Pennant Walters

GLANLLYNFI GARTH WIND FARM

Draft Environmental Statement

Chapter 8 - Biodiversity

JULY 2026

PUBLIC

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8.1 Introduction

8.1.1. This chapter presents the assessment of the likely significant effects of the Proposed Development with respect to biodiversity, including consideration of statutory and non-statutory designated sites, terrestrial and freshwater habitats and legally protected and notable species. The assessment is based on information obtained to date. It should be read in conjunction with the Project description provided in **Chapter 4: Development Description** and with respect to relevant parts of the following chapters:

- Chapter 9: Ornithology;
- Chapter 10: Water environment;
- Chapter 11: Ground conditions; and
- Chapter 13: Noise.

8.1.2. This Chapter is supported by the following appendices in **Volume 3**:

- Appendix 1B: Scoping Direction;
- Appendix 8A: Preliminary Ecological Appraisal (PEA) report; and
- Appendix 8B: Great Crested Newt (GCN) eDNA survey technical note.

8.1.3. This Chapter describes:

- the legislation, policy and technical guidance that has informed the assessment (**Section 8.2**);
- consultation and engagement that has been undertaken and how comments from consultees relating to biodiversity have been addressed (**Section 8.3)**;
- the methods used for baseline data gathering (**Section 8.4**);
- overall baseline (**Section 8.5**);
- embedded measures relevant to biodiversity (**Section 8.6**);
- the scope of the assessment for biodiversity (**Section 8.7**);
- the methods used for the assessment (**Section 8.8**);
- the assessment of biodiversity effects (**Section 8.9**);
- assessment of cumulative (inter-project) effects (**Section 8.10**);
- a summary of the significance conclusions (**Section 8.11**);
- additional measures proposed (**Section 8.12**); and
- an outline of further work to be undertaken for the Final Environmental Statement (ES) (**Section 8.13**).

Limitations and assumptions

8.1.4. The Draft ES has been produced to fulfil Pennant Walters's consultation duties and enable consultees to develop an informed view of the likely significant effects of the Proposed Development.

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

- An assessment of the forestry access track has not been undertaken as part of the Draft ES as the design is yet to be determined (further details are provided in **Section 4.2.24**). This will be confirmed, assessed and reported in the final application submission documents. The Proposed Development would require the access tracks to be upgraded to facilitate the movements of Abnormal Indivisible Loads (AILs). At this stage, detailed surveys are currently being undertaken to inform the design of any required improvements. Following the completion of surveys, assessment and design, the identification of the required upgrades along the route, together with an assessment of environmental effects will be presented in the Final ES.
- An update to the desk study has been undertaken in July 2026 for international and national statutory designated sites to ensure that potential impacts to these are appropriately captured. This Draft ES does not include an updated desk study for the local statutory designated sites, non-statutory sites of importance for nature conservation, protected and notable species, or habitats of conservation importance. It is assumed that ecological features associated with these elements of the desk study, which were recorded in the ES scoping report, remain relevant to this Draft ES and that the desk study will be updated in full for the final ES submission.
- Records held by local biological record centres and local recording groups are generally collected on a voluntary basis, therefore, an absence of records from the desk study data does not necessarily demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- Habitat and botanical surveys are seasonally limited and throughout the year certain botanical species will be more or less evident at different times (i.e. depending on the flowering season). The Phase 1 habitat survey (part of the PEA) (WSP, 2025 – **Appendix 8A**) was carried out in February and March 2025 (sub-optimal months for habitat surveys). 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. However an updated habitat survey to verify the habitat types and gather an updated botanical list during the optimal survey months is scheduled for August 2026 (see further information below). Any changes to the assessment as a result of this update habitat survey will be incorporated into the Final ES.
- The Phase 1 habitat survey completed as part of the PEA was carried out over a period of four days, therefore, only a selection of all species that occur within the Development 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 Development Site to support protected species or those of conservation concern was possible.
- No Night-time Bat Walkovers (NBW) have been completed to inform the Proposed Development, and these have been scoped out based on health and safety grounds. Several areas of the Northern Array and Southern Array are treacherous in nature with steep banks, uneven tracks and difficult terrain and it is not considered safe to complete NBW surveys. This is not seen as a significant limitation to the assessment,

as it is considered that sufficient information will be gathered from the bat activity surveys being undertaken (deployment of static detectors). Furthermore, good practice guidelines for onshore wind farms[1] recognise that NBW is an optional survey method, which can be used to complement the information gathered from static detectors, but their applicability is discretionary and site-specific.

- During the great crested newt *Triturus cristatus* (GCN) environmental DNA (eDNA) survey, three ponds (identified as P1, P3 and P6) were not subject to sampling as the extent of water present was too shallow (<10cm). The ponds were considered unsuitable for GCN to breed as they require open water habitats in which to do so and it was deemed that the ponds do not routinely hold water of a suitable depth to be used by GCN. This has been verified incidentally during other ecological surveys conducted on the Development Site and is therefore not considered a significant limitation to the assessment.
- Due to the project programme and the seasonal nature of ecological surveys, this Draft ES assessment has been carried out prior to the completion of all ecological baseline surveys, as recommended in the PEA (**Appendix 8A**) and in the Scoping Direction (**Appendix 1B**). A precautionary approach to the assessment has therefore been taken within this Chapter to determine an ecological baseline for this assessment. The Chapter will be updated once all surveys are completed and specific species survey reports will be appended to the Final ES. Surveys which are currently underway or outstanding are listed below:
  - Bat activity surveys using static bat detectors: Surveys have been carried out in Autumn 2025 and Spring 2026, with surveys in Summer 2026 ongoing.
  - Preliminary roost assessment: Bat roost surveys of features with suitability for roosting bats within 300 m of the proposed turbine locations in the Northern Array and Southern Array are ongoing. Under the refined Development Site boundary that has been assessed within this draft ES, there is one rocky outcrop at the Northern Array and no trees with potential roosting features within 300 m of either the Northern of Southern Array. Any features with bat roosting potential that are identified within 50 m of the forestry access track will be subject to an appropriate level of survey to inform design and a robust impact assessment.
  - Water vole *Arvicola amphibius* surveys: Surveys of all watercourses within the Northern Array and Southern Array, to determine the presence or likely absence of water vole are ongoing. The first of two surveys was completed on 20 – 21 May 2026 with the final survey being scheduled for late July 2026. Following their completion, the findings of the water vole survey will be presented in a report and discussed within the Final ES.
  - An update Phase 1 habitat survey during the optimal months for botanical surveys (scheduled for August 2026). The survey will also include a search for scabious *Succisa* spp plant species, the larval food plant for marsh fritillary *Euphydryas aurinia.*
  - National Vegetation Classification (NVC) survey: An NVC survey of the Northern Array and Southern Array is scheduled for August 2026, and the findings will be presented in a report and discussed within the Final ES.

8.1.6. It is considered that a combination of the desk study data obtained for habitats present in the Development Site, along with the habitats and species survey data (that will be available in full) for the Final ES, will provide sufficient information on habitats, bats and water vole for an assessment of likely significant effects. Precautionary assumptions have

1 Nature Scot (2021). Bats and Onshore Wind Turbines – survey, assessment and mitigation.

been made at this stage in this Draft ES Chapter to account for incomplete survey data. Precautionary measures will be applied where there are any data gaps.

8.2 Relevant legislation, planning policy and technical guidance

8.2.1. This section identifies the legislation, planning policy and technical guidance that has informed the assessment of effects with respect to biodiversity. Further information on policies relevant to the Project is provided in **Chapter 5: Legislation and Policy**.

Legislation

8.2.2. A summary of the relevant legislation relevant to this Chapter is given in **Table 8.1.**

Table 8.1 Legislation relevant to the biodiversity assessment.

Legislation	Legislative Context
The Conservation of Habitats and Species Regulations 2017 (as amended) (HMSO, 2010)[2]	The Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") transposed the Habitats Directive into English and Welsh law. The Habitats Regulations provided 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 Conservation of Habitats and Species Regulations 2017 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, although 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.

2 HMSO (Her Majesty's Stationary Office). (2010). The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

Legislation	Legislative Context
The Environment (Wales) Act 2016 (Welsh Government, 2016)[3]	The Act makes provisions within Wales for the planning and managing of natural resources at 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 7 of the Act introduces a list of living organisms and types of habitats 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) (HMSO, 1981)[4]	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) 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 (HMSO, 2000)[5]	This Act details further measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation.
Protection of Badgers Act 1992 (HMSO, 1992)[6]	The Protection of Badgers Act provides protection to badgers and their places of shelter (setts).

Planning Policy

8.2.3. A summary of the relevant national and local planning policy relevant to this Chapter is given in **Table 8.2.**

Table 8.2 Planning policy relevant to the biodiversity assessment.

Policy	Policy Context
National planning policy	
Future Wales: The National Plan 2040 (Welsh Government, 2019)[7]	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[8]	Chapter 6 of Planning Policy Wales (PPW) sets out the Welsh Government's objectives for Distinctive and Natural Places theme of planning policy topics which includes biodiversity and

[3] Welsh Government (2016). Environment (Wales) Act 2016.
[4] HMSO. (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000). HMSO, Norwich.
[5] SO (2000). Countryside & Rights of Way Act 2000.
[6] HMSO (1992). Protection of Badgers Act 1992.
[7] Welsh Government (2019). Future Wales: The National Plan 2040. [Updated in 2025]. Available at: https://www.gov.wales/future-wales-national-plan-2040 [Accessed: May 2026]
[8] Welsh Government (2024). Planning Policy Wales (PPW) Edition 12.

Policy	Policy Context
	habitats. 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).
Planning Policy Wales – Stepwise approach	Biodiversity enhancements that achieve Net Benefits for Biodiversity (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. 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.

Policy	Policy Context
	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[9]	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 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 Bridgend Local Development Plan (LDP) 2018 to 2033[10] (adopted 2024), with particular reference to Strategic Policy (SP) 17: Conservation and Enhancement of the Natural Environment.	The Replacement Bridgend LDP identifies a strategic policy for Conservation and Enhancement of the Natural Environment (SP17). The LDP SP17 states that: "*The County Borough has a rich and varied biodiversity, in terms of species and habitats, which the Replacement LDP seeks to maintain and enhance (to provide a net benefit). For development to be sustainable, it needs to be soundly based on good environmental assessments, and to be well planned and controlled with regard to its environmental impact.";* *"SP17 seeks to maintain, and, wherever possible, enhance the landscape quality as part of the natural environment within the County Borough."; and* *"SP17 seeks specifically to protect statutorily designated sites of international or national importance*."
Bridgend Biodiversity Duty Plan 2022-2025[11]	The measures set out in this Plan are part of broader ambitions by the Council to deliver a healthy natural environment, supporting communities and livelihoods.
Bridgend Supplementary Planning Guidance (SPG) 19 Biodiversity and Development – A green infrastructure approach.[12]	This SPG document provides detailed guidance on biodiversity issues within the county and an introduction to the 'Green Infrastructure Approach' to development which the Council has adopted.

[9] Welsh Government (2009). Technical Advice Note 5; Nature Conservation and Planning 2009
[10] Bridgend County Borough Council (2024) Adopted Replacement Local Development Plan 2018 – 2033. Available at: https://www.bridgend.gov.uk/media/izcfgp1f/written-statement.pdf [Accessed July 2026].
[11] Bridgend County Borough Council (2022) Biodiversity Duty Plan 2022 – 2025. Available at: https://democratic.bridgend.gov.uk/documents/s28424/Appendix%202%20- %20Bridgend%20Biodiversity%20Duty%20Plan%202022-25%20FINAL.pdf [Accessed June 2026]
[12] Bridgend County Borough Council (2014) Supplementary Planning Guidance (SPG) 19 Biodiversity and Development – A green infrastructure approach. Available at: https://www.bridgend.gov.uk/media/a3fou4rh/spg-19-biodiversity-and-development.pdf [Accessed July 2026]

Policy	Policy Context
Neath Port Talbot County Borough Council Local Development Plan(2011-2026)[13], with specific reference to Strategic Policy SP15 Biodiversity and Geodiversity	The Neath Port Talbot County Borough Council Local Development Plan identifies a strategic policy for Biodiversity and Geodiversity (SP15). SP15 states that: "*Important habitats, species and sites of geological interest will be protected, conserved, enhanced and managed through the following measures:* *1. The identification of the following Internationally and Nationally designated sites within the County Borough to enable their protection:* *(a) Special Areas of Conservation (SACs) and Ramsar Sites;* *(b) Sites of Special Scientific Interest (SSSIs);* *(c) National Nature Reserves (NNRs).* *2. The identification and protection of sites of regional and local importance;* *3. The protection of important natural heritage features*."
Rhondda Cynon Taf Local Development Plan 2006-2021[14], with specific reference to Area Wide Policy AW8 - Protection And Enhancement Of The Natural Environment.	Rhondda Cynon Taf Local Development Plan identifies an area wide policy for the protection and enhancement of the natural environment (AW8). AW8 states that: "*Rhondda Cynon Taf's distinctive natural heritage will be preserved and enhanced by protecting it from inappropriate development.* *Development proposals will only be permitted where:* *1. They would not cause harm to the features of a Site of Importance for Nature Conservation (SINC) or Regionally Important Geological Site (RIGS) or other locally designated sites, unless it can be demonstrated that:* *a) The proposal is directly necessary for the positive management of the site; or* *b) The proposal would not unacceptably impact on the features of the site for which it has been designated; or* *c) The development could not reasonably be located elsewhere and the benefits of the proposed development clearly outweigh the nature conservation value of the site.* *2. There would be no unacceptable impact upon features of importance to landscape or nature conservation, including ecological networks, the quality of natural resources such as air, water and soil, and the natural drainage of surface water*."

[13] Neath Port Talbot County Borough Council (2016). Neath Port Talbot County Borough Council Local Development Plan (2011-2026). Available at: https://media.npt.gov.uk/media/ca2fbumd/ldp_written_statement_jan16.pdf?v=20240823155047 (Accessed: July 2026).
[14] Rhondda Cynon Taf County Borough Council (2011). Rhondda Cynon Taf Local Development Plan 2006-2021. Available at: https://www.rctcbc.gov.uk/EN/Resident/PlanningandBuildingControl/LocalDevelopmentPlans/RelateddocumentsLDP20062021/AdoptedLocalDevelopmentPlan.pdf (Accessed: July 2026).

