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## 8. Ornithology

### 8.1 Introduction

- 8.1.1 This chapter considers the potential for significant effects to arise as a result of the proposed Glenouther Wind Farm (the 'Proposed Development') on ornithological interests. It details the methods used to establish the bird populations within the application boundary (the 'Site') and its surroundings, the results of the baseline surveys, and the process used to determine the sensitivity of the bird populations present. The ways in which birds might be affected (directly or indirectly) by the construction, operation and decommissioning of the Proposed Development and Likely Grid Connection Route (including in combination with the Proposed Development), are assessed, prior to and after the application of any required mitigation measures.
- 8.1.2 In order to focus on identifying likely significant effects and thereby ensure a proportionate assessment, particular attention has been paid to species of high or moderate Nature Conservation Importance. These include, but are not restricted to, species with national or international protection under the Wildlife and Countryside Act 1981<sup>1</sup> (and later amendments) and the EU Birds Directive (79/409/EEC)<sup>2</sup>.
- 8.1.3 Birds may be affected by the following phases of the Proposed Development:
- Construction: construction of tracks, turbines, grid connection infrastructure, buildings and hard standings (including borrow pit operations);
  - Operation: turbine operation and associated maintenance activities; and
  - Decommissioning: the removal of installed structures and reinstatement of habitats (if appropriate).
- 8.1.4 The potential effects of the Proposed Development on birds are:
- Habitat modification: due to changes in land management or hydrology;
  - Direct habitat loss: due to land take by wind turbine bases, access tracks and ancillary structures;
  - Indirect habitat loss: due to the displacement of birds as a result of construction and maintenance activities, or due to the presence of the operating wind turbines close to nesting or feeding sites or habitual flight routes;
  - Disturbance of bird behaviours due to construction and operational effects that do not result in displacement. This may result in reduced productivity and/or survival; and
  - Collision: the killing or injury of birds following collision with rotating turbine blades and associated structures.
- 8.1.5 Effects on other flora and fauna are presented in **Chapter 7: Ecology** of this Environmental Impact Assessment (EIA) Report.
- 8.1.6 The ornithology assessment was undertaken by Natural Research (Projects) Limited (NRP). NRP has worked on numerous onshore wind farm projects across Scotland, Europe and the Middle East, and has extensive professional experience in preparing and writing Technical Reports and EIA Report chapters and providing ornithological management advice for a number of renewable energy and powerline developments. See **Technical Appendix 1.1: Statement of Expertise** for further information on the authors of the assessment.
- 8.1.7 This chapter is supported by the following figures which are referenced throughout the text, and which can be found at **Volume 3a: Figures**:
- **Figure 8.1: Ornithology Study Area;**
  - **Figure 8.2: Ornithology Assessment Areas;** and
  - **Figure 8.3: Designated Areas**
- 8.1.8 The following appendices (and associated figures) are also referred to throughout the chapter and can be found in **Volume 4: Technical Appendices**:

<sup>1</sup> The Wildlife and Countryside Act 1981, c. 69, as amended. Available at <https://www.legislation.gov.uk/ukpga/1981/69>

<sup>2</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). Official Journal L 20, 26.1.2010, pp. 7–25. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32009L0147&from=EN>

- **Technical Appendix 8.1: Ornithology Technical Report;**
- **Technical Appendix 8.2: Collision Risk Modelling;**
- **Technical Appendix 8.3: Confidential Ornithology<sup>3</sup>;**
- **Technical Appendix 8.4: Confidential Ornithology Assessment<sup>3</sup>; and**
- **Technical Appendix 8.5: Shadow Habitats Regulations Appraisal for the Ailsa Craig Special Protection Area.**

## 8.2 Assessment Methodology

### Legislation, Policy and Guidance

- 8.2.1 The assessment has been informed by the following key legislation, national and local policies and industry standard guidance, of relevance to ornithology.

#### Legislation

- 8.2.2 This assessment is carried out in accordance with the principles contained within the following European legislation:
- Directive 2009/147/EC on the Conservation of Wild Birds ('Birds Directive'; European Commission)<sup>2</sup>;
  - Directive 92/43/EEC on Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) ('Habitats Directive'; European Commission)<sup>4</sup>; and
  - Directive 2014/52/EU Environmental Impact Assessment (European Commission)<sup>5</sup>.
- 8.2.3 The following national legislation, which has been amended as a consequence of the UK's exit from the European Union, has also been considered as part of the ornithology assessment:
- EU Exit: The Habitats Regulations in Scotland 2020<sup>6</sup>;
  - The Conservation of Habitats and Species Regulations 2017<sup>7</sup>;
  - The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations)<sup>8</sup>;
  - The Wildlife and Natural Environment (Scotland) Act 2011<sup>9</sup>;
  - The Nature Conservation (Scotland) Act 2004<sup>10</sup>; and
  - The Wildlife and Countryside Act 1981<sup>1</sup>.

#### Policy

- 8.2.4 The following policies of relevance to the assessment have been considered:

<sup>3</sup> Technical Appendix 8.3 and Technical Appendix 8.4 contain sensitive environmental information relating to species listed on Schedule 1 of the Wildlife and Countryside Act 1981. As such, these Technical Appendices will only be shared with East Ayrshire Council, NatureScot and the Royal Society for the Protection of Birds (RSPB).

<sup>4</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), as amended. Official Journal L 206, 22.7.1992, pp. 7–50. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:31992L0043>

<sup>5</sup> Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. Official Journal L 124, 25.4.2014, pp. 1–18. Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0052>

<sup>6</sup> Scottish Government. (2020). EU Exit: The Habitats Regulations in Scotland. Edinburgh: The Scottish Government. Available at <https://www.gov.scot/publications/eu-exit-habitats-regulations-scotland-2/>

<sup>7</sup> The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended. Available at <https://www.legislation.gov.uk/uksi/2017/1012/contents>

<sup>8</sup> The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (SSI 2017/102). Available at <https://www.legislation.gov.uk/ssi/2017/102/contents>

<sup>9</sup> The Wildlife and Natural Environment (Scotland) Act 2011 (asp 6). Available at <https://www.legislation.gov.uk/asp/2011/6/contents>

<sup>10</sup> The Nature Conservation (Scotland) Act 2004 (asp 6). Available at <https://www.legislation.gov.uk/asp/2004/6/contents>

- National Planning Framework 4 (NPF4) (Scottish Government, February 2023)<sup>11</sup>;
- Planning Advice Note 1/2013 - 'Environmental Impact Assessment' (Scottish Government, August 2013)<sup>12</sup>;
- The Scottish Biodiversity List (NatureScot, 2020)<sup>13</sup>.

## Guidance

8.2.5 This assessment is carried out in accordance with the principles contained within the following documents:

- 'Chartered Institute of Ecology and Environmental Management: Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine' (CIEEM, 2018; updated 2024)<sup>14</sup>;
- 'Scottish Executive Rural Affairs Department: Nature Conservation: Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild Flora and Fauna and the Conservation of Wild Birds ("the Habitats and Birds Directives")' (SERAD, 2000)<sup>15</sup>.
- Planning Guidance: 'Biodiversity' (Scottish Government 2025)<sup>16</sup>,
- Scottish Biodiversity Strategy to 2045: 'Tackling the Nature Emergency in Scotland' (Scottish Government, September 2023)<sup>17</sup>,
- 'Developing Field and Analytical Methods to Assess Avian Collision Risk at Wind Farms' (Band *et al.*, 2007)<sup>18</sup>;
- 'A method for censusing upland breeding waders' (Brown & Shepherd, 1993)<sup>19</sup>;
- 'Bird Monitoring Methods' (Gilbert *et al.*, 1998)<sup>20</sup>;
- 'Raptors: a field guide to survey and monitoring' (Hardey *et al.*, 2013)<sup>21</sup>;
- 'Assessing significance of impacts from onshore wind farms outwith designated areas' (NatureScot, 2025a)<sup>22</sup>;
- 'Wind farm impacts on birds – Use of Avoidance Rates in the NatureScot Wind Farm Collision Risk Model' (NatureScot, 2025b)<sup>23</sup>;
- 'Assessing the cumulative impacts of onshore wind farms on birds' (NatureScot, 2025c)<sup>24</sup>;
- 'NatureScot pre-application guidance for onshore wind farms' (NatureScot, 2025d)<sup>25</sup>;

<sup>11</sup> Scottish Government. (2023). National Planning Framework 4. Available at <https://www.gov.scot/publications/national-planning-framework-4/>

<sup>12</sup> Scottish Government. (2013). Planning Advice Note 1/2013 - Environmental Impact Assessment. Available at <https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/>

<sup>13</sup> NatureScot. (2020). The Scottish Biodiversity List. Available at <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-list>

<sup>14</sup> Chartered Institute of Ecology and Environmental Management (CIEEM). (2018; updated 2024). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (version 1.2). CIEEM, Winchester. Available at: <https://cieem.net/wp-content/uploads/2018/08/EcIA-Guidelines-v1.3-Sept-2024.pdf>

<sup>15</sup> Scottish Executive Rural Affairs Department (SERAD). (2000). Habitats and Birds Directives, Nature Conservation: Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild Flora and Fauna and the Conservation of Wild Birds ("the Habitats and Birds Directives"). Revised Guidance Updating Scottish Office Circular No 6/1995.

