7 ORNITHOLOGY

7.1 Introduction

7.1.1 This chapter provides an assessment of the potential effects upon important ornithological features in relation to the construction, operation and decommission of the Proposed Development. Additional information in relation to the Proposed Development can be found in **Chapter 2: Project Description.**

7.1.2 This chapter is supported by the following figures, presented in **Volume 2a** of the EIA Report:

- **Figure 7.1**: Statutory Designated Sites with Ornithological Interest.
- **Figure 7.2a**: Vantage Point Locations and Viewsheds (Year 1).
- **Figure 7.2b**: Vantage Point Locations and Viewsheds (Year 2).
- **Figure 7.3**: Ornithological Survey Areas (Year 1).
- **Figure 7.4**: Ornithological Survey Areas (Year 2).
- **Figure 7.5**: Ornithological Survey Areas (Year 3).
- **Figure 7.6a**: Flight Activity Survey Results (Year 1) – Raptors.
- **Figure 7.6b**: Flight Activity Survey Results (Year 1) – Other Species.
- **Figure 7.6c**: Flight Activity Survey Results (Year 2) – Raptors.
- **Figure 7.6d**: Flight Activity Survey Results (Year 2) – Other Species.
- **Figure 7.7a**: – Moorland Breeding Bird Survey Results (Year 1).
- **Figure 7.7b**: Moorland Breeding Bird Survey Results (Year 2).
- **Figure 7.8**: Scarce Breeding Bird Survey Results (Excluding Black Grouse).

7.1.3 This chapter is also supported by the following technical appendices, presented in **Volume 3** of the EIA Report:

- **Technical Appendix 7.1**: Ornithology.
- **Technical Appendix 7.2**: Collision Risk Model Analysis.

7.1.4 **Technical Appendix 7.3**: Confidential Ornithology contains detailed information pertaining to the locations of sensitive breeding bird species and which is considered confidential. Such information will not be made publicly available, but will be provided to the Scottish Government, The Highland Council, and other relevant consultee bodies (as required). **Technical Appendix 7.4**: Golden Eagle Habitat Loss GET Model should also be treated as sensitive given it provides information on golden eagle breeding territories. **Technical Appendices 7.3** and **7.4** are provided in a separate volume (**Volume 4**).

7.1.5 The following confidential figures are also included within **Volume 4** of the EIA Report:

- **Confidential Figure 7.9a**: Desk Study Records (RSPB - Sensitive).
- **Confidential Figure 7.9b**: Desk Study Records (HRSG - Sensitive).
- **Confidential Figure 7.10**: Breeding Raptor Survey Results.
- **Confidential Figure 7.11**: Breeding Black Grouse Survey Results (Year 2).

- **Confidential Figure 7.12**: Breeding Black Grouse Survey Results (from SBBS in Year 3).
- **Confidential Figure 7.13**: Breeding Black Grouse Survey Results (Combined).

7.1.6 This chapter should also be read with reference to **Chapter 6**: Ecology.

7.1.7 Only common bird names are referred to within this chapter. A summary of species referred to including common names, species names and relevant conservation status is provided in **Appendix 7.1**.

7.2 Statutory and Planning Context

7.2.1 In preparation of this chapter, reference has been made to the following key pieces of legislation, planning policy and guidance:

European

- Conservation of Habitats and Species Regulations 2017, as amended in Scotland by the Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019 (collectively 'the Habitats Regulations'[21]).

National

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017[22];
- The Wildlife and Countryside Act 1981 (as amended23);
- The Wildlife and Natural Environment (Scotland) Act 201124;
- The Nature Conservation (Scotland) Act 200425;
- The National Planning Policy Framework 4 (Scottish Government, 2023);
- Pre-application guidance for onshore wind farms (NatureScot, 2024a);
- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018);
- Recommended bird survey methods to inform impact assessment of onshore wind farms (Scottish Natural Heritage, SNH, 2017a);
- Assessing Connectivity with Special Protection Areas (SPAs) (SNH, 2016);
- Assessing Significance of Impact From Onshore Windfarms on Birds Outwith Designated Areas (SNH, 2018a);

[21] https://www.legislation.gov.uk/sdsi/2019/9780111041062 (Accessed 21st February 2025).

[22] https://www.legislation.gov.uk/ssi/2017/101/contents (Accessed 21st February 2025).

[23] https://www.legislation.gov.uk/ukpga/1981/69 (Accessed 21st February 2025).

[24] https://www.legislation.gov.uk/asp/2011/6/contents (Accessed 21st February 2025).

[25] https://www.legislation.gov.uk/asp/2004/6/contents (Accessed 21st February 2025).

- Assessing the Cumulative Impact of Onshore Wind Farms on Birds (SNH, 2018b);
- Windfarms and Birds – Calculating a Theoretical Collision Risk Assuming No Avoiding Action (SNH, 2000);
- Avoidance Rates for the onshore SNH Wind Farm Collision Risk Model (SNH, 2017b);
- Natural Heritage Zones Bird Population Estimates (Wilson *et al*., 2015);
- 'Fifth Birds of Conservation Concern' (Stanbury *et al*., 2021); and
- Scottish Biodiversity List (SBL) (NatureScot, 2020).

Local

- Highland Nature Biodiversity Action Plan 2021-2026 (Highland Environment Forum, 2021).
- Highland-wide Local Development Plan; Biodiversity Action Plan (The Highland Council, THC, 2012).
- The Highland Council 'Inner Moray Firth Local Development Plan 2 (IMFLDP2)' adopted 2024 & 'West Highlands and Islands Local Development Plan (WestPlan)' adopted September 2019[26].

7.2.2 The Highland Council is currently preparing a new Local Development Plan (LDP) which, once adopted, will supersede the LDPs listed above. However, this is still at the consultation stage.

7.3 Consultation Undertaken

7.3.1 **Table** 7.1 summarises the consultation responses regarding ornithology matters and provides information on where and/or how they have been addressed in this assessment. The following regulatory bodies made comment on ornithology matters 'Pre-Scoping' and 'Scoping', as stated. Responses with regards to ecology are considered in **Chapter 6** and are not replicated in this chapter. The full list of consultation undertaken for the Proposed Development is provided in **Chapter 3**. This includes information for those consultees that did not respond.

[26] The application site spans both LDPs

Table 7.1: Consultation Summary

Consultee and Date	Summary of Key Issues	Action Taken
NatureScot 25th November 2021, Pre-Scoping	Overall satisfied with the scope of ornithological assessment.	None required.
	Advised that a robust desk study is undertaken for common scoter (*Melanitta nigra*) and the potential impacts on the species in relation to disturbance/displacement and collision risk should be assessed. This is given standard Vantage Point surveys may not pick up common scoter flights (species may fly at night). The assessment should consider likely flights of scoters between the coast and breeding sites (and between breeding lochs), so that the potential for collision risk can be theoretically considered. Suggested that this approach was used for Beinneun Wind Farm.	A robust desk study for common scoter in relation to the listed effects is considered in **Section 7.9**, and with an information to inform a Habitats Regulations Appraisal (HRA) provided in **Section 7.15** with respect to effects on the West Inverness-shire Lochs SPA. Relevant information with respect to common scoter from other nearby wind farms is considered. A summary of the desk study undertaken is provided in **Section 0**.
	Recommended consideration of potential for Slavonian grebe (*Podiceps auritus*) records with data available from the Royal Society for the Protection of Birds (RSPB). If any nearby sites, an analysis of potential flight paths/heights should be used to inform an assessment of collision risk.	No Slavonian grebe records were returned from the desk study, nor were any birds recorded during the field surveys (and no designated sites with Slavonian grebe as a qualifying species are located within 10 km of the Site). Accordingly, potential effects on Slavonian grebe are not considered in this chapter.
	Recommended coordination with the Highland Raptor Study Group (HRSG) to avoid duplication of effort and to minimise disturbance.	The HRSG was consulted for relevant information and also to avoid duplication of field survey effort, thereby reducing any potential for disturbance (see **Appendix 7.1** and **Confidential Appendix 7.3** for details on consultation with the HRSG).

Consultee and Date	Summary of Key Issues	Action Taken
	The assessment should explain any areas not covered by surveys and any implications of this.	The limitations are detailed in **Appendix 7.1** and summarised in **Section 0**.
	Raptors should be considered as target species also outside the breeding season. Recommended assessment for any roosts within 2 km of the Site.	Raptors were treated as Target Species throughout the year during VP flight activity surveys. Results from the VP flight activity surveys and the desk study were considered into whether any further surveys, such as potential targeted non-breeding raptor roost searches were appropriate. No such records that would have suggested targeted roost searches were warranted were identified.
	Recommended a Golden Eagle Topographical (GET) model to inform the assessment.	A GET model was undertaken with results in **Confidential Appendix 7.4**, and the results have informed the assessment (see **Section 7.9**).
	The access route (when determined) should be subject to ornithology surveys.	The access route was subject to targeted ornithology surveys as detailed in **Appendix 7.1**, and with results summarised in **Section 7.5**.
RSPB, 2nd October 2023, Pre-Scoping	Returned ornithology records from the Site, and out to 2 km, extended to 10 km for eagle records.	Records were provided by the RSPB and were considered (see **Section 7.5**), with full details provided in **Confidential Appendix 7.3**.
Highland Biological Recording Group (HBRG), 3rd October 2023, Pre-Scoping	Returned ornithology (and non-statutory site) records from the Site, and out to 2 km.	Records were provided by the HBRG and were considered (see **Section 7.5**), with full details provided in **Confidential Appendix 7.3**.
HRSG, 5th November 2023, Pre-Scoping	Returned ornithology (raptor and owl) records from the Site, and out to 2 km, extended to 10 km for eagle records.	Records were provided by the HRSG and were considered (see **Section 7.5**), with full details provided in **Confidential Appendix 7.3**.
The Highland Council 13th March 2024, Scoping	The EIAR should provide baseline surveys of the bird interest on site.	A full suite of baseline ornithology surveys has been undertaken as detailed in **Appendix 7.1**, with the results of the surveys provided in **Section 7.5**.

Consultee and Date	Summary of Key Issues	Action Taken
	The EIAR should address the likely impacts on the nature conservation interests of all the designated sites in the vicinity of the Proposed Development. It should provide proposals for any mitigation that is required to avoid the impacts or reduce them to a level where they are not significant.	Effects on relevant designated sites have been considered in **Section 7.9** where these relate to ornithology. For any designated site which has been scoped out of detailed assessment, thorough justification is provided in **Section 7.9**. Embedded mitigation measures to be adopted is provided in **Section 7.7**, with any additional mitigation provided in **Section 7.10**.
	A draft or outline Habitat Management Plan (HMP) should be included as part of the EIA. This should include a comprehensive monitoring programme for breeding birds on site. Remote sensing using radar or infra-red cameras should be considered to help inform future development and decision making within the industry with regards to eagles. The HMP should include a protocol for reporting collisions to NatureScot.	An Outline Biodiversity Enhancement Management Plan (OBEMP) is provided as **Technical Appendix 6.7**. This includes information regarding breeding bird monitoring, and the protocol for reporting collisions, to NatureScot. Given the very low levels of eagle flight activity and the outcome of the GET model which demonstrates that the Site is not part of any core eagle's breeding territory, the proportionality of a requirement for remote sensing is considered unlikely, but the possibility for any benefits of remote sensing may be considered and discussed with NatureScot should the Proposed Development receive consent.
	The presence of Schedule 1 birds, and qualifying interests of Special Protection Areas (SPAs) and other areas designated for avian interests must be included and considered as part of the planning application process.	Schedule 1 species and qualifying interests of relevant SPAs (those where there are potential pathways of effects, typically due to the spatial distance between the SPA and the Site being less than the documented foraging range for the qualifying species) were treated as Target Species, and have been appropriately considered in the assessment, in **Section 7.9**. An information to inform a HRA is also provided in **Section 7.15** with respect to effects on the West Inverness-shire Lochs SPA.

Consultee and Date	Summary of Key Issues	Action Taken
	Stated that comments from NatureScot and the RSPB (see below) should be duly considered.	The comments from NatureScot and RSPB have been considered.
	The impacts to birds through collision, disturbance and displacement from foraging/ breeding/ roosting habitat for the Proposed Development (alone) and cumulatively with other proposals will need to be considered in the assessment. The EIAR should be clear on the survey methods and any deviations from guidance on ornithology matters.	Impacts to Target Species through collision, disturbance and displacement from foraging/ breeding/ roosting habitats have been considered for the Proposed Development (alone), in **Section 7.9**. Respective cumulative effects are considered in **Section 7.12**. **Appendix 7.1** details the survey methods, and these are summarised in **Section 0**, with limitations (including with regards to survey methods) also provided in **Section 0**.
	EIAR needs to describe the likely significant effects which cover the direct and indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the Proposed Development. The effects upon baseline data should be provided clearly. Requested that when measuring positive and negative effects of the Proposed Development, a four-point scale is used advising any effect to be either strong positive, positive, negative or strong negative.	Potential effects of the Proposed Development on Target Species (identified from baseline surveys) are provided in **Section 7.9**. Effects are defined based on the assessment methodology set out in **Section 7.8**. As advised a four-point scale is included in **Section 7.14**.
NatureScot 5th March 2024, Scoping	Consideration should be given to available data, consultations and correspondence relating to the recent applications at the locality of the Proposed Development (including the existing Beinneun and Millennium Wind Farms).	Available information from nearby wind farms has been considered in the assessment (see **Sections 7.9** and **7.15**), and as part of the cumulative assessment in **Section 7.12**.
	Potential impacts on European sites including the West Inverness-shire Lochs SPA should be	Potential effects on the West Inverness-shire Lochs SPA have been considered in **Section 7.9**, with an

Consultee and Date	Summary of Key Issues	Action Taken
	considered in assessment. Impacts on this SPA should be scoped into further assessment. Further information will be required to inform a HRA including the potential for disturbance, displacement and collision risk to common scoter and black-throated diver (*Gavia arctica*) (which are qualifying species of the SPA). Stated that based on the location of the Site and the Proposed Development, disturbance to birds breeding within the SPA are unlikely. Therefore, potential impacts of disturbance and displacement should focus on the potential for both species to use waterbodies outside the SPA closer to the Site. EIAR should include full details of waterbody surveys within the Site and a 1 km buffer, including an assessment of suitability for both species. A comprehensive desk study should also be included. This should include data from the RSPB and any relevant results from previous proposals at the locality.	information to inform HRA with respect to the SPA provided in **Section 7.15**. Information into the suitability of waterbodies on-site and within 1 km of the Site to support black-throated diver and common scoter is provided in **Section 7.5**, with further details in **Appendix 7.1**. Desk study information (including relevant information from other nearby schemes, and the RSPB) has been gathered and considered in the assessment (see **Sections 0, 7.5** and **7.9**).
	Assessment of collision risk will be required. For diver methods, NatureScot guidance should be followed (SNH, 2017a). For scoters, a theoretical assessment of potential flight lines used by scoters if they were to move between the SPA lochs (and any other waterbody they may use) at the start, and end, of the breeding season should be undertaken. This should consider desk study information and	Collision risk is considered for relevant Target Species (see **Appendix 7.2** for details), and results are considered within the assessment in **Section 7.9**. Divers were surveyed in accordance with NatureScot guidance (SNH, 2017a). The potential effects on common scoter (in relation to the West Inverness-shire Lochs SPA) is provided in **Section 7.9,** with an information to inform HRA with respect to the SPA in **Section 7.15**. This includes a

Consultee and Date	Summary of Key Issues	Action Taken
	topographical information. The assessment should be supplemented with current expert opinion from scientists with knowledge of scoter breeding ecology and probable flight lines and potential for collision risk.	review of available relevant information including consideration of probable flight lines and potential for collision risk.
	Potential for impacts, including cumulative impacts, to wider countryside birds like golden eagle and upland waders should be considered.	Potential for impacts on wider countryside birds like golden eagle and upland waders is considered in **Section 7.9**, for the Proposed Development (alone) and in **Section 7.12** within respect to cumulative effects.
	Recommended that results of survey and assessment are used to inform the design and layout of the Proposed Development to avoid impacts on sensitive ornithological features.	Field survey results have informed design layout of the Proposed Development as summarised in **Section 7.7**.
	The EIAR should provide any appropriate mitigation required if avoidance of impacts is unavoidable, to minimise impacts.	Any additional mitigation requirement is provided in **Section 7.10**, with embedded mitigation measures to be adopted in **Section 7.7**.
	Noted the future grid connection would be subject to a separate application, but wanted to flag the potential impacts on the West Inverness-shire Lochs SPA would need considered.	Potential effects on the SPA would be considered in any future application, concerning the grid connection.
	Advised that all surveys should follow NatureScot guidance (SNH, 2017a).	Surveys have accorded with NatureScot guidance as detailed in **Appendix 7.1**. Unavoidable limitations encountered are provided in **Section 0**.
	The desk study and survey work should also cover the proposed access, plus relevant buffers. This will allow potential for disturbance/ displacement to be assessed, especially with regards to Schedule 1 species and black grouse.	The desk study and field surveys have appropriately covered the proposed access track (plus required buffers), with surveys undertaken in 2024 (see **Appendix 7.1**). Areas identified for enhancement measures have been appropriately surveyed, as confirmed in the OBEMP (**Appendix 6.7**).

