of the findspot is not clear.
- 4.4.8 The Study Area has several Bronze Age sites and features. The Scheduled Pen-y-Morwydd round barrow (**WA 7**) is located approximately 925 m south of the site close to Criw Farm. The mound is recorded as being large and prominent, eroded on the top and sides from animal trampling but with no evidence of robbing (Smith 2003). The south-western side has largely been destroyed due to ploughing activities and it has been suggested that standing stones were extant on the western side but were cleared before the site was protected (*ibid*).
- 4.4.9 The Scheduled Werthyr Standing Stone (**WA 9**) is located approximately 240 m north of the site at its eastern end. The stone measures approximately 3 m in height and has several packing stones around its base. It has been suggested another stone stood nearby joined by a large capstone but that this was pulled down in antiquity (Rhys 1882, 237). The date of the stone cannot be categorically confirmed but it is thought to be Bronze Age in origin.

- 4.4.10 Cropmarks identified from aerial photographs indicated a small hill top enclosure (**WA 1**) characterised by a group of ring ditches and sub-circular enclosures located approximately 480 m south-west of the site. Geophysical survey identified a clearly defined ditched settlement with subsequent archaeological evaluation uncovering features consisting of mainly post-holes which are likely to be contemporary with the occupation of the enclosure (Smith 2011). An additional enclosure (**WA 6**) was identified from aerial photographs and ground survey within the northern edge of the western half of the site, close to Rhos-isaf farm (Smith 2003).
- 4.4.11 An aerial survey in 2006 showed three ring ditches later confirmed as the remains of three large earthen burial mounds constituting a barrow cemetery (**WA 2**), located approximately 630 m south-southwest of the edge of the site (Hopewell & Smith 2010). A further possible Tumulus (**WA 3**) is recorded approximately 630 m south of the site at its eastern end. It is recorded as sited on a rounded ridge with clear lines of visibility to the northwest and the southeast and having been almost completely ploughed out. However, it is thought some sub-surface remains may still be undisturbed. The name of an adjacent field, Pen-y-Fynwent (Bridgend Cemetery) (**WA 44**), may indicate further burials within its immediate environs (Smith 2003).
- 4.4.12 Approximately 920 m southeast of the eastern end of the site two locations of Bronze Age metal working sites (**WA 4 & 5**) were uncovered during the laying of a pipeline. Both sites comprised an area of fire-cracked stones up to 0.24 m deep, black soil and charcoal fragments (White 1977). Site 2 (**WA 4**) had several features cut into the subsoil including the fire-cracked stones and two similarly filled pits. Although there was no evidence of a structure two small sherds of very friable pottery were found (*ibid*). At site 3 (**WA 5**) excavations uncovered three pits which contained fire-cracked stones and a small piece of copper or bronze slag (*ibid*).
- 4.4.13 Additionally, a now destroyed stone-lined Cist Burial (**WA 10**) was uncovered by workmen containing a skeleton approximately 990 m north of the site close to Llanlleiana.

Iron Age and Romano-British

- 4.4.14 The Iron Age on Anglesey is defined by scattered farming settlements punctuated with dominant, defensive sites, with hillforts and related fortifications occupying naturally defensive positions within the landscape (Longley 2003). The Dinas Gynfor Promontory Fort (Scheduled Monument AN038) located approximately 1.3 km north of the site is a good example of an Iron Age defensive site in a prominent location. The fort has cliffs to the sea on three sides and steep slopes with walling on the landward side.
- 4.4.15 Roundhouse settlements, both enclosed and unenclosed are quite common across the island, although more prevalent in the east and south of the island with the enclosed sites thought to have been Romano-British in origin (Smith 1999; 2001 & Davidson 2009). Recent excavations however (Wessex Archaeology 2007) have uncovered evidence for the earlier establishment of enclosed settlements (see below).
- 4.4.16 Roman occupation of Anglesey began shortly after the conquest in 43 AD when refugees escaping from the advancing Roman army sought shelter on the island. A garrison was established on the island in AD 60 with its final capture occurring in AD 78 after fierce resistance (Hopewell 2006). During the occupation the island was governed from a fort at *Segontium* (Caernarfon) but settlement activity on Anglesey changed little during this time.
- 4.4.17 Within the site boundary is the site of a Late Iron Age/Early Romano-British enclosure (**WA 13**) visible as extant earthworks and from aerial photographs. The location of a settlement was noted at Werthyr on the first edition ordnance survey map in 1841 with a

survey by Rhys in 1882 identifying the visible earthworks as the “ruins of an old Welsh fort”. A survey by the RCHME in 1937 suggested the earthworks were dated to the 3rd century AD leading to the conclusion the site was Romano-British in origin. This determination lasted for a considerable period of time and is recorded on one of the four entries the site has in GATHER and the RCAHMW.

- 4.4.18 In 2006 excavations were carried out by the Channel 4 programme “Time Team” within the visible earthworks in an attempt to expand upon the previous surveys (Wessex Archaeology 2007). Investigations took place in four separate areas with geophysical survey carried out across the site alongside targeted evaluation trenches. The results indicate the enclosure comprised a single ditch with a definite entrance way to the west and a further two possible entrances to the north and south (*ibid*, 16). From the geophysical survey results it was thought the enclosure may have had a double ditch, but the second was not uncovered during excavation, leading to the conclusion the enclosure likely had two ramparts either side of the ditch (*ibid*).
- 4.4.19 The excavations could not provide a secure date for the enclosure although comparison with other similar sites it is considered to be of Late Iron Age origin, and continued in use running into the Romano-British period (Wessex Archaeology 2007, 16). The majority of the datable evidence recovered during the excavations was dated to the post-medieval period, aside from two early Roman coins, which although recovered unstratified suggest continued activity in the Early Roman period (*ibid*).
- 4.4.20 The enclosure at Werthyr was originally considered to be non-defensive. However the scale of the enclosure ditches, between 4 m and 5.4 m wide and c.3 m deep, and the presence of a possible screen in front of the western entrance are consistent with a defensive function, despite no other evidence of defensive structures, such as a palisade, within the enclosure itself. The excavation report concludes the site “could be seen as a fortified farmstead surrounded by fields and stock enclosures with a substantial defensive rampart surrounding the main settlement area” (Wessex Archaeology 2007, 17).
- 4.4.21 A short distance to the north a second rectilinear enclosure (**WA14**) initially identified from aerial photographs, was also investigated as part of the ‘Time Team’ excavations. Trial trenching confirmed the presence of the enclosure, although it did not show up clearly on a geophysical survey. The small quantity of finds recovered suggest a Late Iron Age/Romano-British date, suggesting that it is related to the larger enclosure to the south.
- 4.4.22 Further cropmarks (**WA 11**) thought to originate in the Iron Age are located approximately 660 m south of the site near Tai Hen. The cropmarks indicate an inner and outer enclosure, generally rectilinear, with surrounding linears. Additionally, a further circular ditched enclosure (**WA 12**), c.30 m in diameter, has been identified from aerial photographs approximately 480 m south-west of the western end of the site.
- 4.4.23 In addition to the two coins recovered from the Werthyr site, four findspots comprise the evidence for human activity within the Study Area dated to the Romano-British period. Three copper cakes were found in antiquity, possibly within the site (**WA 17**), but their exact findspot is not clear. They are thought to have originated from the nearby copper mine at Parys Mountain. Two findspots of Roman coins (**WA 19 & 20**) both lie approximately 340 m to the west of the site at Cemaes. Additionally, a Roman saddle quern (**WA 18**) was uncovered, amongst other later features, during the building of a house in 1948 close to the aforementioned Roman coin findspots at Cemaes.

