Ffynnon Oer Wind Farm Life Extension

Appendix A1.2
Scoping Report, Scoping Opinion and Pre-Application Correspondence

natural power

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Ffynnon Oer Wind Farm Life Extension

Neath Port Talbot, Wales

Scoping Report, Figures and Appendix A1

Scoping Volume 1 of 2

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Glossary

Term	Definition
A Weighting	A frequency-weighted correction applied to the measured sound levels to simulate the frequency response of the human ear.
Applicant	Ffynnon Oer Windfarm Limited
Baseline	The existing conditions that prevail against which the effects of the wind farm life extension are compared.
Decibel (dB)	The basic unit for expressing the level of sound on a scale from zero for the least perceptible sound to 130 to 140 dB for threshold of pain. It can also be used for other units including sound power.
EIA Regulations	The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended).
Environmental Impact Assessment (EIA)	EIA is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development.
Environmental Statement	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations.
Environmental Statement Addendum	A report which provides further information following the publication of an Environmental Statement.
L_{eq}	A quasi-average noise level which includes all the sound energy during the measurement period averaged out across the period. It is typically used to describe the ambient noise level. The A weighted value is the L_{Aeq}.
L_{90}	The level exceeded for 90% of the noise measurement period and indicates the steady underlying background noise level. The A weighted value is the L_{A90}.
L_{WA}	An A-weighted sound power level, which represents the acoustic power emitted by a noise source.
Proposed Life Extension	The proposed life extension, for Ffynnon Oer Wind Farm to continue operating for an additional 10 years.
Section 73	Section 73 of the Town and Country Planning (Wales) Act 1990 (as amended) is an application to remove or vary planning conditions following the grant of planning permission.
Site Boundary	The land occupied by Ffynnon Oer Wind Farm.

List of Abbreviations

Term	Definition
BBNP	Bannau Brycheiniog National Park
BCT	Bat Conservation Trust
CIEEM	Chartered Institute of Ecology and Environmental Management
CIfA	Chartered Institute for Archaeologists
dB	Decibel
DEFRA	Department for Environment, Food and Rural Affairs
DSM	Digital Surface Model
ES	Environmental Statement
EIA	Environmental Impact Assessment
GHG	Greenhouse Gas
GLVIA	Guidelines for Landscape and Visual Assessment
HMP	Habitat Management Plan
IoA GPG	Institute of Acoustics Good Practice Guide
IBA	Important Bird Area
IEF	Important Ecological Features
KI	Key Issue
km	kilometre
LDP	Local Development Plan
LGV	Light Goods Vehicle
LNR	Local Nature Reserve
LSE	Likely Significant Effect
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
m	metre
MAGIC	Multi-Agency Geographic Information for the Countryside
MW	Megawatt
NNR	National Nature Reserve
NPTCBC	Neath Port Talbot County Borough Council
NRW	Natural Resources Wales
NVC	National Vegetation Classification
PAA	Pre-Assessed Area
PPW	Planning Policy Wales
PRoW	Public Right of Way

RHPG	Registered Historic Parks and Gardens
RLDP	Replacement LDP
RSPB	Royal Society for the Protection of Birds
SAC	Special Areas of Conservation
SEWBReC	South East Wales Biological Records Centre
SIP	Single Integrated Plan
SLA	Special Landscape Areas
SPA	Special Protection Areas
SSSI	Sites of Special Scientific Interest
SZTV	Screened Zone of Theoretical Visibility
TAN	Technical Advisory Note
ZTV	Zone of Theoretical Visibility

1. Introduction

1.1.1. This Scoping Report has been prepared by Natural Power Consultants (Natural Power) on behalf of Ffynnon Oer Windfarm Limited (hereafter referred to as 'the Applicant'), a wholly owned subsidiary of Nadara Limited (Nadara). The Applicant is seeking to amend the existing consent (Neath Port Talbot Council planning application reference P2002/1322) in order to extend the operational life of Ffynnon Oer Wind Farm by an additional 10 years (hereafter referred to as the 'Proposed Life Extension'). This Environmental Impact Assessment (EIA) Scoping Report sets out the scope for the supporting information, which will be in the form of an addendum to the original Environmental Statement (ES), to accompany an application under Section 73 of the Town and Country Planning (Wales) Act 1990[1] (Section 73 application).

2. Background

2.1.1. In 2002, Entec completed an EIA for Ffynnon Oer Wind Farm as part of an application for planning permission to Neath Port Talbot County Borough Council (NPTCBC), who granted consent on 27th May 2003, subject to a number of conditions, including the restriction for 20 year operational life (see copy of decision notice in Appendix A1: Planning approval with consented planning conditions, at the end of this document). Ffynnon Oer Wind Farm became fully operational on 31st July 2006 and has continued operation since this date. A copy of the original ES for Ffynnon Oer Wind Farm is provided in Volume 2, Appendix A2: Environmental Statement of this Scoping Report.

2.1.2. The wind farm comprises 16 turbines each of 2 Megawatt (MW) output, 93 m turbine tip height and 58 m hub height with a total installed capacity of 32 MW. The location of Ffynnon Oer Wind Farm is shown in Figure 1.1: Site Location. Figure 1.2: Site Layout shows the site boundary and infrastructure layout of Ffynnon Oer Wind Farm.

2.1.3. The Applicant is the owner and operator of Ffynnon Oer Wind Farm. Technical assessment across many of Nadara's sites has demonstrated that if wind farms are operated and maintained in line with best practice, they can continue to operate safely and efficiently beyond their original lifespan.

2.2. Site Location

2.2.1. Ffynnon Oer Wind Farm is located between the Afan and Neath valleys in South Wales, approximately 2 km west of Glyncorrwg, and falls under the NPTCBC local authority area.

2.2.2. The area within the site boundary mainly consists of open undulating rough grazing grassland and moorland with areas of scrub and two watercourses, tributaries of the River Afan, running north-south within the southern section of the site boundary. Commercial

[1] https://www.legislation.gov.uk/ukpga/1990/8/section/73 [Accessed 07/08/2025]

conifer plantation borders the site boundary to the east and west. Access is via a forestry track that leads off Rhigos Road (A4061) at grid reference SN 92873 04391. The access track runs for approximately 13 km through Natural Resources Wales (NRW) forestry.

2.2.3. The Welsh Government has undertaken an assessment to identify 'Pre-Assessed Areas for Wind Energy' where, in principle, there is a presumption in favour of large-scale onshore wind energy development[2]. Most of the south-western section of Ffynnon Oer Wind Farm borders the Welsh Government's Pre-Assessed Area (PAA) 9, with approximately 7.5 ha of the site boundary falling within PAA 9.

2.3. Purpose of Document

2.3.1. This Scoping Report seeks to inform discussions on the scope of the ES Addendum that will assess the effect of increasing the operational life of the wind farm by an additional 10 years. It seeks to ascertain views on:

- The type of application required to address the amendment;
- The scope of any additional survey work required;
- The likely significant effects required to be assessed; and
- Assessment methodology and scope.

2.3.2. The report poses a series of questions to assist discussions.

3. Proposed Amendments

3.1. Benefits of the Proposed Life Extension

3.1.1. The Applicant is seeking to extend the operational life of Ffynnon Oer Wind Farm by 10 years, to enable operations to continue until 31st July 2036.

3.1.2. It is the Applicant's view that by following already established working practices, Ffynnon Oer Wind Farm can continue to operate over the extended period and in doing so, continue to contribute to the delivery of renewable energy within South Wales, as well as Welsh and UK Climate Change and renewable energy targets. The Proposed Life Extension would support the Neath Port Talbot Local Energy Plan[3], as it would enable the continuation of electricity from a renewable energy source. By extending the life of the wind farm by an additional 10 years, the continued production of clean renewable energy would contribute to the targets presented in Section 6 of this Scoping Report.

3.1.3. The community benefit fund has supported a wide range of projects since 2006 including, amongst others:

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[2] https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf [Accessed 07/08/2025]

[3] *Neath Port Talbot Local Area Energy Plan (*2024). Available at: https://democracy.npt.gov.uk/documents/s98856/SB%20NPT%20LAEP%20Final.pdf [Accessed 07/08/2025]

- **Sports projects:** Astro pitch slots and pitch maintenance for Afan community fitness suite coaching and equipment support for the Afan Valley swimming club; sports kit for Croeserw Football Club; renovations of the Cymer Bowls Club house; and storage for Resolven Bowls Club;
- **Youth and family related projects:** An after-school club (Cariad Communities CIC); and the replacement of flooring at a local family centre;
- **Senior related projects:** Community transport bus for senior members of the Croeserw community;
- **Food banks and warm hubs:** Including Gilgal Community Organisation, Siop Y Ddraig Goch, Cymer Afan Community Library and Friends of Croeserw; and
- **Other community projects:** Support for local craft groups, a local Women's Institute, allotment regeneration; and the South Wales Miners Museum.

3.1.4. The community benefit fund would continue throughout the proposed extended period of operation. The community benefit fund amount paid in 2024 (including a 10% administration fee) was £1,946.54 per installed MW (totalling just over £62,000 for that year), which will continue to track inflation under the current community benefit fund agreement until July 2026, and will then be increased by 25% in the first year of the 10-year extension period, increasing annually in line with inflation. Therefore, by extending the operational life of the wind farm, there will be an increased continued local economic contribution for an additional 10 years.

3.1.5. The local economy will also benefit from the associated business rates that the Applicant will continue to pay.

3.1.6. In addition, operational and maintenance jobs and contracts at Ffynnon Oer Wind Farm will continue to contribute to the local economy for the proposed additional 10 years of operation.

3.1.7. As no new infrastructure is required for the Proposed Life Extension, there will be no additional impacts from this proposal over and above those which already exist under the current consent. This proposal continues to make good use of existing infrastructure, has operated over the last 19 years in line with its current consent, and remains aligned with relevant local and national policy, especially the enhanced support for meeting national climate change and renewable energy targets.

3.1.8. Decommissioning of Ffynnon Oer Wind Farm will be addressed at the end of its 30 year operational life in a Decommissioning Method Statement, which will meet the relevant planning conditions (6 and 16, as presented in Appendix A1).

4. Type of Application

4.1. Section 73 Criteria

4.1.1. Ffynnon Oer Wind Farm became fully operational on 31st July 2006, therefore the existing consent will expire on the 31st July 2026 (as per Condition 6 of the current consent).

4.1.2. In order to maximise the operational life of the wind turbines, the Applicant is seeking to extend the period of consent to 31st July 2036. As per pre-application discussions, it is proposed to deal with the changes under a Section 73 application of the Town and Country Planning (Wales) Act 1990 (as amended) to NPTCBC. It is proposed that planning condition 6 of the current consent is reworded as follows:

'*30 years after the date of commencement of electricity generation or at such time as electricity generation is substantially discontinued, whichever is the earlier, the site shall be restored in accordance with a scheme to be first submitted for the approval of the local planning authority.'*

4.1.3. The description for the Section 73 application would be as follows:

'Variation of condition 6 of the consent relating to planning application P2002/*1322 to allow the development to operate for an additional 10 years until 31st July 2036*'.

4.1.4. Under The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (the EIA Regulations), extension to the life of a project may also be subject to an EIA. For the avoidance of doubt, an addendum to the original ES is proposed, the scope of which is discussed in this Scoping Report.

4.2. Question to NPTCBC

Question 4.1: Please confirm that the Proposed Life Extension can be dealt with through means of a Section 73 application?

5. EIA Addendum Topics

5.1. Overview

5.1.1. The purpose of an EIA is to assess the likely significant effects of a proposal. The purpose of scoping is therefore to agree the likely significant effects that will be assessed and ensure that the topics that are not likely to give rise to any significant effects are removed from (i.e. 'scoped out' of) the assessment in order to provide a proportionate assessment, as per the EIA regulations.

5.1.2. Natural Power and their specialist consultants believe that the scope of the ES Addendum should be limited to ecological (bats) and ornithological impacts. Assessments that Natural Power and their specialist consultants view should be scoped out include:

- Cultural Heritage;
- Landscape and Visual;
- Socio-economic and Community issues;
- Public Access;
- Traffic and Transportation;
- Noise;
- Hydrology, Hydrogeology and Geology; and
- Existing Infrastructure, Telecommunications, Television, Aviation and Safety.

5.1.3. Further detail on Natural Power and their specialist consultants' views on the scoping in or out of topics for assessment are presented under individual topic headings later in this Scoping Report.

5.2. Baseline

5.2.1. To reiterate, this is a proposal to extend the operational life of the existing wind farm via a section 73 application for the '*development of land without complying with conditions subject to which a previous planning permission was granted*' (i.e. a variation of condition).

5.2.2. Schedule 4 of the EIA Regulations states that the ES should include.

'*A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.*'

5.2.3. In the absence of Welsh guidance on this matter, guidance from Scottish Environment Protection Agency (SEPA) recommends that the baseline for assessments should be the '*current state of the environment'* as set out in the EIA regulations.

5.2.4. Based on this advice and precedent from other life extension applications, it is proposed that the baseline for the assessment will therefore be the current state of the environment i.e. including the operational Ffynnon Oer Wind Farm. This approach has been presented to and agreed during a meeting with NPTCBC on 2nd April 2025. The ES Addendum will therefore describe the state of the environment in the context of the existing operational wind farm and will present newly collected survey data to assess the significance of effect for the Proposed Life Extension.

5.3. Cumulative Scenario

5.3.1. Ffynnon Oer Wind Farm is located to the south-west and east of the operational Pen y Cymoedd Wind Farm (with their closest turbines approximately 500 m apart), and to the north-east of the recently consented Mynydd Fforch Dwm Wind Farm (closest turbines

approximately 1 km apart). These, and other major developments (such as other large scale energy generation sites) and wind farms further afield, have considered Ffynnon Oer Wind Farm as part of their cumulative baseline assessments if deemed applicable. As a result, Natural Power does not consider any further cumulative assessment is required.

5.4. Questions to Consultees

Question 5.1: Please confirm that all assessments should be based on the current baseline, being the operational Ffynnon Oer Wind Farm and that no further cumulative assessment is required?

6. Legislation and Policy Context

6.1.1. The Proposed Life Extension relates to the generation of electricity from renewable energy sources. The clear objectives of the UK and Welsh Government in relation to renewable energy technologies, consistent with sustainable development policy principles and national and international obligations on climate change, will be summarised in the ES Addendum.

6.1.2. In recent years, UK and Welsh Government policies have focussed increasingly on concerns about climate change.

6.1.3. Each tier of Government has developed policies and actions to achieve targets to deal with the climate emergency and generate more renewable energy and electricity.

6.1.4. The UK Government retains responsibility for the overall direction of energy policy, although some elements are devolved to the Welsh Government. The UK and Welsh Governments have published a series of policy documents setting out how targets can be achieved:

6.2. Future Wales: The National Plan 2040

6.2.1. Future Wales[4], published 24th February 2021, is a 20-year national development plan produced by the Welsh Government that covers the whole of Wales and the period up to 2040. It includes Policies 17 and 18 which highlight the importance of renewable energy. The purpose of Future Wales is to ensure the planning system at all levels is consistent with, and supports the delivery of, Welsh Government strategic aims and policies (including those in Planning Policy Wales (PPW), the Wales Infrastructure Investment Plan and Regional Economic Frameworks). It was prepared with regard to various Welsh Government policies and legislation, including:

- Well-being of Future Generations (Wales) Act 2015;
- Environment (Wales) Act 2016;
- Natural Resources Policy (2017); and
- Prosperity for All: A Low Carbon Wales (March 2019).

[4] *Future Wales – The National Plan 2040* (2021). Available at: https://gov.wales/future-wales-national-plan-2040 [Accessed 06/08/2025]

6.2.2. One of the key aims of the policies in Future Wales is to facilitate the decarbonisation of the economy and promote the principles of a circular economy. Future Wales provides the spatial direction for development in Wales and the policy framework for Strategic Development Plans and Local Development Plans (LDP) at the regional and local level. These plans are required to conform to Future Wales and planning decisions at every level must be taken in accordance with Future Wales. At the time of writing, national and local development plans are in existence (albeit with most LDPs requiring updating to reflect Future Wales), with strategic (regional) development plans yet to be published.

6.3. PPW 12th Edition, Welsh Government (February 2024)[5]

6.3.1. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015[6], the Well-being of Future Generations (Wales) Act 2015[7] and other key legislation. PPW is a material consideration in the decision-making process for planning applications.

6.3.2. Paragraph 3.30 of PPW sets out that the Welsh Government declared a climate emergency in 2019, in order to coordinate action nationally and locally to help combat the threats of climate change. It further sets out that the planning system plays a key role in tackling the climate emergency through the decarbonisation of the energy system and the sustainable management of natural resources.

6.3.3. Paragraph 3.33 of PPW explains that the planning system plays a significant role in managing the significant risk of climate change to people, property, infrastructure and natural resources.

6.3.4. PPW states in Paragraph 5.7.1 that '*Low carbon electricity must become the main source of energy in Wale*s'. It also states that overall power demand is expected to increase as a result of increased electrification of transport and heat, demonstrating the need for developments such as this Proposed Life Extension. Paragraph 5.7.3 states that '…*the planning system should facilitate…Welsh, UK and European targets on renewable energy'*. Paragraph 5.7.7 states that '*The benefits of renewable and low carbon energy, as part of the overall commitment to tackle the climate emergency and increase energy security, is of paramount importance. The continued extraction of fossil fuels will hinder progress towards achieving overall commitments to tackling climate change. The planning system should…maximise renewable and low carbon energy generation'*.

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[5] *Planning Policy Wales , Edition 12* (2024). Available at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf [Accessed 07/08/2025]

[6] *Planning (Wales) Act 2015*. Available at: https://www.legislation.gov.uk/anaw/2015/4/contents/enacted [Accessed 07/08/2025]

[7] *Well-being of Future Generations Act 2015*. Available at: https://www.futuregenerations.wales/about-us/future-generations-act/ [Accessed 07/08/2025]

6.3.5. Most of the south-western section of Ffynnon Oer Wind Farm borders the Welsh Government's Pre-Assessed Area (PAA) 9, with approximately 7.5 ha of the site boundary falling within PAA 9. PPW 12 refers to a presumption in favour of large-scale wind energy development, specifying that this includes the repowering of existing wind farms within PAAs.

6.4. Well-being of Future Generations Act[7]

6.4.1. The Well-being of Future Generations (Wales) Act 2015 creates a legal obligation on public bodies to improve, amongst other things, the environmental well-being of Wales. It also compels public bodies to set objectives that contribute to achieving seven well-being goals. These include the following three objectives which are relevant to the Proposed Life Extension:

6.4.2. A prosperous Wales, described as '*An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work*.'

6.4.3. A resilient Wales, described as '*A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change)*.'

6.4.4. A globally responsible Wales, described as '*A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being*.'

6.5. Wales' Climate Change Regulations

6.5.1. The Environment (Wales) Act 2016[8] placed new duties on the Welsh Government to ensure Greenhouse Gas (GHG) emission reductions, and introduced a carbon budgeting method to measure progress in reducing these emissions. The Act sets out a target to reach Net Zero GHG emissions by 2050, with any residual emissions balanced by removing carbon dioxide from the atmosphere. Decadal targets for 2030 and 2040 were created, with five-yearly caps on emissions in Wales, known as carbon budgets (starting in 2016). The Climate Change Committee recently recommended new reduction levels for the fourth carbon budget of a 73% reduction in average annual emissions compared to the 1990 baseline, over the five year period from 2031 to 2035[9].

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[8] *Environment (Wales) Act 2016*. Available at: https://www.legislation.gov.uk/anaw/2016/3/contents [Accessed 07/08/2025]

[9] *Wales' Fourth Carbon Budget*. Available at: https://www.theccc.org.uk/publication/wales-fourth-carbon-budget/ [Accessed 06/08/2025]

6.6. Local Policy

6.6.1. The NPTCBC Single Integrated Plan (SIP): Working in Partnership (2013-2023)[10] set out the council's vision for the NPTCBC area and steps to achieve that vision. Outcome 3: '*Neath Port Talbot's communities and environment are sustainable*' referred to the importance of the environment to NPTCBCs communities, and also highlighted the carbon legacy of its industrial past. The SIP stated that '*There is a need to reduce our carbon footprint as far as possible by changing our lifestyles while at the same time ensuring that we enhance our natural environment and protect it for future generations.*' It also made reference to '*Chang[ing] systems and processes and rais[ing] awareness so that the County Borough's carbon footprint is significantly reduced…and the growth of more sustainable renewable energy technologies is stimulated leading to a low carbon way of living.*'

6.6.2. NPTCBC's Environment Strategy (2008 – 2026)[11] has the following objectives that are supported by the Proposed Life Extension:

- Adapt to climate change;
- Minimise pollution;
- Increase energy and resource efficiency; and
- Develop in a sustainable way to create a long-term benefit for the people of our county.

6.6.3. NPTCBCs Decarbonisation and Renewable Energy Strategy[12], was published in May 2020 both as a response to the Welsh Government declaration of a climate emergency and also to provide leadership in reducing carbon emissions within its jurisdiction. The vision laid out in the document is '*To introduce a series of interventions and improvement measures across the County Borough to maximise the economic, social and environmental benefits and opportunities that the decarbonisation agenda provides.*' The document mainly relates to actions relating to the council's own activities but demonstrates clearly the alignment between the Proposed Life Extension and NPTCBC's own priorities.

6.6.4. In 2024, NPTCBC released its Local Area Energy Plan[13], which presents the vision for NPT's future energy as a net zero system through a roadmap of actions that span building, transport, generation and networks, and industry.