Technical Guidance

8.2.4. A summary of the technical guidance for biodiversity is given in **Table 8.3**

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[15]	Sets out the industry standard approach to Ecological Impact Assessment (EcIA) for assessing the potential effects of a project on ecological receptors.
Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit; JNCC, Peterborough[16]	A standardised system for classifying and mapping wildlife habitats in all parts of Great Britain, including urban areas. The Phase 1 habitat classification and associated field survey technique provides a relatively rapid system to record semi-natural vegetation and other wildlife habitats. Each habitat type/feature is defined by way of a brief description and is allocated a specific name, an alpha-numeric code and unique mapping colour. The system has been widely used and continues to act as the standard 'Phase 1' technique for habitat survey across Wales, favoured by NRW.
Bat Surveys for Professional Ecologists. Good Practice Guidelines (4th Edition)[17]	A reference guide for ecological consultants conducting bat surveys, providing best practice survey and assessment guidance.
Bats and onshore wind turbines - survey, assessment and mitigation[18]	Provides best practice guidance for designing bat surveys and assessing impacts to bats which may arise from onshore wind energy developments.
Valuing Bats in Ecological Impact Assessment[19]	Provides guidance relating to determining the value of a bat assemblage for the purpose of an ecological impact assessment.
Bats and Artificial Lighting in the UK, Guidance Note 08/23[20]	Provides guidance relating to impacts of lighting on bats and advice on appropriate lighting design.

[15] CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, Version 1.1*. [online]. Available at: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1Update.pdf [Accessed July 2026].
[16] JNCC (2016) Handbook for Phase 1 habitat survey – a technique for environmental audit (JNCC, Peterborough). Available at: https://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.pdf [Accessed: June 2026].
[17] Collins (ed.) (2023). Bat surveys for professional ecologists: Good practice guidelines. 4th Edition.: Bat Conservation Trust; London.
[18] NatureScot (2021). Bats and onshore wind turbines: Survey, assessment and mitigation. Available at: https://www.nature.scot/sites/default/files/2021-08/Bats%20and%20onshore%20wind%20turbines%20-%20survey%2C%20assessment%20and%20mitigation_0.pdf [Accessed July 2026].
[19] Wray, S., Wells, David., Long, E. and Mitchell-Jones, T. (2010). Valuing Bats in Ecological Impact Assessment. In Practice (CIEEM), December 2010, pages 23-26.
[20] Institution of Lighting Professionals and Bat Conservation Trust (2023). Guidance Note GN08/23 Bats and Artificial Lighting at Night. Available online at: https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/ [Accessed: 14 January 2026].

Technical guidance document	Context
Badgers – A Guide for Developers[21]	A fact sheet from NRW that details recommended survey types, assessment of impacts to badgers and their setts, and good practice measures to apply during construction.
The Water Vole Mitigation Handbook[22]	Provides guidance in relation to impact assessment, habitat suitability, survey methods and survey effort for water vole.
Amphibian and Reptile Groups of the United Kingdom (ARG UK) Advice Note 5: Great Crested Newt Habitat Suitability Index[23]	An advice note which provides best practice information for surveying great crested newt (GCN) Triturus cristatus, including use of a Habitat Suitability Index (HSI) scoring system as means of evaluating habitat quality.

8.3 Consultation and Engagement

Overview

8.3.1. The assessment has been informed by consultation responses and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Section 2.4** of **Chapter 2: Approach to EIA**.

Scoping Direction

8.3.2. A Scoping Direction was issued by Planning and Environment Decisions Wales (PEDW), on behalf of the Welsh Ministers, on 12 June 2026. A summary of the relevant responses received in the Scoping Direction in relation to biodiversity and confirmation of how these have been addressed within this Draft ES is presented in **Table 8.4**. The responses include those from PEDW, NRW, Bridgend County Borough Council, Neath Port Talbot Council and Rhondda Cynon Taf County Borough Council.

8.3.3. At the time of writing, not all of the Scoping Direction comments have been addressed, however, all comments will be addressed within the Final ES.

[21] Natural Resource Wales (2023). Badger – A guide for developers. Available at: https://naturalresources.wales/media/696694/badgers-a-guide-for-developers.pdf?mode=pad&rnd=133216507090000000 [Accessed July 2026]
[22] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.
[23] Amphibian and Reptile Groups of the United Kingdom (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. ARGUK. Available at: https://cieem.net/resource/arg-uk-advice-note-5-great-crested-newt-habitat-suitability-index/ [Accessed: June 2026].

Table 8.4 Summary of EIA Scoping Direction Responses for biodiversity

Comment ID	Consultee	Consideration	How addressed in this Draft ES
ID.19 and ID.40	NRW, PEDW and Neath Port Talbot Council (NPTC) ID.19	The consultees raised that the ES should assess the full extent of the Proposed Development and associated infrastructure, including grid connection infrastructure and track upgrades, and that these areas should be clearly defined.	An assessment of the entire Development Site boundary has not been undertaken for the Draft ES because the design of the forestry access track has yet to be determined (see **Chapter 4: Description of the Project**). The design of the forestry access track will be confirmed, assessed and reported in the final application submission documents. Potential impacts to sites important for biodiversity, habitats and species that arise from environmental changes associated with the Proposed Development will be considered (and assessed where necessary) if those receptors are within Zone of Influence (ZoI) and there are foreseeable impact pathways connecting the source and receptor. This Draft ES uses the refined Northern and Southern Array boundaries, which covers all of the elements of construction that the Final ES will include except the forestry access tracks, as the Development Site.
ID.41	PEDW	PEDW raised that a reasonable worst-case scenario for biodiversity effects should be applied where turbine and infrastructure locations remain flexible.	A reasonable worst-case scenario for the spatial and temporal scope of the assessment has been defined within **Section 8.7 - Scope of the assessment**. This has been based upon **Chapter 4: Development Description**. The reasonable

Comment ID	Consultee	Consideration	How addressed in this Draft ES
			worst-case scenario ensures that in elements of the design where flexibility is required the precautionary approach should mean that effects of a greater adverse significance are not likely to arise should any other reasonable design scenario be taken forward in the final design of the Proposed Development.
ID.21	NRW, PEDW and Bridgend Borough Council (BCBC)	The consultees advise that the ES should provide sufficient information to inform HRA, including assessment of potential effects on relevant SACs.	A shadow HRA is being prepared for each of the SACs relevant to the Proposed Development (see **Table 8.14)** and these assessments will be detailed within a HRA Screening Report appendix which will accompany the Final ES application. A summary of the reasons for consideration for the SACs and potential impacts pathways on qualifying features of the SAC is provided in **Section 8.7 - Scope of the assessment**. This Draft ES does not provide a summary of the HRA because survey for mobile species such as bats and marsh fritillary are ongoing (see **Section 8.13 - Further work to be undertaken**) meaning that the importance of the Development Site for these species cannot be quantified at this time. It does however provide a summary of the potential impacts to designated features which are not mobile or geographically confined to within the SAC boundaries.
ID.28	NRW and PEDW	The consultees advise that Cwm Cyffog SSSI should be scoped into the ES and assessed for potential impacts, owing to	The applicant recognises that the scoping report only reported on the distance of the Cwm Cyffog SSSI from the Northern Array

Comment ID	Consultee	Consideration	How addressed in this Draft ES
		its proximity to the Proposed Development.	and that the Southern Array is closer to the SSSI. Irrespective of the smaller distance, the reason for scoping the SSSI out of the assessment was that there was no hydrological connection and therefore no foreseeable impact pathway between the changes in habitat use within the Development Site and the upland blanket mire, bog mosses and white beak sedge, which are the designating features of the SSSI. The conclusion to scope Cwm Cyffog SSSI out of this impact assessment is therefore consistent with the application of 'Source-pathway-receptor approach' and the ES will continue to scope out impacts to this designated site.
ID.20	PEDW, Rhondda Cynon Taf County Borough Council (RCTCBC) and BCBC	The consultees advise that the ES should assess potential impacts from the Proposed Development, including the grid connection route, on designated ecological sites including SINCs. Furthermore, the Proposed Development must be compatible with the nature conservation interests of the SINCs in accordance with relevant planning policy.	This Draft ES includes a summary of desk study data for SINCs purchased from SEWBReC and analysed as part of the PEA (**Appendix 8A**). This Draft ES includes all SINCs which were provided as part of the desk study data and are within the ZoI of the Proposed Development. Furthermore, a habitat management plan (HMP) will be produced, and submitted with the Final ES application, as part of the biodiversity impact mitigation and management strategy for the Proposed Development. This will ensure that habitat mitigation within the Development Site offsets any impacts and complements the nature conservation goals of relevant SINCs.

Comment ID	Consultee	Consideration	How addressed in this Draft ES
ID.29, ID31 and ID.32	PEDW and BCBC	The consultees advised that further detailed ecological survey work is required and that the ES should clearly set out survey methodologies, timing, limitations and confidence in the baseline data. They also highlighted the need to address survey constraints, including where surveys were undertaken outside the optimal survey season.	The ecological baseline data has been informed by habitat and protected species surveys undertaken by suitably qualified ecologists. A summary of limitations to any surveys and assessments and the associated confidence in the baseline ecological data are addressed within **Section 8.1 - Introduction** whilst survey methodologies and survey timings are described within **Section 8.4 - Data gathering methodology**. Full survey reports are provided in **Appendix 8A and 8B**. Where further surveys are proposed, these are scheduled to be undertaken during appropriate survey periods (see **Section 8.13 – Further work to be undertaken**) and the results will be incorporated into the Final ES, with the assessment updated as necessary to reflect the findings.
ID.18	PEDW	The consultees advised that the ES should take account of the updated Section 7 list of species and habitats under the Environment (Wales) Act 2016 and assess any significant effects on relevant habitats and species.	The biodiversity assessment within this Draft ES has been prepared with reference to the current Section 7 list of habitats and species of principal importance under the Environment (Wales) Act 2016. Relevant Section 7 habitats and species identified within the Study Area have been considered within the ecological baseline data within **Section 8.5 - Overall baseline** and then throughout the assessment where relevant.
ID.30	NRW, PEDW and BCBC	The consultees advised that the ES should assess and quantify impacts on Priority habitats (under section 7 of the	**Section 8.7 - Scope of this assessment** within this Draft ES details which potential Priority habitats have been identified on the

Comment ID	Consultee	Consideration	How addressed in this Draft ES
		Environmental (Wales) Act 2016), including habitat loss, fragmentation, condition and ecological connectivity. In order to accurately capture the ecological baseline for habitats, the whole of the Development Site should be subject to a Phase 1 habitat survey, and the semi-natural vegetation should have a National Vegetation Classification (NVC) survey. They also highlighted the need to apply the mitigation hierarchy and give particular consideration to habitats which are sensitive to hydrological change arising from construction approaches such as marshy grassland and heathland mosaics.	Development Site during the extended Phase 1 habitat survey and potential impact pathways for these receptors after industry good practice embedded mitigation and timing of the works has been considered. **Section 8.9 - Assessment of biodiversity effects** then includes an assessment of the distribution and importance of upland habitats within the Development Site, including Section 7 Priority habitats. The assessment considers potential habitat loss, fragmentation, changes in habitat condition and ecological connectivity, and demonstrates how the mitigation hierarchy has been applied through project design and embedded mitigation. The Final ES submission will include updated habitat survey data, including Phase 1 habitat data for the whole Development Site and a NVC survey for any potential Priority habitats identified during the Phase 1 habitat survey (see **Section 8.13 - Further work to be undertaken**), as part the final **Section 8.5 - Overall baseline**.
ID.33	NRW, PEDW and BCBC	The consultees advised that the ES should assess potential ecological effects arising from impacts on wet habitats, peatlands and watercourses, including changes to drainage, water quality, flow regimes and sedimentation. They also highlighted the need to	**Section 8.7 – Scope of the assessment within** this Draft ES includes a list of potential impact pathways for biodiversity receptors that could arise from the Proposed Development and ZoI for their effects considered in light of industry good practice embedded mitigation and the timing of the

Comment ID	Consultee	Consideration	How addressed in this Draft ES
		consider downstream effects on aquatic habitats and designated sites.	works based on **Chapter 4: Development Description.** Any potential effects on aquatic habitats, designated sites and other hydrologically sensitive ecological receptors are considered alongside the findings of the Water Environment (**Chapter 10**) and Ground Conditions (**Chapter 11**) assessments to provide an integrated assessment of impacts.
ID.38	PEDW and BCBC	The consultees advised that the ES should include further surveys, where required, for protected and notable species and provide details of survey methodologies, survey effort and impact assessment. Particular consideration should be given to bats, otter, water vole, great crested newt, reptiles and other notable fauna, including potential operational effects, hydrological impacts and appropriate avoidance, mitigation and compensation measures.	This Draft ES assesses the potential effects of the Proposed Development on protected and notable species identified through desk study and field surveys. Survey methodologies, survey effort and assessment methods are described within Section **8.4 - Data gathering methodology** and follow current guidance and best practice. Additional protected species surveys are scheduled (see **Section 8.13 - Further work to be undertaken**). The results of these surveys will be incorporated into the Final ES. The assessment considers both construction and operational impacts. Appropriate avoidance, mitigation and, where necessary, compensation measures will be identified to address any significant effects on protected and notable species, with species-specific assessments provided where suitable habitat or evidence of presence has been identified.