Consultee and Date	Summary of Key Issues	Action Taken
	Similarly, areas for enhancement should also have been appropriately surveyed and considered in the assessment.	
	Within the EIAR, it should be demonstrated that the VP locations sufficiently covered the Proposed Development on site.	The VP viewshed coverage is provided in **Figures 7.2a** and **7.2b**. Full details into the VP study area and viewsheds (and limitations related to survey coverage) are provided in **Appendix 7.1**, with limitations summarised in **Section 0**.
	If coverage to recommended buffers is restricted due to access issues, the EIAR should explain any such areas and how these were assessed.	Full details of study areas are provided in **Appendix 7.1**, with limitations summarised in **Section 0**.
	As assessment of potential impacts through habitat loss/change, disturbance and/or displacement and collision risk to SPA and wider countryside bird populations will be required, both for the Proposed Development alone and in combination with other projects.	Potential effects on Target Species (including relevant SPA species and wider countryside species) are considered in **Section 7.9**, for the Proposed Development (alone). Cumulative effects are considered in **Section 7.12**.
	Advised that the cumulative assessment should be carried out at the level of the Natural Heritage Zone (NHZ7) or SPA population. Information to assist with cumulative assessment can be provided on request.	The cumulative assessment has been carried out at the level of the 'Northern Highlands' NHZ7 for wider countryside species, given the Site is within NHZ7, and at the level of the West Inverness-shire Lochs SPA population for common scoter and black-throated diver (see **Section 7.9**).
	Mitigation options should be considered in assessment process and details should be provided in the application.	Embedded mitigation is provided in **Section 7.7**, and any additional mitigation required is provided in **Section 7.10**.
	In addition to SPA species, potential impacts (including displacement/disturbance and collision risk) on wider countryside species like golden eagle, black grouse and upland waders should be considered for the Proposed Development alone	Potential effects on Target Species (including relevant SPA species and wider countryside species) are considered in **Section 7.9**, for the Proposed Development (alone). Cumulative effects are considered in **Section 7.12**. Effects are considered with respect to

Consultee and Date	Summary of Key Issues	Action Taken
	and in combination with other schemes. Assessments of impacts to wider countryside birds should be in the context of their NHZ7 populations.	the NHZ7 populations for those wider countryside species.
	Pleased to note a GET model is to be undertaken as part of the assessment.	GET model is presented as **Confidential Appendix 7.4**. Results are considered as part of the assessment in **Section 7.9**.
	If black grouse could be affected by Proposed Development, EIAR should provide information on importance of any lek(s) in local context, and potential for effects due to changes to foraging and roosting habitat. A buffer of at least 500 m should incorporated between any lek and turbines. Additional mitigation would be required during construction to avoid causing disturbance to lekking birds during the sensitive breeding season.	Potential effects on black grouse are considered in **Section 7.9**. Proposed turbines have been appropriately offset from identified lek sites (see **Section 7.7**). Additional mitigation with respect to black grouse is provided in **Section 7.10**.
	Where ornithological features are scoped out of detailed assessment, the justification as to why, should be provided in the EIAR. Details of survey methods, results and any mitigation should be provided.	Some Target Species are scoped out of detailed assessment, and robust rationale for doing so is provided in **Section 7.9**. Details of survey methods and results are summarised in this chapter respectively in **Sections 0** and **7.5**. Mitigation is outlined in **Section 7.7** (with respect to embedded mitigation) and **Section 7.10** (with respect to additional mitigation).
	Potential impacts from habitat loss and modification should be considered, especially with respect to upland waders.	Potential effects of habitat loss on Target Species including upland waders are considered in **Section 7.9**.

Consultee and Date	Summary of Key Issues	Action Taken
	If wood sandpiper could be affected all potential impacts should be addressed, and NatureScot can provide further advise if required. The NHZ7 population for this species can be provided.	Potential effects on wood sandpiper are considered in **Section 7.9**. Embedded mitigation is outlined in **Section 7.7**.
RSPB 7th March 2024, Scoping	Stressed that impacts of collision, disturbance, displacement and barrier effects on common scoter at the locality are not fully understood. Likely significant effects on common scoter (qualifying species of the West Inverness-shire Lochs SPA) will need considered, for the Proposed Development alone and in combination with other projects. The EIAR must include sufficient information to inform the HRA (and Appropriate Assessment, AA).	Potential effects on common scoter (with respect to the West Inverness-shire Lochs SPA) has been considered in **Section 7.9**, with information to inform a HRA with regards to effects on the SPA provided in **Section 7.15**.

7.4 Scope and Methodology

Study Area

7.4.1 The main study area within which baseline information in relation to ornithological receptors has been obtained has typically comprised the Site and buffer areas out to at least 500 m (for Moorland Breeding Bird Survey, MBBS), extended up to 6 km where access allowed for field surveys of specific species (breeding eagles) as per current guidance (SNH, 2017a) and up to 20 km desk-based searches for internationally important designated sites (SPAs and Ramsar sites).

7.4.2 Full details of study areas adopted for the desk study and field surveys are provided in **Appendix 7.1** and illustrated on **Figures 7.1** to **7.7**. Limitations related to design evolution and Site boundary changes is provided below in the **'Assessment Limitations'** section, and further details within **Appendix 7.1**.

Desk Study

7.4.3 As per current guidance (SNH, 2017a) an initial review of existing ornithological information and consultation with NatureScot was undertaken at the beginning of the field survey programme. This enabled a preliminary overview of likely bird species and populations in proximity to the Site to be formed, possible Target Species for surveys to be identified and field survey requirements to be defined, which were subsequently agreed in consultation with NatureScot.

7.4.4 Further desk study (for example regard for publicly available ornithology information from existing or proposed wind farms in close proximity to the Site) has also been undertaken over the course of the field surveys to provide additional context for field survey observations.

7.4.5 The desk study has included a review of statutory designated sites within proximity to the Site through NatureScot's Sitelink (2024), and consultation with specialist recording groups for existing ornithological records including the RSPB, HBRG and the HRSG.

7.4.6 Full details and results of the desk study undertaken are provided in **Appendix 7.1** and **Confidential Appendix 7.3**. Relevant desk study information is provided in **Confidential Figures 7.8a-b**.

Target Species

7.4.7 Target Species for survey and recording have been drawn from the following lists adopting a precautionary approach and with reference to current NatureScot guidance (SNH, 2017a and 2018a):

- Annex 1 of the EC Birds Directive;
- Schedule 1 of the Wildlife & Countryside Act 1981 (as amended);
- 'Red-listed' Birds of Conservation Concern (Stanbury *et al.*, 2021); and
- Annex 1 'Priority bird species for assessment when considering the development of onshore wind farms in Scotland' (SNH, 2018a).

7.4.8 The list of Target Species was extended to include species like mute swan and snipe which may be more vulnerable to wind farm developments. The broad selection of Target Species for survey and recording included qualifying species for the West Inverness-shire Lochs SPA, for which core foraging range overlap with the Site for at least black-throated diver (a qualifying species), in accordance with current guidance (SNH, 2016).

7.4.9 Passerine species were not identified as Target Species for survey and recording and are not considered sensitive to wind farm developments (SNH, 2017a and 2018a). Observations of notable species e.g. those listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and Red-listed Bird of Conservation Concern (BoCC) species (i.e. Stanbury *et al*., 2021) during MBBS were however recorded if encountered.

7.4.10 Gulls and more common raptor species including buzzard, kestrel and sparrowhawk, were also not identified as Target Species given their general widespread number and/or abundance, and for gulls, given there are no SPAs with gulls as qualifying species within 20 km. These birds were recorded as Secondary Species during VP flight activity surveys (detailed below).

Field Surveys

7.4.11 The following field surveys were carried out between 2021 and 2024 to inform the design and assessment of the Proposed Development:

- VP flight activity surveys.
- Moorland breeding bird surveys (MBBS).
- Annex I and Schedule 1 breeding raptor and owl surveys.
- Breeding black grouse surveys.
- Breeding diver searches.
- Scare Breeding Bird Surveys (SBBS), with Target Species black grouse, raptors and open ground species like waders.

7.4.12 Surveys have been undertaken in accordance with guidance (SNH, 2017a) and full details are provided in **Appendix 7.1**.

7.4.13 Current guidance (SNH, 2017a) recommends that a minimum of two years of ornithological surveys is carried out to inform the assessment of wind farm developments, unless it can be demonstrated that a shorter period of survey is sufficient. The collated dataset provides two and a half years of ornithological survey data, collected within the most recently available five-year window of survey opportunity, prior to the undertaking of assessment.

Field Survey Personnel

7.4.14 All field surveys were completed by experienced, reputable and professional ornithologists fully conversant in established bird survey methodologies for proposed wind turbine developments.

7.4.15 A list of the field surveyors used is provided in **Appendix 7.1.**

Assessment Limitations

7.4.16 The boundary of the Site has evolved and been revised throughout the baseline survey period. This has meant that some isolated areas of the Site have not been subject to ornithological surveys (see study areas in **Figures 7.3** and **7.4**). However, these are of limited extent, distant from the Development Area and comprise habitats directly comparable with those surveyed during all the other surveys undertaken in 2022 and 2023, and so it is considered that survey effort undertaken will have been sufficient to characterise the baseline at the Site and which has appropriately informed impact assessment.

7.4.17 Due to evolution of the turbine layout, there were some minor gaps in VP viewsheds coverage during the surveys of the turbines plus 500 m buffer. However, all turbines have been fully covered by at least one year of VP flight activity survey effort. Some gaps in viewshed coverage are expected given challenges of topography, and while in some cases down to a height of 20 m above ground level may not have been visible (within those gap areas) much of the airspace above this will have been, and so those flights at greatest risk of collision are likely to have been recorded. As such, any minor gaps in VP viewshed coverage are not considered a substantive limitation to assessment.

7.4.18 Due to adverse weather conditions (especially during the winter) and access restrictions due to deer stalking, survey hours at some VPs were reduced. In the majority of these instances, additional hours were undertaken in the subsequent months to address any deficit.

7.4.19 In Year 1 (September 2021 to August 2022), during the generic non-breeding season, the minimum 36 hours required in NatureScot guidance (SNH, 2017a) was not met at VPs 1a and 3a with 33 hours undertaken. However, the number of non-breeding season hours achieved at these VPs was only marginally less than the recommended 36, and with only eight flights recorded across the entire Year 1 non-breeding season it is considered unlikely that substantive numbers of flights will have been missed. As stated above, additional hours were undertaken to address the deficit, so the minimum of 72 hours across the year were achieved in Year 1, with 75 hours total effort achieved at VPs 1a and 3a. Furthermore, the breeding season is considered the most sensitive time for ornithological interest at that locality, and the minimum of 36 hours was achieved or exceeded for all VPs during the breeding season.

7.4.20 In Year 2 (September 2022 to August 2023), reduced September hours at VP 1b were caught up in October, and reduced hours in September and October at VP 3b were partially caught up in December. There was a further reduced survey effort at VP3b in March. The deficit was largely due to adverse weather conditions during some surveys. In Year 2, 33 hours were achieved at VP3b in the breeding and non-breeding season. Very low levels of flight activity were recorded from VP3b in Year 2, and it is considered that the weather experienced is typical for the locale and elevation, and so the reduction in hours is not considered to represent a substantive constraint to the validity of the data. Differences in survey effort achieved has been accounted for in the Collision Risk Modelling (CRM) analysis carried out to inform assessment (see **Appendix 7.2**).

7.4.21 During the Annex I and Schedule 1 breeding raptor and owl surveys, access to private land within the full 6 km buffer outside the Site for the surveys was restricted. Suitable habitat

features were however scanned from appropriate vantage points within the Site and safe locations on public highways to detect activity and likely breeding locations of Target Species. Given the large study area and large amount of inaccessible terrain, there is potential that some raptors may not have been recorded, but that in conjunction with the HRSG data, it is considered unlikely that many breeding raptors would have been missed and that the data on which the assessment is based is appropriate and proportionate for assessment.

7.5 Existing Environment

7.5.1 This section provides a summary of baseline ornithology conditions in relation to:

- Statutory designated sites for nature conservation with ornithological interests;
- Target Species flight activity; and
- distributions and abundances of breeding bird species as recorded during baseline ornithology surveys and established from the desk study.

7.5.2 Detailed information regarding desk study records and field survey results is also presented in **Appendix 7.1** and **Confidential Appendix 7.3** and also as relevant within **Section 7.9**, with regards to important ornithological features (IOFs).

Designated Sites for Nature Conservation

7.5.3 This section should be read with reference to **Figure 7.1**.

7.5.4 **Table** 7.2 provides a summary of statutory designated sites with cited ornithological interests located within 10 km of the Site, extended to 20 km for internationally designated sites with migratory waterfowl interest.

7.5.5 Sites designated for other ecological features are addressed separately in **Chapter 6**.

7.5.6 The distances specified within **Table** 7.2 are measured from the Site to the designation boundary at its nearest point.

7.5.7 There is no internationally designated site with migratory waterfowl interests located within 20 km of the Site.

Table 7.2: Designated Sites for Nature Conservation

Site	Distance and Direction	Qualifying Interests
West Inverness-shire Lochs SPA	2.22 km, south	Breeding populations of: • Black-throated diver; and • Common scoter.
West Inverness-shire Lochs Site of	2.22 km, south	Breeding populations of: • Black-throated diver; and • Common scoter.

Site	Distance and Direction	Qualifying Interests
Special Scientific Interest (SSSI)		
Glen Affric SSSI	8.58 km, north-west	Breeding bird assemblage including crested tit, Scottish crossbill, capercaillie and black grouse.

VP Flight Activity Surveys

7.5.8 The flight activity of Target Species 'at-risk' height and within the buffer of the turbines[27] recorded during the entire VP flight activity survey effort (September 2021 – August 2023) is summarised in **Table** 7.3. The total number of flights, total number of birds recorded, and the total flight time (seconds) are presented. Of these, golden eagle was taken forward for collision risk morality modelling, as discussed in **Section 7.9** (with full results presented in **Appendix: 7.2**).

7.5.9 Detailed flight records are presented in **Appendix 7.1**, with flight lines illustrated in **Figures 7.5a-d**.

Table 7.3: Target Species 'At-Risk' Flight Activity Summary

Species	Total No. of Flights	Total No. of Birds	Total Flight Time (seconds)
Golden eagle	7	7	1,640
Pink-footed goose	2	244	442
Greenshank	2	2	359
Grey heron	1	1	149
Merlin	1	1	105
Black grouse	1	1	52

[27] 'At risk from collision considered as at rotor sweep height (25 - 200 m) and within 300 m of proposed turbine locations for all Target Species. It is based on a worst-case scenario of 200 m tip height, 155 m maximum rotor diameter and lower hub height of 102.5 m, thus considering the upper limit of the larger turbines (200 m tip height) and lower limit of the smaller turbines (180 m tip height).

Moorland Breeding Bird Surveys

7.5.10 In summary, the study area was found to support a moorland breeding bird assemblage with a relatively limited range of territory numbers, with many breeding territories in open habitats in the peripheral areas of the Site, and typically distant from the Development Area.

7.5.11 Estimated breeding territory numbers recorded in 2022 (Year 1) and 2023 (Year 2), within the Site (and out to 500 m) are provided in **Table** 7.4 and illustrated in **Figures 7.6a** and **7.6b**, respectively.

7.5.12 Further details of MBBS assemblages recorded are provided in **Appendix 7.1.**

Table 7.4: MBBS Territories – Within the Study Area

Species	No. of Territories	
	Year 1 (2022)	Year 2 (2023)
Golden plover	12	10
Dunlin	7	4
Greenshank	4	6
Wood sandpiper	3	3
Snipe	0	2
Teal	2	1

Annex I and Schedule 1 Breeding Raptor and Owl Surveys

7.5.13 The desk study from the HRSG revealed ten known golden eagle nest locations and two white-tailed eagle nest locations, with further information provided in **Confidential Appendix 7.3** and **Confidential Figure 7.8b**. All nest locations were greater than 2 km from the Site, but within approximately 10 km.

7.5.14 One further breeding record of white-tailed eagle (a juvenile) was returned from the RSPB, and given the location, is considered to be indicative of a breeding pair identified from the HRSG.

7.5.15 The RSPB also returned two records of golden eagle (four individuals in May 2012) and another unspecified record from 2022, and one record of white-tailed eagle (one adult in May 2022). These are provided in **Confidential Figure 7.8a**, given they are to be treated as 'restricted' in accordance with the RSPB data terms of use.

7.5.16 Annex I and Schedule 1 breeding raptor and owl surveys recorded no breeding evidence of breeding raptors or owls within the Site, or out to 2 km from the Site, in 2022 or 2023. A single osprey nest site was located approximately 6 km from the Site in 2022 (but not in 2023), with the nest record provided in **Confidential Figure 7.9**, and further details in **Confidential Appendix 7.3**.

7.5.17 In 2022, although activity of hen harrier, red kite, golden eagle and white-tailed eagle was recorded during surveys there was no definitive evidence that these species were holding breeding territories within the Survey Area.

7.5.18 In 2023, observations of golden eagle recorded during surveys suggested the presence of a possible breeding territory within the 6 km buffer from the Site, with an adult male displaying and landing by a potentially suitable eyrie location.

Breeding Black Grouse Surveys

7.5.19 The desk study from the RPSB revealed 26 records of black grouse, with some of these records annual counts of the same locations across a number of years. A small number of lek records were returned from within the Site within the north and north-east of the Site. The lek records returned from the desk study are provided in **Confidential Figure 7.8a**, with further details in **Confidential Appendix 7.3**.

7.5.20 In 2022, anecdotal records of black grouse were recorded during surveys, with a lek with four males identified in the north of the Site in May 2022.

7.5.21 During the dedicated black grouse surveys in 2023, three leks were recorded comprising maximum counts of four males and one female, three males and no females, and one male and no females. All leks were recorded in the Access Route area at the north of the Site, as shown **Confidential Figure 7.10**, with further details in **Confidential Appendix 7.3**.

Breeding Diver Searches and Common Scoter Suitability

7.5.22 No records of divers were returned from the desk study.

7.5.23 Searches of lochs for breeding divers were undertaken in 2022 and 2023, with searches in 2022 undertaken concurrently with Annex I and Schedule 1 breeding raptor and owl surveys, and specific diver searches undertaken in 2023. None of the lochs within the study area were considered as suitable for supporting breeding black-throated diver, as they were too small for this species.

7.5.24 No black-throated divers were recorded. One red-throated diver (*Gavia stellata*) flight was recorded approximately 2 km south of the Site, with the diver circling in flight over Loch a Bhainne, before gaining height and then moving north-east, in a high and direct flight. No evidence of breeding of red-throated diver was recorded, and no further sightings were made of divers.

7.5.25 Lochs (within the Site and out to 1 km) were also appraised for their potential to support common scoter. No evidence of common scoter was recorded, and all waterbodies were considered unlikely to support breeding scoter, due to factors including lack of suitably vegetated nesting sites (such as islands) and the presence of operational wind farms which are likely to deter breeding scoter, given the species typically requires low levels of disturbance to breed (see Goodship and Furness, 2022). For those on-site waterbodies, such as the bog pools and small lochans around Loch nam Faoileag although the habitat was considered potentially suitable, the disturbance from the adjacent wind farms makes it

unlikely that any breeding scoter will settle at the locality. As such, waterbodies on-site and out to 1 km are considered unlikely to support any breeding common scoter.

