8 ECOLOGY

8.1 INTRODUCTION

8.1.1. This Chapter provides an assessment of potentially significant effects of the Project with respect to Ecology and specific ecological features. This Chapter should be read in conjunction with:

- The description provided in **Chapter 4: Description of the Project**; and
- The relevant parts of the following chapters where common receptors have been considered and where there is an overlap or relationship between the assessments of effects:
  - **Chapter 6: Landscape and Visual Impact Assessment** (due to the association between removing, replacing and creating habitats and the Project's ability to achieve a Net Benefit for Biodiversity (NBB) (Welsh Government, 2024)[44]; and
  - **Chapter 10: Water Resources and Flood Risk** (due to the close association between ecological features and local hydrology).

8.2 LIMITATIONS OF THIS ASSESSMENT

8.2.1. The following limitations and assumptions relating to the collection of the ecological baseline data are relevant to the assessment:

- Ecological survey data is typically valid for 18-24 months unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management (Chartered Institute of Ecology and Environmental Management (CIEEM), 2019[45]). In this case, all ecological survey data has been collected in 2024 or 2025 and therefore can confidently contribute towards our understanding of the current ecological baseline of the Site;
- Habitat and botanical surveys are seasonally limited and throughout the spring and summer period certain botanical species will be more or less evident at different times (i.e. depending on the flowering season). The most recent habitat surveys (WSP, 2025[46]) were carried out in September 2024. An earlier habitat survey was also carried out in May 2024 (CSA Environmental, 2024a[47]). It is considered that sufficient information has been gathered to enable an assessment of the habitat types present, in line with standard Phase 1 habitat categories, and the potential for these to support protected or notable species;

[44] Achieving a Net Benefit for Biodiversity (NBB) is a requirement for all new developments as per Planning Policy Wales (PPW, 2024). Welsh Government (February 2024) Planning Policy Wales Edition 12.

[45] CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports & Surveys. CIEEM.
[46] WSP (2025) Foel Trawsnant Grid Connection. Preliminary Ecological Appraisal. February 2025.
[47] CSA Environmental (2024a). Preliminary Ecological Appraisal - Foel Trawsnant Wind Farm. October 2024.

- Records held by local biological record centres and local recording groups are generally collected on a voluntary basis, therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage;
- The Phase 1 habitat survey was carried out over a period of three days, as such, only a selection of all species that occur within the Site (and within suitable buffers) will have been recorded. However, through use of desk study information to supplement survey data, it is considered that an accurate assessment of the potential for the Site to support protected species or those of conservation concern was possible;
- The extended Phase 1 habitat map (**Figure 8.4**) has been reproduced from field notes and plans. Whilst this provides a sufficient level of detail to fulfil the requirements of a Preliminary Ecological Appraisal (PEA), the maps are not intended to provide exact locations of key habitats; and
- When the final EIA Report is submitted in July, survey data collected up to that date will be used to inform conclusions and recommendations. It is not expected that further survey data will change the assessment made within the final EIA Report. However, data will be collected post-submission for surveys so that a full suite of data can be presented within a supplementary report;
- Surveys which are currently underway are listed below:
    - Bat activity surveys using static bat detectors are being carried out monthly, and results will be used within the final EIA Report. This comprises a suite of automated/static surveys and one transect survey in the form of a 'night-time bat walkover' (NBW) each month. As discussed above, additional data will be collected from July to October and presented in a supplementary report;
    - Otter *Lutra lutra* surveys are being undertaken with the surveys spread across different times of the year to account for seasonal variation in otter activity. One of these otter surveys will be undertaken in April 2025, for inclusion within the final EIA Report. The second otter survey will be undertaken in October 2025 to account for seasonal variability with the results presented in a supplementary report; and
    - An initial bird scoping visit has been undertaken to determine the ornithology surveys required at the Site. The suite of surveys include winter raptor roost surveys to be undertaken in February and March 2025, breeding raptor surveys to be undertaken from April to July 2025, moorland bird surveys to be undertaken from April to July 2025, and nightjar *Caprimulgus europaeus* surveys to be undertaken in June and July 2025. Vantage Point flight activity surveys to be undertaken from April to July 2025, with supplementary data collected in August 2025 to include the late breeding period for honey-buzzard *Pernis apivorus.* All ornithology survey data collected up to final EIA report submission will be used to inform the assessment. As mentioned, supplementary data is not expected to significantly change conclusions, though additional data will be captured in a supplementary report.

8.2.2. It is considered that a combination of the data on the habitats present on the Site with the survey data collated by the Final ES will provide sufficient information on bats, birds and otters for an assessment of significant effects. Precautionary assumptions have been made at this stage to account for incomplete survey data. Precautionary mitigation will be applied where there are any data gaps.

8.3 POLICY, LEGISLATION AND GUIDANCE

8.3.1. The following legislation (**Table 8.1**), planning policy (**Table 8.2**) and technical guidance (**Table 8.3**) are relevant to informing an EIA with respect to Ecology, hereafter referred to as an 'Ecological Impact Assessment (EcIA)'.

Table 8-1 - Legislation relevant to the biodiversity assessment

Legislation	Legislative context
The Conservation of Habitats and Species Regulations 2017 (as amended)[48]	The Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") transposes the Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) into English and Welsh law. This also transpose elements of the EU Wild Birds Directive in England and Wales. The Habitats Regulations provides for the designation and protection of European sites, the protection of certain species (referred to as European Protected Species or EPS) and the adaptation of planning and other controls for the protection of European sites. Note that the Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 to reflect the UK's exit from the EU. These largely carried forward the provisions and terminology of the 2017 Habitats Regulations, and so the term 'European site' is currently retained and for all practical purposes the definition is essentially unchanged. The UK European sites are no longer legally part of the 'Natura 2000' network of protected sites, with this being replaced in the UK by the 'National Site Network' which comprises all existing Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and any new SACs and SPAs designated under the 2019 Regulations (Ramsar sites do not form part of the network). For this reason, and to avoid confusion, all sites which belong to the 'National Site Network' are hereafter referred to as 'International Sites'. This also has relevance if compensation measures are required for an adverse effect, as the relevant metric is the overall coherence of the 'National Site Network'. The 2019 Regulations establish management objectives for the 'National Site Network' which contribute to the conservation of UK habitats and species that are also of pan-European importance, and to the achievement of their favourable conservation status within the UK.
The Environment (Wales) Act 2016	The Act makes provisions within Wales for the planning and managing of natural resources at the national and local level. Section 6 of the Act introduces the biodiversity and resilience of ecosystems duty whereby public authorities are required to seek to maintain and enhance biodiversity so far as it is consistent with the proper exercise of those functions. Section

[48] Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") has been amended by (*inter alia*) the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

Legislation	Legislative context
	7 of the Act introduces a list of living organisms and types of habitat in Wales, known as Priority Species or Priority Habitats, which in Wales are considered of key significance to sustain and improve biodiversity.
The Wildlife and Countryside Act 1981 (as amended) (WCA)	This Act consolidates and amends existing national legislation to implement the Bern Convention. This piece of legislation remains the primary UK mechanism for statutory site designations (e.g. Sites of Special Scientific Interest, SSSI) and the protection of individual species listed under Schedules 5 and 8 of the Act, each subject to varying levels of protection.
Countryside & Rights of Way Act 2000	This Act details further measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation.
The Hedgerows Regulations 1997	The Hedgerows Regulations is intended to protect important countryside hedges from damage or destruction.
Protection of Badgers Act 1992	The Protection of Badgers Act provides protection to badgers and their places of shelter (setts).

Table 8-2 - Planning policy relevant to the biodiversity assessment

Policy	Policy context
National planning policy	
Future Wales: The National Plan	The Welsh national development framework sets the direction for development in Wales to 2040 and includes a Habitats Regulations Assessment. Policy 9 – Resilient Ecological Networks and Green Infrastructure outlines measures to ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure.
Planning Policy Wales – Chapter 6 Distinctive and Natural Places (12th Ed.; 2024)	Chapter 6 of Planning Policy Wales (PPW) sets out the Welsh Government's objectives for Distinctive and Natural Places theme of planning policy topics covers historic environment, landscape, biodiversity and habitats, coastal characteristics, air quality, soundscape, water services, flooding and other environmental (surface and sub-surface) risks. In particular, the Biodiversity and Resilience of Ecosystems section puts emphasis on planning authorities to have regard for the State of Natural Resources Report (SoNaRR) and Area Statements published by Natural Resources Wales (NRW). In this chapter, a 'stepwise approach' is introduced as a means of demonstrating that a NBB has been achieved by Projects. As part of achieved NBB, planning authorities must also consider ecosystem resilience following the DECCA Framework.
Planning Policy Wales – Stepwise approach	Biodiversity enhancements that achieve NBB must be delivered following the implementation of the 'stepwise approach' of firstly avoiding, then minimising, mitigating and, as a last resort, compensating for adverse impacts on the environment that occur as part of a development.

Policy	Policy context
	Therefore, compensation should only be considered as a last resort, where it has been demonstrated clearly that adverse effects on the environment cannot be avoided or fully mitigated. If compensation is necessary, this must be delivered on-site where possible but off-site compensation can be sought if demonstrated that this is not possible. This approach will encourage the consideration of features that may not necessarily be protected, but are crucial for ecosystem functioning, leading to more joined up spaces for nature.
Planning Policy Wales – DECCA Framework	NRW have developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016. This is referred to as DECCA and comprises the objectives listed: ▪ **Diversity** – maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits. ▪ **Extent** – incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance. ▪ **Condition** – the condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer-term types of disturbance. Both direct and wider impacts should be considered, for example avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc. ▪ **Connectivity** – this refers to the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources. Developments should take opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity. ▪ **Adaptability to change** – ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience. NRW define ecosystem resilience as *"An environment that can respond to pressures by resisting, recovering or adapting to change, and is able to continue to provide natural resources and benefits to people"*.
Technical Advice Note 5 (TAN5) Nature Conservation and Planning (2009)	Welsh Government (WG) policy on positive planning for nature conservation and developments affecting designated sites and habitats, along with protected priority habitats and species. It brings together advice on sources of legislation relevant to various nature conservation topics which may be encountered by local planning authorities. It sets out the key

Policy	Policy context
	principles of planning for nature conservation and addresses nature conservation in development control procedures. It also deals with the conservation of protected and priority species. It also outlines that developments that may adversely impact on sites designated for their national nature conservation interest will generally not be permitted.
Local planning policy	
Replacement Neath Port Talbot (NPT) Local Development Plan (LDP) 2023-2038	The LDP identifies the key issue **NKI 2 Nature Emergency** with respect to Biodiversity and has the following related vision: ***'The nature emergency is being positively addressed**: NPT will be delivering on-going net benefit for biodiversity, geodiversity and soils and will be promoting the resilience of ecosystems as a result of development proposals over the plan period'.* In one of its objectives **(NO2)**, the LDP aims to *'Achieve a net biodiversity benefit and enhanced ecosystems resilience from new developments across the county borough'.*
Replacement Bridgend Local Development Plan 2018 to 2033	The LDP identifies the key issue **SPG 19 Biodiversity and Development** and sets out a Green Infrastructure Approach.

Table 8-3 - Technical guidance relevant to the biodiversity assessment

Technical guidance document	Context
Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2024)	Sets out the industry standard approach to EcIA) for assessing the potential effects of a project on ecological receptors.

8.4 CONSULTATION

8.4.1. The assessment has been informed by consultation with NRW. This ES Chapter has taken account of:

- An EcIA Scoping Opinion request submitted to NRW in November 2024; and
- Response from NRW in the form of a Scoping Opinion in Febraruy 2025.

8.4.2. In November 2024, WSP issued a Scoping Report (**Appendix 2A**) which set out the overall approach that would be taken in an EcIA for the Project. This assessed the potentially significant effects of the Project with respect to Ecology and the potential Zone of Influence (ZoI) for these effects. NRW responded in the form of a Scoping Opinion (**Appendix 2B**).

8.4.3. The Scoping Opinion considered that the Project is likely to give rise to significant effects in the absence of mitigation. It highlighted the requirement for an ES, with an Ecology Chapter which should include the following elements for further consideration:

- Sites of Importance for Nature Conservation (SINCs) for which habitat loss/degradation is anticipated;
- Priority Habitats for which habitat loss/degradation is anticipated;
- Roosting bats;
- Foraging and commuting bats;
- Otter;
- Dormouse *Muscardinus avellanarius*;
- Water vole *Arvicola amphibius*;
- Great crested newt (GCN) *Triturus cristatus* – ensuring that all waterbodies within 250 m are identified and a GCN environmental DNA (eDNA) survey is undertaken where appropriate; and
- Terrestrial ornithology.

8.4.4. The Scoping Opinion advised that the ES include information regarding *'species specific impacts in the short, medium and long term together with any details of retention, mitigation and/or compensation measures proposed to offset the impacts identified'.*

8.4.5. Where the potential for significant impacts is identified, a 'Conservation Plan' was recommended to be prepared for receptors for which potential significant impacts are identified as a result of the Project. This would secure any long-term mitigation, compensation, management and monitoring activities.

8.5 DATA GATHERING METHODOLOGY

8.5.1. The Site has been subject to numerous previous surveys and assessment work, all of which have been consulted in order to have a comprehensive understanding of the ecological baseline of the Site. Full details of the previous surveys and assessment work, as well as figures showing locations, are included within the following reports:

- **Appendix 8A**: WSP (2025) Foel Trawsnant Grid Connection. Preliminary Ecological Appraisal. February 2025;
- **Appendix 8B**: CSA Environmental (2024a). Preliminary Ecological Appraisal - Foel Trawsnant Wind Farm. October 2024;
- **Appendix 8C:** CSA Environmental (2024b). Dormouse Survey Report - Foel Trawsnant Wind Farm, Maesteg. November 2024;
- **Appendix 8D:** CSA Environmental (2024c). Water Vole Survey Report - Foel Trawsnant Wind Farm. November 2024; and
- **Appendix 8E:** CSA Environmental (2024d). Great Crested Newt Report - Foel Trawsnant Wind Farm, Maesteg. November 2024.