Other Prehistoric

- 4.4.24 The following sites are recorded by GATHER and RCAHMW as being broadly within prehistory with specific date given, or recorded as undated.
- 4.4.25 Banks (**WA 49**), a hollow way (**WA 51**), an enclosure (**WA 52**) formed by a largely tumbled stone wall a possible burnt mound (**WA 53**) are all recorded within the site. Close to the northern edge of the site a circular mound (**WA 48**) is noted close to the side of a small stream.
- 4.4.26 Approximately 945 m south of the site, near Tai Hen, are five certain and two probable artificial pillow mounds (**WA 14**) which were in fair condition in 1968 but by 2003 the field had been well ploughed with the mounds not visible from the adjoining fields (Smith 2003).
- 4.4.27 Two standing stones (**WA 16**) are recorded as having stood approximately 800 m north of the site close to Pilwen, but were removed or destroyed sometime before 1855 (Smith 2003). An additional two unidentifiable archaeological features are recorded from aerial photographs (**WA 45 & 50**).

Early medieval and medieval

- 4.4.28 Wales was a geographically fragmented country in the early medieval period where for generations Anglesey saw its main orientation westwards, forming part of a sea-province extending as far as the Hebrides and Orkney to the north and encompassing the Isle of Man and the Scandinavian kingdom of Dublin (Davies 1987, 9-11). The island's relationship with Ireland was important for trade and for political sanctuary for Welsh Princes looking to restore themselves to the political forefront, not forgetting raids by the Vikings from Dublin (*ibid*). After the Norman Conquest, which in Wales was hesitant and piecemeal compared to the campaign in England (Davies 1987, 32), Wales continued to be ruled by a series of feudal princes until the principality was largely conquered and subdued in 1282/3 by the invasion of Edward I (Davidson 2003). The town of Cemaes traces its origins to the medieval period where it was a commotal centre.
- 4.4.29 Only one site is recorded by the GATHER dating to the early medieval period and relates to a series of long cist burials (**WA 21**) approximately 680 m north of the site at Tregynrig Fawr. The cists are located within a farmyard at Peibron, some stones (at least four) were visible in the late 1960s indicating one of the cists measured 1.52 m (5ft) by 0.45 m (1.5ft).
- 4.4.30 Archaeological evidence from the medieval period within the Study Area is characterised by ecclesiastical buildings, either standing or demolished. One Grade II Listed Building dating to the medieval period is recorded within the Study Area, the Church of St Peirio (**WA 24**) located approximately 900m south of the site near Shop-y-goeden. The walls of the church are medieval, although have been rebuilt, with a continuous nave and chancel which retain no early detail.
- 4.4.31 Additional religious sites comprise the site of Capel Gwen Hir (**WA 22**) on which the present farm building is thought to be built upon, approximately 390 m north of the site at Betws and an area of disturbed ground at Pen-Y-Fynwent to the south east (**WA 25**) thought to have been a medieval churchyard, although, as previously noted, Smith (2003) suggests the burial ground may be older.
- 4.4.32 Only two non-ecclesiastic sites are recorded within the Study Area. The first of these is the purported site of a Lazar House (leper colony) (**WA 23**) approximately 900 m north of the site near Rhyd-y-clafdy. The date of foundation of the Lazar House is uncertain and

recorded as medieval by GATHER and post-medieval by RCAHMW. The second is the site of the medieval mill (**WA 26**), located approximately 192 m west of the site close to Cemaes, now overlain by a 19th century brickworks.

- 4.4.33 The scarcity of archaeological evidence within the site and the Study Area leads to the assumption both were likely characterised by agricultural activity within a landscape of small, scattered settlements with the presence of churches and chapels throughout the landscape further reinforcing this idea.

Post-medieval

- 4.4.34 The major development on Anglesey during the post-medieval period is the discovery and exploitation of copper ores, especially at the Parys Mountain mine 3.4 km south-east of the site. Large scale extraction began in the mid-late 18th century after the discovery of a rich vein in 1768 with the mine growing to become the largest copper mine in the world (Berks 2010, 3). A smaller mine (**WA 27**) within the Study Area is recorded by GATHER as being located approximately 770 m north-west of the western end of the site at Dinorben, but little additional information about the mine is recorded.
- 4.4.35 The dramatic increase in industrial extraction from the mine led to an inevitable expansion in population with the town of Amlwch, 3.2 km to the east of the site, increasing to 10,000 people during this period. This increase can be seen within the Study Area itself where six chapels and churches (**WA 31-36**) trace their origins to the post-medieval period.
- 4.4.36 Further evidence of industrial production within the Study Area can be seen in two limekilns (**WA 29 & 30**). **WA 30** is located approximately 920 m north of the site close to Porth-y-Castell and is recorded as a heavily overgrown limekiln quarried into the rock face. **WA 31** is located approximately 875 m north-west of the site at its western end and is described as a double stone-built limekiln set in a quarry with a track leading up to the kiln from the quarry floor.
- 4.4.37 Also within the Study Area are the Grade II Listed Cemaes Mill (**WA 28**), located approximately 925 m west of the western end of the site, which is a three-storey, 18th century windmill, now out of use, along with three examples of formal gardens (**WA 37-39**) and an allotment (**WA 40**). Documentary research at Gadlys Hotel uncovered the name Neuadd Cemaes (**WA 46**) which a brief search was traced to the late 18th century, it is thought to make reference to a former manor house and/or the court of Cemaes.
- 4.4.38 With the exception of the establishment of the Parys Mountain Mine, the site and the Study Area appear to have remained essentially rural throughout the post-medieval period forming the agricultural hinterland of the surrounding settlements.
- 4.4.39 The earliest cartographic evidence consulted for this study dated to the post-medieval period. The 1607 "Coloured Map of Anglesey" was surveyed by Christopher Saxton and appeared in Camden's Britannia (**Front Cover**).

19th century and modern

- 4.4.40 The establishment and operation of the Parys Mountain Mine during the post-medieval period continued into the 19th century when additional industries sprung up as a direct result of the requirements of the mine. One of the most important of these was ship building at Amlwch. The industry originally started as a small repairing operation but flourished in the 19th century into the construction of large ships required for the export of copper from the mines. The ship industry began to experience a downturn when the railway was brought to the town from Llangefni in 1865 (Amlwch History 2010).

- 4.4.41 Within the wider landscape the Scheduled Porth wen brickworks is located approximately 1.3km north of the site and is thought to have begun production in 19th century with the works becoming mechanised by 1889. Producing alumina-silicate bricks until 1924 a warehouse/workshop, a large two-storey building, parts of a small steam engine and two tall square-plan brick chimneys survive.
- 4.4.42 There are three heritage assets recorded within the Study Area from the 19th century. The Grade II Listed Ty Cefn cottage (**WA 43**) is located approximately 560 m west of the site within Cemaes. The other two heritage assets from the 19th century are the Cemaes Bay Hotel (**WA 41**), approximately 355 m north-west of the site close to Neuadd, and the former British School in Cemaes (**WA 42**) approximately 462 m west of the site within Cemaes.
- 4.4.43 The site itself appears to have remained relatively undisturbed throughout the 19th century and into the modern period retaining an essentially rural character
- 4.4.44 Cartographic evidence from the Llanbadrig Tithe Map (1845) and the Amlwch Tithe Map (1841), both on **Figure 2**, show the site to be covered mainly with large fields, most of which have irregular boundaries, suggesting their previous enclosure was undertaken in a piecemeal fashion. By the 1888 Ordnance Survey (OS) maps (**Figure 3**) the majority of the previous boundaries remain, however the site has been further enclosed within new, smaller fields with regular boundaries suggesting their division through act of parliament or private agreement.
- 4.4.45 Little has changed within the site throughout the 20th century, as can be seen on the revised 1949 OS map (**Figure 3**) and contemporary satellite imagery (not reproduced) with the majority of field boundaries remaining intact from 1881.