Scarce Breeding Bird Surveys

7.5.26 The SBBS in 2024 recorded four lek sites comprising peaks of seven males and one female, two males (and one female recorded at the same location, but different survey), one male (and no females) and two males (and no females). These lek sites are provided in **Confidential Figure 7.11**, with further details in **Confidential Appendix 7.3**. Given the overlap between the SBBS study area and study area for the breeding black grouse surveys, some of the lek sites identified during the SBBS are indicative of the lek sites identified during dedicated black grouse surveys in 2023 (and the anecdotal lek record from 2022). Results of the leks recorded across the three years of survey combined is provided in **Confidential Figure 7.12**.

7.5.27 The SBBS also recorded low breeding numbers of golden plover (four pairs), dunlin (two pairs), snipe (two pairs) and red grouse (one pair). These records are shown in **Figure 7.7**.

7.5.28 No evidence of breeding Annex I and Schedule 1 raptors or owls was recorded during the SBBS.

7.6 Future Baseline

7.6.1 In the absence of the Proposed Development, or assuming a gap between baseline surveys and the commencement of the Proposed Development construction, changes in baseline ornithology conditions (i.e. distributions and populations) are most likely to result from habitat modifications within or surrounding the Site due to land management practices, principally, forestry works.

7.6.2 In the absence of the Proposed Development, the habitats within the Site are considered to largely remain under the existing management regime. This comprises grazing by livestock at the north-west around the entrance to the Access Route, some modest commercial forestry, and deer stalking within the main Development Area. Other works associated with the operational Millennium Wind Farm would also continue in the absence of the Proposed Development.

7.6.3 Commercial forestry operations within nearby plantation forestry, such as felling, may also alter the distribution of ornithological species recorded during baseline surveys; however, it is highly unlikely this would be in such a way as to substantially alter the baseline reported here particularly given there is only limited forested areas on-site, around the access route and some scattered forestry in the north of the Site.

7.6.4 The Site is not subject to any other development pressures or management which would affect the habitats or ornithological species in such a way that the present baseline conditions presented here would become substantively different.

7.6.5 Breeding bird densities would therefore reasonably be expected to remain at comparable levels with those recorded during field surveys and identified through desk study i.e. at relatively low levels, albeit central territory locations may shift.

7.6.6 The establishment of breeding raptor territories within the Site is considered unlikely, given the limited extent (if any) of suitable nesting habitat features such as deep heather swards, crags, steep scree and mature woodland.

7.6.7 Whilst short-term and small-scale variability in ornithological populations and distributions may occur, and revisions to conservation statuses and designations are possible, such changes would be unlikely to qualitatively alter the conclusion of the assessment presented within and have been accounted for through application of a precautionary approach and appropriate mitigation.

7.7 Design Considerations

7.7.1 The following design considerations have been incorporated to specifically reduce and/or otherwise avoid adverse impacts upon ornithological features.

7.7.2 Full details of the scheme design evolution and embedded mitigation measures are detailed in **Chapter 2: Proposed Development**.

7.7.3 Turbines for the Proposed Development have been appropriately offset from habitat features including woodland edge and lochs (adjacent to the Site Boundary) as these have potential to be a focal point for some ornithological species (including waterfowl and raptors). Lochs on-site are all at least 100 m from the turbines, and typically greater than 500 m (20 of the 28 waterbodies/lochs on-site are greater than 500 m from proposed turbines). Turbines have also avoided as much as practically possible the most suitable golden eagle habitat (GET 6+ habitat) as shown in **Confidential Appendix 7.4**.

7.7.4 All identified black grouse lek sites and nest sites of Schedule 1 raptors identified from field surveys and the desk study (osprey, golden eagle and white-tailed eagle) are spatially separated from the Proposed Development's turbines at least to the lower (typically upper) limit of documented disturbance distances as reported by Goodship and Furness (2022), with no identified lek sites within 500 m of the proposed turbines. All identified Schedule 1 raptor nest sites are greater than 2 km from the Site and thus well exceed the upper disturbance limit reported in Goodship and Furness (2022).

7.7.5 Pre-construction nesting bird checks, included as part of the Outline Construction Environmental Management Plan (OCEMP) described below, would ensure that any nest sites that are identified and which may establish in the interim period, are considered during works for the Proposed Development.

Embedded Mitigation Measures

Construction Environmental Management Plan

7.7.6 An oCEMP is provided in **Technical Appendix 2.1** The detailed CEMP would include all good practice construction measures, pollution prevention controls and monitoring to be implemented over the course of the Proposed Development in line with current industry statutory guidance, as detailed within **Appendix 2.1** and **Chapter 2**.

7.7.7 All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally or recklessly kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. In addition, all wild birds listed on Schedule 1 of the Act receive additional legal protection which makes it an offence to intentionally or recklessly disturb these species while building a nest, using, or when near, a nest containing eggs or young; or to disturb their dependent young.

7.7.8 Prior to the commencement of construction activities, a Construction Breeding Bird Protection Plan (CBBPP) would be prepared and submitted for agreement in consultation the Council and NatureScot which would form part of the CEMP.

7.7.9 The CBBPP would be informed by a pre-commencement breeding bird survey to establish the status and distribution of Schedule 1 breeding birds within the site and within 1 km of disturbing activities. This would be carried out in the breeding season preceding the construction phase of the Proposed Development to ensure the most updated information is considered, following receipt of consent. Note, surveys would also be undertaken during the construction phase to inform of 'live' constraints.

7.7.10 The CBBPP would detail the following measures, and any additional measures required on account of findings from the pre-commencement breeding bird survey, to ensure the protection of breeding birds over the course of construction works during the breeding season is updated to reflect best available species guidance applicable at the time.

7.7.11 The CBBPP would be extended to include an annex regarding measures to be adopted during the operation phase, to minimise effects on lekking black grouse (further details are provided in **Section 7.10**).

Environmental Clerk of Works

7.7.12 A suitably qualified EnvCoW would be employed for the duration of the construction and reinstatement periods, to ensure ornithological interests are safeguarded, although this may not necessarily be a full-time role throughout. The role of the EnvCoW would include the following tasks:

- Provide toolbox talks and information to all staff on-site, so staff are aware of the ornithological sensitives of the Site and the legal implications of not complying with agreed working practices;
- Agree and monitor measures designed to minimise damage to retained habitats;
- Undertake pre-and during construction surveys and advise on ornithological issues and working restrictions (including compliance monitoring) where required; and
- Complete site-supervision works as required, in relation to sensitive habitats and protected ornithological species.

Site Clearance Activities

7.7.13 Habitat clearance activities, where these coincide with the breeding bird season (1 March to 31 August, inclusive) would be subject to a pre-clearance survey by the EnvCoW or a competent ornithologist to identify any active wild bird nests. Should any active nests or leks

be found, works would only proceed under the advice of the EnvCoW/appointed ornithologist and following a disturbance risk assessment. This would include all works within the Site.

7.7.14 Work exclusion buffers around identified nest or lek sites would be implemented where necessary in accordance with best available species guidance applicable at the time and/ or as agreed in consultation with NatureScot.

Decommissioning Environmental Management Plan

7.7.15 Prior to the point of decommissioning, a Decommissioning Environmental Management Plan (DEMP) would be developed through consultation with the Council, NatureScot and other relevant consultees in line with relevant legislation and guidance at that point in time. This would detail those measures to be adopted to ensure the protection of key ecological receptors. This would typically mirror those measures adhered to in the CEMP and would include pollution prevention protocols and pre-decommissioning surveys.

7.8 Assessment of Effects

7.8.1 Assessment has been undertaken in accordance with CIEEM guidelines (2018) and includes the following stages:

- Determination and evaluation of important ornithological features;
- Identification and characterisation of impacts;
- Assessment of the significance of effects prior to mitigation measures;
- Outline of mitigating measures to avoid and reduce significant impacts;
- Assessment of the significance of any residual effects after such measures; and
- Identification of appropriate compensation measures to offset significant residual effects.

7.8.2 The assessment has also been undertaken with reference to NatureScot guidance (SNH, 2016 and 2018a) on the assessment of wind farm developments in relation to designated sites and those located within the wider countryside.

7.8.3 In accordance with current NatureScot guidance (SNH, 2018a) the assessment of impacts has been undertaken at a regional scale with regards species populations, unless an alternative geographical scale is considered appropriate on the basis of best available information.

7.8.4 The NHZ (see Wilson *et al*., 2015) is considered to be the most appropriate default regional scale, with the Proposed Development located entirely within NHZ7. Through consultation (see **Table** 7.1) consultees also recommended using NHZ7 as the appropriate regional scale in which effects are considered in the assessment. Accordingly, effects on NHZ7 populations are considered in the assessment.

7.8.5 For common scoter and black-throated diver (qualifying species of the West Inverness-shire Lochs SPA), the assessment of impacts is made against the SPA population (see **Section 7.9**), and against the conservation objectives of the designated site with respect to the information to inform HRA (see **Section 7.15**).

7.8.6 The assessment considers effects upon designated sites and ornithological features which are considered important on the basis of relevant guidance and professional judgement.

7.8.7 Where ornithological features are not considered so important as to warrant a detailed assessment, or where they would not be significantly affected on the basis of baseline information, these are 'scoped out' of the assessment. Mitigation measures for such features may, however, still be outlined as appropriate to reduce and/or avoid any potentially adverse effects or to ensure legislative compliance.

7.8.8 The assessment has also considered (where relevant) effects on IOFs for the Proposed Development cumulatively with other developments, and the cumulative assessment undertaken is in **Section 7.12.**

Determining Importance

7.8.9 Relevant European, national and local guidance has been referred to in order to determine the importance of ornithological receptors. Reference has also been made to NatureScot guidance on "Priority" bird species for assessment, when considering the development of onshore wind farms in Scotland (SNH, 2018a).

7.8.10 In addition, importance has also been determined using professional judgement and taking account of the results of baseline surveys, desk study and the importance of features within the context of the regional geographic area.

7.8.11 For the purposes of this assessment the importance of ornithological features is considered within a defined geographical context, from local to international, as outlined in **Table** 7.5.

7.8.12 Importance does not necessarily relate to the level of legal protection that a feature receives, and ornithological features may be important for a variety of reasons, such as their connectivity to a designated site, rarity or the geographical location of species relative to their known range.

7.8.13 Similarly, whilst a particular feature may be associated with a nearby internationally designated site, the feature is not automatically assigned a value of "International" importance in the context of the Proposed Development, if for example it is only recorded occasionally in small numbers.

Table 7.5: Sensitivity / Geographic Scale of Ornithological Feature of Importance

Sensitivity/ Geographic Scale	Definition
High - International/ National	Species listed on Annex 1 of the EU Birds Directive (2009/147/EC) and which comprise a qualifying interest of a potentially connected internationally statutory designated site for nature conservation i.e. SPA and/or Ramsar site. Nationally or internationally important numbers of a species, including regularly occurring migratory species listed on Annex 1 of the Birds Directive i.e. >1 % of the relevant national or international biogeographical population). Species not listed on Annex 1 of the EU Birds Directive but listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), and which comprise a qualifying interest of a potentially connected nationally designated site for nature conservation i.e. SSSI.
Medium - Regional	Species not listed on Annex 1 of the EU Birds Directive, but listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and which do not comprise a qualifying interest of a statutory designated site for nature conservation i.e. SPA, Ramsar site or SSSI. Regionally important numbers of a species i.e. >1 % of the relevant regional NHZ population (NHZ7) or appropriate alternative and listed on Annex 1 of NatureScot guidance (SNH, 2018b).
Low – Local	Widespread and common and which are not present in regionally or nationally important numbers, but which form part of the breeding/wintering bird assemblage within the Site (and surrounding area).
Site	Widespread and common and which are not present in regionally, nationally or locally important numbers, but which form part of the breeding/wintering bird assemblage within the Site only. Note, these features are not considered in this assessment.

Characterising Effects

7.8.14 Once identified, effects are described with reference to the following characteristics as appropriate:

- Beneficial or adverse;
- Extent;
- Magnitude;
- Duration;
- Timing;
- Frequency; and

- Reversibility.

7.8.15 The assessment only makes reference to those characteristics relevant to understanding the nature of an effect and determining its significance. For the purposes of this assessment the temporal nature of potential effects is described as follows:

- Negligible: of inconsequential duration;
- Short-term: for 1 to 5 years;
- Medium-term: for 5 to 25 years;
- Long-term: >25 to 35 years; and
- Permanent: >35 years.

7.8.16 The likelihood or probability that an effect would occur is also described as far as possible based on best available information and is referred to using the following terms: certain, likely, unlikely or highly unlikely where appropriate.

7.8.17 The criteria used to determine the magnitude of impact are set out in **Table** 7.6.

7.8.18 It is important to note that where reference is made to population level effects to assess magnitude (e.g. at the regional NHZ population level or SPA population level), population estimates used are considered to be guides.

7.8.19 In addition, it is often impossible to equate an impact to an actual population loss. For example, where birds may be displaced from a wind farm as a result of construction or operational activities, such a loss may be temporary or may reasonably result in the relocation of birds to suitable habitats elsewhere within the Site, immediate or wider area. Where uncertainty arises, a precautionary approach has been adopted.

7.8.20 As such, professional judgement, on the basis of best available evidence, has been used to inform the assessment of impacts presented herein.

Table 7.6: Impact Magnitude

Magnitude	Definition
Very High	The impact (either on its own or in-combination with other proposals) may result in the permanent total or almost complete loss of a designated site and/or species status or productivity. Or alternatively notable gains in the species status or productivity. E.g. Affecting >80 % of the relevant Regional NHZ population (NHZ7).
High	The impact (either on its own or in-combination with other proposals) may adversely, or positively, affect the conservation status of a designated site and/or species population, in terms of the coherence of its ecological structure and function (integrity), across its whole area, that enables it to sustain the habitat, complex of habitats and/or the population levels of species of interest. E.g. Affecting >21 % - 80 % of the relevant Regional NHZ population (NHZ7).

Magnitude	Definition
Medium	The impact (either on its own or in-combination with other proposals) would not adversely, or positively, affect the conservation status of a designated site and/or species in the long-term, but some element of the functioning might be affected, and impacts could potentially affect its ability to sustain some part of itself in the short to medium-term. E.g. Affecting >6 % - 20 % of the relevant Regional NHZ population (NHZ7).
Low	Neither the above or below applies, but some observable adverse, or positive, impact is evident on a short-term basis or affects the extent of a species abundance in the local area. E.g. Affecting >1 % -5 % of the relevant Regional NHZ population (NHZ7).
Negligible	A very slight (indiscernible) reduction, or increase, in a species status or productivity and/or no observable effect. E.g. Affecting ≤1 % of the relevant Regional NHZ population (NHZ7).

Determining Significance

7.8.21 For the purposes of assessment, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important features' or for biodiversity in general.

7.8.22 Significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution) and are identified on the basis of magnitude, professional judgment and best available evidence.

7.8.23 CIEEM guidelines (2018) note that "A significant effect does not necessarily equate to an effect so severe that consent for the project should be refused planning permission. For example, many projects with significant negative ecological effects can be lawfully permitted following EIA procedures."

7.8.24 For the purposes of this assessment, significant effects are primarily expressed with reference to the regional NHZ7 population scale (or SPA population scale for SPA qualifying species), in line with NatureScot's interests of a species status at wider spatial levels (SNH, 2018a), as well as agreed through consultation (see **Table** 7.1). The significance of effects at other geographical scales (such as local or national) is also expressed where appropriate and where sufficient information allows a meaningful assessment.

7.8.25 In cases of reasonable doubt, where it is not possible to robustly justify a conclusion of no significant effect, a significant effect has been assumed as a precautionary approach. Where uncertainty exists, this is acknowledged.

7.8.26 Where the ornithological assessment proposes measures to mitigate adverse effects on ornithological features, a further assessment of residual ornithological effects, taking into account any mitigation recommended, has been undertaken.

7.8.27 CIEEM guidelines (2018) do not recommend the sole use of a matrix table as commonly set out in EIA Report chapters to determine 'significant' and 'not significant' effects. For the purposes of this assessment presented herein, **Table** 7.7 sets out adapted CIEEM terminology and equivalent EIA terms.

7.8.28 **Major** and **moderate** effects are considered significant in the context of the EIA Regulations.

Table 7.7: Effect (EIA Significance)

Sensitivity	Impact Magnitude				
	Very High	High	Medium	Low	Negligible
High	Major	Major/Moderate	Moderate/Minor	Minor	Negligible
Medium	Major/Moderate	Moderate	Minor	Minor/Negligible	Negligible
Low	Moderate/Minor	Minor	Minor	Minor/Negligible	Negligible

Requirements for Mitigation

7.8.29 A mitigation hierarchy has been adopted to avoid, mitigate and compensate for potential ornithological impacts as a result of the Proposed Development:

- Avoidance is used where an impact has been avoided e.g., through changes in scheme design;
- Mitigation is used to refer to measures to reduce or remedy a specific negative impact in situ;
- Compensation describes measures taken to offset residual effects, i.e., where mitigation in situ is not possible; and
- Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

Assessment of Residual Effect Significance

7.8.30 Where the assessment proposes measures to mitigate adverse effects on ornithological features, a further assessment of residual effects, taking into account any ornithological mitigation recommended, has been undertaken (see **Section 7.11**).

Cumulative Assessment

7.8.31 Potentially significant cumulative effects can result from actions resulting in individually not significant effects but collectively significant effects over a period of time or concentrated in a location.

7.8.32 Cumulative effects have therefore been assessed with reference to guidance (SNH, 2018b) for important ornithological features subject to a detailed assessment. Information on relevant cumulative projects (within NHZ7, with information on the scoped in IOFs) was sought from NatureScot, and relevant information was provided (collision risks or relevant Target Species, and displacement information with regards to golden eagle). Furthermore, criteria for the GET model (details provided in **Confidential Appendix 7.4**) are also considered in determining parameters for cumulative assessment.

7.8.33 The cumulative assessment as detailed in **Section 7.12** includes consideration of:

- Existing wind farm developments, either built or under construction;
- Approved wind farm developments, awaiting implementation; and
- Wind farm developments in planning, within the planning process with design information in the public domain.

7.8.34 No major non-wind developments are considered in the assessment given no such development was identified by NatureScot during scoping (see consultation points in **Table** 7.1) as requiring consideration.