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[10] *Neath Port Talbot Single Integrated Plan (SIP): Working in Partnership (2013-2023)*. Available at: https://www.wgsb.wales/media/6872/sip1_2013_2023.pdf?v=20190920114146 [Accessed 06/08/2025]

[11] *Neath Port Talbot Environment Strategy 2008 – 2026* (2008). Available at: https://media.npt.gov.uk/media/rmjl5tiq/environment-strategy.pdf?v=20240916161924 [Accessed 07/08/2025]

[12] *Decarbonisation and Renewable Energy Strategy* (2020). Available at: https://media.npt.gov.uk/media/ushdtddq/dare-the-neath-port-talbot-decarbonisation-and-renewable-energy-strategy.pdf?v=20240724153038 [Accessed 07/08/2025]

[13] *Neath Port Talbot Local Area Energy Plan 2024.* Available at: https://democracy.npt.gov.uk/documents/s98856/SB%20NPT%20LAEP%20Final.pdf [Accessed 07/08/2025]

6.6.5. NPTCBC formally adopted their Local Development Plan (LDP)[14] on 27 January 2016. This document is designed to guide when, where and how much future development will take place in the NPTCBC area in the period to 2026. The Annual Monitoring Review of the LDP was undertaken in 2020, which concluded that a Replacement LDP (RLDP)[15] will need to be prepared covering a 15 year plan period (2025 – 2035), with a base date of 1 April 2020. NPTCBC sought views on the RLDP draft Delivery Agreement for a 6 week period ending in September 2021. The Delivery Agreement[16] was subsequently approved by Welsh Government on the 26th October 2023 and allows NPTCBC to formally commence preparation of the RLDP. The Delivery Agreement sets out a 3.5 year process to an anticipated adoption of an RLDP in April 2027, with a plan end date of 2038.

6.6.6. The key extant policies of the current LDP relating to the Proposed Life Extension are outlined in the following paragraphs.

6.6.7. Paragraph 1.1.16 of the LDP recognises the significant potential for exploitation of wind resource in NPTCBC area.

6.6.8. Key Issue (KI) 1 in the LDP (p.16) is that '*The causes and consequences of climate change will need to be addressed, including the increased risk of flooding*'. KI11 says that '*There is a need to balance the impact of development on the countryside, landscape and coast, in particular the exploitation of mineral and renewable energy resources.*'

6.6.9. The following objectives in the LDP are of relevance to the Proposed Life Extension:

- Overarching Objective 1 (p.19) '*Minimise the causes and consequences of climate change through reduced greenhouse gas emissions and adapt to climate change through consideration of its effects in the design and location of new development.*'; and
- Area Based Objective *19 'To make a proportionate contribution towards the energy needs of Wales with a focus on renewable energy*'.

6.6.10. The following Strategic Policies in the LDP are of relevance to the Proposed Life Extension:

- SP1 - Climate Change: '*Provision will be made for the County Borough's appropriate contribution to renewable and low carbon energy generation.*' The LDP recognises that climate change is likely to affect the environment and future development of NPTCBC area, that it is necessary to reduce GHG emissions as far as reasonably possible to minimise the causes of climate change, and that these issues are of such fundamental importance that climate change is seen as an overarching matter to be addressed by all topic areas;

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[14] *Neath Port Talbot Local Development Plan 2024* https://api.npt.gov.uk/asset?url=https%3A%2F%2Fmedia.npt.gov.uk%2Fmedia%2Fca2fbumd%2Fldp_written_statement_jan16.pdf%3Fv%3D20240823155047 [Accessed 07/08/2025]

[15] *Replacement Local Development Plan (RLDP) 2023-2038*. Available at: https://www.npt.gov.uk/planning-and-building-control/planning-policy/replacement-local-development-plan-rldp-2023-2038/ [Accessed 07/08/2025]

[16] *Replacement Local Development Plan (RLDP) Delivery Agreement.* Available at: https://www.npt.gov.uk/planning-and-building-control/planning-policy/replacement-local-development-plan-rldp-2023-2038/delivery-agreement/ [Accessed 07/08/2025]

- SP2 - Health: Points out that policies seek to ensure developments do not increase the number of people exposed to significant levels of pollution;
- SP16 - Environmental Protection: '*Air, water and ground quality and the environment generally will be protected and where feasible improved through the following measures: 1. Ensuring that proposals have no significant adverse effects on water, ground or air quality and do not significantly increase pollution levels; and 3 Ensuring that developments do not increase the number of people exposed to significant levels of pollution.*';
- SP18 - Renewable and Low Carbon Energy: '*A proportionate contribution to meeting national renewable energy targets and energy efficiency targets will be made while balancing the impact of development on the environment and communities. This will be achieved by: 1. Encouraging where appropriate, all forms of renewable energy and low carbon technology development;*';
- RE1 - Criteria for the Assessment of Renewable and Low Carbon Energy Development: '*Proposals for renewable and low carbon energy development will only be permitted subject to the following criteria: 1. Large scale wind farm developments (>25 MW) will be expected to be located within the boundaries of the refined Strategic Search Areas. 2. Proposals for wind farms of any size outside the SSAs will only be permitted where it is demonstrated that there will be no unacceptable impact on visual amenity or landscape character through the number, scale, size, design and siting of turbines and associated infrastructure… 4. All renewable energy or low carbon energy development proposals will be required to demonstrate that: (a) Measures have been taken to minimise impacts on visual amenity and the natural environment; (b) There will be no unacceptable impacts on residential amenity; (c) The development will not compromise highway safety; (d) The development would not interfere with radar, air traffic control systems, telecommunications links, television reception, radio communication and emergency services communications; and (e) There are satisfactory proposals in place for site restoration as appropriate.*' To note, this policy pre-dates, and does not align with, Future Wales; and
- SP21 - Built Environment and Historic Heritage: '*The built environment and historic heritage will, where appropriate, be conserved and enhanced through the following measures: Safeguarding features of historic and cultural importance*.'

6.6.11. The LDP has not been updated since adoption of Future Wales and therefore does not reflect the extant national policy situation, including reference to PAAs and how onshore wind should be assessed in relation to them.

6.1. Questions to Consultees

Question 6.1: Please confirm that the ES Addendum should include a summary of current policy and legislation?

7. Cultural Heritage

7.1. Overview

7.1.1. This section of the Scoping Report presents the consideration of the potential impacts and effects of the Proposed Life Extension upon the value and importance of historic assets and has been prepared by Pegasus Group (Pegasus). It is important to take into consideration that the application under consideration for this scoping is a life extension for an existing, operational wind farm at Ffynnon Oer which has been in-situ and within this landscape for nearly 20 years.

7.1.2. The original ES for the Ffynnon Oer Wind Farm (Appendix A2 of this Scoping Report), prepared in 2002, considered cultural heritage. The scheme was granted permission and therefore the proposed wind farm was considered to be acceptable with regards to potential impacts on historic assets at that time.

7.1.3. As stated, it is the case that this application seeks a life extension to the existing Ffynnon Oer Wind Farm – the turbines will simply continue to be within this landscape but the date of decommissioning will be extended. As such, for those historic assets which were designated at the time of the original permission in 2002, the effects from the turbines have already been assessed and found to be acceptable. The continued operation of the existing turbines for an additional 10 years would not have any additional effect over and above what has already been assessed.

7.1.4. A review of designated historic assets in the vicinity of the site boundary has been undertaken as part of this scoping exercise, to identify assets designated after the original wind farm was assessed and consented. This has identified a number of historic assets designated after the wind farm application was submitted in 2002. It is the case that these assets have been designated with the Ffynnon Oer Wind Farm in situ and as such, the turbines clearly do not cause such a reduction in significance or value that would render them lacking in the key features of that particular asset class – for example the special architectural or historic interest of a listed building or the national archaeological interest of a scheduled monument.

7.1.5. However, it is acknowledged that with regards to listed buildings designated after 2002, the provisions of S314A(1b) of the Town and Country Planning Act 1990[17] (via the Historic Wales Act 2023) set out a statutory duty for decision-makers to have a special regard to the desirability of preserving the setting of a listed building. It is also acknowledged that these newly designated assets will not have been assessed with regards specifically to the Ffynnon Oer Wind Farm and its possible impacts, and whether any such effects would be significant, in the professional opinion of Pegasus. As such, in order to prepare a robust assessment, these heritage assets within an appropriate study area (defined below) and within the Zone of Theoretical Visibility (ZTV), designated since 2002, have been assessed at this stage in order to provide a full understanding of the heritage position.

[17] https://www.legislation.gov.uk/ukpga/1990/8/section/314A [Accessed 07/08/2025]

7.1.6. It is Pegasus' position that this approach is proportionate to the level of impact arising from a development which is already in situ and which will, in reality, result in no change whatsoever from the baseline position that exists today.

7.1.7. Matters relating to below-ground archaeology are not considered to be relevant to this application as there will be no physical changes to the wind farm and no new land take for the Proposed Life Extension, and matters of archaeology were considered within the original application and were found to be acceptable. Below-ground archaeology is therefore scoped out of any further assessment.

7.1.8. As set out in the remainder of this section, having undertaken this scoping exercise, it is not considered that there are any designated assets (designated since 2002) that would have the potential to give rise to significant effects.

7.2. Baseline

7.2.1. To undertake a review of the designated historic assets, a study area of 10 km was utilised from the site boundary. This was considered an appropriate study area given the relatively low turbine tip height of 93 m and taking into account the number of other wind farms which have been constructed within the immediate and wider surrounds of Ffynnon Oer since its construction.

7.2.2. No Conservation Areas are located within the 10 km study area which were designated post-2002. There are no Historic Battlefields or World Heritage Sites within the 10 km study area.

7.2.3. Information was sourced from Cadw and interrogated to identify those designated post-2002. This identified that since 2002, the following assets have been designated:

- Seven Scheduled Monuments;
- One Grade II* Registered Historic Park and Garden (RHPG);
- Three Grade II RHPGs; and
- 48 Grade II Listed Buildings.

7.2.4. Non-designated built heritage assets are scoped out as there are none in proximity which would be affected by the Proposed Life Extension.

7.2.5. A ZTV based on the existing turbines was produced to support this scoping exercise. Figure 7.1: Blade Tip ZTV with Heritage Assets Designated post-2002, which accompanies this Scoping Report, shows historic assets designated after 2002 to help identify which assets have potential visibility of Ffynnon Oer Wind Farm.

7.2.6. It is recognised that matters of setting are not solely confined to visual aspects, however with wind turbine developments it is primarily the interruption, blocking or distraction in key views from, to and through assets which are the cause of impacts to significance.

7.2.7. Once the ZTV and assets were overlain, this enabled filtering of the number of post-2002 assets that required further consideration, which were reduced to:

- Two Scheduled Monuments:
  - GM277 Cairn Caglau; and
  - GM581 Cefn Mawr (within the site boundary);
- One Grade II RHPG:
  - Rheola; and
  - Eight Grade II Listed Buildings (see Table 7.1 for list).

7.3. Assessment of Identified Assets designated post-2002

7.3.1. Following the filtering exercise described above, these assets were critically reviewed to establish which had the potential to have their setting impacted by the continued operation of Ffynnon Oer Wind Farm for an additional 10 years.

7.3.2. All assets were initially assessed via desk-based assessment utilising Cadw data, online resources including historic mapping, aerial photographs and research websites. Alongside this, professional judgement was applied, to initially assess whether each asset had a setting likely to be impacted by the life extension of the Ffynnon Oer Wind Farm.

7.3.3. The eight Grade II listed buildings designated after 2002 within the ZTV were considered within the initial assessment and the justification whether the assets required further assessment is discussed in Table 7.1.

Table 7.1: Listed Buildings within 10 km within ZTV designated post-2002

Ref	Name	Requiring further Assessment? Y/N	Justification for previous column
82086	Goose rearing shelters and mounting block at Tan-y-rhiw	N	Farming structure amid wider farmstead – setting is formed by this wider farmstead. Views to and from this asset do not form part of the setting that contributes to the significance. As such, views of turbines would not result in any adverse impact.
82269	Bridge over Neath Canal at Farmer's Arms Lock	N	Setting is associated route carrying the routeway over the canal and the canal itself. The only views that contribute to the significance are those close-range views which illustrate the

			architectural interest. Long distance views across the surrounding landscape make no contribution. Therefore, views of turbines from this asset would not cause any adverse impact to the significance.
82272	Milestone NE of Abergarwed on B4242	N	Setting is associated route and the specific location of that stone in that location – that is its primary function. The only views that contribute are the close-range views which allow a traveller to read what is on the stone. Long-distance views across the wider landscape make no contribution to the significance of the asset and therefore a view of the turbine would not cause any adverse impact.
82451	Crugau	N	Farmstead – setting is formed by its immediate farmyard surrounds and immediate surrounding agricultural land associated with that farmstead. Views to and from this asset do not contribute to the significance. This asset is located in a valley distant from the scheme within land which has no association with the farmstead. The turbines would not cause an adverse impact upon the significance of this asset.
82452	Barn at Crugau	N	The asset is a farming structure, located amongst a wider farmstead. It is this farmstead which forms the setting of this asset which makes the biggest

			contribution to the significance. Views to and from this asset do not contribute. Views of turbines would not cause any adverse impact to the significance of this asset.
87633	Icehouse at Rheola House	N	This asset is part of a designed landscape and the setting is formed by the wider designed and formal parklands and garden. The significance of the asset is enhanced by the location within the RHPG. This will not be affected by the scheme. Views of turbines would not cause any adverse impact upon the significance of this asset.
87862	Milestone on B4242, 100 m east of Rock & Fountain PH	N	Setting is associated route and the specific location of that stone in that location – that is its primary function. The only views that contribute are the close-range views which allow a traveller to read what is on the stone. Long-distance views across the wider landscape make no contribution to the significance of the asset and therefore a view of the turbine would not cause any adverse impact.
87889	Catholic Church of Our Lady and St Patrick	N	Asset is located within a discrete, urban setting. The wider, surrounding landscape makes no contribution to the significance of this asset. Views from this asset make no particular contribution to the significance and therefore glimpsed views of the turbines

	would not cause any adverse impact to the significance of this asset.

7.3.4. Consideration of the results of the desk-based assessment indicated that none of these listed buildings had a setting which would be affected by the Proposed Life Extension. As such, none were taken forward for further assessment.

7.3.5. It is the case that all Registered Historic Parks and Gardens (RHPG) in Wales were designated post-2002 as the designation was not formalised until 2022. Therefore, all RHPGs within the 10 km study area were considered. Four RHPGs were located within this 10 km study area, however when the ZTV was applied, only one (the Grade II RHPG Rheola) lay within and even then, only a small portion of its overall area had potential visibility of the operational turbines. However, given the lack of assessment of this asset in the original application, it was considered as potentially sensitive and therefore taken forward for further assessment.

7.3.6. Given the location of the two scheduled monuments, one being within the site boundary, 65 m south-west of Turbine 5, and the other being in close proximity to the north-east of the site boundary, these were both taken forward for further assessment including a site visit.

7.3.7. Therefore, following the initial desk-based review, three historic assets were identified for a site visit.

Site Visit

7.3.8. To provide a robust baseline of evidence to support this Scoping Report, a site visit was undertaken to visit the three identified historic assets, to visually assess their setting. This process was assisted by the existing presence of Ffynnon Oer Wind Farm in the landscape. This provides the best indication of the potential impacts of the continued life extension of the wind farm upon the importance of these historic assets.

7.3.9. The site visit was undertaken on 19th June 2025. The weather was clear and sunny and visibility was excellent.

7.3.10. Following the site visit, the three assets were assessed to understand whether the life extension could be likely to cause significant effects. This is, after all, the purpose of a Scoping Report – to scope receptors and disciplines into or out of the full assessment required as part of an EIA. It is important to note that if a topic is scoped out of an EIA, this does not mean there would be no adverse impacts but rather that the impacts would not reach a 'significant' level for EIA purposes.

7.3.11. These three assets are shown on a Figure 7.2: Assets Considered within Scoping, accompanying this Scoping Report.

Cefn Mawr cairn – Scheduled Monument – GM581

7.3.12. Cefn Mawr is a scheduled monument, designated on 7th September 2004, following the consent of the Ffynnon Oer Wind Farm. It comprises the earthwork remains of a Bronze Age cairn within open moorland, on the west-facing terrace of Cefn Mawr. It is 14.5 m in diameter and 2 m high, with a robbed out centre. The Cadw record describes its importance as being formed by the potential to enhance knowledge about Bronze Age burial rituals. The asset is an important relic of a prehistoric funerary landscape with archaeological potential to reveal information about the burial deposits themselves as well as evidence of the design and construction of the cairn.

7.3.13. Cefn Mawr cairn lies 65 m south-west of T5 (Plate 1). It is quite a prominent earthwork, with an easily legible barrow mound. It shows up well on aerial photographs and 1 m LiDAR Digital Surface Model (DSM).

7.3.14. The cairn is sited on the end of the watershed between the Vale of Neath and Cwm Afan watercourse systems. The location is not dramatic in terms of its topography. There is no long drop down to the valley floor from the edge of the high ground but rather a gentler slope onto the shallow saddle between Cefn Mawr and Mynydd Nant-y-bar to the south-west[18]. About 650 m south-east of the cairn, the ground level drops sharply down from the plateau around the heads of Nant Troed-y-rhiw and Nant Cregan, tributaries of the Afan. The valley associated with these streams is collectively referred to as 'Cwm Cregan'. There are three non-designated cairns south of Cefn Mawr cairn, close to the base of the saddle and the head of Nant Troed-y-rhiw, all are within the site boundary. The locations of these cairns cannot be seen from Cefn Mawr cairn, being obscured by the end of saddles of land and associated drop in topographic levels.

7.3.15. There is an arc of view from the scheduled cairn in most directions with only those to the north-west being obscured to an extent by the rising topography of the watershed (i.e. it is a gentle rise in ground level rather than something more immediate, rising up and obscuring all views). The sea is visible over intervening high ground to the south and to the south-east. The Black Mountain/Fforest Fawr ridge[19] forms the skyline in views along the west to north arc. The landscape seen in these views is multi-period with large blocks of commercial forestry as the most common element, followed by upland grazing.

7.3.16. There are other operational turbines, part of other wind farms visible in all directions from Cefn Mawr cairn, most at close range. Whilst the majority of the Ffynnon Oer Wind Farm turbines lie 'behind' the cairn (i.e. further up the slope to the east), T10 and T16 lie between the cairn and Cwm Cregan valley. From the cairn, T10 and T16 lie 'either side' of the valley so do not appear on any line of sight from the cairn down the valley (Plate 2). The turbines within view, looking from the cairn over the saddle toward the high ground to the south-west, belong to the Pen y Cymoedd Wind Farm (Plates 3 & 4).

[18] Mynydd Fforch-dwm, Myndd Canol and Mynydd Nant-y-bar

[19] i.e. western end of Bannau Brycheiniog National Park.

7.3.17. In terms of what elements of the surrounding landscape and views contribute to the significance of the asset through setting, the cairn does have a distinct view to watercourses rising out of the hillside features of cairn locations, but there is a lack of visibility between this and the non-designated barrows on the saddle which indicates that it was the watercourses themselves which form the important part of the setting, not any visual links to possible contemporary cairns. Whilst the landform immediately to the south west is not distinctive, there are clear sea views in this direction. Despite the presence of turbines in proximity to the cairn, much of this setting which contributes to significance remains very legible: the sea view south does not contain a turbine; the Black Mountain/Fforest Fawr ridge is largely clear with some blades rising over the horizon from the Pen y Cymoedd Wind Farm and two Ffynnon Oer Wind Farm turbines breaking through it at the northernmost visible end (T1 and T3 – though T1 does punch through the summit of one of the hills); Ffynnon Oer Wind Farm T10 and T16 do not lie in direct line of sight down Cwm Cregan valley.

7.3.18. In conclusion, whilst on plan, the location of T5 and the scheduled cairn is very close, it is, along with all the other turbines, effectively 'behind' the cairn, with the principal focus of the cairn being the valley located to the east, north and south which the cairn overlooks from its edge of slope position.

7.3.19. It is also the case that this cairn was scheduled once the turbines were operational in the landscape. A further 10 years of operation given the age of this asset will not be a cause of a level of impact which could be considered to be significant. It is considered there would be some ongoing adverse impact to significance through a change in the setting which contributes to significance arising from the Proposed Life Extension (but no more than the current impact experienced), however this is not to a level which requires it to be scoped into an EIA.



Plate 1: Carn Mawr cairn, looking south-west from approach to the cairn from T5 – turbines visible are not part of the Ffynnon Oer Scheme (taken from adjacent to T5 – 284104, 198646) – the turbines are of the Pen-y-Cymoedd Wind Farm.



Plate 2: From Carn Mawr cairn, looking south-south-east over Cwm Cregan. T16 centre-ground left, T10 centre-ground right (easting 284061, northing 198595)



Plate 3: From Carn Mawr cairn, looking south-south-west towards Pen y Cymoedd Wind Farm (easting 284061, northing 198595)



Plate 4: From Carn Mawr cairn, looking south-west towards Pen y Cymoedd Wind Farm

Carn Caglau Cairn – Scheduled Monument GM577

7.3.20. This scheduled Bronze Age cairn was designated 7th January 2004, after Ffynnon Oer was consented.

7.3.21. The monument comprises the earthwork remains of a cairn measuring 10 m in diameter and 0.9 m high. The designation description states its importance as a prehistoric monument with the ability to contribute to understanding of prehistoric burial and ritual. It is a relic and is evidence of a prehistoric funerary landscape and can provide evidence of the material culture of the society at this time, as well as offering comparisons with possible contemporary assets in terms of styles of construction and preferred materials.

7.3.22. The asset lies immediately south-east of the bridleway which coincides with the access track to Ffynnon Oer Wind Farm. It lies on a watershed between the head of the Melin Court Brook (to west) and a small stream running the north-west to Cwm Fforch. It is these relationships which are considered to make the biggest contribution to the setting of this asset.

7.3.23. Ffynnon Oer Wind Farm is to the south-west of the cairn. The cairn is approximately 70 m east of the forestry plantation and the cairn is not visible from outside of the plantation (see Plate 5**Error! Reference source not found.**, photograph taken from the closest point on the bridleway to the cairn).

7.3.24. If there were views from this asset, they would contain turbines in views toward the Melin Court Brook watercourse system. The turbines would occupy the minor watershed between the two streams which form the upper reaches of the system.

7.3.25. Following the site visit and assessment, it is considered that at present the setting is making no contribution whatsoever to the significance of this asset. There is no ability to experience the asset from any surrounding area – let alone anywhere to experience the significance of the asset.

7.3.26. There is no evidence before the author at the time of writing that the forestry surrounding this asset is due to be felled within the proposed extension period of 10 years. As such, this asset is not considered to be sensitive at all to the Proposed Life Extension and would not experience any impacts and is therefore scoped out of further assessment.



