9. Ornithology

Contents

9 Ornithology

9.1 Executive Summary

9.1.1 This chapter considers the potential significant effects on important ornithological features (IOFs) associated with the construction, operation and decommissioning of the Proposed Development.

9.1.2 The assessment is based upon comprehensive baseline data, comprising specifically targeted field surveys of important and legally protected ornithological features identified during desk study and consultation feedback. It draws on pre-existing information, where appropriate, from other studies and survey data sources, and is based on Environmental Impact Assessment (EIA) guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM) and NatureScot.

9.1.3 Two full years of ornithology surveys were carried out to support the application, as agreed through consultation with NatureScot. Surveys consisted of Vantage Point (VP) flight activity surveys, moorland breeding bird surveys, Annex 1 and Schedule 1 breeding raptor and owl searches, breeding black grouse searches and breeding diver searches.

9.1.4 The site (and adjacent habitats) supports a relatively limited range of ornithology species regarded as 'target species', as evidenced from baseline surveys (and desk study records). IOFs taken forward for detailed assessment were Glen Affric to Strathconon Special Protection Area (SPA), golden eagle, red kite and black grouse. A cumulative effects assessment considering other wind farm developments within Natural Heritage Zone (NHZ) 7 'Northern Highlands' was also undertaken. No major impacts or significant effects on these IOFs were concluded, prior to consideration of (additional) mitigation measures.

9.1.5 Standard mitigation adopted would include embedded mitigation through Proposed Development design (avoidance), good practice control measures including production of a breeding bird protection plan (BBPP), pre-clearance surveys and appointment of an Ecological Clerk of Works (ECoW) to oversee the implementation of the ornithology mitigation measures.

9.1.6 Following the application of the proposed mitigations, no significant adverse direct and/or indirect effects on ornithological features are anticipated as a result of the Proposed Development. Note, some precautionary, additional mitigation in relation to black grouse lek sites and foraging raptors would however be adopted to reduce the potential for unnecessary disturbance/potential displacement to leks and minimise potential for attracting raptors on-site during operation. Habitat enhancement opportunities detailed in an outline Nature Enhancement Management Plan (ONEMP) would also be implemented to improve habitat conditions on-site for many IOFs.

9.1.7 Information to inform Habitats Regulations Appraisal (HRA) is also included with reference to Likely Significant Effects (LSEs) on Glen Affric to Strathconon SPA, Ben Wyvis SPA, Cromarty Fifth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site, from the Proposed Development (and in combination with other relevant wind farms in NHZ7). No LSEs on the qualifying ornithological interests of any of these internationally designated sites are concluded.

9.2 Introduction

9.2.1 This chapter considers the potential significant effects on IOFs associated with the construction, operation and decommissioning of the Proposed Development.

9.2.2 The assessment is based upon comprehensive baseline data, comprising ornithological field surveys of important and legally protected ornithological features identified during desk study and consultation feedback. It draws on pre-existing information, where appropriate, from other studies and survey data sources, and is based on the 'Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland' CIEEM (2018) and NatureScot's 'Environmental Impact Assessment Handbook' (formerly Scottish Natural Heritage (SNH), 2018a).

9.2.3 The specific objectives of the chapter are to:

- describe the ornithological baseline conditions associated with the site and associated study areas, in order to identify the ornithological features which will be the focus of this assessment;
- describe the assessment methodology and significance criteria used in completing the impact assessment;
- evaluate the sensitivity of each ornithological feature;
- determine the magnitude of impacts on IOFs;
- describe and assess the potential effects, including direct, indirect and cumulative effects;

- describe the mitigation measures proposed to avoid, reduce and offset potentially significant adverse effects; and
- assess the significance of residual effects remaining following the implementation of mitigation.

9.2.4 The assessment has been carried out by Avian Ecology Ltd. Lead author: Dr Colin Bonnington DPhil MSc BSc (Hons) FBNA FLS MRSB MCIEEM, Principal Ecologist, with support from Mr Thomas Goater MSc BSc (Hons) MCIEEM, Technical Director. Dr Bonnington and Mr Goater have over 12 and 17 years' experience respectively as professional ecologists, specialising in renewable energy developments. Both Dr Bonnington and Mr Goater have contributed to, and led on, many large-scale renewable energy projects in Scotland, including numerous wind farm development projects.

9.2.5 This chapter is supported by the following figures:

- Figure 9.1: Ornithological Statutory Designated Sites for Nature Conservation.
- Figure 9.2: Vantage Point Flight Activity Survey Plan.
- Figure 9.3: Breeding Bird Survey Plan.
- Figure 9.4a: Target Species Flight Activity – Waders (Year 1).
- Figure 9.4b: Target Species Flight Activity – Raptors and Owls (Year 1).
- Figure 9.4c: Target Species Flight Activity – Other Species (Year 1).
- Figure 9.5a: Target Species Flight Activity – Waders (Year 2).
- Figure 9.5b: Target Species Flight Activity – Raptors and Owls (Year 2).
- Figure 9.5c: Target Species Flight Activity – Other Species (Year 2).
- Figure 9.6a: Moorland Breeding Bird Survey Results (Year 1).
- Figure 9.6b: Moorland Breeding Bird Survey Results (Year 2).
- Confidential Figure 9.7a: Existing Ornithological Records (RSPB and Highland Biological Recording Group (HBRG)).
- Confidential Figure 9.7b: Existing Ornithological Records (Highland Raptor Study Group (HRSG)).
- Confidential Figure 9.8a: Breeding Annex 1/Schedule 1 Raptor and Owl (Year 1).
- Confidential Figure 9.8b: Breeding Annex 1/Schedule 1 Raptor and Owl (Year 2).
- Confidential Figure 9.9a: Breeding Black Grouse Leks (Year 1).
- Confidential Figure 9.9b: Breeding Black Grouse Leks (Year 2).
- Confidential Figure 9.9c: Breeding Black Grouse Leks (Years 1 and 2 Combined).