7.8.35 Those developments which have been withdrawn and/or refused, or at scoping, are not considered, unless an appeal is currently in progress and appropriate information is available.

7.8.36 Small wind farm developments, including those with three turbines or less, have also been scoped out as applications for such developments do not generally consider the potential for impacts upon ornithological features in sufficient detail to meaningfully inform assessment.

7.8.37 With regard to the spatial extent of the cumulative assessment, guidance (SNH, 2018b) recommends that cumulative effects should typically be assessed at the relevant regional NHZ scale, unless there is a reasonable alternative.

7.8.38 In this case, the undertaking of a cumulative assessment of potential impacts at the NHZ scale entails the consideration of a large number of other wind farm developments. NatureScot have provided a list of effects from major wind farm developments within NHZ7 which have been considered in this assessment (given the Site falls entirely within NHZ7; see **Table** 7.1 for consultation points on this subject).

7.8.39 The search area used in accordance with the criteria for GET model was 20 km (see **Confidential Appendix 7.4**).

Requirements for HRA

7.8.40 The Site is located 2.22 km from West Inverness-shire Lochs SPA, where effects on both qualifying species (common scoter and black-throated diver) are considered possible.

7.8.41 Accordingly, this chapter (see **Section 7.15**) provides a 'screening' stage where the Proposed Development is examined to determine if it will have a likely significant effect on the West Inverness-shire Lochs SPA. Furthermore, **Section 7.15** provides information to inform an HRA (which is all the relevant data and details gathered) to allow the competent authority to undertake an AA, if necessary.

Enhancement Opportunities

7.8.42 As a fundamental part of the Proposed Development, habitat enhancement opportunities on-site are investigated. The requirements of Policy 3 of NPF4 states that developments will contribute to the enhancement of biodiversity, and this could include restoring degraded habitats and strengthening nature networks and connections between them. Enhancement

measures to be investigated and adopted are accordingly provided in the OBEMP, **Appendix 6.7**.

7.9 Potential Impacts

7.9.1 This section presents an assessment of effects upon important ornithological interest, in the absence of tertiary and non-embedded design mitigation as a result of the Proposed Development alone.

7.9.2 The Proposed Development has been assessed for an operational lifespan of 35 years.

7.9.3 The following potential effects have been assessed:

- Disturbance to birds during construction due to vehicular traffic, operating plant and the presence of construction workers;
- Disturbance to birds during the operation of the wind farm through the presence of the turbines, vehicular traffic and the presence of people during operations;
- Collision mortality of birds with turbine blades and other infrastructure; and
- Habitat loss (nesting/breeding/roosting/foraging areas) during construction and operation.

7.9.4 In this section, effects on those ornithological interests scoped into detailed assessment are considered, as summarised in **Table** 7.8. These comprise golden eagle, black grouse, golden plover, greenshank, dunlin and qualifying species of the West Inverness-Shire Lochs SPA and component SSSI (common scoter and black-throated diver). All other ornithological features are scoped out of detailed assessment with justification provided in **Table** 7.8.

Table 7.8: Summary of Important Ornithological Features

Ornithological Feature	Importance	Justification
Designated Sites for nature conservation	International/ National	The Proposed Development does not form part of any statutory designated site for nature conservation with qualifying ornithological features. The West Inverness-Shire Lochs SPA, and component SSSI are 2.22 km from the Site, which is within the documented 10 km foraging range of black-throated diver (taken from SNH, 2016). Following consultation (see **Table** 7.1), the potential for common scoter (the second qualifying species of the SPA and SSSI) to be active at the locality cannot be discounted. The effects on the qualifying species (breeding black-throated diver and common scoter) of the West Inverness-Shire Lochs SPA and SSSI are **scoped into detailed assessment**. Furthermore, information to inform a HRA in relation to the West Inverness-shire Lochs SPA is provided in **Section 7.15**. Effects on qualifying species of the Glen Affric SSSI (breeding bird assemblage including crested tit, Scottish crossbill, capercaillie and black grouse), located 8.58 km from the Site is **scoped out of detailed assessment**. This is due to a lack of records of most of the listed species from the baseline information gathering, lack of effects on suitable habitats for these species, and the Site being spatially separated from the SSSI such that disturbance on breeding qualifying species can be discounted (based on disturbance buffers reported in Goodship and Furness, 2022). Furthermore, black grouse recorded during baseline surveys are not considered to be part of the Glen Affric SSSI population given the spatial distance between the SSSI and the Site (>8.5 km), and features including the A887 and the River Moriston between the SSSI and the Site which may restrict any wider dispersal of grouse from the SSSI in the direction of the Site.
Wood sandpiper	National	Wood sandpiper is a Schedule 1, BoCC Red List, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). A peak of three breeding territories were recorded during baseline surveys, which represents 8.3 % of the UK population, which all breed in Scotland (from Eaton *et al.,* 2021). Note, there is no

Ornithological Feature	Importance	Justification
		such NHZ7 population estimate, but given the limited size of the estimated Scottish population (36 breeding pairs) the NHZ7 population will be very low. It is noted that NatureScot did state (see **Table** 7.1) that if effects on wood sandpiper are predicted then a NHZ7 population for the species can be provided. Given, no such effects are anticipated (see below) this has not been requested at this time. All identified breeding territories are spatially separated from the Proposed Development (including turbines and access tracks) in excess of 300 m which is the documented upper disturbance limit for this species (Goodship and Furness, 2022). Furthermore, wood sandpiper territories were associated with waterbodies, typically on the periphery of the Site, and thus would not be enclosed by the Proposed Development. Given the Proposed Development is offset from the wood sandpiper breeding territories and due to the retention of sufficient suitable habitat to support the density of breeding pairs present, **the species is scoped out of detailed assessment.**
Golden eagle	Regional	Golden eagle is an Annex I, Schedule 1, SBL and LBAP species. Seven 'at-risk' flights were recorded during the survey period (2021-23), indicative of low activity. Although no definitive evidence of breeding (such as nest site) was recorded from the baseline information gathering, the study area (out to 6 km from the Site) is considered to be part of, at least, one breeding pair's territory in the wider area. Open habitat within the Site was used modestly by eagles for traversing/ foraging. If it is assumed that one single golden eagle territory overlaps with the study area this single territory represents 2.3 % of the NHZ7 population estimate (from Wilson *et al.,* 2015). **Golden eagle is therefore scoped into detailed assessment.**
Greenshank	Regional	Greenshank is a Schedule 1, BoCC Amber List and LBAP species. Two 'at-risk' flights were recorded during the survey period (2021-23). A peak of six breeding territories were recorded during baseline surveys, which represents 4.1 % of the NHZ7 population estimate (from Wilson *et al.,* 2015). Of these, up to three territories

Ornithological Feature	Importance	Justification
		were within 500 m of the Proposed Development (2 %), which is within the disturbance limits for the species (Goodship and Furness, 2022). Given the potential effects on up to three pairs, **greenshank is therefore scoped into detailed assessment.**
Black grouse	Regional	Black grouse is a BoCC Red List, SBL and LBAP species. One 'at-risk' flight was recorded during the survey period (2021-23). A total of four leks were recorded across the survey period. The peak number of lekking males recorded during any one survey year was eight which represents 1.69 % of the NHZ7 population estimate (from Wilson *et al.,* 2015). All four identified leks are within 500 m of the Proposed Development (although >500 m from proposed turbines). The documented disturbance limit for lekking black grouse is 500-750 m (Goodship and Furness, 2022), and thus the four leks are located within the documented lower disturbance limit. Given the potential effects on four leks (peak of eight lekking males), **black grouse is scoped into detailed assessment.**
Dunlin	Regional	Dunlin is a BoCC Red List, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). A peak of seven breeding territories were recorded during baseline surveys, which represents 7.8 % of the NHZ7 population estimate (from Wilson *et al.,* 2015). All identified breeding territories with the exception of one breeding territory are in excess of 200 m from the turbines of the Proposed Development which is the documented upper disturbance limit (Goodship and Furness, 2022). There are up to two dunlin breeding territories within 200 m of the Proposed Development. One to two dunlin pairs represent 1.1 – 2.2 % of the NHZ7 population estimate, with seven pairs on-site representing 7.78 % of the NHZ7 estimate (from Wilson *et al.,* 2015). Given up to two dunlin pairs may be potentially affected **dunlin is scoped into detailed assessment.**
Golden plover	Local	Golden plover is an Annex I, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23).

Ornithological Feature	Importance	Justification
		A peak of 12 breeding territories were recorded during baseline surveys, which represents 0.4 % of the NHZ7 population estimate (from Wilson *et al.,* 2015). Up to nine territories were within 500 m of the Proposed Development (which is within the disturbance limits for the species, see Goodship and Furness, 2022). Given up to nine golden plover pairs may be potentially affected **golden plover scoped into detailed assessment.**
Common Snipe	Local	Common snipe is a BoCC Amber List and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). A peak of two breeding territories were recorded during baseline surveys, which represents only 0.15 % of the NHZ7 population estimate (from Wilson *et al.,* 2015). The study area is therefore only used by modest numbers of breeding snipe. All identified breeding territories are in excess of 200 m from the turbines of the Proposed Development which is the documented upper disturbance limit (Goodship and Furness, 2022). There are up to two snipe breeding territories within 200 m of the Proposed Development (existing access track). Given the Proposed Development is typically offset from the modest number (two pairs; 0.15 % of NHZ7 population) of common snipe breeding territories (only existing access track within 200 m), and due to the retention of suitable habitat, the **species is scoped out of detailed assessment.**
Teal	Local	Teal is a BoCC Amber List species. No 'at-risk' flights were recorded during the survey period (2021-23). A peak of two breeding territories were recorded during baseline surveys, using waterbodies on-site. Two territories indicate only modest numbers of breeding teal. There are no available NHZ population estimates for teal, but the Scottish breeding population is 1,950-3,400 pairs (Scottish Government, 2014) and two pairs represents <0.06 % of the population. One breeding territory is within 200 m of the Proposed Development. Given the Proposed Development is typically offset from the teal breeding territories (only one territory within 200 m), and due to the retention of suitable habitat (waterbodies), the **species is scoped out of detailed assessment.**

Ornithological Feature	Importance	Justification
White-tailed eagle	Local	White-tailed eagle is an Annex I, Schedule 1, BoCC Amber List, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). No evidence of white-tailed eagle holding breeding territory were recorded during surveys. Desk study indicates two breeding pairs in the wider area (> 6 km from the Site). Given the known breeding territories/nest locations are located well in excess of the documented upper disturbance limits for the species from the Proposed Development (from Goodship and Furness, 2022) and given the very limited usage of the study area by white-tailed eagle, the **species is scoped out of detailed assessment.**
Merlin	Local	Merlin is an Annex I, Schedule 1, BoCC Red List, SBL and LBAP species. One 'at-risk' flight was recorded during the survey period (2021-23). No evidence of merlin holding breeding territory were recorded during surveys, and no records were returned from the desk study. **Merlin is scoped out of detailed assessment.**
Hen harrier	Local	Hen harrier is an Annex I, Schedule 1, BoCC Red List, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). No evidence of hen harrier breeding was identified during surveys, and no records were returned from the desk study. **Hen harrier is scoped out of detailed assessment.**
Red kite	Local	Red kite is an Annex I, Schedule 1, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). No evidence of red kite breeding was identified during surveys, and no records were returned from the desk study. **Red Kite is scoped out of detailed assessment.**

Ornithological Feature	Importance	Justification
Grey heron	Site	One 'at-risk' flight was recorded during the survey period (2021-23), indicative of only very limited activity. No further evidence of grey heron recorded during surveys. **Grey heron is scoped out of detailed assessment.**
Red-throated diver	Local	Red-throated diver is an Annex I, Schedule 1, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). No evidence of red-throated diver breeding was identified during surveys, and no records were returned from the desk study. Only one diver flight was recorded during the entire survey period, an individual circling above Loch a Bhainne, approximately 2 km from the Site. There was no evidence from surveys that the divers bred on the loch. **Red-throated diver is scoped out of detailed assessment.**
Black-throated diver	Local	Black-throated diver is an Annex I, Schedule 1, BoCC Amber List, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). No evidence of black-throated diver breeding was identified during surveys, and no records were returned from the desk study sources. **Black-throated diver is scoped out of detailed assessment.** However, effects on the species are considered with respect to the West Inverness-shire Lochs SPA and this is provided as an information to inform a HRA (see **Section 7.15**).
Common scoter	Local	Common scoter is a Schedule 1, BoCC Red List, SBL and LBAP species. No 'at-risk' flights were recorded during the survey period (2021-23). No evidence of common scoter breeding was identified during surveys, and no records were returned from the desk study sources. **Common scoter is scoped out of detailed assessment.** However, effects on the species are considered with respect to the West Inverness-shire Lochs SPA and this is provided as an information to inform a HRA (see **Section 7.15**).

Ornithological Feature	Importance	Justification
Pink-footed goose	Site	Pink-footed goose is a BoCC Amber List species. A total of two 'at-risk' flights (total of 244 birds) were recorded during the survey period (2021-23). All flights were in April (both in 2022 and 2023), indicating birds on passage through the area and not being active at the locality during the main non-breeding season. These geese are not considered to be connected to any specific designated site (and there is no such site with qualifying pink-footed goose interest within 20 km of the Site) but instead are considered part of the Scottish 'wider countryside' non-breeding population. Based on the combined population of all NHZs in Scotland the total population is 462,714 (from Wilson *et al.,* 2015). The 244 geese which passed (comprising the two at risk flights) represents 0.05 % of the Scottish population. Formal CRM analysis was not undertaken given the geese recorded are not considered part of a SPA population, in accordance with NatureScot guidance (2024). The effects on pink-footed geese are considered to be inconsequential at the Scottish population level. **Pink-footed goose is scoped out of detailed assessment.**
Osprey	Local	Osprey is an Annex I, Schedule 1, BoCC Amber List and SBL species. No 'at-risk' flights were recorded during the survey period (2021-23). One osprey nest site was located approximately 6 km from the Site, with some flights recorded during raptor searches (but not indicative of any closer breeding activity to the Site). Given the spatial separation of the Proposed Development from the nest site, and lack of osprey activity in the study area, the **species is scoped out of detailed assessment.**
Red grouse	Site	Red grouse is a BoCC Amber List and SBL species. One red grouse breeding territory was recorded during the SBBS, within 500 m of the proposed access track. Embedded mitigation, including the implementation of good practice construction measures and pre-construction surveys (as detailed in **Section 7.7**), as well as the extent of suitable habitat in the study area, are considered adequate to avoid any potentially significant adverse effects upon red grouse.

Ornithological Feature	Importance	Justification
		Red grouse is scoped out of detailed assessment.
Other Raptors – peregrine and goshawk	Local	Peregrine is an Annex I, Schedule 1, SBL and LBAP species. Goshawk is a Schedule 1 and LBAP species. Two peregrine and two goshawk flights were recorded during entire survey period with none of these 'at-risk' height. No evidence was recorded of either species holding breeding territory during surveys, and accordingly both **species are scoped out of detailed assessment.**
Other Waders – whimbrel and lapwing	Local	Whimbrel is a Schedule 1 and BoCC Red List species. Lapwing is a BoCC Red List, SBL and LBAP species. One whimbrel and one lapwing flight were recorded during the entire survey period with none of these 'at-risk' height. No evidence was recorded of either species holding breeding territory during surveys, and accordingly both **species are scoped out of detailed assessment.**
Other Wetland species – goosander and greylag goose	Local	Greylag goose is a BoCC Amber List species. One goosander and one greylag goose (two birds) flights were recorded during the entire survey period with none of these 'at-risk' height. No evidence of either species holding breeding territory was recorded during surveys, and accordingly both **species are scoped out of detailed assessment.**

Ornithological Features Scoped out of Detailed Assessment

7.9.5 Ornithological features assigned 'local' or lower importance have mostly been scoped out of detailed assessment on the basis of their established presence in numbers of very low importance and low levels of activity recorded during baseline surveys (**Appendix 7.1**). The only exception is golden plover which, although assigned local importance, was included in the detailed assessment given the relatively high number of breeding territories recorded in the study area (peak of 12).

7.9.6 Wood sandpiper has been assigned 'national' importance due to the presence of up to three breeding pairs in the study area. However, the species has been scoped out of detailed assessment given the territories' proximity to the Proposed Development (which exceeded the upper disturbance limit for the species, from Goodship and Furness, 2022), available suitable habitat within the study area (including retention of the breeding habitat used by the pairs on-site), and because embedded mitigation is considered appropriate to negate any potential for significant effects on the species (further information on embedded mitigation is provided in **Section 7.7**).

7.9.7 As all wild birds and their nests are protected under the provisions of the Wildlife and Countryside Act 1981 (as amended) mitigation measures are however, outlined to ensure legislative compliance and protection for the in-use nests, eggs and dependent young of all wild birds.

Designated Sites for Nature Conservation

7.9.8 Effects on the West Inverness-shire Lochs SPA and component West Inverness-shire Lochs SSSI is considered with respect to potential effects on the qualifying species; black-throated diver and common scoter.

7.9.9 A summary of information relevant to inform a HRA in relation to the West Inverness-shire Lochs SPA is provided in **Section 7.15**.

Collision Risk Modelling Analysis

7.9.10 CRM analysis has been undertaken for golden eagle only on the basis of the 'at-risk' flight activity recorded (≥ 3 flights, or more than ten birds, within the two-year baseline survey period). Full details are provided in **Appendix 7.2**.

Direct Habitat Loss

7.9.11 The Proposed Development would result in the direct and permanent loss of open moorland habitats as detailed within **Chapter 6**.

7.9.12 Habitat losses have the potential to result in the loss, or otherwise lowered quality, of nesting and foraging opportunities for ornithological features which are known to use or inhabit the Site (or the wider area), primarily including black grouse and open moorland species.

7.9.13 Overall direct and permanent habitat losses, on the basis of the nature and scale of the Proposed Development, are considered to be small (footprint of the Proposed Development

is 4.08 ha, compared to 1,912 ha within the Site; thus 0.2 % of habitat on-site), resulting in an adverse impact upon ornithological features at no more than a "local" level. However, habitat loss is specifically considered in the assessment specific to those ornithological features that are scoped into the assessment for the construction phase.