8.5.2. The Study Area considered when assessing the overall ecological baseline encompassed the total area for which desk study and field survey data were collected during the above ecological assessments. The level and type of data collection varied across the Study Area due to the

presence of multiple ecological features and potential impact pathways. The CIEEM Guidelines for Ecological Impact Assessment for the UK and Ireland were used to determine the extent of the Study Area (CIEEM, 2024). The Study Area comprised:

- The land within the Site boundary and the immediate surrounding area, hereafter referred to as the 'Survey Area' (as shown on Figure 8.1). The Survey Area was 250m from the Site for all receptors, extended to waterbodies within 500m of the Site for GCN;
- Statutory designated sites within 10km of the Site boundary (as shown on Figure 8.2);
- Non-statutory designated sites up to 2km from the Site boundary (as shown on Figure 8.3);
- Habitats of conservation importance up to 1 km from the Site boundary, including waterbodies within 500m; and
- Desk study records of protected and notable species up to 2km from the Site boundary.

8.5.3. The Study Area was defined on a precautionary basis to ensure that the ZoIs[49] relevant to all ecological features were covered during baseline data collection activities. ZoIs are the areas within which a Likely Significant Effect (LSE) associated with the Project may be identified for a particular ecological feature.

8.6 SCOPE OF THE ASSESSMENT

8.6.1. The CIEEM guidelines recognise that an EcIA cannot consider in detail every individual species or habitat that may potentially be present at a Site or affected by a development. The EcIA process therefore aims to focus the assessment on those ecological features that could be 'significantly' affected by the Project (i.e. where the effects on the ecological features are of sufficient concern that they could influence the decision on whether or not planning permission should be consented), or for which the development could result in the contravention of relevant legislation. The EcIA process therefore includes a 'scoping' stage (which excludes those ecological features that cannot be 'significantly' affected[50]) and a 'detailed assessment' stage, which examines more closely the potential effects of the scheme on those ecological features that could be subject to 'significant' effects. Detailed assessments may also be undertaken where it is considered appropriate to examine the predicted effects on a feature in more detail, for example due to consultee comments. This section summarises the approach to the EcIA scoping stage. The outcomes of the scoping stage, i.e. features scoped out is provided in Table 8.10.

8.6.2. All the activities and consequent environmental changes associated with the construction and operation of the Project, as set out in **Chapter 4: Description of the Project** have been considered.

[49] The ZoI in this context is the area over which an individual ecological feature may be subject to a potentially significant effects resulting from changes in the baseline environment due to the Project.
[50] Based on the results of desk-studies, field surveys, consultations, the importance of the ecological feature, the presence (or not) of pathways for effects, and the measures incorporated into the scheme to avoid effects occurring.

SPATIAL SCOPE

8.6.3. The spatial scope of the assessment covers the area of the Project contained within the Site boundary and overhead line (OHL)/ grid connection corridor, together with the ZoIs that have formed the basis of the Study Area.

8.6.1. Through an understanding of the activities associated with the Project and the resulting environmental change, it is possible to identify ecological features that cannot be subject to potentially significant effects due to an absence of effect pathways, or certainty that incorporated measures will be entirely successful in preventing a significant effect occurring. In order to identify such ecological features, all the activities and consequent environmental changes associated with the construction and operation of the Project have therefore been considered.

8.6.2. The construction and operation of the Project may result in the following environmental changes, which have the potential to cause significant effects on ecological features at or near the Site. Many of these aspects will operate additively or synergistically to affect ecological features.

Construction

- Permanent or temporary habitat loss;
- Habitat degradation;
- Noise, vibration and visual disturbance from construction traffic and personnel;
- Changes in air quality – dust;
- Changes in light levels;
- Removal of trees;
- Introduction or spread of invasive non-native species (INNS); and
- Direct mortality during construction.

Operation

- Collision risk with OHL.

8.6.3. Following the operational phase, the connection (underground and overground) will be left in situ as it has the potential to become integrated into the wider distribution network. Therefore, the decommissioning stage has been scoped out of this assessment.

8.7 ECOLOGICAL IMPACT ASSESSMENT

8.7.1. This section sets out the methodology that will be followed to assess the potential ecological impacts of the Project, considering both the construction and operational phases. The construction phase includes enabling works, clearance, earthworks and construction activities.

8.7.2. Assessment methods for all potentially significant effects upon ecological features are based on the methodology described in the Guidelines for Ecological Impact Assessment in the UK (CIEEM, 2024[51]).

8.7.3. The importance and sensitivity of ecological features have been evaluated with reference to the quality or extent of designated sites or habitats, habitat or species rarity, the extent to which they are threatened throughout their range, their rate of decline, and their legal status. This level of importance was then qualified at a relevant geographical scale.

8.7.4. Effects were deemed significant if they are anticipated to affect the structure and function of a site, or impact upon the conservation status of a habitat, species or constituents of a species assemblage:

- Establishing the Study Area and Survey Area;
- Collating information on the baseline studies and evaluation of ecological receptors;
- Identification of Important Ecological Features (IEFs);
- Identification and characterisation of potential impacts;
- Identification and assessment of potentially significant effects upon IEFs; and
- Identification and assessment of residual effects.

IDENTIFICATION OF IMPORTANT ECOLOGICAL FEATURES

8.7.5. The value of sites, species and habitats will be evaluated in line with CIEEM guidelines with reference to their importance in terms of conservation value (which relates to the need to conserve representative areas of different habitats and the generic diversity of species populations) and their legal status. For the purposes of this assessment, sites, species populations, species assemblages and habitats will be valued using the following geographical scale:

- International;
- National (UK or Wales);
- County;
- Local;
- Of value/significance within the context of the Project (Site); and
- Negligible.

8.7.6. Guidelines on EcIA note the difficulty of devising valuation criteria that can be consistently applied to designated sites, species and habitats in the same way in all parts of the country. It recommends an approach to valuation that involves teasing apart the different values that can be attached to the ecological features under consideration. However, it is beneficial to give examples of the sorts of criteria used in the valuation process, and these are summarised in **Table 8.4** below.

[51] CIEEM (2024) Guidelines for Ecological Impact Assessment in the UK.

Table 8-4 - Examples of Criteria used to Evaluate Important Ecological Features

Level of Value	Definition
International	An internationally important site, e.g. SPA, SAC, or Ramsar site (or a site considered worthy of such designation); a regularly occurring population of an internationally important species (listed on Annex IV) of the Habitats Directive); 1% of the known international population of a particular species.
National/UK or National/Wales	A nationally designated site, e.g. National Nature Reserve (NNR), SSSI, Ancient Woodland, or a site considered worthy of such designation; a viable area of a habitat type listed in Annex 1 of the Habitats Directive, or smaller areas of such habitat which are essentially to maintain the viability of a larger habitat; any regularly occurring population of a nationally important species, e.g. listed on Schedules 5 and 8 of the WCA,; a feature identified to be of Principal Importance Under Section 7 of the Environment Wales Act 2016, 1% of the known UK population of a particular species.
County	Viable areas of key habitat identified in Local Biodiversity Action Plans (LBAPs) or Priority Habitat, or smaller areas of such habitat which are essential to maintain the viability of a larger whole, a site designated as a Wildlife Site or a SINC, a regularly occurring, locally significant number of a nationally important species.
Local	Designated sites including Local Nature Reserves (LNRs) designated in the local context. Trees that are protected by Tree Preservation Orders (TPOs) and areas of habitat that are considered to enrich the habitat resource in the local context (such as veteran trees), including features of value for migration, dispersal or genetic exchange.
Site	Habitats or species with some nature conservation value which, however, do not meet the criteria for attaining value at the Local level.
Negligible	No intrinsic natural conservation value associated with the habitat. Generally, these are areas of hardstanding or buildings.

8.7.7. It is impractical and inappropriate for an assessment of the ecological effects of a development to consider every species and habitat that may be affected. Instead, it focuses on IEFs which are the species and habitats present within the ZoI of the Project that are of sufficiently high value that certain impacts upon them, as a result of the Project, could result in a significant effect. In the case of this assessment, IEFs will be scoped in where pathways for potentially significant effects lie within the relevant ZoI, where an IEF holds value at a County level or above and/or where there are relevant legal considerations. All ecological features that were determined to be of ecological importance at a 'Local', 'Site' or 'Negligible' level were scoped out of the assessment at this stage.

8.7.8. The description and valuation of ecological features will consider any likely changes including, for example, trends in the population size or distribution of species, likely changes to the extent of

habitats, and the effects of other Projects or land-use changes. Due consideration will be given to ecological features scoped out of this assessment (i.e. those nature conservation sites, species and habitats below County importance) throughout the construction and operation period, with regard to legislative protection and good practice with mitigation provided, where required, as recommended within the WSP PEA report (WSP, 2025[52]).

MAGNITUDE OF POTENTIAL IMPACTS

8.7.9. Impacts arising from the Project can be permanent or temporary, direct or indirect, and can be cumulative. These factors are brought together to assess the magnitude of the impact on particular IEFs and, wherever possible, the magnitude of the impact is quantified. Professional judgement is then used to assign the impacts on the IEFs to one of four classes of magnitude, defined in **Table 8.5** below.

Table 8-5 - Magnitude of Potential Impacts

Magnitude	Definition
High	An impact that causes a permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. If adverse, this is likely to threaten its sustainability; if beneficial, this is likely to enhance its conservation status.
Medium	Impact causes a permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group or a short-term effect that will adversely affect the integrity of a receptor in a permanent manner. If adverse negative effect, this is unlikely to threaten its overall sustainability; if positive, this is likely to be sustainable but is unlikely to significantly enhance its conservation status.
Low	Impact causes a permanent or temporary, long-term reversible or short-term effect on a site, habitat, species assemblage or community, population or group whose magnitude is detectable but will not threaten/change its conservation status.
Negligible	Impact causes a short-term reversible effect on the extent, size or integrity of a site, habitat, species assemblage or community, population or group that is within the normal range of natural variation and has no discernible lasting effect.

[52] WSP (2025) Foel Trawsnant Grid Connection. Preliminary Ecological Appraisal.

8.7.10. Potential impacts are characterised initially in the absence of any mitigation, except where this is integral to the design of the Project (embedded measures).

DEFINING SIGNIFICANCE OF EFFECT

8.7.11. The significance of the predicted effects on receptors arising from the identified impacts of the Project is assessed. Significance is assessed as Adverse, Beneficial or Not Significant on the integrity of an IEF and/or the conservation status of IEFs within a given geographical area.

8.7.12. In considering the integrity and conservation status of the receptor, the key considerations are:

- Will any site/ecosystem processes be removed or changed or subject to disturbance?
- What will be the effect on the nature, extent, structure and function of component habitats?
- What will be the effect on the average population size and viability of component species?

8.7.13. In determining the significance of a potential effect, the above factors, including the value of the feature, magnitude of the potential impact, and the duration of the impact are considered.

8.7.14. Where possible, the assessment of these parameters needs to be expressed quantitatively and to be based on research and published information. However, it is also recognised that many ecological effects are complex and poorly understood, so professional and qualitative judgements are often required to prescribe the significance of the effect.

SOURCE-PATHWAY-RECEPTOR APPROACH

8.7.15. The source-pathway-receptor approach will be used to understand the mechanisms by which the Project could result in potentially significant effects upon IEFs. The approach starts by identifying potential sources of effects, defining the ZoI, and then mapping the progression of the effect along potential mitigation pathways. Where it was observed that an effect was potentially connected, via a pathway, to an ecological resource, an analysis was undertaken to assess the implications for the resource, including the likely sensitivity of the resource.

8.7.16. In order for an effect to occur, all three elements of the concept must be in place. The absence or removal of one of the elements of the concept means there is no likelihood for the effect to occur.

8.7.17. Habitats and species which may be impacted by the Project are considered to be within the relevant ZoI. The ZoI is assessed according to the anticipated construction work methods and the extent to which they can affect IEFs within and outside the boundaries of the Project. The ZoI for each ecological feature will vary depending on the nature of the ecological feature being considered and in accordance with published guidance where available.

8.8 CURRENT BASELINE

8.8.1. The ecological baseline conditions were defined during the WSP PEA (WSP, 2025[53]) and the various ecological surveys (listed in Section 8.5) that have been carried out to inform the Project. As part of the WSP PEA, an ecological desk study was carried out. The ecological desk study was completed with information requested from the South East Wales Biodiversity Records Centre (SEWBReC) in addition to an assessment of aerial imagery and Ordnance Survey mapping. The most recent site walkover was carried out over three days in September 2024 and covered the entire Survey Area (**Figure 8.1**). The results from these surveys and reports are considered to present a relevant and current baseline as ecological survey data has been collected within the typical 18-24 month window for ecological validity (CIEEM, 2019[54]).

STATUTORY SITES

8.8.2. During the desk study, three international statutory designated sites were identified within 10km of the Site. These comprised Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands Special Area of Conservation (SAC), Kenfig/Cynffig SAC and Blackmill Woodlands SAC. A brief description of these sites and the distance they lie from the Site is provided in **Table 8.6** and shown on **Figure 8.2**. Full descriptions can be found within the WSP PEA. The desk study did not return any national statutory designated sites within 2km of the Site.

8.8.3. During the WSP PEA, it was considered that there were no impact pathways present between any international statutory designated sites and the Site.

8.8.4. These international statutory designated sites are of **International conservation importance**.

Table 8-6 - International statutory designated sites within 10km of the Site

Site name	Designation	Size (ha)	Approximate distance and orientation from the Site	Description
Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands	Special Area of Conservation (SAC)	58.19	4.3km south	The site is designated for the following Annex I habitat that is a primary reason for selection of this site: ▪ Purple moor-grass *Molinia caerulea* meadows on calcareous, peaty or clayey-silt-laden soils.

[53] WSP (2025) Foel Trawsnant Grid Connection. Preliminary Ecological Appraisal.
[54] CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports & Surveys. CIEEM.