Plate 5: Carn Caglau cairn, looking south-east from bridleway

Rheola Registered Historic Park and Garden (RHPG)

7.3.27. Rheola RHPG lies 4.3 km north of the Ffynnon Oer Wind Farm site boundary. It was designated on 1st February 2022 when this designation was established.

7.3.28. Three listed buildings lie at the core of the RHPG, Rheola House (Grade II*), and ancillary buildings (icehouse and stables, both Grade II). The entrance gates and lodge at the B4242 are not listed (Plate 6a and 6b). Aside from the buildings and driveways the main feature of

the RHPG is Rheola Pond, a small lake at the eastern edge of the park. The pond lies outside the ZTV. The core of the RHPG is in the ZTV whilst the southern section, adjacent to the B4242, is not. The main house is a John Nash remodelling of an earlier farmhouse, undertaken in the 1810s, and the RHPG is a small informal parkland laid out to complement the house, probably also with Nash's involvement and that of George Repton, in the 1820s. There are no public rights of way through the RHPG and so this asset was assessed from its gates.

7.3.29. The main frontages of Rheola House face south-east and north-east over the parkland, i.e. not in the direction of Ffynnon Oer Wind Farm. Driveways or designed routes through the parkland do not align with Ffynnon Oer Wind Farm, that is there are no designed avenues, vistas or long-distance views orientated towards the higher ground of the site boundary. The surroundings of the estate are largely rural and likely to contribute to the significance of the asset by placing it in a landscape similar to that it was designed to operate in (i.e. as a picturesque and slightly secluded version of the neighbouring countryside).

7.3.30. However, the site visit identified a key factor in the surroundings of this asset. The southern tip of the RHPG boundary is a substantial conifer shelter belt. This was planted to screen an aluminium works next door, operational between 1939 and 1981. The works was partially demolished by 2006 but large works buildings were still extant in 2011, with these demolished and cleared by 2013. There remain some remnants of the works, which were noted during the site visit: works gates and a possible weighbridge building, and perimeter wall. The site visit did not note any views of the Ffynnon Oer turbines from the entrance gates. Any view from the RHPG or main house will be over the former works site, and therefore the setting of the asset in terms of views in the direction of Ffynnon Oer Wind Farm has already been heavily compromised. It is considered that views of turbines in this direction would not cause an impact – at least not one to the level of a significant effect, therefore this is also proposed to be scoped out of further assessment.



Plate 6a: Rheola RHPG entrance lodge at B4242, looking east



Plate 6b: Rheola works gates, looking south toward Ffynnon Oer Wind Farm



Plate 7 Rheola works possible weighbridge building, looking south-south-east (taken through works gates).

7.4. Proposed Heritage Impact Assessment

7.4.1. As the assessment set out above has demonstrated, it is considered that no significant effects would arise as a result of the Proposed Life Extension upon any historic asset. An adverse impact upon the setting of the scheduled Cefn Mawr cairn has been identified, however this level of adverse impact is not considered to have a demonstrable and unacceptably damaging effect upon the setting. This has been robustly demonstrated by the results of the site visit described above and the assessment of what forms the setting which contributes to the significance of this asset.

7.4.2. As set out previously, below-ground archaeology is not considered relevant to this application.

7.4.3. As no significant effects are considered to occur to any historic asset, it is proposed that Cultural Heritage is scoped out of the ES Addendum.

7.4.4. It is considered that given the scheduled Cefn Mawr cairn is in close proximity to Turbine 5, it would be appropriate to propose some form of protection to this asset during the decommissioning phase of the Wind Farm to ensure that no damage occurs to this asset

through the decommissioning activity. The works to protect the monument would be secured via condition and would form part of the Decommissioning Method Statement. It is envisaged that the details of the protection measures will be established through discussions with NPTCBC and Cadw, but are likely to include fencing of the monument, outside the scheduled boundary, to create an exclusion zone so no traffic can cross or go near the area and no material would be stored on or near the area. All workers on site should be provided with a clear map of the monument and a 'toolbox talk' which would involve physically being shown the monument within the Site boundary so all are familiar with its appearance and location.

7.5. Questions to Consultees

Question 7.1: Do you agree that matters of cultural heritage can be scoped out of the ES Addendum?

8. Landscape and Visual

8.1. Overview

8.1.1. This section of the Scoping Report presents the consideration of the potential landscape and visual impacts and effects of the Proposed Life Extension and has been prepared by Pegasus. It is acknowledged from the outset that, in common with almost all commercial-scale wind and energy developments, some landscape and visual effects would occur as a result of the Proposed Life Extension, including some significant effects. Indeed, such effects were identified in the Landscape and Visual Impact Assessment (LVIA) section set out in the original ES (Appendix A2), concerning the operational period of the Ffynnon Oer Wind Farm, however these effects as a result of the Proposed Life Extension would be no greater than what is experienced currently as a result of the operational wind farm.

8.1.2. The purpose of this EIA scoping exercise is therefore to establish whether there is the potential for any significant landscape and visual effects to arise that have not previously been reported in the original ES (Appendix A2) and were deemed to be acceptable, in order to establish whether landscape and visual matters would require further consideration in the forthcoming Proposed Life Extension application.

8.1.3. Consideration has therefore been given to whether there are any substantive changes to the landscape and visual baseline environment which might have taken place since the previous ES (Appendix A2) was prepared in 2002. This includes, with regard to the landscape features of the site boundary, landscape character, landscape designations and nearby visual receptors. Consideration has also been given to any changes to the cumulative situation in the vicinity of the site boundary. Regard has also been given to any changes in best practice guidance for LVIA which might identify new significant effects.

8.1.4. As set out in the remainder of this section, having undertaken this scoping exercise, it is not considered that there are any changes to the landscape and visual baseline environment, nor any changes to best practice guidance for LVIA, that would have the potential to give rise to additional significant effects, that have not previously been reported.

8.2. Summary of previously identified Landscape and Visual Effects

8.2.1. An LVIA was undertaken as part of the original ES (Appendix A2). This considered a 20 km study area around the site boundary. The findings of the LVIA, with regard to significant effects, were set out in Appendix C to the ES (Appendix A2). Table C4 within Appendix C set out the findings of landscape effects during the operational period, with Table C6 setting out the findings of visual effects. In each case it is these effects which would continue to apply to the extension period of operation, with the construction phase effects set out in Table C3 and C5 having already taken place and not being applicable for the purpose of the Proposed Life Extension.

8.2.2. Table C4 identified a localised significant effect on landscape character within the Upland Forest Plateau Landscape Character Area, but no other significant landscape character effects. Table C6 identified significant effects on the following visual receptors only:

Public Rights of Way

- Coed Morgannwg Way – in the vicinity of Cefn Ffordd and at the junction with the St Illtyd's Walk;
- St Illtyd's Walk – as the route passes to the north of the site[20];
- Sarn Helen – from sections closest to the site;
- Celtic Trail/ High Level Route 47 - as the route passes to the north of the site;
- Bridleway and Byway on Foel Trawsnant – from both routes; and
- Footpaths on Werfa – only when the weather allows good visibility.

Residential Communities

- Abercregan;
- Cymmer;
- Croeserw; and
- Afan Valley Holiday Park (proposed[21]).

[20] 'site' being the term that was used in the original ES to describe the site boundary of Ffynnon Oer Wind Farm.

[21] Proposed at the time the ES was being prepared.

8.3. Methodology and Approach

8.3.1. The LVIA within the original ES (Appendix A2) was undertaken in line with the Guidelines for Landscape and Visual Impact Assessment (GLVIA), which at the time of the assessment had just been updated to the second edition. Since the original assessment was prepared, GLVIA has remained the appropriate best practice guidance for wind energy LVIA and although the third edition has now been issued (in 2013[22]) with recent clarification notes in 2024[23], it is considered that the approach taken to the LVIA was sufficiently robust to enable the significant effects to be identified.

8.4. Updated Landscape and Visual Baseline

Landscape Features

8.4.1. The primary change to the landscape of the site boundary itself since the LVIA was undertaken is that the wind farm has now been constructed, such that the turbines are now present in the landscape, along with the associated access tracks. Any potential impacts to the landscape features within a site boundary of a proposed wind farm takes place during the construction period and therefore as the Proposed Life Extension does not require any new infrastructure, there is no potential for further impacts and no new significant effects would arise.

Landscape Character

8.4.2. The LVIA provided an assessment of effects on landscape character based on a series of landscape character areas, as illustrated in LVIA Figure 9.4: Landscape Character Areas, of the original ES (Appendix A2). These areas were derived as part of the LVIA process, based on the principles of LANDMAP, which at the time was still in its infancy. Since the original assessment was undertaken in 2002, LANDMAP[24] has been further developed, with updates to its methodology taking place most recently in 2024.

8.4.3. The LVIA had identified the site boundary to lie within an area known as Upland Forest Plateau. The current LANDMAP visual and sensory mapping also identifies the site boundary as being within a Wooded Upland Plateau. It is therefore considered that whilst the approach taken to the identification of landscape character areas set out in the original LVIA differs slightly from the current LANDMAP system, the consideration of landscape character in the LVIA remains robust and there would be no potential for further significant effects to be identified beyond that which was set out in the LVIA. As noted above, that

[22] Guidelines for Landscape and Visual Impact Assessment, Landscape Institute and Institute of Environmental Management & Assessment, 3rd Edition, 2013

[23] https://www.landscapeinstitute.org/wp-content/uploads/2024/08/LITGN-2024-01-GLVIA3-NC_Aug-2024.pdf [Accessed: 07/08/2025]

[24] https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline/?lang=en [Accessed: 07/08/2025]

effect was a localised significant effect on landscape character within the Upland Forest Plateau Landscape Character Area in which the turbines are located.

Landscape Designations

8.4.4. The LVIA addressed the potential for effects on designated landscapes, including the Bannau Brycheiniog National Park (BBNP) (Brecon Beacons National Park at that time), on which no significant effects were identified. It also considered a series of other landscape planning designations which were applicable at that time, which were illustrated on Figure 9.5: Landscape Planning Designations, of the original ES (Appendix A2). These included the Port Talbot Local Plan Landscape Protection Area (which was not formally adopted at the time the LVIA was prepared), various Special Landscape Areas and the Strategic Coalfield Plateau.

8.4.5. Since the LVIA was undertaken there have been no new National Parks or Areas of Outstanding Natural Beauty (now referred to as National Landscapes) designated within the 20 km study area.

8.4.6. There have however been changes to the local landscape designations, in particular with respect to the Special Landscape Areas (SLAs) identified under Policy EN2 of the adopted Neath Port Talbot Local Development Plan (2011-2026)[25]. The site boundary lies outside of the SLA, the boundary of which runs around the northern edge of the wind farm, as illustrated in the annotated extract from the Local Plan mapping in Figure 8.1.1 below.

[25] https://www.npt.gov.uk/planning-and-building-control/planning-policy/adopted-ldp-2011-2026/ [Accessed: 07/08/2025]

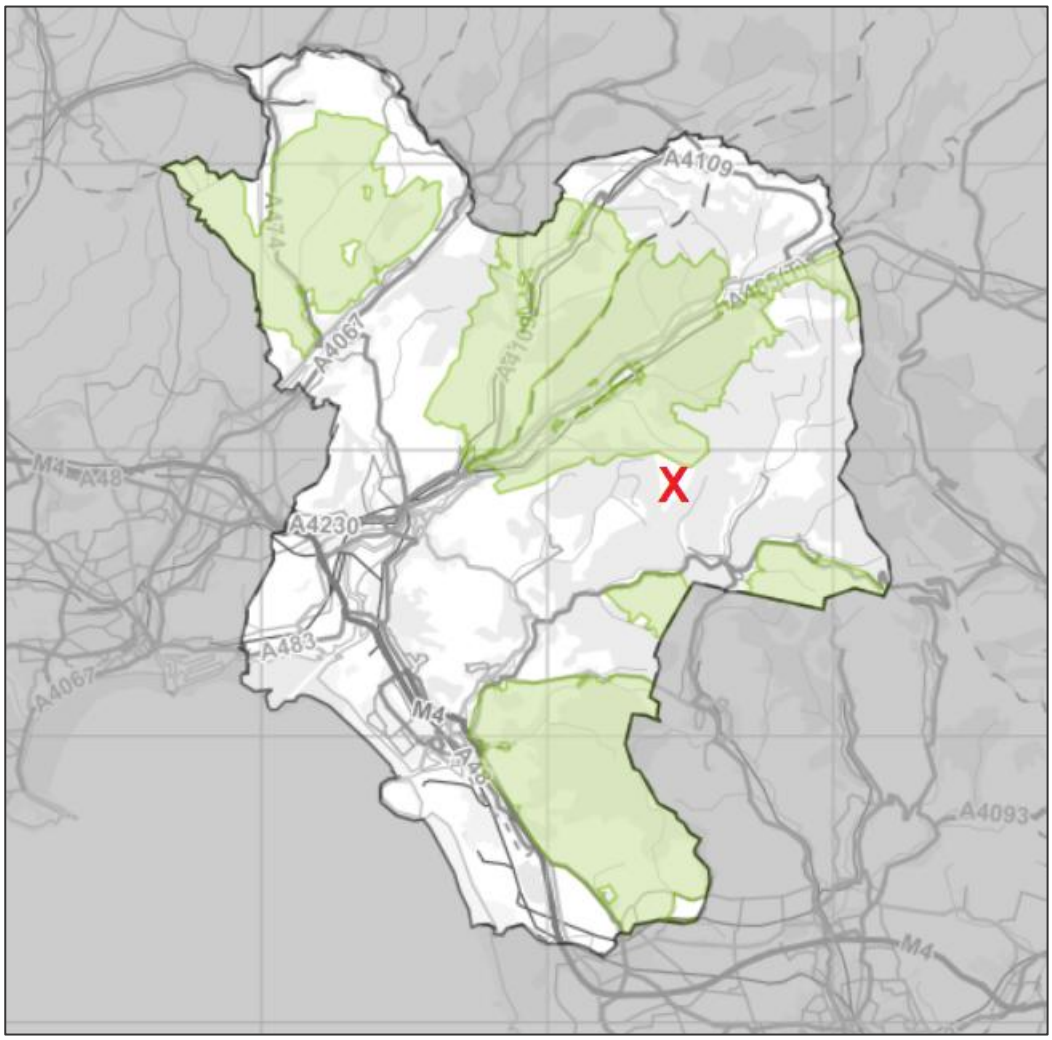


Figure 8.1.1 – Extract of Local Plan map illustrating SLAs and the approximate location of Ffynnon Oer Wind Farm indicated with a red X

8.4.7. The SLA was allocated with Ffynnon Oer wind farm in existence. It is not considered that the Proposed Life Extension would bring about any significant effects on the character of the SLA beyond those that have already been identified in the LVIA in terms of the localised effect on the Upland Forest Plateau Landscape Character Area in the immediate vicinity of the turbines. The majority of the SLA would have little or no visibility of the turbines, as was illustrated on Figure 9.1: ZVI to Blade tip, of the original ES and as viewed in the field, and the Proposed Life Extension would not undermine the features and characteristics for which the SLA has been designated, in line with the test set out in Policy EN2.

Visual Receptors

8.4.8. A review has been undertaken to establish whether there are any notable additional visual receptors in the study that are now applicable, which were not in existence when the LVIA was undertaken. This includes consideration of potential new properties or settlements, PRoW or other recreation routes, roads and railways and any other relevant visual

receptors, such as tourism or amenity assets. No such notable new receptors have been identified. It is therefore considered that the findings of the LVIA regarding which visual receptors would experience a significant visual effect from the operational period of the wind farm remain appropriate to the Proposed Life Extension. Such localised effects on nearby residential settlements and Public Right of Way (PRoW) are typical with many similar operational wind energy developments in Wales and indeed when compared with more modern, larger-scale commercial turbines are highly localised in their extent and nature.

Cumulative Effects

8.4.9. The original LVIA included a consideration of potential cumulative effects, which addressed the Taff Ely scheme (which at the time was already operational) and what it referred to as the Margam wind farm cluster (a proposed wind farm and adjacent two turbine cluster). There have been many changes to the cumulative situation since the LVIA was prepared, with several further schemes becoming operational, including the Pen y Cymoedd Wind Farm, which is located to the north-east and west (with their closest turbines approximately 500 m apart). In addition, there are also other consented schemes, including the Mynydd Fforch Dwm Wind Farm (of which the closest proposed turbine lies approximately 1 km to the south-west of the nearest turbine).

8.4.10. Such other nearby wind energy development only serves to consolidate the presence of wind energy in this part of the landscape and each of the applications will have fully considered the potential cumulative effects with Ffynnon Oer Wind Farm. For the reasons set out separately in this Scoping Report it is therefore not considered that there would be any new significant cumulative effects.

8.5. Conclusion

8.5.1. As no significant additional effects are considered to occur, as set out above, it is proposed that landscape and visual impact assessment is scoped out of any ES Addendum for the Proposed Life Extension.

8.6. Question to Consultees

Question 8.1: Do you agree that there would be no further potential for significant landscape and visual effects beyond those set out in the existing LVIA, and that landscape and visual effects can therefore be scoped out of the ES Addendum?

9. Ecology and Ornithology

9.1. Overview

9.1.1. This section of the Scoping Report has been prepared by Natural Power to provide the competent authority and its advisors with sufficient information (where it currently exists) on

the likely impacts of the Proposed Life Extension on Important Ecological Features (IEFs). IEFs are species and habitats, identified in accordance with Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines[26], that are protected by legislation, which are of high conservation importance or are particularly sensitive to impacts. In this section, IEF refers to both ecological and ornithological features. Where likely non-significant effects are identified for an ecological feature, it is proposed that these features are not carried forward for inclusion in the ES Addendum and are scoped out. This will allow for an ES Addendum that focusses on features which could be significantly affected, or for which the predicted effects are currently unknown.

9.1.2. This section provides details of the proposed EIA scope and assessment methods, including information on statutory sites of international importance, upon which the Proposed Life Extension may have a 'Likely Significant Effect' (LSE). A screening process will be undertaken to determine whether the predicted impacts of the Proposed Life Extension will result in a LSE.

9.2. Baseline

Desk Study

Data Sources

9.2.1. The following data sources will be consulted for relevant information to support the assessment, including records of protected and notable species within a 2 km buffer of the site boundary, and within 10 km for birds and bats:

- Natural Resources Wales (NRW) Designated Sites Search website[27] and the Department for Environment, Food and Rural Affairs (DEFRA) Multi-Agency Geographic Information for the Countryside (MAGIC) Map application tool;[28]
- South East Wales Biological Records Centre (SEWBReC);
- Royal Society for the Protection of Birds (RSPB);
- NRW;
- The Gower Ornithological Society; and
- A review of any relevant contextual data including the original ES (Appendix A2), and relevant ES/EIA Reports and associated technical reports from other proposed, consented and operational wind developments in the local area.

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[26] CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

[27] NRW Designated Sites Search. Available at: https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/find-protected-areas-of-land-and-sea/?lang=en [Accessed: 06/08/2025]

[28] DEFRA MAGIC Map tool. Available at: https://magic.defra.gov.uk/ [Accessed: 06/08/2025]

Designated Sites

9.2.2. To support the assessment of the Proposed Life Extension, an updated search for the following designated sites was completed:

- Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) within 10 km of the site boundary (25 km for SPAs designated for geese);
- Ramsar sites (Ramsar Convention on Wetlands of International Importance) where waterfowl or waterfowl habitat are described as ecological features within 10 km of the site boundary (25 km for geese);
- Sites of Special Scientific Interest (SSSIs) and Important Bird Areas (IBAs) within 5 km of the site boundary;
- Local and National Nature Reserves (LNRs/NNRs), including RSPB reserves within 2 km of the site boundary; and
- Local Wildlife Sites (LWSs) and proposed LWSs within 2 km of the site boundary.

9.2.3. The ES[30] (Appendix A2) noted that no statutory sites designated for ecological or ornithological features were identified within 2 km of the proposed Ffynnon Oer Wind Farm in 2002. An initial search completed in 2025 has identified a single statutory designated site within 10 km of the site boundary: Coedydd Nedd a Mellte SAC[29], designated for sessile oak woods in 2004. Coedydd Nedd a Mellte SAC, shown on Figure 9.1: Statutory Sites Designated for Ecological Features of this Scoping Report, lies approximately 9.6 km north-east of the site boundary. No other statutory or non-statutory designated sites were identified within the relevant search areas defined above.

9.2.4. Additional records of LNRs, LWSs and any other locally designated sites will be requested within the data search from SEWBReC for inclusion in the ES Addendum.

Review of Historic Information

9.2.5. Ecology and ornithology surveys were completed as part of the EIA for Ffynnon Oer Wind Farm[30]. A summary of surveys completed along with results and conclusions are provided in Table 9.1. No details of surveys completed or assessments made for bats, amphibians or reptiles were included within the ES (Appendix A2)[30].

Table 9.1: Methodology, results and conclusions made within the original Ffynnon Oer ES section 15

Feature	Survey dates	Methodology	Results and conclusions
Habitats	May and June 2002.	Phase 1 habitat survey and National Vegetation Classification (NVC).	Habitats were found to comprise mainly acid grassland (34% of application area*), marshy grassland

[29] Coedydd Nedd a Mellte Nature 2000 – Standard Data Form. Available at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030141.pdf [Accessed: 10/08/2025]

Feature	Survey dates	Methodology	Results and conclusions
			(25%), blanket bog (14%), acid flush (6%), and peat pool (0.5%). Valley bog was also noted to be present to the north-west of the application area. Blanket bog noted to be of importance and most sensitive habitat present.
Birds	May and June 2002.	Breeding bird surveys – two survey visits completed.	Skylark and meadow pipit were abundant, with 19 and 25 breeding territories identified, respectively. Wheatear, pied wagtail and reed bunting were also recorded breeding in suitable habitat within the site or surrounding area. Other species observed foraging within the site included; song thrush, mistle thrush and chaffinch. Species recorded foraging within coniferous plantations bordering the site included coal tit, willow warbler, goldcrest and crossbill. A single red kite, buzzard and kestrel were also observed in flight in the area surrounding the site. No waders were recorded. Collision risk considered low due to avoidance behaviour.
Protected mammals	May and June 2002.	Protected mammal walkover.	A single brown hare flushed from blanket bog. No adverse

Feature	Survey dates	Methodology	Results and conclusions
			impact considered on brown hare. No signs of other protected mammals (such as badger, otter or water vole) were recorded.
Inverte-brates	May and June 2002.	Walkover to determine habitat suitability, particularly for marsh fritillary.	Habitats determined to support dragonflies, butterflies, hoverflies, craneflies, beetles, bugs and spiders. Acid flush and marshy grassland likely to support high densities of invertebrates. No marsh fritillary or devil's-bit scabious (larval food plant) recorded. No adverse impact considered on invertebrates.