7.9.14 All wild birds, their in-use nests, eggs and dependent young are protected under the provisions of the Wildlife and Countryside Act 1981 (as amended). Site clearance activities during the construction phase of the Proposed Development, where undertaken during the breeding bird season (broadly March to August inclusive), may therefore result in an offence under the act should activities result in the loss or damage to in-use nests, eggs or dependent young of any wild bird species. Mitigation measures are therefore outlined (see **Section 7.7**) to ensure legislative compliance during the construction phase and further consideration of loss or damage to active nests/dependant young is scoped out of this assessment.

7.9.15 The potential for indirect habitat loss to ornithological features as a result of disturbance and displacement is assessed for both the construction and operational phase of the Proposed Development.

Construction

7.9.16 Potential construction phase ornithological effects associated with the Proposed Development are considered to relate to disturbance/ displacement of birds from the area and habitat loss as a result of the footprint of the Proposed Development.

7.9.17 Potential effects are assessed on the assumption that embedded mitigation measures, as detailed in **Section 7.7** and within **Chapter 2** will be implemented thoroughly and effectively.

7.9.18 During construction of the Proposed Development, noise and visual disturbance could lead to the short-term displacement or disruption of breeding and foraging birds. The magnitude of effect would be dependent on the timing, the extent of displacement, species affected and availability of alternative suitable habitats within the Site's locality.

7.9.19 During and after construction, habitat loss could result in a reduction of suitable habitat (used for example for nesting/breeding/foraging/roosting by birds) and/or habitat quality.

7.9.20 The construction period is anticipated to last approximately 17 months.

West Inverness-shire Lochs SPA and SSSI

7.9.21 The West Inverness-shire Lochs SPA and SSSI is 2.22 km south of the Site at its closest point. Documented disturbance limits for black-throated diver are 500-750 m, and for common scoter are 300-500 m (Goodship and Furness, 2022). The spatial distance between the Site and the SPA and SSSI therefore exceeds the upper distrubance limits for both species. Potential construction effects to the West Inverness-shire Lochs SPA and SSSI (and breeding black-throated diver and common scoter within the SPA and SSSI boundary, which are the qualifying species) are therefore considered to be short-term, and of a Negligible magnitude of impact, resulting in a **Negligible** adverse effect which is considered **Not Significant** at the SPA and SSSI population level. Furthermore, there was no evidence of black-throated diver or common scoter (potentially part of the SPA/SSSI population) using waterbodies on-site or within 1 km of the Site. The waterbodies were considered unlikely to

support either breeding species due to black-throated diver requiring larger lochs to breed, and particularly the proximity of operational wind farms which is considered likely to deter common scoter from settling and breeding (with both species known to require low levels of disturbance, SNH, 2007).

7.9.22 A summary of information relevant to inform a HRA in relation to the West Inverness-shire Lochs SPA, is provided in **Section 7.15**.

Golden Eagle

7.9.23 A total of 27 golden eagle flights were recorded during VP flight activity surveys (September 2021 to August 2023), of which only seven flights were 'at-risk'.

Displacement / Disturbance

7.9.24 Construction works associated with the Proposed Development would occur at a sufficient distance from any identified golden eagle eyrie (records from the desk study, given no nest sites were identified during field surveys) to preclude the likelihood of disturbance to nesting pairs (750 - 1000 m based on expert opinion; Goodship and Furness, 2022). As such, no disturbance to breeding golden eagles at their nest sites would occur.

7.9.25 In line with current research, which suggests some evidence for construction phase displacement of golden eagles from wind farm sites (Haworth Conservation, 2015), there may be some level of disturbance to individual birds which choose to utilise habitats in the vicinity of working areas over the course of construction works (anticipated to be approximately 17 months). Only modest golden eagle activity was however recorded during the entire survey period which provides no evidence that the Site is functioning as a core part of any golden eagle's breeding territory. Note, the GET model results (see **Confidential Appendix 7.4**) also suggested that the Site does not represent part of a core golden eagle breeding range likely, at least partly, as a consequence of operational wind farms to the south and south-west of the Site deterring eagle establishment at the locality.

7.9.26 Any impacts would be short-term and would constitute an impact of Negligible magnitude, resulting in a **Negligible** adverse effect which is considered **Not Significant** at the NHZ7 population level.

Habitat Loss

7.9.27 The Site is predominantly open moorland habitat (all but commercial forestry in the north-west of the Site), and the most suitable eagle habitat ('GET 6+') is in the west of the Site, with central and eastern parts of the Site of lower suitability for eagles (see **Confidential Appendix 7.4**). The Development Area is principally located in the centre, and the east of the Site (thus in habitat of lower suitability for eagles), but there are up to three proposed turbines within GET 6+ habitat, so the Proposed Development has not been able to entirely avoid potentially suitable eagle habitat. The Site is adjacent to the Millennium Wind Farm and extension which are considered 'closed' habitat and unsuitable, and wind turbines are likely to displace golden eagles out to *c.* 300 m (see **Confidential Appendix 7.4**).

7.9.28 Golden eagle activity was relatively low and randomly distributed within the Site, as shown in **Figures 9.5a** and **9.5c**. Although no definitive breeding evidence (such as nest site) was

recorded during the surveys, (territorial) display behaviour was recorded in Year 2 within 6 km of the Site, and the desk study revealed a number of golden eagle breeding territories in the wider area (greater than 2 km from the Site). The activity recorded (albeit limited) may be reflective of at least one golden eagle territory in the wider area (out to at least 10 km from the Site), and which is almost certainly associated with one of the known territories identified by HRSG from data.

7.9.29 There would be no direct loss of known or potentially suitable undisturbed nesting habitat for golden eagle. Potential direct moorland foraging habitat losses as a result of the Proposed Development are also considered negligible in the context of remaining habitats immediate to the Site and in the wider surrounding area and that are likely within the range of the nearest golden eagle territory. The GET model (see **Confidential Appendix 7.4** for details) predicts an insignificant loss of suitable golden eagle habitat during the construction stage of the Proposed Development; given such a small proportion (<1-2 %) of suitable habitat (GET 6+ habitat) within the golden eagle's estimated range would be lost.

7.9.30 Overall direct habitat losses would not be considered to affect the perceived quality of the potential foraging range of golden eagles or result in reduced breeding success or subsequent abandonment by any golden eagle pair in the wider area (out to 10 km).

7.9.31 Such impacts of habitat loss for both breeding and non-breeding eagles would be short-term and would constitute an impact of Negligible magnitude, resulting in a **Negligible** adverse effect which is considered **Not Significant** at the NHZ7 population level.

Greenshank

7.9.32 A total of four greenshank flights were recorded during VP flight activity surveys (September 2021 to August 2023), of which only two flights were 'at-risk'. A peak of six breeding territories were recorded within the study area.

Displacement / Disturbance

7.9.33 Of the peak of six breeding territories, up to two were recorded within 500 m of a proposed turbine, and up to three were recorded within 500 m of the Proposed Development (thus including all infrastructure, such as access tracks). Although greenshank will not use the same nest site annually, it is considered likely that the same areas could be used in subsequent breeding seasons.

7.9.34 Published literature by Goodship and Furness (2022) on disturbance distances to breeding greenshank suggest a range of 300-500 m where disturbance is possible.

7.9.35 As a precaution and given greenshank may be disturbed out to 500 m, it cannot be precluded that up to three breeding pairs recorded within 500 m of the Proposed Development would be displaced during construction (at least in the short-term). This is considered a worst-case scenario given the Proposed Development includes existing access tracks, but these are included given they may need to be upgraded, and thus construction disturbance may occur. In the event that three pairs are displaced this would constitute 2 % of the NHZ7 population estimate (which is 148 pairs, from Wilson *et al*., 2015). There is suitable habitat for breeding greenshank in the wider area including moorland to the south and south-west of the Site (and the operational Millennium and Millennium South Wind Farms), and within the Site itself,

especially in the north-east. Furthermore, greenshanks are expected to return to breeding habitats at least where they are 500 m from the proposed turbines following construction.

7.9.36 A total of four greenshank flights were recorded during two years of VP flight activity surveys, suggesting that the Site was subject to only modest levels of greenshank activity.

7.9.37 Impacts are predicted to be short-term, and are considered no more than Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Habitat Loss

7.9.38 The Site is open moorland habitat which is used by modest numbers of breeding greenshank.

7.9.39 There would be a direct loss of suitable nesting habitat for greenshank (from the Proposed Development footprint) out to potentially 500 m as a precaution (in terms of indirect habitat loss) (using upper limit in Goodship and Furness, 2022), and this may affect up to three breeding pairs, based on baseline surveys.

7.9.40 There is alternative suitable breeding and foraging habitat in the wider area, and therefore even in the worse-case scenario of three breeding greenshank pairs unable to use habitats on-site during construction, these would likely use alternative suitable habitat on, or near, the Site.

7.9.41 The loss of the habitat during construction is therefore only expected to have a limited effect on greenshank. There would be some reinstatement of habitats disturbed during construction, but there would be a permanent loss of some habitats as a result of the footprint of the Proposed Development.

7.9.42 Impacts are considered short-term, and no more than Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Black Grouse

7.9.43 One black grouse flight was recorded during VP flight activity surveys (September 2021 to August 2023), which was ‘at-risk’. A peak of four lek sites were recorded within the study area (based on the survey results combined).

Displacement / Disturbance

7.9.44 A review of disturbance distances for the species suggest that breeding female black grouse would not be passively disturbed at distances greater than 100 - 150 m and leks would not be passively disturbed at over 500 - 750 m (Goodship and Furness, 2022).

7.9.45 Based on the survey results, no lek sites were identified within 500 m of the proposed turbines, however four leks are within 500 m of the Proposed Development (thus including all infrastructure, such as access tracks). Construction works to the access track (principally the existing track) if required may therefore result in, at least the short-term displacement of four leks (peak of eight males recorded). In the event that four leks (eight males) are displaced this would constitute 1.69 % of the NHZ7 population estimate (which is 472 lekking males, from Wilson *et al*., 2015). There is suitable habitat for lekking back grouse in the wider area including moorland to the south and south-west of the Site (and the operational

Millennium and Millennium South Wind Farms), and within the Site itself, especially in the north-east. Furthermore, it is expected that black grouse would return to the identified lek sites after the construction phase, especially given the lek sites are all within 500 m of an existing access track (and thus lekking birds will already be habituated to some level of vehicular traffic on the access track).

7.9.46 Impacts are short-term, and are considered no more than Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level. However, additional mitigation is proposed as stated in **Section 7.10**, to reduce unnecessary disturbance/displacement to leks on-site.

Habitat Loss

7.9.47 The Site is open moorland habitat which is considered suitable for lekking males. However, survey results suggested the lek sites are all in open habitat in the north of the Site in close proximity to adjacent forested areas, and away from the operational Millennium Wind Farm and extension.

7.9.48 The loss of potentially suitable habitat for black grouse would be small in the context of remaining habitats immediate to the Site and in the wider surrounding area and that could be used by lekking birds.

7.9.49 Overall direct habitat losses would not be considered to affect the perceived quality of the potential range of any breeding black grouse in the wider area or result in reduced breeding success or subsequent abandonment by any breeding birds in the medium-term (although short-term displacement cannot be precluded, see above). The proposed turbines are located greater than 500 m from all leks, although the Proposed Development (thus including infrastructure, including existing access tracks) lie within 500 m of four leks. It is considered that after construction, the four lek sites would continue to be used by black grouse given the leks' location in relation to the Proposed Development.

7.9.50 Impacts are short-term, and are considered no more than Low adverse magnitude, resulting in a **Minor/Negligible adverse** effect which is **Not Significant** at the NHZ7 population level.

Dunlin

7.9.51 A total of four dunlin flights were recorded during VP flight activity surveys (September 2021 to August 2023), but none of these were 'at-risk'. A peak of seven breeding territories were recorded within the study area.

Displacement / Disturbance

7.9.52 Of the peak of seven breeding territories, none were recorded within 200 m of a proposed turbine, but two were recorded within 200 m of the Proposed Development (thus including all infrastructure, such as access tracks). Although dunlin will not use the same nest site between years, it is considered likely that the same areas could be used in subsequent breeding seasons.

7.9.53 Published literature by Goodship and Furness (2022) on disturbance distances to breeding dunlin suggest a range of 100-200 m where disturbance is possible.

7.9.54 In the event that the two dunlin pairs within 200 m of the Proposed Development are displaced (even in the short-term), this would constitute 2.22 % of the NHZ7 population estimate (which is 90 pairs, from Wilson *et al*., 2015). There is suitable habitat for breeding dunlin in the wider area including to the south and south-west of the Site (and the Millennium and Wind Farm and extension), and within the Site especially in the north-east. Furthermore, dunlin is also considered likely to return to breeding habitat following the construction phase.

7.9.55 A total of four dunlin flights were recorded during two years of VP flight activity surveys, suggesting that the Site was subject to only modest levels of dunlin activity.

7.9.56 Impacts are short-term, and are considered no more than Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Habitat Loss

7.9.57 The Site is open moorland habitat which is used by modest numbers of breeding dunlin.

7.9.58 There would be a direct loss of suitable nesting habitat for dunlin from the Proposed Development footprint potentially out to a precautionary 200 m in terms of indirect habitat loss (using upper limit in Goodship and Furness, 2022), and this may affect up to two breeding pairs, based on results of baseline surveys.

7.9.59 There is alternative suitable breeding and foraging habitat in the wider area, and therefore even in the worse-case scenario of two breeding dunlin pairs unable to use habitats within 200m of the Proposed Development during construction these would likely use alternative suitable habitat, including elsewhere in the Site.

7.9.60 The loss of the habitat during construction is therefore only expected to have a limited effect on dunlin.

7.9.61 Effects are therefore considered short-term, and no more than Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Golden Plover

7.9.62 A total of three golden plover flights were recorded during VP flight activity surveys (September 2021 to August 2023), but none of these were ‘at-risk’. A peak of 12 breeding territories were recorded within the study area.

Displacement / Disturbance

7.9.63 Of the peak of 12 breeding territories, six were recorded within 500 m of a proposed turbine, and up to nine were recorded within 500 m of the Proposed Development (thus including all infrastructure, such as access tracks). Although golden plover will not use the same nest site between years, it is considered likely that the same areas could be used in subsequent breeding seasons.

7.9.64 Published literature by Goodship and Furness (2022) on disturbance distances to breeding golden plover suggest a range of 200-500 m where disturbance is possible, although there is little consistent evidence on displacement of species like golden plover specifically from

wind farm developments during construction and operation (see Pearce-Higgins *et al.* (2009), Whitfield *et al.* (2010) and Pearce-Higgins *et al*. (2012)).

7.9.65 As a precaution and given golden plover may be disturbed out to 500 m, it cannot be precluded that nine breeding pairs recorded within the study area would be displaced during construction, at least in the short-term. In the event that nine pairs are displaced this would constitute 0.3 % of the NHZ7 population (which is 3,009 pairs, from Wilson *et al*., 2015). There is suitable habitat for breeding golden plover in the wider area including to the south and south-west of the Site (and the Millennium Wind Farm and extension), and within the Site, especially in the north-east.

7.9.66 Such impacts would be short-term and would constitute an impact which is considered to be of a Negligible magnitude of impact, resulting in a **Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

7.9.67 With the potential displacement of up to nine pairs of the 12 breeding on-site as a worst-case scenario, local-scale impacts are considered as short-term and would constitute an impact which is of Low magnitude of impact, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the local level.

Habitat Loss

7.9.68 The Site is open moorland habitat which is used by moderate numbers of breeding golden plover.

7.9.69 There would be a direct loss of suitable nesting habitat for golden plover from the Proposed Development footprint, out to potentially 500 m as a precaution (in terms of indirect habitat loss) (using upper limit in Goodship and Furness, 2022), and this may affect up to nine breeding pairs, based on baseline surveys.

7.9.70 There is alternative suitable breeding and foraging habitat in the wider area, and therefore even with up to nine breeding plover pairs unable to use habitats on-site, within 500 m of the proposed turbines, during construction these would likely use alternative suitable habitat, including on-site.

7.9.71 A total of three golden plover flights were recorded during two years of VP flight activity surveys, suggesting that the Site was subject to relatively modest levels of golden plover activity.

7.9.72 The loss of habitat during construction is therefore only expected to have a limited effect on golden plover.

7.9.73 Impacts are therefore considered short-term and would constitute an impact of Negligible magnitude, resulting in a **Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

7.9.74 With the potential habitat loss for up to nine pairs of the 12 breeding on-site as a worst-case scenario, local-scale impacts are considered as short-term and would constitute an impact which is of Low magnitude of impact, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the local level.

Operation

7.9.75 Potential operational ornithological effects associated with the Proposed Development are considered to relate to disturbance / displacement and collision mortality of birds from the area occupied by the Proposed Development and surrounding areas as a result of the operation of the Proposed Development. Note, effects of indirect habitat loss from the operation of the Proposed Development are also covered within the disturbance / displacement assessment.

West Inverness-shire Lochs SPA and SSSI

Displacement / Disturbance & Collision Risk

7.9.76 The West Inverness-shire Lochs SPA and SSSI is designated for black-throated diver (6.6 pairs) and common scoter (7.8 pairs) according to the SPA citation (dated 8th October 2009[28]). The SPA and SSSI comprises of Lochs Affric, Cluanie, Loyne (including Lochan Bad an Losguinn), Garry (including Loch Poulary), Lundie and Blair. For the most part, the designated sites include habitats 10 m landward of the loch's shorelines. Note, of these Lochs Cluanie, Loyne, Garry and Lundie are at least partially within 10 km of the Site.

7.9.77 The lochs are characterised by deep, acidic waters with patchy emergent vegetation, and the adjacent grass and heathland provide nesting and brood-rearing areas for both species (as stated in the SSSI citation).

7.9.78 During the 2021-23 field survey period for the Proposed Development no evidence of black-throated diver or common scoter was recorded during any of the surveys carried out. Furthermore, no records of either species were returned from the desk study sources (RSPB and HBRG).

7.9.79 A review of information available which supported the consented Millennium South Wind Farm (DPEA Ref: WIN-270-4[29]), Bunlionn Wind Farm (ECU Ref: ECU00003304) and Beinneun Wind Farm (the Council Ref: 11/04152/S36) was undertaken.