9.2.6 This chapter should also be read in conjunction with the following Technical Appendices:

- Technical Appendix 9.1: Ornithology.
- Technical Appendix 9.2: Confidential Ornithology.
- Technical Appendix 9.3: Collision Risk Model Analysis.
- Technical Appendix 9.4: Confidential GET Model Assessment.

9.2.7 For ecological features, please see **Chapter 8: Ecology**.

9.2.8 Information in figures, Technical Appendices and other chapters are referred to where relevant, but in the interests of concision, information contained in other chapters and appendices is not repeated herein unless essential for understanding. Confidential Figures and Appendices will be supplied to relevant consultees only on request.

9.2.9 The site is defined by the red line site boundary shown on **Figures 9.1** to **9.6b**.

9.3 Legislation, Policy and Guidelines

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

Legislation

9.3.2 Relevant legislation has been reviewed and taken into account as part of this ornithology assessment. Of particular relevance are:

- The Conservation of Habitats and Species Regulations 2017 (UK Government, 2017) (as amended) and the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland by the Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019) (Scottish Government, 2019) (collectively 'the Habitats Regulations')
- The Nature Conservation (Scotland) Act 2004 (Scottish Government, 2004).
- The Wildlife and Countryside Act 1981 (as amended) (UK Government, 1981).
- The Wildlife and Natural Environment (Scotland) Act 2011 (Scottish Government, 2011).
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Scottish Government, 2017).

Planning Policy

9.3.3 Planning policies are detailed within **Chapter 4: Policy Framework**, although those policies given most consideration in this chapter are the following:

- The National Planning Policy Framework 4 (Scottish Government, 2023), and specifically 'Policy 3 – Biodiversity' and 'Policy 4 – Natural Places'.
- Highland-wide Local Development Plan (The Highland Council (THC), 2012), particularly 'Policy 57 – Natural, Built and Cultural Heritage', 'Policy 58 – Protected Species', 'Policy 59 – Other Important Species' and 'Policy 60 – Other Important Habitats and Article 10 Features'.
- Highland Biodiversity Action Plan 2021-2026 (Highland Environment Forum, 2021).
- Highland Statutorily Protected Species Supplementary Guidance (THC, 2013).

Guidance

9.3.4 The following best practice guidelines/guidance have been taken account of:

- Pre-application guidance for onshore wind farms (NatureScot, 2024).
- 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 (SNH, 2017a).
- Assessing Connectivity with Special Protection Areas (SPAs) (SNH, 2016a).
- Environmental Statements and Annexes of Environmentally Sensitive Bird Information: Guidance for Developers, Consultants and Consultees (SNH, 2016b).
- Assessing Significance of Impact From Onshore Windfarms on Birds Outwith Designated Areas (SNH, 2018b).
- Assessing the Cumulative Impact of Onshore Wind Farms on Birds (SNH, 2018c).
- 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).
- Scottish Biodiversity List (SBL) (Scottish Government, 2020).
- Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species (Goodship and Furness, 2022).
- Developing Field and Analytical Methods to Assess Avian Collision Risk at Wind Farms (Band *et al.*, 2007).
- Using a collision risk model to assess bird collision risks for onshore wind farms (Band, 2024).
- Implications of additional protection for hen harrier, red kite and golden eagle under schedules A1 and 1A of the Wildlife and Countryside Act (1981) (SNH, 2014).

9.3.5 Additional sources of guidance and peer-reviewed literature have also been referred to during the interpretation of baseline ornithological information for the purposes of this assessment and is referenced to where appropriate.

9.4 Consultation

9.4.1 **Table 9.1** summarises the consultation responses received regarding ornithology matters and provides information as to where and/or how these comments have been addressed.

Table 9.1 – Consultation

Consultee and Date	Consultation Response	Applicant Response
NatureScot 24 October 2019 *Pre-Scoping*	- Recommended looking at available documentation for the previous Carn Gorm Wind Farm.	– Publicly available documentation for the previous Carn Gorm Wind Farm has been considered (see **Technical Appendix 9.1** and **Section 9.6**).
	- Ben Wyvis National Nature Reserve (NNR) should be considered and accordingly scoped in or out of further consideration. NatureScot acknowledge that no adverse impacts on the interests of the NNR are envisaged.	– Effects on the NNR are considered, see **Section 9.8**.
	- Confirmed that the proposed survey work and target species are appropriate.	– Noted.
	- Stated that there are more white-tailed eagle (*Haliaeetus albicilla*) in the area in recent years (but no breeding sites), and similar for osprey (*Pandion haliaetus*). Satisifed that the proposed surveys would record these Annex 1/ Schedule 1 raptors.	– These were both target species (**Section 9.5**), and were recorded during surveys (**Section 9.6**), and potential effects on these species have been considered (**Section 9.8**).
	- Flagged that there are some gaps in Vantage Point (VP) viewshed coverage around two of the small waterbodies which might be a focal point for bird activity. Therefore some targeted surveys around those lochans would be prudent.	– Field surveys appropriately covered the waterbodies on-site, with all turbines located appropriately within the visible viewsheds used during VP flight activity surveys (see **Figure 9.2**), with limitations considered in **Technical Appendix 9.1** and **Section 9.5**.
	- Further comment would be provided at the formal scoping stage, and asked that as much detail is provided at that stage to ensure key ornithological issues are scoped in for assessment.	– Noted. See *Scoping* comments below.
Highland Biological Recording Group (HBRG) 14 April 2023 *Pre-Scoping*	- Provided ornithological records within 2 km of the site, extended to 10 km for records of Annex 1/ Schedule 1 raptors.	– Records have been considered (in **Confidential Figure 9.7a**, **Confidential Technical Appendix 9.2**) and **Section 9.8**.
Highland Raptor Study Group (HRSG) 30 September 2020 and updated 11 July 2023 *Pre-Scoping*	- Provided raptor and owl records within 2 km of the site, extended to 6 km for records of eagles.	– Records have been considered (in **Confidential Figure 9.7b**, **Confidential Technical Appendix 9.2**) and **Section 9.8**.
Royal Society for the Protection of Birds (RSPB) 29 October 2019 and updated 26 January 2025 *Pre-Scoping*	- Provided ornithological records within 6 km of the site, extended to 10 km for records of eagles.	– Records have been considered (in **Confidential Figure 9.7a**, **Confidential Technical Appendix 9.2**) and **Section 9.8**.
The Highland Council (THC) Un-dated *Pre-Application Advice (PAC)*	- Detailed work will be required to demonstrate compliance with Policy 3 of NPF4. This must account for the requirements to conserve, restore and enhance biodiversity, including priority peatland habitats.	– Enhancement measures to be adopted (to accord with Policy 3 of NPF4) are provided in **Section 9.10**, and are discussed within the Outline Nature Enhancement Management Plan (ONEMP) (see **Technical Appendix 8.5**). Standard mitigation to be adopted (as summarised in **Section 9.7**) aims to minimise effects on biodiversity, including through avoidance of key features of biodiversity.
	- The impact that the Proposed Development would have on designated sites will need to	– Effects on designated sites with respect to ornitholological qualifying