Site name	Designation	Size (ha)	Approximate distance and orientation from the Site	Description
				The following Annex II species are also present as a qualifying feature, but not a primary reason for site selection: ▪ Marsh fritillary butterfly *Euphydryas aurinia*.
Kenfig/Cynffig	SAC	1190.8	6.1km south-west	The site is designated for the following Annex I habitats that are a primary reason for selection of this site: ▪ Fixed coastal dunes with herbaceous vegetation ("grey dunes"). ▪ Humid dune slacks. ▪ Hard oligo-mesotrophic waters with benthic vegetation of musk-grass *Chara spp.* The following Annex I habitats are also present as a qualifying feature, but not a primary reason for site selection: ▪ Atlantic salt meadows *Glauco-Puccinellietalia maritimae*. The site is designated for the following Annex II species that are a primary reason for selection of this site: ▪ Petalwort *Petalophyllum ralfsii.* ▪ Fen orchid *Liparis loeselii*.
Blackmill Woodlands	SAC	70.56	8.2 km south-east	The site is designated for the following Annex I habitat that is a primary reason for selection of this site: ▪ Old sessile oak *Quercus petraea* woods with holly *Ilex* and hard fern *Blechnum*.

NON-STATUTORY SITES

8.8.5. A total of 22 non-statutory nature conservation sites were located within 2km of the Site. These are shown on **Figure 8.3**.

8.8.6. Of these, the WSP PEA identified five SINC sites which would be directly impacted by the Project as they lie within the Site. Furthermore, an additional five SINCs lie within 50m of the Site and are therefore vulnerable to air quality related impacts during construction in the absence of mitigation.

8.8.7. A brief description of the 10 SINC sites where impacts are anticipated and the distance they lie from the Site are provided in **Table 8.7**. Full descriptions of all SINCs within 2km can be found within the WSP PEA. The remainder have been scoped out of the EcIA and the reader should refer to the WSP PEA for their details.

8.8.8. The nature conservation value for SINC sites is considered to be of **County conservation importance**.

Table 8-7 - Non-statutory designated sites within 2km of the Site

Site name	Designation	Approximate distance from the Site	Description
Abercerdin Wood	SINC	Within the Site.	Broad-leaved semi-natural woodland, unimproved neutral grassland, semi-improved neutral grassland, acid/neutral geological outcrop.
Caerau West	SINC	Within the Site.	Marsh/marshy grassland, flush spring and acid/neutral flush, sphagnum blanket bog, sphagnum wet modified bog, wet dwarf shrub heath, dry heath acid mosaic, dry dwarf shrub heath, semi-improved acid grassland, scattered bracken *Pteridium aquilinum*.
Cwm Cerdin	SINC	Within the Site.	Broad-leaved semi-natural woodland, unimproved neutral grassland, tall herb fern interspersed in improved grassland.
Gilfach Uchaf	SINC	Within the Site.	Marsh/marshy grassland, semi-improved acid grassland, acid dry dwarf shrub heath, natural acid/neutral rock exposure.
Nant-y-Castell Grasslands	SINC	Within the Site.	Unimproved neutral grassland, dense continuous bracken.
Sychbant Fields	SINC	0.2 km west	Dry dwarf shrub heath (acid).
Y Parc (south)	SINC	0.4 km north	Broad-leaved semi-natural woodland, marsh/marshy grassland, semi-improved neutral grassland, dense continuous scrub, wet dwarf shrub heath, blanket bog, unimproved neutral grassland.
Waun-y-Gilfach woods	SINC	0.4 km east	Broad-leaved semi-natural woodland, marsh/marshy grassland.

Site name	Designation	Approximate distance from the Site	Description
Y Parc (north)	SINC	0.4 km north	Broad-leaved semi-natural woodland, wet and dry dwarf heath with scattered bracken, semi-improved acid grassland, unimproved neutral grassland, wet modified *Sphagnum* bog, marsh/marshy grassland, dense continuous scrub.
Cwm Sychbant	SINC	0.4 km north	Semi-improved neutral grassland, broad-leaved seminatural woodland, marsh/marshy grassland, dense continuous bracken, coniferous plantation.

OTHER HABITATS OF CONSERVATION IMPORTANCE

8.8.9. A total of 39 parcels of Ancient Woodland Inventory (AWI) were identified within 1km of the Site as part of the desk study. Of these, one AWI parcel - an Ancient Semi-Natural Woodland (ASNW) - was identified in the southern extent of the Survey Area, spanning both banks of the Nant Lluest-Wen, which flows through the Site.

8.8.10. AWI parcels are irreplaceable habitats and are of **National conservation importance** due to the significant amount of time that it would take to mitigate for the removal of a parcel.

8.8.11. Eight Priority Habitats were identified within the Survey Area during the Phase 1 habitat survey carried out as an element of the WSP PEA:

- Lowland dry acid grassland;
- Lowland fen;
- Purple moor-grass and rush pasture;
- Upland oakwoods;
- Wet woodland;
- Lowland mixed deciduous woodland;
- Hedgerows; and
- Rivers (including the Nant Lluest-Wen and Nant y Castell).

8.8.12. Of these, there is loss of habitat anticipated within parcels of priority habitat. There is potential for habitat degradation via air quality impacts and/or hydrological pollution (rivers).

8.8.13. The network of Priority Habitats within Wales is of **County conservation importance**, reflected by their inclusion on Section 7 of the Environment (Wales) Act 2026. The conservation value of specific habitats within the Site is discussed in **Table 8.8** below.

ON-SITE HABITATS

8.8.14. A total of 19 Phase 1 habitat types were identified within the Survey Area during the Phase 1 habitat survey, carried out as part of the WSP PEA. They are mapped on **Figure 8.4** and are listed in **Table 8.8** along with areas in hectares (or length for linear features). A description of the dominant and notable species, the composition and management of each habitat is provided within the WSP PEA

report. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification (JNCC, 2016[55]). The order of the habitat descriptions below reflects their ordering in the Phase 1 habitat survey manual and does not reflect habitat importance. The conservation value of specific habitats within the Site is discussed in **Table 8.8** below.

[55] Joint Nature Conservation Committee (JNCC) (2016). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.

Table 8-8 - Phase 1 Habitat Areas within the Survey Area and their conservation value

Phase 1 Habitat	Habitat description	Nature conservation value	Area (ha)	Length (m)	% of Site Area
A1.1.1 – Broadleaved woodland – Semi-natural	Five parcels of semi-natural broadleaved woodland were recorded within the Survey Area. Four of which have been classified as Priority Habitats, including one parcel of upland oakwoods and one wet woodland in poor condition. Two parcels of lowland mixed deciduous woodland, one of which was also listed as ancient woodland and forming part of the Cwm Cerdin SINC, were present in the Survey Area.	All parcels which qualified as Priority Habitats have **County importance**. This also includes the woodland parcel which lies within Cwm Cerdin SINC. The ancient woodland parcel has **National importance**.	3.59	-	7.93
A1.1.2 – Broadleaved woodland – Plantation	One parcel of plantation broadleaved woodland has been recorded within the Survey Area comprising mature and semi mature hazel *Corylus avellana*, beech *Fagus sylvatica* and sessile oak.	This habitat has **Site importance**.	0.45	-	0.99
A1.2.2 – Coniferous woodland – Plantation	Two parcels of coniferous woodland plantation have been identified within the Survey Area comprising mature larch *Larix decidua*.	This habitat has **Site importance**.	0.11	-	0.25
A1.3.2 – Mixed woodland – Plantation	One area of plantation mixed woodland was identified in the far south of the Survey Area. Species were dominated by larch and sessile oak. This habitat parcel is considered likely to have been planted following felling.	This habitat has **Site importance**.	0.35	-	0.76

Phase 1 Habitat	Habitat description	Nature conservation value	Area (ha)	Length (m)	% of Site Area
A2.1 – Scrub – Dense/continuous	Parcels of dense/continuous scrub were identified within the southern section of the Survey Area. The majority of these formed field boundaries, comprising dense gorse *Ulex europaeus* scrub. One of these parcels was on an earth bank.	This habitat has **Site importance**.	0.27	-	0.46
A2.2 – Scrub – Scattered*	A small parcel of scattered scrub was identified in the northern section the Survey Area, where scattered gorse was present over bracken. In the southern section, a parcel of scattered willow scrub was identified with semi-mature trees present.	This habitat has **Site importance**.	0.11	-	0.23
A3.1 – Broadleaved parkland/scattered trees	Several lines of trees were identified within the Survey Area, all in the southern section. These lines of trees formed boundary features between fields, watercourses and roads. Each of these lines of trees was assessed as qualifying as the Priority Habitat 'hedgerows,' and may qualify as Important Hedgerows under the Hedgerows Regulations 1997.	These habitats have **County importance**.	-	502.72[56]	-

[56] Broadleaved parkland/scattered trees in this case were present as a linear feature and therefore have been measured in metres.

Phase 1 Habitat	Habitat description	Nature conservation value	Area (ha)	Length (m)	% of Site Area
B1.2 – Acid grassland – Semi-improved	Semi-improved acid grassland was recorded in the northern and southern section of the Survey Area. In the northern section, the semi-improved acid grassland was sheep-grazed, with abundant common bent *Agrostis capillaris* and occasional sheep's-fescue *Festuca ovina*. Heath species, including heather *Calluna vulgaris*, heath bedstraw *Galium saxatile*, bell heather *Erica cinerea*, and bilberry *Vaccinium myrtillus*, were recorded throughout the habitat parcel. The semi-improved acid grassland in the northern section of the Site was identified according to DataMapWales as a Priority Habitat, comprising lowland dry acid grassland and upland heathland. Given the abundance of species present, the habitat was assessed as qualifying as the Priority Habitat 'lowland dry acid grassland'. Semi-improved acid grassland in the southern section were also sheep grazed. Perennial rye-grass *Lolium perenne* was abundant, indicating improvement. Sweet vernal-grass *Anthoxanthum odoratum* and sheep's fescue were occasional, and common bent was rare. Species indicative of acidic conditions, such as tormentil *Potentilla erecta* and sheep's sorrel *Rumex acetosella* were recorded.	The semi-improved acid grassland in the northern section of the Site habitat has **County importance.** The semi-improved acid grassland in the southern section of the Site was not considered to qualify as a Priority Habitat and has **Local importance.**	5.00	-	11.05
B4 – Improved grassland	Improved grassland was also recorded in the Survey Area. Much of the habitat was dominated by perennial	This habitat has **Site importance**.	17.78	-	39.25

Phase 1 Habitat	Habitat description	Nature conservation value	Area (ha)	Length (m)	% of Site Area
	rye-grass, with a short, homogenous sward height. Some areas of improved grassland were less grazed, with a taller sward height and with sweet-vernal grass and creeping bent *Agrostis stolonifera* also recorded.				
B5 – Marshy grassland	Marshy grasslands were identified in the northern and southern sections of the Survey Area. Cattle and sheep-grazing was evident within some of the habitat parcels. A range of species were recorded including purple moor-grass, soft rush, Yorkshire-fog *Holcus lanatus*, marsh thistle *Cirsium palustre*, rosebay willowherb *Chamaenerion angustifolium*, and common ragwort *Jacobaea vulgaris*. Some of the marshy grassland parcels were identified in DataMapWales as qualifying as the Priority Habitat 'upland flushes, fens and swamps'. However, as the habitat was assessed during the Phase 1 habitat survey as being species-poor, it was found not to qualify as a Priority Habitat. A parcel of marshy grassland was identified around a minor stream in the northern section of the Survey Area. The tall sward height was dominated by soft rush, with occasional purple moor-grass, Yorkshire-fog, and foxglove *Digitalis purpurea*. DataMapWales identified this area as belonging to the Priority Habitat 'lowland fens and reedbeds'. The habitat parcel was assessed as being a poor-quality lowland fen and thus qualifying as a Priority Habitat.	The areas of marshy grassland identified during the Phase 1 survey as Priority Habitat have **County importance**. The species-poor marshy grassland habitats which do not qualify as Priority Habitat are of **Local importance**.	12.08	-	26.68

Phase 1 Habitat	Habitat description	Nature conservation value	Area (ha)	Length (m)	% of Site Area
B6 – Poor semi-improved grassland	Sheep-grazed poor semi-improved grassland were identified in the northern and southern sections of the Survey Area.	This habitat has **Site importance**.	3.50	-	7.74
C1.1 – Bracken – Continuous	Dense, continuous bracken was identified throughout the Survey Area.	This habitat has **Site importance**.	0.96	-	2.12
C1.2 – Bracken – Scattered*	Scattered bracken habitats were present in the southern section of the Survey Area.	This habitat has **Site importance**.	0.90	-	-
C3.1 – Other tall herb and fern – ruderal	Parcels of tall herb and fern – ruderal habitat were recorded in the southern section of the Survey Area.	This habitat has **Site importance**.	0.09	-	0.20
G2 – Running water	Running water habitats were found throughout the Survey Area. This included streams of various size and depth. A wet ditch with a slow flow was also recorded. All running water within the Site was classified as the Priority Habitat 'river'.	All river habitat within the Site has **County importance**.	-	1,688.11	-
HS - Hardstanding	Small areas of unvegetated roads formed the hardstanding habitats, all within the southern section of the Survey Area.	These areas have **Negligible importance**.	0.14	-	0.31
J2.1.2 – Species-poor intact hedge	Several species-poor intact hedges were recorded, all within the southern section of the Survey Area. This included hedgerows with no signs of recent flaying and an unmanaged relict hedgerow. Species within the	All Priority Habitat hedgerows form part of the hedgerow network of **County importance**.	-	559.68	-

Phase 1 Habitat	Habitat description	Nature conservation value	Area (ha)	Length (m)	% of Site Area
	hedgerows included hazel, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus* agg. The hedgerows within the Site qualify as 'hedgerow' Priority Habitat and may qualify as Important Hedgerows under the Hedgerows Regulations 1997.				
J2.5 – Wall	Dry stone walls were recorded throughout the Survey Area. These were mostly in poor condition, and were collapsed in places and vegetated with grasses, ferns and bramble.	This habitat has **Site importance**.	-	764.40	-
J2.6 – Dry ditch	One dry ditch was recorded in the northern section of the Survey Area, within an area of marshy grassland. In the southern section of the Survey Area a dry ditch was recorded north of Nant Lluest-Wen SINC and appeared to be seasonally wet with some stones in the bed. The dry ditches do not qualify as Priority Habitats.	This habitat has **Site importance**.	-	272.93	-
Total			**42.29**	**3787.84**	**100**
*A2.2 and C1.2 represent scattered habitats overlaid over another habitat type, therefore, these are subtracted from the total area.					