Comment ID	Consultee	Consideration	How addressed in this Draft ES
ID.22 and ID.23	NRW, PEDW and BCBC	The consultees raised that bat surveys and assessments should follow current best-practice guidance and include: ■ Surveys for potential bat roost features within relevant turbine buffers with any confirmed roosts assessed and appropriate mitigation or compensation identified; ■ An assessment of commuting and foraging routes associated with linear features, supported by nighttime surveys to identify key flight paths and activity areas. ■ Species-specific analysis of seasonal bat activity data; and ■ An assessment of collision risk and barrier effects arising from the Proposed Development.	Bat surveys have been designed in accordance with current best-practice guidance, including relevant NatureScot and Bat Conservation Trust guidance. Static bat activity surveys and surveys of potential roosting features within 300 m of the Development Site are ongoing (see **Chapter 8.13 – Further work to be undertaken**) and the results of these surveys will be incorporated into the Final ES. No night-time bat walkover surveys are being carried out due to health and safety limitations associated with walking across the Development Site at night (see **Section 8.1 – Introduction** for further details). **Section 8.7 – Scope of the assessment** within this Draft ES details the reasons for considering commuting and foraging bats along with potential impact pathways, and **Section 8.9 –Assessment of biodiversity effects** includes an assessment of impacts given our precautionary assessment of how bats may be using the Development Site for commuting and foraging. The Final ES will then assess potential effects including turbine collision risk, barrier effects, disturbance or loss of roost and the use of commuting and foraging routes, together with any required mitigation measures.
ID.24	NRW and PEDW	The consultees advised that GCN surveys should cover relevant	A desk study, Habitat Suitability Index (HSI) assessment and eDNA surveys have been

Comment ID	Consultee	Consideration	How addressed in this Draft ES
		waterbodies within appropriate distances of development works and follow current best-practice guidance. The ES should clearly define the survey scope and include presence/absence surveys, population assessments, impact assessment and mitigation where GCN are confirmed to be present.	undertaken to identify the potential presence of GCN within waterbodies within 500 m of the Northern Array and Southern Array. The surveys identified that GCN are likely absent from the Development Site. Detailed results of these surveys are summarised in **Section 8.5 – Overall baseline** and full details are available in **Appendix 8B.**
ID.25	NRW and PEDW	The consultees advised that suitable habitat for water vole is present within ditches and marshy grassland and that appropriate surveys should be undertaken where required. The ES should assess potential impacts on water voles and set out suitable mitigation or compensation measures where the species is confirmed to be present.	Suitable habitat for water vole has been identified within parts of the Development Site, including ditches and areas of marshy grassland. Water vole surveys are currently ongoing (see **Section 8.13 – Further survey to be undertaken**), and the results so far are included in **Section 8.5 – Overall baseline** and are used to inform the assessment of potential effects on the species within this Draft ES. The findings of these surveys will be incorporated into the Final ES, which will assess any potential impacts on water vole and identify appropriate avoidance, mitigation and, where necessary, compensation measures.
ID.26	NRW and PEDW	The consultees noted that there are no known dormouse records on or adjacent to the Development Site and that the PEA considers dormice likely to be absent.	This Draft ES continues to exclude dormouse *Muscardinus avellanarius* from the assessment.
ID.27	NRW and PEDW	The consultees advised that marsh fritillary should be scoped into the ES	Marsh fritillary has been scoped into the ecological assessment in response to

Comment ID	Consultee	Consideration	How addressed in this Draft ES
		due to nearby records and the presence of potentially suitable habitat within the Development Site. They recommended appropriately timed habitat and invertebrate surveys, including assessment of devil's-bit scabious and suitable habitat within the development footprint, to determine potential impacts on the species and its functional landscape	consultee feedback, given the presence of suitable habitat within the Development Site and records of the species within 2 km of the Proposed Development. The updated Phase 1 habitat survey (see **Section 8.13 – Further survey to be undertaken**) will include search for Scabious plants (the food source for marsh fritillary surveys) and an assessment of suitable supporting habitat, and results will be reported in the Final ES.
Not provided	NRW, BCBC and PEDW	The consultee advised that invertebrate surveys should be scoped into the ES, given the ecological context of the Development Site and the potential presence of notable species. They recommended that the assessment includes appropriate invertebrate survey work and consultation with the local authority ecologist where necessary.	The PEA concluded that the habitats within the Development Site could support common invertebrates. The scoping report concluded that the receptor was of Site value and that impacts to populations from habitat loss and/or fragmentation would be minor when considered in the context of the availability of suitable habitat in the surrounding landscape. Common invertebrates have been scoped out of this Draft ES as the assessment for this receptor would remain the same.
ID.34	PEDW and BCBC	The consultees advised that the ES should identify any INNS present within the Development Site and include appropriate management measures. This should include a detailed INNS Management Plan, incorporating biosecurity, treatment and post-treatment monitoring measures to prevent the spread of INNS before, during and after construction.	The PEA identified two invasive non-native plant species. A detailed Invasive Non-native Species (INNS) management plan will be prepared as an industry good practice embedded measure, to be secured by a planning condition. **Section 8.7 – Scope of the assessment** details that inclusion of this embedded measure would remove the spread of INNS as potential impact pathway and as such this receptor or impact pathway

Comment ID	Consultee	Consideration	How addressed in this Draft ES
			will not be included in the detailed assessment.
ID.36	NRW and PEDW	The consultees advised that the Proposed Development should maintain and enhance green infrastructure and ecological connectivity, avoiding fragmented habitats and isolated corridors. The ES should demonstrate how ecological connectivity will be retained and enhanced throughout the Proposed Development.	**Section 8.7 – Scope of the assessment** within this Draft ES includes fragmentation of habitats as a potential impact pathway. The Draft ES therefore considers how ecological connectivity within the Development Site and surrounding area may be impacted. Furthermore, an outline HMP and NBB assessment will be produced, and submitted with the Final ES application, as part of the biodiversity impact mitigation and management strategy for the Proposed Development. This will ensure that potential habitat fragmentation arising from the Proposed Development is avoided and or mitigated, where appropriate.
ID.37	NRW and PEDW	The consultees advised that the ES should assess species-specific impacts throughout the construction, operation and decommissioning phases, considering short-, medium- and long-term effects. Where protected species are present, the ES should demonstrate that favourable conservation status will be maintained and set out any necessary mitigation, compensation, monitoring and long-term management measures.	This description of the Proposed Development in **Section 8.7 Scope of the** assessment uses the information on construction, operation and decommissioning provided within **Chapter** 4**: Development Description .** This Draft ES assesses species-specific effects against a realistic worst case scenario for the Proposed Development and takes account of short-, medium- and long-term impacts where relevant. The assessment is informed by desk study information, field surveys and species-specific survey data, and considers potential effects on protected and notable species.

Comment ID	Consultee	Consideration	How addressed in this Draft ES
Not provided	NRW, BCBC and PEDW	The consultee advised that the ES should demonstrate how the long-term effectiveness and security of any mitigation or compensation measures will be secured. Where significant impacts on protected species are identified, species-specific Conservation Plans should be prepared and included within the ES.	At this stage, this Draft ES cannot provide any additional measures which should be implemented as targeted mitigation as data collection on important ecological receptors is ongoing and as such mitigation or compensation measures are yet to be fully defined. Where mitigation or compensation is required, details of the proposed long-term management, monitoring and maintenance arrangements will be provided in the Final ES and the HMP and NBB reports which will accompany the ES.
ID.35	PEDW and BCBC	The consultees advised that the ES should deliver measurable biodiversity enhancements that go beyond standard mitigation measures. They recommended a clear biodiversity enhancement strategy, supported by long-term management and monitoring.	The scheduled survey work for habitats and protected species means that this Draft ES cannot fully consider the impacts of the Proposed Development and as such it cannot fully define the requirement for mitigation and/or enhancement measures. The Final ES submission will include a HMP which will compile biodiversity enhancements and mitigation measures from across multiple appendices including species specific reports and NBB report. This HMP will provide a clear strategy for the long term management and monitoring of the biodiversity value of the Development Site.
ID.39	PEDW and BCBC	The consultees advised that the ES should assess cumulative ecological effects alongside other existing and	An assessment of cumulative effects of the Proposed Development and other relevant projects/schemes on important ecological receptors has not been produced for this Draft ES. This is because the ongoing

Comment ID	Consultee	Consideration	How addressed in this Draft ES
		proposed developments, including wind farm schemes.	ecological surveys (see **Section 8.13 – Further work to be undertaken**) need to be completed to allow for an accurate and robust assessment of cumulative effects. Nonetheless, a list of relevant projects/schemes which could have in-combination effects with the Proposed Development have been provided in **Chapter 17.**

Technical Engagement

8.3.4. At the time of writing there has been no technical engagement with consultees in relation to biodiversity. The current survey approaches follow good practice guidance and the impacts of the Proposed Development on important ecological receptors is yet to be fully defined due the ongoing surveys. This will be reviewed as survey data becomes available and, where necessary, technical engagement with consultees will happen prior to Final ES submission.

8.4 Data gathering methodology

8.4.1. The ecological survey programme has been designed to provide a comprehensive ecological baseline which will include data on legally protected and notable species within appropriate Study Areas (see **Sections 8.4.3 to 8.4.6**), and the general status and condition of all habitats within the Development Site.

Study Area

8.4.2. There are various Study Areas 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 for each ecological feature (CIEEM, 2024[24]). The Study Areas contained within this Draft ES biodiversity chapter are as follows:

- The desk study areas for sites designated for their nature conservation interest at the international, national and local levels (see **Section 8.4.5 to 8.4.7 Desk Study**);
- The desk study areas for legally protected and notable ecological features (see **Section 8.4.5 to 8.4.7 Desk Study**);
- For protected and notable species, the Study Area was defined as the land within the Development Site as well as additional habitats outside the Development Site that were included based on good practice guidance and could be impacted by the Proposed Development (hereafter referred to as 'the Study Area'). These additional habitats were any habitats suitable for protected and notable species within 250 m of the Development Site, extended to waterbodies within 500 m of the Development Site for GCN (as shown on **Figure 8.7 and 8.8**); and
- For habitats, the Study Area was defined as the land within the Development Site.

8.4.3. These Study Areas have been defined on a precautionary basis to ensure that the Zones of Influence (ZoIs) relevant to all ecological features were covered during baseline data collection activities. ZoIs are defined as the areas over which ecological features may be affected as a result of environmental change associated with the Proposed Development. The ZoI will vary for different ecological features depending on their sensitivity to an environmental change and it will therefore be appropriate to identify different ZoIs for different ecological features. ZoIs for the purpose of the impact assessment are detailed further within **Section 8.7**.

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

Desk Study

8.4.4. An initial desk study was carried out in March 2025 as part of the Preliminary Ecological Appraisal (**Appendix 8A**) and was summarised within the ES Scoping Report. The extent of the initial desk study was determined based on good practice guidance[22] and a high-level overview of the types of ecological features present and the potential effects that could occur. Furthermore, this initial desk study was based on scoping boundary which had a larger extent for the Northern Array (Pwll-yr-Lwrch) and Southern Array (Cynhordy). The boundary of the site at the Northern and Southern Array has since been refined and has had the NGED Connection and Forestry access track added to it to create the Development Site boundary.

8.4.5. In response to this, an update to the desk study was undertaken in July 2026 for international national and local statutory designated sites and non-statutory sites of importance for nature conservation to ensure that potential impacts to these are appropriately captured.

8.4.6. The desk study areas applied within this Draft ES are as follows:

- International statutory designated sites[25] within 10 km of the Development Site, extended to 30 km for international statutory sites designated for bats (as shown on **Figure 8.1 and 8.3**);
- National statutory designated sites[26] within 2 km of the Development Site, extended to 10 km for national statutory sites designated for bats (as shown on **Figure 8.2 and 8.3**);
- Local statutory designated sites within 10 km of the Northern Array and Southern Array boundaries which are designated for bats (as shown on **Figure 8.4**);
- Non-statutory sites of importance for nature conservation within 2 km of the Northern Array and Southern Array boundaries (as shown on **Figure 8.5**);
- Desk study records of protected and notable species up to 2 km from the Northern Array and Southern Array boundaries, extended to 10 km for bat roosts; and
- Habitats of conservation importance (including Ancient Woodland Inventory parcels and Priority Habitats listed on Section 7 of the Environment (Wales) Act 2016) up to 2 km from the Northern Array and Southern Array boundaries (as shown on **Figure 8.6**).
- Waterbodies and watercourses within 500 m of the Northern Array and Southern Array boundaries (as shown on **Figure 8.7 and 8.8**).

8.4.7. A summary of the organisations that have supplied data, together with the nature of that data is outlined in **Table 8.5**.

[25] Special Areas of Conservation (SAC), Special Protection Areas (SPA), and Ramsar sites.
[26] Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

Table 8.5 Data sources used to inform the biodiversity assessment

Organisation	Data source	Data provided
Welsh Government	DataMapWales[27]	International statutory designated sites, national statutory designated sites, Priority Habitats[28]
South East Wales Biodiversity Records Centre (SEWBReC)	SEWBReC biodiversity records data.	Local statutory designated sites, non-statutory sites of importance for nature conservation, AWI parcels, legally protected and notable species records, bat roost records.
Ordnance Survey	Freely available open source 1:25,000 Ordnance Survey mapping and satellite imagery.	Location of waterbodies and watercourses.
Buglife	Open access visualisation of Buglife B-lines within an online GIS explorer and downloadable dataset[29].	GIS shapefiles showing location of Buglife B-Lines.

Survey work

8.4.8. The Study Area has been subject to ecological surveys and assessment work in 2025 and 2026. The following ecological surveys, assessments and reports have been completed by 14 July 2026 and will inform this ecological baseline reported in this Draft ES. This does not represent the entire survey effort and programme that will be reported in the Final ES and as such **Section 8.13 Further works to be undertaken** includes a list of surveys which are due to be completed.

Preliminary Ecological Appraisal (PEA)

8.4.9. The baseline conditions for terrestrial ecology were established through a PEA completed in 2025. The PEA included an ecological desk study followed by a walkover survey of the Northern Array and Southern Array conducted on 18 and 19 February and 11 and 12 March 2025. The PEA walkover survey included an Extended Phase 1 Habitat survey[30] (mapping of habitats and an assessment of their suitability to support protected/notable species), a Daytime Bat Walkover[31] and GCN Habitat Suitability Index (HSI) assessment[32]. The assessment of habitat suitability for protected and notable species followed standard sources of best practice survey guidance (for full details see **Appendix 8A**).

[27] DataMapWales. Available at https:\\ datamap.gov.wales
[28] Habitats listed under Section 7 of the Environment (Wales) Act 2016, that are of principal importance for the conservation of biodiversity in Wales.
[29] Buglife (2025). B-Lines UK Network. Available at: https://gis-data-hub-buglife.opendata.arcgis.com/datasets/d3c968156acb4dc897882bf8875132ba_0/explore?location=51.595702%2C-3.577542%2C13
[30] Joint Nature Conservation Committee (JNCC) (2016). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.
[31] Collins J. (ed.) (2023) Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
[32] Oldham R.S., Keeble J., Swan M.J.S., and Jeffcote M. (2000) Evaluating the suitability of habitat for the great crested newt. Herpetological Journal 10: 143-155.

Daytime Bat Walkover (DBW)

8.4.10. A DBW was completed for the Northern Array and Southern Array during the PEA walkover survey. The DBW was conducted to identify the presence of trees, buildings and structures that could support bat roosts, and to identify any potentially important habitats for commuting and foraging bats. All observations were made from ground level and followed Bat Conservation Trust good practice guidelines[33]. This survey was used to inform any further bat survey requirements. The results of this survey are summarised within **Section 8.5 Overall baseline** and will be incorporated with a bat specific survey report which will be appended to the Final ES.

Bat automated static detector activity survey

8.4.11. Bat activity surveys using automated static detectors are being completed for 10 nights in each of Autumn 2025 (mid-August-October), Spring 2026 (April-May) and Summer 2026 (June-mid-August)[34] at each of the turbine locations within the Development Site**.** The Summer 2026 visit has not been completed at this time (for further details see **Section 8.13 Further work to be undertaken**[35]. These surveys will provide details on the active bat species assemblage within the Development Site and the spatial and temporal distribution of bat activity as per good practice guidelines[36]. The analysis of data from these surveys is ongoing and as such this Draft ES is based on a precautionary approach and does not include details of full baseline data. The full results will be incorporated within a bat specific survey report which will be appended to the Final ES.