7.9.80 The survey results for Beinneun Wind Farm reported one record of a black-throated diver at the northern end of Loch Loyne in July 2011 (and a further sighting of a pair on Loch a'Bhainne in March 2011). The surveys did not record any common scoter and the chapter states that common scoter favour particular areas on Loch Garry, Loch Loyne and Loch Claunie. No flights of either species were recorded during surveys for Beinneun Wind Farm.

7.9.81 The surveys for the Millennium South Wind Farm reported no flights of black-throated diver, but reported the presence of the species on Loch a'Bhainne (not a known breeding location for the species). The documentation for the Millennium South Wind Farm also reports of surveys from 2002/03 for the original Millennium Wind Farm not recording any black-throated diver flights, but recording divers breeding on Loch Lundie, Loch Cluanie, Loch Garry and Loch Loyne. Furthermore, surveys from 2005/06 for the 'Millennium First Extension' reported

[28] Available at the NatureScot Sitelink: https://sitelink.nature.scot/site/9187 (Accessed 19/02/2025).

[29] Survey information from the operational Millennium Wind Farm is also taken from the Millennium South Wind Farm documentation.

no black-throated divers within survey area, but a diver pair active on Loch Loyne, and a failed breeding attempt was assumed. In 2008, surveys for the 'Millennium Second Extension' reported no black-throated divers in the survey area, but occasional sightings of one or two birds on Loch a'Bhainne, although no evidence of breeding was noted.

7.9.82 The surveys for the Millennium South Wind Farm reported no records of common scoter in 2011, 2008 or 2005/06. In 2002/03, confirmed scoter breeding was recorded on Loch Lundie, Loch Cluanie, Loch Garry and Loch Loyne, with observations also at Loch a'Bhainne, but with no evidence of breeding.

7.9.83 Post-construction bird monitoring data for the Millennium Wind Farm (Nevis Environmental, 2017) reported the presence of a black-throated diver at Loch Liath, with breeding not confirmed, but considered possible. No records of common scoter were made during surveys.

7.9.84 An expert opinion report regarding potential impacts to the West Inverness-shire Lochs SPA common scoter from the proposed Bunloinn Wind Farm was reviewed, although parts have been redacted including the author, the report is dated March 2023 and is for NatureScot[30]. The consented Bunloinn Wind Farm is located on land between (and adjacent to) two of the lochs which form the SPA and SSSI (Loch Loyne and Loch Cluanie), so it is in much closer proximity to the SPA and SSSI than the Proposed Development (which is greater than 2 km from the SPA/SSSI).

7.9.85 This report provided evidence that common scoter activity over the course of the breeding season (mid-May to late August) is localised to the particular loch used, and typically involves birds (both male and female, although not always together) flying low (below 20 m, with some flights <5 m) over a focal loch. Scoter movement between lochs is however rare, and there is no evidence of nocturnal flight activity during the breeding season. During the breeding season therefore, it is considered that common scoter will typically reside within a particular loch of those which collectively form the West Inverness-shire Lochs SPA and SSSI. Note, another study (Mitchell *et al*., 2023) also reported no evidence that female scoters move between breeding lochs and the sea during the breeding season, even when the sea is in close proximity to the breeding loch. The expert opinion report for Bunloinn Wind Farm also states that conditions in some of the SPA/SSSI lochs (Loch Loyne and Loch Cluanie) appear to be reducing the suitability of the waterbodies for common scoter (it was alluded to in the report that Loch Cluanie is no longer being used by common scoter), and believe this to be as a result of fluctuating water-levels due to the actions of the Loyne hydro-loch and effects of this on food resources (aquatic invertebrates and macrophytes).

7.9.86 Although there is no evidence of nocturnal flight activity during the breeding season there is still potential for scoters to move outside daylight hours during the pre- and post-breeding periods. The report states that flights from the SPA/SSSI lochs along a south-west to north-east axis (and vice versa for return trips from the sea) are most likely during the pre- and

[30] Report titled 'Provision of expert opinion on the potential impacts to West Inverness-shire Lochs SPA common scoter *Melanitta nigra* that could result from the proposed Bunloinn Wind Farm'. Report prepared for NatureScot. March 2023.

post-breeding periods. It is predicted within the report that birds would leave the loch via the natural low point of the dam and river valley.

7.9.87 Given scoters are documented as likely to follow a south-west to north-east axis, any birds from Loch Garry or Loch Lundie are anticipated to fly in a north-east direction along the Caledonian Canal to Loch Ness, and beyond to the Moray Firth via Rosemarkie Bay. Scoter using Loch Loyne and Loch Cluanie (although it is noted that these lochs are offering less suitable habitat/feeding opportunities for the species) on the other hand are likely to pass along River Moriston and into Loch Ness and into the Moray Firth. Both of these likely routes would mean the Site is not traversed by in-flight scoters. This is considered likely especially given the presence of the operational Millennium Wind Farm to the south of the Site. In the event that any common scoter do traverse the Site, they will be required to fly high over the aforementioned operational wind farm and over the commercial forestry to the north of the Site. When flying over-land, common scoter fly very high (Bergman and Donner, 1964), and thus it is likely that in the unlikely event that any scoters do fly over-land and through the Site during the pre- and post-breeding periods, rather than following watercourse corridors, they will do so above 'at-risk' height.

7.9.88 Like common scoter, any black-throated diver flights from lochs within the SPA/SSSI to the Moray Firth are likely to follow respectively the Caledonian Canal route for Loch Garry and Loch Lundie, and the River Moriston route for Loch Loyne and Loch Cluanie. Assuming divers follow these watercourses to the sea, as supported by the lack of evidence of flights through the Site during field surveys, the Site will not be traversed. As stated above, the operational Millennium Wind Farm will already form a 'barrier' to any flights at a height where they might be 'at-risk'.

7.9.89 Given the movement routes of black-throated diver and common scoter from the West Inverness-shire Lochs SPA and SSSI to the sea north of Loch Ness are likely to follow watercourses (as detailed above), the Proposed Development is not considered likely to have effects on foraging and/or traversing divers and scoters, nor are collisions to either species predicted. This is particularly given the presence and effect of the existing operational Millennium Wind Farm adjacent to the Site, which would mean that in the event that any birds do fly through the Site (and adjacent habitat) they will do so by taking evasive action and flying above a height where they are likely to be 'at-risk', and because scoter flying over-land are reported to do so, at a very high height (Bergman and Donner, 1964). As such, existing conditions at the locality (operational Millennium Wind Farm) makes it unlikely that birds will pass through the Site (and adjacent habitats).

7.9.90 Operational works are considered to result in a long-term, Negligible magnitude of impact at the West Inverness-shire Lochs SPA and SSSI population levels (for black-throated diver and common scoter), resulting in a **Negligible** effect which is considered **Not significant**.

7.9.91 **Section 7.15** provides information to inform HRA with respect to the West Inverness-shire Lochs SPA and its qualifying species.

Golden Eagle

Displacement / Disturbance

7.9.92 The desk study revealed up to ten known golden eagle breeding territories in the wider area (out to 10 km, with none within 2 km of the Site). During the surveys, although no definitive evidence of breeding was recorded (such as presence of a nest site) during one survey year an eagle male was recorded territorially displaying within the study area (but off-site). It is thus considered that the wider study area may be used by at least one breeding eagle pair. There were seven 'at-risk' golden eagle flights during the VP flight activity surveys across the survey period (27 flights in total). The GET model revealed that there appeared to be no extant golden eagle home range centres within 10 km of the Proposed Development, within NHZ7, and attributed this to the number and position of existing turbines that make it unlikely that a home range would be occupied. It is thus considered precautionary to consider that golden eagle recorded during surveys is indicative of activity of a breeding golden eagle pair.

7.9.93 Previous studies have found evidence of displacement of golden eagles from operational wind farms. A single long-term study of potential displacement effects upon the species at the Edinbane and Ben Aketil Wind Farms on the Isle of Skye, did suggest the occurrence of displacement on the basis of the decrease in the spatial use of habitats within 500 m of operational turbines (Haworth Conservation, 2015). However, overall eagle flight activity was found to be highly variable between monitoring years, with potential confounding influences of differences in habitat features between onshore wind sites (e.g. topography). A second study carried out at Beinn an Tuirc Wind Farm, did also identify a decrease in spatial use of the onshore wind site by golden eagles during initial years of operational monitoring, although some limited activity through turbine clusters was recorded, with only one flight through the cluster, and three flights over the wind farm (Walker *et al*., 2005).

7.9.94 More recent and comprehensive research from analysed movements of 59 Scottish GPS-tagged golden eagles demonstrated that there is now clear evidence that golden eagles are displaced from suitable habitat as a result of operational wind developments, with eagles displaced out to 300 m from the outermost turbines (Fielding *et al*. 2021a and b). This displacement effect also includes golden eagles being deterred from using habitat in between turbines. Another study by Fielding *et al*. (2024) revealed that golden eagles avoid turbines (regardless of whether in motion or not) and that the level of avoidance is influenced by wind speed and habitat suitability around the turbines.

7.9.95 On the basis of best and currently available evidence at Scottish wind developments, displacement and loss of habitats for foraging golden eagles is calculated for areas encompassing the turbine layout and buffer out to a maximum distance of 300 m[31] of the outermost turbine locations including the area between turbines. Based on this approach, only approximately 83 ha within the Site is open GET 6+ habitat, referred to as 'good' eagle habitat (see **Confidential Appendix 7.4**).

7.9.96 The output from the GET model is detailed in **Confidential Appendix 7.4** and has assumed a theoretical golden eagle range of 6,000 ha, and thus a <1-2 % of any new range is estimated to be lost to the Proposed Development (although establishment of new range at

[31] In line with the buffer distance used within the GET model.

the locality is considered unrealistic due to the presence of existing wind farms which are considered likely to be deterring eagles).

7.9.97 The GET model similarly reports insignificant levels of habitat loss for dispersing golden eagles. The model has assessed the effects out to 20 km from the Proposed Development and with regard to the availability of suitable eagle habitat (GET 6+). It was estimated that only ~0.1 % of GET 6+ habitat (83 ha from 73,213 ha) would be lost at that scale as a result of the Proposed Development.

7.9.98 The GET model concludes that there would be an insignificant loss of golden eagle habitat arising from the operation of the Proposed Development, and it is therefore unlikely that the loss would create a significant effect on the extent of habitat used by golden eagles or on dispersing young eagles.

7.9.99 It is also unlikely that there would be a significant reduction of habitat use outside of the 300 m exclusion zone from the Proposed Development.

7.9.100 Furthermore, given the Site only offers modest suitable golden eagle habitat (GET6+) and the presence of an existing wind farm within and adjacent to the Site is considered to already be displacing eagles from otherwise potentially suitable habitat, no barrier effects on eagle movements are anticipated as a result of the Proposed Development.

7.9.101 Operational displacement / disturbance impacts, whilst long-term, are therefore considered to be of Negligible magnitude of impact, resulting in a **Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Collision Risk

7.9.102 CRM analysis for golden eagle has been completed using flight activity data for the non-breeding season (September 2021 to January 2022), and breeding seasons (February to August 2022, and February to August 2023). No 'at-risk' eagle flights were recorded during the non-breeding season (September 2022 to January 2023), so mortality risk during that season is treated as zero. The CRM analysis predicts a breeding season mortality average of 0.046 and non-breeding season average of 0.001 and combined an annual mortality of 0.047 (see **Appendix 7.2**). This represents 0.05 % of the NHZ7 adult population estimate (43 pairs, thus 86 territorial adult birds).

7.9.103 Estimated adult survival rates for golden eagle are stated as 95 % (Watson, 1997), which gives a baseline mortality of 5 % for adult birds. Assuming a regional NHZ7 population estimate of 43 pairs (86 birds); the baseline mortality rate in the absence of the Proposed Development would be 4 adult birds per year. The estimated annual mortality (0.047 birds) resulting from the Proposed Development represents a potential 1.18 % increase in annual baseline NHZ7 mortality.

7.9.104 It is understood that there have been at least seven golden eagle collision fatalities at operational wind farms in Scotland at the time of writing and therefore the potential for collisions to occur for the species over the lifetime of the Proposed Development cannot be entirely precluded, but such events are considered to be extremely rare, given eagles apparent avoidance of operational turbines (see **Confidential Appendix 7.4**). There is no evidence to indicate that golden eagle collisions occur to such an extent that they could affect

regional population levels. Recent research (Fielding *et al.*, 2021a, b, 2023 and 2024) documents that golden eagles are displaced from wind farms, with 300 m considered modest for the displacement effect. It is therefore reasonable to predict that collision risk mortality from the Proposed Development would be considerably lower than those estimated from CRM analysis, given the recent advancements in our understanding of the effects of wind farms on golden eagles and that birds clearly cannot be both displaced and at risk of collision at the same time.

7.9.105 Overall collision mortality risks to golden eagle (breeding and non-breeding) are therefore considered impacts which are long-term, and to represent no more than a Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Greenshank

Displacement / Disturbance

7.9.106 Field surveys revealed up to two greenshank pairs within 500 m of proposed turbines, and up to three pairs within 500 m of the Proposed Development (including all infrastructure, like access tracks). It is considered that during the operation of the Proposed Development greenshank that were breeding within 500 m of proposed turbines may be displaced (given this is the upper disturbance limit documented, see Goodship and Furness, 2022). However, those within 500 m of other infrastructure of the Proposed Development (in this instance for an extra greenshank pair, within 500 m of existing access track) are unlikely to be displaced.

7.9.107 It is considered likely that at least some of the greenshank would continue to breed and nest on-site and in the study area (particularly those nesting habitats more spatially distant from the Proposed Development). However, as a precaution, the displacement of up to two territories during operation of the Proposed Development is assumed.

7.9.108 Two pairs constitute 1.35 % of the NHZ7 population estimate. Displaced birds are expected to use alternative suitable nesting habitat either on-site (more spatially distanced from the Proposed Development and especially turbines) or in the wider area. Furthermore, habitat enhancement (bog restoration) to be adopted (see **Appendix 6.7**), will provide benefits and nesting and chick rearing opportunities for the ground-nesting wading species.

7.9.109 A total of four greenshank flights were recorded during two years of VP flight activity surveys, suggesting that the Site was subject to only modest levels of greenshank activity.

7.9.110 Impacts are long-term, and are considered no more than Low adverse magnitude, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the NHZ7 population level.

Collision Risk Mortality

7.9.111 Only two ‘at-risk’ greenshank flights were recorded across the entire VP flight activity survey period (September 2021 to August 2023), with two flights in Year 2 (only single birds, and for a total flight time of only 359 seconds). No CRM analysis was therefore undertaken and the collision risk for the species as a consequence of the Proposed Development is considered inconsequential. Therefore, such impacts are long-term, and are considered of Negligible

magnitude, resulting in a **Negligible** effect which is **Not Significant** at the NHZ7 population level.

Black Grouse

Displacement / Disturbance

7.9.112 Research into the operational displacement of black grouse from wind farm sites remains limited. However, at several sites in Scotland, studies have shown that the abundance of lekking males at wind farm sites did not change during the operational period, although some lek sites, within 500 m of planned turbine locations, moved locally after construction (Zwart *et al*., 2015).

7.9.113 The same research also outlines evidence of the species occasional use of areas beneath turbines (Zwart *et al.,* 2015) and confounding factors such as habitat management and the lack of pre-construction data do however, place limitations on evidence suggesting displacement and population level effects for the species (Zwart *et al.*, 2015).

7.9.114 The locations of lek sites identified during baseline surveys has been considered as part of the evolution of scheme design, and as such, no such lek site is located within 500 m of any proposed turbine.

7.9.115 Field surveys recorded a peak of four lek sites (peak of eight males) within the study area (based on the survey results combined). Although none of the four lek sites were identified within 500 m of the proposed turbines, all four leks are within 500 m of other infrastructure associated with the Proposed Development. Of these leks, all are located within 500 m of existing track (but typically greater than 200 m, at least), and only one lek is located within 500 m of the infrastructure (in terms of new access track). Operational displacement of male black grouse utilising these lek sites is therefore highly unlikely on the basis of best available evidence, particularly given the spatial separation between lek sites and proposed turbines. Whilst the localised displacement of individual lekking males at the lek sites (all leks are within 500 m of the access track) cannot be entirely precluded, such effects would not be attributable to local population losses. This is particularly given the lek sites are located within 500 m of an existing access track, and therefore lekking birds will be habituated to some level of vehicular traffic.

7.9.116 Furthermore, given only one black grouse flight was recorded during the entire VP flight activity survey period (September 2021 to August 2023), the Site is not considered to be readily utilised by black grouse, with the leks concentrated on the northern periphery of the Site (further away from the Development Area).

7.9.117 Impacts are long-term and are considered no more than of Negligible magnitude, resulting in a **Negligible** effect which is **Not Significant** at the NHZ7 population level. Additional mitigation is proposed as stated in **Section 7.10**, to reduce unnecessary disturbance/displacement to leks on-site.

Collision Risk Mortality

7.9.118 Only one ‘at-risk’ black grouse flight was recorded across the entire VP flight activity survey period (September 2021 to August 2023), with the flight one bird with only 30 seconds spent

'at-risk' height). No CRM analysis was therefore undertaken and the collision risk for the species as a consequence of the Proposed Development is considered inconsequential. Therefore, such impacts are long-term, and are considered of Negligible magnitude, resulting in a **Negligible** effect which is **Not Significant** at the NHZ7 population level.

Dunlin

Displacement / Disturbance

7.9.119 Field surveys revealed no breeding dunlin territories within 200 m of proposed turbines, but up to two territories within 200 m of the Proposed Development (thus including all infrastructure, such as access tracks). It is considered that during the operation of the Proposed Development those two territories within 200 m of other infrastructure of the Proposed Development are unlikely to be displaced, and no dunlin pairs are anticipated to be displaced by operation of the turbines.

7.9.120 Although dunlin will not use the same nest site between years, it is considered likely that the same areas could be used in subsequent breeding seasons. It is considered that the breeding dunlin recorded would continue to breed and nest on the Site and in the study area and not be displaced by the Proposed Development. Furthermore, habitat enhancement (bog restoration) to be adopted (see **Appendix 6.7**), will provide benefits and nesting opportunities for the ground-nesting wading species.

7.9.121 Such impacts would be long-term and are considered of Negligible magnitude, resulting in a **Negligible adverse** effect which is **Not Significant** at the NHZ7 population level.