4.5 Historic Landscape Character

- 4.5.1 No formal Historic Landscape Characterisation (HLC) has been carried out for the site, however GATHER records three “Character Areas” within the Study Area. The Cemaes Character Area (**WA 54**) records the medieval and later core of the town to the west of the site. The North Coast Character Area (**WA 55**) is recorded as being remote and a difficult area for agriculture, although enclosed, with irregular fields, lanes and settlements. The Rhosbeirio Character Area (**WA 56**) is defined as a distinctive area of large, well cultivated, agricultural fields with scattered settlements thought to be medieval in origin.
- 4.5.2 The site falls broadly within that described within the Rhosbeirio Character Area. As the cartographic evidence shows, prior to the middle of the 19th century the site was enclosed within very large fields with irregular boundaries before further subdivision occurring before the drafting of the 1st edition OS map. It is likely the initial larger fields were enclosed during the post-medieval period but would certainly have been used for agriculture prior to its enclosure. The Historic Landscape Character of the site has changed little aside from the installation of the 24 wind turbines in the 1990s and is still firmly agricultural, with isolated settlements/farms.

4.6 Site visit and setting

- 4.6.1 The site visit aimed to identify any designated heritage assets within the wider context of the site which might be considered potential sensitive receptors to the proposed Development, by comparing the ZTV produced by the Viewshed Analysis (**Figure 3**) to the actual views available of the landscape surrounding the site (see **Section 2.5**). In order to do this an indicative turbine array was used.

- 4.6.2 Other aspects of the landscape were also considered in order to attempt to establish whether the site constituted or contributed to the setting of any monuments within the ZTV, in accordance with *Conservation Principles* (Cadw 2011). The above guidance states that the setting comprises “*the surroundings in which a historic asset is experienced in its local context, embracing present and past relationships to the adjacent landscape*” (Cadw 2011).
- 4.6.3 The site lies within a series of pasture fields in a landscape characterised by undulating hills and almost entirely uninterrupted views across the island and further out into the Irish Sea (**Plate 1**). Inevitably, the most noticeable elements of the landscape are the visually dominating wind turbines comprising the existing wind farm dotted throughout the site. In certain sections of the site it is possible to see all of the turbines, with those furthest away often only discernable through the metronomic appearance of their rotor tips.
- 4.6.4 Moving through the eastern half of the site the majority of the ground is smooth and appears relatively undisturbed save from the work undertaken to erect the turbines. The Scheduled Monument Werthyr standing stone (**WA 9**) is located close to the eastern end of the site opposite Bryn Llwyd. Presumably, if as is suggested this was a portal Dolmen with a further standing stone and stone cap, the monument would have been more visible and obvious. **Plate 4** shows the setting of the stone in relation to the wind farm with the pre-existing turbines clearly visible whilst **Plate 2** comprises a panoramic montage from close to the eastern end of the site. This location offers a clear view across to the location of Werthyr standing stone, although the stone cannot be distinguished from the background.
- 4.6.5 Nestled in the middle of the eastern half of the site are the easily discernable remains of the Werthyr Iron Age defended farmstead (**WA 13**) (**Plates 5, 10 and 11**) partially excavated in 2007 (Wessex Archaeology). The site photographs were taken during a hail storm depositing water on the lens; however, despite this the earthworks are still clearly visible. A second enclosure recorded on GATHER and investigated during the excavations undertaken by Time Team (**WA 14**) lies to the north of the access track to the wind farm, however the site visit failed to identify any further visible earthworks in this vicinity.
- 4.6.6 To the northwest of the Werthyr site are some low banks and hollows (**Plate 6**) which, although very ephemeral, suggest the potential presence of archaeological features. Their location close to a circular mound (**WA 48**) recorded by GATHER supports this inference.
- 4.6.7 Moving to the west along the track, the land drops sharply towards the river before rising again. To the north of this track lie a series of low earthworks (**Plate 7**) running in a northeast-southwest direction which are likely caused by ridge and furrow farming.
- 4.6.8 The proposed locations of the turbines within the western half of the site are, similarly to those within the eastern half, scattered across several fields on either side of a road. There were no further discernable earthworks on this side of the site nor were there any clear lines of visibility between the proposed turbine locations and the standing stone at Werthyr (**WA 9**). The high point close to the western edge of the site has excellent views over the majority of the landscape taking in the Grade II Listed Cemaes Mill (**WA 28**) and the Scheduled Monument Pen-Y-Morwyd (**WA 7**) (**Plate 8**). The panoramic montage also encapsulates the Grade II Listed Church of St Peirio (**WA 24**) but this cannot be distinguished from the picture. It was not possible to access Pen-y- Morwyd, however a photo (**Plate 8**) was taken from the most accessible point in line with the monument and the site and, given the monument is higher topographically, it is safe to say it would have good intervisibility with the site. The church also shares intervisibility with the site as **Plate**

9 shows. Cemaes Mill, Pen-Y-Morwyd and the Church of St Peirio share intervisibility with most of the turbines within the western half of the site due to their location on a south facing slope.

- 4.6.9 Overall, the site visit identified that the site is located in a position of prominence within the immediate landscape. Lines of sight have been confirmed between the site and almost all the designated heritage assets within the Study Area, apart from Tŷ Cefn (**WA 43**) which is screened by its surrounding buildings in Cemaes. The openness of the landscape combined with the topographical prominence of the site lead to the conclusion that the siting of up to 19 new turbines is likely to have an effect on the setting of the designated heritage assets within the Study Area which is discussed below.

5 SUMMARY OF HERITAGE ASSETS

5.1 Introduction

- 5.1.1 The planning policies listed in **Section 3** aim to promote development proposals that will preserve, conserve and, where possible and appropriate, enhance the historic environment. Moreover, these policies will seek to avoid or mitigate against harm.
- 5.1.2 In line with national and local planning policies, development proposals which have the potential to affect designated and non-designated heritage assets and their settings will be permitted only where it can be demonstrated, along with sufficient evidence, that the asset would be conserved and, where appropriate, enhanced.
- 5.1.3 A description of the significance of heritage assets directly affected by the proposed development, based on the current level of available information, is presented below in line with current planning policy and guidance.

5.2 Known heritage assets within the site

Designated heritage assets

- 5.2.1 No designated heritage assets are located within the site.

Non-designated heritage assets

- 5.2.2 There are ten non-designated heritage assets within the site; six of which are recorded as part of the Werthyr settlement (**WA 13, WA 14, WA 48, WA 51 - 53**) with the rest comprising a findspot of Romano-British copper cakes, (**WA17**), a ring-ditch (**WA 6**), an Bronze Age urned burial (**WA 8**) and series of banks (**WA 49**)

5.3 Potential buried archaeological remains

- 5.3.1 Based on the evidence presented within the baseline resource (**Section 4**) there is considered to be the potential for as yet unknown buried archaeological remains within the site relating to the following periods:

- *Bronze Age*
- *Iron Age/Romano-British*
- *Medieval*
- *Post-medieval*

- 5.3.2 This is summarised in **Table 3** below.

5.4 Heritage assets within the indicative ZTV

Designated heritage assets

- 5.4.1 No designated heritage assets are located within the site.
- 5.4.2 There are a total of 35 designated heritage assets within the site's indicative ZTV. The remainder have been scoped out of any further assessment. To the east of the site much of the Amlwch and Parys Mountain, designated as a Landscape of Outstanding Historic Interest lies within the ZTV; whilst other sites include to the west and east of site, the registered park and garden at Cestyll, two Grade I Listed Buildings; 12 Grade II * Listed Buildings and 19 Scheduled Monuments, spread across the surrounding landscape. The Listed buildings are dominated by churches, but do also contain some vernacular buildings, whilst the Scheduled monuments are dominated by prehistoric barrows, chambered tombs, standing stones, enclosures and hillforts. A list of these heritage assets can be seen in **Appendix 3** and their distribution is shown in **Figure 4**. It is also noted that the turbines of the current wind farm on the site are visible in the distant from the hillfort at Caer y Twr, located on Holyhead mountain (220 m), well outside the 10 km area for visual assessment. These views, are, however extremely distant and include a significant number of other modern features including the adjacent Holyhead port and the turbines from other wind farms, many of which are closer to the monument and more visible.
- 5.4.3 It is likely that the proposed repowering could impact upon the setting of some of these monuments, although the permissions for the existing wind farm dictate that the current turbines must be included as part of the baseline of assessment for consideration of existing setting. It is recommended that this should be taken into consideration during the design phase of the turbine array. Of particular concern are the settings of prehistoric monuments, where intervisibility plays an important part in our understanding and appreciation of these monuments, and the numerous chapels and churches identified as potentially lying within the ZTV. These may have significant views or relationships with each other or their surrounding landscape. It is a requirement of PPW that the preservation of a Listed Building or its setting should be a material consideration when considering development proposals.
- 5.4.4 A full assessment of these indirect and visual impacts will be undertaken as part of the Environmental Statement chapter once the final turbine array design is known and following detailed discussions with GAPS and using a detailed ZTV drawn up by the client's landscape and visual team.