PROTECTED SPECIES

BATS

8.8.24. A total of 31 records of at least eight different bat species were returned during the desk study comprising:

- Brown long-eared bat *Plecotus auritus*;
- Common pipistrelle *Pipistrellus pipistrellus*;
- Daubenton's bat *Myotis daubentonii*;
- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Natterer's bat *Myotis nattereri*;
- Noctule bat *Nyctalus noctule*; and
- Soprano pipistrelle *Pipistrellus pygmaeus*.

8.8.25. The desk study also returned records of bats that were not identified to species level: pipistrelle bat species *Pipistrellus* sp., myotis bat species *Myotis* sp. and unknown bat species *Chiroptera* sp.

8.8.26. The closest bat record was for a myotis bat 428m east of the southern section of the Site.

8.8.27. During the Phase 1 habitat survey, a daytime bat walkover (DBW) was carried out, which identified trees within the Survey Area with suitability to support roosting bats. There were no buildings or structures identified within the Survey Area with potential to support roosting bats.

8.8.28. Three trees were identified with the potential to support roosting bats. These were all in the southern section of the Survey Area, between the Nant Lluest-Wen and Nant y Castell watercourses, shown on **Figure 8.4**:

- Tree 1 was a mature sessile oak adjacent to a fence line. A tear-out wound was identified on the south side of the tree, extending upwards into two chambers and downwards;
- Tree 2 was along the same tree line to the east. Again, it was a mature sessile oak with a tear-out wound; and
- Tree 3 was slightly to the south and was the westernmost sessile oak in the tree line. It was twin-stemmed and on the south stem a wound hosted an active bees' nest which could extend further beyond this. On the north stem there were two woodpecker *Dendrocopos major* holes with old nest material inside.

8.8.29. These trees will not be subject to direct removal. Impacts will be limited to looping of branches, should the trees be located within 4m of a wooden pole location.

8.8.30. The Survey Area provides some suitable habitat for foraging and commuting bats in the form of dense scrub, woodland, and linear habitats such as running water, tree lines and hedgerows.

8.8.31. Out of the species recorded in the desk study, soprano pipistrelle, common pipistrelle and brown long-eared bats are widespread species of bat across the southwest of England and South Wales. Daubenton's bats are a widespread species in many geographies across the southwest of England and South Wales, although are not abundant in all areas. Lesser horseshoe bats have a rarer or

restricted distribution. Natterer's bats are widespread in many geographies, but not as abundant in all. Greater horseshoe bat is listed as a very rare species (Reason, P.F. and Wray, S., 2023[57]).

8.8.32. Further automated monitoring surveys and close inspections surveys of trees within the Project are currently underway and data from these surveys will be included in the Final ES.

8.8.33. Bats are protected by legislation at the national level. Based on the desk study results and the habitats present on Site, the bat assemblage using the Site for foraging, commuting and roosting purposes is considered to be of **County conservation importance**. This is based on the DBW only and awaits further assessment. The valuation will be refined following the results of the recommended further surveys.

Badger

8.8.34. Two records of badger *Meles meles* within 2km of the Site were returned by the desk study in the last 10 years. The nearest badger record was 1.09km east of the southern section of the Site.

8.8.35. No evidence of badger was present during the field survey. However, suitable habitat for commuting, foraging and sett-building existed within the Survey Area in the form of grassland, scrub and woodland, particularly in the southern extent.

8.8.36. While badgers are protected under legislation at the national level, they are common and widespread in South Wales. The results of the desk study confirm widespread presence locally, and it is reasonable to assume that the Site is suitable for supporting badgers. For this reason, badger social groups potentially occupying habitat on Site are considered to be of **Site conservation importance**.

8.8.37. Due to the legal protection afforded to this species, measures to avoid impacts to badger will form part of the mitigation for the Project.

Dormouse

8.8.38. One record of dormouse *Muscardinus avellanarius* within 2km of the Site was returned by the desk study in the last 10 years, 1.8km east of the southern section of the Site.

8.8.39. Dormouse surveys conducted by CSA Environmental in support of the Project in 2024 found no dormice or evidence of dormice, and therefore dormice are considered likely absent from the Survey Area (CSA Environmental, 2024b[58]) and have therefore been scoped out of the assessment. Given

[57] Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.
[58] CSA Environmental (2024c). Dormouse Survey Report - Foel Trawsnant Wind Farm, Maesteg. November 2024.

the suitability of the habitat within the Site for dormice, precautionary measures to avoid impacts to dormice will form part of the mitigation for the Project as detailed within the WSP PEA.

Otter

8.8.40. A total of three records of otter within 2km of the Site were returned by the desk study in the last 10 years. The nearest otter record was 873m west of the northern section of the Site.

8.8.41. There was no evidence of otter within the Site during the field survey, and no potential resting sites were identified, although a thorough search of all watercourses and a buffer appropriate to otter was beyond the scope of this survey and was therefore not conducted.

8.8.42. Watercourses throughout the Survey Area were considered to be suitable to support commuting and resting otter, with watercourses in the southern section of the Survey Area also suitable to support foraging otter due to the likely presence of fish. Riparian habitats, notably the woodland habitats adjacent to watercourses in the southern section of the Survey Area, were also considered suitable to support commuting and resting otter.

8.8.43. Further otter surveys are underway, and this data will be included in the Final ES.

8.8.44. Otters are protected under legislation at the national level. Otters are widespread within Wales, although there is evidence indicating a recent population decline[59]. In this context, given the desk study results and habitats present on Site, otters are considered to be of **County conservation importance**. This valuation will be refined following the results of the recommended further surveys.

Water vole

8.8.45. There were no records of water vole *Arvicola amphibius* within 2km of the Site returned by the desk study in the last 10 years.

8.8.46. Slow-moving waterbodies within both the northern and the southern sections of the Survey Area were considered suitable to support water vole. Suitable vegetation to support water vole was identified, with exposed areas of banks that would provide suitable burrowing habitat.

8.8.47. CSA Environmental (2024c[60]) carried out two water vole surveys within the Survey Area in 2024. The first of these surveys identified evidence of water vole in the northern-most section of running water in the northern section of the Site. It was considered likely that water vole are present in the surrounding areas due to the suitability of the habitat, which includes acid and marshy grassland. The second of the two water vole surveys found water vole signs in this area to be lower in

[59] Kean EF, and Chadwick EA 2021. Otter Survey of Wales 2015-2018. NRW Report No: 519, NRW.

[60] CSA Environmental (2024c). Water Vole Survey Report - Foel Trawsnant Wind Farm. November 2024.

frequency (CSA Environmental, 2024c). The water vole surveys did not identify any evidence of water voles in the southern section of the Site.

8.8.48. Water vole are protected under legislation at the national level and are declining in Wales. Water voles have restricted distribution across Wales. In this context, given the presence of water vole on Site and habitats present, water vole are considered to be of **National conservation importance**.

OTHER MAMMALS

8.8.49. One record of brown hare *Lepus europaeus* was returned during the desk study, 1.7km south-east of the southern section of the Survey Area. Although no evidence of brown hare was observed during the field survey, the Survey Area has habitats considered suitable to support brown hare, with a mosaic of grass fields and hedgerows, and some woodland edges.

8.8.50. A total of ten records of hedgehog *Erinaceus europaeus* within 2km of the Site were returned by the desk study in the last 10 years. Nine of these were in residential areas around the Survey Area, with one in coniferous woodland west of the southern section of the Survey Area. Although no evidence of hedgehog was observed during the field survey, habitats within the Survey Area are considered suitable to support hedgehogs included grasslands, hedgerows, and woodlands.

8.8.51. CSA Environmental identified two records of harvest mouse *Micromys minutus* 0.01 km east of the Site in 2008 and 2009 (CSA Environmental, 2024a). Although no evidence of harvest mouse was observed during the field study, marshy grassland habitats within the Survey Area were considered suitable to support harvest mouse.

8.8.52. Brown hare, hedgehogs and harvest mice are afforded protection through legislation and/or policy up to the national level. Brown hare and hedgehog numbers are stable across Wales (Mammal Society, 2021[61]). There is deficient data to assess the population trends of bats and harvest mice (Mammal Society, 2021). Owing to the extent of similar or more suitable habitat outside the Site, any populations within the Site are considered to be of **Site conservation importance**.

PROTECTED AND NOTABLE BIRDS

8.8.53. In total, the desk study returned 906 records of 53 protected and/or notable bird species within 2km of the Site.

8.8.54. A total of 22 of these species are listed on Schedule 1 of the WCA, with 21 bird species are listed on Part 1 (protected at all times) of Schedule 1, and one bird species, notably pintail *Anas acuta*, is listed on Part 2 (protected during the close season) of Schedule 1. Examples of those listed on Part 1 include barn owl *Tyto alba,* marsh harrier *Circus aeruginosus,* and merlin *Falco columbarius.*

[61] Mammal Society (2021). The State of Mammals in Wales - A report by the Mammal Society for Natural Resources Wales.

Honey buzzard *Pernis apivorus*, also listed on Schedule 1, is known to be present within the wider area.

8.8.55. Nightjar, listed on Annex 1 of the Birds Directive, is known to be present in the wider area around the Site, and forages in open areas adjacent to forests.

8.8.56. A total of 31 bird species (of the 53 species returned from the desk study) are listed as Priority Species in accordance with Section 7 of the Environment (Wales) Act 2016. These include curlew *Numenius arquata,* lapwing *Vanellus vanellus*, and yellowhammer *Emberiza citrinella.*

8.8.57. During the Phase 1 habitat survey, seven bird species were sighted or heard. These species were:

- Dipper *Cinclus cinclus*;
- Red kite *Milvus milvus* (Schedule 1 of the WCA);
- Swift *Apus apus* (listed on the Birds of Conservation Concern 4 Wales (BoCC4W) – Red List (BoCC, 2022));
- House martin *Selichon urbicum* (BoCC4W – Amber List);
- Skylark *Alauda arvensis* (Priority Species, BoCC4W – Amber List);
- Wheatear *Oenanthe oenanthe* (BoCC4W – Amber List); and
- Meadow pipit *Anthus pratensis* (BoCC4W – Red List).

8.8.58. An initial scoping survey for birds was undertaken in January 2025. During the survey an ornithologist assessed the suitability of habitats on Site for supporting protected or notable species of birds. Habitats were recorded suitable for supporting species of raptor, with habitat suitable for supporting moorland species, including nightjar. A suite of surveys is underway, comprising winter raptor surveys, breeding raptor surveys, Vantage Point flight activity surveys, moorland bird surveys and nightjar surveys.

8.8.59. The habitats within the Survey Area were considered suitable for common and widespread breeding birds. Owing to extent of similar habitat outside the Site, and the opportunistic nature of nesting birds, any populations of common and widespread breeding birds within the Site are considered to be of **Local conservation importance** or below.

8.8.60. It was also considered that some species listed on Schedule 1 of the WCA, such as red kite and honey buzzard, may nest in the habitats in the southern section of the Site. Furthermore, habitats were identified with suitability for supporting moorland species including nightjar. Owing to the declining status of these species they are considered to be of **National conservation importance**. This valuation will be refined following the results of the further surveys.

AMPHIBIANS

8.8.61. Six records of common frog *Rana temporaria,* four records of common toad *Bufo bufo*, and six records of palmate newt *Lissotriton helveticus* within 2km of the Site were returned during the desk study.

8.8.62. The Site is on the boundary of the known range of GCN in Wales (French et al., 2014[62]). The eDNA surveys carried out by CSA Environmental returned negative results for GCN in four suitable ponds within 500 m of the Site (CSA Environmental, 2024d). Therefore, it is considered very unlikely that GCN will be present within the Survey Area and, as such, have been scoped out from further assessment.

8.8.63. During the Phase 1 habitat survey, no amphibians nor evidence of amphibians were identified, however, suitable terrestrial habitat for common and widespread amphibian species (e.g. common frog and common toad) existed within the Survey Area in the form of scrub, grassland, and woodland habitat. Brash piles adjacent to the woodland ride in the southern section of the Survey Area were recorded as potential refugia. Slow flowing waterbodies are also suitable for breeding common and widespread amphibians, in both the northern and southern sections of the Survey Area.

8.8.64. Common or widespread amphibians (e.g. common toad, common frog, and palmate) are afforded a level of protection by legislation at a national level. Amphibians are widespread in Wales, although there is evidence indicating decline of several native amphibian species including all native species of newt and common toad (Humphreys, E., et al., 2011[63]). Common frog populations have been recorded as stable since the 1970s. Owing to the extent of similar or more suitable habitat outside the Site, the amphibian population within the Site is considered to be of **Local conservation importance**.

REPTILES

8.8.65. Fifteen records of adder *Vipera berus,* 20 records of common lizard *Zootoca vivipara*, nine records of grass snake *Natrix helvetica*, and six records of slow worm *Anguis fragilis* within 2km of the Site were returned by the desk study in the last 10 years. The nearest common lizard record was 21m west of the southern-most point of the Site. All other reptile records were at least 1.2km from the Site.

8.8.66. No evidence of reptiles was identified during the field survey. The habitats within the Survey Area were considered to provide suitability to support reptile species, with lower suitability in the southern section of the Survey Area due to a short sward height within grassland fields. As the habitats on Site are suitable for reptiles they are assumed to be present although they are unlikely to occur at high densities in the habitats affected.