Collision Risk Mortality

7.9.122 No 'at-risk' dunlin flights were recorded across the entire VP flight activity survey period (September 2021 to August 2023). No CRM analysis was therefore undertaken and the collision risk for the species as a consequence of the Proposed Development is considered inconsequential. Therefore, such impacts are long-term, and are considered of Negligible magnitude, resulting in a **Negligible** effect which is **Not Significant** at the NHZ7 population level.

Golden Plover

Displacement / Disturbance

7.9.123 Field surveys revealed six breeding golden plover territories within 500 m of proposed turbines, and up to nine territories within 500 m of the Proposed Development (thus including all infrastructure, such as access tracks). It is considered that during the operation of the Proposed Development those nine territories within 500 m of other infrastructure of the Proposed Development are unlikely to be displaced, but the potential for the six pairs within 500 m of the proposed turbines to be displaced cannot be precluded (although the evidence of such displacement at 500 m is not consistent; see Pearce-Higgins *et al.* (2009), Whitfield *et al.* (2010) and Pearce-Higgins *et al*. (2012)).

7.9.124 In the event that six golden plover pairs are displaced this would constitute 0.2 % of the NHZ7 population. There is suitable habitat for breeding golden plover in the wider area including to the south and south-west of the Site (and the Millennium Wind Farm), and within the Site

especially in the north-east. Furthermore, habitat enhancement (bog restoration) to be adopted (see **Appendix 6.7**), will provide benefits and nesting opportunities for the ground-nesting wading species.

7.9.125 Furthermore, given only three golden plover flights were recorded during the entire VP flight activity survey period (September 2021 to August 2023), this suggests that the Site was subject to only modest levels of golden plover activity.

7.9.126 Such impacts would be long-term and are considered of Negligible magnitude, resulting in a **Negligible** effect which is **Not Significant** at the NHZ7 population level.

7.9.127 With the potential displacement of up to six pairs of the 12 breeding on-site as a worst-case scenario, local-scale impacts are considered as short-term and would constitute an impact which is of Low magnitude of impact, resulting in a **Minor/Negligible** adverse effect which is **Not Significant** at the local level.

Collision Risk Mortality

7.9.128 No 'at-risk' golden plover flights were recorded across the entire VP flight activity survey period (September 2021 to August 2023). No CRM analysis was therefore undertaken and the collision risk for the species as a consequence of the Proposed Development is considered inconsequential. Therefore, such impacts are long-term, and are considered of Negligible magnitude, resulting in a **Negligible** effect which is **Not Significant** at the NHZ7 population level, and local level.

Decommissioning

7.9.129 Potential decommissioning effects are assumed to be similar to those identified for the construction phase (i.e. disturbance / displacement and habitat loss). Decommissioning effects are therefore not considered separately for each IOFs.

7.9.130 The future of the bird community at the time of decommissioning (35 years) is unknown and cannot be reasonably assumed with any certainty.

7.9.131 In the absence of mitigation, decommissioning effects may result in the destruction of nest sites and disturbance and displacement of IOFs identified in **Table** 7.8 (as well as all other wild birds which are afforded protection at least in terms of their active nests being protected through the Wildlife and Countryside Act, 1981 (as amended)).

7.9.132 Providing the implementation of good practice measures such as those outlined in **Section 7.7** are included (and presented in a DEMP at the point of decommissioning), it is unlikely that significant effects upon important ornithological features would occur.

7.10 Mitigation

7.10.1 No significant effects upon IOFs are predicted to occur as a result of the Proposed Development and, as such, project-specific mitigation measures above and beyond those integrated into the design (see **Section 7.7**) are not required.

7.10.2 However, it is considered prudent that precautionary additional mitigation is adopted to reduce the potential for effects on black grouse using the Site. The location of black grouse leks will be considered with regards to construction and operational works associated with the Proposed Development. Current research suggests that lekking black grouse are not passively disturbed at distances over 500 - 750 m from source (taken from Goodship and Furness, 2022). Adopting these findings, no construction works within at least 500 m of identified lek sites would be undertaken prior to 9 am in the months of April and May. This is particularly in relation to any works associated with the access track in the north of the Site. Note, this also should extend towards adoption of a no-stop policy in relation to works vehicles within at least 500 m of lek sites during the main lekking period as defined above, both during the construction and operational phases of the Proposed Development.

7.10.3 This would serve to avoid potential construction and operational phase disturbance to modest numbers of lekking male black grouse using the Site.

7.11 Residual effects

7.11.1 Although no significant effects are predicted, additional mitigation (see **Section 7.10**) is to be adopted in relation to lekking black grouse to avoid unnecessary disturbance/possible displacement to grouse.

7.11.2 It is considered that with the additional mitigation, impacts on black grouse in terms of displacement/disturbance and habitat loss during the construction phase are short-term, and are reduced to Negligible magnitude, resulting in a **Negligible adverse** effect which is **Not Significant** at the NHZ7 population level.

7.11.3 During the operation phase respective impacts on black grouse would continue to be long-term, and of Negligible magnitude, resulting in a **Negligible adverse** effect which is **Not Significant** at the NHZ7 population level.

7.12 Cumulative effects

7.12.1 This section considers the potential effects of the Proposed Development upon IOFs in combination with other wind farm developments in accordance with NatureScot guidance (SNH, 2018b). The assessment considers operational, consented and under construction wind farms within NHZ7 (which is the region where the Site is located). This cumulative assessment considered potential effects on the IOFs scoped in for further detailed assessment in this chapter. Note, the cumulative ('in-combination') effects on the West Inverness-shire Lochs SPA are considered in **Section 7.15**.

Collision Risk Mortality

7.12.2 Cumulative collision risks for golden eagle, during the operation of the Proposed Development, have been considered as being potentially significant for the purposes of this assessment, given this was the only Target Species which was subject to CRM analysis for the Proposed Development. Collision risk rates for all other Target Species as a result of the

Proposed Development is considered inconsequential and is not considered further in this section.

7.12.3 Wind farm developments considered in the assessment are listed in **Table** 7.9 together with a summary of collision risk mortality estimates predicted. Note, 99 % avoidance rates were used for all golden eagle collision risk estimates. This list of wind farms within NHZ7 for consideration was provided by NatureScot on 19th December 2024, with Beinneun 2 added in October 2025 following submission of the planning application for this proposed development to the ECU.

7.12.4 Following a review of documentation for Kirkan and Loch Liath, the estimates were amended to accord with the values stated within the respective EIAs (this meant modest increases in both values from the NatureScot provided values).

Table 7.9: Cumulative Collision Risk Mortality Estimates – Golden Eagle

Wind Farm	Annual Collision Risk Estimate
Beinneun	0.145
Beinneun 2	0.259
Bhlaraidh Extension	0.180
Bunloinn	0.035
Chrathaich	0.067
Coire na Cloiche	0.008
Corriemoillie	0.021
Corrimony	0.042
Kirkan	0.07
Loch Liath	0.054
Millenium & Extensions I & II	0.009
Tomchrasky	0.035
Proposed Development	0.047
Total	**0.972**

7.12.5 The cumulative collision risk estimates for golden eagle for the NHZ7 region is calculated at 0.972 birds per year (values in **Table** 7.9 combined), which represents 1.13 % of the NHZ7 (86 adults) population estimate. This represents an 24.3 % increase over the (rounded) annual baseline mortality for NHZ7 of four birds, with 1.18 % (0.047 birds) of this cumulative increase in annual baseline mortality contributed by the Proposed Development. The golden eagle population change in the Highland region between 2009-2018 was reported as non-significant (Challis *et al*., 2023), and thus indicative of a largely stable population, even with an increasing number of wind farm developments in the region.

7.12.6 As detailed, there have been a low number of known incidents of golden eagle collision fatalities at operational wind farms in Scotland at the time of writing, but the instances are considered to be extremely rare. Furthermore, recent studies (Fielding *et al.*, 2021 a and b) have documented that golden eagles are displaced from operational wind farms by up to 300 m. It is therefore considered that predicted collision risk mortality of golden eagles would be considerably lower than the cumulative annual mortality of up to 0.972 birds, given the advancements in our understanding of the effects of wind farms on golden eagles.

7.12.7 Given, the predicted over-estimation of golden eagle annual mortality due to stronger displacement effects, as recently established (see Fielding *et al*., 2021a, b, 2023 and 2024), overall cumulative collision mortality risks to golden eagle are considered long-term, and to represent an impact of no more than a Medium adverse magnitude, resulting in a **Minor adverse** effect which is **Not Significant** at the NHZ7 population level.

Displacement / Disturbance

7.12.8 In this section, effects of displacement/ disturbance (which also encompasses indirect effects of habitat loss) for golden eagle, greenshank, dunlin and golden plover have been considered as being potentially significant for the purposes of this assessment, given these Target

Species may be subject to some displacement effects from the Proposed Development. Black grouse are not considered given the adoption of additional mitigation which would negate the potential for displacement/ disturbance (see **Section 7.11**).

Golden Eagle

7.12.9 Information on displacement effects on golden eagle for those listed wind farm schemes in **Table** 7.9 was largely provided by NatureScot on 24th January 2025, and is summarised below:

- Bhlaraidh Extension – potential displacement (foraging/breeding is not specified).
- Bunloinn – potential for one pair displacement, in terms of breeding and foraging.
- Chrathaich – some potential for foraging displacement but limited.
- Loch Liath – potential loss of foraging habitat.
- Tomchrasky – potential for foraging displacement.
- Beinneun 2 – potential loss of foraging habitat[32].

7.12.10 The information provided confirms loss of some (principally foraging) habitat for the above listed schemes, extending to potential displacement of an eagle pair at Bunloinn. However, the assessment for Bunloinn concludes that the pair would not be lost/displaced but instead would likely use an alternative nest site within the pair's range. Accordingly, no golden eagle pairs are anticipated to be lost/displaced due to any of the above listed schemes. Note, these displacement effects are considered relevant principally at the operation phase.

7.12.11 Overall cumulative displacement/ disturbance and habitat loss effects to golden eagle, whilst long-term, are therefore considered to represent an impact of no more than a Low adverse magnitude, resulting in **Minor/Negligible** adverse effects which is **Not Significant** at the NHZ7 population level.

Greenshank, Dunlin and Golden plover

7.12.12 Information on displacement effects on greenshank, dunlin and golden plover was gathered for those listed wind farm schemes in **Table** 7.9, following a review of available information. Note, the number of birds displaced are those peak, worst-case scenario numbers, considered during operation and thus are representative of long-term displacement, rather than any short-term, temporary displacement that may be experienced only during construction (with breeding birds returning to suitable breeding habitats post-construction). Construction displacement effects for dunlin for the Proposed Development is however considered as a worst-case scenario to acknowledge some displacement cannot be precluded for this species, given no displacement effects for dunlin are anticipated during the operation phase. **Table** 7.10 provides the displacement information for the Target Species. Note '-' is either the Target Species was not considered in the assessment, or it was considered, but no displacement was anticipated.

[32] Information for this scheme has been gathered separately, as this information was not available to NatureScot when it was provided in January 2025.

Table 7.10: Cumulative Displacement Effects – Target Species

Wind Farm	Number of Birds Displaced		
	Greenshank	Dunlin	Golden Plover
Beinneun	-	1 pair	4 pairs
Beinneun 2	1 pair	-	-
Bhlaraidh Extension	3 pairs	-	3 pairs
Bunloinn	1 pair	2 pairs	-
Chrathaich	-	-	2 pairs
Coire na Cloiche	-	-	15 pairs
Corriemoillie	2 pairs	-	-
Corrimony	-	-	-
Kirkan	1 pair	-	-
Loch Liath	-	-	-
Millenium & Extensions I & II	-	-	-
Tomchrasky	1 pair	-	-
Proposed Development	2 pairs	- *(2 pairs during construction)*	6 pairs
Total	**11 pairs**	**3 pairs**	**30 pairs**
Total *(incl. as a precaution, construction displacement for dunlin from Proposed Development)*		***5 pairs***	

Greenshank

7.12.13 The cumulative displacement estimate for greenshank for the NHZ7 region is up to 11 pairs displaced, which represents 7.43 % of the NHZ 7 (148 pairs) population estimate.

7.12.14 The overall cumulative displacement effects to greenshank are considered to represent an impact of Medium adverse magnitude, resulting in **Minor adverse** effects which is **Not Significant** at the NHZ7 population level.

Dunlin

7.12.15 The cumulative displacement estimate for dunlin for the NHZ7 region is up to three pairs displaced, which represents 3.33 % of the NHZ 7 (90 pairs) population estimate. Note, none of this displacement (during operation phase) is however attributed to the Proposed Development.

7.12.16 The overall cumulative displacement effects to dunlin are considered to represent an impact of no more of Low adverse magnitude, resulting in **Minor/Negligible** adverse effects which is **Not Significant** at the NHZ7 population level.

7.12.17 Note, in the event that displacement of breeding dunlin is considered for the Proposed Development during the construction phase as a worst-case scenario (two pairs), a cumulative displacement estimate for the NHZ7 region represents 5.56 % of the NHZ7

population estimate. This would represent an impact of no more of Medium adverse magnitude, resulting in **Minor** adverse effects which is **Not Significant** at the NHZ7 population level.

Golden Plover

7.12.18 The cumulative displacement estimate for golden plover for the NHZ7 region is up to 32 pairs displaced, which represents 1.06 % of the NHZ 7 (3,009 pairs) population estimate.

7.12.19 The overall cumulative displacement effects to golden plover are considered to represent an impact of no Low adverse magnitude, resulting in **Minor/Negligible** adverse effects which is **Not Significant** at the NHZ7 population level.

7.13 Ornithological Enhancement Measures

7.13.1 Enhancement measures designed to benefit ornithological features at the Site would be implemented.

7.13.2 A detailed Site BEMP would be produced post-consent for agreement by statutory consultees and other relevant stakeholders. The objectives of this plan would be to restore degraded peatland habitats on-site, to mitigate loss and to provide a net gain of good quality bog habitat within the site, and to provide habitat creation and enhancement to benefit a range of species, including black grouse and ground-nesting waders, like golden plover, wood sandpiper and dunlin. An outline BEMP setting out the broad principles is provided in **Appendix 6.7** and is summarised below.

7.13.3 Peat restoration, including rewetting via blocking of drains, would be undertaken in appropriate areas of the Site. Riparian planting is proposed within the Site, which would enhance habitat connectivity and shelter for bird species, including black grouse.

7.13.4 The OBEMP also includes information into monitoring to be undertaken if the Proposed Development is consented. This would include ornithological monitoring, including breeding bird surveys, with the protocol agreed with the Council and NatureScot.

7.14 Summary of Effects

Table 7.11: Summary of Ornithology Effects

Effect	Phase	Assessment Consequence	Effect Significance	Four-Point Scale[33]
West Inverness-shire Lochs SPA and SSSI – Displacement / Disturbance	Construction	Negligible	Not Significant	Neutral
	Operation	Negligible	Not Significant	Neutral
Golden Eagle – Displacement / Disturbance	Construction	Negligible	Not Significant	Neutral
	Operation	Negligible	Not Significant	Neutral
Golden Eagle – Habitat Loss	Construction	Negligible	Not Significant	Neutral
Golden Eagle – Collision Risk Mortality	Operation	Low adverse magnitude	Not Significant	Negative
Greenshank – Displacement / Disturbance	Construction	Low adverse magnitude	Not Significant	Negative
	Operation	Low adverse magnitude	Not Significant	Negative
Greenshank – Habitat Loss	Construction	Low adverse magnitude	Not Significant	Negative
Greenshank – Collision Risk Mortality	Operation	Negligible	Not Significant	Neutral
Black Grouse – Displacement / Disturbance	Construction	Low adverse magnitude Negligible (with additional mitigation)	Not Significant	Negative / Neutral
	Operation	Negligible	Not Significant	Neutral
Black Grouse – Habitat Loss	Construction	Low adverse magnitude Negligible (with additional mitigation)	Not Significant	Negative / Neutral

[33] As requested by The Highland Council see **Table** 7.1, with effects considered as 'strong negative', 'negative', 'positive' or 'strong positive'. Note, it was considered appropriate to include 'neutral' as a fifth point on the scale given some effects were considered neither negative nor positive.

Effect	Phase	Assessment Consequence	Effect Significance	Four-Point Scale[33]
Black Grouse – Collision Risk Mortality	Operation	Negligible	Not Significant	Neutral
Dunlin – Displacement / Disturbance	Construction	Low adverse magnitude	Not Significant	Negative
	Operation	Negligible	Not Significant	Neutral
Dunlin – Habitat Loss	Construction	Low adverse magnitude	Not Significant	Negative
Dunlin – Collision Risk Mortality	Operation	Negligible	Not Significant	Neutral
Golden Plover – Displacement / Disturbance	Construction	Negligible Minor/Negligible (at local level)	Not Significant	Neutral
	Operation	Negligible Minor/Negligible (at local level)	Not Significant	Neutral
Golden Plover – Habitat Loss	Construction	Negligible Minor/Negligible (at local level)	Not Significant	Neutral
Golden Plover – Collision Risk Mortality	Operation	Negligible	Not Significant	Neutral
Golden Eagle (Cumulative) - Collision Risk Mortality	Operation	Medium adverse magnitude	Not Significant	Negative
Golden Eagle (Cumulative) – Displacement / Disturbance	Operation (& Construction)	Low adverse magnitude	Not Significant	Negative
Greenshank (Cumulative) – Displacement / Disturbance	Operation	Medium adverse magnitude	Not Significant	Negative
Dunlin (Cumulative) – Displacement / Disturbance	Construction	Medium adverse magnitude	Not Significant	Negative
Dunlin (Cumulative) – Displacement / Disturbance[34]	Operation	Low adverse magnitude	Not Significant	Negative

[34] Note, the Proposed Development does not contribute to this cumulative effect.

Effect	Phase	Assessment Consequence	Effect Significance	Four-Point Scale[33]
Golden Plover (Cumulative) – Displacement / Disturbance	Operation	Low adverse magnitude	Not Significant	Negative

7.15 Information to Inform HRA

7.15.1 Information is presented for the competent authority to determine whether an AA is required (through identifying whether there are any Likely Significant Effects (LSE)' as a result of the Proposed Development on identified international designated sites).