5.5 Assessment of survival and previous impacts

- 5.5.1 The site visit in conjunction with cartographic evidence consulted suggests the site has been subject to localised disturbances caused by activities undertaken during the installation of the turbines and associated cabling alongside broader disturbance cause by modern farming. Excavations carried out at the Werthyr site indicate that in areas which have remained undisturbed archaeological remains are likely to be well preserved. As such, it is likely this level of preservation of archaeological remains is broadly similar across the rest of the site.

5.6 Summary

- 5.6.1 The following table presents a summary of the known and potential heritage assets within the site and the Study Area.

- 5.6.2 The risk of encountering heritage assets has been given a rating, calculated using professional judgement based on the various datasets assessed during the course of the study.
- 5.6.3 A survival rating has been determined following a review of previous impacts identified within the site, based on a site visit, cartographic sources and other relevant site information (e.g. HER event records)

Table 3: Summary of Heritage Assets

Risk	Period and Description		Significance	Value	Survival
High	Bronze Age	The discovery of Bronze Age funerary evidence from the site coupled with the numerous other Bronze Age features within the Study Area indicates it was an important landscape during this time. The risk of encountering remains from this period is therefore considered to be high. Any evidence uncovered would be of value to regional research values.	Regional	Evidential	Good
	Iron Age	As well as the fortified settlement excavated still visible as extant earthworks within the site itself, the broader landscape exhibits significant evidence for human and occupation. It is therefore considered highly likely that remains relating to this period would be uncovered during any excavations works, especially in the immediate vicinity of the Werthyr settlement. Any evidence uncovered would be of use to regional research values	Regional	Evidential	Extant/Good
	Romano-British	Copper cakes, probably found within the site, coupled with the copper mines at Parys Mountain, indicate the presence of Romano-British occupation within the area. It is considered likely that the settlement excavated at Werthyr continued in use into the Romano-British period. Therefore the risk of encountering Romano-British remains during excavations is considered high. Any evidence uncovered would be of value to regional research objectives.	Regional	Evidential	Good



Risk	Period and Description		Significance	Value	Survival
	Medieval	The site appears to have remained essentially rural since the medieval period, and likely beyond. Considering this, and the presence of earthworks possibly relating to ridge and furrow, it is considered likely remains relating to medieval agriculture would be uncovered during any excavation works. Any evidence uncovered would be of value to local research objectives.	Local	Evidential	Extant/Good
	Post-medieval	As mentioned above the site has remained essentially rural since likely before the medieval period. The possible evidence for ridge and furrow are too ephemeral to conclusively assign to either period. It is considered that there is a high likelihood of encountering remains of post-medieval agriculture. Any evidence uncovered would be of value to local research objectives.	Local	Evidential	Extant/Good
Medium	-	-	-	-	-
Low	Early Medieval	The paucity of remains from the Study Area, and indeed entire island of Anglesey, the likelihood of uncovering remains from this period are low. However, the nature of the features from this period make it difficult to entirely exclude the chance of their presence being uncovered during excavation works. Any evidence uncovered would be of value to regional research objectives.	Regional	Evidential	Good
Unknown	Palaeolithic, and Mesolithic	Given the rich prehistoric landscape on Anglesey there is a chance of uncovering remains from these periods, however, the ephemeral and sporadic nature of the remains make their presence difficult to predict. Any evidence uncovered would be of value to regional research objectives.	Regional	Evidential	Unknown

Risk	Period and Description		Significance	Value	Survival
	Neolithic	Evidence for activity from the Neolithic has been recovered from within the Study Area however, predicting the location of further remains from this period is difficult. The chance of encountering them close to previous can certainly not be excluded and this invariably increases the risk of uncovering Neolithic remains during any excavation. Considering this the risk of encountering such remains is recorded as unknown. Any evidence uncovered would be of value to regional research objectives.	Regional	Evidential	Unknown

6 IMPACTS

6.1 Introduction

6.1.1 The management and mitigation of change to the heritage resource resulting from development is based on the recognition within Government planning objectives that archaeological remains “...are a finite and non-renewable resource, part of the historical and cultural identity of Wales...” (PPW Policy 6.1.1). Impacts to the historic environment and its associated heritage assets arise where changes are made to their physical environment by means of the loss and/or degradation of their physical fabric or setting, which in turn leads to a reduction in the significance of the historic environment record and its associated heritage assets.

6.2 Proposed development

6.2.1 The proposed development within the site will comprise the installation of up to nineteen new wind turbines up to a maximum tip height of 93 m.

6.2.2 Although the specific design detailing the construction methods is not yet known, the construction works at the site will include some or all of the following ground disturbance and excavations associated with the scheme:

- *Excavation of the turbine footings;*
- *Excavation of substation foundations;*
- *Excavation of cable trenches;*
- *Construction of access tracks;*
- *Potential removal of existing hedges for site access.*
- *Decommissioning and removal of existing turbine bases and some cabling.*

6.3 Statement of impact

Designated heritage assets

6.3.1 It is considered the proposed replacement of the Rhyd-y-Groes wind farm could affect the setting of four designated heritage assets within the Study Area, Werthyr Standing Stone, Pen-y-Morwyd Barrow, Cemaes Mill and the Church of St Peirio. It is also likely to affect

the setting of a number of the Heritage assets in the wider study area (**Appendix 3**). Whilst many of these monuments already have existing view of the current wind turbines, the scale of the proposed new turbines relative to the existing turbines may increase the scale of this impact.

Archaeological potential

- 6.3.2 The construction of the proposed development has the potential to result in the damage to or loss of any buried archaeological features, particular relating to Bronze Age funerary practices, Iron Age/Romano-British settlement and agricultural activity and medieval and later farmstead and agricultural practices, which may be present within the site. This would in turn result in a total or partial loss of significance of these heritage assets. This adverse effect would be permanent and irreversible in nature.

Historic Landscape Character

- 6.3.3 The site lies within the Rhosbeirio character area, characterised as a “very distinctive area of huge fields. Very agricultural and well cultivated. Very sparse pattern of scattered farmsteads down long tracks which are probably medieval in origin. Now dominated visually by wind turbines”. With the exception of the wind turbines, now clearly part of the character area, the landscape’s present character has changed little since the 19th century when significant enclosure was undertaken either by parliamentary act or private agreement. Before this the site’s character was defined in the post-medieval period when it was enclosed into large fields after presumably having been open land during the medieval period. The major change in the HLC has been the introduction of the current 24 wind turbines.
- 6.3.4 It is considered that the installation of up to nineteen replacement turbines within the site should not be considered to have a significant impact on the historic landscape character of the site providing there are no planned wholesale changed to landscape divisions or boundaries. The current wind farm has been in place for over 20 years, and the repowering will not alter the physical impact on the landscape significantly, the scale of the new turbines may add to the visual dominance of the turbines over and the post-medieval and 19th century agricultural historic character which is still overt and visible.