Consultee and Date	Consultation Response	Applicant Response
	be considered with respect to Policy 4 of NPF4.	species is considered in **Sections 9.8**, **9.9** and **9.14**.
	- Potential effects on the Glen Affric to Strathconon Special Protection Area (SPA), for which breeding golden eagle (*Aquila chrysaetos*) is a qualifying species, will need to be considered. This will include an HRA being required to consider these impacts from the Proposed Development and cumulatively.	– Effects on the SPA are considered in **Sections 9.8** and **9.9**, with an information to inform Habitats Regulations Appraisal (HRA) included regarding effects (including cumulative effects) on the SPA provided in **Section 9.14**.
	- Potential for displacement of golden eagle from foraging habitat should be considered, and informed by a GET (Golden Eagle Topographical) model.	– A GET model was carried out (see **Confidential Technical Appendix 9.4**), and the results are considered in **Sections 9.8** and **9.9**.
	- Collision risk to golden eagle should also be considered for the Proposed Development, and cumulatively.	– Collision risk mortality (CRM) modelling was undertaken for golden eagle, with results in **Technical Appendix 9.3**, and results considered in the assessment in **Sections 9.8** and **9.9**. A cumulative assessment with respect to collision risk to golden eagles is provided in **Section 9.12**.
	- As the site lies within the foraging distance of greylag goose (*Anser anser*), effects on the Cromarty Firth SPA, and Inner Moray Firth SPA (for which non-breeding greylag goose is a qualifying species), effects on these SPAs (in relation to greylag goose) should be considered.	– Effects on greylag goose with respect to those named SPAs are considered in **Sections 9.8** and **9.14**.
	- Advised that any application should provide sufficient information to demonstrate that the Ben Wyvis SPA qualifying species, dotterel (*Charadrius morinellus*), will not be affected by the Proposed Development.	– Effects on the Ben Wyvis SPA and its qualifying species (dotterel) are considered in **Section 9.8**, and information is provided with this respect also in **Section 9.14**.
	- Effects on the Ben Wyvis NNR should be considered.	– Effects on the NNR with respect to ornithological interest of the NNR are provided in **Section 9.8**.
	- In addition to SPA species, effects on other species like upland waders and black grouse (*Lyrurus tetrix*) from the Proposed Development (and cumulatively) should be considered.	– Effects on other species like upland waders and black grouse are considered in **Section 9.8**, and with respect to black grouse also **Section 9.9**. –
	- Advised that RSPB and the HRSG should be contacted for relevant bird records, and with respect to RSPB, should include Slavonian grebe (*Podiceps auritus*) and capercaillie (*Tetrao urogallus*).	– RSPB and the HRSG were contacted for suggested records (see **Confidential Technical Appendix 9.2**).
	- Survey work should also cover access routes, to ensure potential disturbance and displacement effects on species (especially Schedule 1 species) are considered.	– Survey work covered access routes (see **Figures 9.2** and **9.3**) and potential effects on species including Schedule 1 species is considered (see **Sections 9.8** and **9.9**).
	- Potential impacts through habitat loss/change, disturbance and/or displacement and collision risk to SPA and wider countryside bird populations will need to be considered, both for the Proposed Development alone, and cumulatively.	– Such effects are considered in **Sections 9.8** and **9.9**, and in **Section 9.14** for cumulative assessment.
	- Cumulative assessment should be considered at the Natural Heritage Zone (NHZ) 7, or SPA population level.	– Assessment has been considered at the NHZ 7 level (see **Section 9.9**) and SPA population level (see **Section 9.14**).
	- Mitigation should be considered as part of the assessment process, and details included.	– Standard mitigation to be adopted is provided in **Section 9.7**, and additional mitigation is provided in **Section 9.10**.