Water vole presence/absence survey

8.4.12. A water vole presence/absence survey is being completed for all watercourses within the Northern Array and Southern Array. This survey will include a search for any burrows and field signs. The first survey visits were completed on 20 – 21 May 2026 and the outcomes of this survey visit are summarised within **Section 8.5 Overall baseline.** The second visit has not been completed at this time (for further details see **Section 8.13 Further work to be undertaken**). The results from both survey visits will be incorporated within a water vole specific survey report which will be appended to the Final ES.

Great crested newt Habitat Suitability Index (HSI) assessment

8.4.13. A GCN HSI assessment was completed during the PEA walkover survey for any waterbodies within 500 m of the Northern Array and Southern Array. The assessment was conducted in accordance with the standard methodology[37] and has been used to inform

[33] Collins (ed.) (2023). Bat surveys for professional ecologists: Good practice guidelines. 4th Edition.: Bat Conservation Trust; London.
[34] Good practice survey guidelines recognises that survey can be split over two successive calendar years. This approach has been taken for the Proposed Development because early data collection would allow for the outcome of surveys to be factored into the development of the design. This promotes the application of the avoidance and minimisation approaches of the mitigation hierarchy through detailed design rather than relying on compensation at a later stage.

[36] NatureScot (2021). Bats and onshore wind turbines: Survey, assessment and mitigation. Available at: https://www.nature.scot/sites/default/files/2021-08/Bats%20and%20onshore%20wind%20turbines%20-%20survey%2C%20assessment%20and%20mitigation_0.pdf [Accessed July 2026].
[37] Oldham R.S., Keeble J., Swan M.J.S., and Jeffcote M. (2000) Evaluating the suitability of habitat for the great crested newt. Herpetological Journal 10: 143-155.

any further GCN survey requirements. The outcomes of this survey are summarised within **Section 8.5 Overall baseline** and are detailed within the PEA (**Appendix 8A**).

Great crested newt environmental DNA (eDNA) survey

8.4.14. A GCN eDNA survey was conducted on all waterbodies identified from the HSI assessment as having below average (or better) GCN habitat suitability score or those which were not visited during the PEA. The survey was carried out by a licensed ecologist on 22 April 2026 and has been used to determine the presence/ likely absence of GCN. The outcomes of this survey are summarised within **Section 8.5 Overall baseline** and have been incorporated into the GCN specific survey report (**Appendix 8B**).

8.5 Overall baseline

8.5.1. The description of the ecological features as follows provides a summary of the biodiversity baseline as determined through the desk assessments and surveys undertaken prior to 14 July 2026. Full details, as well as figures showing detailed survey results, are included within the respective survey reports (**Appendix 8A - 8B**).

Current baseline

8.5.2. The current ecological baseline conditions were defined during the PEA including desk study and the various ecological surveys (listed in **Section 8.4**) that have been carried out to inform the Proposed Development. This chapter takes a precautionary approach to the inclusion of ecological features which the Development Site could support but are yet to undergo the level of survey effort proposed to provide a detailed assessment (see **Section 8.13 Further work to be undertaken**).

Designated sites

8.5.3. There are no statutory designated sites within the Development Site.

8.5.4. The desk study identified two statutory designated sites of international importance within 10 km of the Development Site, and one statutory designated site of international importance for bats within 30 km of the Development Site. These are shown in **Figures 8.1 and 8.3** and detailed in **Table 8.6**, along with a description of the reasons for their designation.

Table 8.6 Designated sites of international importance

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Development Site	Description
Glaswelltiroedd Cefn Cribwr/Cefn Cribwr Grasslands	Special Area of Conservation (SAC)	58.0	Northern Array: 8.8 km south Southern Array: 6 km South-west	Designated for the presence of the following Annex I habitat: ▪ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). The following Annex II species is also present as a qualifying feature, but not a primary reason for site selection: ▪ Marsh fritillary butterfly
Blackmill Woodlands	SAC	70.1	Northern Array: 7.7 km south-west Southern Array: 4.3 km south-east	Designated for the presence of the following Annex I habitat: ▪ Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles.
Arfordir Calchfaen de Orllewin Cymru/Limestone Coast of South West Wales	SAC	1583.9	Northern Array: 29 km west Southern Array: 30.8 km west	Designated for the presence of the following Annex I habitats: ▪ Vegetated sea cliffs of the Atlantic and Baltic Coasts; and ▪ fixed coastal dunes with herbaceous vegetation (“grey dunes”). The following Annex I habitats are also present as a qualifying feature, but not a primary reason for site selection: ▪ European dry heaths;

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Development Site	Description
				■ Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuca-Brometalia*) ■ Caves not open to the public; and ■ submerged or partially submerged sea caves. Designated for the presence of the following Annex II species: ■ Greater horseshoe bat *Rhinolophus ferrumequinum*; and ■ early gentian *Gentianella anglica*. The following Annex II species is also present as a qualifying feature, but not a primary reason for site selection: ■ Petalwort *Petalophyllum ralfsii*.

8.5.5. The desk study identified two designated sites of national importance within 2 km of the Development Site.

8.5.6. There is one designated site of national importance for bats within 10 km of the Development Site.

8.5.7. These are shown in **Figures 8.2 and 8.3** and detailed in **Table 8.7**, along with a description of the reasons for designation.

Table 8.7 Designated sites of national importance

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Development Site	Description
Cwm Du Woodlands	Site of Special Scientific Interest (SSSI)	24.0	Northern Array: 1.2 km south Southern Array: 0.3 km west	An ancient sessile valley oakwood growing on the Pennant Sandstone of the South Wales Coalfield. Alder *Alnus glutinosa* dominates locally, and there is a rich ground flora.
Cwm Cyffog	SSSI	17.9	Northern Array: 4.7 km south-west Southern Array: 1.7 km east	Upland blanket mire dominated by purple moor-grass *Molinia caerulea* with a range of bog-mosses *Sphagnum* spp. White beak-sedge *Rhynchosdora alba* is locally rare.
Coedymwstwr Woodland	SSSI	20.5	Northern Array: 12.9 km south-east Southern Array: 9.7 km south east	A mixed deciduous woodland on limestone with a rich ground flora. Bats have been recorded inhabiting the main cave system.[38]

8.5.8. The desk study identified four designated sites of local importance for bats within 10 km of the Development Site.

8.5.9. These are shown in **Figure 8.4** and detailed in **Table 8.8**, along with a description of the reasons for designation.

Table 8.8 Designated sites of local importance for bats

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Development Site	Description
Frog Pond Wood	Local Nature Reserve (LNR)	3.0	Northern Array: 10.3 km south-west	A mixed oak *Quercus* sp./ash *Fraxinus excelsior* woodland, with

[38] Although bats have been recorded in the Coedymwstwr Woodland SSSI, it is not known if the site is designated for the presence of bats. In the absence of this detail, it has been assumed that Coedymwstwr Woodland SSSI is designated for the presence of bats

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Development Site	Description
			Southern Array: 8.6km south-east	a pond and wetland areas. Pipistrelle bats *Pipistrelle* sp. are present in the LNR.
Tremains Wood	LNR	3.1	Northern Array: 12.79 km south Southern Array: 9.5 km south	A lowland mixed broadleaved woodland. Pipistrelle bats are present in the LNR.
Glyncornel	LNR	29.7	Northern Array: 11.6 km east Southern Array: 9.5 km east	Habitats comprise woodland and flower-rich meadows. Foraging bats are present in the LNR.
Craig-y-parciau Woodland	LNR	0.6	Northern Array:12.9 km south Southern Array: 9.9 km south-east	An oak and ash woodland on a steep slope of the Ogmore River. Daubenton's bat *Myotis daubentonii* is known to be present within the site.

Non-statutory designated Sites

8.5.10. The desk study identified 35 non-statutory designated sites within 2 km of the Development Site, comprising 34 Wildlife Sites / Sites of Importance for Nature Conservation (SINC) and one B-line[39], as shown in **Figure 8.5**.

8.5.11. One of the SINCs is present within the Development Site's Southern Array boundary and the B-line is present 450 m east of the Southern Array boundary, but is more than 2 km from the Northern Array. The remainder of the SINCs are outside the Northern and Southern Array boundaries. The details of the relevant SINC is provided in **Table 8.9**

Table 8.9 Non-statutory designated sites within the Development Site

Site name	Present within Development Site	Description
Nant-y-Fforest SINC	Southern Array	Comprises habitats: marsh/marshy grassland; wet dwarf shrub heath; dry heath/acid grassland mosaic; dry modified bog-moss bog; semi-improved acid grassland; broadleaved semi-natural woodland; acid/neutral flush; and acid dry dwarf shrub heath.

[39] B-lines are locally important insect pollinator dispersal pathways between areas of existing wildflower-rich habitat

Habitats of conservation importance

Ancient Woodland Inventory (AWI) parcels

8.5.12. A total of 78 parcels of AWI areas were identified in the desk study within 2 km of the Development Site. The closest of these to the Development Site was approximately 440 m west of the Southern Array boundary shown in **Figure 8-6**.

Priority Habitats

8.5.13. A total of 564 parcels of habitats that may contain Priority Habitats[40] were identified within 2 km of the Development Site. The following potential Priority Habitats are within the Development Site boundary for the Northern and Southern Array (and shown in **Figure 8.6**):

- Northern Array:
  - Upland heathland – 5 parcels;
  - Lowland dry acid grassland – 1 parcel;
  - Open mosaic habitat on previously developed land – 1 parcel; and
  - Lowland fens– 1 parcel.
- Southern Array:
  - Lowland dry acid grassland – 4 parcels; and
  - Lowland heathland – 1 parcel.

8.5.14. The PEA identified a total of 25 Phase 1 habitat types within its survey boundary however the refined Development Site boundary used in this assessment has 23 Phase 1 habitat types. The Northern Array was dominated by acidic habitats including acid grassland and heath with occasional scree and flush habitats. The Southern Array was mostly improved grassland with smaller areas of bracken and acid grassland interspersed with scrub, scree, marshy grassland and mixed woodland. In both areas there are small watercourses which could be possible Priority Habitats. There are therefore five Priority Habitats (or possible Priority Habitats) that were identified within the Development Site:

- Upland heathland;
- Small, medium altitude rivers on acidic geology;
- Lowland dry acid grassland;
- Inland rock outcrop and scree habitats; and
- Upland flushes, fens and swamps.

Protected and Notable Species

8.5.15. Following the PEAs evaluation of protected and notable species desk study records and extended Phase 1 habitat survey, the Development Site was considered suitable to support the following protected and / or notable species:

- Bats (all UK species*);*

[40] Priority Habitats are considered to be of national conservation importance, in accordance with their legislation, being listed on Section 7 of the Environment (Wales) Act 2016. All other habitats are considered to be common and widespread across the county and beyond.

- Badger *Meles meles*;
- Environment (Wales) Act 2026 – Section 7 Mammals (including Hedgehog *Erinaceus europaeus* and Brown hare *Lepus europaeus)*;
- Water vole;
- Birds[41];
- Common amphibians (common frog *Rana temporaria* and common toad *Bufo bufo,* palmate newt *Lissotriton helveticus*, and smooth newt *Lissotriton vulgaris)*;
- Great crested newt;
- Common reptiles (common lizard *Zootoca vivipara*, slow worm *Anguis fragilis* and grass snake *Natrix natrix*;
- Terrestrial invertebrates (including marsh fritillary);
- Notable plants (including *Chamaemelum nobile* and pennyroyal *Mentha pulegium*); and
- INNS (including Rhododendron *Rhododendron ponticum* and Indian balsam *Impatiens glandulifera*).

8.5.16. This Draft ES will not consider the following species because the PEA concluded that they are considered to be likely absent from the Development Site, or only present in low numbers and on an occasional basis:

- Otter *Lutra lutra*; and
- Dormouse.

Bats

8.5.17. There are no internationally or nationally important sites that are designated for bat conservation within 10 km of the Sites. There have however been bats recorded using the caves at Coed y Mwstwr Woodland SSSI[42] and at three local nature reserves which are all within 10 km of the Development Site. There is also one site designated for bats within 30 km of the Development Site (Arfordir Calchfaen de Orllewin Cymru/Limestone SAC, designated for the presence of the greater horseshoe bat).

8.5.18. Twenty four records of bats were returned from the desk study within 2 km of the Northern Array, the closest of which was for pipistrelle bat species located 420 m west of the Site. The closest bat roost record to the Northern Array was located 3km north-east of the Development Site.

8.5.19. Seven records of bats were returned from the desk study within 2 km of the Southern Array, the closest of which was for common pipistrelle *Pipistrellus pipistrellus*, located 36 m west of the Development Site. The closest bat roost record to the Southern Array was located 1.5 km south-east of the Development Site.

[41] Chapter 9 of the ES relates to Ornithology. Birds are therefore not discussed further within the biodiversity chapter.
[42] Although bats have been recorded in the Coed y Mwstwr Woodland SSSI, it is not known if the site is designated for the presence of bats. In the absence of this detail, it has been assumed that Coed y Mwstwr Woodland SSSI is designated for the presence of bats.

Daytime Bat Walkover (DBW)

8.5.20. A DBW was undertaken during the PEA[43] and identified:

- Eighteen trees and a rocky outcrop were assessed as having Potential Roost Features (PRFs) for bats within the Northern Array. The rocky outcrop within the Northern Array was categorised as having low potential to support roosting bats, likely to be used only opportunistically by individual crevice roosting bats.
- Eighteen trees assessed as having Potential Roost Features (PRFs) for bats within the Southern Array.
- Linear habitats such as running water provide suitable commuting corridors, and marshy grassland and woodland provide suitable foraging opportunities for bats.

8.5.21. It is noteworthy that the PEA survey boundary was larger than the Development Site boundary used in this Draft ES because the design of Proposed Development has been refined between the PEA and Draft ES production. This reduction in the survey boundary means that the 36 trees identified during the PEA as having PRFs are now at least 300 m from the Proposed Development, and outside of the ZoI and are therefore no longer relevant to this assessment.

Badger

8.5.22. No records of badger were returned from the desk study.

8.5.23. The habitats which have the potential for sett building are outside of the Northern and Southern Array boundaries and to date there have been no setts identified within the Development Site. The bracken, dry heath and acid and improved grassland habitats within Northern and Southern Array boundaries were considered to provide suitable foraging and commuting habitat for badger.

Section 7 Mammals (including Hedgehog and Brown hare)

8.5.24. Fifteen records of hedgehog were returned from the desk study, the closest record to the Northern Array was located 933 m south-west. The closest record to the Southern Array was located 352 m west.

8.5.25. Three records for brown hare were returned from the desk study. The closest record to the Northern Array was located 1556 m to the east, the closest record to the Southern Array was located 842 m to the south.

8.5.26. Areas of habitat suitable to support foraging, resting and breeding hedgehog were identified within both the Northern and Southern Array boundaries, in the form of grassland, scrub and bracken. A variety of open grassland habitats with either heath, scrub or bracken were present within both the Northern and Southern Array boundaries. These habitats were considered suitable for foraging, resting and breeding brown hare.