<sup>16</sup> Scottish Government. (2025). Planning Guidance: Biodiversity. Available at: <https://www.gov.scot/publications/scottish-government-planning-guidance-biodiversity/>

<sup>17</sup> Scottish Government. (2023). Scottish biodiversity Strategy to 2045: tackling the Nature Emergency in Scotland. Available at: <https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland-2/>

<sup>18</sup> Band, W., Madders, M. & Whitfield, D.P. (2007). Developing field and analytical methods to assess avian collision risk at wind farms. In de Lucas, M., Janss, G.F.E. & Ferrer, M. (Eds.) Birds and Wind Farms: Risk assessment and Mitigation, pp. 259 - 275. Quercus, Madrid.

<sup>19</sup> Brown, A.F. & Shepherd, K.B. (1993). A method for censusing upland breeding waders. Bird study 40(3):189-195.

<sup>20</sup> Gilbert, G., Gibbons, D.W. & Evans, J. (1998). Bird monitoring methods. Royal Society for the Protection of Birds (RSPB) Sandy, Bedfordshire.

<sup>21</sup> Hardey, J., Crick, H.Q.P., Wernham, C.V., Riley, H., Etheridge, B. & Thompson, D.B.A. (2013). Raptors. A Field Guide for Surveys and Monitoring, 3rd edn. The Stationery Office, Edinburgh.

<sup>22</sup> NatureScot. (2025a). Assessing significance of impacts from onshore wind farms outwith designated areas. Available at <https://www.nature.scot/doc/guidance-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect-protected>

<sup>23</sup> NatureScot. (2025b). Avoidance rates for the onshore SNH wind farm Collision Risk Model. Available at <https://www.nature.scot/doc/wind-farm-impacts-birds-use-avoidance-rates-naturescot-wind-farm-collision-risk-model>

<sup>24</sup> NatureScot. (2025c). Assessing the cumulative impacts of onshore wind farms on birds. Available at <https://www.nature.scot/doc/guidance-assessing-cumulative-impacts-onshore-wind-farms-birds>

<sup>25</sup> NatureScot. (2025). NatureScot pre-application guidance for onshore wind farms. Available at <https://www.nature.scot/doc/naturescot-pre-application-guidance-onshore-wind-farms>

- 'Standing advice for planning consultations - Birds' (NatureScot, 2024a)<sup>26</sup>;
- 'Good Practice During Wind Farm Construction. 4th Edition' (NatureScot, 2024b)<sup>27</sup>;
- 'Disturbance Distances in selected Scottish Bird Species' (NatureScot, 2022)<sup>28</sup>;
- 'Recommended bird survey methods to inform impact assessment of onshore wind farms' (SNH, 2017)<sup>29</sup>;
- 'Assessing connectivity with Special Protection Areas' (SNH, 2016a)<sup>30</sup>;
- 'Environmental Statements and Annexes of environmentally sensitive bird information' (SNH, 2016b)<sup>31</sup>;
- 'Dealing with construction and birds' (SNH, 2016c)<sup>32</sup>;
- 'Wind farm impacts on birds - Calculating a theoretical collision risk assuming no avoiding action' (SNH, 2000a)<sup>33</sup>;
- 'Natural Heritage Zones' (SNH, 2000b)<sup>34</sup>;
- 'Birds of Conservation Concern 5' (Stanbury *et al.*, 2021)<sup>35</sup>;
- 'International Union for the Conservation of Nature Red List of Threatened Species' (IUCN, 2025)<sup>36</sup>; and
- 'Natural Heritage Zone bird population estimates' (Wilson *et al.*, 2015)<sup>37</sup>.

## Consultation

8.2.6 In undertaking the assessment, consideration has been given to the consultation which has been undertaken as detailed in **Table 8.1**.

**Table 8.1 Consultation responses**

| Consultee and Date    | Scoping/Other Consultation | Issue Raised                                                                                                                                                                                                                                                                                          | Response/Action Taken                                                                                                                                                                             |
|-----------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NatureScot 31/10/2025 | Formal Scoping             | The Proposed Development is approximately 66 km from Ailsa Craig Special Protection Area (SPA) / Site of Special Scientific Interest (SSSI) which lies within the mean maximum foraging ranges for herring gull and lesser black-backed gull which are qualifying interests of the SPA and associated | A shadow Habitats Regulations Appraisal (HRA) has been undertaken to determine if the Proposed Development could affect the integrity of the SPA. Please refer to <b>Technical Appendix 8.5</b> . |

<sup>26</sup> NatureScot. (2024a). Standing advice for planning consultations – Birds. Available at <https://www.nature.scot/doc/standing-advice-planning-consultations-birds>

<sup>27</sup> NatureScot. (2024b). Good Practice During Wind Farm Construction. Version: July 2024. Available at <https://www.nature.scot/doc/good-practice-during-wind-farm-construction>

<sup>28</sup> NatureScot. (2022). Disturbance distances of selected Scottish bird species. Available at: <https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance>

<sup>29</sup> Scottish Natural Heritage (SNH). (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Version 2. SNH Guidance Note Series, Battleby, UK.

<sup>30</sup> Scottish Natural Heritage (SNH). (2016a). Assessing connectivity with Special Protection Areas (SPAs). Version 3. SNH Guidance Note Series, Battleby, UK.

<sup>31</sup> Scottish Natural Heritage (SNH). (2016b). Environmental Statements and Annexes of environmentally sensitive bird information. Available at <https://www.nature.scot/doc/environmental-statements-and-annexes-environmentally-sensitive-bird-information>

<sup>32</sup> Scottish Natural Heritage (SNH). (2016c). Dealing with construction and birds. Available at <https://www.nature.scot/doc/dealing-construction-and-birds>

<sup>33</sup> Scottish Natural Heritage (SNH). (2000a). Wind farm impacts on birds - Calculating a theoretical collision risk assuming no avoiding action. SNH Guidance Note Series, Battleby, UK.

<sup>34</sup> Scottish Natural Heritage (SNH). (2000b). Natural Heritage Zones. SNH Guidance Note Series, Battleby, UK.

<sup>35</sup> Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds. Volume: 114, 25pp.

<sup>36</sup> International Union for Conservation of Nature (IUCN) (2025) The IUCN Red List of Threatened Species. Available at: <https://www.iucnredlist.org>

<sup>37</sup> Wilson, M. W., Austin, G. E., Gillings, S. & Wernham, C. V. (2015). Natural Heritage Zone Bird Population Estimates. SWBSG Commissioned report number SWBSG\_1504, 72pp.

| Consultee and Date | Scoping/Other Consultation | Issue Raised                                                                                                                                                                                                                                                                                                                                                                                                        | Response/Action Taken |
|--------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
|                    |                            | SSSI. Given the potential for connectivity between the Ailsa Craig SPA and the proposed development, appraisal of the potential impact on these qualifying species must be undertaken. If likely significant effects are ascertained, then North [East] Ayrshire Council will be required to conduct a Habitats Regulation Assessment (HRA). The EIA should contain enough information to inform the Council's HRA. |                       |

### Study Area

- 8.2.7 During the collection of baseline ornithological data, bird populations were surveyed up to a maximum of 2 kilometres (km) from the Ornithology Study Area (OSA) (**Figure 8.1**). The OSA was defined prior to the design refinement of the Proposed Development and therefore encompasses an area larger than the Site boundary. However, the area for this assessment is defined with reference to the locations of turbines, tracks and infrastructure associated with the final design. Therefore, within this chapter, the Proposed Development refers to these elements, and the area pertaining to the ornithological assessment is defined by the Proposed Development and relevant buffers around this (**Figure 8.2**). Full details of the study areas pertaining to particular survey methods, or surveys targeted at particular species, are provided in **Technical Appendix 8.1** and **Technical Appendix 8.3**. The study area for the assessment of effects of the Likely Grid Connection Route as set out in **Chapter 4: Development Description** is shown in **Figure 4.8a** of the EIA Report.
- 8.2.8 The assessment of effects has been undertaken with reference to the regional bird population which is the West Central Belt Natural Heritage Zone (NHZ 17), as defined by NatureScot (SNH, 2000b)<sup>34</sup>.
- 8.2.9 Additionally, information is also presented to allow the competent authority to undertake an Appropriate Assessment in respect of the qualifying interest of the Ailsa Craig SPA. Hence, the study area for assessment of effects under the Habitats Regulations is the Ailsa Craig SPA.

### Desk based Research and Data Sources

- 8.2.10 The following data sources have informed the assessment of the Proposed Development and the Likely Grid Connection Route:
- NatureScot Sitelink website (<https://sitelink.nature.scot/>);
  - The Birds of Scotland (Forrester *et al.*, 2007)<sup>38</sup>;
  - Scottish Raptor Monitoring Scheme Annual Reports<sup>39</sup>;
  - Publicly available EIA documentation for the previous Glenouther Renewable Energy Park application (East Ayrshire Council (EAC) ref 15/0584/PP) and Harelaw Wind Farm application (EAC ref 09/0001/S36) have been reviewed for existing information on target species within proximity to the Proposed Development, and
  - Peer-reviewed literature has also been referred to and is referenced where relevant.
- 8.2.11 Results from the desk-based study and consultation informed the field survey design.

<sup>38</sup> Forrester, R. W., Andrews, I. J., McInemy, C. J., Murray, R. D., McGowan, R. Y., Zonfrillo, B., Betts, M. W., Jardine, D. C. & Grundy, D. S. (eds). (2007). The Birds of Scotland. Scottish Ornithologists Club, Aberlady.