*Source: Proposed Wind Farm Ffynnon Oer Environmental Statement Volume 1 Chapter 15, 2002[30]*Application area is the term used in the ES (also Scoping Report Volume 2, Appendix A2)*

Habitat Management Plan Review

9.2.6. A Habitat Management Plan (HMP)[31] was implemented at Ffynnon Oer Wind Farm between 2005 and 2009 in line with Planning Condition 18. Four objectives were outlined in the HMP:

1. Blanket Bog – restore the waterlogged conditions of the blanket bog;
2. Heathland – encourage the establishment of a more tussocky sward with more abundant ericaceous species within the higher ground on-site;
3. Pool – increase the availability of wet areas and potential nesting sites for wetland birds; and
4. Walls – increase the availability of intact sections of drystone walls as shelter habitat for nesting birds and other wildlife.

[30] Entec UK Limited (2002). Proposed Wind Farm Ffynnon Oer Environmental Statement, Volume 1 Main Report and Appendices. National Wind Power (Appendix A2 of this Scoping Report).

[31] Entec UK Limited. (2005). Ffynnon Oer Windfarm Habitat Management Plan. RWE nPower Renewables.

9.2.7. A summary of the management prescriptions and condition assessment in relation to the HMP objectives outlined within each HMP annual habitat monitoring report[32,33,34,35,] other than the 2006 habitat monitoring report (which was not available), is provided in Table 9.2.

Table 9.2: Summary of HMP prescriptions and condition assessment 2005 and 2007-2009*

Objective	Habitat management prescription	Year	Condition assessment
1	Ditch blocking – three ditches blocked using peat excavated during turbine erection in 2005.	2005	Habitat surrounding the blocked ditches changed from wet modified bog as recorded in 2002, to marshy grassland following ditch blocking, suggesting water table rose and ground became wetter.
		2007	Noted to be significantly drier than in previous years, with fewer areas of open water present. Rush cover significantly increased and location of ditches difficult to distinguish from surrounding vegetation.
		2008	Noted to be significantly wetter than in 2007. Rush cover still noted to be dense but not significantly more so than in 2007, with some areas of open water also noted.
		2009	Noted to be significantly wetter than in 2007. Rush cover noted to have increased since 2008. Some areas of open water noted.
2	Grazing – reduced livestock grazing regime implemented in 2006.	2005	Few ericaceous species present with small amounts of heather.
		2007	Vegetation did not to appear to have changed significantly but noted to be drier than in 2006, with absence of heathland species, likely due to grazing.
		2008	Vegetation did not appear to have changed significantly but noted to be noticeably wetter than in 2007. Young heathland species noted to be present.

[32] Wardell Armstrong (2005). Ffynnon Oer Wind Farm Habitat Monitoring. RWE nPower Renewables.

[33] Wardell Armstrong (2007). Ffynnon Oer Wind Farm Habitat Monitoring. RWE nPower Renewables.

[34] Wardell Armstrong (2008). Ffynnon Oer Wind Farm Habitat Monitoring. RWE nPower Renewables.

[35] Wardell Armstrong (2009). Ffynnon Oer Wind Farm Habitat Monitoring. RWE nPower Renewables.

Objective	Habitat management prescription	Year	Condition assessment
		2009	Vegetation did not appear to have changed significantly but noted to be similar to conditions in 2008. Some vegetation noted to be shorter than recorded in 2008, likely due to grazing. However, vegetation abundance was noted to have increased overall.
3	Pool creation – two shallow pools created in area with high water table in 2005.	2005	Not noted
		2007	Vegetation cover increased with more grass and rush species present, with less surface water visible and notably drier. Dry conditions attributed to dry weather conditions during summer.
		2008	Vegetation cover increased significantly with more grass and rush species present. Wetter than noted in 2007 with some open areas of water, but pools were not filled. Some evidence of poaching by cattle.
		2009	Vegetation cover increased significantly with more grass and rush species present, and encroachment noted. Areas of open water noted to have decreased since 2008.
4	Drystone wall restoration – repair of 100 m of drystone wall using existing material already present in 2005.	2005	Not noted
		2007	Small sections of restored drystone wall next to T13 collapsed, notably section adjacent to the track.
		2008	Collapsed sections of drystone wall repaired.
		2009	No change - drystone wall noted to be intact.

*Source: Ffynnon Oer Wind Farm Habitat Monitoring reports 2005[32], 2007[33], 2008[34] and 2009[35]; *Habitat Monitoring reports are only currently available for 2005 and 2007-2009.*

Field Surveys

9.2.8. In the absence of statutory guidance on life extensions, NatureScot guidance[36] relating to the assessment of repowering onshore wind farms has been referred to. NatureScot guidance recommends the following where an extension to the wind farm footprint is not proposed and where there is insufficient operational monitoring data:

- A single year of ornithological distribution and abundance surveys;
- Other ecological surveys, including for freshwater interests, bat roosts and bat activity; and
- Habitat surveys where there is insufficient evidence that habitats have remained unchanged since the original survey, or where affected habitats are of low importance.

9.2.9. Consultation was undertaken during an online meeting with the NPTCBC Senior Planning Officer and the NPTCBC Independent Ecologist, on 2nd April 2025 and the following survey approach was agreed:

Birds

9.2.10. The following ornithology surveys are due to be completed at Ffynnon Oer Wind Farm in 2025, following NatureScot guidance[37]:

- Breeding bird surveys (April to July); and
- Breeding raptor surveys (April to August).

Breeding Bird Surveys

9.2.11. Breeding bird surveys commenced in April 2025 and were completed in July 2025. Surveys were completed following an adapted version of the Brown and Shepherd (1993)[38] methodology, detailed in Calladine, *et al.* (2009)[39]. Four survey visits were undertaken between April and July 2025 (inclusive) to record and map wader species within the site and a surrounding 500 m buffer, shown on Figure 9.2: Ornithology Survey Areas, of this Scoping Report.

Breeding Raptor Surveys

9.2.12. Breeding raptor surveys commenced in April 2025 and are due to be completed in August 2025. Surveys are being completed following methods outlined in Hardey, *et al.* (2013)[40].

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[36] NatureScot (2024). NatureScot pre-application guidance for onshore wind farms. Available at: https://www.nature.scot/doc/naturescot-pre-application-guidance-onshore-wind-farms [Accessed: 06/08/2025]

[37] SNH (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage, Battleby.

[38] Brown, A.F. & Shepherd, K.B. (1993). A Method for Censusing Upland Breeding Waders. *Bird Study* **40**, 189-195.

[39] Calladine, J., Garner, G., Wernham, C. & Thiel, A. (2009). The influence of survey frequency on population estimates of moorland breeding birds. Bird Study, 56, 381-388.

[40] Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). Raptors: a field guide to survey and monitoring (3rd Edition). The Stationery Office, Edinburgh.

Six survey visits will be undertaken between April and August 2025 to record and map target raptor species within the site boundary and a surrounding 2 km buffer, shown on Figure 9.2 of this Scoping Report. Target raptor species are those listed on Annex I of the European Commission Birds Directive[41], Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)[42] and/or Section 7 of the Environment (Wales) Act 2016[43], including honey buzzard, goshawk, red kite, merlin, hobby and peregrine.

Bats

9.2.13. The following bat surveys are due to be completed at Ffynnon Oer Wind Farm in 2025 following NatureScot guidance[44] and Bat Conservation Trust (BCT) guidance[45]:

- Static acoustic surveys;
- Bat carcass searches and searcher efficiency trials; and
- Bat carcass persistence trials.

Static Acoustic Surveys

9.2.14. Static acoustic surveys commenced in April 2025, with eight full spectrum Wildlife Acoustic Song Meter (SM4) static detectors installed at eight of the 16 turbine locations at Ffynnon Oer Wind Farm, representing a variety of different habitats present within the site boundary. Each static detector will be deployed for a minimum of 10 days during the spring (mid-April to May), summer (June to mid-August) and autumn (mid-August to October) survey periods.

9.2.15. There is no standard guidance for life extensions in relation to bat surveys. However, deployment of detectors at 50% of the turbines present is considered appropriate and proportionate based on professional judgment and reflects the proposed carcass searches.

Bat Carcass Searches and Searcher Efficiency Trials

9.2.16. Bat carcass searches are due to take place between July and September 2025 (inclusive). The carcass searches will be undertaken following carcass search methodology outlined in guidance, and where possible searches will be undertaken at the same eight turbine locations as subject to acoustic monitoring. Searches will be conducted on a weekly basis (13 visits in total) by specialist dog handlers and search dogs. Searcher efficiency trials

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41 UK Government (2009). Directive 2009/147/EC of the European Parliament and of the Council. Available at: https://www.legislation.gov.uk/eudr/2009/147/contents [Accessed: 06/08/2025]

42 UK Government (1981). Wildlife and Countryside Act 1981. Available at: https://www.legislation.gov.uk/ukpga/1981/69 [Accessed: 06/08/2025]

43 UK Government (2016). Environment (Wales) Act 2016. Available at: https://www.legislation.gov.uk/anaw/2016/3/contents [Accessed: 06/08/2025]

44 NatureScot (2021). Bats and onshore wind turbines – survey, assessment and mitigation. Available at: https://www.nature.scot/doc/bats-and-onshore-wind-turbines-survey-assessment-and-mitigation [Accessed: 06/08/20125]

45 Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London. Available at: https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-4th-edition [Accessed: 06/08/2025]

using bat carcasses will also be completed to test efficiency of the search dogs. Should bat carcasses not be available, an appropriate substitute will be used as a proxy.

Bat Carcass Persistence Trials

9.2.17. Bat carcass persistence trials are due to take place between July and September 2025. These involve placement of bat carcasses (or appropriate substitutes) in front of trail cameras at selected turbine locations for a period of 30 days to monitor the length of time the carcass persists in the environment before scavenging occurs.

Habitats

9.2.18. Habitat management prescriptions outlined in the HMP[31] and summarised in Table 9.2, were implemented and monitored between 2005 and 2009. As such, it is proposed that an assessment of site conditions in relation to the HMP objectives is carried out in 2025 for inclusion in the Proposed Life Extension ES Addendum.

9.2.19. A walkover of the HMP areas within the site boundary will be completed between August and September to assess the success of management prescriptions in meeting the HMP objectives.

9.2.20. As the Proposed Life Extension does not require any additional construction works, no impacts on habitats are anticipated.

9.3. Proposed EIA Methodology

9.3.1. Operational monitoring in relation to birds was not completed at Ffynnon Oer. Therefore, breeding bird surveys and breeding raptor surveys are being undertaken as outlined above in 2025 to update the assessment of impacts on birds in relation to the Proposed Life Extension. As no assessment of impacts was made in relation to bats within the ES (Appendix A2), a suite of bat surveys, outlined in Section 9.2, is also being undertaken as outlined above in 2025 to support the assessment of the Proposed Life Extension on bats.

9.3.2. Although there are expected to be no impacts to existing habitats within the site boundary, given that there are no proposed changes to the current layout of Ffynnon Oer Wind Farm infrastructure, it is proposed that a condition assessment is undertaken in 2025 to assess the success of the HMP management prescriptions in relation to the HMP objectives.

9.3.3. NPTCBC were consulted on the scope of ecology and ornithology surveys, with agreement on the survey approach confirmed on 2nd April 2025. NRW were also approached regarding the Proposed Life Extension in June 2025 but responded that they were unable to accept any new pre-planning requests. Details of scoping opinions received and results of data requests will be included within the ES Addendum to support the assessment.

9.3.4. Impacts on a wide range of habitats, birds, mammals, amphibians, reptiles and invertebrates are usually assessed when considering a new wind farm development. However, the application for the Proposed Life Extension will extend the operational phase

and not result in any physical changes to the habitats currently existing within the site boundary. As such, it is considered that the potential effects of the ongoing operation of the turbines will be assessed in relation to the Proposed Life Extension. Therefore, impacts on habitats and species which are known to not be affected by operational wind turbines have been scoped out. However, the effects on birds and bats will be considered as these are known to potentially be directly affected by the operation of wind farms through collision.

9.3.5. Potential effects on birds and bats will be assessed in line with accepted EIA methodology described in CIEEM guidelines[26].

9.4. Potential Effects

9.4.1. The EIA regulations state that the baseline should be the 'current state of the environment', which for the purposes of this assessment, is considered to be the conditions present during the operational phase of Ffynnon Oer.

9.4.2. The ES (Appendix A2), HMP[31] and Habitat Monitoring reports[32 33 34 35] have been reviewed. The most recent documented assessment of conditions at Ffynnon Oer during the operational phase were noted within the 2009 Habitat Monitoring report[35]. It is considered unlikely that ecological baseline conditions have changed significantly between 2009 and 2025, given that the land at Ffynnon Oer Wind Farm has been in continuous use by livestock for rough grazing during this time.

9.4.3. No physical change to Ffynnon Oer Wind Farm turbines or other infrastructure is required for the Proposed Life Extension. There are also no proposed changes to land management. Given that there are no direct changes to habitats in their current state within the site boundary as a result of the Proposed Life Extension, there is considered to be no potential effect on habitats present, or associated fauna that may be present including protected mammals (badger, otter and water vole), amphibians, reptiles and invertebrates.

9.4.4. Potential effects of the Proposed Life Extension are considered to be limited to collision risk to birds and bats. As no change to Ffynnon Oer Wind Farm turbines or infrastructure is proposed, there is considered to be no additional impact of collision risk as a result of the Proposed Life Extension. Collision risk was not assessed in relation to birds or bats in the ES (though the ES considered that the risk of bird collision with the turbines would be low (Appendix A2)), however, the realised impact of collision risk will be measured through carcass searches as part of this assessment.

9.4.5. A single statutory designated site, Coedydd Nedd a Mellte SAC[29], was identified within 10 km of the site boundary. The SAC, which is designated for sessile oak woods, is approximately 9.6 km north-east of the site boundary. Given the distance of the SAC from the site boundary, there is unlikely to be any connectivity between Ffynnon Oer and the SAC. Additionally, as no physical changes to infrastructure are required for the Proposed Life Extension, it is considered that there would no impact pathway of the Proposed Life Extension on the SAC, and therefore no LSE. Whilst a data search has not yet been

conducted which would request information on any LWSs, as there are no construction works required or any other changes to the existing layout, no potential effects are predicted on non-statutory designated sites. Therefore, designated sites are proposed to be scoped out from the assessment.

9.4.6. Potential effects of decommissioning are expected to be similar to those identified within the ES[30]. As such, planning conditions 6 and 16 required under consent of Ffynnon Oer Wind Farm will be discharged on commencement of decommissioning.

9.4.7. In order to ensure that the ES is focused on potentially significant effects only, it is proposed that only those ecological features identified within Table 9.3 as being scoped in are carried forward for EIA within the ES Addendum ecology chapter.

Table 9.3: Summary of ecological features scoped in/out of assessment

Feature	Scoped in/out
Statutory designated sites	Out
Non-statutory designated sites	Out
Habitats	Out
Birds	In
Bats	In
Protected mammals	Out

Source: Natural Power

9.5. Proposed Mitigation

9.5.1. Given that there are no proposed changes to Ffynnon Oer in its current state as a result of the Proposed Life Extension, it is considered that mitigation measures are not likely to be required. However this will be confirmed following assessment. Following the proposed updated assessment of habitat conditions in relation to HMP objectives, existing management prescriptions may be revised where objectives are identified to no longer be met.

9.6. Questions to Consultees

Question 9.1: Please confirm that a desk-based study in combination with a single year of bird distribution and abundance surveys, as outlined in Section 9.2, is sufficient to update the assessment of impacts of the Proposed Life Extension on birds?

Question 9.2: Please confirm that a desk-based study in combination with static activity surveys, carcass searches and persistence trials, as outlined in Section 9.2, is sufficient to assess the impact of the Proposed Life Extension on bats?

Question 9.3: Please confirm that an updated assessment of HMP objectives is sufficient to assess impacts of the Proposed Life Extension on habitats?

Question 9.4: In line with the EIA guidance in relation to proportionality, the EIA focuses on features which may be subject to significant effects from the Proposed Life Extension (either directly or indirectly). Please confirm that this approach is accepted.

10. Socio-economic and Community Issues[46]

10.1. Overview

10.1.1. This section considers the potential significant effects as a result of the Proposed Life Extension in relation to socio-economic and community matters. This section of the Scoping Report has been prepared by Natural Power.

10.2. Baseline

10.2.1. Socio-economic effects as a result of the operational wind farm have primarily been directly through its regular servicing and maintenance; and indirectly through its community benefit fund.

10.2.2. The baseline for the Proposed Life Extension will be the socio-economic situation in the local area as it currently exists.

10.3. Potential Effects

10.3.1. Operational and maintenance jobs and contracts which will result from the proposed extended operational period will continue to contribute to the local economy. Currently, five technicians are employed to work on Ffynnon Oer Wind Farm, all who live within approximately 30 miles.

10.3.2. There will be a benefit from the associated business rates that the Applicant will continue to pay. In addition, the community benefit fund will continue to run for the proposed extended period of operation until July 2026 (see section 3.1) and will then be increased by 25% in the first year of the 10-year extension period, increasing annually in line with inflation. Therefore, by extending the operational life of the wind farm there will be continued and increased local economic benefit for an additional 10 years.

10.3.3. A study into the impact of onshore wind farms on tourism in Wales found no evidence of negative effects[47]. On the contrary, it reported that there may be instances where wind farm development could enhance existing visitor attractions or be an attraction in their own right. A report by Biggar Economics (2021) found no link between wind farm development and

[46] This is the section title in the original ES, which also covers issues relating to tourism

[47] Available at: Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector. [Accessed 06/08/2025]

trends in tourism employment in Scotland[48], and a separate study by Oxford Brookes[49] also found references to a number of studies across the UK reporting no adverse effects of onshore wind farms on tourism.

10.3.4. It is not considered that the Proposed Life Extension will have any additional significant effects on socio-economic, community or tourism related matters, in isolation or through cumulative effects with other developments. Any potential effects can be seen as a positive ongoing contribution to the local economy for an additional 10 years.

10.3.5. It is therefore proposed that a socio-economic, community and tourism assessment is scoped out of the ES Addendum.

10.3.6. The inclusion of human health in EIAs was introduced in the 2017 EIA Regulations and so was not specifically covered in the original ES. However, impact on human health was considered as part of the noise section. The site will continue to be operated and maintained in line with relevant conditions attached to the original consent, best practice and the relevant health and safety regulations. Ffynnon Oer Wind Farm has been operational for over 19 years with no major incidents reported (including major accidents, pollution incidents or health related incidents), therefore extending the life of the wind farm is not considered to give rise to any additional significant effects on human health. Therefore, it is proposed human health should be scoped out of the addendum to the ES.

10.4. Questions to Consultees

Question 10.1: Please confirm that a socio-economic, community, tourism and health assessment can be scoped out of the ES Addendum?

11. Public Access

11.1. Overview

11.1.1. This section considers the potential significant effects of the Proposed Life Extension in relation to public access.

11.2. Baseline

11.2.1. The only PRoW within the site boundary of the Ffynnon Oer Wind Farm is St Illtyd's Walk, a long distance footpath which runs for approximately 1 km through the south-western section of the site (approximately 80 m away from the site boundary), and along its north-western boundary. A separate PRoW runs along the north-eastern edge of the site boundary for approximately 700 m. The nearest turbine to a PRoW (bridleway) is T2,

[48] Available at: https://biggareconomics.co.uk/wp-content/uploads/2021/11/BiGGAR-Economics-Wind-Farms-and-Tourism-2021.pdf [Accessed 06/08/2025]

[49] Available at: https://group.vattenfall.com/uk/contentassets/c66251dd969a437c878b5fec736c32aa/tourism-impact-of-offshore-wind-farms---final-report----jg-300921.pdf [Accessed 06/08/2025]

approximately 105 m away, greater than the topple distance of 93 m, which is the tip height of the operational turbines.

11.3. Potential Effects

11.3.1. St Illtyd's Walk was established in 1994, 9 years before the consent for Ffynnon Oer Wind Farm was granted. The original ES found that the operational effects of Ffynnon Oer Wind Farm on St Illtyd's Walk would be adverse and of major significance in EIA terms.

11.3.2. A comparison of original ES figures and current ProW routes suggests that potentially two PRoW routes have been amended, from within the north-western corner of the site boundary, to along the north-western boundary, post-consent. The NPTCBC ProW officer was approached regarding any historical changes to the route of St Illtyd's Walk since Ffynnon Oer Wind Farm was consented, however a response has not yet been received.

11.3.3. The Proposed Life Extension will create no additional significant effects on public access in isolation or through cumulative effects with other developments. It is therefore proposed that public access is scoped out of the assessment, as extending the operational life of Ffynnon Oer Wind Farm will not result in any physical changes.

11.4. Questions to Consultees

Question 11.1: Please confirm that a public access assessment can be scoped out of the ES Addendum?

12. Traffic and Transport

12.1. Overview

12.1.1. This section considers whether there will be any significant effects on traffic and transport arising from the Proposed Life Extension.

12.2. Baseline

12.2.1. Operations and maintenance traffic will continue to use the site entrance and on-site access tracks up to the wind turbines. The Proposed Life Extension will not create any additional construction traffic and will simply result in a continuation of the current level of operations and maintenance traffic for a further 10 years.