[62] French GCA, Wilkinson JW, Fletcher DH, and Arnell AP Amphibian and Reptile Conservation Trust (2014). Quantifying the Status of Great Crested Newts in Wales. Natural Resources Wales.
[63] Humphreys, E., Toms, M., Newson, S., Baker, J. and Wormald, K. (2011). An examination of reptile and amphibian populations in gardens, the factors influencing garden use and the role of a 'Citizen Science' approach for monitoring their populations within this habitat. British Trust for Ornithology

8.8.67. Brash piles adjacent to the woodland ride in the southern section of the Survey Area and stone walls throughout the Survey Area were considered to be potential refugia.

8.8.68. Reptiles are protected by legislation at a national level. Reptiles are widespread in Wales, although there is evidence indicating decline of all native reptile species (Humphreys, E., et al., 2011). Owing to the extent of habitat within the Site with suitability for supporting reptiles, the reptile population within the Site is considered to be of **County conservation importance**.

FISH

8.8.69. One record of a fish within 2km of the Site was returned by the desk study in the last 10 years. This species was the brown trout *Salmo trutta* and the record was 596m east of the Site, within the Afon Llynfi. Streams within the Site are hydrologically connected to the Afon Llynfi. The streams within the southern section of the Site are considered suitable to support brown trout. However, due to the low flow and dense vegetation in the streams in the northern section of the Site, these are not considered suitable to support brown trout.

8.8.70. Brown trout are protected under the Salmon and Freshwater Fisheries Act 1975. Owing to the restricted extent of habitats within the Site, the fish population within the Site is considered to be of **Local conservation importance**.

INVERTEBRATES

8.8.71. A total of 50 invertebrate species which are listed as Priority Species in accordance with Section 7 of the Environment (Wales) Act 2016 were returned during the desk study within 2km of the Site. These species included small heath *Coenonympha pamphilus*, anomalous *Stilbia anomala*, autumnal rustic *Eugnorisma glareosa*, flounced chestnut *Anchoscelis helvola*, neglected rustic *Xestia castanea*, sallow *Cirrhia icteritia*, and small phoenix *Ecliptopera silaceata.*

8.8.72. Habitats considered suitable to support many of these invertebrate species were present within the Survey Area. For example, heathland supports small heath, woodland fringes support autumnal rustic, woodland supports flounced chestnut, and woodlands with willowherbs support small phoenix. Watercourses on Site were also considered suitable for supporting common and widespread aquatic invertebrates. In general, the areas of woodland, scrub, grassland and watercourses present with the Survey Area were considered suitable to support mainly common invertebrate species. Habitats suitable to support some of the Priority Species returned by the desk study are present within the Survey Area.

8.8.73. Owing to the extent of similar or more suitable habitat outside the Site, the terrestrial and aquatic invertebrate population within the Site is considered to be of **Site conservation importance**.

NOTABLE PLANTS

8.8.74. Three notable plant species were returned during the desk study including bluebell *Hyacinthoides non-scripta*, listed on Schedule 8 of the WCA. Two additional notable plant species that are Priority Species in accordance with Section 7 of the Environment (Wales) Act 2016 were also returned - chamomile *Chamaemelum nobile* and pennyroyal *Mentha pulegium*.

8.8.75. No notable plant species listed on Schedule 8 of the WCA or Section 7 of the Environment (Wales) Act 2016 were identified during the field survey and, although the field survey was carried out over a short period of time, it was carried out during the optimal season for botanical survey. Bluebell was recorded during the field survey, however, this was the hybrid between the native and non-native bluebell which is not protected by the WCA. The field survey was carried out towards the end of the optimal season for botanical survey and would be expected to have recorded the majority of any notable plant species should they have been present, with the exception of any early flowering plants such as the native bluebell which, as such, may have been present within the woodland habitats in the Survey Area, but undetected.

8.8.76. Owing to lack of notable plants being recorded within the Survey Area, they are scoped out from further assessment.

INNS

8.8.77. Ten INNS listed on Schedule 9 of the WCA were returned during the desk study within 2 km of the Site: curly waterweed *Lagarosiphon major,* entire-leaved cotoneaster *Cotoneaster integrifolius*, Himalayan cotoneaster *Cotoneaster simonsii*, hollyberry cotoneaster *Cotoneaster bullatus*, Indian balsam *Impatiens glandulifera*, Japanese knotweed *Reynoutria japonica,* variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum,* montbretia *Crocosmia x crocosmiiflora*, rhododendron *Rhododendron ponticum* and wall cotoneaster *Cotoneaster horizontalis.* Curly waterweed and Indian balsam are listed on Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019 which supersedes Schedule 9 for those INNS listed on it.

8.8.78. During the field survey, two plant INNS were recorded within the Site: Japanese knotweed and Indian balsam. Furthermore, all habitats within the Survey Area were considered suitable to support INNS.

8.8.79. Eighteen records of harlequin ladybird *Harmonia axyridis*, an invertebrate species considered to be invasive, were also returned during the desk study.

FUTURE BASELINE

8.8.80. Determining a future baseline draws upon information about the likely future use and management of the Site in the absence of the Project, known population trends (for species), climate change and any other Projects (consented or otherwise) that may act cumulatively to affect ecological features.

8.8.81. The State of Mammals in Wales report (Mammal Society, 2021) identifies that badger, dormouse, brown hare and hedgehog numbers are stable across Wales, with otter numbers increasing. Although for certain species, such as otter, other data sources indicate decline (NRW, 2021). The State of Mammals in Wales report finds that there is deficient data to assess the population trends of bats and harvest mice. This was because of changes in survey methodology over time and a general lack of monitoring information.

8.8.82. The Plant Atlas summary report (BSBI, 2020) identified that INNS are increasing in abundance within Wales. As INNS have been identified within the Site, these are likely to spread further and increase in abundance if left unmanaged and eventually will degrade the Site's conservation value.

8.8.83. In the absence of further data or analysis, the future baseline in the absence of the Project is unlikely to be markedly different from the current baseline, as land use/management within the Site is anticipated to remain largely unchanged. It is therefore considered appropriate to use the current baseline for the purpose of this assessment.

8.9 EMBEDDED MEASURES

8.9.1. A range of environmental measures have been embedded into the Project as outlined in **Chapter 11: Summary of Significant Effects**. Embedded measures are measures that will be implemented as part of the Project regardless of the requirement for ecological mitigation/assessment outcomes, for example as a result of legislative requirements and/or standard best practice and, as such, the subsequent EcIA assumes they are in place. **Table 8.9** outlines how these embedded measures influence the assessment.

Table 8-9 - Summary of Embedded Measures

Potential impact	Zone of Influence (ZoI)	Embedded measures	Ecological Features Impacted	Compliance mechanism
Construction				
Habitat loss (temporary)	Within the construction footprint.	Habitat loss will be avoided in the first instance to minimise the overall habitat loss resulting from the Project. Where habitats are subject to temporary loss, these will be replaced as soon as possible following construction. Disturbance to features that could support reptiles or amphibians (e.g. scrub, dense tussocky grassland, rocks) will be kept to a minimum, and works in these areas will take place outside the hibernation period for those species. Poles will be stored at the temporary construction compound and transported to the works area on the day of installation. See **Chapter 4: Description of the Project** and **Chapter 6: Landscape and Visual**	Direct and temporary habitat loss within construction zone; temporary loss of habitat for protected species including bats, badgers, otter, brown hare, hedgehog, harvest mouse, reptiles, amphibians, birds, invertebrates and plant species of notable interest. Temporary loss of habitat within parcels of ancient woodland, SINC and Priority Habitat.	Construction Environmental Management Plan (CEMP)

Potential impact	Zone of Influence (ZoI)	Embedded measures	Ecological Features Impacted	Compliance mechanism
		for habitats to be lost, replaced and created.		
Habitat degradation	Hydrological pollution and contamination incidents within 2km.	See embedded measures to manage pollution associated with air quality, hydrology, noise, vibration and visual. Construction works would be undertaken using all necessary and practical measures to minimise the release of additional sediment-laden run-off into nearby watercourses.	Priority Habitat, ancient woodland and SINCs within 2km. Habitats with hydrological connections to the Project, within 2km, including those that support protected or notable species. Impacts to watercourses: Nant-y-Castell, Nant Lluest-wen (leading into Nant Sychbant and Nant y Cerdin) and any associated protected species.	CEMP
Habitat fragmentation	Within the construction footprint.	Where habitats are subject to temporary loss, these will be replaced as soon as possible following construction. The OHL would be located predominantly in open grassland fields. Micro-siting will be used to avoid impacts to hedgerows, tree lines and watercourse, avoiding direct impacts to these habitats. See Chapter 4: Description of the Project and Chapter 6: Landscape and Visual for habitats to be lost, replaced and created.	Habitat fragmentation within the construction zone for protected species including bats, badgers, otter, brown hare, hedgehog, harvest mouse, reptiles, amphibians, birds and invertebrates	CEMP
Noise, vibration and visual disturbance from construction traffic and personnel	Construction footprint and up to 250 m from construction zone.	Construction works would be undertaken using all necessary and practical measures to minimise the noise, vibration and visual disturbance. Construction works will take place between 07:00 to 19:00 hours on weekdays and 07:00 to 13:00 on	Temporary disturbance to otters. Otters are highly mobile and may be sensitive to disturbance at up to 200m when breeding	Noise and Vibration Management Plan via CEMP

Potential impact	Zone of Influence (ZoI)	Embedded measures	Ecological Features Impacted	Compliance mechanism
		Saturdays. In exceptions, there may be a requirement for a 7-day work week. This would be agreed with the local council as appropriate. Full measures to address noise, vibration and visual disturbance are detailed in the CEMP (**Appendix 4A**).	(Scottish National Heritage[64]). Other protected species such as bats, badgers, water vole, brown hare, hedgehog, harvest mouse, reptiles, amphibians and breeding birds are also susceptible to disturbance.	
Changes in air quality - dust	Statutory designated sites, non-statutory designated sites and important habitats within 50m of construction footprint.	Due to the nature of the Project, impacts arising from dust generation have been assessed as being minimal (see **Chapter 4: Description of the Project**). There will be little to no demolition and earthworks will be undertaken only for the underground works under existing roads.	Priority Habitat, ancient woodland and SINCs within 50m of the Project.	Dust management via CEMP
Changes in light levels	Changes in lighting within and immediately adjacent to the Project during construction.	Construction works are currently programmed to start January 2028 for a total of 9 months. There will be no nighttime working with works taking place between 07:00 and19:00 hours on weekdays and 07:00 to 13:00 on Saturdays. In exceptions, there may be a requirement for a 7-day work week. This would be agreed with the local council as appropriate During the winter months when day length is shorter some site lighting will be	Direct impact to protected species such as bats, otter and birds.	CEMP

[64] https://www.nature.scot/doc/standing-advice-planning-consultations-otters

Potential impact	Zone of Influence (ZoI)	Embedded measures	Ecological Features Impacted	Compliance mechanism
		required. Site lighting will be controlled to prevent incidental spillage on to features that may be used by nocturnal species.		
Removal of trees	Within the construction footprint.	Whilst the intention is for the OHL route to be as straight as possible, there will be some deviation to avoid environmental features, such as trees. At points of deviation, angle poles will be used; these are likely to be H-pole structures. The three trees with bat suitability will not be impacted. It is currently anticipated that trees within one location will require removal (**Figure 8.5**).	Direct and permanent loss of trees with bat roosting suitability and commuting habitat such as linear habitat (e.g., boundary trees/hedgerows).	CEMP, Precautionary Method of Works (PMoW[65]) and Ecological Clerk of Works (ECoW)[66].
Introduction or spread of INNS	Within the construction footprint.	Biosecurity measures, such as boot wash stations, will be implemented throughout construction to avoid the introduction or spread of INNS	Habitats including Priority Habitat, ancient woodland and SINCs	CEMP, PMoW and ECoW
Direct mortality during construction.	The area within the temporary and permanent construction.	A method statement will be prepared which will include measures such as ensuring all excavations will have sloped sides or have a means of escape for entrapped animals; excavations to be checked each morning by operatives prior to work within the excavation. This will include	Incidental mortality or injury of protected species during vegetation and site clearance.	CEMP, PMoW and ECoW

[65] A Method Statement outlining measures to avoid or reduce impacts to IEFs.
[66] An ECoW oversees vegetation clearance and other construction activities, ensuring works follow a PMoW.

Potential impact	Zone of Influence (ZoI)	Embedded measures	Ecological Features Impacted	Compliance mechanism
		the protection of retained features, designated haul routes, ecological supervision (ECoW). Construction activities will be minimised outside of normal working hours (with works taking place between 07:00 and19:00 hours on weekdays and 07:00 to 13:00 on Saturdays). In exceptions, there may be a requirement for a 7-day work week. This would be agreed with the local council as appropriate This will largely avoid the hours of darkness, particularly in the summer when species are most active.		
Operation				
Direct mortality due to collision impact (birds / bats)	Within the operation footprint (OHL route).	Micro siting of the OHL route from the nearest point of linear/ foraging features considered likely to be well-used by bats such as treelines, woodland, and some waterbodies.	Potential killing or injury to bats/ birds in flight, through direct collision with OHL.	Embedded in design

8.9.4. Environmental measures required to avoid or reduce ecology impacts will be incorporated into a Conservation Plan. The Conservation Plan will set out the objectives for biodiversity protection, mitigation, monitoring and habitat enhancement (where applicable). It will set out a timetable for ecological measures throughout the lifetime of the Project, including any pre-construction measures that are required. The Conservation Plan will be agreed with the planning authority at the pre-construction stage either as part of the CEMP or as a standalone document.

8.10 NOT SIGNIFICANT EFFECTS

8.10.1. The following pathways for potentially significant effects have been assessed as Not Significant following incorporation of embedded measures at the construction stage:

- Air quality – dust emissions;
- Hydrological pollution;

- Habitat fragmentation;
- Noise, vibration and visual disturbance;
- Changes in light levels;
- Introduction or spread of INNS; and
- Habitat degradation as a result of pollution associated with air quality, hydrology, noise, vibration, visual disturbance, lighting and/or the introduction/spread of INNS.