Consultee and Date	Consultation Response	Applicant Response
	- Directed to NatureScot guidance with regards to CRM modelling, SPA connectivity, effects of aviation lighting, etc.	– Advice and guidance from NatureScot is considered, with details of where the recommendations have been addressed provided in this table.
THC 25 August 2023 *Scoping*	- Presence of Schedule 1 species and qualifying species of SPAs and other listed bird species of designated areas must be included and considered as part of the application process.	– These species have been considered in this chapter (see **Sections 9.8** and **9.9**).
	- Assessment of impacts to birds through collision, disturbance, and displacement from foraging, breeding and/or roosting habitat for the Proposed Development (and cumulatively) will be required.	– Potential effects are considered in **Sections 9.8** and **9.9**, and **Section 9.14** for cumulative assessment.
	- The EIA Report should be clear on the survey methods and any deviations from guidance on ornithology matters.	– Detail of the survey methods is provided in **Technical Appendix 9.1**, and is summarised in **Section 9.5**.
NatureScot 21 July 2023 *Scoping*	- Potential effects on the Glen Affric to Strathconon SPA, for which breeding golden eagle is a qualifying species, will need considered. This should consider the SPA's 'Conservation Objectives' especially with regards to 'population'. This will include an HRA being required to consider these impacts from the Proposed Development and cumulatively.	– Potential effects on the SPA are considered in **Sections 9.8**, **9.9** and **9.12**. An information to inform HRA is provided in **Section 9.14**.
	- Welcome that Cromarty Firth SPA and Inner Moray Firth SPA are to be scoped into the EIA process, with respect to (non-breeding) greylag goose. Collision risk is the key consideration.	– Potential effects on the SPAs are considered in **Sections 9.8**. An information to inform HRA is provided in **Section 9.14**.
	- The greylag goose number reported in the SPA citations should be used in the assessment, with respect to a shadow HRA.	– Noted, and population numbers from SPA citations have been considered, see **Section 9.14**.
	- Effects on the Ben Wyvis SPA (and its qualifying species, breeding dotterel) should be scoped in to assessment, so it is clear that such effects have been fully considered.	– Potential effects on the SPA is considered in **Sections 9.8**. An information to inform HRA is provided in **Section 9.14**.
	- Effects on the Ben Wyvis NNR should be considered in the assessment.	– Effects on the NNR with respect to ornithological interest of the NNR are provided in **Section 9.8**.
	- Slavonian grebe and capercaillie should be duly considered in the assessment.	– Both species are considered in **Section 9.8**.
Ferintosh Community Council 20 July 2023 *Scoping*	- Proper environmental study should be conducted at the impact of the collective windfarms, existing and proposed projects, and not just individual studies.	– Potential effects of the Proposed Development (alone) are considered in **Sections 9.8**, **9.9** and **9.14**, and cumulatively in **Sections 9.12** and **9.14**.
RSPB Scotland 20 July 2023 *Scoping*	- Generally satisfied with the content of the scoping report and the proposed scope of EIA.	– Noted.
	- Effects on golden eagle in terms of potential loss of foraging habitat, displacement, and collision risk should be considered.	– These potential effects on golden eagle have been considered in **Sections 9.8** and **9.9**.
	- Welcome the use of the GET model.	– Noted. The GET model is provided in **Confidential Technical Appendix 9.4.**
	- Important to ascertain distances of operations to golden eagle nest sites (and line-of-sight) so that appropirate constraints can be adopted to prevent disturbance.	– Such potential effects to nesting eagles has been considered (see **Section 9.9**).
	- Recommend the HRSG are contacted for the latest information on golden eagle, including location of nest sites.	– Such information has been gathered from the HRSG (see **Confidential Technical Appendix 9.2**).

Consultee and Date	Consultation Response	Applicant Response
	- The Ben Wyvis SPA should be scoped in to the assessment. Assessment should make it clear whether any suitable breeding habitat for dotterel on the site. Potential for dotterel to traverse the site should also be considered.	– Potential effects on the Ben Wyvis SPA (breeding dotterel) is considered in **Sections 9.8** and **9.14**.
	- Welcome the inclusion of the Cromarty Firth SPA and Ramsar site, and Inner Moray Firth SPA and Ramsar site within the assessment, with regards to non-breeding greylag goose.	– Potential effects on the SPAs and Ramsar sites are considered in **Sections 9.8**. An information to inform HRA is provided in **Section 9.14**.
	- Effort should be made to minimise collision risk to red kite (*Milvus milvus*), for example by turbines avoiding main areas of red kite activity.	– Noted. Those areas of the site with the highest red kite activity has been considered during design evolution (see **Sections 9.7** and **9.9**).
	- EIA must include an assessment of the disturbance, displacement and collision risk for black grouse. Potential for black grouse to collide with the turbine base should also be considered.	– Effects on black grouse are considered in **Sections 9.8** and **9.9**.
	- Black grouse are sensitive to disturbance during lekking, and the Proposed Development should be designed to avoid potential displacement ensuring a 750 m buffer is in place around leks. Works should also avoid disturbance during the lekking season (March to May, inclusive).	– This mitigation measure is being adopted as confirmed in **Section 9.10**.
	- Habitat enhancement measures should be considered to benefit black grouse and could include promotion of heather and other dwarf shrubs, low density native woodland planting by commercial forestry and bog restoration.	– Enhancement measures to be adopted are provided in **Section 9.10**, and are discussed within the ONEMP (see **Technical Appendix 8.5**). These include measures aimed to benefit black grouse.
	- Content, in general, with the range, survey areas/buffers and approach to bird surveys undertaken, it would be prudent to include dotterel in the surveys.	– Noted. Dotterel was included as a target species during the two years of surveys.
	- Raptor and eagle surveys were carried out April to August 2020 and 2021, even though NatureScot (SNH, 2017) states the eagle surveys should commence from February.	– Raptor surveys were undertaken between February and August 2021 (and April to August 2020), and thus Year 2 at least captured the early eagle breeding season. Note, VP flight activity surveys would have captured eagle activity in February and March 2020, and the desk study carried out provided recent raptor (including eagle) records. As such, a true reflection of the eagle activity on, and adjacent to, the site has been determined.
	- Information should be provided in the EIA Report to demonstrate that the survey data is adequate, robust and accurate, and should included: full information of VP work undertaken, including dates, times and weather conditions, maps showing VP locations and visible viewsheds, maps showing any goose, swan, wader, grouse, crossbill and raptor breeding, foraging and roosting areas, worked examples of CRM calculations, and raw data in order for independent verification of CRM results.	– Information on survey methods and conditions are provided in **Technical Appendix 9.1**. Study areas used during surveys are depicted in **Figures 9.2** and **9.3**. CRM models undertaken, including the worked examples, are provided in **Technical Appendix 9.3**.
	- EIA Report should consider all aspects of the Proposed Development including turbines, borrow pits, access roads, substation and storage compounds, etc. And at all phases including site selection, design, construction, operation and maintenance	– All aspects of the Proposed Development have been considered in the assessment and at all suggested phases (see **Section 9.9**).
	- Disturbance, displacement, loss of suitable habitat (breeding, wintering and foraging) and collision risk should be assessed for all scoped in species, both during construction	– These potential effects have been assessed for those scoped-in species (see **Section 9.9**).