12.2.2. Operations and maintenance traffic volumes are low. These currently include, on average, two to three visits per day using light goods vehicles (LGVs); six annual visits by heavy goods vehicles (HGVs) for track maintenance; and two annual visits involving a crane and HGV for maintenance of major components (including the turbines). In combination, this results in a negligible impact on the roads.

12.3. Potential Effects

12.3.1. Because the Proposed Life Extension will not generate additional traffic movements beyond levels considered acceptable as part of the operational scheme, the effects of the Proposed Life Extension on traffic and transport are considered to be not-significant.

12.3.2. Decommissioning and restoration works at the end of the 30 year operational life will create less traffic than during the peak of the construction phase of the wind farm and will be considered in a Decommissioning Method Statement.

12.3.3. It is proposed that traffic and transport is scoped out of the assessment, as extending the operational life of Ffynnon Oer Wind Farm will not result in any significant effects on traffic and transport in isolation or through cumulative effects with other developments.

12.4. Questions to Consultees

Question 12.1: Please confirm that a Traffic and Transport Assessment can be scoped out of the ES Addendum?

13. Noise

13.1. Overview

13.1.1. This section has been prepared by Ion Acoustics and considers potential noise impacts arising from the Proposed Life Extension. Ffynnon Oer became operational in July 2006 and has a noise limit specified in Condition 5 of the planning consent which states:

> *'The level of noise emitted from the site shall not exceed 55 dB(A) during daylight hours and 43dB(A) at any other times, as measured at the nearest residential property to the site (Troed y Rhiw Farmhouse).'*

13.1.2. The noise limit is not structured in accordance with the guidance document ETSU-R-97[50], which is current guidance together with the Institute of Acoustics Good Practice Guide (IoA GPG)[51]. However, ETSU-R-97 does include a night-time limit of 43 dB (deciBel) L_{A90} or the background noise + 5dB (whichever is the greater). Therefore, it is possible to assess noise levels against a limit of 43 dB L_{A90}. The Proposed Life Extension can comply with this limit.

13.1.3. Since 2006, when Ffynnon Oer became operational, Pen y Cymoedd Wind Farm has been built. It started operating in 2017, and a further wind farm, Mynydd Fforch Dwm, was consented in December 2024. The assessments for both subsequent wind farms included

[50] ETSU-R-97 The Assessment and Rating of Noise from Wind Farms https://assets.publishing.service.gov.uk/media/5a798b42ed915d07d35b655a/ETSU_Full_copy__Searchable_.pdf [Accessed 06/08/2025]

[51] The Institute of Acoustics Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Noise from Wind Farms https://www.ioa.org.uk/publications/wind-turbine-noise [Accessed 06/08/2025]

a cumulative assessment with Ffynnon Oer Wind Farm in accordance with ETSU-R-97 limits.

13.1.4. NPTCBC has a statutory duty to investigate noise complaints under the Environmental Protection Act 1990[52]. The NPTCBC Environmental Health Officer has undertaken a search NPTCBC's historic case management system, and found that no noise complaints relating to Ffynnon Oer Wind Farm had been registered; nor evidence of any noise abatement notices being issued.

13.1.5. It is therefore deemed that no further assessment of noise impact is required for the Proposed Life Extension. Such assessments are therefore scoped out of the ES Addendum, because the situation will remain unchanged, and the applicable noise limits can be adhered to. Furthermore, subsequent cumulative assessments for later developments have also indicated compliance with ETSU-R-97.

13.2. Baseline

13.2.1. A noise survey was carried out by Entec as part of the original application in 2002 at two locations: Troed-y-Rhiw and No 24 Prosser's Terrace. A further baseline survey was carried out for Pen y Cymoedd Wind Farm in 2008 by Ion Acoustics at Troed-y-Rhiw and at The School House, Abercreggan Road, Cymmer (amongst other locations).

13.2.2. The baseline noise environment now includes the effects of Pen y Cymoedd Wind Farm and Ffynnon Oer Wind Farm. However, the guidance document ETSU-R-97 states: '*…that absolute noise limits and margins above background should relate to the cumulative effect of all wind turbines in the area which contribute to the noise received at the properties in question'*.

13.2.3. The EIA for Mynydd Fforch Dwm Wind Farm considered operational noise levels from the Ffynnon Oer Wind Farm, Pen y Cymoedd Wind Farm and Mynydd Fforch Dwm Wind Farm and stated that: '*It is finally concluded that predicted cumulative noise immission levels from the Proposed Development [MFD] when operating with both* Pen y Cymoedd *Wind Farm and Ffynnon Oer Wind Farm are compliant with the ETSU-R-97 criteria at all locations and all wind speeds.'*

13.3. Potential Effects

13.3.1. The original ES for Ffynnon Oer considered noise from Bonus (now Siemens) 1.3 MW wind turbines. However, the project has been constructed with Repower MM70 2 MW turbines with a 58 m hub height. New noise predictions have been carried out for the as-built scheme for the Repower MM70 turbines using a sound power level of 105.5 dB L_{WA} at rated power (typically at wind speeds from 7 to 10 m/s at 10 m height). The predictions have been carried

[52] UK Government Environmental Protection Act 1990 https://www.legislation.gov.uk/ukpga/1990/43/contents [Accessed 06/08/2025]

out according to ISO 9613-2[53] with input parameters and restrictions specified in accordance with the IoAGPG. Current Welsh Government planning guidance indicates that the IoAGPG should be used for wind turbine noise assessments. A noise contour plot for the Proposed Life Extension is provided as Figure 13.1: Predicted Noise Contours, of this Scoping Report.

13.3.2. Predicted noise levels at Troed-y-Rhiw Farmhouse are 38.6 dB L_{A90} at rated power. This indicates the Proposed Life Extension complies with the noise limit in the planning conditions. Based on the available aerial imagery, Troed-y-Rhiw Farmhouse appears to be unoccupied. The next nearest residential properties are at least 1,400 metres from the nearest turbine of Ffynnon Oer Wind Farm.

13.3.3. In addition to the operational noise from the Proposed Life Extension, any occasional traffic noise associated with its maintenance is also deemed negligible and is also scoped out of the assessment.

13.4. Questions to Consultees

13.4.1. **Question 13.1:** Please confirm that no further assessment of noise impact is required as part of the Proposed Life Extension.

14. Hydrology, Hydrogeology and Geology

14.1. Overview

14.1.1. This section, prepared by Natural Power, considers the potential significant effects as a result of the Proposed Life Extension in relation to hydrology, hydrogeology and geology. These were addressed in two separate sections in the original ES (namely, Hydrology and Hydrogeology; and Geology).

14.2. Baseline

14.2.1. The wind farm is located in an elevated position with a high point of 464 m Above Ordnance Datum (AOD) which forms part of a larger ridge referred to as Cefnmawr. Due to the elevated location of the wind farm, runoff flows to three separate catchments. These catchments include drainage northwards to a tributary of the Melin Court Brook; drainage westwards towards an area of forestry; and drainage south into the Nant Cregan, a tributary of the River Afan.

14.2.2. The site boundary is underlain by Carboniferous Upper Coal Measures strata. The strata at the site are known to have been worked at shallow depth (with 36 mine entrances within the site boundary) and the boundary site is crossed by a fault, with landslipped ground present in the north-west and west of the site boundary. A phased ground investigation was

[53] International Standard ISO 9613-2 Acoustics – Attenuation of Sound during Propagation Outdoors

carried out prior to construction of the wind farm, with turbines sited to avoid the landslipped ground and mine entrances.

14.2.3. The site boundary is situated on gently sloping ground, whereas beyond the site boundary, slopes become steeper. To the north and beyond the site boundary the flat plateau gives way to a narrow valley leading to the Vale of Neath. To the south and west of the site boundary, small valleys give way to Cwm Afan.

14.2.4. According to the NRW Development Advice Map, there are no major flood zones across the site boundary (the entire site boundary is within Zone A – '*considered to be at little or no risk of fluvial or coastal/tidal flooding')*.

14.2.5. The ES concludes that (Section 13.7) '*Overall the impacts and effects will be restricted mostly to the construction phase of the development, though the effects are not predicted to be significant*', and that:

'*The main process effecting the hydrological regime will be the introduction of access tracks to the site, which may lead to the generation of sediment charged runoff during construction and through its operation. The access track have been constructed however to ensure that runoff is quickly shed to avoid the generation of large volumes of runoff*'…*'The site has been designed and will be operated in accordance with best management practices, particularly with regards to the avoidance of pollution issues..'* … '*The proposed development will have no effect on the hydrology of the location, and there will be no pollution of groundwater. No toxic chemicals will be used, and no petrochemical products will be stored on site*.'

14.2.6. The ES describes the site boundary as including predominantly loamy permeable soils with a wet peaty surface. It includes mitigation of peat disturbance through the avoidance of areas of deep peat during construction of the access tracks.

14.2.7. The baseline is considered to be the same as was reported in the original ES.

14.3. Potential Effects

14.3.1. As no physical changes to the wind farm are proposed, and no additional infrastructure is required for the Proposed Life Extension, there will be no additional significant environmental effects with regards to hydrology, hydrogeology and geology as a result of the Proposed Life Extension in isolation or cumulatively. It is therefore proposed that hydrology, hydrogeology and geology are scoped out of the assessment.

14.4. Questions to Consultees

Question 14.1: Please confirm that Hydrology, Hydrogeology and Geology related assessments can be scoped out of the ES Addendum?

15. Existing Infrastructure, Telecommunications, Television, Aviation and Safety

15.1. Overview

15.1.1. This section, prepared by Natural Power, considers the potential significant effects as a result of the Proposed Life Extension in relation to existing infrastructure, telecommunications, television, aviation and safety.

15.2. Baseline

15.2.1. The ES described consultation with telecommunications and television providers, as well as aviation and military safety operators and other infrastructure consultees, including utilities managers, the Health and Safety Executive (HSE) and The Coal Authority, regarding potential disturbance of the wind farm during construction and operation.

15.2.2. Reponses to this consultation identified that the wind farm would not affect telecommunication or television signals. Although a national gas pipeline was identified in the vicinity, adherence to guideline buffer distances avoided risk of interference with the pipeline by the wind farm infrastructure.

15.3. Potential Effects

15.3.1. As no physical changes to the wind farm are proposed, and no additional infrastructure is required for the Proposed Life Extension, there will be no additional significant environmental effects with regards to existing infrastructure, telecommunications, television, aviation and safety as a result of the Proposed Life Extension in isolation or through cumulative effects with other developments.

15.3.2. It is proposed that existing infrastructure, telecommunications, television, aviation and safety are scoped out of the assessment, as extending the operational life of Ffynnon Oer Wind Farm will not result in any additional significant effects on existing infrastructure, telecommunications, television, aviation and safety.

15.4. Questions to Consultees

Question 15.1: Please confirm that existing infrastructure, telecommunications, television, aviation and safety related assessments can be scoped out of the ES Addendum?

16. Conclusion

16.1.1. The Applicant is seeking a formal EIA Scoping Opinion for the Proposed Life Extension of the operational life of the existing Ffynnon Oer Wind Farm in order to inform the Section 73 application process.

16.1.2. As discussed above, it is proposed to scope out: cultural heritage; landscape and visual; traffic and transport; hydrology, geology and hydrogeology; socio-economic, community, tourism and health; public access; noise; and existing infrastructure, telecommunications, television, aviation and safety, from the ES Addendum, based on the reasons provided in this Scoping Report. The potential effects on ecology (bats) and ornithology will be assessed and reported in the ES Addendum, which is considered to be a proportionate assessment for Proposed Life Extension.

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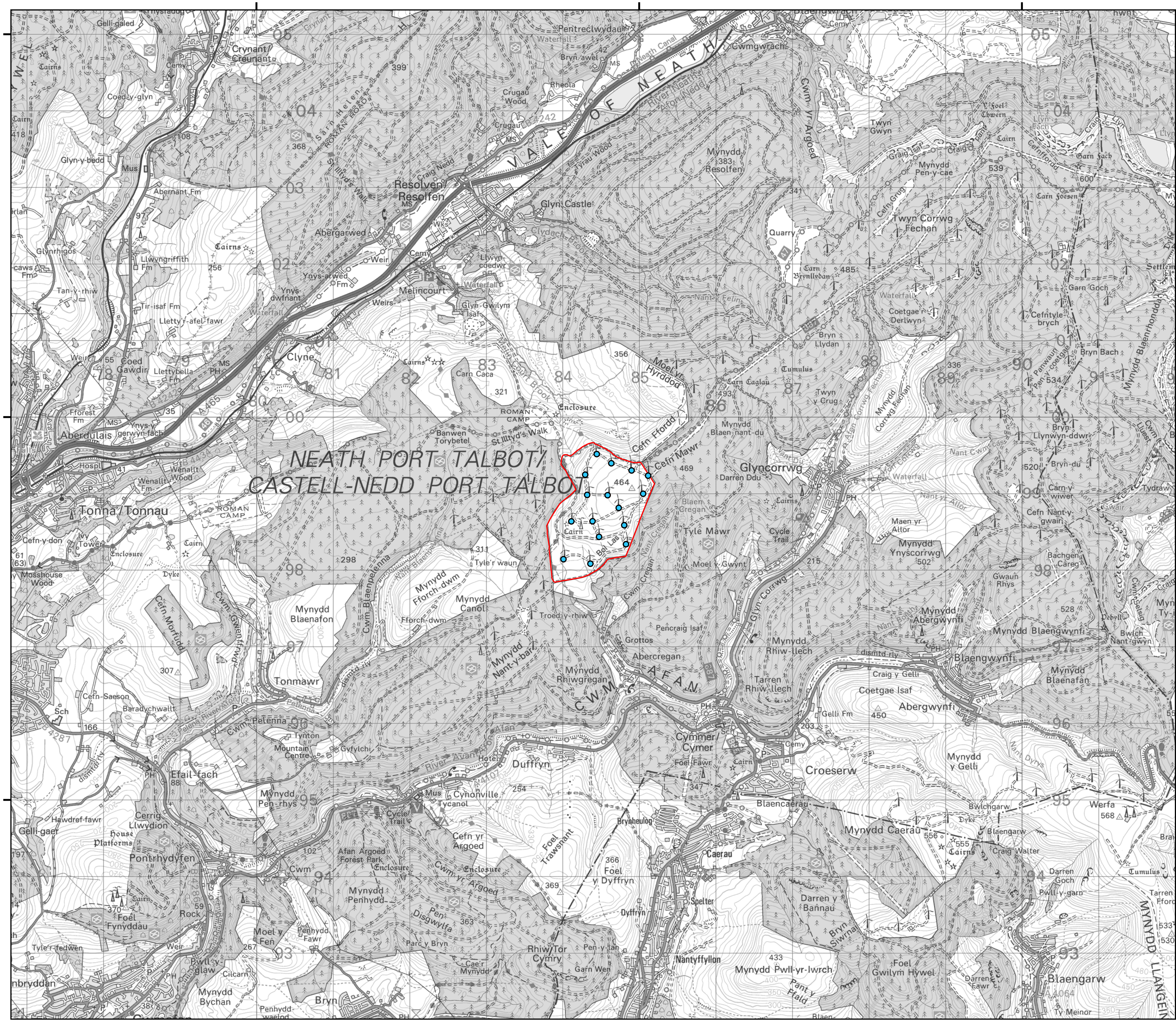
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Project:

Ffynnon Oer Wind Farm Life Extension, Neath Port Talbot, Wales

Title:

Figure 1.1: Site Location

Key

Site boundary

Turbine



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Scale @ A3: 1:50,000

Coordinate System: British National Grid

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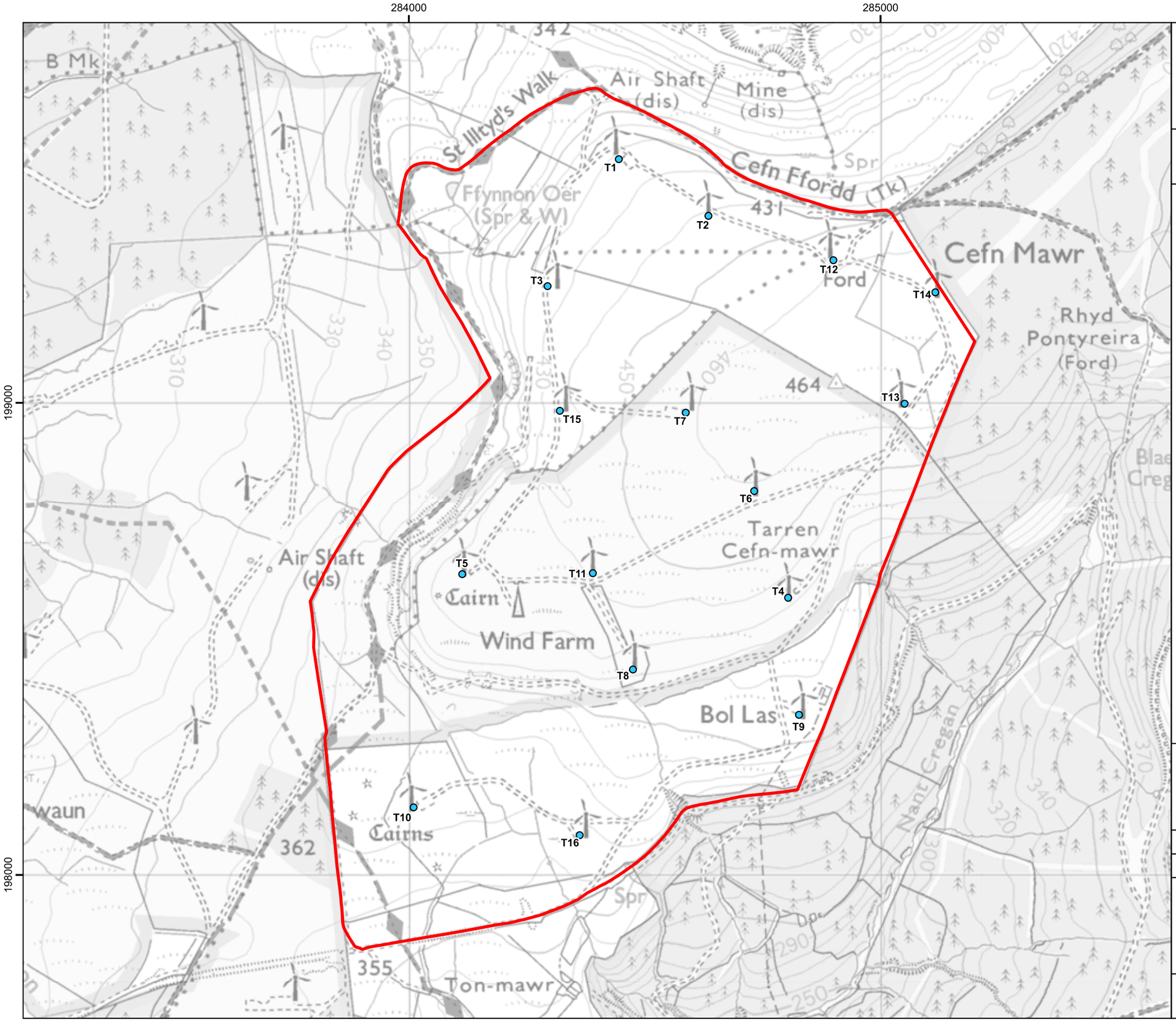
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Date: 21-07-25	Prepared by: LG	Checked by: HP

Ref: GB211705_M_007_A	Layout: 140225_16t_A

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Project:

Ffynnon Oer Windfarm Life Extension, Neath Port Talbot, Wales

Title:

Figure 1.2: Site Layout

Key

- Site boundary
- Turbine

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Scale @ A3:1:8,000

Coordinate System: British National Grid

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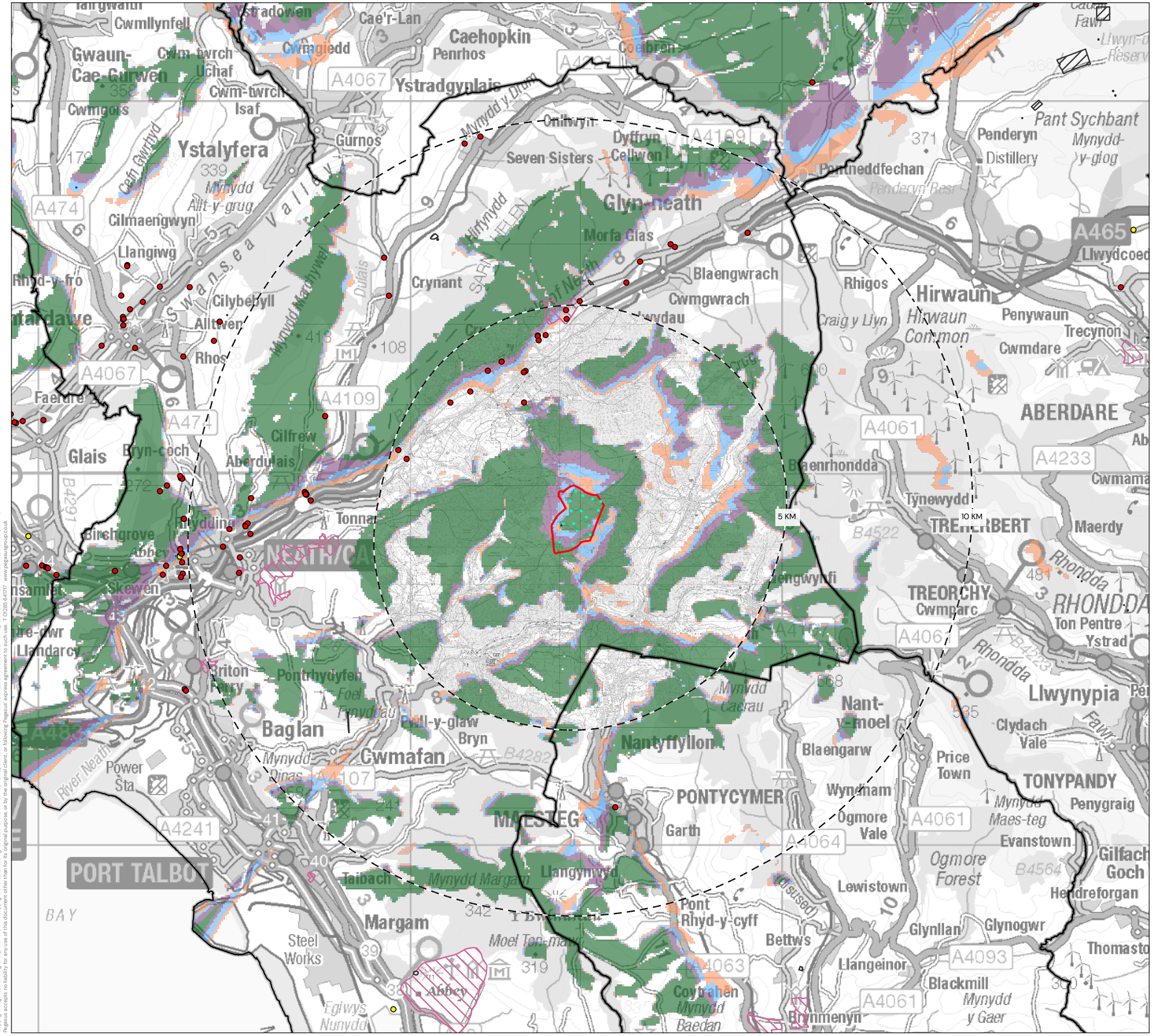
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KEY