8.10.2. Taking embedded measures into account, and the implementation of a CEMP, the risk of air pollution created during the construction phase of the Project is highly unlikely. This was scoped out at the Scoping stage (**Appendix 2A** and **2B**). General site good practice recommendations to avoid dust impacts will be detailed in a CEMP.

8.10.3. The implementation of a CEMP mitigates against the risk of hydrological pollution created during the construction phase of the Project, making it highly unlikely to occur. Hydrological pollution can be mitigated following full measures detailed in **Chapter 10: Water Resources and Flood Risk**.

8.10.4. There will be no nighttime working. Working hours will take place between 07:00 and 19:00 hours on weekdays and 07:00 and 13:00 on Saturdays (starting January 2028 for 9 months). In exceptions, there may be a requirement for a 7-day work week. This would be agreed with the local council as appropriate. If any ad hoc lighting is required, for example during the winter months when day length is shorter, it will be controlled to prevent incidental spillage on to features that may be used by nocturnal species. Details of these measures will be outlined in a CEMP (**Appendix 4A**). Refer to **Chapter 4: Description of the Project.**

8.10.5. The introduction or spread of INNS will be controlled within the Site, the details of which will be outlined in a CEMP (**Appendix 4A**) and PMoW/Method Statement.

8.10.6. The following IEFs have been scoped out for potentially significant effects, following the consideration of embedded measures:

- Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands SAC; Blackmill Woodlands SAC and Kenfig/Cynffig SAC.

8.10.7. The consideration of embedded measures when assessing significance of effect, have led to the further scoping out of the following IEFs:

- Lighting impacts on SINCs, Priority Habitats and ancient woodland;
- Lighting impacts on bats, otters, water vole and birds (excluding ad hoc lighting impacts not within embedded measures);
- SINC sites with hydrological connectivity;
- Other mammals, invertebrates, breeding birds and amphibians; and
- Notable plants.

COMPLIANCE WITH POLICY

8.10.8. To ensure compliance with PPW (2024), it is necessary to demonstrate that the Project will achieve a NBB by following both the stepwise approach and the DECCA framework.

THE STEPWISE APPROACH

8.10.9. The stepwise approach, as mentioned in the PPW (2024), entails firstly avoiding, then minimising, mitigating and, as a last resort, compensating for adverse impacts on the environment that occur as part of a development. Therefore, compensation should only be considered as a last resort, where it has been demonstrated clearly that adverse effects on the environment cannot be avoided or fully mitigated. If compensation is necessary, this must be delivered on-site where possible but off-site compensation can be sought if demonstrated that this is not possible.

THE DECCA FRAMEWORK

8.10.10. PPW (2024)[8] instructs planning authorities to take account, and promote the resilience, of ecosystems when assessing planning applications.

8.10.11. NRW has developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016[2]. This is referred to as DECCA and comprises the objectives listed:

- Diversity – maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits;
- Extent – incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance;
- Condition – the condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer-term types of disturbance. Both direct and wider impacts should be considered, for example avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc; and
- Connectivity – this refers to the links between and within habitats which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources. Developments should take opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity.

8.10.12. Ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience. NRW define ecosystem resilience as "*An environment that can respond to pressures by resisting, recovering or adapting to change, and is able to continue to provide natural resources and benefits to people*".

8.10.13. NRW has a duty to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced and sustainably used. Article 4 of the Natural Resource Body for Wales (Establishment) Order 2012 (Welsh Government, 2012) sets a general purpose for NRW to pursue the Sustainable Management of Natural Resources (SMNR) in the exercise of its functions. In order to achieve this, NRW applies a set of nine principles: adaptive management, scale, collaboration and engagement, public participation, evidence, multiple benefits, long term (consequences of actions), preventative action, and building resilience.

8.10.14. Importantly, the objective of the SMNR is to maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing, meet the needs of present generations of people without compromising the ability of future generations to meet their need, and contribute to the achievement of the well-being goals of the Well-being of Future Generations Act 2015.

8.10.15. As per policy guidance, habitat loss will be minimised as far as possible and temporarily lost habitats will be replaced as soon as possible. Where habitats are planned for temporary removal, Priority Habitats, SINC or ancient woodland will be translocated following construction. Trees removed will be replaced at 3:1 ratio.

8.10.16. Wildflower creation areas will be incorporated into the design as part of achieving these ratios. These areas will be focused for recreating lost habitat on a like-for-like basis. This will include planting rush pasture with purple moor-grass and acid grassland species to help recreate Priority Habitat and replace temporarily lost SINC habitat.

8.10.17. Furthermore, some retained habitats will be enhanced for biodiversity. This will include the enhancement of existing improved grassland habitat by planting with species-rich seed mixes and managing appropriately to maintain botanical diversity, i.e., a single late-summer cut with removal of arisings.

8.11 ASSESSMENT OF EFFECTS

8.11.1. Potentially significant effects upon ecological features are largely determined by spatial and temporal factors. Spatial factors include where the IEF lies in relation to the Site; its proximity, relevant ZoI and whether or not there are effect pathways. Temporal factors consider the period of time over which the Project will be carried out and the impact of this on IEFs.

8.11.2. **Table 8.10** identifies IEFs and whether they are scoped in or out of further assessment based on their level of value and the presence of pathways for potentially significant effects, following the application of embedded measures (**Table 8.9**). IEFs are scoped in where potentially significant effects upon the relevant feature occur. IEFs will be scoped in where these pathways for potentially significant effects lie within the relevant ZoI and where an IEF holds value at a County level or above.

Table 8-10 - IEFs which have been scoped in or out for further assessment

Important Ecological Feature (IEF)	Level of value	Pathways for potentially significant effects upon ecological features – construction	Pathways for potentially significant effects upon ecological features – operation	Scoped in/out
Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands SAC	International	No pathways for potentially significant effects upon ecological features identified.	No pathways for potentially significant effects upon ecological features identified.	Out
Blackmill Woodlands SAC	International	No pathways for potentially significant effects upon ecological features identified.	No pathways for potentially significant effects upon ecological features identified.	Out
Kenfig/Cynffig SAC	International	No pathways for potentially significant effects upon ecological features identified.	No pathways for potentially significant effects upon ecological features identified.	Out
SINCs: Abercerdin Wood SINC, Caerau West SINC, Cwm Cerdin SINC, Gilfach Uchaf SINC, Nant-y-Castell Grasslands SINC	County	**Habitat loss** – resulting from temporary removal of habitats to make way for the Project. **Direct mortality or injury of associated species.**	No pathways for potentially significant effects upon ecological features identified.	**In**

Important Ecological Feature (IEF)	Level of value	Pathways for potentially significant effects upon ecological features – construction	Pathways for potentially significant effects upon ecological features – operation	Scoped in/out
Priority Habitats[67] – lowland deciduous woodland, lowland dry acid grassland and purple-moor grass and rush pastures.	County	**Habitat loss** – resulting from temporary removal of habitats to make way for the Project. **Direct mortality or injury of associated species.**	No pathways for potentially significant effects upon ecological features identified.	**In**
Ancient Woodland	National	**Habitat loss** – resulting from removal of habitats to make way for the Project. **Direct mortality or injury of associated species.**	No pathways for potentially significant effects upon ecological features identified.	**In**
All other habitats within the Survey Area boundary,	Site/Negligible	**No pathways for potentially significant effects upon ecological features identified**	No pathways for potentially significant effects upon ecological features identified.	Out

[67] Priority Habitats overlap Phase 1 broadleaved semi-natural woodland, semi-improved acid grassland, marshy grassland, broadleaved parkland/scattered trees, running water and species-poor intact hedgerows. These habitats are therefore assessed together.

Important Ecological Feature (IEF)	Level of value	Pathways for potentially significant effects upon ecological features – construction	Pathways for potentially significant effects upon ecological features – operation	Scoped in/out
excluding Priority Habitats and ancient woodland		Habitats which hold nature conservation value of less than County importance have been scoped out of the assessment. These are, however, considered with regard to NBB.		
Bats	County	**Habitat loss** – of suitable habitat for roosting, foraging and commuting bats, including tree removal. **Direct mortality or injury –** during clearance of suitable vegetation. **Disturbance to bats and/or roost sites.** **Changes in light levels –** changes in lighting during construction.	**Direct mortality or injury** – resulting from collision with overhead wires.	**In**
Badger	Site	**No pathways for potentially significant effects upon ecological features identified.** Badgers hold a nature conservation value of less than County importance and have been scoped out of the assessment. Compliance with legislation will be applied for this species, including a pre-works check.		Out
Otter	County	**Habitat degradation** – resulting from pollution and contamination incidents associated with air quality and hydrology.	No pathways for potentially significant effects upon ecological features identified.	**In**

Important Ecological Feature (IEF)	Level of value	Pathways for potentially significant effects upon ecological features – construction	Pathways for potentially significant effects upon ecological features – operation	Scoped in/out
		Changes in light levels – changes in lighting during construction. **Disturbance** – to otter and/or commuting or resting habitats.		
Water vole	National	**Habitat degradation** – resulting from pollution and contamination incidents associated with air quality and hydrology. **Direct mortality** – during clearance of suitable vegetation **Changes in light levels –** changes in lighting during construction. **Disturbance –** to commuting or resting habitat.	No pathways for potentially significant effects upon ecological features identified.	**In**
Other mammals (brown hare, hedgehog and harvest mouse)	Site	**No pathways for potentially significant effects upon ecological features identified.** Other mammals holding nature conservation value of less than County importance have been scoped out of the assessment. Compliance with legislation will be applied for relevant species.		Out
Reptiles	County	**Habitat loss –** of suitable habitat for reptiles.	No pathways for potentially significant effects upon ecological features identified.	**In**

Important Ecological Feature (IEF)	Level of value	Pathways for potentially significant effects upon ecological features – construction	Pathways for potentially significant effects upon ecological features – operation	Scoped in/out
		Direct mortality – during clearance of suitable vegetation.		
Amphibians (excluding GCN)	Local	**Habitat loss –** of suitable habitat for reptiles. **Direct mortality –** during clearance of suitable vegetation	No pathways for potentially significant effects upon ecological features identified.	Out
Breeding birds (common / widespread)	Local	**No pathways for potentially significant effects upon ecological features identified.** Breeding birds holding nature conservation value of less than County importance have been scoped out of the assessment. Compliance with legislation will be applied for relevant species.		Out
Protected or notable birds (including barn owl, goshawk, honey buzzard, nightjar)	National	**Habitat loss** – of suitable commuting and foraging habitat for barn owl **Changes in light levels –** changes in lighting during construction**.** **Disturbance** – resulting from construction activities in proximity to suitable roosting sites	**Direct mortality** – resulting from overhead line collision incidents	**In**
Fish	Local	**Changes in light levels –** changes in lighting during construction**.**	No pathways for potentially significant effects upon ecological features identified.	Out

Important Ecological Feature (IEF)	Level of value	Pathways for potentially significant effects upon ecological features – construction	Pathways for potentially significant effects upon ecological features – operation	Scoped in/out
		Disturbance – resulting from construction activities		
Invertebrates	Site	**No pathways for potentially significant effects upon ecological features identified.** Invertebrates hold a nature conservation value of less than County importance and have been scoped out of the assessment. Compliance with legislation will be applied for relevant species and mitigation such as wildflower seeding and habitat creation will enhance the Site for this species group.		Out
INNS – Japanese knotweed and Indian balsam	N/A	INNS are not of conservation importance and therefore are scoped out of the assessment. However, measures to mitigate the illegal spread of INNS have been considered as part of the embedded measures of this report.		Out

8.12 PREDICTED EFFECTS AND THEIR SIGNIFICANCE

8.12.1. **Table 8.11** below provides the characterisation of unmitigated impacts on IEFs. A summary of the findings of the assessment of potential effects without mitigation, followed by residual effects with mitigation, is then provided. The assessment is made following the inclusion of embedded measures.

Table 8-11 - Characterisation of the unmitigated impact on the IEF

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
Construction impacts				
Habitat loss: SINCs	Temporary loss of SINC habitat: ▪ 0.53 Ha of Abercerdin Wood SINC; ▪ 1.35 Ha of Caerau West SINC; ▪ 0.50 Ha of Cwm Cerdin SINC; ▪ 1.33 Ha of Gilfach Uchaf SINC; and ▪ 0.15 Ha of Nant-y-Castell Grasslands SINC. Temporary loss to habitats will result during wooden pole placement and trench digging. The width of the trench will depend upon the final specification but will be in the region of 600 mm widening to 1.5 m closer to the surface.	Temporary loss of species-rich habitats and associated species. The temporary loss will be restricted to a linear habitat corridor within a larger SINC unit. Any losses associated with the footprint of the wooden poles will be minimal as the habitat will be reinstated immediately after construction with no permanent habitat loss resulting. The effect without mitigation is predicted to	A Conservation Plan will be devised in consultation with the LPA. This will incorporate habitat creation, management and monitoring of the habitats present within the Site. The Conservation Plan will include creation and enhancement of existing habitats. The turf layer will be translocated during construction following an appropriate methodology to avoid soil compaction. It will be stored in a secure location and will be immediately reinstated following the completion of the trench digging. There will be no loss of floral diversity within the turf layer as it will be	The magnitude of change in the short-term is predicted to be low, leading to a temporary adverse effect on the habitat affected. The magnitude of change in the long-term is predicted to be negligible on a feature of County conservation importance. The effect is expected to be Not Significant in EIA terms, following the application of mitigation.

[68] Embedded measures have been applied before the assessment of effects. This is because the embedded measures will be implemented as part of the Project regardless of the requirement for ecological mitigation/assessment outcomes.