[43] It is noteworthy that the PEA survey boundary was larger than the Development Site boundary used in this draft ES because the design of Proposed Development has been refined between the PEA and draft ES production. The baseline ecological data collected to provided here therefore includes potential ecological receptors which may be scoped out further on in the assessment due to being outside of the Proposed Developments ZoI.

Water Vole

8.5.27. No records of water vole were returned from the desk study.

8.5.28. Suitable habitat for water vole existed within the ditches and marshy grasslands across the northern section of the Southern Array and Northern Array in the form of wet heathland, marshes and rivers/streams with steep vegetated banks. The watercourses in the Northern Array are within the footprint of the internal access tracks but are at least 100 m from any other construction works. The watercourses in the Southern Array are at least 150 m from any other construction works.

8.5.29. The first presence / absence survey for water vole found no signs to indicate water vole presence within either the Northern or Southern Array boundaries. It was concluded that despite the watercourse habitats being suitable for water vole they would be considered sub-optimal for burrowing and foraging due to the fast-flowing water conditions. In addition, the grassland surrounding the watercourses are heavily grazed which further reduces the Development Sites suitability for water vole.

8.5.30. The second presence / absence survey is yet to be completed so the likely absence of water vole from Development Site cannot be confirmed at this time.

Common amphibians (excluding GCN)

8.5.31. There were 23 records for common amphibians returned from the desk study which included common frog, common toad, palmate newt, and smooth newt. The closest record to the Northern Array was for common frog located 383 m east, the closest record to the Southern Array was also for common frog, located 145 m east.

8.5.32. Ten standing waterbodies were identified from the desk study within 500 m of the Development Site however only one pond (P9) is located within 100 m of any impacts from the Proposed Development (see **Figure 8.8**). The PEA concluded waterbodies within 500 m of the Development Site were suitable to support common amphibians during their aquatic stage and that the surrounding grassland and dry stone walls may also provide suitable terrestrial habitat for amphibians.

Great crested newt

8.5.33. There were no records of GCN returned from the desk study.

8.5.34. Eight of the ten waterbodies identified from the desk study were subject to a GCN habitat suitability index (HSI) assessment as part of the PEA. From these, five waterbodies had a HSI score which was below average (or better) (P1, P3, P4, P6 and P9) and were therefore put forward for GCN eDNA presence/absence surveys, and three were considered to have a poor HSI score (P7, P8 and P10) and are considered unsuitable for GCN. The remaining two waterbodies were P2 which was absent at the time of survey and P5 which was not accessed during the PEA. P5 was precautionarily recommended for a GCN eDNA presence / absence survey as there was no HSI data available.

8.5.35. GCN eDNA presence / absence surveys were attempted for P1, P3, P4, P5, P6 and P9. These surveys found that waterbodies P1, P3 and P6 were unsuitable for GCN as they were drying out and held water <10cm deep and/ or had been overgrown by willow. P4, P5 and P9 were suitable for eDNA surveys and are concluded as having GCN likely absent as they were found to have negative laboratory analysis results.

8.5.36. GCN are therefore concluded to not be using the waterbodies within 500 m of the Development Site based on the outcomes of the GCN HSI and eDNA surveys.

Common reptiles

8.5.37. There were 71 records for common reptiles returned from the desk study which included common lizard, slow worm and grass snake were returned from the desk study. The closest record to the Northern Array was for common lizard located 455 m south, the closest record to the Southern Array was also for common lizard, located 385 m east.

8.5.38. Bracken, scrub, heath, scree, dry stone walls, rock piles and grasslands, including marshy grassland and acid grassland, were suitable for common lizard, slow worm, grass snake and adder.

Terrestrial invertebrates

8.5.39. Ninety-seven records of protected and/or notable invertebrates were returned from the desk study. From these records there were a single record for each of the following Wildlife 7 Countryside Act (1981) Schedule 5 species:

- Marsh fritillary (approximately 738 m south of Northern Array);
- Pearl-bordered fritillary *Boloria euphrosyne* (approximately 16 m northeast of Southern Array); and
- Small blue *Cupido minimus* (approximately 833 m southwest of Northern Array).

8.5.40. The habitats within the Development Site may support marsh fritillary as there are grasslands which could support the larval food plant Devil's-bit scabious *Succisa pratensis*. The habitats within the Development Site are unlikely to support the other two species as they do not include woodlands with clearings that support violet species *Viola spp.* or calcareous grasslands with the larval food plant Kidney Vetch *Anthyllis vulneraria.* These two species of invertebrates are therefore assumed to be likely absent from the Development Site.

8.5.41. Records of protected terrestrial invertebrates were returned from the desk study within the Northern Array boundary and approximately 12 m east for the Southern Array boundary. A review of aerial imagery has concluded that the habitats within the Development Site which could support protected and notable invertebrates other than marsh fritillary are likely to be common and widespread in the local landscape. Furthermore, the watercourses and waterbodies within the Sites were also considered likely to support mainly common and widespread aquatic invertebrate species.

Notable plants

8.5.42. Twenty-four records of notable plant species were returned from the desk study. From these records there were two species which are listed on Section 7 of the Environment (Wales) Act 2016 (chamomile *Chamaemelum nobile* and pennyroyal *Mentha pulegium*), and two which are listed on Wildlife 7 Countryside Act (1981) Schedule 8 (bluebell *Hyacinthoides non-scripta* and pennyroyal).

8.5.43. Although no notable plant species have been recorded during the PEA survey, the habitats within the Development Site were considered suitable to support bluebell (bracken), chamomile (acid grassland) and pennyroyal (marshy grassland).

INNS

8.5.44. No INNS were returned from the desk study.

8.5.45. Two species of INNS were identified during the PEA survey which included Rhododendron and Indian balsam within the woodland and marshy grassland habitats at the Northern Array. Nonetheless, all habitats within the Development Site were considered suitable to support various species of INNS.

Future baseline

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

8.5.47. In this instance, the future baseline in the absence of the Proposed Development is unlikely to be markedly different from the current baseline, as land use / management within the Development Site is anticipated to remain largely unchanged. It is therefore considered appropriate to use the current baseline for the purpose of this assessment.

8.6 Embedded measures

8.6.1. A range of environmental measures have been embedded into the Proposed Development as outlined in **Section 4.9. Table 8.9** outlines how these embedded measures will influence the Biodiversity assessment.

Table 8.9 Summary of the embedded environmental measures

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
Construction			
Surface water run-off	The introduction of toxic pollutants or sediments into the environment resulting in changes, loss or damage to terrestrial or freshwater environments and the fauna they support.	Construction works would be undertaken using good practice measures to minimise the release of additional sediment-laden run-off into nearby watercourses. Full measures are detailed in **Chapter 10: Water Environment.**	Outline Construction Environmental Management Plan (CEMP) secured via DNS condition. Construction Method Statement (CMS) secured via DNS condition
General-species safeguarding	Death, injury or displacement during construction, e.g. due to entrapment within excavations or collisions with construction traffic.	Appropriate pre-construction surveys or inspections will be carried out. Good practice species-safeguarding measures will be followed, including: - Vehicle movement outside of daylight hours would be restricted, vehicle speeds controlled, and operatives warned of the presence of certain species in order to	Outline CEMP secured via DNS condition.

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
		reduce the risk of collisions. - All excavations would 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. - Construction activities would be restricted to normal working hours (so largely avoiding the hours of darkness, particularly in the summer when species are most active). - Site lighting will be controlled to prevent incidental spillage on to features that may be used by nocturnal species.	
Habitats	Permanent or temporary land-take / changes to habitats resulting in degradation and/or loss of habitat (shown in **Figure 8-9 and 8-10**)	The wind farm infrastructure layout has been designed to avoid the loss of habitats of high ecological value as far as is practicable.	Embedded in design
Habitats	Permanent or temporary land-take / changes to habitats resulting in degradation and/or loss of habitat	Habitats which would be subject to temporary loss will be re-vegetated and reinstated as soon as possible after construction.	Outline CEMP secured via DNS condition. Outline HMP. To be appended to the Final ES.
Bats / trees	Disturbance or loss / damage of bat roosts within trees	The wind farm infrastructure layout has been designed to avoid trees which have been identified as having	Embedded in design

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
		suitability for use by roosing bats, with all such trees, falling outside of the ZoI of predicted impact pathways.	
INNS	Introduction of spread of INNS	Biosecurity measures, such as boot wash stations, will be implemented throughout construction to avoid the introduction or spread of INNS An INNS Management Plan will also be prepared.	INNS Management Plan secured via DNS condition.
Operation			
Bats	Potential killing or injury to bats in flight, through direct collision with moving turbine blades or barotrauma.	A minimum of 200 m stand-off will be maintained between turbine blade tips and the nearest point of linear / foraging features considered likely to be well-used by bats such as treelines, woodland, and some waterbodies.	Secured via DNS condition.

8.7 Scope of the assessment

8.7.1. The CIEEM guidelines recognise that the impact assessment for a Proposed Development cannot consider in detail every individual species or habitat that may potentially be present at a site or affected by a development. The impact assessment process therefore aims to focus the assessment on those ecological features that could be 'significantly' affected by the Proposed Development (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.

8.7.2. The impact assessment process therefore includes a 'scoping' stage which results in a list of potential receptors which should be taken forward to a 'detailed assessment' stage (**Table 8.10**) and a list of species, taxa or habitats that can be scoped out as they will not be 'significantly' affected (**Table 8.11**).

8.7.3. The 'detailed assessment' stage examines more closely the potential effects of the Proposed Development on the potential receptors 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. The following sections define the define the elements of the Proposed

Development which are relevant to the biodiversity chapter of this ES and the Spatial and Temporal Scope which will be considered within the impact assessment.

The Proposed Development

8.7.4. All the activities and consequent environmental changes associated with the construction and operation of the Proposed Development, as set out in **Chapter 4: Development Description** (and subsequently not including the Forestry Access Track)**,** have been considered.

8.7.5. A realistic worst-case scenario for biodiversity effects has been included for the detailed assessment for design parameters which are still under consideration or in the absence of sufficient survey data to inform detailed assessment. This precautionary approach ensures effects of greater adverse significance are not likely to arise should any other reasonable design scenario be taken forward in the final design of the Proposed Development.

8.7.6. In relation to biodiversity the following assumptions are made regarding design parameters to ensure a realistic worst-case scenario:

- Summer months are favoured for construction due to longer periods of daylight allowing longer (and safer) working days, and generally drier weather which aids construction progress. Despite this, any habitat clearance to allow for site establishment, access track creation / enhancement or temporary construction compounds and site offices deployment will occur outside of the nesting bird season (March to September, inclusive).
- The wind turbine foundation design will depend on the results from detailed ground investigation, but it is currently planned that the total area of hardstanding at each turbine location will be approximately 2,200 m^2 (inclusive of the turbine foundations and the crane pad). It is anticipated that approximately a third of this area will be dressed back with topsoil and landscaped into the surrounding area upon completion of turbine erection.
- The electricity produced by a wind turbine requires a voltage step up transformer for it to be fed to the control buildings. The transformer is typically housed in a kiosk adjacent to the wind turbine foundation which is typically 5.0 m long x 2.5 m wide x 2.5 m high. While the transformers may be integrated into the nacelle or base of the tower, the external kiosk has been assessed as a worst-case scenario and is therefore included in the extent of hardstanding at each turbine.
- The internal access tracks would comprise of newly formed stoned tracks which will be approximately (~) 5 m wide with ~2 m grass verge either side. The grass verge allow space for the ~450 mm trench which will house the underground cables that will link the turbines within the Northern and Southern Array to the on-site substation situated within each parcel. The ~ 9 m wide track and verge is therefore a realistic worst-case scenario for the extent of habitat loss along the tracks and cabling routes.
- Micrositing of turbine locations and access tracks is required to allow for an appropriate degree of flexibility for condition on site. Limits of deviation would be up to 50 m for turbines and 100 m for access tracks, substations and temporary site compounds. A realistic worst case scenario for turbine micrositing has therefore been applied. In this assessment, if an important ecological feature is within 200 m of a proposed turbine location (which represents the 150 m rotor diameter and a 50 m limit of deviation) then it is assumed that impacts from habitat loss and / or disturbance

cannot be avoided. It has been assumed that access tracks, substations and temporary site compounds will be microsited to avoid impacts to ecological features.

- The indicative construction programme details that the Proposed Development will be approximately 22 months in duration. In reality, development would be phased such that, at different parts of the Development Site, the construction works would be running concurrently. This would lead to a potentially shorter programme, and which would allow restoration of disturbed areas to occur in a progressive manor. Nonetheless a realistic worst-case scenario has been assumed within this assessment which includes loss of habitats for the full 22 month programme.

Spatial Scope

8.7.7. The spatial scope of the assessment for biodiversity covers the area of the Proposed Development contained within the Development Site boundary, together with the Study Areas which have been informed by the likely ZoIs associated with the potential impact pathways described below.

8.7.8. As detailed within the Scoping Report the majority of potential impacts from Proposed Development are associated with the construction phase. The ZoIs defined for the construction phase are as follows:

- **Mortality or injury from construction activities** (e.g. vegetation clearance and animal entrapment in excavations) – ZoI within the Development Site. For the majority of species this impact pathway could be scoped out on the basis of implementation of best practice approaches to vegetation clearance, the implementation of embedded measures to avoid or reduce the potential for wildlife to become entrapped in voids (and / or implement protocols should this happed) (see **Section 8.6**), and the micrositing of construction works to avoid direct mortality or injury to notable plant and animals from construction activities. Despite this, the incomplete status of some protected species presence / absence surveys and the nature of species means that avoidance of mortality and injury via micrositing of construction works cannot always be confidently achieved;
- **Permanent or temporary land take / changes to habitats** – ZoI within the Development Site for habitats and sedentary species; mobile species (such as bats and migratory / aquatic species) may be affected beyond this if land within the Development Site overlaps their typical home ranges or movement patterns and if it causes habitat severance;
- **Fragmentation of habitats** – ZoI within the Development Site for habitats and sedentary species; mobile species (such as bats and migratory / aquatic species) may be affected beyond this if land within the Development Site overlaps their typical home ranges or movement patterns and if it causes habitat severance; and
- **Disturbance of protected and / or notable species from changes in noise and light levels** – ZoI for sensitive species is variable and dependent on the species' tolerance to sources of disturbance. ZoI are typically up to 250 m from the construction works areas for noise and up to 50 m from the construction works areas for light. This ZoI may be increased on a case-by-case basis dependent on the ecological feature being assessed.
- **Contamination of site run-off** – ZoI for habitats and species is generally within watercourses and wet habitats within the Development Site and up to 2 km downstream where there is hydrological connectivity.