- Site Boundary
- Turbine
- Study Area
- County Boundary

Heritage Assets (designated post 2002)

Listed Buildings - Grade

- II
- II*
- Scheduled Monuments
- Historic Parks and Gardens

Blade Tip Zone of Theoretical Visibility (93m)

- 1 to 4 turbines visible
- 5 to 8 turbines visible
- 9 to 12 turbines visible
- 13 to 16 turbines visible

REV	DATE	DESCRIPTION
-	-	-

FIGURE 7.1: BLADE TIP ZTV WITH HERITAGE ASSETS DESIGNATED POST-2002

FFYNNON OER WIND FARM

NATURAL POWER

DATE	SCALE	DRAWN	APPROVED
12/08/2025	1:100,000@A3	NC	LG

SHEET	REV	N	0	1.5 KM
-	B			

DRAWING NUMBER
P24-2672_EN_103

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Rheola
Blaengwrach
Crynant
GM577
GM581
Tonna
5 KM
Pontrhydyfen
Blaengarw
Cwmafan
Bryn

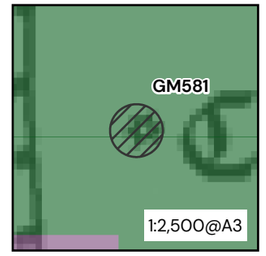
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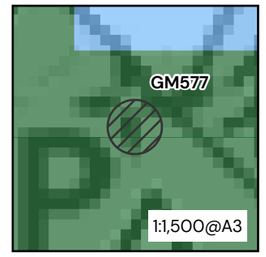
- Site Boundary
- Turbine
- Study Area 5km
- County Boundary
- Scheduled Monuments
  - GM581 - Cefn Mawr cairn
  - GM577 - Carn Caglau cairn
- Historic Parks and Gardens

Blade Tip Zone of Theoretical Visibility (93m)

- 1 to 4 turbines visible
- 5 to 8 turbines visible
- 9 to 12 turbines visible
- 13 to 16 turbines visible

Scheduled Monuments Insets





Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

REV	DATE	DESCRIPTION
-	-	-

FIGURE 7.2: ASSETS CONSIDERED WITHIN SCOPING

FFYNNON OER WIND FARM

NATURAL POWER

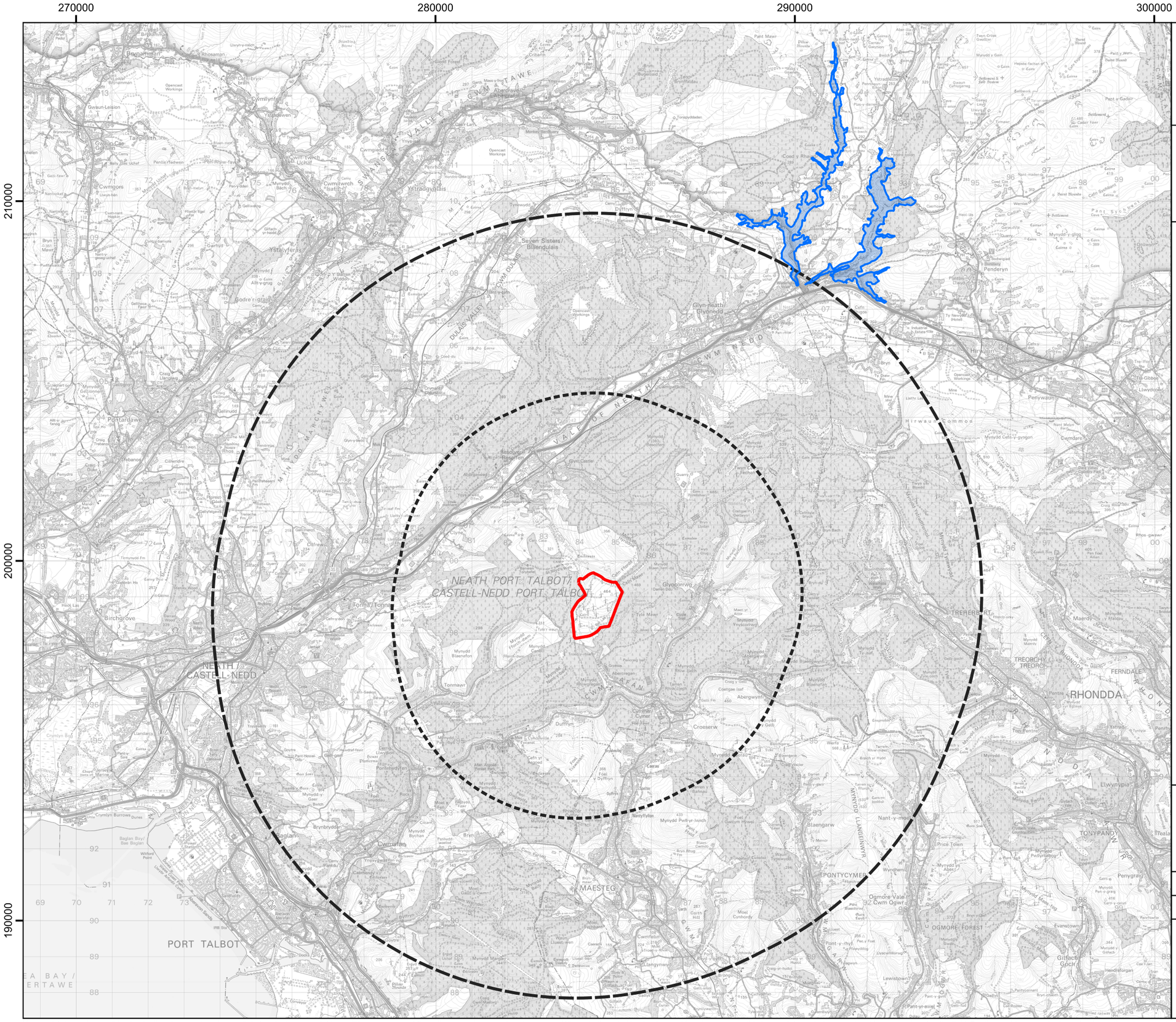
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Project:

Ffynnon Oer Wind Farm Life Extension, Neath Port Talbot, Wales

Title:

Figure 9.1: Statutory Sites Designated for Ecological Features

Key

- Site boundary
- Site of Special Scientific Interest (SSSI) search area (5 km buffer of site boundary)
- Special Area of Conservation (SAC) /Special Protection Area (SPA) search area (10 km buffer of site boundary)
- Coedydd Nedd a Mellte Special Area of Conservation (SAC)

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Scale @ A3: 1:105,000

Coordinate System: British National Grid

0 1.25 2.5 3.75 5 km

N

Date: 21-07-25	Prepared by: LG	Checked by: EA
Ref: GB211705_M_005_C		

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282000 284000 286000 288000

202000 200000 198000 196000

T1 T2 T12 T3 T14 T15 T7 T13 T6 T5 T11 T4 T8 T9 T10 T16

Cefn Mawr

Project:

Ffynnon Oer Wind Farm Life Extension, Neath Port Talbot, Wales

Title:

Figure 9.2: Ornithology Survey Areas

Key

- Site boundary (proposed life extension - consented)
- Site boundary (proposed life extension - amended*)
- As-built turbine
- Upland breeding bird survey area (500 m buffer of consented site boundary)
- Upland Breeding bird survey area (500 m buffer of amended site boundary*)
- Breeding raptor survey area (2 km buffer of consented site boundary)
- Breeding raptor survey area (2 km buffer of amended site boundary*)

* An incorrect site boundary was initially used to create the bird survey area. The error was that the area to the north-west of the site boundary was not included. In June 2025 this was amended to the consented site boundary. The bird surveys conducted from July 2025 onwards were completed in line with the consented site boundary. The surveyor is confident that the error has no bearings on the relevance or quality of data collected during these surveys which owing to the survey buffers included the areas within the actual site boundary not covered by the incorrect map.

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Scale @ A3: 1:25,000

Coordinate System: British National Grid

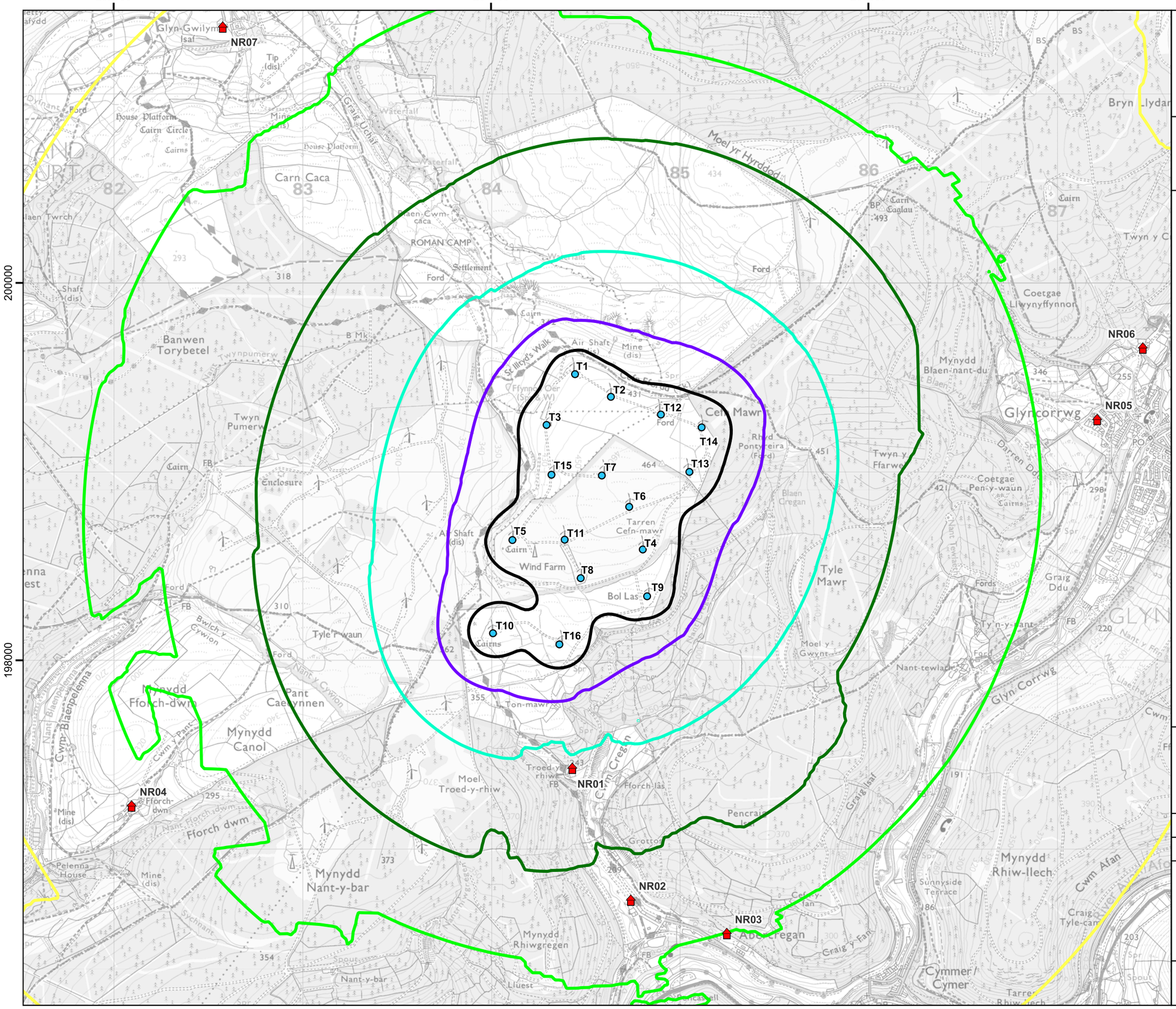
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Project:

Ffynnon Oer Windfarm Life Extension, Neath Port Talbot, Wales

Title:

Figure 13.1: Predicted Noise Contours

Key

- Turbine*

Predicted Noise Contours at Rated Power (dB L_{A90}) 8-10 m/s at 10 m above ground level **

- 50
- 45
- 40
- 35
- 30
- 25
- Noise receptor

No.	Noise Receptor Name
NR01	Troed-y-Rhiw Farm
NR02	Alban Terrace
NR03	Prossers Terrace
NR04	Fforch Dwn Farm
NR05	Heol-y-Mynydd
NR06	Llwyn-y-Ffynnon Farm
NR07	Gwyn Gwilyn Farm

* Repower MM70 Wind Turbines 105.5 dB L_{WA}

** Predictions according to ISO 9613-2 assuming mixed ground (G=0.5)

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Scale @ A3: 1:20,000

Coordinate System: British National Grid

0 0.25 0.5 0.75 1 km

N

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Ffynnon Oer Wind Farm Life Extension

Appendix A1: Planning Approval and Conditions

12028/215/1/A

Reference No: P/2002/1322

NEATH PORT TALBOT COUNTY BOROUGH COUNCIL
CYNGOR BWRDEISTREF SIROL CASTELL-NEDD PORT TALBOT

TOWN AND COUNTRY PLANNING ACT 1990
THE TOWN AND COUNTRY PLANNING (GENERAL DEVELOPMENT PROCEDURE) ORDER 1995

APPROVAL OF FULL PLANNING PERMISSION

Name and address of the applicant

NATIONAL WIND POWER
RIVERSIDE HOUSE
MEADOWBANK
FURLONG ROAD, BOURNE END
BUCKINGHAMSHIRE
SL8 5AJ

Whereas on the Tuesday, 05 November 2002 you submitted an application for the following development:-

PROPOSAL	A WIND FARM DEVELOPMENT INCLUDING THE ASSOCIATED INFRASTRUCTURE. (THIS INCLUDES 16 WIND TURBINES, ACCESS TRACKS, CABLE ROUTES, ANEMOMETER AND A SUBSTATION WITH PARKING.)
LOCATION	FFYNNON OER APPROX 2.5km NORTH OF ABERCREGAN, CYMMER PORT TALBOT

THE NEATH PORT TALBOT COUNTY BOROUGH COUNCIL AS THE LOCAL PLANNING AUTHORITY IN PURSUANCE OF ITS POWER UNDER THE ABOVE MENTIONED ACT AND ORDER HEREBY PERMITS THE DEVELOPMENT TO BE CARRIED OUT IN ACCORDANCE WITH THE APPLICATION AND THE PLANS SUBMITTED THEREWITH, SUBJECT TO COMPLIANCE WITH THE CONDITIONS SPECIFIED HEREUNDER:

Cont.

Reference No: P/2002/1322

CONDITIONS:-

(1)The development hereby permitted shall be begun before the expiration of five years from the date of this permission.
Reason
To comply with the requirements of Section 91 of the Town and Country Planning Act 1990.

(2)Notwithstanding the details shown in the application, no development shall take place until there has been submitted to and approved by the local planning authority details of all materials and external finishes. The development shall be built in the materials approved in accordance with this condition.
Reason
In the interests of visual amenity.

(3)Prior to the commencement of work on site, full details of the proposed substation building shall be submitted to and approved in writing by the Local Planning Authority. The substation building shall be constructed in accordance with the details approved under this condition.
Reason:
In the interests of the visual amenity of the area.

(4)Prior to the commencement of work on site, full details of the proposed temporary fenced compound shall be submitted to and approved in writing by the Local Planning Authority. The compound shall be constructed in accordance with the details approved under this condition and shall be cleared away and its site restored to its previous condition within one month of the completion of construction of the windfarm.
Reason:
In the interests of the visual amenity of the area.

(5)The level of noise emitted from the site shall not exceed 55 dB(A) during daylight hours and 43dB(A) at any other time, as measured at the nearest residential property to the site (Troed y Rhiw Farmhouse).
Reason
In the interests of the amenities of the area.

Cont.

(6)20 years after the date of commencement of electricity generation or at such time as electricity generation is substantially discontinued, whichever is the earlier, the site shall be restored in accordance with a scheme to be first submitted for the approval of the local planning authority.
Reason
In order to ensure the restoration of the site at the end of the predicted operational lifespan of the windfarm.

(7)The development hereby approved shall be substantially carried out in accordance with the following documents and plans, or as otherwise modified by other conditions of this consent or schemes subsequently approved under any other conditions.
Planning application dated 30.10.2002.
Environmental Statement 25.10.2002.
Figure 1.1 Location Plan.
Figure 2.1 Structure of wind turbine.
Figure 2.2 Foundation of wind turbine.
Figure 2.3 Turbine Location and Access Tracks.
Figure 2.4 Track formation.
Figure 2.5 Generic Crane area.
Figure 2.6 Design of substation.
Reason
To identify plans and documents hereby approved.

(8)No development shall take place until the applicant or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted to and approved in writing by the Local Planning Authority.
Reason:
To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource.

(9)All construction vehicles shall enter and leave the site via access from the A4016 as indicated in the Environmental Statement.
Reason:
In the interests of highway safety.

Cont.

(10)Before the commencement of the construction of any wind turbine, a soil survey of the areas identified as sheep dip disposal areas as indicated on Figure 13.1 of the Environmental Statement shall be undertaken and the results provided to the local planning authority. A scheme for the mitigation and/or disposal of any contaminated soil shall be submitted to and approved by the local planning authority in writing and the scheme as approved shall be fully implemented and completed before any foundations are excavated in the identified areas.
Reason
In the interests of public safety.

(11)The process lagoons/ponds shall be of the closed circuit type with no discharge to any watercourse.
Reason:
In order to prevent pollution

(12)Cut off ditches shall be provided below the working area to intercept contaminated surface water and direct it to suitable lagoons for treatment prior to discharge to a watercourse.
Reason:
In order to prevent pollution.

(13)Provision shall be made to ensure that no polluting discharge from haul roads and disturbed areas enters any watercourse.
Reason:
Protection of the environment.

(14)No development shall commence until a scheme for the method of working has been submitted to and approved in writing by the Local Planning Authority. The scheme shall be implemented as approved under this condition.
Reason:
To prevent pollution of the water environment.

(15)Any trial pits or drill sites shall be located within the footprint of the tracks, pads, turbine bases or Substation.
Reason:
In order to minimise ecological damage on site.

Cont.

(16)Reseeding on site shall be undertaken using an upland seed mix of native origin and local provenance.
Reason:
In the interests of nature conservation.

(17)The colour of the turbines and blades shall be mid grey in colour or in accordance with a scheme to be first submitted to the local planning authority for approval.
Reason
In the interest of visual amenity.

(18)Prior to the commencement of work on site, a comprehensive Habitat Management Plan shall be submitted to and approved in writing by the Local Planning Authority. The plan shall be implemented as approved.
Reason:
In the interests of nature conservation and the ecology of the site.

(19)No advertisements/logos shall be displayed on the apparatus, without the prior consent of the Local Planning Authority.
Reason
In the interest of visual amenity.

NOTES TO DEVELOPER

(1)Underground mining operations may have been prosecuted beneath this site and the developer is advised to seek appropriate technical advice in order to decide what precautions if any, need to be taken to reduce the risk of damage from subsidence. If as a consequence of this technical advice, the developer wishes to carry out exploratory works to coal seams or to old coal workings upon this site, then his proposals should be forwarded to British Coal for the Board's written approval, prior to their execution. It is suggested that the developers discuss the proposals with the Authority's Building Control Officers prior to submitting an application under the Building Regulations.

(2)If the access road to the site follows the existing track from Glyn Gwilym Farm, this would require Scheduled Monument Consent under Section 2 of the Ancient Monuments and Archaeological Areas Act 1979.

Cont.

(3)The Habitat Management Plan required under condition .. Should be developed using specific on-site information gathered on the status, distribution and requirements of the blanket bog, mammals (principally brown hare), breeding birds, invertebrates, amphibians and reptiles.

(4) The developer should have regard to Sections 4, 7, 8 and 8A of the Chronically Sick and Disabled Persons Act 1970 and to the British Standards Institution's Code of Practice for "Design of buildings and their approaches to meet the needs of disabled people" (BS 8300:2001).

(5)Please note that any works carried out without compliance with the conditions attached to this approval will be entirely at the risk of the persons involved and may result in formal action being taken by the Local Planning Authority.

(6)Before commencing development, the developer is advised to contact Hyder Network Development Consultants on 01443 331155 in relation to building in the vicinity of a sewer or a connection to a sewer.

(7)Any culverting of a watercourse requires the prior written approval of the Local Authority under the terms of the Public Health Act 1936, and the prior written consent of the Environment Agency under the terms of the Land Drainage Act 1991/Water Resources Act 1991. The Environment Agency seeks to avoid culverting and its consent for such works will not normally be granted except for access crossings.

(8) The Environment Agency and the Local Authority have permissive powers to maintain watercourses depending on the watercourse's definition as 'Main River' or 'Ordinary Watercourse'. The responsibliity for general maintenance of the river and its banks rests with the riparian owner.

(9) The appointed contractors on site are advised to arrange a meeting with the Environment Management Officers of the Environment Agency during the first stages of the development to discuss pollution prevention measures. You are advised to contact the Environment Management Officer Ms Joanne Thomas on 01792 645300 to arrange a convenient date.