7.15.2 This section summarises information relating to the potential for LSEs upon ornithological qualifying interests of the West Inverness-shire Lochs SPA (breeding black-throated diver and common scoter) as a result of the Proposed Development either on its own or in combination with other projects.

7.15.3 The West Inverness-shire Lochs SPA is 2.22 km from the Site boundary at its nearest point to the south (Loch Lundie). Other lochs which constitute the SPA are more spatially distant from the Site, and are Loch Garry which is south of the A87, Loch Loyne and Loch Cluanie to the west of the A87, Loch Affric (greater than 10 km to the north-west of the Site) and Loch Blair (greater than 10 km to the south-west of the Site). The foraging range for black-throated diver during the breeding season is up to 10 km (SNH, 2016) which thus exceeds the spatial distance between the Site and at least parts of the SPA.

7.15.4 For common scoter, there is no evidence that birds will forage away from their breeding lochs to other lochs and/or the sea during the breeding season (Mitchell *et al.*, 2023, and the expert witness report for Bunloinn Wind Farm). Scoter are therefore considered to stay local to their breeding loch during the breeding season and not forage out to distances from the SPA where they could reach the Site. This is particularly as waterbodies on-site and within 1 km of the Site are not considered likely to be suitable for breeding common scoter (and there is no evidence of historical use by the species).

7.15.5 During the pre- and post- breeding periods when scoter respectively arrive and leave their breeding lochs for the sea, birds will travel greater distances which will well exceed the 2.22 km between the SPA and the Site.

7.15.6 Accordingly, LSEs are considered for black-throated diver and common scoter.

7.15.7 Within this section, SPA populations are taken from the SPA citation (from NatureScot's Sitelink).

7.15.8 The Proposed Development would need to ensure that it does not contravene any of the conservation objectives for the West Inverness-shire Lochs SPA. These are:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site.
- Distribution of the species within site.
- Distribution and extent of habitats supporting the species.
- Structure, function and supporting processes of habitats supporting the species.
- No significant disturbance of the species.

7.15.9 Note, the breeding common scoter population for the SPA, is listed as being in 'unfavourable status' (based on the latest assessment in 2018, see NatureScot, 2025), and the breeding black-throated diver population for the SPA, is listed as being in 'favourable status' (based on the latest assessment in 2010, see NatureScot, 2025). Expert opinion for the Bunloinn Wind Farm suggested that notable fluctuating water-levels (principally due to the actions of the Loyne hydro-loch) are likely resulting in negative effects on food resources (macrophytes and aquatic invertebrates) which has resulted in Loch Loyne and Loch Cluanie becoming less suitable for common scoter, with the species largely absent (at least at Loch Cluanie). Furthermore, SNH (2007) report historically low chick productivity rates for black-throated diver of 0.22 chicks per territory within the West Inverness-shire Lochs 'Site management statement' for the SSSI which is considered also applicable to the SPA (although low rates are common for the species).

7.15.10 The Site is located sufficiently away from the SPA to avoid potential impacts of disturbance on qualifying species within the SPA, given the species's disturbance limits (Goodship and Furness, 2022), and impacts on habitat processes and distribution within the SPA are not anticipated. This section thus considers maintaining the population (and distribution if applicable) of the qualifying ornithological species of the West Inverness-shire Lochs SPA.

West Inverness-shire Lochs SPA

Black-throated diver

7.15.11 The SPA supports an average of 6.6 pairs (based on the average number between 1990 and 2005; from the SPA citation).

7.15.12 The baseline data gathering did not record any evidence of black-throated diver in the study areas, nor did the desk study sources reveal any black-throated diver records. A review of other nearby wind farms reported the following historical records:

- A diver pair on Loch Loyne and a pair on Loch a'Bhainne in 2011 (survey results for Beinneun Wind Farm.
- Divers on Loch a'Bhainne in 2011/12 (breeding not confirmed, survey results for Millennium South Wind Farm).
- Breeding divers on Loch Lundie, Loch Claunie, Loch Garry and Loch Loyne in 2002/03 (survey results for Millennium Wind Farm).
- Diver pair on Loch Loyne in 2005/06, and a failed breeding attempt was assumed (survey results for 'Millennium First Extension').
- Occasional sighting of one or two divers on Loch a'Bhainne in 2008, but no evidence of breeding (survey results for 'Millennium Second Extension').

- Black-throated diver at Loch Liath in 2017, with breeding not confirmed, but considered possible (post-construction monitoring of the 'control site' for the Millennium Wind Farm).

7.15.13 During the field surveys for the Proposed Development none of the lochs within the study area were considered as suitable for supporting breeding black-throated diver, as they were too small.

7.15.14 Any black-throated diver foraging or traversing flights from lochs within the SPA to the sea are likely to follow watercourses/river valleys/channels towards the sea (into the Moray Firth). It is likely that divers will follow a south-west to north-east axis (and vice versa) as considered the most likely route also for common scoter from the SPA to/from the sea (based on the expert witness report for Bunloinn Wind Farm). The likely movement routes would be respectively the Caledonian Canal route for Loch Garry and Loch Lundie, and the River Moriston route for Loch Loyne and Loch Cluanie, given the close proximity of these watercourses to the lochs. Similarly, any divers breeding at Loch Blair or Loch Affric (which are the other component lochs of the SPA), and are greater than 10 km from the Site, are similarly expected to follow watercourses/river valleys to the sea. Assuming divers follow watercourses to the sea (with no evidence of flights through the Site during field surveys) the Site will not be traversed. The operational Millennium Wind Farm (to the south of the Site and thus between the Site and the SPA) will already form a 'barrier' to any diver flights at a height where they might be 'at-risk'. Furthermore, there is relatively tall commercial forestry to the north of the Site further increasing the likelihood that flying divers will instead follow clearer, lower-lying defined river valleys/watercourses in the landscape to and from the sea from breeding lochs.

7.15.15 Given the movement routes of black-throated diver from the West Inverness-shire Lochs SPA to the sea north of Loch Ness are likely to follow watercourses (as detailed above), the Proposed Development is not considered likely to have a barrier effect on foraging and/or traversing divers, nor are diver collisions predicted. This is particularly given the presence and effect of the existing operational Millennium Wind Farm within and adjacent to the Site, which would mean any birds have to fly high above a height where they are likely to be 'at-risk', in the unlikely event that any birds did traverse the Site.

As such, in terms of mortality risks, displacement (and habitat loss) as a result of the Proposed Development on black-throated diver of the West Inverness-shire Lochs SPA, **no adverse effect on site integrity (AESI)** is anticipated.

In-combination Impacts

7.15.16 For black-throated diver, no evidence of the species was recorded (relevant to the Site) during baseline data gathering, with no impacts anticipated.

7.15.17 In terms of collision risk, disturbance / displacement and habitat loss, no significant impacts are predicted based on the results of the desk study, field surveys and considering likely disturbance limits for the species.

7.15.18 Based on the results of this assessment with regards to black-throated diver (of the West Inverness-shire Lochs SPA), for in-combination impacts from the Proposed Development, **no AESI** is anticipated.

Common Scoter

7.15.19 The SPA supports an average of 7.8 pairs (based on the average number between 1994-2000 and 2004-05; from the SPA citation).

7.15.20 The baseline data gathering did not record any evidence of common scoter in the study areas, nor did the desk study sources reveal any scoter records. A review of other nearby wind farms reported the following historical record:

- Confirmed breeding on Loch Lundie, Loch Cluanie, Loch Garry and Loch Loyne, with observations also at Loch a'Bhainne (but with no breeding evidence) in 2002/03.

7.15.21 During the field surveys for the Proposed Development the lochs within the study area were considered as unlikely to support breeding common scoter. Although the bog pools and small lochans around Loch nam Faoileag on-site were considered to provide some potentially suitable habitat, the presence of the adjacent wind farm (and the disturbance from this) means that breeding scoter are unlikely to use the waterbodies (scoter require low levels of disturbance, SNH, 2007).

7.15.22 Common scoter is not expected to fly from breeding lochs from within the SPA during the breeding season but will fly during the pre- and post- breeding periods (as detailed in the expert opinion report for Bunloinn Wind Farm, and Mitchell *et al*., 2023). Any scoter traversing flights from lochs within the SPA from/to the sea when arriving and leaving a breeding loch are likely to do so following natural low-lying points in the landscape (such as low points associated with a river valley), as stated in the expert opinion report. Scoters are also predicted to fly from the SPA breeding loch to the sea along a south-west to north-east axis (and vice versa) as stated in the expert opinion for Bunloinn Wind Farm. Scoters are thus likely to follow watercourses/river valleys/channels towards the sea (into the Moray Firth). The likely movement routes would be respectively the Caledonian Canal route for Loch Garry and Loch Lundie, and the River Moriston route for Loch Loyne and Loch Cluanie, given the close proximity of these watercourses to the lochs. Similarly, any scoters breeding at Loch Blair or Loch Affric (which are the other component lochs of the SPA), and are greater than 10 km from the Site, are similarly expected to follow watercourses/river valleys to the sea. Assuming scoters follow watercourses to the sea (supported by the lack of evidence of flights through the Site during field surveys) the Site will not be traversed. The operational Millennium Wind Farm (to the south of the Site and thus between the Site and the SPA) will already form a 'barrier' to any scoter flights at a height where they might be 'at-risk'. Furthermore, there is relatively tall commercial forestry to the north of the Site further increasing the likelihood that flying scoters will instead follow defined river valleys/watercourses in the landscape.

7.15.23 Given the movement routes of common scoter from the West Inverness-shire Lochs SPA to the sea north of Loch Ness are likely to follow watercourses (as detailed above), the Proposed Development is not considered likely to have a barrier effect on foraging and/or traversing scoters, nor are scoter collisions predicted. This is particularly given the presence and effect of the existing operational Millennium Wind Farm within and adjacent to the Site, which would mean any birds have to fly high above a height where they are likely to be 'at-

risk' and given scoters when flying over land will do so at a very high height (Bergman and Donner, 1964), in the unlikely event that any birds did traverse the Site.

7.15.24 As such, in terms of mortality risks, displacement (and habitat loss) as a result of the Proposed Development on common scoter of the West Inverness-shire Lochs SPA, **no AESI** is anticipated.

In-combination Impacts

7.15.25 For common scoter, no evidence of the species was recorded (relevant to the Site) during baseline data gathering, with no impacts anticipated.

7.15.26 In terms of collision risk, disturbance / displacement and habitat loss, no significant impacts are predicted based on the results of the desk study, field surveys and considering likely disturbance limits for the species.

7.15.27 Based on the results of this assessment with regards to common scoter (of the West Inverness-shire Lochs SPA), for in-combination impacts from the Proposed Development, **no AESI** is anticipated.

Conclusion

7.15.28 No AESI is anticipated from the Proposed Development, alone and in-combination with other considered developments, on black-throated diver and common scoter of the West Inverness-shire Lochs SPA. The Proposed Development would not contravene the conservation objectives of the West Inverness-shire Lochs SPA. As such, it is considered that an AA is not required.

7.16 References

Bergman, G. and Donner, K.O. (1964), 'An analysis of the spring migration of the Common Scoter and the Long-tailed Duck in southern Finland', Acta Zoologica Fennica 105: 1-59.

CIEEM (2018), 'Guidelines for ecological impact assessment in the UK and Ireland: Terrestrial, freshwater, coastal and marine', September 2018. *Note, the guidance has been updated as version 1.3 (2024), but the update relates to relatively modest edits, and thus the original version 1 from 2018 is considered the key guidance and is referenced throughout the chapter.*

Challis, A., Beckmann, B.C., Wilson, M.W., Eaton, M.A., Stevenson, A., Stirling-Aird, P., Thornton, M. & Wilkinson, N.I. (2023), 'Scottish Raptor Monitoring Scheme Report 2021 & 2022', BTO Scotland, Stirling.

Eaton, M. and the Rare Breeding Bird Panel (2021), 'Rare breeding birds in the UK in 2019', British Birds, 114, 646-704.

Fielding, A.H., Anderson, D., Benn, S., Dennis, R., Geary, M., Weston, E. and Whitfield, P. (2021a), 'Responses of dispersing GPS-tagged golden eagles (*Aquila chrysaetos*) to multiple wind farms across Scotland', Ibis, 164, 102-177.

Fielding, A.H., Anderson, D., Benn, S., Dennis, R., Geary, M., Weston, E. and Whitfield, P. (2021b), 'Non-territorial GPS-tagged golden eagles *Aquila chrysaetos* at two Scottish windfarms: Avoidance influenced by preferred habitat distribution, wind speed and blade motion status', PLoS ONE 16(8): e0254159, https://doi.org/10.1371/journal.pone.0254159.

Fielding, A.H., Anderson, D., Benn, S. Taylor, J., Tingay, R., Weston, E.D. and Whitfield, D.P. (2023), 'Responses of GPS-Tagged Territorial Golden Eagles *Aquila chrysaetos* to Wind Turbines in Scotland', Diversity, 15, 917, https://doi.org/10.3390/d15080917.

Fielding, A.H., Anderson, D., Benn, S., Taylor, J., Tingay, R., Weston, E.D. and Whitfield, P.D. (2024), 'Approach distances of Scottish golden eagles *Aquila chrysaetos* to wind turbines according to blade motion status, wind speed, and preferred habitat', Diversity 16, 71, https://doi.org/10.3390/d16010071.

Goodship, N.M. and Furness, R.W. (2022), 'Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species' MacArthur Green, NatureScot Research Report 1283.

Haworth Conservation (2015), 'Edinbane Windfarm: Ornithological monitoring 2007–2014. A review of the spatial use of the area by birds of prey', Haworth Conservation Ltd.

Highland Environment Forum (2021), 'Highland Nature: Biodiversity Action Plan 2021-2026', https://www.highlandenvironmentforum.info/biodiversity/action-plan/ (Accessed 11th October 2024).

Mitchell, C., Griffin, L.R., Burrell, E. and Hilton, G.M. (2023), 'Year-around movements of female common scoter *Melanitta nigra* nesting in Scotland; birds of a feather don't flock together', Wildfowl, 73: 262-274.

NatureScot (2020), 'Scottish Biodiversity List', https://www.nature.scot/doc/scottish-biodiversity-list (Accessed 21st February 2025).

NatureScot (2024a), 'Pre-application guidance for onshore wind farms', Version: February 2024.

NatureScot (2024b), 'Wind farm impacts on birds', https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/onshore-wind-energy/wind-farm-impacts-birds (Accessed 21st February 2025).

NatureScot Sitelink (2024), https://sitelink.nature.scot/home (Accessed 11th October 2024).

Nevis Ecology (2017), 'Millennium Wind Farm. Post construction monitoring report Year 5', Millennium Wind Energy Ltd., September 2017.

Pearce-Higgins, J.W., Stephen, L., Langston, R.H.W, Bainbridge, I.P. and Bullman, R. (2009), 'The distribution of breeding birds around upland wind farms', Journal of Applied Ecology 46, 1323-1331.

Pearce-Higgins, J.W., Stephen, L., Douse, A. and Langston, R.H.W. (2012), 'Greater impacts of wind farms on bird populations during construction than subsequent operation: results of a multi-site and multi-species analysis', Journal of Applied Ecology 49, 386-394.

Scottish Government (2023), 'National Planning Policy Framework 4', https://www.gov.scot/publications/national-planning-framework-4/ (Accessed 11th October 2024).

Scottish Government (2014), 'Scottish Marine and Freshwater Science Volume 5 Number 12: Strategic assessment of collision risk of Scottish offshore wind farms to migrating birds', Report to inform large scale indicative strategic assessments on the impact of offshore wind energy developments on birds. 17th October 2014. https://www.gov.scot/publications/scottish-marine-freshwater-science-volume-5-number-12-strategic-assessment/pages/3/ (Accessed 21st February 2025).

NatureScot (2025), 'Site Condition Monitoring', https://informatics.sepa.org.uk/ProtectedNatureSites/ (Accessed 21st February 2025).

SNH (2000), 'Windfarms and birds: calculating a theoretical collision risk assuming no avoiding action', SNH, Inverness.

SNH (2007), 'West Inverness-shire Lochs Site of Special Scientific Interest. Site Management Statement', November 2007.

SNH (2016), 'Assessing connectivity with Special Protection Areas (SPAs)', SNH, Inverness.

SNH (2017a), 'Recommended bird survey methods to inform impact assessment of onshore wind farms', SNH, Inverness.

SNH (2017b), 'Avoidance rates for the onshore SNH Wind Farm Collision Risk Model', SNH, Inverness.

SNH (2018a), 'Assessing significance of impact from onshore windfarms on birds outwith designated areas', SNH, Inverness.

SNH (2018b), 'Assessing the cumulative impacts of onshore wind farms on birds', SNH, Inverness.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and 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, 114, 723–747.

THC (2012), 'Highland-Wide Local Development Plan', https://www.highland.gov.uk/info/178/development_plans/199/highland-wide_local_development_plan (Accessed 9th October 2024).

THC (2015), 'Inner Moray Firth Proposed Local Development Plan', Adopted Plan, June 2015, https://www.highland.gov.uk/downloads/file/2362/proposed_plan (Accessed 21st February 2025).

THC (2019), 'West Highland and Islands Local Development Plan', Adopted Plan, September 2019, https://www.highland.gov.uk/info/178/development_plans/582/west_highland_and_islands_local_development_plan (Accessed 21st February 2025).

Walker, D., McGrady, M., McCluskie, A., Madders, M. and McLeod, D.R.A. (2005), 'Resident golden eagle ranging behaviour before and after construction of a windfarm in Argyll', Scottish Birds, 25, 24–40.

Watson, J. (1997), 'The golden eagle', Poyser, London.

Whitfield, D.P., Green, M. and Fielding, A.H. (2010), 'Are breeding Eurasian curlew *Numenius arquata* displaced by wind energy developments?', Natural Research Projects Ltd., Banchory, Scotland.

Wilson, M. W., Austin, G. E., Gillings S. and Wernham, C. V. (2015), 'Natural Heritage Zone bird population estimates', Scottish Windfarm Bird Steering Group Commissioned Report No. 1504.

Zwart, M. C., Robson, P., Rankin, S., Whittingham, M.J. and McGowan, P.J.K. (2015), 'Using Environmental Impact Assessment and Post-construction Monitoring Data to Inform Wind Energy Developments', Ecosphere, Volume 6(2), Article 26, https://doi.org/10.1890/ES14-00331.1.