7 CONCLUSIONS

7.1 General

- 7.1.1 The effect of the development proposals on the known and potential heritage resource will be a material consideration in determination of the planning application.
- 7.1.2 This assessment has established that there is an archaeological interest within the site. This is defined as the potential for the presence of buried archaeological remains, in particular relating to Bronze Age funerary practices, Iron Age/Romano-British settlement and agricultural activity and medieval and later farmstead and agricultural practices. Previous archaeological excavations (Wessex 2007) within the site indicate that any archaeological remains uncovered are likely to be well preserved due to a lack of previous disturbance.
- 7.1.3 It is considered that the proposed development also has the potential to have an adverse effect on the setting of the designated heritage assets within the Study Area. In particular, the Scheduled Monuments Werthyr Standing Stone and Pen-y-Morwyd are considered to be sensitive receptors to the proposed wind farm redevelopment. Intervisibility is an important concept in prehistory with monuments and settlements often placed in areas of prominence with clear lines of sight between each other. The erection of up to nineteen

new wind turbines with a maximum tip height of 93 m has the potential to have an adverse effect on this intervisibility and the setting of the site as a whole within the wider prehistoric landscape will be an important consideration in designing the turbine array.

- 7.1.4 The two Grade II Listed Buildings within the Study Area Cemaes Mill and the Church of St Peirio are also considered to be sensitive receptors to the proposed wind farm redevelopment. Both of these lie within the 1 km Study area surrounding the site, and the development has the potential to impact upon their setting within the landscape.
- 7.1.5 Within the wider 10 km area, a further thirty five designated heritage assets have been identified where there is a potential for intervisibility with the development and where there is therefore the potential for the development to impact negatively on the setting of these monuments (**Appendix 3**). The proposed turbine array and associated design should seek to avoid any impacts on these monuments either through sensitive design or mitigatory landscaping. In particular the design should seek to minimise any impacts on the setting of Amlwch and Parys Mountain Landscape of Outstanding Historic Interest, the registered garden at Cestyll and on the settings of the Scheduled Monuments in Appendix 3 (with particular regard to the intervisibility between prehistoric barrows and standing stones) as well as the Listed Buildings in Appendix 3 (and in particular the setting of the numerous Listed churches in the list).

7.2 Mitigation

- 7.2.1 The presence, location and significance of any buried heritage assets within the site cannot currently be confirmed on the basis of the available information. In order to clarify the likely impact of the proposed repowering development on this buried resource, Gwynedd Archaeological Planning Services (GAPS) have indicated that in order to clarify the nature of the buried resource prior to the submission of the planning application, a programme of geophysical survey and archaeological evaluation (trial trenching) will be required.
- 7.2.2 The precise scale, scope and nature of any further archaeological works should be agreed through consultation with the development control archaeologist at the Gwynedd Archaeological Planning Service.

7.2.3 References

7.3 Bibliography

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7.4 Historic Environment Records

Anglesey Archives, Llangefni (AA)
Gwynedd Archaeological Trust Historic Environment Record (GATHER)
National Library of Wales, Aberystwyth (NLW)

7.5 Cartographic and Documentary Sources

British Geological Survey – Sheet 93 Anglesey
1841 Amlwch Tithe Map
1845 Llanbadrig Tithe Map
1888 Ordnance Survey 25”
1901 Ordnance Survey 25”
1924 Ordnance Survey 25”
1922 with 1949 Revisions Ordnance Survey 6”
1974 Ordnance Survey 1:2500

7.6 Online resources

<http://ads.ahds.ac.uk>
<http://www.anglesey.gov.uk/planning-and-waste/planning-policy/development-plan/>
http://www.cofiadurcahcymru.org.uk/arch/gat/english/gat_interface.html
<http://www.coflein.gov.uk/en/search/>
<http://cadw.wales.gov.uk/?lang=en>



<http://www.magic.gov.uk>

<http://www.old-maps.co.uk/index.html>

<http://wales.gov.uk/docs/desh/publications/121107ppwedition5en.pdf>

8 APPENDICES

8.1 Appendix 1: Gazetteer of Information summarised from the GATHER and other sources

WA No.	HER No.	Description	Designation	Period	Easting	Northing
1	29454	Ring Ditch and Enclosures, Carrog Farm, Llanbadrig		Bronze Age	237270	392150
2	410181/34697	Barrow Cemetery, Carrog, Llanfechell		Bronze Age	237470	391850
3	302470/3555	Tumulus (Possible), Ty Newydd, Amlwch		Bronze Age	241250	391860
4	3559	Metalworking Site (No. 2) (possible) - E of Penciw		Bronze Age	241870	391620
5	3565	Metalworking Site (No.3) (possible) - E of Penciw		Bronze Age	241770	391620
6	402212/5198	Ring-ditch, SW of Rhos-isaf		Bronze Age	238740	393480
7	AN110/3055	Pen-y-Morwyd Round Barrow	Scheduled	Bronze Age	238472	391259
8	3050	Urn Burial, Site of, Plas Penrhyn, Llanbadrig		Bronze Age	238000	393000
9	AN150/3541	Werthyr standing stone	Scheduled	Bronze Age	241523	392867
10	3061	Cist Burial, Llanleiana		Bronze Age	238600	394600
11	86848	Tai Hen, Cropmark Enclosure South Of		Iron Age	238360	391520
12	309535	Carrog, Cropmark Enclosure Nw Of		Iron Age	237270	392150
13	3546	Earthwork, remains of, Y Werthyr, Amlwch		Iron Age/Romano-British	240947	392502
14	5199	Cropmark Enclosure, Werthyr		Iron Age/Romano-British	240900	392750
15	3071	Pillow Mound (Possible Cairnfield), Nr. Pen y Mowydd		Prehistoric	238450	391240
16	3553	Standing Stones (Two) - Site of, E of Cemaes		Prehistoric	241000	393600



WA No.	HER No.	Description	Designation	Period	Easting	Northing
17	3070	Roman Copper Cakes - Findspot, Bryndu, Amlwch		Romano-British	238000	393000
18	5384	Saddle Quern - Findspot, Cemaes		Romano-British	237420	393430
19	998	Roman Coins - Findspot, C. G. Station, Cemaes		Romano-British	237400	393490
20	999	Roman Coins and Brooch - Findspot, Cemaes Fawr Farm		Romano-British	237550	393380
21	302469/3545	Long Cist Burials, Peibron Farm, Amlwch		Early Medieval	240550	393750
22	43563/3060	Capel Gwen Hir (Hoyw), Site of, Llanbadrig		Medieval	239430	393550
23	15862/3065	Leper House, Rhyd Y Clafdy, Cemaes		Medieval	239000	394100
24	43640/5349	Church of St Peirio	Grade II	Medieval	239112	391738
25	43601	Pen-Y-Fynwent, Churchyard		Medieval	241200	391780
26	36110	Melin Cemais, Former Site of, Cemaes		Medieval	237340	393090
27	21930	Dinorben Mine		Post-medieval	237800	394300
28	5344/3066	Cemaes Windmill	Grade II	Post-medieval	236620	392630
29	7178	Limekiln, Porth y Castell		Post-medieval	240380	394220
30	7188	Limekiln, Penrhyn-mawr		Post-medieval	237280	394100
31	8635/7635	Rehoboth Chapel (Welsh Calvinistic Methodist;Burwen), Burwen		Post-medieval	241910	393210
32	8640/7640	Seion Methodist Chapel (Wesleyan), Burwen		Post-medieval	241940	393380
33	8693/7693	Capel Bethel, Cemaes		Post-medieval	237120	393340
34	8694/7694	Capel Bethlehem, Cemaes		Post-medieval	237320	393490
35	8695/7695	Capel Bethesda, Cemaes		Post-medieval	236530	393080
36	7697/8697	Capel Moriah, Porth Wen		Post-medieval	239250	394390
37	86529	Gors, Garden, Llanfechell		Post-medieval	236820	392050
38	86523	Gadlys Hotel, Garden, Llanbadrig		Post-medieval	237820	393830
39	86527	Carog;Carrog, Garden, Llanfechell		Post-medieval	237530	391960
40	86519	Cemaes Allotments, Cemaes		Post-medieval	236770	393000