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
		be medium, leading to a temporary adverse effect. The temporary loss of habitat is small in comparison to the SINC habitat retained within the wider Site.	reinstated with appropriate aftercare if required (e.g. watering in dry weather).	
Habitat loss: Priority Habitat	Temporary loss of Priority Habitats: ▪ 0.21 Ha of wet woodland; ▪ 3.06 Ha of lowland dry acid grassland; ▪ 0.17 Ha of lowland fen; ▪ 1.02 Ha of lowland mixed deciduous woodland; ▪ 6.36 Ha of purple moor-grass and rush pasture; and ▪ 0.24 Ha of upland oakwoods. Temporary loss to habitats will result during wooden pole placement and trench digging. The width of the trench will depend upon the final specification but will be in the region of 600 mm widening to 1.5 m closer to the surface.	Temporary loss of species-rich habitats and associated species. The temporary will be restricted to a linear habitat corridor within a larger Priority Habitat unit. Any losses associated with the footprint of the wooden poles will be minimal as the habitat will be reinstated immediately after construction with no permanent habitat loss resulting. The effect without mitigation is predicted to be medium, leading to a temporary adverse effect. The temporary loss of habitat is small in	A Conservation Plan will be devised in consultation with the LPA. This will incorporate habitat creation, management and monitoring of the habitats present within the Site. The Conservation Plan will include creation and enhancement of existing habitats. The turf layer will be translocated during construction following an appropriate methodology to avoid soil compaction. It will be stored in a secure location and will be immediately reinstated following the completion of the trench digging. There will be no loss of floral diversity within the turf layer as it will be reinstated with appropriate aftercare if required (e.g. watering in dry weather).	The magnitude of change in the short-term is predicted to be low, leading to a temporary adverse effect on the habitat affected. The magnitude of change in the long-term is predicted to be negligible on a feature of County conservation importance. The effect is expected to be Not Significant in EIA terms, following the application of mitigation.

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
		comparison to the Priority Habitat retained within the wider Site.		
Habitat loss: Ancient woodland	Temporary loss of 0.21 Ha of ancient woodland. No direct loss of trees will result however a 4 m minimum clearance is required to trees from the conductors/poles. If trees encroach within 4 m of a pole, trimming will be required.	The OHL would be located predominantly in open grassland fields however a small temporary loss of ancient woodland will result. This loss is small in comparison to the ancient woodland within the wider Site and will not involve any tree removal. There will be temporary disturbance to soil and ground-floral species during trench digging. The effect without mitigation is predicted to be medium, leading to a temporary adverse effect. The temporary loss of habitat is small in comparison to the Priority Habitat retained within the wider Site.	A Conservation Plan will be devised in consultation with the LPA. This will incorporate habitat creation, management and monitoring of the habitats present within the Site. The Conservation Plan will include creation and enhancement of existing habitats. The turf layer will be translocated during construction following an appropriate methodology to avoid soil compaction. It will be stored in a secure location and will be immediately reinstated following the completion of the trench digging. There will be no loss of floral diversity within the turf layer as it will be reinstated with appropriate aftercare if required (e.g. watering in dry weather).	The magnitude of change in the short-term is predicted to be low, leading to a temporary adverse effect on the habitat affected. The magnitude of change in the long-term is predicted to be negligible on a feature of National conservation importance. . The effect is expected to be Not Significant in EIA terms, following the application of mitigation. In the long-term, habitat creation and enhancement will increase the area of ancient woodland.
Bats:	Temporary loss of suitable habitat for roosting, foraging and commuting bats.	Temporary loss of suitable habitat for roosting habitat	Habitats lost will be reinstated, as to be detailed in the Conservation Plan.	The magnitude of change in the short-term is

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
Habitat loss	Tree removal will be required at one location only (**Figure 8.5**) and will affect 0.01 Ha of tree habitat at this location. No tree removal will take place in ancient woodland with existing gateways will be used for access avoiding the need to disturb linear features for bats.	for bats resulting from tree removal. Temporary loss of foraging and commuting habitat within the wider Site. This could result in a short-term negative impact on local bat populations through a reduction in amount of prey availability and foraging opportunities. The effect without mitigation is predicted to be medium, leading to a temporary adverse effect. Nevertheless a significant amount of habitat will remain in the wider area.	In the event that direct effects upon bat roosts cannot be avoided, this will be subject to a licence administered by NRW and implementation of a licensed method statement. Mitigation will avoid a net reduction in habitat suitability for bats, which is achievable given the suitability of habitat across the wider Site.	predicted to be low as a significant amount of habitat will remain across the wider Site. Habitat loss will be minimised as far as possible and residual losses will be compensated. Any changes as a result of the construction in the medium to long-term are predicted to be of negligible on a feature of County conservation importance. This effect is expected to be Not Significant in EIA terms, providing appropriate mitigation to ensure legal compliance with respect to effects upon bats is followed. This assessment will be revised following the recommended further surveys when information on the Site's bat assemblage is available.

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
Bats: Direct mortality or injury of associated species; Disturbance	Direct mortality or injury of bats and / or disturbance during clearance of suitable habitat in the absence of mitigation. Tree removal will be required at one location only (**Figure 8.5**) and will affect 0.01 Ha of tree habitat at this location.	Direct mortality or injury resulting from tree removal could temporarily reduce the local bat population. Temporary disturbance of suitable habitat for roosting or foraging habitat for bats could result during construction activities affecting foraging or breeding behaviour. Owing to the limited number of trees being removed this is not considered to be significant for the Site bat populations, even in the absence of mitigation. Without mitigation, the impact has potential to cause disruption to a flightlines or cause behavioural alterations (e.g. due to short-term changes in noise or lighting).	Any trees assessed as having potential to support roosting bats will be subject to Potential Roost Feature (PRF) aerial inspection surveys to determine the presence or likely absence of roosting bats. In the event that direct effects upon bat roosts or disturbance on flight lines cannot be avoided, this will be subject to a licence administered by NRW and implementation of a licensed method statement. The results of the roost surveys will be used to support the Final ES.	The magnitude of change in the short-term is predicted to be low as a mitigation measures will avoid direct mortality or injury to bats. Any changes as a result of the construction in the medium to long-term are predicted to be of negligible magnitude and would result in no change to the status of the County importance bat populations on Site. This effect is expected to be Not Significant in EIA terms, providing appropriate mitigation to ensure legal compliance with respect to effects upon bats is followed. This assessment will be revised following the recommended further surveys when information on the Site's bat assemblages is available.

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
		The magnitude of change without mitigation is predicted to be low.		
Bats / otters: Changes in light levels	Changes in light levels during construction impacting species (e.g. bats or otters).	Changes in ad hoc light levels could result in disturbance effects to species. This could temporarily disrupt nocturnal species foraging, commuting or breeding behaviour in the areas where construction activities are taking place. Working hours will mainly be in daylight therefore the magnitude of change without mitigation is predicted to be low.	During the winter months, when day length is shorter, site lighting will be required. Site lighting will be controlled to prevent incidental spillage on to features that may be used by nocturnal species. Should additional lighting be required this will be task specific and will restrict light spill onto retained adjacent habitats.	The magnitude of change in the short-term is predicted to be low. Taking the mitigation measures into account, any changes as a result of the construction are predicted to be of low magnitude. In the medium to long-term any changes are predicted to be of negligible magnitude and would result in no change to the status of the County importance bat and otter populations. The effect is expected to be Not Significant in EIA terms, providing appropriate mitigation to ensure legal compliance are followed. This assessment will be revised following the recommended further surveys.

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
Otter: Disturbance to otter and/or commuting or resting habitats. Direct mortality or injury.	The OHL is required to cross the Nant Sychbant watercourse which is suitable for supporting otters. At this location, a temporary dam will be used to install cable through an open cut in the side of the bank. Impacts to all other watercourses will be avoided through micro-siting; this will involve the OHL crossing the majority of watercourses and not directly impacting them. The wooden poles will be spaced out between 90m and 130m allowing room for micro-siting of poles at sensitive locations.	Disturbance, direct mortality or injury could result to otter during construction activities at the Nant Sychbant watercourse. This could affect foraging and feeding behaviours of otter on Site. Disturbance to otter and/or commuting or resting habitats could affect otter populations within the wider area as otters have large ranges. The magnitude of change without mitigation is predicted to be medium however disturbance would be short in duration.	A pre-works survey will take place ahead of works at the Nant Sychbant watercourse. Specific measures to minimise and avoid impacts to otter will be provided in a PMoW. A suitability experienced ecologist will supervise supervising works at this location. If the otter surveys identify a confirmed otter holt or resting place within the relevant ZoI, a licence will be required from NRW.	The magnitude of change in the short-term is predicted to be low. Any changes as a result of the construction are predicted to be of low magnitude and are not expected to result in changes to the status of the County importance otter populations on Site. In the medium to long-term, the effect is expected to be Not Significant in EIA terms, providing appropriate mitigation to ensure legal compliance with respect to effects upon otters. This assessment will be revised following the recommended further surveys.
Water vole: Habitat loss (temporary);	Temporary habitat loss, mortality or injury and disturbance could result to water vole during vegetation clearance where populations have been recorded in the northern section of the Site.	Water vole populations have been recorded to the north of the Site (CSA Environmental (2024c). Trench digging and placement of wooden	A pre-construction survey of the footprint of the Site and a suitably sized area (250m radius based on the ZoI of disturbance impacts) will be conducted to ascertain any new water vole habitats within the Site.	The magnitude of change is predicted to be medium in the short-term. In the medium to long-term, the magnitude of change is predicted to be low on an

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
Direct mortality or injury; and Disturbance.		poles could result in temporary habitat loss, mortality or injury and disturbance. This could affect the population assemblages on the Site and breeding success in the absence of mitigation. The effect without mitigation is predicted to be high, should direct mortality or injury take place.	Specific measures to minimise and avoid impacts to water vole will be provided in a PMoW. A suitability experienced ecologist will supervise works at this location to minimise the risk of direct mortality or injury. Confirmed water vole habitat that will be impacted by the Project will be subject to a licence application with NRW. To ensure long-term protection measures for water vole, maintenance and enhancement, a Conservation Plan will be devised in consultation with the LPA. This will incorporate long-term management and monitoring of the habitats present within the Site.	ecological feature of National importance. Appropriate mitigation to ensure legal compliance with respect to effects upon water vole will be required through a licence with NRW. The effect is expected to be Not Significant in EIA terms, providing appropriate mitigation to ensure legal compliance are followed.
Reptiles: Habitat loss (temporary); Direct mortality or injury.	Temporary removal of suitable habitat for reptiles within the Site during digging of trenches and positioning of OHLs.	The Project has the potential to result in temporary habitat loss, and direct mortality or injury to reptiles during construction. This could result from vegetation clearance or moving log piles or refugia. This could	A pre-works check for reptiles will be carried out prior to habitat removal. This will be carried out by a suitably experienced ecologist. A two-stage cut will also be implemented to minimise the risk of killing and injury of reptiles. This will be defined in a Method Statement.	The magnitude of change in the short-term is likely to be low. In the medium to long-term, the effect is expected to be Not Significant in EIA terms, providing appropriate mitigation to ensure legal compliance with respect to effects upon otters.

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
		negatively affect reptile populations on the Site. The effect without mitigation is predicted to be medium however would be short in duration.	Potential refugia/hibernacula will be dismantled during the active season. No clearance of hibernacula should take place between October – March inclusive. Any reptiles discovered during construction will be moved out of harm into adjacent suitable vegetation. To provide enhancement for this species, a Conservation Plan will be devised in consultation with the LPA. This will incorporate long-term management and monitoring of the habitats present within the Site. This will include 'reptile friendly' cutting of associated habitats.	
Protected or notable birds (including barn owl, goshawk, honey buzzard, nightjar):	Habitat loss and disturbance to bird breeding sites could occur during construction (e.g. removal of scrub, trees or grassland habitats).	Habitat loss and disturbance to breeding sites could result in a negative effect on breeding success during the season when the temporary habitat loss takes place. This has the potential to impact breeding success and	A programme of surveys for protected or notable birds is underway. The results of the surveys will inform the programme and clearance methodology at sensitive locations. Vegetation clearance within sensitive locations for birds will take place out of the breeding bird season for that particular season. The OHL will be	Following the application of mitigation, the magnitude of change in the short-term is predicted to be low. In the medium to long-term, habitat enhancement will increase the area of habitat on Site, offsetting any adverse effects. In the medium to long-term, the

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
Habitat loss (temporary); Disturbance.		reducing the population size. The effect without mitigation is predicted to be medium however would be short in duration leading to an adverse effect on birds.	micro-sited away from sensitive locations.	effect will be Not Significant in EIA terms and is not expected to result in changes to the National importance of this species group. This assessment will be revised following the recommended further surveys.
Operation				
Bats: Direct mortality due to collision impact	Direct mortality due to collision impact with the OHL.	There are five high collision risk species in Wales and potentially at the site (depending on the results of the further surveys). These species are common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, noctule and Leisler's *Nyctalus leisleri* bat. The collision risk for common pipistrelle has been increased to high, but this species in Wales	A programme of surveys for bats is underway. The results of the surveys will inform the programme and clearance methodology at sensitive locations. Mitigation is likely to include: ▪ There is potential for the OHL to be micro-sited away from any sensitive locations. ▪ Minimum stand-off buffers from sensitive habitats which will reduce collision. The stand-off buffers will be determined following the receipt of bat survey data.	Following the application of mitigation, the magnitude of change in the short-term is predicted to be low, leading to a permanent adverse effect on an ecological feature of County importance. In the medium to long-term, mitigation and enhancement will increase the area of habitat, offsetting the short-term effects. The effect will be

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
		is categorised as common, with a low population vulnerability (NatureScot et al, 2021[69]). Collision impacts could affect breeding success and permanently reduce bat populations at the Site. The effect without mitigation is predicted to be medium.	▪ Habitat management under OHL may also be required to discourage sensitive species from foraging. These measures will be provided in a Conservation Plan will be devised in consultation with the LPA.	Not Significant in EIA terms.
Protected or notable birds (including barn owl, goshawk, honey	Direct mortality due to collision impact with the OHL.	Direct mortality due to collision impact could result affect the breeding success of protected or notable birds. This could impact population assemblages for sensitive species.	A programme of surveys for birds is underway. The results of the surveys will inform the programme and clearance methodology at sensitive locations. Mitigation is likely to include:	Following the application of mitigation, the magnitude of change in the short-term is predicted to be low. The effect is therefore assessed as Adverse on an ecological feature of National importance.