<sup>39</sup> Available at <https://raptormonitoring.org/annual-report>



## Field Survey

- 8.2.12 NatureScot guidance (SNH, 2017)<sup>29</sup> was used to inform the initial survey design and a range of baseline ornithological surveys commenced within the OSA and surrounding area in September 2023. These continued until the end of August 2025, providing two breeding seasons and two non-breeding seasons of baseline survey.
- 8.2.13 The study area was defined with reference to the OSA and encompasses a series of buffers of up to 2 km radius from the OSA, with buffer size dependent on the sensitivity of key species to potential effects associated with the Proposed Development (**Figure 8.1**).
- 8.2.14 Survey methods followed contemporary best practice guidance; further details of the survey methods and results are provided in **Technical Appendix 8.1** and **Technical Appendix 8.3**.
- 8.2.15 The assessment has been informed by the following baseline surveys:
- Flight Activity Surveys (September 2023 to August 2025; within the OSA and 500 meters (m) buffer);
  - Moorland Bird Surveys (four visits conducted April to July 2024 and April to July 2025; within the OSA and 500 m buffer);
  - Scarce Breeding Bird Surveys (April to August 2024 and April to August 2025; within the OSA and buffer extending up to 2 km depending on species);
  - Black Grouse Surveys (April to May 2024 and April to May 2025; within the OSA and buffer extending up to 1.5 km);
  - Winter Walked Transects (September 2023 to March 2024 and September 2024 to March 2025; within the OSA and 500 m buffer), and
  - Wintering Wildfowl Counts (September 2023 to March 2024 and September 2024 to March 2025; Corsehouse Reservoir).
- 8.2.16 No field surveys were undertaken to inform the assessment of the Likely Grid Connection Route at this stage. Baseline information to inform the assessment of the grid connection route (as shown in **Figure 4.8a**) has been gathered through desk-based sources only.

## Assessing Significance

- 8.2.17 The assessment follows the process set out in the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations') and Scottish Government guidance on the implementation of the Birds and Habitats Directives (SERAD, 2000)<sup>15</sup>. The process of evaluating the effects of the Proposed Development on birds ensures that the consenting authority has sufficient information to determine whether the Proposed Development (either alone or in combination with other projects) is likely to have a significant effect on bird interests.
- 8.2.18 The assessment determines the potential effects of the Proposed Development and considers the likelihood of their occurrence. Effect is defined as change in the assemblage of bird species present as a result of the impacts accrued by the Proposed Development. Change can occur either during or beyond the life of the Proposed Development. Where the response of a population has varying degrees of likelihood, the probability of these differing outcomes is considered. Note that effects can be adverse, neutral or beneficial.
- 8.2.19 In assessing whether an effect is significant or not, three factors are considered:
- The Nature Conservation Importance of the species involved;
  - The magnitude of the likely effect, and
  - The conservation status of the species.
- 8.2.20 The significance of potential effects is then determined by integrating the assessments of these factors in a reasoned way. The magnitude of likely effects involves consideration of their spatial and temporal magnitudes. In making judgements on significance by this integration, consideration is given to the national and NHZ trends of the potentially affected species, and how the integrated effects may impinge on the conservation status of the species involved at these geographical levels. Further details of the process underlying the assessment and the determination of significance follow.

### Nature Conservation Importance

- 8.2.21 The Nature Conservation Importance of each species potentially affected by the Proposed Development is defined according to **Table 8.2**.

**Table 8.2 Nature Conservation Importance**

| Importance | Description                                                                                                                                                                                                                                              |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High       | Species listed in Annex 1 of the EU Birds Directive and/or comprise a qualifying interest of a potentially connected internationally statutory designated site for nature conservation, i.e., SPA and/or Ramsar site.                                    |
|            | Breeding species listed on Schedule 1 of the WCA and/or comprise a qualifying interest of a potentially connected nationally designated site for nature conservation, i.e., SSSI.                                                                        |
| Moderate   | Species on the BoCC 'Red list' (Stanbury <i>et al.</i> , 2021) <sup>35</sup> or IUCN Red List of Threatened Species (IUCN, 2025) <sup>36</sup> .                                                                                                         |
|            | Regularly occurring migratory species, which are either rare or vulnerable, or warrant special consideration on account of the proximity of migration routes, or breeding, moulting, wintering or staging areas in relation to the Proposed Development. |
|            | Species present in regionally important numbers (>1 % NHZ population).                                                                                                                                                                                   |
| Low        | All other species not covered above.                                                                                                                                                                                                                     |

- 8.2.22 Species listed in Local Biodiversity Action Plans (LBAPs) are considered moderately important only if the Proposed Development supports at least 1% of the NHZ population.
- 8.2.23 All other species considered to be of low Nature Conservation Importance are not considered further in this assessment.

### Magnitude

- 8.2.24 Magnitude is determined by consideration of the spatial and temporal nature of each potential impact. There are five levels of spatial magnitude (**Table 8.3**) and five levels of temporal magnitude (**Table 8.4**). In the case of non-designated sites, spatial magnitude is assessed in respect of populations within the appropriate ecological unit; in this case the appropriate unit is taken to be the West Central Belt NHZ 17, as defined by NatureScot (SNH, 2000b)<sup>34</sup>.

**Table 8.3 Levels of Spatial Magnitude**

| Magnitude | Description                                                                                                                                                                                                      |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Very High | Total / near total loss of a bird population due to mortality or displacement. Total / near total loss of productivity in a bird population due to disturbance.<br>Guide: > 80 % of the NHZ population affected. |
| High      | Major reduction in the status or productivity of a bird population due to mortality, displacement or disturbance.<br>Guide: > 20 - 80 % of the NHZ population affected.                                          |
| Moderate  | Partial reduction in the status or productivity of a bird population due to mortality, displacement or disturbance.<br>Guide: > 5 - 20 % of the NHZ population affected.                                         |
| Low       | Small but discernible reduction in the status or productivity of a bird population due to mortality, displacement or disturbance.                                                                                |

| Magnitude  | Description                                                                                                                                                                                                                                       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Guide: 1 - 5 % of the NHZ population affected.                                                                                                                                                                                                    |
| Negligible | Very slight reduction in the status or productivity of a bird population due to mortality, displacement or disturbance. Reduction barely discernible, approximating to the 'no change' situation.<br>Guide: < 1 % of the NHZ population affected. |

**Table 8.4 Levels of Temporal Magnitude**

| Magnitude   | Description                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Permanent   | Impacts continuing indefinitely beyond the span of one human generation (taken as approximately 25 years), except where there is likely to be substantial improvement after this period (e.g., the replacement of mature trees by young trees which need > 25 years to reach maturity, or restoration of ground after removal of a development). Such exceptions can be termed very long effects. |
| Long-term   | Approximately 15-25 years or longer (refer to above).                                                                                                                                                                                                                                                                                                                                             |
| Medium-term | Approximately 5-15 years.                                                                                                                                                                                                                                                                                                                                                                         |
| Short-term  | Up to approximately five years.                                                                                                                                                                                                                                                                                                                                                                   |
| Negligible  | No discernible effect, or an effect of such short duration (e.g., days or weeks) that it does not result in a measurable change to the baseline environment.                                                                                                                                                                                                                                      |

- 8.2.25 The magnitude of an impact can be influenced by when it occurs. For example, operations undertaken in daylight hours may have little temporal overlap with the occupancy of birds' night-time roosts; and seasonality in a bird population's occupancy of a site may mean that impacts are unlikely during certain periods of the year.
- 8.2.26 A population's behavioural sensitivity may also be considered when assessing the magnitude of impacts. Behavioural sensitivity may be judged as being high, moderate or low according to the species' ecological function and behaviour. Behavioural sensitivity can differ even between similar species, and, for a particular species, some populations and individuals may be more sensitive than others, and sensitivity may change over time, e.g. species are often more sensitive during the breeding season.
- 8.2.27 Importantly, in determining sensitivity and its contribution to an effect, where such information exists from monitoring sites, data on the responses of individual birds and bird populations to wind farms and similar developments are taken into account, along with knowledge of how rapidly the population or performance of a species is likely to recover following loss or disturbance (e.g. birds being recruited from other populations elsewhere).

#### Conservation Status

- 8.2.28 Where the available data allows, the conservation status of each potentially affected population is considered within the NHZ. For these purposes, conservation status is taken to mean the sum of the influences acting on a population which may affect its long-term distribution and abundance. Conservation status is considered to be favourable where:
- A species appears to be maintaining itself on a long-term basis as a viable component of its habitats;
  - The natural range of the species is not being reduced, nor is likely to be reduced for the foreseeable future; and
  - There is (and will probably continue to be) sufficient habitat to maintain the species' population on a long-term basis.

#### Significance

- 8.2.29 Following the classification of each species' Nature Conservation Importance and consideration of the magnitude of each impact, professional judgement is used to make a reasoned assessment of the likely effect on the conservation status of each potentially affected species.