8.7.9. For the operational phase potential impacts are limited to changes in the potential levels of disturbance from site traffic and people visiting the turbines, substations and site access tracks for routine maintenance. The environmental changes that could lead to potentially significant effects are anticipated to relate to increased artificial light and noise associated with site traffic and personnel visiting the Development Site. The impact of disturbance from lighting and noise can be scoped out because activities are likely to be temporary, short-term, and localised, and are therefore not likely to lead to significant effects

8.7.10. The ZoIs presented above have taken account of environmental measures identified to date that are to be implemented to reduce effects, such as the avoidance of potentially significant effects through the design process as well as standard construction good practice measures (as tried and trusted). The ZoIs will be revisited within the ES to take account of any further design development and / or environmental measures proposed to avoid or reduce the impacts of the Proposed Development.

8.7.11. When scoping in or out ecological features or routes of impact from further assessment, embedded environmental measures (see **Section 8.6**) associated with standard construction best practice measures have been taken into account (e.g., dust suppression, pollution prevention controls, appropriately scheduled vegetation removal, micrositing of construction works away from ecologically sensitive areas and so on). As a result, the following environmental changes are scoped out for all ecological features:

- **Increased movement levels** – death and injury of fauna due to increased movement of traffic of construction and operational vehicles and plant are scoped out based on the implementation of speed limits on all construction haul roads and access tracks that would be employed, and the relatively limited amount of traffic involved (see **Section 8.6**);
- **Potential collision risk for commuting bats** – The potential for bats to collide with the turbines or be subject to barotrauma during operation can be scoped out based on the implementation of embedded measures. The inclusion of micrositing the turbines at least 200m away from habitat features that would be suitable for commuting bats should avoid this impact pathway for bats. Furthermore surveys for bats are ongoing at the time of writing this Draft ES, however initial results collected from Autumn 2025 and Spring 2026 indicate the levels of bat activity on Site during these timeframes is relatively low
- **Introduction or spread of INNS** – the introduction or spread of INNS can be scoped out for construction and operation based on the implementation of embedded measures such as the INNS Management Plan;
- **Changes in air quality (construction and operation)** – Dust and air quality are not considered any further within this Draft ES because no likely significant effects are anticipated in this regard and have been scoped out of the assessment. This approach was set out in the Scoping Report (**Appendix 1A**) and no objections were raised in the Scoping Direction (**Appendix 1B**). The measures for the control of dust are detailed within the Outline CEMP (**Appendix 4A**); and
- **Modification / degradation of habitats from pollutants (construction and operation)** – Impacts to protected and / or notable species and the habitats which support them from site run-off or pollutants during construction and operation/maintenance activities can be scoped out. This is because for construction good construction practices should promote avoidance of significant effects (see

Outline CEMP, **Appendix** 4A) and for operation impacts are likely to be temporary, short-term, and localised.

Temporal Scope

8.7.12. The temporal scope of the assessment for biodiversity is consistent with the period over which the Project would be carried out and therefore covers the 22 month construction programme, and the lifetime of the Proposed Development for operation (expected to operate for 30 years), and decommissioning (see paragraph 8.7.15).

8.7.13. For the purpose of describing impacts and effects, the temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur, and are typically defined as either being:

- Permanent - these are effects that would remain even when the Proposed Development is complete, although these effects may be caused by environmental changes that are permanent or temporary.
- Temporary – these are effects that are related to environmental changes associated with a particular activity and that would cease when that activity finishes.

8.7.14. Furthermore, the temporal scope of assessment may also consider the duration of the resultant effect, using the following general categories (noting that professional judgement and available guidance would also be applied on a case-by-case basis):

- Short-term – less than two years;
- Medium-term – between two - ten years; and
- Long-term – over ten years.

8.7.15. The Proposed Development is expected to have an operational life of 30 years. If decommissioning is required at this point in time, then activities and effects associated with the decommissioning phase are expected to be of a similar level to those during the construction phase works. Acknowledging the complexities of completing a detailed assessment for decommissioning works up to 30 years in the future, it is considered that the significance of effects relating to the decommissioning phase would be no greater than those from the construction phase and decommissioning effects are not discussed in detail in this chapter. Furthermore, should decommissioning take place it is expected that an assessment in accordance with the legislation and guidance at the time of decommissioning would be undertaken.

Potential Receptors

8.7.16. The principal biodiversity receptors that have been identified as being potentially subject to significant effects and have been taken forward for detailed assessment are summarised in **Table 8.10**. It should be noted that in the absence of a full ecological baseline, some ecological features have been identified on a precautionary basis on the assumption that they are present and / or present in sufficient numbers to the extent that potentially significant effects may occur. Only where appropriate and where confidence exists at this Draft ES stage have potential effects been scoped out from being subject to further assessment (as detailed in **Table 8.11**). Once further baseline surveys are completed, the ecological features for inclusion within the impact assessment will be

revisited and refined where appropriate, with a full and final account presented in the Final ES.

Table 8.10 Biodiversity receptors subject to potential effects

Sensitive Receptor	Reason for consideration	Potential significant impact pathways and effects
Cefn Cribwr Grasslands SAC	This internationally designated site includes marsh fritillary as a qualifying feature. The habitats within the Development Site could support marsh fritillary and may be ecologically connected with the SAC population as they may form a metapopulation in the wider landscape.	In the absence of marsh fritillary survey data, it is precautionarily assumed that the Proposed Development could impact the SAC population through direct habitat loss of functionally linked land. A HRA will be completed once survey data has been collected (see **Section 8.13 – Further work to be undertaken**) and analysed. There are no potential impact pathways for Annex I habitats associated with the SAC.
Limestone Coast of South West Wales SAC	This internationally designated site includes greater horseshoe bat as a qualifying feature. The habitats within the Development Site could support foraging and commuting bats but the likelihood of the habitats within the Development Site being ecologically connected with the SAC population is very low.	In the absence of complete bat activity survey data, it is precautionarily assumed that the Proposed Development could impact the SAC population through direct habitat loss, although the likelihood of this is considered to be low (based on the survey information collected to date (Autumn 2025 and Spring 2026). A HRA will however be completed once survey data has been collected in full (see **Section 8.13 – Further work to be undertaken**) and analysed and this assessment will be reviewed. There are no potential impact pathways for Annex I habitats or other Annex II species associated with the SAC.
Priority habitats (as listed under Section 7 of Environment (Wales) Act 2016) including: ▪ Upland heathland;	The extended Phase 1 habitat survey identified the following habitats within the Development Site which could potentially be Priority Habitats: ▪ Dry dwarf shrub heath – acid; ▪ Acid grassland – semi-improved;	There are extents of potential Upland heathland, Lowland dry acid grassland, Upland flushes, fens and swamps, and Small, mid altitude rivers on acidic geology present within the construction areas for the Northern Array. In this part of the Development Site there is therefore the potential for permanent

Sensitive Receptor	Reason for consideration	Potential significant impact pathways and effects
■ Upland flushes, fens and swamps; ■ Lowland dry acid grassland; and ■ Small, mid altitude rivers on acidic geology.	■ Dry heath/acid grassland mosaic; ■ Wet heath/acid grassland mosaic; ■ Running water. An NVC survey will be completed in August 2026 (see **Section 8.13 – Further work to be undertaken**). This survey will confirm whether the Phase 1 habitats are representative of Priority Habitats. Priority habitats should therefore be considered in this assessment until this NVC data can be collected and analysed.	changes to all Priority habitat extents and fragmentation of the Upland flushes, fens and swamps, and Small, mid altitude rivers on acidic geology. There are no potential Priority habitats within the construction areas of Southern Array. Potential impacts from changes in air quality and / or hydrological pollution events have been scoped out based on the inclusion of industry good practice embedded mitigation measures. These impact pathways will therefore not be assessed for Priority habitats.
Bats - Roosting	The PEA identified a rocky outcrop within the indicative grid connection route for turbines in the Northern Array. This potential roosting feature (PRF) was assessed as having low suitability to support roosting bats. As a realistic worst case scenario this Draft ES assumes that roosting bats are present at the PRF but that the PRF is not a roost of high conservation value (e.g. hibernation or maternity roost). A preliminary roost inspection using an endoscope and torch will be completed by a licensed bat ecologist in July / August 2026 (see **Section 8.13 – Further work to be undertaken**). This survey will confirm the status of the Development Site for supporting roosting bats and as such roosting bats should be considered in this assessment until this data can be collected and analysed.	The Proposed Development will not result in the loss of the rocky outcrop PRF because wooden poles for the OHL connection will be microsited to avoid the PRF. There will also be no change in the connectivity of the rocky outcrop PRF with the wider landscape because the installed wooden pole and cables will not fragment the habitats for any bats potentially using the PRF. The loss of the PRF and the fragmentation of suitable habitats are therefore scoped out of potential significant effect. There is a possibility that any bats which may be using the rocky outcrop PRF could be disturbed by noise associated with installation of wooden poles and cables that will form the OHL connection. It is assumed that these construction works could occur within 50 m of the PRF and that impacts from noise disturbance should therefore be scoped in despite works being short in duration. Disturbance from light is not expected as works will occur within daylight hours meaning there is no need for artificial lighting.

Sensitive Receptor	Reason for consideration	Potential significant impact pathways and effects
Bats – Commuting and foraging	The PEA identified suitable habitats for commuting and foraging bats within 200 m of the turbine locations, access tracks, substations and construction compounds. As such bat activity surveys following good practice guidance are ongoing (see **Section 8.13 – Further work to be undertaken**) and data analysis for these surveys are yet to be completed. As a realistic worst case scenario this Draft ES assumes that bats could commute and forage across the Development Site. Furthermore, in the absence of nighttime bat walkover surveys it has been assumed that woodland edges and walls within the Development Site could provide commuting corridors for bats and that foraging potential would be relatively uniform across all habitats.	The Proposed Development will result in a small reduction in potential foraging habitat. It is anticipated that the micrositing of the Proposed Developmentinfrastructure will remove any impacts on woodland edge or walls which could be used by commuting bats. Furthermore, the micrositing of the Proposed Development infrastructure will allow for habitat fragmentation to be avoided by ensuring that turbines, substations and temporary site compounds are located 200 m from woodland edges and walls. Disturbance of commuting and foraging bats is anticipated to be minimal during construction as works will happen in daylight hours; and minimal during operation as assets will be microsited away from potentially important commuting habitats and impacts from lighting will be localised to substations and employ industry good practice embedded mitigation measures (e.g. directional lighting fitted with cowls and timers to reduce light spill).
Water vole	The PEA identified suitable habitat for water vole within the Development Site and as such presence / absence surveys have been schedule for the Proposed Development. The first presence / absence survey visit found no signs to indicate water vole presence. The second survey visit will be completed in late July 2026 (see **Section 8.13 – Further work to be undertaken**). This survey will confirm the status of the Development Site for supporting water vole and as such	The habitats which potentially support water vole in the Northern Array are within the footprint of the internal access tracks. Under the current design for the internal access tracks (see **Figure 1.3 Northern array site layout**), it is precautionarily assumed that the Proposed Development could result in permanent change to the extent of suitable habitat; the fragmentation of suitable habitat; and disturbance from construction noise for water vole which could have burrows within 50 m of the construction works.

Sensitive Receptor	Reason for consideration	Potential significant impact pathways and effects
	this species should be considered in this assessment until this data can be collected and analysed.	
Marsh fritillary	The PEA identified habitats which could support the larval food plant Devil's-bit scabious. In the absence of survey data, it is assumed that the habitats which potentially support marsh fritillary make up the majority of the Northern and Southern Array boundaries. An update Phase 1 habitat survey and NVC survey will be completed in August 2026 (see **Section 8.13 – Further work to be undertaken**) which will include identification of any scabious plant species. If scabious plant species are identified during these surveys, there will be a targeted marsh fritillary presence / absence survey in August 2026 (see **Section 8.13 – Further work to be undertaken**). These surveys will confirm the status of the Development Site for supporting marsh fritillary and as such this species should be considered in this assessment until this data can be collected and analysed.	The design of turbine, access track, substation and construction compound locations cannot consider marsh fritillary without survey data on the presence or the distribution of their supporting larval food plant. As worst case scenario it is therefore assumed that the Proposed Development could impact the conservation status of this species in the wider landscape through direct habitat loss and habitat fragmentation at the metapopulation scale, but not fragmentation within the Development Site. Habitat fragmentation at the metapopulation scale would occur if there is a population of marsh fritillary within the Development Site, which acts as an intermediate, connecting population in the wider landscape, and all of the suitable habitats within the Development Site were removed during construction. Without appropriate survey data this species has therefore been scoped into the assessment. Despite this, the potential risk of killing/injury of marsh fritillary can be mitigated by including industry good practice embedded mitigation measures (e.g. micrositing of construction areas away from larval food plants and controls for minimising dust deposition or changes in air quality).

8.7.17. The receptors / effects detailed in **Table 8.11** have been scoped out from being subject to further assessment because the potential effects are not considered likely to be significant.