WA No.	HER No.	Description	Designation	Period	Easting	Northing
41	409440	Cemaes Bay Hotel; Gadlys Hotel, Cemaes Bay		19th century	237845	393856
42	419111	Former British School, Cemaes		19th century	237318	393442
43	24339	Ty Cefn	Grade II	19th century	237088	393365
44	3557	Pen y Fynwent - Place Name, Gwerthyr, Amlwch		Undated	241200	391780
45	7362	AP Site, N of Llanfechell		Undated	237200	392200
46	897	Neuadd Cemaes		Undated	238000	393700
47	268040	Cemaes Bay;Cemaes, Anglesey		Undated	237170	393450
48	38096	Circular Mound, Rhyd y Groes		Undated	240730	392870
49	38097	Banks, Rhyd y Groes		Undated	239730	392860
50	38098	Archaeological Feature, Rhyd y Groes		Undated	239360	392510
51	38099	Hollow Way, Rhyd y Groes		Undated	240760	392640
52	38100	Enclosure, Rhyd y Groes		Undated	240550	392650
53	38101	Burnt Mound, Possible, Rhyd y Groes		Undated	240520	392410
54	17147	Cemais Character Area		Multi-Period	237148	393315
55	17148	North Coast Character Area		Multi-Period	239681	394092
56	17149	Rhosbeirio Character Area		Multi-Period	239637	391937

8.2 Appendix 2: National and Local Historic Environment Policies

National planning policy

Policy Ref.	Title	Scope
n/a	Ancient Monuments and Archaeological Areas Act 1979 (as amended)	Scheduled Monuments and Archaeological Areas of Importance (AAls or their equivalent) are afforded statutory protection and the consent of Welsh Assembly Government (WAG), as advised by CADW, is required for any works.
n/a	Planning (Listed Buildings and Conservation Areas) Act 1990	Works affecting Listed Buildings and Conservation Areas are subject to additional planning controls administered by Local Planning Authorities (LPAs). CADW are a statutory consultee in works affecting Grade I or II* Listed Buildings.
PPW	6.4.6: Conservation Areas and assessments	Development plan policies should make it clear that development proposals will be judged for their effect on the character and appearance of conservation areas , as identified in the assessment and proposal document, to ensure that any new development is in accord with the area's special architectural and historic interest. While the character or appearance of conservation areas must be a major consideration, it cannot prevent all new development.
PPW	6.5.1 Ancient monuments and archaeological remains	The desirability of preserving an ancient monument and its setting is a material consideration in determining a planning application, whether that monument is scheduled or unscheduled. Where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical preservation in situ. In cases involving lesser archaeological remains, local planning authorities will need to weigh the relative importance of archaeology against other factors, including the need for the proposed development.
PPW	6.5.8 Preservation of Listed Buildings and optimum viable use	There should be a general presumption in favour of the preservation of listed buildings. The continuation or reinstatement of the original use should generally be the first option when the future of a listed building is considered. However, not all original uses will now be viable or necessarily appropriate. The application of development and listed building controls should recognise the need for flexibility where new uses have to be considered to secure a building's survival. The aim should be to identify the optimum viable use that is compatible with the character and setting of an historic building.
PPW	6.5.9: Proposals affecting a listed building or its setting	Where a development proposal affects a listed building or its setting, the primary material consideration is the statutory requirement to have special regard to the desirability of preserving the building, or its setting, or any features of special architectural or historic interest which it possesses.
PPW	6.5.24: World Heritage Sites	World Heritage Sites are a material consideration to be taken into account by local planning authorities in the determination of planning applications, and by the Welsh Government in determining cases on appeal or following call-in. The impact of development proposals on both the sites and their settings should be carefully considered.

Policy Ref.	Title	Scope
PPW	6.5.25: Effect on historic landscape, park or garden and settings as a material consideration	Local planning authorities should protect parks and gardens and their settings included in the first part of the 'Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales'. Cadw should be consulted on planning applications affecting grade 1 and II* sites and the Garden History Society should be consulted on all parks and gardens on the Register ³¹ . Information on the historic landscapes in the second part of the Register should be taken into account by local planning authorities in considering the implications of developments which are of such a scale that they would have a more than local impact on an area on the Register (see para 6.4.9). The effect of proposed development on a park or garden contained in the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, or on the setting of such a park or garden, may be a material consideration in the determination of a planning application.
n/a	Hedgerow Regulations 1997 (amended 2002)	Under the Hedgerow Regulations 1997, as amended by The Hedgerows (England) (Amendment) Regulations 2002, hedgerows are deemed to be historically Important if they are over 30 years old and if: A hedgerow incorporating, or associated with, an archaeological feature or site 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; or b) Recorded at the relevant date in a Sites and Monuments Record c) A hedgerow that forms an integral part of a pre-1845 field system, or a pre-1870 enclosure field system In practice hedgerows are deemed Important under the above regulations if they can be demonstrated to exist on the appropriate pre-1845 parish tithe or enclosure map.

Local planning policy: Gwynedd Structure Plan 1993

Policy Ref.	Title	Scope
D15	N/A	In considering proposals for development the planning authorities will ensure that: i. Scheduled Ancient Monuments and their settings will be preserved intact and; ii. Areas of Archaeological Importance and unscheduled archaeological sites (including those important sites which are presently unknown but which may be discovered during the plan period) and their settings which are considered to be of sufficient regional, local or academic interest to merit preservation, will be preserved and planning permission will be refused; iii. For archaeological sites not meriting preservation, planning consent will be withheld until provision has been made by the developer for an appropriate archaeological response before and during the development, either through written legal agreement or through the attachment of conditions to any planning consent;



Policy Ref.	Title	Scope
		<p>iv. For archaeological sites of unknown importance and areas of high archaeological potential provision will be made for investigation before and during development;</p> <p>v. Schemes for development of visitor and educational facilities at and management of appropriate archaeological sites will be encouraged provided they comply with the above.</p>
D16	N/A	There will be a presumption in favour of retaining a representative selection of industrial. Archaeological sites and monuments which will be protected from redevelopment and derelict land reclamation schemes
D21	N/A	Any proposals to alter, extend, render or otherwise change a listed building shall respect the setting, form, scale, mass, materials and character of the original
D22	N/A	Any development or redevelopment in close proximity to a listed building and having a bearing on its setting and character will be carefully controlled
D26	N/A	All development in proximity to a designated conservation area having a bearing of the setting of the area will be carefully controlled so as to protect the character and appearance of the area

Local planning policy: Ynys Môn Local Plan 1996

Policy Ref.	Title	Scope
39	Archaeology	The Council will use its planning powers to ensure that Scheduled Ancient Monuments and their settings are retained intact. Unscheduled archaeological sites and their settings of sufficient importance to merit preservation will also be protected. Where proposals affect other unscheduled archaeological remains which do not merit preservation, provision will be made for an appropriate archaeological response. Schemes for the development of visitor and educational facilities on suitable sites will be permitted provided that the archaeological site is not put at risk.
40	Conservation of Buildings	The character and appearance of all designated conservation areas will be protected from unsympathetic development. Enhancement of their characters will be achieved by carrying out improvements and permitting high quality new development. The Council will define and designate additional Conservation Areas within other areas of special architectural or historic interest where it is considered necessary to preserve and enhance the character and appearance of those areas.