- 8.2.30 In accordance with the EIA Regulations, each likely effect is evaluated and classified as either significant or not significant. The significance levels of effect on bird populations are described in **Table 8.5**. Detectable changes in the conservation status of regional populations of Nature Conservation Importance are automatically considered to be significant effects for the purposes of the EIA Regulations (i.e., no distinction is made between effects of 'Major' or 'Moderate' significance).
- 8.2.31 Non-significant effects include all those which are likely to result in barely detectable ('Minor') or non-detectable ('Negligible') changes in conservation status of regional (and therefore national) populations. If a potential effect is determined to be significant, measures to avoid, reduce or remedy the effect are suggested wherever possible. Residuals effects, following the application of additional mitigation measures, are identified within the species-specific assessments where relevant.

**Table 8.5 Significance Criteria**

| Significance of Effect | Description                                                                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major                  | Detectable changes in NHZ populations of Nature Conservation Importance that would have a severe impact on conservation status.                               |
| Moderate               | Detectable changes in NHZ populations of Nature Conservation Importance that would likely have an impact on their conservation status.                        |
| Minor                  | Small or barely discernible changes that would be unlikely to have an impact on the conservation status of NHZ populations of Nature Conservation Importance. |
| Negligible             | No or non-detectable changes in the conservation status of NHZ populations of Nature Conservation Importance.                                                 |

### Cumulative Assessment

- 8.2.32 The potential for cumulative impacts of the Proposed Development and the Likely Grid Connection Route (as a single project for EIA purposes) with cumulative developments has been assessed following current CIEEM and NatureScot guidance (CIEEM, 2018<sup>14</sup>; NatureScot, 2025c<sup>24</sup>). This part of the assessment focuses on those receptors where there is a realistic potential for cumulative effects to occur. The assessment includes consideration of cumulative developments including those that are operational, under construction, consented which are not yet under construction, and those for which planning applications have been submitted and for which sufficient information is publicly available (as of March 2026).
- 8.2.33 Cumulative effects, from two or more development proposals, can be additive (i.e. the effect of each of the proposals can be summed), antagonistic (i.e. the combined effects are less than if they were summed) or synergistic (i.e. the combined effects are greater than if they were summed). In relation to combined collision mortality estimates the approach has been to assume, on a precautionary basis, that the effect on key receptor populations would be additive. However, combining collision mortality estimates from a number of different projects is likely to lead to over-estimates, as individual birds taken from a population, as a result of collision mortality, can be removed only once and this then reduces the number of birds subject to collision risk from other sources. Also, birds that are lost to the population as a result of wind turbine collision may have died anyway from other causes (i.e. compensatory mortality).
- 8.2.34 The relevant spatial scale is also an important consideration in determining the scope of the cumulative assessment. The assessment of potential cumulative effects has been restricted to those projects that have the potential to interact with the same key receptor populations at a similar scale or influence as the Proposed Development, at the NHZ scale. A cumulative assessment is undertaken for species where the in-isolation residual effects are assessed as Minor or greater.

### Methodology for Assessing Likely Significant Effects on a Special Protection Area

- 8.2.35 The Conservation (Natural Habitats, & c.) Regulations 1994 as amended (the "1994 Habitats Regulations") apply to European sites. Where reserved matters are concerned, certain provisions of the Conservation of Habitats and Species Regulations 2017 (hereafter "the Habitats Regulations") apply instead. Both sets of regulations require an equivalent process in relation to the assessment of plans and projects with the potential to affect European sites.

- 8.2.36 The method for assessing the significance of a likely effect on an SPA is different from that employed for wider-countryside ornithological interests. Regulation 63 of the Habitats Regulations refers to three assessment steps: the outcome of the first two deciding whether or not the third needs to be implemented (these are referred to here as an HRA). The three steps, set out below as questions, are:
- Step 1: Is the proposal directly connected with or necessary to the management of the Site?
  - Step 2: Is the proposal, alone or in combination, likely to have a significant effect on the Site? If a significant effect is likely, then an appropriate assessment is necessary; and
  - Step 3: Can it be ascertained that the proposal will not adversely affect the integrity of any of the SPA, either by itself or in combination with other plans or projects?

- 8.2.37 The assessment on the integrity of an SPA in relation to the Proposed Development are presented in **Technical Appendix 8.5: Shadow Habitats Regulations Appraisal for the Ailsa Craig Special Protection Area**. The results of baseline surveys and scientific conclusions presented in the EIA are used to inform the appraisal process.

### Assessment Assumptions

- 8.2.38 The assessment of ornithological effects is based on a series of assumptions regarding the construction programme, forestry operations, operational characteristics of the Proposed Development and the baseline context within which effects are evaluated. These assumptions provide a consistent framework for the assessment and reflect the best available information at the time of writing.

### Construction Programme

- 8.2.39 Construction of the Proposed Development is assumed to commence in Q3 2030 and to extend over a period of approximately 20 months. On this basis, construction activities are expected to overlap with two breeding seasons and two non-breeding seasons, and the assessment therefore assumes that all principal construction activities may occur during these periods unless otherwise restricted. A micro-siting allowance of up to 50 m is assumed for all turbines and associated infrastructure.
- 8.2.40 Construction is assumed to include the formation of turbine foundations, crane hardstandings, auxiliary hardstandings, new access tracks, watercourse crossings, a substation and a temporary construction compound as detailed in **Chapter 4**. These activities are assumed to generate typical levels of construction noise, vehicle movements and human presence within the Site.

### Forestry Removal and Habitat Change

- 8.2.41 Forestry removal is assumed to occur during the first 12 months of construction. Woodland within the Site will be felled to enable construction of infrastructure and to support wider woodland management. Following construction, felled areas will be restocked, while areas required for infrastructure or habitat restoration will remain unstocked (see **Technical Appendix 4.1: Wind Farm Forestry Plan** for full details).

### Operational Characteristics

- 8.2.42 The operational assessment assumes that the Proposed Development will comprise five turbines with a maximum blade tip height of 200 m and a minimum tip height of 38 m above the ground. Turbines are assumed to operate year-round, with no seasonal curtailment.
- 8.2.43 The Proposed Development includes a control building and substation, which are assumed to be present throughout the operational period. These components are not expected to give rise to additional ornithological effects beyond those associated with general construction and operational activity.
- 8.2.44 The grid connection is assumed to be delivered via an underground cable linking the Site to the existing Crookstone Substation, approximately 11.6 km from the Site. The route and means of construction are assumed to be as detailed in **Chapter 4** and as shown on **Figure 4.8a**.

### Decommissioning

- 8.2.45 Decommissioning is assumed to occur at the end of the operational life of the wind farm and to last for approximately 6–12 months. Effects are expected to be similar in nature to those arising during construction but of shorter duration and lower intensity. No forestry felling is assumed to take place during decommissioning.

### Baseline and Survey Assumptions

- 8.2.46 The assessment assumes that the two years of baseline ornithological survey data (2023–2025) are representative of typical conditions within the Site and field survey area, and that no major land use changes affecting bird populations will occur between the completion of surveys and the commencement of construction. Bird populations within NHZ 17 are assumed to remain broadly stable.

### Cumulative Assessment

- 8.2.47 Should cumulative assessment be deemed necessary, all developments with potential connectivity to the Proposed Development would be considered in accordance with the methodology set out in **Section 8.2** and relevant NatureScot guidance.

### Assessment Limitations

- 8.2.48 The available information on bird populations at the NHZ level is limited, and available information on the results of monitoring, mitigation and enhancement work at other existing and proposed developments is sparse. Therefore, as is standard with these assessments, use is necessarily made of the available literature and professional judgement to inform the assessment.
- 8.2.49 General and project-specific uncertainties have been accounted for in this impact assessment, where appropriate, by assuming reasonable 'worst cases' where relevant in the evaluation of receptor sensitivity and the assessment of the potential effects of the Proposed Development. These are highlighted and discussed, where relevant, within the assessment sections of this chapter.
- 8.2.50 The methods adopted for this assessment follow current best practice and have been agreed in consultation with NatureScot. Whilst some information gaps have been identified, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on ornithological interests.

## 8.3 Existing Conditions

### Designated Sites

- 8.3.1 The Site is not covered by any statutory nature conservation designations for ornithological interests. Two ornithological designated sites lie within connectivity distance of the Proposed Development (**Table 8.6; Figure 8.3**).

**Table 8.6 Designated sites within connectivity distance of the Proposed Development.**

| Designated Site                                        | Qualifying Interest                                                                                       | Distance from the Proposed Development |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------|
| Ailsa Craig Special Protection Area (SPA)              | Northern gannet<br>Lesser black-backed gull<br>Common guillemot<br>Black-legged kittiwake<br>Herring gull | 66 km south-west                       |
| Ailsa Craig Site of Special Scientific Interest (SSSI) | Northern gannet<br>Breeding seabird colony                                                                | 66 km south-west                       |

- 8.3.2 The Ailsa Craig SPA and SSSI lie approximately 66 km to the south-west of the Proposed Development. This is within the mean foraging range for lesser black-backed gull (236 km) and herring gull (85.6 km), both of which form part of the Qualifying Interests of the SPA<sup>40</sup>. Due to this, and the occurrence of both species during baseline surveys (**Technical Appendix 8.1**) there is potential for collision mortality to herring gull and lesser black-backed gull during operation of the Proposed Development. It is considered that there is a likelihood of significant effects, as defined by the Habitats Regulations.