Table 8.11 Summary of effects scoped out of the biodiversity assessment

Receptors/potential effects	Justification
Blackmill Woodlands SAC	This international designated site has old sessile oak woodland as its qualifying feature. There are no foreseeable impact pathways to connect environmental change within the Development Site with the designated site. This will be confirmed within the HRA screening assessment which accompanies the Final ES submission and as such potential impacts to the designated site are scoped out of this Draft ES assessment.
Cwm Du Woodlands SSSI	This nationally designated site has sessile oak and alder woodland with a rich ground flora as its designating features. There are no foreseeable impact pathways to connect environmental change within the Development Site with the designated site when industry good practice embedded mitigation measures (e.g. pollution prevention) are included. This designated site is therefore scoped out of this assessment.
Cwm Cyffog SSSI	This nationally designated site has upland blanket mire, bog mosses and white beak sedge as its designating features. There are no foreseeable impact pathways to connect environmental change within the Development Site with this upland SSSI because there is no hydrological connection between them and it is outside of any conceivable ZoI for habitat loss / degredation. This designated site is therefore scoped out of this assessment.
Coed y Mwstwr Woodland SSSI	This nationally designated site mentions roosting bats within its citation and is at least 9.7 km south of the Development Site. The designated site is surrounded by the M4 and the settlement of Pencoed to the north and east with Bridgend approximately 2 km to the west. These features would represent a barrier to bat dispersal in the direction of the Development Site and impacts to bats associated with this designated site are therefore scoped out from this assessment. There are no foreseeable impact pathways for other designating features of the SSSI.
Frog Pond Wood LNR	This local designated site is designated for woodland, pond and wetland habitats with bats being present. The extent of habitats suitable for bats between the Development Site and the LNR are sufficiently large to attenuate any potential environmental change from the Proposed Development that could impact the populations at the LNR. There are no foreseeable impact pathways for habitats with the LNR. This designated site is therefore scoped out of this assessment.
Tremains Wood LNR	This local designated site is designated for woodland with bats being present. The extent of habitats suitable for bats between the Development Site and the LNR are sufficiently large to attenuate any potential environmental change from the

Receptors/potential effects	Justification
	Proposed Development that could impact the populations at the LNR. There are no foreseeable impact pathways for habitats with the LNR. This designated site is therefore scoped out of this assessment.
Glyncornel LNR	This local designated site is designated for woodland and meadow habitats with bats being present. The extent of habitats suitable for bats between the Development Site and the LNR are sufficiently large to attenuate any potential environmental change from the Proposed Development that could impact the populations at the LNR. There are no foreseeable impact pathways for habitats with the LNR. This designated site is therefore scoped out of this assessment.
Craig-y-parciau Woodland LNR	This local designated site is designated for woodland and river habitats with bats being present. The extent of habitats suitable for bats between the Development Site and the LNR are sufficiently large to attenuate any potential environmental change from the Proposed Development that could impact the populations at the LNR. There are no foreseeable impact pathways for habitats with the LNR. This designated site is therefore scoped out of this assessment.
Craig Du SINC	This SINC is outside the Proposed Development's construction areas so will not undergo any habitat change or fragmentation, and there are no impact pathways to consider when industry good practice embedded mitigation measures (e.g. pollution prevention) are included. This SINC is therefore scoped out of this assessment.
Nant-y-Fforest SINC	This SINC is outside the Proposed Development's construction areas so will not undergo any habitat change or fragmentation, and there are no impact pathways to consider when industry good practice embedded mitigation measures (e.g. pollution prevention) are included. This SINC is therefore scoped out of this assessment.
Blaen-Cwmdu SINC	This SINC is outside the Proposed Development's construction areas so will not undergo any habitat change or fragmentation, and there are no impact pathways to consider when industry good practice embedded mitigation measures (e.g. pollution prevention) are included. This SINC is therefore scoped out of this assessment.
B-Line	Potential impacts to the B-line are scoped out because the Proposed Development is not within the B-Line and will not meaningfully reduce the extent, connectivity or integrity of habitats which support terrestrial invertebrates within it. For further details see the common invertebrates receptor below.
Ancient woodland inventory (AWI) parcels	The Development Site is at least 440 m from the nearest AWI parcels so this receptor can be scoped out as there will be no change in habitat extent and impacts from changes in air quality have been scoped out based on the inclusion of industry good practice embedded mitigation measures.

Receptors/potential effects	Justification
Priority habitats (as listed under Section 7 of Environment (Wales) Act 2016)	The extended Phase 1 habitat survey identified the following habitats within the Development Site which could potentially be Priority Habitats: ■ Inland cliff – acid/neutral; and ■ Scree – acid/neutral. The potential Inland rock outcrop and scree habitats are outside of any construction areas and are therefore outside the ZoI for permanent changes to habitats or habitat fragmentation. This Priority habitat is therefore scoped out of this assessment.
Common and widespread habitats	The scoping report concluded that common and widespread habitats (e.g. those not meeting the criteria for a Priority Habitats) could be scoped out of the assessment. This is because these habitats by definition are common in the local landscape and as such the Proposed Development will not change the status or distribution of the plant (or animal) species associated with these habitats.
Badger	The PEA desk study returned no records for badger, and the surveys identified no setts, no signs of badger and limited suitable habitat for sett excavation and foraging. Badgers were therefore scoped out at the scoping stage because the receptor is concluded to be likely absent from the Development Site.
Section 7 Mammals (including Hedgehog and Brown hare)	The PEA desk study returned records for hedgehog and brown hare with the surveys confirming there was suitable habitat within the Development Site to support these species. Nonetheless these species were scoped out at the scoping stage because the potential risk of killing/injury can be mitigated by including industry good practice embedded mitigation measures (e.g. precautionary method of works). Furthermore, the extent of habitat change will not impact the distribution and conservation status of these species or cause any fragmentation of key supporting habitats.
GCN	The HSI and eDNA surveys completed for the ten waterbodies present within 500 m of the Development Site have determined that GCN are likely absent. This species is therefore scoped out of this assessment.
Common reptiles and amphibians	The PEA desk study returned records for three species of reptile and four species of amphibian. The survey identified terrestrial habitats suitable to support both reptiles and amphibians as well as aquatic habitats which supported breeding amphibians. Nonetheless these species were scoped out at the scoping stage because the potential risk of killing/injury can be mitigated by including industry good practice embedded mitigation measures (e.g. precautionary method of works). Furthermore, the extent of habitat change will not impact the distribution and conservation status of these species or cause any fragmentation of key supporting habitats.

Receptors/potential effects	Justification
Common invertebrates (excluding marsh Fritillary)	The PEA desk study returned records for a variety of common invertebrates. The PEA survey concluded that the habitats within the Development Site could support common invertebrates. Nonetheless these species were scoped out at the scoping stage because the extent of habitat change will not impact the distribution and conservation status of these species and any effects of fragmentation on key supporting habitats would be minor.
Notable plants	The PEA identified three notable plant species that could be present in habitats within the Development Site. An NVC survey will be completed in August 2026 (see **Section 8.13 – Further work**) which will include identification of camomile, pennyroyal or bluebell plants. Nonetheless, these receptors are scoped out of the assessment because potential impacts will be avoided by micrositing the Proposed Development away from any location with these plants and inclusion of industry good practice embedded mitigation measures (e.g. precautionary method of works and ecological clerk of work).
INNS	The PEA survey identified two INNS and INNS are therefore assumed to be present across the Development Site construction areas. Nonetheless this receptor was scoped out at the scoping opinion report stage because the potential risk of spreading INNS can be avoided by including industry good practice embedded mitigation measures (e.g. precautionary method of works and invasive non-native species management plan).

8.8 Assessment methodology

8.8.1. The generic project-wide approach to the assessment methodology is set out in **Chapter 3: Approach to EIA**, and specifically in **Sections 3.7** to **3.10**. However, whilst this has informed the approach that has been used in this biodiversity assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to align with the standard industry guidance provided by CIEEM.

8.8.2. Throughout the assessment process, the initial results of the assessment regarding potentially significant effects have been used to inform whether additional baseline data collection is required, together with the identification of environmental measures that should be embedded into the development proposals (see **Table 8.6**). The results of the assessments therefore reflect the scheme design inclusive of the embedded mitigation measures described in **Section 8.6**.

Identification of Important Ecological Features

8.8.3. The starting point for defining which ecological features are taken forward to the detailed assessment stage was to use the baseline data collected through the desk study and field surveys to determine which of those are ‘important’ at the level of the project. Following

CIEEM, the importance of ecological features was determined using a geographic scale and described in relation to UK legislation and policy, and with regard to the extent of habitat or size of population that may be affected by the Project.

8.8.4. The importance of ecological features can therefore differ from that which would be conferred solely by legislative protection or identification as a conservation notable species. For example, a small length of hedgerow (a Section 7 Priority Habitat), even if deemed to be 'important' with regard to the Hedgerows Regulations 1997, is unlikely to be considered to have greater than 'local' importance due to the extent of this habitat type across a given county.

8.8.5. Where possible, information regarding the extent and population size, population trends and distribution of the ecological features have been used to inform the categorisation and determine importance at the project level. Where detailed criteria or contextual data are not available, professional judgement has been used to determine importance. **Table 8.12** provides a high-level description of features assigned to respective geographic scale of importance and displays the corresponding level of sensitivity as set out on **Table 2.1**.

Table 8.12 High-level description of features relative to the geographic scale of importance

Geographic Context of Importance	Corresponding Sensitivity as per Table 2.1	Description
International	Very high	■ European sites (SPAs, SACs, cSACs and SCI), plus sites treated as such by national planning policy (pSPA, pSAC and Ramsar sites (designated under international convention)). ■ Areas of habitat or populations of species which meet the published selection criteria for designation as a European site, but which are not themselves currently designated at this level (this would be agreed with NRW where applicable).
National (UK context)	High	■ Nationally designated sites including SSSIs and NNRs. ■ Areas (and the populations of species which inhabit them) which meet the published selection criteria guidelines for selection of biological SSSIs, but which are not themselves designated (this would be agreed with NRW where applicable). ■ Section 7 habitats and species, Red listed and legally protected species that are not addressed directly in Part 2 of the "Guidelines for Selection of Biological SSSIs" but can be determined to be of national importance using the

Geographic Context of Importance	Corresponding Sensitivity as per Table 2.1	Description
		principles described in Part 1 of the guidance. ■ Areas of Ancient Woodland e.g. woodland listed within the AWI and ancient and veteran trees.
National (Wales context)	Medium	■ Regularly occurring Section 7 habitats or populations of Section 7 species, Red listed, and legally protected species may be of regional (Wales) importance in the context of published information on population size and distribution.
County	Low	■ LNRs and Non-Statutory Designated sites including Biodiversity Areas (referred to throughout this Chapter as Wildlife Sites for clarity) and County Wildlife Sites. ■ Areas which based on field data collected to inform the ES meet the published selection criteria for those sites listed above (for habitats or species, including those listed in relevant Local Biodiversity Action Plans) but which are not themselves designated.
Local	Very low	■ Section 7 habitats and species, Red listed and legally protected species that based on their extent, population size, quality etc are determined to be at a lesser level of importance than the geographic contexts above.
Site	Very low	■ Common and widespread semi-natural habitats and species that do not occur in levels elevated above those of the area surrounding the Site. ■ Common and widespread semi-natural habitats occurring within the Study Area in proportions greater than may be expected in the local context. ■ Common and widespread native species occurring within the Study Area in numbers greater than may be expected in the local context.
Negligible	Very low	■ Common and widespread semi-natural habitats and species that do not occur in levels elevated above those of the surrounding area.

Geographic Context of Importance	Corresponding Sensitivity as per Table 2.1	Description
		▪ Areas of heavily modified or managed land uses (e.g. hard standing used for car parking, as roads etc.)

8.8.6. 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, with the exception of:

- Species receiving specific legal protection or subject to legal control (e.g. invasive species); or
- Features which consultees specifically indicated that the ES should consider.

8.8.7. Ecological features are therefore scoped in where the identified pathways for potentially significant effects lie within the relevant ZoI and where the ecological feature holds value at a County level or above. For each scoped-in ecological feature (**Table 8.10**), effects were assessed against the baseline conditions for that feature during construction and operation.

Significant Evaluation Methodology

Source-pathway-receptor approach

8.8.8. The source-pathway-receptor approach will be used to understand the mechanisms by which the Proposed Development could result in LSEs on important ecological features ("receptors"). The approach starts by identifying potential sources of environmental change, defining the ZoI for those sources and any potential pathways that could lead to changes to in the status of the important ecological feature. An evaluation of significance for a given important ecological feature is then undertaken where sources of environmental change are connected to an important ecological feature via a potential impact pathway. In order for a likely significant 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. The details of the method for evaluating significance are provided below.

Magnitude of change

8.8.9. When considering potentially significant effects on important ecological features, whether these be adverse or beneficial, the following characteristics of environmental change are taken into account:

- extent – the spatial or geographical area over which the environmental change may occur;
- magnitude – the size, amount, intensity or volume of the environmental change;
- duration – the length of time over which the environmental change may occur;
- frequency – the number of times the environmental change may occur;

- timing – the periods of the day/year etc. during which an environmental change may occur; and
- reversibility – whether the environmental change can be reversed through restoration actions.

8.8.10. Although the characteristics described above are all important in assessing effects by using information about the way in which habitats and species are likely to be affected, a scale of the magnitude of the environmental change as a result of the Proposed Development has been described in **Table 8.13**. This provides an understanding of the resultant effect in terms of relative change from the baseline position, be that adverse or beneficial. The scale of change is equivalent to the magnitude of change as per **Table 2.1**.

Table 8.13 Guidelines for the assessment of the scale of magnitude

Scale of Change	Criteria and Resultant Effect
High	The change permanently (or over the long-term) affects the conservation status of a habitat / species, reducing or increasing the ability to sustain the habitat or the population level of the species within a given geographic area. Relative to the wider habitat resource/species population, a large area of habitat or large proportion of the wider species population is affected. For designated sites, integrity is compromised. There may be a change in the level of importance of the receptor in the context of the project.
Medium	The change permanently (or over the long term) affects the conservation status of a habitat / species reducing or increasing the ability to sustain the habitat or the population level of the species within a given geographic area. Relative to the wider habitat resource/species population, a small-medium area of habitat or small-medium proportion of the wider species population is affected. There may be a change in the level of importance of this receptor in the context of the project.
Low	The quality or extent of designated sites or habitats or the sizes of species' populations, experience some small-scale reduction or increase. These changes are likely to be within the range of natural variability and they are not expected to result in any permanent change in the conservation status of the species/habitat or integrity of the designated site. The change is unlikely to modify the evaluation of the receptor in terms of its importance.
Very Low	Although there may be some effects on individuals or parts of a habitat area or designated site, the quality or extent of sites and habitats, or the size of species populations, means that they would experience little or no change. Any changes are also likely to be within the range of natural variability and there would be no short-term or long-term change to conservation status of habitats/species receptors or the integrity of designated sites.
Negligible	A change, the level of which is so low, that it is not discernible on designated sites or habitats or the size of species' populations, or changes that balance each other out over the lifespan of a project and result in a neutral position.

Determining Significance

8.8.11. The CIEEM EcIA guidelines define a significant effect in the context of an EcIA as "an effect that either supports or undermines biodiversity conservation objectives for important ecological features or for biodiversity in general". Significant effects are determined by assessing deviation in the baseline conditions of an important ecological feature that may occur because of individual and cumulative impacts during the construction and operational phases of the Proposed Development. In the context of this assessment for a likely significant effect[44] to occur for an important ecological feature there would need to be a deviation in the baseline conditions at a medium or high scale magnitude of change.

8.8.12. Where a likely significant effect is identified, proposals for mitigation and compensation would be made with the aim of avoiding, preventing, reducing or, if possible, offsetting any identified significant adverse effects (see **Section 8.12**). Following the application of mitigation and compensation, the residual effect is presented within **Section 8.13**. Where further assessment or work is required to establish the significance of effect or to identify suitable mitigation and compensation, this has been presented within **Section 8.13**.

8.9 Assessment of biodiversity effects

8.9.1. The effects of the Proposed Development on ecological features that are scoped into this assessment are detailed in **Table 8.10** along with mitigation specific to these effects that will be in place (which would be considered as additional measures in the context of the wider ES) and any residual effects. It is expected that the CEMP will incorporate the dynamic measures pertaining to mitigation during construction and that the HMP will capture any management and monitoring measures relevant to the Proposed Development.