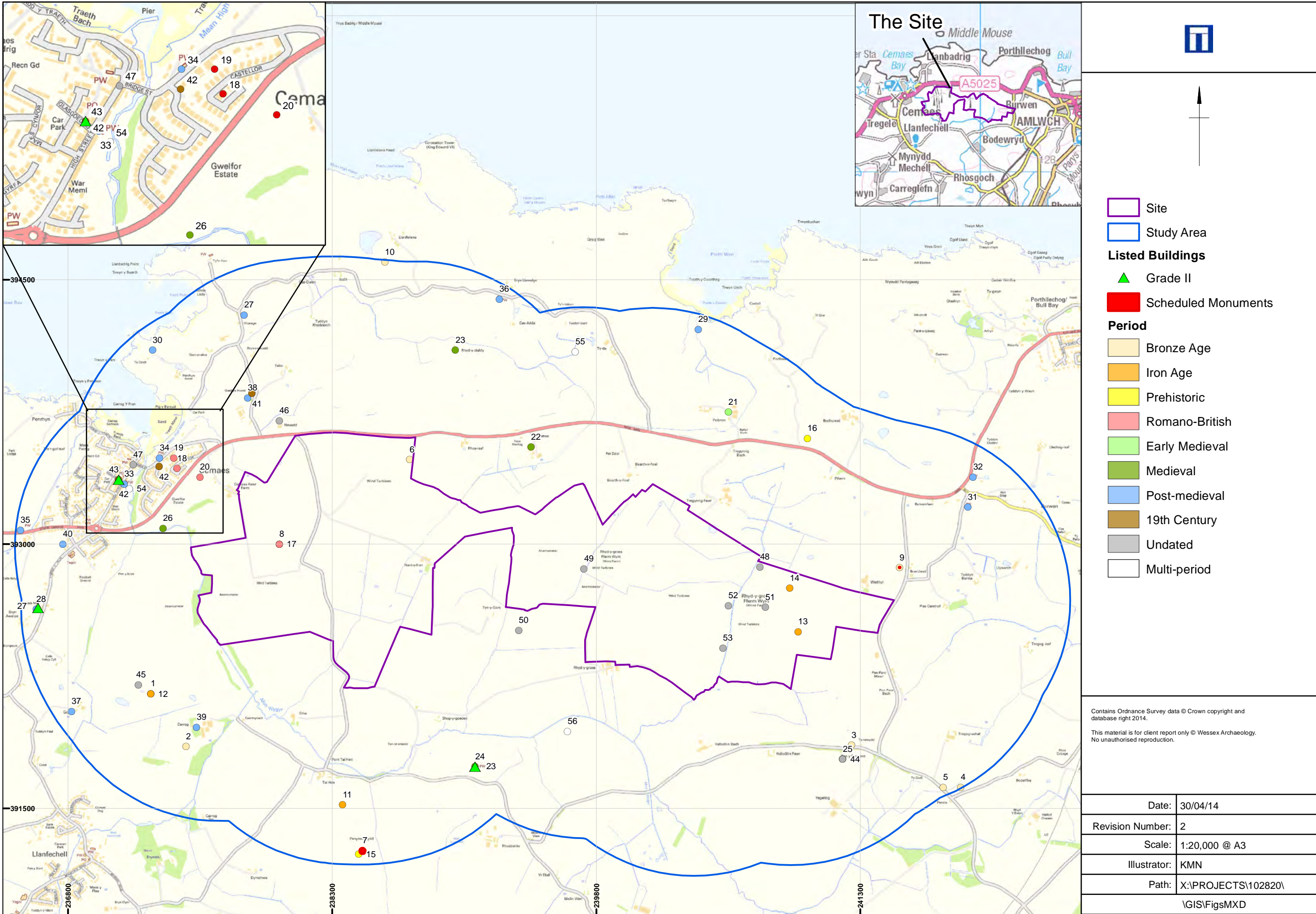
Policy Ref.	Title	Scope
41	Conservation of Buildings	Buildings of special architectural and historic interest and their settings will be protected from unsympathetic development, alterations or demolition. Appropriate uses which help to preserve their character and fabric will be permitted.

8.3 Appendix 3: Designated heritage assets within the ZTV

Ref. no.	Name	Type	Grade	Easting	Northing
HLW (Gw) 1	Amlwch and Parys Mountain	Landscape of Outstanding Historic Interest	N/A	244250	391700
PGW (Gd) 45	Cestyll Garden, Wylfa	Registered Park and Garden	N/S	234500	393300
AN029	Castell Crwn	Scheduled Monument	N/A	233188	390833
AN030	Standing Stones	Scheduled Monument	N/A	236401	391681
AN038	Dinas Gynfor Hillfort	Scheduled Monument	N/A	239035	395060
AN076	Maen Chwyf Chambered tomb	Scheduled Monument	N/A	240623	390219
AN077	Llys Einion Standing Stone	Scheduled Monument	N/A	243002	385812
AN078	Bodewryd Standing Stone	Scheduled Monument	N/A	240623	390218
AN079	Llifad, Carreglefn	Scheduled Monument	N/A	238490	391051
AN080	Standing Stone 410m North of Church	Scheduled Monument	N/A	236991	391636
AN081	Pen-yr-Orsedd Standing Stones	Scheduled Monument	N/A	233378	390562
AN083	Capel Soar Standing Stone	Scheduled Monument	N/A	238	
AN091	Cors-y-Bol Round Barrow	Scheduled Monument	N/A	233191	390833
AN109	Porth Wen Brickworks	Scheduled Monument	N/A	240151	394626
AN110	Pen-y-Morwyd Round Barrow	Scheduled Monument	N/A	238472	391258
AN111	Parys Mountain: Windmill, Engine House, Precipitation Pits and Great Opencast	Scheduled Monument	N/A	244241	390330
AN124	Pen-y-Fynwent Enclosure	Scheduled Monument	N/A	243355	388842
AN125	Pen-y-Fynwent Barrow	Scheduled Monument	N/A	243422	388929
AN135	Dyffryn Adda Copper Furnace and Precipitation Ponds	Scheduled Monument	N/A	243796	391336
AN150	Werthyr standing stone	Scheduled Monument	N/A	241523	392867
AN158	Y Werthyr Hillfort	Scheduled Monument	N/A	236320	384305
5363	Church of St Eilian	Listed Building	I	246978	392897
5380	Church of St Mary	Listed Building	I	232722	390847
5265	Melin Llynnon	Listed Building	II*	234052	385229
5301	Church of St Maethlu	Listed Building	II*	231260	387084
5334	Plas Bodewryd	Listed Building	II*	240013	390822
5356	Church of St Padrig	Listed Building	II*	237610	394640
5382	Church of St Rhwydrys	Listed Building	II*	232210	393224





5383	Church of St Mechell	Listed Building	II*	236942	391273
5427	Church of St Eleth	Listed Building	II*	244224	392950
24455	Church of Our Lady Star of the Sea, St Winifred	Listed Building	II*	243804	393101
24836	Range including cornbarn, granary, threshing room and lofted cowhouse at Llwydiarth Esgob Farm	Listed Building	II*	243520	384394
24837	Range including cowhouse, stables, coach house, smithy and poultry house at Llwydiarth Esgob Farm	Listed Building	II*	243523	384424
24838	Range including pigsties, laundry, slaughter house, cartsheds and coalshed at Llwydiarth Esgob Farm	Listed Building	II*	243563	384441
24839	Hammels at Llwydiarth Esgob Farm	Listed Building	II*	243637	384391