Consultee and Date	Consultation Response	Applicant Response
	and operation, for all aspects of the Proposed Development.	
	- The potential barrier effects of the Proposed Development should be addressed in the EIA, particularly with regards to raptors and geese.	– The potential for barrier effects are considered in **Sections 9.8** and **9.9**.
	- The turbines should be located within the VP visible viewsheds.	– The turbines are located within the VP visible viewsheds, as shown in **Figure 9.2**.
	- The turbine which is located by VP1 (based on a previous design iteration) should be moved to avoid the surveyor's presence potentially affecting bird behaviour.	– The nearest turbine has been accordingly moved away from VP1 (see **Figure 9.2**), in the final layout for the Proposed Development.
	- Although welcomed the use of GET model, this should not take precedence over observational data.	– Noted. The results of the GET model have been considered, as well as observational field survey data (and desk study records), in this assessment (see **Section 9.9**).
	- If significant numbers of collisions are predicted, then population models are likely to be required, to provide Counterfactual of Population Size (CPS) outputs.	– Significant numbers of collisions are not predicted (see **Section 9.9**), and CPS is accordingly not considered.
	- Cumulative impacts on species should be considered across both NHZ7 and NHZ21, and in relation to any designated site with connectivity to the site, including SPAs.	– Cumulative impacts on species has been considered at the NHZ7 level, and SPA level, for relevant species. This approach was recommended by THC (see consultation in this table), and has been followed (see **Sections 9.9** and **9.14**), and was the approach set out at scoping (so consider NatureScot to have been satisfied with approach too, given there was no response on the contrary). Impacts are not assessed at the NHZ21 population level. NHZ21 is greater than 6 km from the site and thus is on the upper foraging limit of target species including golden eagle and red kite (from SNH 2016a). The documented NHZ21 golden eagle population is reported as '0' so it is considered inappropriate to consider effects also on the NHZ21 population, given the apparent lack of eagles in that NHZ. The red kite population in NHZ21 (50 pairs) is notably higher than within NHZ7 (nine pairs), so assessing impacts against the NHZ7 population (which is where the site is located) is considered most appropriate and provides a worst-case scenario.
	- In addition to wind farm developments, in combination effects of other relevant projects like overhead power lines and new woodland planting should be considered, and grid connections to wind farms like Lochluichart Wind Farm II.	– Scoping (including consultation with NatureScot) did not reveal any specific non-wind farm developments that are required to be considered, so cumulative assessment is limited to other relevant wind farm developments (see **Section 9.12**).
	- Strongly support the production of an outline Habitat Management Plan (HMP) and Breeding Bird Protection Plan (BBPP). Encourage measures to benefit black grouse, away from turbines.	– An ONEMP which provides habitat enhancement measures to be adopted is provided in **Technical Appendix 8.5**. This includes measures aimed to benefit black grouse. If consented, a BBPP will be produced as part of the CEMP. See **Section 9.7**.
	- The HMP must include a monitoring programme for any habitat improvements, breeding birds on the site, and SPA species, including golden eagle.	– The ONEMP summarises the monitoring to be undertaken if the Proposed Development is consented (see **Technical Appendix 8.5**).

Consultee and Date	Consultation Response	Applicant Response
	- The HMP (or other document) should include a protocol for reporting collisions to NatureScot.	– The summary of ornithological monitoring in the ONEMP includes reference to reporting collisions to NatureScot.
NatureScot 15 August 2024 *Gatecheck*	- Content that the advice from scoping (see above) has been considered.	– Noted.
	- At this stage, have no opportunity to comment on quality of work undertaken or study findings, and reserve this to when a full and detailed consideration of the impacts of the Proposed Development can be made as part of the EIA process.	– Noted.

9.5 Assessment Methodology and Significance Criteria

Assessment Methodology

9.5.1 The assessment presented within this chapter has been undertaken in accordance with CIEEM guidelines (CIEEM, 2018) and considers the following potential impacts upon ornithological features associated with construction and operation of the Proposed Development:

- collision mortality – the risk of mortality resulting from collision or interaction with the turbines and/or other wind farm infrastructure;
- disturbance/displacement of species - disturbance and displacement of birds from the area occupied by the Proposed Development and surrounding areas as a result of the construction and operation of the Proposed Development; and
- habitat loss as a result of the construction and operation of the Proposed Development.

9.5.2 The potential effects are considered as a result of the Proposed Development alone and cumulatively, in combination with other wind farm developments. No other large developments were considered, as none were specifically requested to be considered during consultation (see **Table 9.1**).

9.5.3 CIEEM guidelines (2018) stipulate that it is not necessary to carry out a detailed assessment of impacts upon ecological (including ornithological) features that are sufficiently widespread, unthreatened and resilient to impacts of the Proposed Development.

9.5.4 As such, the assessment considers effects upon designated sites and ornithological features which are considered important on the basis of baseline information, relevant guidance, literature, professional judgement of the authors, and opinions of statutory advisory bodies, provided through consultations in relation to the Proposed Development and, where relevant, other wind farm developments.

9.5.5 Where ornithological features are not considered so important as to warrant a detailed assessment, or where it is clear they will not be significantly affected on the basis of baseline information (e.g. passerine species), these ornithological features 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 provide legislative compliance for breeding and roosting birds.

Consultation

9.5.6 Consultation with NatureScot consisted of pre-scoping correspondence in October 2019, formal scoping consultation in July 2023, and Gatecheck consultation in August 2024 (as detailed in **Table 9.1**).

9.5.7 The HBRG, the RSPB and the HRSG were consulted for relevant ornithological records, with the HBRG consulted in April 2023, the RSPB in October 2019 and February 2025, and the HRSG consulted in September 2020 and July 2023 (as detailed in **Section 9.5**).

9.5.8 THC provided advice which included information relevant to ornithology (undated) through a Pre-application Consultation (PAC) Report.

9.5.9 The following consultees were consulted (and provided responses in relation to ornithology) during the formal scoping (in addition to NatureScot, in July 2023):

- THC in April 2023;
- RSPB Scotland in July 2023; and
- Ferintosh Community Council in July 2023.

9.5.10 Issues raised and actions taken (with regards to ornithology) following these consultations are detailed in **Section 9.5**.