Cont.

Reference No: P/2002/1322

[redacted]

Signed : .....

Director of Environment & Consumer Services

Date: 27/05/03

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25 years

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Ffynnon Oer Wind Farm Life Extension

Neath Port Talbot, Wales

Scoping Volume 2 of 2

Appendix A2: Environmental Statement

August 2025

Prepared by Natural Power on behalf of
Ffynnon Oer Windfarm Ltd

Natural Power, Harbour House, Y Lanfa, Aberystwyth, Ceredigion, SY23 1AS, Wales, UK

NATIONAL WIND POWER



Proposed Wind Farm

Ffynnon Oer

Environmental Statement

Volume 1
Main Report and Appendices



National Wind Power

Proposed Wind Farm Ffynnon Oer, Neath Port Talbot

Environmental Statement

Volume 1 - Main Report and Appendices

25 October 2002

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1. Introduction

1.1 Ffynnon Oer Wind Farm

National Wind Power propose to develop a wind farm at Ffynnon Oer. The site, which covers a total area of some 150 ha is located within Neath and Port Talbot County Borough. The wind farm would comprise 16 three-bladed turbines with associated crane pads, access tracks, substation and infrastructure. The maximum total height of each turbine will be 91 m to vertical blade tip.

The site is located on high ground situated to the southeast of Resolven and to the north of Abercregan. Figure 1.1 provides the location of the proposed development.

The current land use of Ffynnon Oer is agricultural with the site providing what is best described as rough grazing for sheep; the site covers a variety of ecological habitats of varying significance. There is widespread evidence of past industrial activity on the site and of earlier human settlement most notably a Roman encampment which lies outside the site boundary, to the northwest. The area identified for the erection of the turbines is bounded to the east and west by forestry plantations.

1.2 The Environmental Statement

This Environmental Statement (ES) has been prepared to report on the Environmental Impact Assessment (EIA) of the proposed wind farm at Ffynnon Oer. Environmental Impact Assessment is a process that involves collecting information about the existing environment likely to be affected by a project. The nature and scale of the project's effects on the environment are then assessed in an impartial manner and presented in a systematic way. The process is designed to allow environmental concerns and opportunities to be addressed during the planning and design of a project, by incorporating into the proposal measures to mitigate adverse effects or enhance beneficial ones. Also critical to the process is that consultation should be carried out at appropriate stages. The findings of the assessment are designed to assist consultees and, ultimately, decision-makers in coming to a view about whether or not, and how, a project should proceed.

The regulatory route for gaining planning permission for a wind farm depends on its size with larger schemes (>50 MW) being considered under Section 36 of the Electricity Act 1989 by ministers. The proposed Ffynnon Oer scheme (20.8 MW) falls below this threshold and is therefore considered through the normal Town and Country Planning process administered by the Local Planning Authority (LPA). In this case the LPA is Neath Port Talbot County Borough Council. The requirements to consider the environmental consequences of the scheme arise from the Environmental Impact Assessment (England and Wales) Regulations 1999 requiring an Environmental Statement to be submitted in support of the planning application.

This Statement sets out the results of the Environmental Impact Assessment for the proposed wind farm at Ffynnon Oer. It should be noted that this statement covers only the environmental effects associated with the construction, operation and decommissioning of the wind turbines,

access tracks and on-site substations and infrastructure. The statement does not address any overhead transmission lines that may be needed for the grid connection between the wind farm and the national electricity grid which are subject to a separate consenting process.

The document begins by outlining the nature of the proposed development followed by an explanation of the EIA and Scoping processes relevant to this wind farm. This is followed by information on how the site was selected and what alternatives to the development have been considered. The Statement then provides a summary of energy and planning policy relevant to the development followed by a number of sections covering the technical topics agreed for consideration during the scoping exercise. The final section summarises the key environmental effects of the development.

1.3 The Rationale for Renewable Energy

There is a growing awareness and acceptance that the rise in atmospheric levels of carbon dioxide (CO_2) and other greenhouse gases is leading to changes in the global climate. At the international conference on climate change held in Kyoto in 1997, the UK government accepted binding commitments to reduce greenhouse gas emissions and subsequently set a domestic goal of a 20% reduction in such emissions by 2010. In his presentation to the Economic Development Committee of the National Assembly for Wales (NAW) Sir John Houghton, Co-chair of the Scientific Assessment Working Group at the Intergovernmental Panel on Climate Change (IPCC) identified that the Earth's average surface temperature is rising at a faster rate than it has for at least 10 000 years and is projected this century to increase by 0.2 to 0.5 degrees per decade. In its Report for Consultation on Renewable Energy issued in April 2002 the Economic Development Committee noted its opinion, that both humans and ecosystems will find it difficult to adjust to this temperature increase.

The impact of climate change in Wales was also the subject of a recent report, 'Climate Changes Wales - Learning to Live Differently'. The key impacts identified were those associated with the rise in sea levels, increased winter rainfall, increased occurrences of storms and flooding and the changes in agriculture and habitat likely to result. Furthermore there were expected to be a wide range of economic consequences.

Whilst global warming is the responsibility of all governments the Economic Development Committee stated its belief that Wales is in a particularly good position to act. Wales was considered to be the ideal location for the development of renewable technologies, especially wind, tide and sea-current and both wind-power and biomass are considered to both be ideally suited for rural areas and offer jobs and investment at a time when diversification is urgently needed. In the longer term industry and business throughout Wales is considered by the Committee to benefit from a reliable supply of electricity from renewables at a competitive price.

In the whole of the UK operational wind farms annually offset the emission of 1.35 million tonnes of carbon dioxide a year. By early 2002 a total capacity of over 499 megawatts (MW) had already been installed in the UK, meeting the average electricity needs of over 250 000 homes and displacing the emission of carbon dioxide into the atmosphere. Within Wales the British Wind Energy Association (BWEA) in their submission to the NAW's Economic Development Committee on 16 January 2002 estimated that 152.7 MW of the UK total was being produced in Wales.

1.4 National Wind Power

National Wind Power Limited has developed a leading position in the UK wind power market. Formed in August 1991, the company is a subsidiary of Innogy plc - an integrated energy business. By early 2002, National Wind Power (NWP) was operating 280 MW and had developed seventeen wind farms worldwide (fourteen in the UK).

2. Description of Proposed Development

2.1 Introduction

This section of the report outlines the activities associated with the construction, operation and decommissioning at the wind farm. It includes details of the construction programme and technical information on the turbines and the associated infrastructure.

2.2 Wind Farm Principles and Design

2.2.1 Wind Farm Principles

Wind turbines are designed to convert the kinetic energy of the wind into electrical energy (Figure 2.1). Air passing over the blades of a wind turbine causes them to rotate. This low speed rotational motion is converted into electrical energy at a voltage of 690 V by a generator located inside the nacelle and is then converted to a high voltage (typically 11 kv) by a unit transformer located at the base of the turbine. Underground cables link all the turbine unit transformers to a dedicated substation on the site where the electricity generated by the wind farm is metered, and if necessary transformed to the same voltage as the electricity grid system to which the wind farm will be connected. The wind farm substation is typically connected to an existing substation on the national electricity grid by a high voltage transmission line in this case 66 kv.

2.2.2 The Role of EIA in the Design of the Proposed Scheme

Entec has been involved throughout the design of the proposed scheme. This ensured that environmental issues have been fully considered and where feasible mitigated. This ES presents the assessment of effects of the final scheme, but it is important to note below (**Table 2.1**) the changes in the final form of development that have been made throughout the design stage in order to mitigate potentially significant environmental effects.

Table 2.1 Mitigation of Potentially Significant Effects Through Design

Iteration	Comment
Initial Layout	Taking account of known information and good design practice
Relocation of Turbine 9	This avoids the landslipped ground and entrances to former mine workings
Relocation of Turbines 1,2 and 12	Moved to an appropriate distance from public rights of way
Relocation of Turbines 15 and 16	This avoid the area identified within the Phase 1 habitat survey as acid flush
Relocation of Turbine 7	The turbine has been moved to the edge of the area identified in the Phase 1 Habitat survey as modified blanket bog
Review of Road layout	Road layout modified to minimise length on modified blanket bog
Relocation of Turbine 6	This has been moved to the edge of the area licensed by the Environment Agency for the deposal of sheep dip and outside the actual site area used by the landowner
Agreement of Operational Access Route	Agreement has been reached with the Forestry Commission to allow for operational (in addition to construction) access to take place through the forestry. There will be no need to use the access track passing through the Roman Camp
Reduction in length of Internal Track	The length of track shortened to reduce loss of habitat and lessen visual impact

2.2.3 Ffynnon Oer Wind Farm

This proposal is to construct and operate a 16 turbine wind farm and associated infrastructure including unit transformers, internal access roads and a substation. The turbines (each 1.3 mw) would have a combined maximum rated output of 20.8 MW of electricity, equivalent to the domestic needs of around 25% of households within Neath Port Talbot County Borough Council. The proposed layout of the turbines is provided at Figure 2.2 together with the access track layout and the new substation. This will be located at the southeastern end of the site closest to turbine No 9. The electricity will then be taken to a sub station located at SS8625 9505, between Croeserw and Caerau on the A4603.

2.2.4 Wind Farm Design Criteria

Once a site has been identified, the design of the wind farm is refined in order to produce a design which seeks to maximise wind power generation within the constraints of the site and potential environmental impacts. The optimal layout of a wind farm depends on a range of technical, economic and environmental criteria including:

- Ground conditions – to be suitable for the installation of wind turbines, access tracks and cables e.g. avoidance of former landslip or geologically unstable ground.
- The feedback from a range of consultation activities are also taken into account including views of the local planning authority, statutory and non-statutory consultees, the local community and landowners.

- Energy yield – the site and immediate environs are computer modelled to establish the windflow on and around the site to provide guidance on the best locations for the wind turbines, taking account of the turbulent interaction between wind turbines.
- Proximity to occupied dwellings – sufficient stand off to occupied houses to protect local noise amenity.
- Environmental constraints – features and areas that are environmentally sensitive are identified and their implications considered.
- Existing land use –the existing use of the land is considered in the layout of tracks and turbines. For example, existing track lines are used where practicable.
- Site access – for movement of materials and personnel to and from the site bearing in mind that turbine blades are over 30 m long.

2.2.5 Selection of Turbines

The wind turbines selected for this site are of the horizontal axis type, with a rotor consisting of three blades, each 29 m in length and affixed to the tower by means of a hub or nacelle which itself adds a further 2 m to the overall blade length. These are then mounted at a height to the wind turbine hub of 60 m and with a maximum rated power generation capacity of 1.3 MW. This gives a turbine with a maximum height to vertical blade tip of 91 m. The final selection of turbine will be subject to competitive tendering within these design parameters.

2.3 Construction

Construction of the wind farm at Ffynnon Oer will consist of the following main operations:

- Create and upgrade the access route from the forest into the site and install the site accommodation and compounds;
- Construct on-site access tracks including operational access road, and excavate the wind turbine foundations;
- Construct the wind turbine foundations (the grid connection is the subject of a separate consenting process);
- Construct the site substation and install grid connection;
- Excavate cable trenches and lay the power and instrumentation cables;
- Erect and commission the wind turbines;
- Carry out reinstatement works, remove temporary accommodation and clear the site.

An indicative construction programme is shown below. It is anticipated that the construction process will take seven months. Weather in particular has a strong influence on the timing of these activities. During the construction period strong wind conditions are avoided for obvious safety reasons, and during cold conditions concrete pouring for turbine bases can be halted. For

these and other reasons summer months are favoured. Current expectations are that construction work would start in August 2003.

ID	Task Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
1	Access to site							
2	Site preparatory work							
3	Field access work							
4	Establish Compound							
5	Set out access tracks							
6	Site access tracks							
7	WTG foundations							
8	Sub-station building							
9	Crane hardstandings							
10	Cable laying							
11	Transformer delivery							
12	HV cable terminations							
13	LV cable terminations							
14	WTG deliveries							
15	WTG assembly and erection							
16	WTG startup							
17	WTG commissioning							
18	Re-instatement							

2.3.1 Site Access and On-site Access Tracks

Site Access

One access route is proposed to the site. Existing forest tracks to the northeast of the site joining onto the A4061 will be used during construction and decommissioning to facilitate the movement of the large turbine components and concrete lorries to and from site. They will also be used for operational access.

Layout

The layout of the access tracks has been developed from the following criteria:

- Track length should be kept to a minimum to reduce construction time, roadstone requirement and environmental impact;
- Gradients must be kept low 1:8 to allow construction plant to move safely round the site (typically less than 1:8);
- Track layout reflects contours and avoids cross slopes and deep cuts into existing terrain;
- Tracks should be routed to avoid sensitive ecological and archaeological features.

An estimated 6.2 km of track will be required to link the turbines and control compound. Of this approximately 3.2 km is new, the remainder is the existing farm track that will be upgraded. The anticipated track layout is provided at Figure 2.4.

Construction Methodology

The tracks will primarily be of a reinforced geogrid type where crushed store and geogrid membrane are laid in multiple layers. This is established practice on wind farm sites and tracks are required to cross soft peatland soils by avoiding disturbance to hydrological flows.

Within the site the access track specifications will be varied to suit the conditions. At this stage, prior to intrusive geo-technical investigations, it is expected that there will be a need to employ up to three types of track construction and details are provided at Figure 2.3. The tracks will be designed to permit access within the site by normal road-going cranes and heavy goods vehicles. The tracks will normally be 4 m wide with 0.5 m shoulders, giving a total excavated width of 5m. In some places the bends will be widened to up to 14 m to permit the turning of long vehicles. Where tracks are required over areas of softer ground, the width may also need to be increased to provide appropriate load bearing, up to approximately 7 m wide.

In constructing the tracks the vegetation and approximately 50-100 mm of topsoil will be scraped off and stored on a layer of geotextile near to the tracks for partial reinstatement alongside the completed track Geotextile will be laid directly onto the exposed subsoil and the track will then be constructed on the geotextile by laying and compacting crushed stone. Where depth to subsoil is small crushed rock up to a depth of 300 mm will typically be used. In softer ground the number of layers or geogrid membrane is increased as is total depth of stone. Areas of soft ground will be avoided where possible.

Where required, provision for surface draining will be incorporated within the track structure to maintain existing surface water run off. Similarly, running surfaces will be suitably cambered to direct surface drainage flows.

In addition to the access track, crane hardstanding areas and turning bays will be constructed adjacent to wind turbine bases. Figure 2.5 represents a typical arrangement however the precise layout required to accommodate the crane will depend upon the turbines used. The laydown areas will accommodate components ready for assembly and erection and provide a firm base for cranes used to erect the turbines. Crane pads will be left in place to allow similar plant use in case of component failure and for decommissioning.

Stone Requirement

Conventional practice on wind farm sites is to open burrow pits to win stone for track construction. This creates some additional impact but offsets significant numbers of lorry movements. At Ffynnon Oer however agreement has been reached to use the stone from the existing Bwlch Ffos Open Cast Site which is located within the forestry area to the Northeast of the site. The operator of this site has recently received planning permission to extend the operation and the stone excavated to access the coal will be used in the development of the wind farm. Borrow pits are therefore unnecessary. The location of the open cast site avoids any requirement for vehicles to use the public highway with forestry tracks providing the route. Stone will be crushed and graded at Bwlch Ffos prior to its delivery on site.

2.3.2 Site Accommodation and Temporary Works

During construction a temporary fenced off compound area of about 5000 m^2 will be situated on the southern and lower plateau as indicated in Figure 2.4. It will enclose the following:

- Temporary portacabin to be used for site offices and welfare facilities including one portacabin toilet with provision for sealed waste and storage;

- Parking for up to 30 cars and 10 construction vehicles;
- Containerised storage for tools and small parts.

The compound will be stripped of topsoil, which will be stored separately on site for eventual restorations upon completion of works and surfaced in crushed stone. Temporary fencing will be erected to prevent personnel or livestock from straying into excavations, or to prevent the public from straying into the path of vehicles close to rights of way. It will be placed around each turbine base and it will be of a post and wire construction. Fencing will also be used to protect archaeological or environmental features where appropriate.

2.3.3 Turbine Foundations

A schematic design for the proposed wind turbine foundations is shown at Figure 2.6. Each foundation will be formed from reinforced concrete, typically to a diameter of 14.5 m and a depth of approximately 3 m. The base will initially be excavated to about 1 m oversize to allow for shuttering access, and the shuttering positioned and supported. The foundation will then be filled with 100 mm of blinding and 750 mm of reinforced concrete.

An upstand of 4.5 m diameter to a depth of about 2 m is then formed and wind turbine tower fixing bolts integrated with this. Once set the remaining cavity is backfilled with compacted excavation material. Prior to the commencement of these operations the area to be used for the foundations will be stripped of topsoil and subsoil, the topsoil will be stored separately for later use.

2.3.4 Site Substation and Grid Connection

The grid connection for the wind farm will be via a new substation building to be located on the southern lower platteau of the site. Metering and switch gear will be contained within this building which will be of a local vernacular appearance. The plan and typical elevations of the substation is provided at Figure 2.6.

A transformer will also be required due to the need to step up the voltage from the wind farm to the 66 kv required for the grid connection. This will be adjacent to the substation on a concrete pad of approximately 15 x 8 m.

2.3.5 Cabling

Between the wind turbines and the substation, all the power and control cabling will be laid in trenches approximately 500 mm wide by 750 mm deep excavated directly adjacent to access tracks. These will then be back-filled with compacted fill, which will have been selected to remove large or sharp stones. In pure peat areas the peat will be replaced directly around the cables. The vegetation and top 50-100 mm of soil will be stripped and laid beside the trench and replaced to the existing ground level immediately after the cables have been installed. Clay plugs will be installed where appropriate (approximately every 50-100 m) to restrict water flow through the trench.

2.3.6 Erect and Commission Wind Turbines

Wind Turbines components will be transported to site on articulated trailers with the blades arriving via low bed trailers with rear steering. Erection will be undertaken using two mobile

road going cranes of approximately 100 and 500 tonnes IFt capacity. The maximum axle weight of the larger crane will normally be limited to 14.25 tonnes.

2.4 Wind Farm Operation

2.4.1 Wind Turbine Characteristics & Meteorological Effects

The power output from wind turbines begins when wind speed exceeds 5 m/s and it reaches a maximum output at around 15 m/s. At wind speeds above 25 m/s(60 mph), the turbine automatically shuts down. Generation output is also seasonally dependent with around two thirds of the output generated between October and March.

Although wind farms require wind for electricity generation, at high wind speeds (>25 m/s or 60 mph) they shut themselves down to avoid excessive wear on the components, and the rotor is both aerodynamically and mechanically braked. Modern wind turbines are however designed to withstand much higher windspeed, and are normally warranted against structural failure for windspeeds up to 150 mph. Lightning generally has no effect on turbines, though as with all structures there is a risk of damage if hit directly by lightning. Turbines are fitted with a lightning protection system as part of their design.

Snow and ice do not generally pose problems other than with access to the site. Occasionally very heavy snow and ice may affect the anemometer or aerodynamics of the turbine blades resulting in temporary automatic shutdown. The wind turbine would restart automatically after accumulations have naturally thawed.

2.4.2 Wind Turbine Servicing and Emergency Operations

The wind farm would be visited once a month for general checks. Routine maintenance or servicing of turbines is required and generally carried out twice a year, with a main service at 12 monthly intervals and a minor service at 6 months. In the first year there is also an initial 3 month service after commissioning. The turbine being serviced is switched off for the duration of its service.

Site maintenance personnel would use off-road vehicles to access the wind turbines via the forest access track.

2.4.3 Habitat Management

Enhanced management of the modified bog area is proposed for the operational life of the wind farm. It is intended that following the grant of consent an outline habitat management and monitoring plan will be prepared and agreed with the local planning authority.

2.5 Decommissioning

The predicted operational lifespan of the Wind Farm is 20 years. At the end of this period the site will be decommissioned or, alternatively, a planning application maybe submitted to retain the existing turbines or replace them with new turbines. The decommissioning of this wind farm is expected to take three months to complete. It will involve the following operations.

2.5.1 Wind Turbines

These will be removed from the site entirely and their foundations broken out to below ground level. All materials arising from demolition will be disposed of in accordance with relevant waste management regulations. Foundations will be covered in topsoil and seeded with an appropriate local mix.

2.5.2 Cables

Wind turbine interconnecting cables will be de-energised and left in place at their placement depth of 750 mm. This is considered less damaging than their complete removal. Cable marker signs will be removed.

2.5.3 Substation

The demolition of the substation will involve the removal of equipment and then complete demolition of the building and compound including breakout of the foundations to below ground level. Foundations will be covered in topsoil and seeded with an appropriate local mix.

2.5.4 Access Tracks

Although removal of the site access tracks is feasible the process of track removal may cause more environmental damage than will the result of leaving them *in situ.* It is proposed that decisions on their removal be undertaken at the time of decommissioning in conjunction with the landowner and local planning authority.

2.5.5 Habitat Management

Habitat management following decommissioning is subject to discussions with the landowners. Given current policy trends it is anticipated that the land use would continue to be agricultural, but with emphasis on maintaining nature conservation and bio-diversity value.

3. The Environmental Impact Assessment

3.1 The EIA Process

EIA is a process, the key characteristics of which are that it is:

- systematic, comprising a sequence of tasks defined both by regulation and by practice;
- analytical, requiring the application of specialist skills from the environmental sciences;
- impartial, its aim being to inform the decision-maker rather than to promote the project;
- consultative, with provision being made for obtaining feedback from interested parties including local authorities and statutory agencies;
- interactive, allowing opportunities for environmental concerns to be addressed during the planning, design and implementation of a project (see Table 2.2 for how the EIA has altered the scheme design).

The interactive nature of the process relates to one of the purposes of EIA, namely the need progressively to refine the design of a proposed scheme in order to reduce its potential adverse effects (i.e. to mitigate potential effects so that they are reduced or eliminated). Where possible, measures should be taken to compensate for any significant adverse effects that it is predicted will occur and to increase the environmental benefits through environmental enhancements.

A further purpose of EIA is to evaluate the significance of the environmental effects that have been assessed. Information about the significance of the effects, and the underpinning data and assessments, are then presented in the ES.