[69] NatureScot (Scottish Natural Heritage), Natural England, Natural Resources Wales, RenewableUK, Scottish Power Renewables, Ecotricity Ltd, the University of Exeter and the Bat Conservation Trust (BCT) with input from other key stakeholders (August, 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

Impact	Characterisation of unmitigated impact on the feature	Effect without mitigation[68]	Secondary or tertiary mitigation measures	Significance of effects of residual impacts (after mitigation)
buzzard, nightjar): Direct mortality due to collision impact		The effect without mitigation is predicted to be medium.	▪ Use of bird flight diverters on the OHL to improve visibility for birds and reduce collision events. ▪ Habitat management under OHL route to discourage sensitive species. ▪ There is potential for the OHL to be micro-sited away from any sensitive locations. ▪ Minimum stand-off buffers may be required from sensitive habitats which will reduce collision. These measures will be provided in a Conservation Plan will be devised in consultation with the LPA. Appropriate mitigation will ensure legal compliance with respect to effects upon Schedule 1 WCA birds.	In the medium to long-term, habitat creation will increase the area of habitat, offsetting the short-term adverse effects. In the medium to long-term, the effect will be Not Significant in EIA terms. This assessment will be revised following the recommended further surveys.

8.13 ASSESSMENT OF CUMULATIVE EFFECTS

8.13.1. Consideration has been given as to whether any of the IEFs that have been taken forward in this chapter are likely to be subject to cumulative effects as a result of the Project and by other developments. This includes the consideration of effects that are not significant, as a number of minor effects on an ecological feature from multiple projects may result in a significant cumulative effect.

8.13.2. Cumulative effects would generally be either:

- Cumulative 'ZoI' effects whereby two or more developments affect the same specific receptor (e.g. two developments in the same river catchment); or
- Cumulative effects on the total resource (or population) of an ecological feature in a region due to two or more developments (e.g. two developments affect the same habitat type in a region, reducing its overall area).

8.13.3. Assessment of these is complex and relies on the definition of a reasonable scope for cumulative effects, and the availability of a reasonable baseline for other developments. However, the same principles of assessment apply, i.e. an effect would have to be significant at the 'County' level to be significant in EcIA terms. In addition, the assessment focuses on those occasions where two 'not significant' effects might operate cumulatively to result in a significant effect (rather than where the effects of one development on an ecological feature are already, on their own, considered significant).

8.13.4. The developments within 5km of the Site which are considered as part of the cumulative assessment are detailed within **Table 8.12**. Developments are omitted from the assessment where they are considered small scale and residential such as a garage extension or tree removal within a residential property. See **Chapter 2: EIA Approach** for further details on cumulative effects, as well as **Figure 2-1**.

Table 8-12 - Cumulative assessment

Planning Reference	Site Address	Proposal	Decision	Decision Date	Potential cumulative effects
P2022/0517	Foel Trawsnant Bryn Port Talbot	Wind Farm associated with Project - consisting of 11 turbines with a maximum tip height of 145m	Approved	04/04/2023	This development is within the ZoI of the Project; there could be in-combination effects between the consented Foels Trawsnant Windfarm and the grid connection could.
P2022/0344	The proposed Foel Trawsnant Wind Farm site is located approximately 2.3km to the northwest of Maesteg, Bridgend.		Approved	15/06/2022	
P/23/621/APN	Field south-west of Vicarage Terrace Maesteg CF34 9PF	Agricultural Storage Building.	Approved	03/11/2023	No, due to the scale of this proposal, in-combination effects are not considered likely to result.
P/23/473/RLX	Upper Ogmore Wind Farm Neath Port Talbot SA13 3YE	Seven wind turbines. Four turbines are up to a maximum tip height of 149.9m, and three turbines are up to a	unknown	unknown	
P2020/1002			Approved	28/09/2022	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.

Planning Reference	Site Address	Proposal	Decision	Decision Date	Potential cumulative effects
P2020/0569		maximum tip height of 130m.	No Objections	13/08/2020	
P2022/0694	Caegarw Solar Farm Caegarw Farm A48 From Margam Roundabout To Pyle Road Margam Bridgend Neath Port Talbot CF33 6PT	Installation of Solar Farm, with a capacity of 3.80MW, on a former colliery soil heap between the B284 and A48 northwest of Pyle	Approved	13/10/2022	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.
P2022/0537			Approved	02/08/2022	
P2024/0820	Land At Pen Y Bryn Croeserw Cymmer Port Talbot	Mixed-use Residential Development, comprising of 600 apartments and 100-bed hotel	Approved	15/01/2025	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.
P2022/0776			Approved	08/11/2022	
P2018/0493			Approved	18/01/2022	
P2024/0029	Y Bryn Windfarm Bridgend /	Wind Farm consisting of 18 turbines with a maximum height ranging	Awaiting Decision	n/a	Yes, this development is within the ZoI of the Project. There could be in-combination effects.

Planning Reference	Site Address	Proposal	Decision	Decision Date	Potential cumulative effects
	Neath Port Talbot	between up to 206m, up to 203m, and up to 250m to blade tip			
P2021/0057	Land At Bryn And Penhydd Forest Located Between Port Talbot And Maesteg		Comments given (objections)	17/02/2021	
P2023/0444	Y Bryn Wind Farm North-East Of The M4 Motorway Between Port Talbot And Maesteg		Comments given (objections)	17/07/2023	
P/12/877/BCB	Maesteg Welfare Park Heol Ty Gwyn Maesteg Bridgend CF34 0AZ	Community Park	Approved	13/02/2013	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.
P/16/291/FUL	Former Maesteg Washery & Coegnant	Community Wood	Approved	25/05/2016	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.

Planning Reference	Site Address	Proposal	Decision	Decision Date	Potential cumulative effects
	Colliery Site East Of Maesteg And Nantyffyllon				
P2023/0638	Fforch Dwm Farm Lane From Fforch Dwm Road To Fforch Dwm Farm Pontrhydyfen Port Talbot Neath Port Talbot SA12 9SS	6 wind turbines, with a maximum tip height of 200m, a solar photovoltaic array, battery storage facilities, together with associated and ancillary development include a control building, electricity transformers and anemometry mast, grid connection, access works, temporary construction compound and associated works	Approved	06/01/2025	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.
P/16/128/FUL	Former Margam Surface Mine Cefn Cribwr CF32 0BS	Restoration of former mine	Retrospective Conf Consent	17/02/2017	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.
P/22/795/DOC			awaiting Decision	n/a	

Planning Reference	Site Address	Proposal	Decision	Decision Date	Potential cumulative effects
P2023/0498	Mynydd Emroch Penycae Neath Port Talbot	Solar Farm and Energy storage - 79mw	considered to be EIA	10/07/2023	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.
P/19/915/RES	Land west of Maesteg Road Tondu CF32 9DS	Proposed 50 MW ground mounted photovoltaic solar farm with associated equipment, infrastructure, grid connection and ancillary works.	Conditional Consent (reserved matters)	17/09/2020	No, this development is outside the ZoI of the Project. In-combination effects are not considered likely to result.

8.13.5. Potential cumulative effects of the Project have been assessed on:

- The proposed Foel Trawsnant Wind Farm (reference P2022/0517/P2022/0344); and
- The proposed Y Bryn Windfarm Bridgend (planning reference P2024/0029).

8.13.6. In its ES, the Foel Trawsnant Wind Farm does not anticipate any significant effects on any relevant IEFs following the application of mitigation.

8.13.7. In its Scoping Report, Y Bryn Windfarm, has scoped in for assessment the following IEFs:

- Non-statutory designated sites (SINCs);
- Habitats;
- GCN;
- Bats;
- Dormice;
- Birds;
- Otter;
- Water vole;
- Pine marten *Martes martes;*
- Polecat *Mustela putorius*;
- Badger; and
- Fish.

8.13.8. The Y Bryn Windfarm ES has concluded that there will be no significant residual effects for ecological or ornithological receptors.

8.13.9. Due to the proximity of these developments to the Project, cumulative effects on IEFs cannot be ruled out, however, they are considered unlikely to be significant with the implementation of a CEMP for both developments and the likely staggered timescales for works being carried out.

8.13.10. The Project includes embedded measures that will moderate these effect pathways. Additional mitigation has been proposed to reduce the significance of any effects likely to result from the anticipated impacts of the Project. The potential for cumulative effects will be assessed in the final ES once the Project specific assessment has been finalised.

8.14 CONCLUSIONS OF SIGNIFICANCE EVALUATION

8.14.1. No adverse effects are expected to result from the Project, following the application of embedded measures and secondary mitigation. This assessment will be revised on the receipt of further survey data.

SUMMARY OF LIKELY RESIDUAL SIGNIFICANT EFFECTS

8.14.2. With the implementation of the ecological mitigation measures described in this chapter, at this stage, it is concluded likely that residual effects will be Not Significant in the long-term for those IEFs which have been fully assessed. Section 8.16 lists IEFs that have not been fully assessed. On the receipt of the recommended further surveys, the assessments will be revised for these IEFs.

8.14.3. The combination of embedded mitigation and additional measures will minimise effects upon IEFs. Short term effects upon SINCs, Priority Habitats and ancient woodland and those species occupying these habitats including bats, birds, otter, water vole and reptiles cannot be avoided, as temporary habitat loss is necessary within the construction footprint. The significance of this will be confirmed once the data from the further surveys is available. In the longer term, habitat enhancement will improve the condition and provision of Priority Habitat and ancient woodland. The benefits will be realised during the operational phase and offset the short-term adverse effects.

8.14.4. This precautionary assessment reflects the baseline data gathered during bat surveys between 2020-2024. Likely residual effects upon bats, birds and otters will be confirmed following the receipt of surveys undertaken in 2025 (ahead of the Final ES).

8.15 CONSERVATION PLAN

8.15.1. Mitigation and enhancement will be identified in a Conservation Plan. This will include future monitoring of habitat and species is to be agreed with the LPA. It will also be required as part of the Project's commitment to achieving an NBB. The requirement for further monitoring has been identified for the following IEFs:

- Ancient Woodland;
- Priority Habitats;
- Bats;
- Birds;
- Water voles; and
- Reptiles.

8.15.2. NET BENEFIT FOR BIODIVERSITY

8.15.3. To achieve a NBB, removed trees will be replaced at a 3:1 ratio. Enhancement of existing habitats will be undertaken to increase their conservation value. Wildflower seeding will take place in habitats with low species-diversity. Long-term habitat monitoring of reinstated habitats will ensure that the Project achieves a NBB in the long-term and when the Project is in its operational phase.

8.16 FURTHER WORK TO BE UNDERTAKEN

8.16.1. The final assessment of likely significant effects will be reported in the ES. This section describes the further work to be undertaken to support the biodiversity assessment presented in the draft ES:

- Results from the bat activity and bat roost surveys (undertaken between April and June 2025) will be analysed and used to inform any required mitigation strategy.
- Surveys are ongoing for birds (in February and June 2025) along the OHL in areas that are considered suitable to support target species.

- Otter surveys are ongoing along the OHL in areas that are considered suitable to support otters. The results from the April 2025 otter survey will be discussed in the final ES.

8.16.2. Results from the bat activity, bat roost, otter and bird surveys undertaken in 2025 along the OHL will be presented at final ES submission and used to inform the Conservation Plan and assessment of effects.

8.17 REFERENCES

BoCC (2021) Birds of Conservation Concern Wales 5: the population status of birds in Wales. Available at: https://www.bto.org/our-science/publications/birds-conservation-concern/status-our-bird-populations-fifth-birds [Accessed: February 2025].

Botanical Society of Britain and Ireland (BSBI) (2020) Plant Atlas 2020. Available at: https://plantatlas2020.org/ [Accessed: February 2025]

Burns F, Eaton MA, Balmer DE, Banks A, Caldow R, Donelan JL, Douse A, Duigan C, Foster S, Frost T, Grice PV, Hall C, Hanmer HJ, Harris SJ, Johnstone I, Lindley P, McCulloch N, Noble DG, Risely K, Robinson RA, Wotton S (2020) The state of the UK's birds 2020. The RSPB, BTO, WWT, DAERA, JNCC, NatureScot, NE and NRW, Sandy, Bedfordshire.

CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports and Surveys. April 2019.

CIEEM (2024). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, Version 1.3*. [online]. Available at: https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/ [Accessed February 2025].

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.

HMSO (1992) The Badgers Act. HMSO, Norwich.

HMSO (1997) The Hedgerows Regulations 1997. HMSO, Norwich.

HMSO (2010). The Conservation of Habitats and Species Regulations 2017 (the Habitat Regulations). HMSO, Norwich.

HMSO (Her Majesty's Stationary Office) (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000). HMSO, Norwich.

Humphreys, E., Toms, M., Newson, S., Baker, J. and Wormald, K. (2011). An examination of reptile and amphibian populations in gardens, the factors influencing garden use and the role of a 'Citizen Science' approach for monitoring their populations within this habitat. British Trust for Ornithology. Norfolk. February 2011.

Joint Nature Conservation Committee (JNCC) (2016). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.

Mammal Society (2021). The State of Mammals in Wales - A report by the Mammal Society for Natural Resources Wales. Available at: https://www.researchgate.net/publication/346362144_The_State_of_Mammals_in_Wales [Accessed: February 2025].

NRW (2021). NRW Evidence Report Otter Survey Wales 2015-2018. Available at: https://cdn.cyfoethnaturiol.cymru/media/694539/osw-6th-report-final.pdf [Accessed: February 2025].

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Welsh Government (2016). The Environment (Wales) Act 2016. Available at: https://www.legislation.gov.uk/anaw/2016/3/contents [Accessed: February 2025].

Welsh Government (2021) Future Wales: The National Plan 2040, February 2021. [online]. Available at: https://gov.wales/future-wales-national-plan-2040 [Accessed: February 2025].

Welsh Government (2021) *Planning Policy Wales, Edition 12, February 2024*. [online]. Available at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf [Accessed February 2025].

Welsh Government., (2009). Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning.

Welsh Ornithological Society. (2021). Birds in Wales – Welsh Bird Report No. 34: 2020.