9.5.11 No other responses were returned relevant to ornithology.

Study Area

9.5.12 The main study area within which baseline information in relation to ornithological features has been obtained has comprised an original boundary for the site and buffer areas out to at least 500 m (for Moorland Breeding Bird Survey (MBBS)), extended up to 6 km for field surveys of specific species (breeding eagles, but note, anecdotal evidence of breeding of other Annex 1/Schedule 1 raptors and owls was also noted out to this distance) as per current guidance (SNH, 2017a) and up to 20 km searches used for desk study gathering, including for European sites (SPAs and Ramsar sites).

9.5.13 Full details of study areas adopted for the desk study and field surveys (as well as any limitation considerations) are provided in **Technical Appendix 9.1** and illustrated on **Figures 9.1** to **9.6b**.

Desk Study

9.5.14 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.

9.5.15 Further desk study (for example in regard to 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.

9.5.16 The desk study has included a review of statutory designated sites in proximity to the site and consultation with specialist recording groups for existing ornithological records including the RSPB, HBRG and the HRSG (see **Table 9.1**).

9.5.17 Full details and results of the desk study undertaken are provided in **Technical Appendix 9.1** and **Confidential Technical Appendix 9.2**. Sensitive desk study information is provided in **Confidential Figures 9.7a** and **9.7b**.

Field Surveys

Target Species

9.5.18 Target species for field surveys and recording were drawn from the following lists adopting a precautionary approach and with reference to current NatureScot guidance (SNH, 2017a and 2018b):

- 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).
- Annex 1 'Priority bird species for assessment when considering the development of onshore wind farms in Scotland' (SNH, 2018b).

9.5.19 The list of target species was extended to include mute swan (*Cygnus olor*) and snipe (*Gallinago gallinago*) which may be more vulnerable to wind farm developments based on their size and low manoeuvrability, and display behaviour respectively. The broad selection of target species for survey and recording included qualifying species for the Glen Affric to Strathconon SPA (golden eagle), Ben Wyvis SPA (dotterel), and Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site (in relation to over-wintering greylag goose), for which core foraging ranges overlap with the site for those named qualifying species, in accordance with current guidance (SNH, 2016a). The nearest documented golden eagle breeding territory to the site is within the Glen Affric to Strathconon SPA, and thus eagle activity recorded is considered likely to be from one of the SPA eagle pairs.

9.5.20 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 Birds of Conservation Concern (BoCC) species (i.e. Stanbury *et al*., 2021) during Moorland Breeding Bird Surveys (MBBS) were however recorded.

9.5.21 Gulls, raven (*Corvus corax*) and commoner raptor species including buzzard (*Buteo buteo*), kestrel (*Falco tinnunculus*) and sparrowhawk (*Accipiter nisus*), 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 Vantage Point (VP) flight activity surveys (detailed below).

9.5.22 For further information into the target species considered during field surveys, see **Technical Appendix 9.1**.

Surveys

9.5.23 The following field surveys were carried out between 2019 and 2021 to inform the design and assessment of the Proposed Development:

- VP flight activity surveys.
- MBBS.
- Annex 1 and Schedule 1 breeding raptor and owl searches.
- Breeding black grouse searches.
- Breeding diver searches.

9.5.24 Surveys have been undertaken in accordance with guidance (SNH, 2017a) and full details are provided in **Technical Appendix 9.1**.

9.5.25 Current guidance (SNH, 2017a) recommends that a minimum of two years of ornithological surveys are 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 years of ornithological survey data, with the majority of the survey data collected within the most recently available five-year window of survey opportunity, prior to the undertaking of assessment.

Field Survey Personnel

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

9.5.27 A list of the field surveyors used is provided in **Technical Appendix 9.1.**

Assessment of Potential Effect Significance

9.5.28 The assessment has been undertaken in accordance with CIEEM guidelines (2018) and includes the following stages:

- determination and evaluation of important ecological/ornithological features;
- identification and characterisation of impacts;
- consideration of embedded mitigation measures;
- assessment of the significance of effects prior to (additional) mitigation measures;
- outline of (additional) mitigating measures to avoid and reduce significant impacts;
- assessment of the significance of any residual effects after the application of such measures; and
- identification of appropriate compensation measures to offset significant residual effects.

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

9.5.30 In accordance with current NatureScot guidance (SNH, 2018b) 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.

9.5.31 The NHZ is considered to be the most appropriate default regional scale, with the Proposed Development located entirely within the Northern Highlands NHZ (NHZ7). Accordingly, effects on the NHZ7 are considered in the assessment (see **Table 9.1** on discussions surrounding this approach).

9.5.32 For those scoped-in qualifying species of the Glen Affric to Strathconon SPA (golden eagle), Ben Wyvis SPA (dotterel) and Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site (non-breeding greylag goose), the assessment of impacts is also made against the conservation objectives of the designated sites.

9.5.33 The assessment has also considered (where relevant) effects on important ornithological features for the Proposed Development cumulatively with other developments, and with cumulative assessment undertaken in **Section 9.12.**

Criteria for Assessing the Sensitivity of Features

9.5.34 For the purpose of the assessment, ‘sensitivity’ is synonymous with ‘importance’.

9.5.35 Relevant European, national and local guidance has been referred to in order to determine the importance of ornithological features. 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, 2018b).

9.5.36 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.

9.5.37 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 9.1**.

9.5.38 It should be noted that 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/ abundance at the locality, or the geographical location of species relative to their known range.

9.5.39 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, if for example it is only recorded occasionally in small numbers.

Table 9.2 – Sensitivity/ Geographic Scale of Ornithological Feature of Importance

Sensitivity / Geographical Scale of Importance	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. Site of Special Scientific Interest (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	Species which are 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). Note, this may also include species listed on Annex 1 of the EU Birds Directive and/ or Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), but which are present in low number (i.e. <1% of the relevant regional NHZ population (NHZ7) or appropriate alternative).
Very Low - Site	Species which are 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.

Criteria for Assessing the Magnitude of Impact

9.5.40 The likelihood or probability that an effect would occur is 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.

9.5.41 The criteria used to determine the magnitude of impact are set out in **Table 9.13**.

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

9.5.43 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 site 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 or the immediate or wider surrounding area. Where uncertainty arises, a precautionary approach has been adopted.