3.2 The Steps in the EIA Process

3.2.1 Key Steps

The key steps that have been undertaken as part of this EIA process are summarised in **Table 3.1** (these are based on the EIA Regulations, Government guidance and good practice).

Table 3.1 Key Steps in the EIA Process

Key Steps in the EIA Process
• Defining the project
• Considering the need for the project and alternatives for meeting this need
• Deciding on the potentially significant effects that need to be assessed and how this assessment will be carried out (i.e. scoping)
• Consultation over the scope of the EIA and refining the scope in response to the comments that are received
• Describing the baseline environment that is relevant to the potentially significant effects (i.e. that existing before commencement of the project and assumed to develop in its absence) and establishing the sensitivity of identified receptors/resources within that environment
• Identifying measures to mitigate significant effects and liaising with the project design team to incorporate these (where possible) into the proposals
• Ongoing consultation with statutory consultees and other interested parties
• Assessing the magnitude of predicted environmental effects
• Evaluating the significance of the predicted effects
• Collating the findings in an ES and summarising the findings in a non-technical summary
• Subsequently ongoing environmental monitoring, assessment and other work, as required following the production of the ES

3.2.2 The Scoping Process

One of earliest steps in the process is to define those environmental effects that need to be assessed as part of the EIA. This focusing exercise is part of the process known as scoping. The context for this focusing exercise is provided in the EIA regulations and in DETR Circular 02/99 *Environmental Impact Assessment*. Schedule 4 of the Regulations states that the ES should include "*a description of the likely significant effects of the development on the environment...*". The Circular states that "*In many cases, only a few of the effects will be significant and will need to be discussed in the ES in any depth. Other impacts may be of little or no significance for the particular development in question and will need only very brief treatment to indicate that their possible relevance has been considered*". The focusing exercise is the means by which the likely significant effects are identified.

Against this background, the scoping process therefore uses the best available data to identify those effects that are likely to be of significant concern, which can then be taken forward for more detailed analysis. These effects should include those that are:

- known or likely to be significant;
- sufficiently uncertain that it cannot be determined this stage whether or not they are likely to be significant.

Other effects are not considered in any further detail in the EIA on the grounds that they are known to be irrelevant or that they will give rise to effects of little or no significance. This ES identifies such aspects that have been scoped out.

3.3 Terminology

The terms 'impact' and 'effect' are often used synonymously and this can lead to confusion. For this assessment they have been defined as follows:

- **Impacts** are any changes attributable to the proposed development that have the potential to have environmental effects (i.e. they are the cause of the effects).
- **Effects** are the results of the changes for specific environmental resources or receptors.
- **Mitigation** is categorised as follows:
  - **Avoidance**: measures taken to avoid impacts which could have adverse effects, such as locating the main development and its working areas and access routes away from areas of high nature conservation interest, fencing off sensitive areas during the construction period, or timing works to avoid sensitive periods.
  - **Reduction**: measures taken to reduce impacts that could have adverse effects e.g. modifications or additions to the design of the development, such as the creation of reedbed silt traps to prevent polluted water from running directly into important watercourses.
- **Compensation**: measures taken to offset/compensate for residual adverse effects that cannot be entirely mitigated. These usually take the form of replacing what will be lost e.g. the translocation of existing vegetation to another site, the restoration of damaged or badly managed habitats, or the creation of new habitats.
- **Enhancement**: the genuine enhancement of environmental interest e.g. improved management of established habitats, or the creation of new habitats over and above what is required for mitigation and compensation.

Through the iterative EIA process that has been adopted the proposed scheme has been revised and various mitigation incorporated. The residual effects are then evaluated to assess their significance and this forms the basis for decision making on whether the scheme should proceed.

For this assessment the evaluation of significance generally takes account of the following criteria:

- the type of effect – i.e. whether it is positive negative or unknown;
- the probability of the effect occurring – i.e. certain, likely or unlikely. If there is uncertainty this will be noted;
- the policy importance (or sensitivity) – i.e. international, national, regional county, district or local/parish importance.

The findings in relation to all of these are brought together to form an assessment of significance for each effect, based on professional judgement. Effects are assessed as being either unknown, not significant or minor or major significance.

Some disciplines adopt slightly different terminology and/or definitions e.g. landscape assessment, and where this departs from that given above this is noted in the relevant technical section, along with any specific definitions of policy importance etc.

3.4 The Assessment Methodology

3.4.1 The Stages of The Development

Potential environmental effects have been considered in relation to the following stages of development:

- Construction: this covers preliminary site establishment, the construction of the internal access track, foundations and erection of turbines, associated facilities and infrastructure;
- Operation of the scheme: i.e. when construction work is complete and the wind farm is operational;
- Decommissioning where it is relevant.

3.4.2 Approach to the Assessment of Environmental Topics

Each of the separate assessments dealing with the environmental topics has been undertaken in relation to a 'baseline'. This relates to the existing environmental situation and how this would change if the proposed development were not to go ahead (i.e. the 'do nothing' scenario). All of the topic assessments have been undertaken on the basis of a common understanding of the nature of the proposed development (as described in Section 2).

Different methodologies are required to assess the effects relating to each of the environmental topics that have been investigated as part of the EIA. Individual methodologies are outlined at the start of each topic section and are based upon recognised good practice such as the guidelines prepared by the Institute of Environmental Assessment.

Each environmental topic follows a common format, as outlined below:

- methodology;
- description of the baseline conditions;
- description of the mitigation measures that have been proposed for inclusion in the scheme;
- identification of the predicted impacts generated during the construction and operation phases (allowing for the agreed mitigation) and an assessment of the environmental effects that these are expected to cause;
- an evaluation of the significance of the predicted effects in which these are defined as being of major, minor and no significance;
- opportunities for mitigation additional to that which it is proposed to incorporate into the development.

Again where individual disciplines may vary from this, it is noted in the relevant technical section.

3.4.3 Structure of the Environmental Statement

The environmental statement (ES) consists of a Non Technical Summary, the text (Volume 1) and the Figures (Volume 2). The text is divided into eighteen sections, as described below:

- Section 1 provides a introduction to proposed Ffynnon Oer Wind Farm and describes the role of windpower in meeting renewable energy needs. It briefly describes the EIA process and identifies the statutory duty of NWP to mitigate the environmental effects of its proposals.
- Section 2 describes the nature of the development proposed, the methodology behind its construction and operations and the changes that have been made to the development in response to the findings of the EIA.
- Section 3 provides a more detailed review of the EIA process and an outline of the impact assessment methodology used to ensure a consistent and transparent approach to assessment across topics. It outlines the structure of the ES and provides brief details of the team that has completed the EIA and compiled the ES.
- Section 4 explains the scoping process undertaken to inform the topics considered and methodologies employed in the development of the EIA.
- Section 5 reviews energy policy associated with wind farm development. It also identifies the relevant planning policy guidance including development plans and policies appropriate to the consideration of the development.
- Section 6 provides the background to the site selection exercise undertaken by NWP. It includes a review of alternatives to the production of renewable energy by wind.
- Section 7 to 15 provide the main technical body of the report considering the impact of the constructional operational and decommissioning phases of the development against the topics identified within the scoping report and agreed with the Local Planning Authority and statutory consultees.
- Section 16 assesses the likely implications of the development upon existing infrastructure, communication networks, aviation, safety and television.
- The ES concludes with a section summarising the major positive, cumulative and negative effects identified during the preceding sections.
- Section 18 forms the conclusion to the ES.

3.4.4 The Project Team

The project team that has carried out the Environmental Impact Assessment was:

National Wind Power

NWP provided the design of the development. They provided details of the construction methodology and information regarding site selection and the investigation of alternatives.

Entec UK Ltd

Entec is one of the UK's leading environmental and engineering consultancies. Consultants with the company undertook the assessment of socio-economic and community, the cultural history, landscape and visual, Public Rights of Way, Traffic and Transportation, Noise, Hydrology and hydrogeology, geology, Ecology and Nature Conservation and Infrastructural issues associated with the development. The input also included the preparation and submission of the scoping report and production of the ES and Non Technical Summary.

4. Scoping of the Proposed Development

4.1 Proposed Scope

A scoping opinion was sought from Neath Port Talbot County Borough Council (the Local Planning Authority) in order that this ES contains the information required for them to identify the environmental effects of the proposed development. To assist them in reaching their opinion, and to allow broader consultation with bodies that may be unfamiliar with the proposals, the following information was provided:

- an outline description of the proposed development;
- the site location and description;
- the purpose of the proposal;
- the proposed basis of the Environmental Statement.

The report identified a series of effects that the development was likely to have on the environment and which were proposed to be considered in more detail within the EIA. These were:

- Landscape;
- Nature Conservation;
- Noise;
- Traffic and Transport;
- Cultural Heritage;
- Geology;
- Hydrology;
- Public Access;
- Sustainability (covered within Sections 1 and 6);
- Socio-economic;
- Health and safety, including telecommunications and television and air safety.

Effects on air quality and soil were proposed to be scoped out, the former being addressed through appropriate construction practices.

A copy of the scoping report was also sent to key consultees including the Countryside Council for Wales, The Glamorgan Archaeological Trust; the Environment Agency; the Royal Society for the Protection of Birds; The Glamorgan Wildlife Trust; the National Assembly for Wales and CADW.

In addition to the formal consultation undertaken at the scoping stage National Wind Power has completed an extensive programme of public consultation. This consultation process resulted in the following highlights:

- Extensive dialogue with public representatives prior to any actions;
- The direct mailing of 10,747 residents of aged 16 or over (5451 homes) detailing the project and inviting them to two public exhibitions;
- Widespread advertising via media and posters.

Which resulted in the following results:

- 1% of those informed by the leaflet drop directly attending the exhibition;
- 0.3% of those directly informed by the leaflet drop submitting their views in writing;
- 17% of those attending submitting in writing their support compared to 7% in opposition.

Temporal Scope

The temporal scope of the EIA covered the period from commencement of construction, through the operational phase, to completion of operations, decommissioning and restoration, as appropriate.

Spatial Scope

In its broadest sense, the spatial scope of the EIA is the area over which changes to the environment would occur as a consequence of the development. In practice, the EIA focuses on those areas where these effects are likely to be significant.

The spatial scope will potentially be different within each specialist area of study. For example, the effect of the proposed development upon the landscape is likely to require a greater spatial scope than, for example, the study of cultural heritage. This is discussed in each technical section.

4.2 Agreed Scope

Neath Port Talbot responded to the submission of the Scoping Report by letter on 2 May inviting Entec and National Wind Power to a meeting to discuss the proposal. A meeting was held at the Neath Port Talbot Planning Offices on 21 May with the Local Planning Authority (LPA).

Discussion were held on to the nature of the proposed development. Contact names for consultees were also provided. The LPA. were of the opinion that those matters covered within the scoping report were sufficient to enable them to assess the proposal.

Subsequent to the meeting consultation responses have been received from the Environment Agency, the Countryside Council for Wales, the Glamorgan Archaeological Trust and the RSPB. Discussions with Highways officers at Neath Port Talbot have also confirmed that Traffic and Transport effects on the highway network can be scoped out although it has been

necessary to consider traffic implications for that section of the route which runs through Rhondda Cynon Taff.

4.2.1 Topics to be Addressed in The EIA

Schedule 4 of the EIA Regulations specify that the EIA should address *"...direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects..."*

Furthermore having identified the nature of the effects the evaluation should seek to establish the probability and magnitude of the effect taking place.

Schedule 4 also specifies that the ES should describe those "*aspects of the environment likely to be significantly affected by the development, including, in particular population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.*"

In this report, these topics are dealt with under the headings set out in **Table 4.1**.

Table 4.1 Environmental Topics Addressed in EIA

Topics in the EIA Regulations (SI No 293)	Section(s) Incorporating This Topic in This Report
Population	Socio-economic Issues (Section 7), Noise (Section 12), Traffic and Transportation (Section 11), Landscape and Visibility (Section 9), Public Access (Section 10), Infrastructure (Section 16)
Fauna	Hydrology and Hydrogeology (Section 13), Ecology (Section 15)
Flora	Landscape and Visibility (Section 9), Ecology (Section 15)
Soil	Scoped out
Water	Hydrology and Hydrogeology (Section 13)
Air	Scoped out
Climatic factors	Hydrology and Hydrogeology (Section 13), Energy and Planning Policy (Section 5)
Material assets, including the architectural and archaeological heritage	Landscape and Visibility (Section 9), Cultural Heritage (Section 8)
Landscape	Landscape and Visibility (Section 9)
The inter-relationship between the above factors	This are discussed within each Section as relevant

5. Energy Policy and Planning Policy

5.1 About this Section

This section presents a brief review of the main policies against which the proposed development should be considered.

It identifies those policies which are serving as driving influences for renewable energy developments. The translation of these into planning policies that provide context for the Ffynnon Oer proposal is discussed as are policies that provide constraints to the nature and location of renewable energy developments.

5.2 Energy Policy

5.2.1 UK Renewable Energy Policy

The direction of UK policy on renewable energy has been established through its commitments to international and European climate change instruments. The UK government is a signatory to the convention of the Intergovernmental Negotiating Committee on climate change which was signed at the UN Conference on Environmental Development 'The Earth Summit' in Rio de Janeiro in June 1992 which commits developed countries to formulating policies and measures:

> *"with the aim of returning individually or jointly to their 1990 levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol".*

Although these commitments at the Earth Summit were not legally binding on the signatories, at the Third Conference of the Parties to the Convention on Climate Change in Kyoto in December 1997 set binding targets on industrialised nations to reduce their emissions of six greenhouse gases to 5.2% below 1990 levels over the period 2008-2012. The Member States of the EU jointly agreed to exceed this commitment by requiring a reduction in greenhouse gas levels by 8% over 1990 levels by this period. The contribution to this target differs for each member state. The UK has accepted a legally binding target of 12.5% reduction in these greenhouse gases over 1990 levels within the identified time period. Following these binding agreements the EU Environmental Council agreed a list of priority measures to help Member States achieve their individual contributions to the overall target. Promotion of renewable energy was highlighted as one of the principal means to achieving the targets.

The current UK government has gone further and set itself targets beyond those of its legal commitments under the Framework Convention on Climate Change. Its target is to reduce greenhouse gas emissions including CO2 emissions to 20% below 1990 levels by 2010. It was recognised in the consultation document 'UK Climate Change Programme' that this would only be:

> *"a first stage towards what will be needed in the longer term."*

Policy development continues to exert upward pressure on these targets and in 2001 the UK Government announced a thorough review of UK Energy Policy to be undertaken by the Performance and Innovation Unit (PIU) in the Cabinet Office. It was generally agreed that energy policy should address all three objectives of sustainable development - economic, environmental and social - as well as energy security. In conclusion the PIU report suggests that to meet possible carbon reduction targets by 2050 it will be necessary to have:

- a reduction of at least 50% in total energy demand through energy efficiency measures;
- at least 50% of total electricity production produced from zero-carbon sources;
- substantial changes in vehicle technology to ones that provide very low carbon emissions.

The National Assembly for Wales (NAW), is understood to be unique in that it has a constitutional duty under Section 121 of the Government of Wales Act to promote sustainable development. No other national Government in the European Union has such a constitutional duty. Sustainable Development provides the over-arching framework for the development of policies and actions across the Assembly so that social, environmental and economic objectives are taken into consideration in all aspects of the Assembly's duties and functions. With regard to the impact of climate change NAW has produced a report entitled Climate Change Wales - Learning to Live Differently. Published in August 2001, the report identifies the potential impacts of climate change and the areas where there is likely to be a need for adaptation.

With regard to energy production the report identifies a NAW aim of making Wales a global showcase for clean energy production. The following key objectives are included within Better Wales, the strategic plan for the NAW:

- *generate 5% of electricity from renewable sources by 2003;*
- *pursue a course of developing Wales as a global showcase for clean energy production;*
- *to encourage the development of strong environmental goods, services and renewables industrial sectors.*

NAW has identified that it will work with the UK Government, the Scottish Executive and the Department of the Environment (Northern Ireland) to deliver the Kyoto agreement.

The commitments to using renewable sources of energy is being implemented through the new renewables obligation which places a legal obligation on licensed electricity suppliers to supply a specified proportion of their electricity supplies from renewable energy sources. During 2000 the UK Government announced its new policy on renewable energy when the Department of Trade and Industry (DTI) published a consultation document on its Renewable Obligation. The principle aim of the new policy was the stimulation of the UK renewable energy industry with the objective that by 2003, 5% of the UK electricity requirements be met by renewable resources, rising to 10% by 2010. This issue formed the basis of a number of recommendations within the Economic Development Committee (of NAW) Review of Energy Policy in Wales (April 2002). Suppliers who fail to meet their targets will be penalised at a rate of 3 pence per kilowatt-hour. The New Renewables Obligation is therefore stimulating demand for new renewable energy developments including windpower.

In summary the UK Government's renewable energy policy can be considered as having five key aims:

- to assist the UK to meet national and international targets for the reduction of emissions including greenhouse gases;
- to help provide, secure diverse, sustainable and competitive energy supplies;
- to stimulate the development of new technologies to provide the basis for continuing growth of the contribution from renewables into the longer term;
- to assist the UK renewables industry to become competitive in home and export markets and, in doing so, provide employment;
- to make a contribution to rural development.

The National Assembly of Wales has confirmed the important role that Wales plays in assisting to achieve these aims.

It is against this background of international and national energy policy and commitments that individual development proposals for renewable projects should be assessed.

5.3 Planning Policies

This section examines the planning policies against which an application for the proposed Wind Farm would be assessed. Taking each relevant policy document or plan in turn, its relevant policies are extrapolated and explained where necessary.

5.3.1 Planning Policy Wales

Planning Policy for Wales sets out the land use planning policies of the NAW. It is supplemented by a series of Technical Advisory Notes which are identified in Section 5.3.2. Procedural advice is given in NAW/Welsh Office circulars. Planning Policy Wales, Technical Advisory Notes and circulars together comprise national planning policy which need to be taken account of in the preparation of Unitary Development Plans and where material, in decisions on individual planning applications.

Planning Policy Wales identifies, within its Sustainable Energy section, that climate change is a widely accepted issue caused in part by the burning of fossil fuels. In light of this other sources of energy generation need to be developed to be consistent with UK Government energy policy to ensure a secure, diverse and sustainable supply of energy. The NAW aim is to secure the strongest economic development policies to underpin growth and prosperity in Wales and recognise in this the importance of clean energy, both as an economic driver and to take forward the Assembly's commitment to sustainable development. As part of this the Assembly Government intends to encourage the development of the renewables sector and promote energy efficiency and conservation in an economic, environmentally sound and socially acceptable way.

Renewable energy currently accounts for some 3% of Wales's electricity generation. The Assembly Government wishes to see the planning system play its part in contributing to the UK Climate Change Programme. This commitment to renewable energy sources includes water, solar, geothermal energy and biomass as well as wind.

Planning Policy Wales indicates that Local Planning Authorities should make positive provision for all forms of renewable energy by:

- Considering the contribution that their authority area can make towards developing and facilitating renewable energy and energy efficiency and conservation through their UDPs.
- Ensuring that development control decisions are consistent with national and international climate change obligations, including a contribution to renewable energy targets, having regard to emerging national and international policy on the levels of renewable energy required and on appropriate technologies.
- Recognising the environmental, economic and social opportunities that the use of renewable energy resources can make wider planning goals and objectives and the delivery of renewable energy targets.

At the same time Local Planning Authorities should:

- Ensure that international and national statutory obligations to protect designated sites, species and habitats and the historic environment are protected from inappropriate development.
- Ensure that environmental effects on local communities are minimised.

Planning Policy Wales promotes the potential of UDPs for indicating broad locations or specific areas where wind energy developments are likely to be permitted. In defining such areas the guidance states the need to balance the scale and contribution of such developments to certain levels of renewable energy against the sensitivity of the receiving environment. Small scale or domestic scale schemes may be appropriate in most locations whereas in nationally designated areas large scale deployment of renewable energy may not be appropriate.

In terms of assessing planning proposals for renewable energy generation consideration should be given to impacts on the local environment. Where a development is likely to cause demonstrable harm to a designated area, and the purposes for that designation, consideration should be given to refusing the proposal if such effects cannot be overcome.

5.3.2 Technical Advice Notes

Technical Advice Notes (TAN) provide statements of NAW policy on nationally important land use and other planning matters. A number of TANs are relevant to the determination of this application:

- TAN 5 Nature Conservation and Planning (1996);
- TAN 6 Agriculture and Rural Development (2000);
- TAN 8 Renewable Energy (1996);
- TAN 11 Noise (1997), detailed guidance pertaining to noise and wind farms is included within TAN 8.

Of particular note is TAN 8 which identifies the key issues to be assessed and taken into account with respect to wind farm proposals.

TAN 8 notes that:

> *"The principle of harnessing wind energy by wind turbines is well established, and there is no doubt about the technical feasibility of wind power."*

TAN 8 also identifies that modern wind turbines have distinctive features which must be taken into account in planning and development control, these are:

- *The need to site the machines in open, exposed locations, with annual wind speeds generally of more than 7.5 metres per second at hub height, often in rural areas, which may also be in attractive landscapes;*
- *The nature of noise emissions from the turbines;*
- *The movement of the blades;*
- *Considerations relating to the safety and electro-magnetic interference.*

With regard to wind farms TAN 8 outlines specific development issues:

> *"Wind turbines need to be positioned so that the distances between them are around 5-10 rotor diameters (about 150-300 metres). This spacing represents a compromise between compactness which minimises capital cost and the need for adequate separations to lessen energy loss through wind shadowing from upstream machines. Turbines should be sited in sympathy with local features and should respect the grain and form of the land. Turbine siting will always be a compromise between maximising energy capture and minimising visual impact."*

It also raises a number of key issues which need to be considered in relation to the siting of wind turbines:

- safety;
- proximity to airports, roads and railways;
- shadow flicker;
- noise;
- electro-magnetic production and interference;
- scattering of signal;
- siting and landscape;
- ecology;
- construction disturbance.

These subjects have all been addressed either directly within this Environmental Statement or via consultation with third party consultees.