8.10 Assessment of cumulative (inter-project) effects

8.10.1. At the time of writing a CEA for biodiversity effects has not been provided because of the current position in relation to baseline ecological data collection for the habitats and protected species which could potentially be present on the Development Site. A robust CEA requires a detailed understanding of the presence and significance of sensitive receptors which could be impacted and given the current survey work proposed for July – August 2026 this is not possible.

8.10.2. A cumulative effects assessment (CEA) for biodiversity effects will be undertaken as part of the Final ES for the Proposed Development. This will consider the combined impacts with other developments on the same single receptor or resource (inter-project effects). The detailed method for identifying and assessing potential cumulative effects which will be followed in the CEA is set out in **Section 4.9** of **Chapter 4** alongside a list of projects which will be considered in the CEA. The list of potentially relevant projects will be reviewed, and if necessary updated, in the lead up to the Final ES as the Proposed Development design further evolves and in response to any comments raised during consultation.

[44] Significant effects can either be adverse (negatively affecting an ecological feature), or beneficial (where a resulting change from baseline improves the quality of the environment for the ecological feature).

8.11 Significance conclusions

8.11.1. A summary of the results of the biodiversity assessment is provided in **Table 8.14.**

Table 8.14 Summary of the results of the biodiversity assessment

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
Cefn Cribwr Grasslands SAC	International	Potential Effects	No direct impacts e.g. habitat loss, will occur within the footprint of the SAC. It has been precautionarily assumed that marsh fritillary could be present within the Development Site as targeted species surveys are not yet completed. There is therefore the potential for the Development Site to be ecologically connected to the SAC via a metapopulation of marsh fritillary. In the absence of mitigation, there is the potential for Proposed Development to result in the mortality of marsh fritillary larvae and eggs that are part of the SAC metapopulation and degradation / loss of suitable habitats resulting in the metapopulation being more vulnerable to local extinction events. Impacts to adult animals is not expected given the mobile nature of the species.
		Mitigation	The detailed design of the Proposed Development would avoid locations with scabious plants which support marsh fritillary larva and eggs. Furthermore, construction will adhere to measures outlined within a CEMP for micrositing of construction works away from larval food plants which could sustain the local population of marsh fritillary which have not been found via survey. The measures prescribed within the CEMP shall be agreed with the LPA (RCTCBC) as part of the post-approval DNS Condition Discharge process (prior to start of construction).
		Effects and Monitoring	The local population of marsh fritillary, and the wider metapopulation that is connected with the SAC, is highly unlikely to be subject to effects following the implementation considerate design and avoidance measures outlined within a CEMP. On this basis, a negligible magnitude of change on an ecological feature of international importance is predicted as a result of the Proposed Development, with effects concluded to be Not Significant.
	International	Potential Effects	No direct impacts e.g. habitat loss, will occur within the footprint of the SAC.

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
Limestone Coast of South Wales SAC			It has been precautionarily assumed that greater horseshoe bats could use habitats within the Development Site for commuting and foraging as targeted bat activity surveys are ongoing. The SAC is approximately 30 km west of the Development Site with 20 km of that distance being Swansea Bay, and urban land use of the Mumbles and Port Talbot. The distance across suitable semi-natural and arable landscapes is closer to 40 km and would involve bats from the SAC population crossing either the M4 or A465. It is therefore considered reasonable to assume that bats associated with the SAC would only visit the Development Site sporadically, if at all, and that the impacts on site would be minor given the availability of foraging and commuting habitat closer to the SAC. As such, the SAC population of greater horseshoe bat are scoped out of this assessment. A HRA screening assessment has yet to be completed for the impacts of the Proposed Development on the SAC, but this will be included within the Final ES submission.
		Mitigation	The potential effects on the SAC's population of greater horseshoe bat are sufficiently unlikely and minor to not warrant any targeted mitigation. The mitigation detailed below for commuting and foraging bats would protect any local populations of greater horseshoe bat.
		Effects and Monitoring	The SAC's population of greater horseshoe bats have been scoped out of potential impacts because of a negligible magnitude of change. Effects on this ecological feature of international importance are therefore concluded to be Not Significant.
Priority Habitats	National (Wales)	Potential Effects	The extended Phase 1 habitat data shows that there are four potential Priority habitats (Upland heathland, Lowland dry acid grassland, Upland flushes, fens and swamps, and Small, mid altitude rivers on acidic geology) within the Northern Array and none at the Southern Array. In the absence of detailed NVC data, it has been precautionarily assumed that Priority habitats are present and that all construction will coincide with locations of Priority habitats.

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
			This receptor is assessed as having a 'National' value of importance because it is assumed to support a regularly occurring Section 7 species but would not support a population that would be significant enough warrant designation as SSSI. The extent of Priority habitat which could be temporarily and permanently lost/degraded has been precautionarily estimated as 3.75 ha of terrestrial habitat at the Northern Array based on site layout drawings and the project description elements listed below: ■ 2.1 km of 9 m wide access track; ■ Four 2200 sqm turbine locations; ■ Four 1500 sqm at turbine locations for temporary storage of turbine components including blade and tower sections during the construction phase; ■ One 37.5 m x 35 m substations; and ■ One 50 m x 50 m construction compound areas. It is also anticipated that in the absence of mitigation the Proposed Development could fragment a length of small, mid altitude rivers on acidic geology. At the time of writing the NVC survey has not been completed and an NBB assessment has not been produced. These would form the basis of defining the magnitude of change for Priority habitats.
		Mitigation	At this time, it is assumed that impacts will occur on Priority habitats but that detailed survey data is needed for a mitigation strategy to be designed. This Draft ES does not provide any proposed mitigation measures for this receptor, and these measures will therefore be presented with the Final ES.
		Effects and Monitoring	In the absence of NVC survey data and suitable mitigation proposals an effect of which is not significant cannot be ruled out and as such a **Likely significant effect** on Priority habitat must be precautionarily included.

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
Bats - roosting	National (Wales)	Potential Effects	In the absence of finalised survey data for the rock outcrop, it is precautionarily assumed that the feature is likely to be used only opportunistically by individual crevice roosting bats (as defined within the DBW) and that potential effects are limited to disturbance from noise during construction of the OHL grid connection. This feature is assessed as having a 'National' value of importance because it is assumed to support a regularly occurring Section 7 species but would not support a population that would be significant enough warrant designation as SSSI. The reasonable worst-case scenario presented for the Proposed Development includes daytime construction works within the summer months. This could result in roosting bats being disturbed causing them to temporarily vacate the roost in favour of another roost location. In the absence of mitigation, the Proposed Development could therefore result in a temporary, low scale magnitude of change in the suitability of the feature to support roosting bats. As the roost is assumed to be used opportunistically, the temporary vacation of the feature is likely to be within the range of natural variability and is not expected to result in any permanent change in the conservation status of the local bat populations.
		Mitigation	The Proposed Development includes an allowance for micrositing, and therefore precise locations will be determined on site during construction, guided by a suitably qualified ecologist/ecological clerk of works. If the surveys of the rocky outcrop confirm the presence of roosting bats or if likely absence cannot be reasonably assumed, then it will be necessary for the mitigation to include: ■ Obtaining a European Protected Species Licence (EPSL) from NRW for the loss, damage or disturbance of a bat roost. ■ Suitable compensation for the loss of a roost (compensatory measures would differ based on the bat species and roost type present) and

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
			▪ Suitable mitigation strategy to ensure appropriate working methods are employed to minimise disturbance or the risk of injury to bats during dismantling / destruction of the roost feature.
		Effects and Monitoring	With the design and embedded mitigation measures detailed above the effects of the Proposed Development on this ecological feature of potential National importance is predicted to be negligible, with effects concluded to be **Not Significant.**
Bats – Commuting and foraging	National (Wales)	Potential Effects	In the absence of finalised bat activity survey data, it is precautionarily assumed that the woodland edges and walls could be used by commuting bats and that the semi-natural grasslands/heathland could support foraging bats. In the absence of mitigation, there is therefore the potential for flightlines used by commuting bats to be fragmented and foraging habitats to be lost/degraded. The extent of suitable foraging habitat which could be temporarily and permanently lost/degraded has been precautionarily estimated as 7.41 ha based on site layout drawings and the project description elements listed below: ▪ 4.8 km of 9 m wide access track; ▪ Eight 2200 sqm turbine locations ▪ Eight 1500 sqm at turbine locations for temporary storage of turbine components including blade and tower sections during the construction phase; ▪ Two 37.5 m x 35 m substations; and ▪ Two 50 m x 50 m construction compound areas. This receptor is assessed as having a ‘National’ value of importance because it is assumed to support a regularly occurring Section 7 species but would not support a population that would be significant enough warrant designation as SSSI. In the absence of mitigation this would be a low scale magnitude of change in the suitability of the Development Site to support commuting and foraging bats.

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
			This is because it would represent a relatively small proportion of the habitat area which would constitute suitable commuting and foraging habitat at the landscape population scale.
		Mitigation	Despite a low scale magnitude of change, it is intended that the micrositing of the Proposed Development infrastructure will remove any impacts on woodland edge or walls which could be used by commuting bats. Furthermore, micrositing will allow for habitat fragmentation to be avoided by ensuring that turbines, substations and temporary site compounds are located 200 m from woodland edges and walls.
		Effects and Monitoring	Commuting and foraging bats are highly unlikely to be subject to effects following the implementation of the mitigation measures outlined above. On this basis, a negligible magnitude of change on ecological features of national importance is predicted as a result of the Proposed Development, with effects concluded to be **Not Significant**.
Water vole	National (Wales)	Potential Effects	In the absence of finalised presence/absence survey data, it is precautionarily assumed that the watercourse in the Northern Array could be impacted by access track which connects Turbine 1 to the other internal access tracks (see **Figure 1.3 Northern array site layout**). This would be considered a permanent change to the extent of suitable habitat; the fragmentation of suitable habitat; and disturbance from construction noise for water vole. This feature is assessed as having a 'National' value of importance because it is assumed to support a regularly occurring Section 7 species but would not support a population that would be significant enough warrant designation as SSSI. In the absence of mitigation this would be a medium scale magnitude of change in the suitability of the Development Site to support water vole.
		Mitigation	The reasonable worst-case scenario presented for the Proposed Development includes an allowance for micrositing the internal access tracks within 100 m of their indicative routes (see **Figure 1.3 Northern array site layout**). The

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
			implementation of this embedded mitigation would allow for impacts to water vole to be avoided.
		Effects and Monitoring	Water voles are highly unlikely to be subject to effects following the implementation of the mitigation measures outlined above. On this basis, a negligible magnitude of change on an ecological feature of National importance is predicted as a result of the Proposed Development, with effects concluded to be **Not Significant**.
Marsh fritillary	National (Wales)	Potential Effects	In the absence of finalised NVC data and / or marsh fritillary presence/absence survey data, it is precautionarily assumed that the grassland and heathland mosaics could contain marsh fritillary larval food plants and therefore the vulnerable life stages of the protected species. Loss/damage of the larval food plants would result in the killing and injury of protected animals but could also degrade the quality of the Development Site for this species which in turn could cause fragmentation of the habitats at the landscape scale which could support this species. Impacts to adult animals is not expected given the mobile nature of the species. This feature is assessed as having a 'National' value of importance because it is assumed to support a regularly occurring Section 7 species but would not support a population that would be significant enough warrant designation as SSSI. The distinction is made here because: ■ marsh fritillary suitable habitat is frequent in the landscape within 2 km of the Development Site (see **Figure 8-6**) indicating a lower level of fragility/rarity; and ■ The naturalness of the suitable habitats has been reduced as a result of habitat improvement from grazing. Nonetheless, in the absence of mitigation this would be a medium scale magnitude of change in the suitability of the Development Site to support marsh fritillary.

Sensitive Receptor	Value of importance	Potential Effects/ Mitigation/ Effects and Monitoring	
		Mitigation	The reasonable worst-case scenario presented for the Proposed Development includes an allowance for micrositing construction works away from larval food plants that are identified via survey. The implementation of micrositing as an embedded mitigation measure for avoidance of impacts would allow for impacts to marsh fritillary to be avoided.
		Effects and Monitoring	Marsh fritillary are highly unlikely to be subject to effects following the implementation of the mitigation measures outlined above. On this basis, a negligible magnitude of change on an ecological feature of National importance is predicted as a result of the Proposed Development, with effects concluded to be **Not Significant**.

8.12 Additional measures

8.12.1. The assessment set out above has concluded that it will not be necessary to implement additional measures and that embedded measures, including design and industry good practice approaches (see **Table 8.9**), are anticipated to be sufficient to avoid and mitigate for any potential impacts to ecological receptors.

8.13 Further work to be undertaken

8.13.1. This section describes the further work to be undertaken to support the Biodiversity Chapter assessment presented in the Final ES.

Baseline

The following baseline surveys and analysis is to be undertaken to inform the Final ES:

- Bat activity surveys using automated static detectors: Survey data has been collected in Autumn 2025 and Spring 2026, but Summer data remains outstanding. These surveys are scheduled for July / August 2026 and will entail the deployment of automated static detectors, at the base of each of the proposed turbine locations across the Development Site, for a period of 10 nights, in accordance with good practice guidelines[45] [46].
- Water vole presence/absence survey: One of two surveys required has been completed to date (in May 2026). The remaining survey is scheduled for late July 2026. The survey will focus on all watercourses within the Northern Array and Southern Array and will include a search for any burrows and field signs in accordance with good practice survey guidelines[47]. The results from both survey visits will be incorporated within a water vole specific survey report which will be appended to the Final ES.
- Bat roost surveys: One rocky outcrop at the Northern Array, within 300 m of the proposed turbine locations, was identified as having suitability for supporting roosting bats during the DBW in 2025. This feature will be subject to a detailed roost survey (endoscope inspection) in August 2026 to further categorise its suitability level (negligible, low, medium or high) and to search for signs of use by roosting bats.
- An update Phase 1 habitat survey, during the optimal months for botanical surveys (scheduled for August 2026). The survey will also include a search for scabious plant species, the larval food plant for marsh fritillary, which will subsequently inform the Habitats Regulations Assessment (see below).
- A National Vegetation Classification (NVC) survey: An NVC survey of the Northern Array and Southern Array is scheduled for August 2026, which will focus on surveying Priority Habitats or potential Priority Habitats, that fall within 50 m of the proposed turbine locations.
- Relevant habitat and species surveys (where required) of the forestry access track, once preliminary design and estimate land take is determined.

45 Nature Scot (2021). Bats and Onshore Wind Turbines – survey, assessment and mitigation.
46 Collins (ed.) 2023. Bat surveys for professional ecologists: Good practice guidelines. 4th
47 Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.

Assessment

The following baseline surveys and analysis is to be undertaken to inform the Final ES:

- Habitats Regulations Assessment: A HRA Screening will be prepared, to assess the potential for likely significant effects on relevant SACs, including Cefn Cribwr Grasslands SAC, Limestone Coast of South West Wales SAC and Blackmill Woodlands SAC.