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

Table 9.3 – Impact Magnitude

Magnitude	Definition
Very High	The impact (either on its own or in combination with other proposals) may be adverse and result in the permanent total or almost complete loss of a designated site and/or species

Magnitude	Definition
	status or productivity. Or alternatively the impact may be positive, and result in 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).
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 adverse impact which is an indiscernible reduction, or very slight positive impact which results in an indiscernible increase, in a species status or productivity, and/or no observable effect. E.g. Affecting ≤1 % of the relevant Regional NHZ population (NHZ7).

Characteristics Provided in Assessment of Potential Impacts

9.5.45 Once identified, potential impacts are described with reference to the following characteristics as appropriate:

- beneficial or adverse;
- extent;
- magnitude;
- duration;
- timing;
- frequency; and
- reversibility.

9.5.46 The assessment only makes reference to those characteristics which are 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 10 years;
- long-term: >10 to 50 years; and
- permanent: >50 years.

Criteria for Determining Significance

9.5.47 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 have been lawfully permitted following EIA procedures*."

9.5.48 For the purposes of assessment, significant effects are identified as those which encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance, and distribution).

9.5.49 Such effects are identified by considering the sensitivity of a feature, the magnitude of the impact and applying professional judgement based on best available evidence, to identify whether the integrity of a feature will be affected.

9.5.50 The term integrity is used here to refer to the maintenance of the conservation status of a population of a species at a specific location or geographical scale.

9.5.51 For the purposes of this assessment, significant effects are primarily considered with reference to the most recently published Regional NHZ population level (Wilson *et al*., 2015; or suitable alternative), in line with NatureScot's interests of a species' status at wider spatial levels. The significance of effects at other

geographical scales is also considered where appropriate on a precautionary basis and where sufficient information allows a meaningful assessment.

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

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

9.5.54 CIEEM guidelines (2018) do not recommend the sole use of a matrix table as commonly set out in EIA Reports to determine 'significant' and 'non-significant' effects on ornithological features. For the purposes of this assessment, **Table 9.4** sets out adapted CIEEM terminology and equivalent in the context of the EIA Regulations.

9.5.55 For the purpose of this assessment **'Major'** and '**Moderate'** effects alone (or **Major/Moderate** effects) are considered significant in the context of the EIA Regulations.

Table 9.4 – 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

9.5.56 A mitigation hierarchy has been proposed to avoid, mitigate and compensate for potential adverse effects on ornithological features as a result of the Proposed Development:

- 'avoidance' is used where a potential impact has been avoided from occurring e.g., through changes in scheme design;
- 'mitigation' is used to refer to measures to reduce a specific adverse effect in situ;
- 'compensation' describes measures taken to offset residual effects, i.e., where mitigation in situ is not possible or sufficient; 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

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

Cumulative Assessment

9.5.58 Potentially significant cumulative effects can result from individually not significant, but collectively significant effects taking place over a period of time or concentrated in a location.

9.5.59 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 obtained from NatureScot. Furthermore, criteria for the Golden Eagle Topographical (GET) model (details provided in **Confidential Technical Appendix 9.4**) are also considered in determining parameters for cumulative assessment.

9.5.60 The cumulative assessment as detailed in **Section 9.12** 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.

9.5.61 No major non-wind developments are considered in the assessment given no such development was identified by the Applicant, or NatureScot during scoping (see consultation points in **Table 9.1**), as requiring consideration.

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

9.5.63 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.

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

9.5.65 In this case, the undertaking of a cumulative assessment of potential impacts at the NHZ scale would entail the consideration of a very 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 9.1** for consultation points on this subject). The information from the wind farm developments provided by NatureScot is considered those which have relevant information for those IOFs scoped-in to assessment.

9.5.66 The search area used for the GET model (and thus specific to golden eagle), was 20 km.

Requirements for Information to Inform HRA

9.5.67 The site is considered to be in proximity to Ben Wyvis SPA, Glen Affric to Strathconon SPA, Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site, where effects on at least some the designated sites' qualifying species are considered possible.

9.5.68 Accordingly, as required by the Habitats Regulations, this chapter (see **Section 9.14**) provides a 'screening' stage where the Proposed Development is examined to determine if it is likely to have a significant effect on these protected sites. Furthermore, **Section 9.14** provides information to inform an HRA (which is all the data and details gathered) to allow the competent authority to undertake an appropriate assessment, if necessary.

Enhancement Opportunities

9.5.69 As a fundamental part of the Proposed Development, habitat enhancement opportunities on-site are investigated. The requirements of Policy 3 of NPF4 state 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 proposed to be adopted are accordingly provided in the ONEMP (**Technical Appendix 8.5).**

Limitations to Assessment

9.5.70 Limitations related to baseline data gathering are provided in **Technical Appendix 9.1.** The below provides a summary of the main considerations.

9.5.71 The natural topography of the site resulted in some steep hollows missing from coverage during the VP flight activity surveys, however the achieved coverage is considered appropriate, and in accordance with NatureScot guidance (SNH, 2017a). This guidance acknowledges that some minor gaps are typically unavoidable due to factors such as sloping topography, with the key consideration that all proposed turbines were located within the VP flight activity survey viewsheds. Digital elevation modelling (DEM) and ground-truthing were used to ensure maximum visual coverage of the required VP study area has been achieved using the minimum number of VPs, in accordance with the NatureScot guidance (SNH, 2017a). The final turbine layout is appropriately covered by VP viewsheds, as shown in **Figure 9.2**.

9.5.72 NatureScot guidance (SNH, 2017a) recommends that VPs be sited outside the turbine area of the Proposed Development to prevent the presence of the surveyor from potentially altering flight behaviour and artificially reducing the level of activity during the course of the survey. VPs 1 and 2 are located within the turbine envelope (within 500 m, albeit both are several hundred metres from the nearest turbine). At all VPs, surveyors were positioned off the peaks and instead positioned on slopes (below the skyline) and wore muted clothes to be as inconspicuous as possible, while maximising visibility of the study area. The recorded flight activity indicates no evidence of bird activity being influenced by the presence of surveyors, with some target species active relatively close to the surveyor's location.