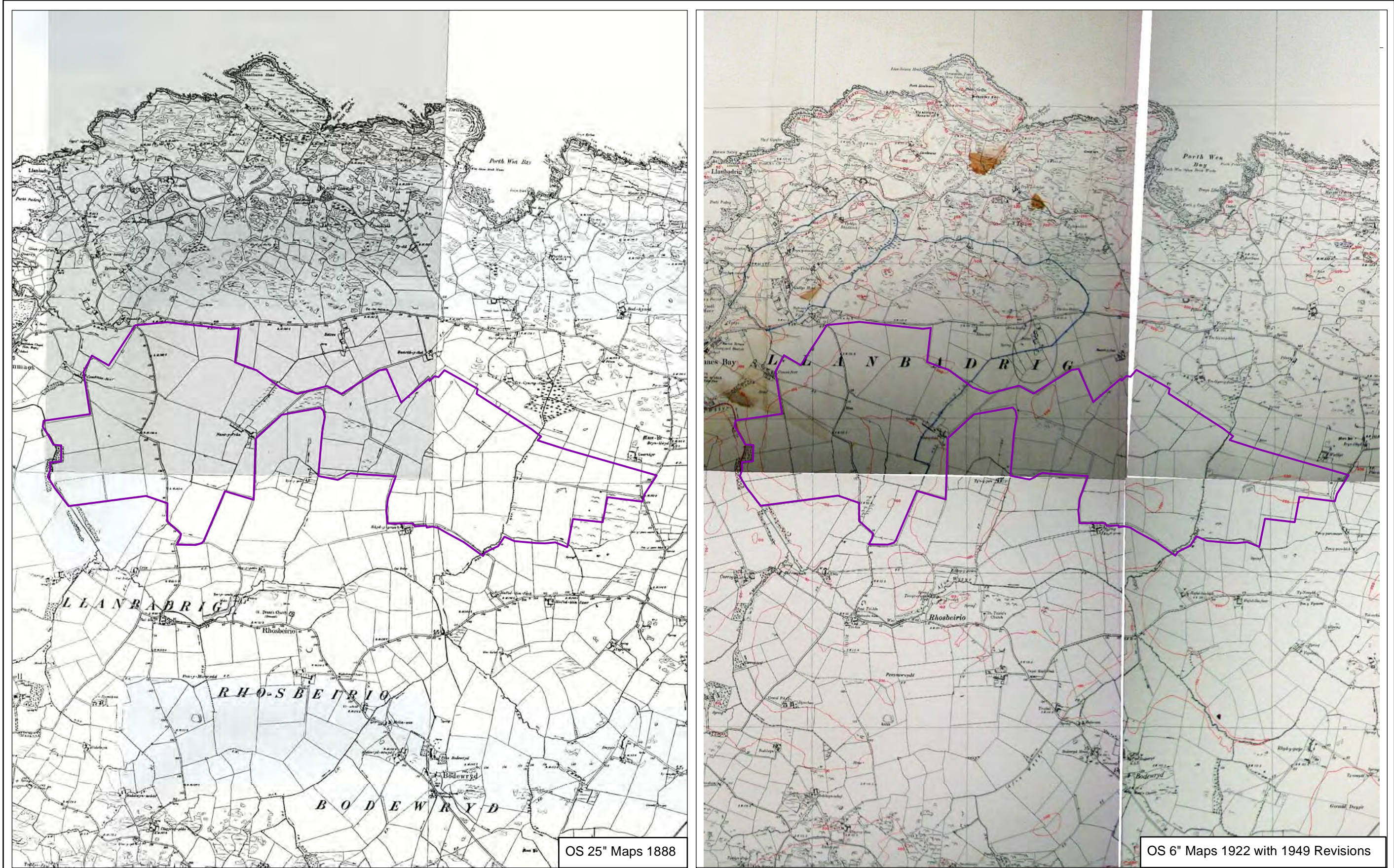




Site location, Study Area and known heritage resources (based on GATHER and other sources)

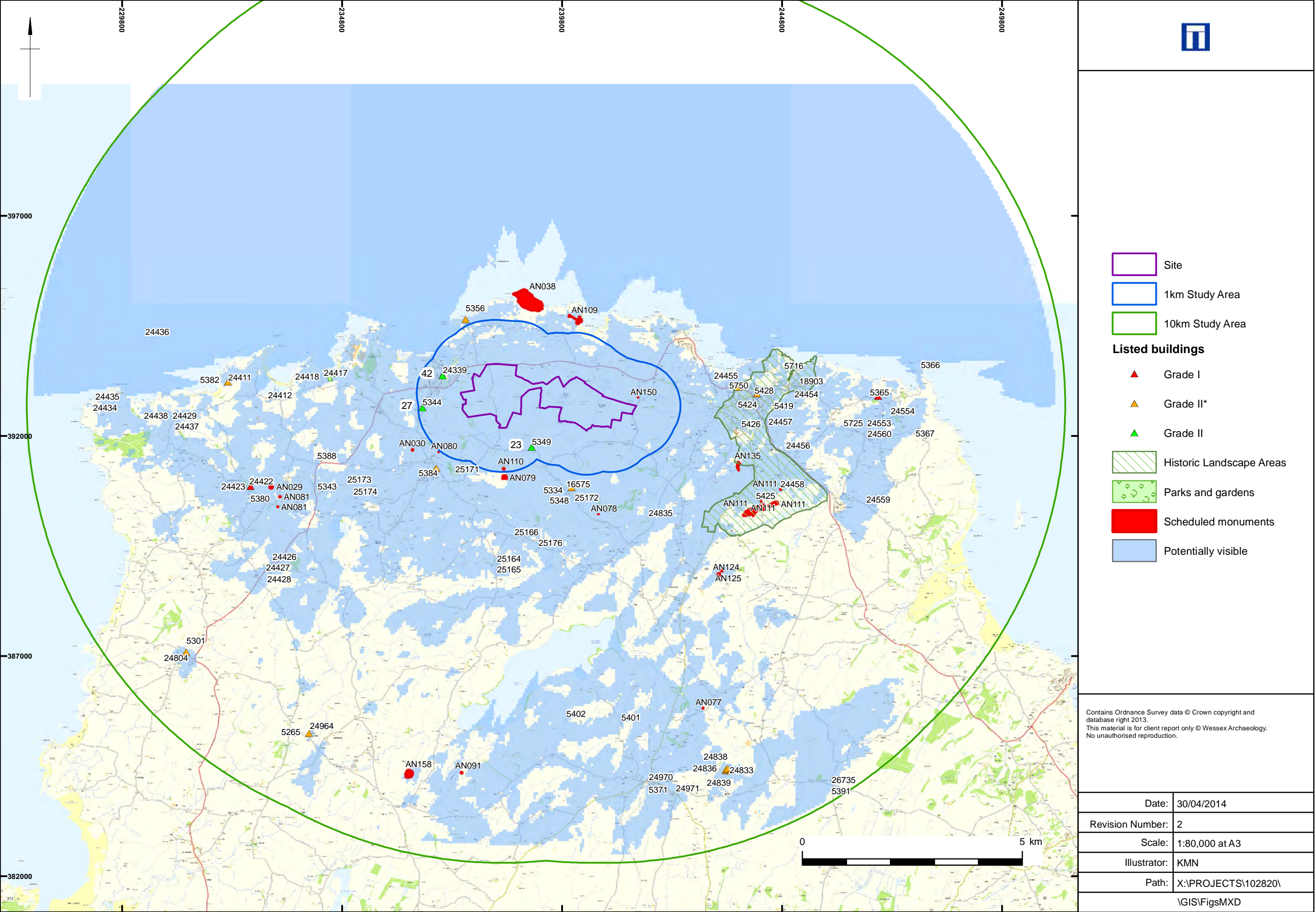
Figure 1



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	\GIS\FigsMXD

Theoreticl ZVI and Designated Heritage Assets

Figure 4



Plate 1: Panoramic mosaic from the NW edge of site



Plate 2: Panoramic mosaic at the Eastern end of the Site



Plate 3: Panoramic mosaic at the Western edge of the Site


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Plate 4: View towards the Site from Werthyr Standing Stone



Plate 5: View of Werthyr earthworks


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Plate 6: Ephemeral earthworks South of WA 48



Plate 7: Low earthworks, likely to be ridge and furrow, NW of WA 52


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Plate 8: View towards the Site from close to Pen-y-Morwyd Barrow



Plate 9: View towards the Site from the Church of St Peirio


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Plate 10: Aerial photo of the site at Werthyr taken from the east

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Plate 11: Aerial photo of the site at Werthyr taken from the north east

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