## Baseline Bird Populations

### Wildfowl

- 8.3.3 Whooper swan is a species of high Nature Conservation Importance (**Table 8.2**) and was recorded once during baseline surveys (**Technical Appendix 8.1**). One flight, involving two adult birds, was recorded during Flight Activity Surveys to quantify flight activity in the non-breeding season. Given the very low levels of activity recorded by this species over all baseline non-breeding seasons, no significant effects are considered likely and a detailed assessment of effects on this species arising from the Proposed Development has not been undertaken, in accordance with the EIA Regulations. Hence, despite their high Nature Conservation Importance, whooper swan is not considered further in this assessment.
- 8.3.4 Greylag goose and pink-footed goose were recorded during baseline surveys (**Technical Appendix 8.1**). Both are regular migratory species and as such are afforded protection under the Birds Directive and are of moderate Nature Conservation Importance (**Table 8.2**). Due to the very low numbers and low levels of flight activity it is considered unlikely that the Proposed Development will result in significant effects under the EIA Regulations. Therefore, neither species are considered further in this assessment.
- 8.3.5 Other wildfowl species recorded of lesser conservation concern included Canada goose, mallard, teal and tufted duck (**Technical Appendix 8.1**). All of these species are considered to be of low Nature Conservation Importance (**Table 8.2**) and are not considered further in this assessment.

### Waders

- 8.3.6 Curlew is a species of moderate Nature Conservation Importance (**Table 8.2**) and was recorded during both breeding seasons of baseline surveys (**Technical Appendix 8.1**). Analyses of the survey results suggests that one pair of curlew probably bred within the moorland bird survey area in 2024, but no nest site was found. No flights by curlew were recorded during Flight Activity Surveys within the Flight Activity Assessment Area (FAAA) (**Technical Appendix 8.2**). Therefore, due to the low numbers and low flight activity recorded within the FAAA, and as no confirmed breeding sites of curlew were found, no significant effects are considered likely. A detailed assessment of effects on this species has therefore not been undertaken in accordance with the EIA Regulations.
- 8.3.7 Lapwing is a species of moderate Nature Conservation Importance (**Table 8.2**) and was recorded on five occasions during the study period. No breeding sites were located within the moorland bird survey area and one flight involving lapwing was recorded during baseline Flight Activity Surveys (**Technical Appendix 8.1**). Due to the very low numbers and as no breeding sites of lapwing were found within distances where negative effects could occur and no flight activity was recorded within the FAAA, there is no possibility that any potential effects will be significant under the EIA Regulations. Hence, lapwing is not considered further in this assessment.
- 8.3.8 Woodcock is a species of moderate Nature Conservation Importance (**Table 8.2**). Woodcock was recorded on ten occasions during the course of baseline surveys (**Technical Appendix 8.1**). No evidence of breeding was found during the study period. No flights involving woodcock were recorded during baseline Flight Activity Surveys within the FAAA (**Technical Appendix 8.2**). Therefore, due to the very low numbers, no breeding sites found and the low level of flight activity recorded within the FAAA, there is no possibility that any potential effects will be significant under the EIA Regulations. Hence, woodcock is not considered further in this assessment.
- 8.3.9 Other wader species recorded of lesser conservation concern included snipe, jack snipe, common sandpiper and oystercatcher (**Technical Appendix 8.1**). All of these species are considered to be of low Nature Conservation Importance and are not considered further in this assessment.

<sup>40</sup> NatureScot. (2024). Conservation and Management Advice: Ailsa Craig SPA; December 2024. Available at: <https://www.nature.scot/sites/default/files/special-protection-area/8463/conservation-and-management-advice.pdf>



### Gulls

- 8.3.10 Herring gull is a qualifying interest of the Ailsa Craig SPA and is, therefore, a species of high Nature Conservation Importance (**Table 8.2**). Twenty-nine flights of herring gull, involving a total of 66 birds, were recorded during baseline Flight Activity Surveys. There was no breeding activity recorded within the study area. Given the potential for additional mortality as a result of collision with turbine blades during the operational phase of the Proposed Development, herring gull is considered further in this assessment.
- 8.3.11 Lesser black-backed gull is a qualifying interest of the Ailsa Craig SPA and is, therefore, a species of high Nature Conservation Importance (**Table 8.2**). Seventy-six flights of lesser black-backed gull, involving a total of 168 birds, were recorded during baseline Flight Activity Surveys. There was no breeding activity recorded within the study area. Given the potential for additional mortality as a result of collision with turbine blades during the operational phase of the Proposed Development, lesser black-backed gull is considered further in this assessment.

### Scarce Raptors and Owls

- 8.3.12 Osprey is a species of high Nature Conservation Importance (**Table 8.2**) and was recorded infrequently during the study period (**Technical Appendix 8.1**). A total of 21 observations were made, principally in the vicinity of Corsehouse Reservoir, of which eight flights were recorded during Flight Activity Surveys. A total of 1,864 seconds of flight time was recorded, of which 140 seconds was recorded within the FAAA. No osprey breeding records were obtained within 2 km of the Proposed Development during baseline surveys. Therefore, due to the low numbers recorded, no breeding sites were found within 2 km of the Proposed Development and the low level of flight activity recorded within the FAAA, there is no possibility that any potential effects will be significant under the EIA Regulations. Hence, despite their high Nature Conservation Importance, osprey is not considered further in this assessment.
- 8.3.13 Hen harrier is a species of high Nature Conservation Importance (**Table 8.2**) and was recorded on seven occasions during the study period. No breeding sites were located despite extensive searches in suitable habitat. Two flights were recorded during Flight Activity Surveys for a total duration of 161 seconds (**Technical Appendix 8.1**). Therefore, due to the low numbers and low flight activity recorded, and as no breeding sites of hen harrier were found, no significant effects are considered likely. A detailed assessment of effects on this species has therefore not been undertaken, in accordance with the EIA Regulations. Hence, hen harrier is not considered further in this assessment.
- 8.3.14 Other Annex 1/Schedule 1 species of high Nature Conservation Importance (hereafter defined as 'protected species') were recorded during the study period; however, this information is confidential and is presented in **Technical Appendix 8.3**.
- 8.3.15 Other raptor and owl species of lesser conservation concern were also recorded, including common buzzard, Eurasian sparrowhawk, common kestrel and long-eared owl (**Technical Appendix 8.1**). These species are considered to be of low Nature Conservation Importance and are not considered further in this assessment.

### Black Grouse

- 8.3.16 Black grouse is a species of moderate Nature Conservation Importance (**Table 8.2**). No black grouse or signs of black grouse were recorded during baseline surveys within the study area (i.e. within 1.5 km of the Proposed Development) (**Technical Appendix 8.1**). Due to the lack of records of black grouse within distances where negative effects could occur and as no flight activity was recorded within the FAAA, there is no possibility that any potential effects will be significant under the EIA Regulations. Hence, black grouse is not considered further in this assessment.

### Likely Grid Connection Route

- 8.3.17 The Likely Grid Connection Route (see **Figure 4.8a**) follows existing public roads and roadside verges for its entire length and does not pass through areas of habitat known to support notable concentrations of breeding, wintering or foraging birds. The habitats along the route principally comprise improved grassland verges, scattered scrub, occasional hedgerows, and small pockets of plantation woodland. As such, no species of moderate or high Nature Conservation Importance are considered likely to be associated with the habitats along the route, and no ornithological constraints relevant to construction or operation are expected.



## 8.4 Implications of Climate Change for Existing Conditions

- 8.4.1 The UK Climate Projections (UKCP18) for temperature and precipitation based on a precautionary intermediate representative concentration pathway for greenhouse gases of RCP 6 (see **Chapter 12: Climate Change**), suggests that Scotland will become hotter and drier in the summer (June to August) and warmer and wetter in the winter (December to February). These factors may result in extensions to breeding bird seasons, with the potential for increases in some species breeding productivity. Conversely it may also result in unfavourable habitat changes, changes to prey availability and species survival rates. This makes predicting future outcomes very difficult.
- 8.4.2 Breeding productivity for some species sensitive to precipitation rates e.g. ground nesting species including breeding raptors or divers, may reduce, given the predicted higher rates of average precipitation across the lifespan of the Proposed Development (according to the UKCP18 climate change projections). This would most likely occur in line with national trends for such and there is no reason to anticipate that the baseline bird assemblage established to be using the Site would change substantially over the lifespan of the Proposed Development due to climate change.
- 8.4.3 Whilst short-term and small-scale variability in ornithological populations and distributions may occur, and revisions to conservation status and statutory designated sites for nature conservation are possible, such changes would be unlikely to qualitatively alter the conclusions of the assessment and have been accounted for through the adoption of a precautionary approach and appropriate protection measures and industry standard good practice.

## 8.5 Future Baseline in the Absence of the Proposed Development and Likely Grid Connection Route

- 8.5.1 In the absence of the Proposed Development, or assuming a gap between baseline surveys and the commencement of the Proposed Development, any noticeable changes in baseline conditions (for example, in the distribution and population of breeding and non-breeding ornithological features) are most likely to result from habitat modifications within or surrounding the Site, or due to widespread land management practices. Such changes are not predicted to happen at least in the short and medium term.
- 8.5.2 As the Site comprises commercial coniferous forest, any future changes will primarily reflect ongoing forestry operations and the cyclical nature of felling and restocking. Habitat change will therefore continue to occur as part of the forestry cycle, with areas of clear fell, young restock and maturing crop present at different times. Any changes in the distribution or abundance of breeding and non-breeding bird species will be driven primarily by these forestry operations. Under this scenario, the land will remain under the existing forestry management regime, with no requirement or mechanism to deliver peatland restoration, open ground expansion or other habitat improvements beyond standard forestry practice.
- 8.5.3 Breeding bird densities will therefore reasonably be expected to fluctuate in response to ongoing forestry operations but remain at comparable levels with those recorded during field surveys and identified through desk study, although remaining subject to minor inter-annual variation and existing local population pressures.
- 8.5.4 In the absence of the Proposed Development, opportunities to deliver targeted habitat enhancement for open ground and peatland bird species, such as those proposed in Technical Appendix 7.6: Outline Biodiversity Enhancement Management Plan (OBEMP) would not be realised.

## 8.6 Embedded Design Mitigation

- 8.6.1 There are no embedded design mitigation measures relevant to ornithology, and the assessment therefore relies solely on standard good-practice construction safeguards that are detailed in **Section 8.7**.

## 8.7 Good Practice Mitigation Measures

- 8.7.1 The measures described below constitute standard good practice and procedural safeguards that will be implemented through the Construction Environmental Management Plan (CEMP) and Bird Protection Plan (BPP).
- 8.7.2 The assessment has been undertaken on the basis that a BPP, devised in consultation with NatureScot, will be in place prior to the onset of construction activities and will be implemented through the CEMP. The BPP will apply across the full landholding (the 'blue line' boundary shown on **Figure 1.1**), rather than being restricted to the red-line planning boundary, to ensure that all relevant bird interests are appropriately safeguarded. The BPP will describe survey methods for the identification of sites used by protected birds and will detail protocols for the prevention, or minimisation, of disturbance to birds as a result of activities associated with the Proposed Development. To avoid

direct impacts to breeding birds during construction, removal of all vegetation will take place outside of the bird nesting season in the first instance i.e. undertaken between September and March inclusive. Where vegetation clearance cannot reasonably be scheduled outside the breeding season, an Ecological Clerk of Works (ECoW) will undertake a pre-works nest check to ensure no active nests are present before works proceed.

- 8.7.3 To conform with the Wildlife and Countryside Act 1981, surveys to locate nests of birds will be undertaken prior to construction during the breeding season (between April and August) as part of the BPP, which will be overseen by an ECoW. If it is judged that these activities are likely to disturb breeding attempts, then appropriate exclusion zones (NatureScot, 2022)<sup>28</sup> or other protection measures will be agreed with NatureScot prior to recommencing works.
- 8.7.4 The BPP will describe surveys to locate the nests or other key sites (e.g. roosts) of birds listed in Schedules 1 and 1A of the WCA, in advance of construction works progressing. In the event that an active nest or roost of a Schedule 1 or Schedule 1A species is discovered within distances given by NatureScot guidance (2022)<sup>28</sup> (or within a 500 m radius for Schedule 1 species not listed), a disturbance risk assessment will be prepared under the BPP. The disturbance risk assessment will detail any measures considered necessary to safeguard the breeding attempt or roost (e.g., exclusion zones or restrictions on timing of works) and will be submitted to NatureScot before recommencing work.

## 8.8 Opportunities for Enhancement

- 8.8.1 A number of enhancement measures are proposed within **Technical Appendix 7.6** to improve conditions for a range of bird species. This includes the creation, restoration and enhancement of breeding and foraging habitats for a range of bird species through the restoration and enhancement of peatland within HMU A. The restoration of peatland and the increase in open moorland from commercial woodland, will, over time, have benefits in terms of general biodiversity. The diversity of flora and fauna will improve, and the area is likely to become ecologically richer.
- 8.8.2 Additional enhancement measures are proposed for protected ornithological interests and these are detailed in a confidential version of **Technical Appendix 7.6** within **Volume 5: Confidential Documents**.

## 8.9 Micrositing

- 8.9.1 The requirement for micrositing of any infrastructure, within the 50 m allowance sought, will be determined on the basis of pre-construction site investigations.
- 8.9.2 The potential for micrositing of any infrastructure to result in a change in the significance of effects upon any ornithological features scoped in or out of detailed assessment is considered very low. Baseline studies have identified that the Site supports a limited breeding bird assemblage.
- 8.9.3 Good practice measures including a BPP will also ensure that any change in baseline conditions, and therefore the potential for sensitive species to be established closer to the Proposed Development infrastructure, are identified and appropriate measures implemented to avoid the risk of disturbance and enable legislative compliance.
- 8.9.4 The identification of “at risk” flight activity for the purposes of collision risk modelling has also adopted a precautionary approach, through the identification of such activity within a 200 m buffer of proposed turbine locations, relative to the blade length of the candidate turbine. The potential for collision mortality has therefore inherently considered the requirement for a micrositing allowance.

## 8.10 Scope of the Assessment

### Effects Assessed in Full

- 8.10.1 The assessment of effects is based upon the Proposed Development description outlined in **Chapter 4: Development Description** of this EIA Report and assumes the implementation of good practice measures (including the BPP) discussed above. Effects assessed include:
- Construction effects of the Proposed Development and Likely Grid Connection Route (including in-combination with the Proposed Development);
  - Operational effects of the Proposed Development;
  - Decommissioning effects of the Proposed Development, and

■ Cumulative effects of the Proposed Development.

- 8.10.2 Potential effects are evaluated in respect of regularly occurring species of high and moderate Nature Conservation Importance identified through baseline survey, whose NHZ populations could be potentially affected by the Proposed Development as set out in **Table 8.7**. Consideration has been given to the criteria in **Table 8.2** when assigning the Nature Conservation Importance of potentially affected species.

**Table 8.7 Nature Conservation Importance of Potentially Affected Species**

| Importance | Species potentially affected           |
|------------|----------------------------------------|
| High       | Herring gull, lesser black-backed gull |
| Moderate   | N/A                                    |
| Low        | N/Ae2q                                 |

### Conservation Status of Potentially Affected Species

#### Herring gull

- 8.10.3 Herring gull is included on the Birds of Conservation Concern (BoCC) 'Red list' (Stanbury *et al.*, 2021)<sup>35</sup> and the Scottish Biodiversity List (NatureScot, 2020)<sup>13</sup>. Herring gull is a Qualifying Interest of the Ailsa Craig SPA, and therefore a feature of international importance. Wilson *et al.* (2015)<sup>37</sup> estimated the number of breeding herring gull in NHZ 17 as 2,928 pairs. As well as Ailsa Craig SPA there are significant breeding colonies of herring gull on Lady Isle and Horse Isle, approximately 28 km south-west and west of the Site respectively. In 2021, this included over 800 pairs of herring gull on Lady Isle (Hogg & Grant, 2025)<sup>41</sup>. In 2017, Horse Isle held 1,245 pairs of herring gull (SMP, 2026)<sup>42</sup>. Elsewhere, smaller numbers of herring gull breed at coastal urban sites (Hogg, 1997)<sup>43</sup>.
- 8.10.4 At the time of classification, the Ailsa Craig SPA population of herring gulls was 2,250 pairs<sup>44</sup>; however, recent population estimates are lower, with 179 pairs of herring gull in 2025 (SMP, 2026)<sup>42</sup>. The condition of the SPA population was assessed as Unfavourable, no change in 2019.
- 8.10.5 Given the above, the Conservation Status of herring gull in NHZ 17 is assessed as Unfavourable, declining.

#### Lesser black-backed gull

- 8.10.6 Lesser black-backed gull is included on the BoCC 'Amber list' and the Scottish Biodiversity List. Lesser black-backed gull is a Qualifying Interest of the Ailsa Craig SPA, and therefore a feature of international importance. Wilson *et al.* (2015)<sup>37</sup> estimated the number of breeding lesser black-backed gull in NHZ 17 as 7,681 pairs. As well as Ailsa Craig SPA there are significant breeding colonies of lesser black-backed gull on Lady Isle and Horse Isle, approximately 28 km south-west and west of the Site respectively. In 2021, this included over 300 pairs of lesser black-backed gull on Lady Isle (Hogg & Grant, 2025)<sup>41</sup>. In 2017, Horse Isle held 901 pairs of lesser black-backed gulls (SMP, 2026)<sup>42</sup>. Elsewhere, smaller numbers of lesser black-backed gull breed at coastal urban sites (Hogg, 1997)<sup>43</sup>.
- 8.10.7 At the time of classification, the Ailsa Craig SPA population of lesser black-backed gull was 1,800 pairs; however, recent population estimates are lower, with 135 pairs of lesser black-backed gull in 2025 (SMP, 2026)<sup>42</sup>. The condition of the SPA population was assessed as Unfavourable, no change in 2019.
- 8.10.8 Given the above, the Conservation Status of lesser black-backed gull in NHZ 17 is assessed as Unfavourable, declining.

<sup>41</sup> Hogg, A. & Grant, D. (Eds.). (2025). Ayrshire Bird Report 2022. Available online at: <https://www.ayrshire-birding.org.uk/wp-content/uploads/2025/03/ABR-2022.pdf>. Accessed February 2026.

<sup>42</sup> Seabird Monitoring Programme (SMP). (2026). Data sourced from website, available at: <https://app.bto.org/seabirds/public/index.jsp>. Accessed February 2026

<sup>43</sup> Hogg, A. (Ed.). (1997). Ayrshire breeding birds Atlas 1991-1997 – The Atlas Maps. Available online at: <https://www.ayrshire-birding.org.uk/ayrshires-breeding-birds-1991-1997-the-atlas-maps/>. Accessed February 2026

<sup>44</sup> Nature 2000 Standard Data Form for Site UK9003091. Available at: <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9003091.pdf>. Accessed February 2026

## Protected Species

- 8.10.9 Please refer to **Technical Appendix 8.4**.

## Effects Scoped Out

- 8.10.10 On the basis of the desk based and field survey work undertaken (**Technical Appendices 8.1 and 8.3**), the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, and feedback received from consultees, the following effects have been 'scoped out' of detailed assessment, as proposed in the EIA Scoping Report. Specifically, following due consideration of the potential for the Proposed Development to give rise to significant effects on relevant ornithological interests, it has been concluded that significant effects are unlikely. Therefore, a detailed assessment is not required under the EIA Regulations. Hence, the effects on the following bird species have been scoped out of this assessment: whooper swan, greylag goose, pink-footed goose, Canada goose, mallard, teal, tufted duck, curlew, lapwing, woodcock, snipe, jack snipe, common sandpiper, oystercatcher, osprey, hen harrier, common kestrel, common buzzard, sparrowhawk, long-eared owl and black grouse.
- 8.10.11 Although these species were present, they were recorded infrequently, and / or in relatively small numbers (see **Section 8.3: Existing Conditions** and **Technical Appendices 8.1 and 8.3**). Hence, their reliance on habitats (e.g., for breeding, roosting or foraging) and airspace in the vicinity of the Proposed Development was considered low, and the Proposed Development will have no significant effects on relevant populations of these species. Consequently, given abundance within the NHZ and / or behavioural sensitivity, there is considered to be no potential for any adverse effect on NHZ populations as a result of construction or operational activities. Therefore, these species are not considered further in the ornithological assessment.
- 8.10.12 Given its nature as a buried underground cable, and the type and nature of operational maintenance activities, it is considered that there will not be any significant operational effects with respect to ornithology in terms of disturbance from the Likely Grid Connection Route in isolation or in-combination with Proposed Development. Consequently, the operational phase of the Likely Grid Connection Route is not considered further.
- 8.10.13 During decommissioning, it is expected that the Likely Grid Connection Route will be made safe and left in-situ, therefore avoiding the need for cable removal and any associated potential direct or indirect effects on ornithology. Given the decommissioning proposals for the Likely Grid Connection Route, it is considered that there will not be any significant effects with respect to ornithology, either for the Likely Grid Connection Route in isolation or in-combination with Proposed Development. Consequently, decommissioning of the Likely Grid Connection Route is not considered further.

## 8.11 Assessment of Effects

- 8.11.1 The assessment of effects identified above is based on the project description of the Proposed Development as outlined in **Chapter 4**. Unless otherwise stated, potential effects identified are considered to be negative. Whilst the assessment of effects on protected species is restricted to confidential **Technical Appendix 8.4**, this chapter provides a summary of the likely significant effects of these species to fulfil the requirements of the EIA Regulations.

## Designated Sites

### Ailsa Craig Special Protection Area

- 8.11.2 Likely significant effects upon herring gull and lesser black-backed gull, both Qualifying Interests of the Ailsa Craig SPA, could not be ruled out. Consequently, an assessment of effects on the integrity of the SPA under the Habitats Regulations is required. Information is presented in **Technical Appendix 8.5** to inform the Appropriate Assessment to be undertaken by the competent authority in respect of potential effects of the Proposed Development on the integrity of the Ailsa Craig SPA. This information is considered to provide a robust basis on which the competent authority can conclude that the Proposed Development would not have an adverse effect on the integrity of the SPA.
- 8.11.3 It follows, therefore, that there would be no significant effects on the associated SSSI designation underpinning this SPA.

## Construction Effects

### The Proposed Development

#### Predicted Construction Effects

##### Displacement Effects

##### Protected Species

- 8.11.4 Please refer to **Technical Appendix 8.4**.

##### Committed Additional Mitigation

- 8.11.5 As no construction effects are deemed Significant, no additional mitigation is proposed. Measures set out in **Good Practice Mitigation Measures** and **Opportunities for Enhancement** will ensure that displacement through disturbance and habitats loss is avoided.

##### Residual Construction Effects

- 8.11.6 Any disturbance and / or displacement would be temporary and the significance of any effects as a result of disturbance and displacement from breeding and foraging habitats generated by construction are therefore anticipated to be **Negligible** and **Not Significant** under the terms of the EIA Regulations.

### The Likely Grid Connection Route

#### Predicted Construction Effects (including in combination with the Proposed Development)

- 8.11.7 It is proposed that the Likely Grid Connection Route, as set out in **Chapter 4**, will be buried underground and will be located in areas of low ornithological value, i.e., roads and roadside verges. Furthermore, due to works being temporary in nature there is no potential for significant effects on bird populations. Additionally, a BPP (see **Best Practice Measures**) would be implemented as good practice to ensure any breeding birds are safeguarded, and if necessary, works would be undertaken outwith the breeding season to ensure no significant effects on ornithological receptors.
- 8.11.8 Consequently, there is considered to be no potential for any adverse effects on NHZ populations of species of moderate or high Nature Conservation Importance as a result of the grid connection works in isolation or in combination with the Proposed Development during construction, and effects will be **Negligible** and therefore **Not Significant**.

## Operational Effects

### The Proposed Development

#### Predicted Operational Effects

##### Displacement and Barrier Effects

##### Protected Species

- 8.11.9 Please refer to **Technical Appendix 8.4**.

##### Committed Additional Mitigation

- 8.11.10 As no displacement or barrier effects are deemed Significant no additional mitigation is proposed.

##### Residual Operational Effects

- 8.11.11 Enhancement measures are set out in **Technical Appendix 8.4: Opportunities for Enhancement**. Given that operational activities are predicted to result in negligible effects, no additional mitigation is required, and the residual operational effect remains Negligible. As such, both the magnitude and significance of any effects as a result of

disturbance and displacement from breeding and foraging habitats generated by operation of the Proposed Development are therefore anticipated to be **Negligible** and **Not Significant** under the EIA Regulations.

#### Collision Risk

##### Protected Species

- 8.11.12 Please refer to **Technical Appendix 8.4**.

##### Committed Additional Mitigation

- 8.11.13 As the risk of collision is deemed as Not Significant, no additional mitigation is proposed.

##### Residual Effects

- 8.11.14 Any risk of collision generated by the operation of the Proposed Development would remain unchanged and is therefore anticipated to remain **Negligible** and **Not Significant** under the EIA Regulations.

##### Herring gull

- 8.11.15 **Impact:** herring gulls flying within the turbine array may be subject to collision with turbine blades, thereby increasing the annual mortality rate of the population above background levels.
- 8.11.16 **Sensitivity:** high Nature Conservation Importance (**Table 8.2**) and the NHZ 17 population is currently in Unfavourable, declining conservation status.
- 8.11.17 **Magnitude of Impact:** collision risk has been calculated applying an accepted avoidance rate of 99.5 % for herring gull (NatureScot, 2025b)<sup>23</sup>. Full details of the calculations are shown in **Technical Appendix 8.2**. The annual collision risk for herring gull is predicted to be 0.04 birds or one bird every 25.2 years. Overall, the magnitude of impact on herring gull arising from collision mortality and based on an additional mortality figure of one bird every 25.2 years, is considered to be **Negligible** at the scale of the NHZ.
- 8.11.18 **Significance of Effect:** Although herring gull is of high Nature Conservation Importance, the projected increase in mortality is insufficient to result in a detectable change to its conservation status and the effects are judged to be **Negligible** and **Not Significant** under the terms of the EIA Regulations.

##### Committed Additional Mitigation

- 8.11.19 As the risk of collision is deemed as Not Significant, no additional mitigation is proposed.

##### Residual Effects

- 8.11.20 Any risk of collision to herring gull generated by the operation of the Proposed Development would remain unchanged and is therefore anticipated to remain **Negligible** and **Not Significant** under the EIA Regulations.

##### Lesser black-backed gull

- 8.11.21 **Impact:** lesser black-backed gulls flying within the turbine array may be subject to collision with turbine blades, thereby increasing the annual mortality rate of the population above background levels.
- 8.11.22 **Sensitivity:** high Nature Conservation Importance (**Table 8.2**) and the NHZ 17 population is currently in Unfavourable, declining conservation status.
- 8.11.23 **Magnitude of Impact:** collision risk has been calculated applying an accepted avoidance rate of 99.5 % for lesser black-backed gull (NatureScot, 2025b)<sup>23</sup>. Full details of the calculations are shown in **Technical Appendix 8.2**. The annual collision risk for lesser black-backed gull is predicted to be 0.11 birds or one bird every 9.1 years. Overall, the magnitude of impact on lesser black-backed gull arising from collision mortality and based on an additional mortality figure of one bird every 9.1 years, is considered to be **Negligible** at the scale of the NHZ.
- 8.11.24 **Significance of Effect:** Although lesser black-backed gull is of high Nature Conservation Importance, the projected increase in mortality is insufficient to result in a detectable change to its conservation status and the effects are judged to be **Negligible** and **Not Significant** under the terms of the EIA Regulations.



#### Committed Additional Mitigation

- 8.11.25 As the risk of collision is deemed as Not Significant, no additional mitigation is proposed.

#### Residual Effects

- 8.11.26 Any risk of collision to herring gull generated by the operation of the Proposed Development would remain unchanged and is therefore anticipated to remain **Negligible** and **Not Significant** under the EIA Regulations.

### Decommissioning Effects

#### The Proposed Development

#### Predicted Decommissioning Effects

- 8.11.27 **Impact:** species of moderate or high Nature Conservation Importance (**Table 8.2**) may be displaced from suitable habitats during decommissioning by disturbance.
- 8.11.28 **Sensitivity:** moderate to high Nature Conservation Importance
- 8.11.29 **Magnitude of Impact:** turbines would be removed, and the top 1 m of the turbine foundation would be removed and disposed of appropriately. This is considered preferential to removing all infrastructure, due to the potentially lower environmental impacts than those associated with excavating, processing and removing concrete from the Site. The excavated foundation would be reprofiled with soil and reseeded. The same protocols to those followed during construction would be followed with regard to the avoidance of disturbance to breeding birds and important sites (nests, leks and roosts) of key bird species will be safeguarded under a BPP. Disturbance effects due to decommissioning would last for a shorter time and be of lower intensity than during construction, and so effects would be similar in nature but of lower magnitude, both temporally and spatially, during decommissioning. Therefore, the magnitude of impact during decommissioning is considered to be **Negligible** at the scale of the NHZ.
- 8.11.30 **Significance of Effect:** even in the case of species of highest Nature Conservation Importance these effects are judged to be **Negligible** and **Not Significant** under the terms of the EIA Regulations.

#### Committed Additional Mitigation

- 8.11.31 As no decommissioning effects are deemed Significant, no additional mitigation is proposed. Measures set out in a BPP (as part of a Decommissioning Environmental Management Plan (DEMP)) would ensure that disturbance to sites used by protected bird species is avoided.

#### Residual Decommissioning Effects

- 8.11.32 Any disturbance and / or displacement to species of moderate or high Nature Conservation Importance would be temporary and both the magnitude and significance of any effects as a result of disturbance and displacement from key habitats generated by decommissioning are therefore anticipated to be **Negligible** and **Not Significant** under the EIA Regulations.

### Cumulative Effects

- 8.11.33 The EIA Regulations require the cumulative effects of the Proposed Development and the Likely Grid Connection (as a single project) with other relevant projects to be assessed. NatureScot guidance (NatureScot, 2025c)<sup>24</sup> on assessing cumulative effects has been followed. In considering cumulative effects, it is necessary to identify any effects that are Minor in isolation (**Table 8.5**) but that may be Major or Moderate, and therefore Significant, cumulatively. Predicted adverse effects on birds arising from the construction, operation and decommissioning of the Proposed Development and the Likely Grid Connection have the potential to contribute to cumulative effects upon wider populations, in this case populations within NHZ 17.
- 8.11.34 Species for consideration were taken to be those species of high or moderate Nature Conservation Importance (**Tables 8.2** and **8.7**) for which there was some indication of a potential effect as a result of the Proposed Development and the Likely Grid Connection, which may be exacerbated cumulatively.
- 8.11.35 However, given that no residual Significant effects of the Proposed Development and Likely Grid Connection Route (including in-combination with the Proposed Development) were identified, and all effects on all bird species were deemed to be of Negligible significance (**Table 8.5**), where 'negligible' has been defined as 'No or non-detectable

changes in the conservation status of NHZ populations of Nature Conservation Importance”, then the predicted effects of the Proposed Development and Likely Grid Connection Route are considered to have no potential to contribute to cumulative effects and are, therefore, negligible across all species.

- 8.11.36 In conclusion, for all bird species and at all stages of the Proposed Development and Likely Grid Connection Route, the cumulative effects with other projects in the NHZ are likely to be **Negligible** and deemed to be **Not Significant** under the terms of the EIA Regulations.

## 8.12 Further Survey Requirements and Monitoring

- 8.12.1 Post-construction ornithological monitoring will be undertaken during Years 0 to 5, when Year 0 is pre-construction and Years 1 to 5 are during operation, to confirm the effectiveness of the ornithology specific measures implemented through the OBEMP, and to provide an evidence base for adaptive management if required. Monitoring will be undertaken by suitably qualified ornithologists under the direction of the ECoW and in accordance with relevant NatureScot guidance.
- 8.12.2 Monitoring will comprise:
- Breeding Moorland Birds (Years 0 to 5) — Targeted breeding bird surveys will be undertaken annually across open ground habitats to assess the effectiveness of habitat management and mitigation measures implemented through the agreed OBEMP. Surveys will follow standardised methods (Brown & Shepherd, 1993)<sup>18</sup> to allow comparison across years and to detect any changes in species presence, abundance, or distribution attributable to the Proposed Development or associated management interventions.
  - Specific monitoring for protected ornithological interests which are presented in **Volume 5** of the EIA Report.
- 8.12.3 Findings from all monitoring will be reported annually and used to inform ongoing implementation of the OBEMP. Where monitoring identifies a need for refinement of management measures, recommendations will be made to the Applicant and implemented subject to agreement with the relevant statutory bodies.
- 8.12.4 Following completion of the Year 0 to 5 monitoring period, the Applicant will prepare a Monitoring Review Report summarising species responses to enhancement measures and the outcomes of habitat management delivered through the OBEMP. The requirement for any continued monitoring beyond Year 5 will be determined by the EAC, in consultation with NatureScot, based on the evidence gathered and the extent to which enhancement objectives are being achieved. Where monitoring demonstrates stable or improving ecological conditions, no further surveys will be required; however, where additional information would support ongoing enhancement or adaptive management, a proportionate programme of continued monitoring may be agreed.
- ## 8.13 Summary of Likely Significant Effects
- 8.13.1 No significant effects are predicted to arise from the construction, operation or decommissioning of the Proposed Development on ornithology (including cumulatively), or from the associated Likely Grid Connection Route (including in-combination with the Proposed Development).



## Glossary/Abbreviations

Table 8.8 : Glossary

| Term in Full                                                | Abbreviation | Meaning                                                                                                                                                                  |
|-------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Applicant                                               | N/A          | Wind Power North Four Limited                                                                                                                                            |
| Environmental Impact Assessment                             | EIA          | Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development. |
| the Proposed Development                                    | N/A          | Glenouther Wind Farm                                                                                                                                                     |
| the Site                                                    | N/A          | The full application boundary                                                                                                                                            |
| Outline Biodiversity Enhancement Management Plan            | OBEMP        | A plan outlining measures to enhance, restore and manage biodiversity within and around the Proposed Development.                                                        |
| Birds of Conservation Concern                               | BoCC         | The UK conservation status assessment that assigns bird species to Red, Amber or Green lists based on population trends, range and threats.                              |
| Bird Protection Plan                                        | BPP          | A construction-phase plan detailing procedures to avoid disturbance to breeding birds, including surveys, buffers and timing restrictions.                               |
| Chartered Institute of Ecology and Environmental Management | CIEEM        | The professional body representing ecologists and environmental managers in the UK and Ireland.                                                                          |
| Collision Risk Modelling                                    | CRM          | A method used to estimate the potential number of bird collisions with wind turbines based on flight activity data and turbine characteristics.                          |
| Ecological Clerk of Works                                   | ECoW         | A specialist responsible for overseeing environmental compliance during construction, including ecological safeguards.                                                   |
| Flight Activity Assessment Area                             | FAAA         | The defined area within which bird flight activity is recorded to inform collision risk modelling.                                                                       |
| Scottish Raptor Study Group                                 | SRSG         | A network of volunteer fieldworkers who monitor raptor populations across Scotland.                                                                                      |
| Habitats Regulations Appraisal                              | HRA          | The process for assessing potential effects of a plan or project on European sites (SPAs/SACs) under the Habitats Regulations.                                           |
| Special Area of Conservation                                | SAC          | A site designated under the Habitats Directive for the protection of internationally important habitats and species listed on Annex I and Annex II.                      |
| International Union for the Conservation of Nature          | IUCN         | The global authority on species conservation status, responsible for the Red List of Threatened Species.                                                                 |
| Natural Heritage Zone                                       | NHZ          | A regional scale used by NatureScot for assessing bird populations and contextualising impacts.                                                                          |
| National Planning Framework 4                               | NPF4         | Scotland's most recent national spatial planning policy framework, setting out priorities for sustainable development.                                                   |
| Natural Research (Projects) Limited                         | NRP          | An ecological consultancy specialising in ornithological research and survey that undertook this assessment.                                                             |
| Ornithology Study Area                                      | OSA          | The defined area within which ornithological surveys and assessments are undertaken.                                                                                     |

| Term in Full                              | Abbreviation | Meaning                                                                                                                                                            |
|-------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Royal Society for the Protection of Birds | RSPB         | The UK's largest nature conservation charity, focused on protecting birds and their habitats.                                                                      |
| Special Protection Area                   | SPA          | A site designated under the Birds Directive for the protection of rare, vulnerable or migratory bird species.                                                      |
| Site of Special Scientific Interest       | SSSI         | A nationally designated site protected for its important habitats, species or geological features under the Nature Conservation (Scotland) Act 2004.               |
| UK Climate Projections 2018               | UKCP18       | The most recent set of UK climate projections providing probabilistic and high-resolution climate change scenarios used to assess future environmental conditions. |
| Wildlife and Countryside Act              | WCA          | The primary UK legislation protecting wild birds, animals and plants, including offences relating to disturbance, killing, taking or damaging nests and habitats.  |