9.5.73 During the Annex 1/Schedule 1 breeding raptor and owl searches, MBBS and breeding black grouse searches, direct access to land outside the site for survey was restricted. Suitable habitat features were however scanned from appropriate vantage points within the site and from public rights of ways (PRoWs) to detect activity and likely breeding locations of key species. In conjunction with the desk study data, it is considered unlikely that any breeding target species were overlooked.

9.5.74 The site boundary has evolved since the baseline surveys were completed, with the boundary reduced in the north and south, and extended in the west and east (see **Figure 9.3**). The surrounding buffers that were based on the original site boundary, and which comprised the survey areas covered during the baseline surveys, have meant that the western and eastern areas of the new site boundary have been largely covered. The extreme east of the new site boundary has, however, not been covered during MBBS, but this is not considered a substantive constraint given the area is limited in extent, typically on the

periphery of the Proposed Development, and the characteristic breeding bird assemblage and ornithological importance of the site (and the surrounding area) has been established over a two-year period.

9.5.75 The results of the GET model (see **Confidential Technical Appendix 9.4**) was based on an original 14-turbine scheme, which has been reduced to the nine turbines which comprise the Proposed Development. The turbine exclusion zone used in the GET model (300 m around the 14 turbines) would now be modestly reduced based on the Proposed Development's turbines. The GET model results are thus likely to be the worst-case scenario, and the actual effects are likely to be comparable, albeit slightly lower (but will not have increased)[1]. The results of the GET model are thus confirmed as precautionary, valid and robust for assessment.

9.5.76 No substantive limitations to the assessment are therefore considered.

9.6 Baseline Conditions

Current Baseline

9.6.1 This section provides a summary of baseline ornithological conditions.

9.6.2 Full details are provided within **Technical Appendices 9.1** to **9.4** (noting that **Technical Appendices 9.2** and **9.4** contain sensitive information and are thus confidential).

Designated Sites for Nature Conservation

9.6.3 This section should be read with reference to **Figures 9.1 and 9.7a and b.** Designated sites for non-ornithological features are addressed separately in **Chapter 8: Ecology.**

9.6.4 The distances provided in **Table 9.5** are from the site boundary to the designated site boundary at their nearest points.

Statutory Designated Sites for Nature Conservation

9.6.5 **Table 9.5** provides a summary of statutory designated sites for nature conservation with cited ornithological interests, located within 10 km of the site, extended to 20 km for any such designated site with cited migratory goose interests.

9.6.6 The site does not form a part of any internationally or nationally designated site for nature conservation with cited ornithological interests.

Table 9.5 – Statutory ornithological designated sites

Designated Site	Distance at Closest Point and Orientation from Site Boundary	Qualifying Features
Ben Wyvis SSSI	– 1.35 km, north-east.	– Breeding dotterel.
Ben Wyvis NNR	– 1.35 km, north-east.	– No specific qualifying species, but golden eagle, ptarmigan (*Lagopus muta*), dotterel and snow bunting (*Plectrophenax nivalis*) are listed as possible birds to see.
Ben Wyvis SPA	– 2.38 km, north-east.	– Breeding dotterel.
Glen Affric to Strathconon SPA	– 3.05 km, south-west.	– Breeding golden eagle.
Cromarty Firth SPA and Ramsar site	– 10.82 km, east.	– Wintering greylag goose. – Also, breeding osprey, common tern (*Sterna hirundo*) and other overwintering wetland species.
Inner Moray Firth SPA and Ramsar site	– 16.58 km, south-east.	– Wintering greylag goose. – Also, breeding osprey, common tern and other overwintering wetland species.

Non-statutory Designated Sites for Nature Conservation

9.6.7 Consultation with the HBRG indicated there are no non-statutory designated sites for nature conservation (with ornithological interests) within 2 km of the site.

Existing Ornithological Desk Study Records

9.6.8 Ornithological records since 2010 were returned from the RSPB, HBRG and the HRSG, and comprised records of short-eared owl (*Asio flammeus*), hen harrier (*Circus cyaneus*), white-tailed eagle, red kite, black

[1] Confirmed by Dr Alan Fielding on 17 January 2025. Noting, Dr Alan Fielding is the GET model author and model developer.

grouse and golden eagle. These included breeding records of red kite and golden eagle. These records are detailed in **Confidential Technical Appendix 9.4** and are shown in **Confidential Figures 9.7a** and **b**.

9.6.9 Information from the Carn Gorm Wind Farm application (Ref: 13/04791/FUL) from 2010-12, which was located within the site, recorded activity of 15 target species during VP flight activity surveys, with red kite and golden eagle the most regularly recorded of these target species.

Field Surveys

VP flight activity surveys

9.6.10 The flight activity of target species at collision risk height and within the buffer of the proposed turbines[2] recorded during the entire VP survey effort (September 2019 – August 2021) is summarised in **Table 9.56**. The total number of flights, total number of birds recorded, and the total flight time at collision risk (seconds)[3] are presented. Of these, golden eagle and red kite were taken forward for collision risk mortality modelling, given these were the target species with three or more 'at collision risk' flights, as discussed below (with full results presented in **Technical Appendix 9.3**).

9.6.11 Detailed flight records are presented in **Technical Appendix 9.1**, with flight lines illustrated in **Figures 9.4a-c** (for Year 1) and **Figures 9.5a-c** (for Year 2).

Table 9.6 – Target Species 'At Collision Risk' Flight Activity Summary

Species	Total No. of Flights	Total No. of Birds	Total Flight Time at Collision Risk (seconds)
Year 1 (September 2019 - August 2020)			
Red kite	9	9	1,520
Golden eagle	6	7	1,486
Whooper swan (*Cygnus cygnus*)	2	27	1,710
Greylag goose	2	17	1,606
Golden plover (*Pluvialis apricaria*)	1	11	5,687
Red-throated diver (*Gavia stellata*)	1	1	232
Teal (*Anas crecca*)	1	2	42
White-tailed eagle	1	1	198
Year 2 (September 2020 – August 2021)			
Golden eagle	17	17	3,711
Red kite	14	14	3,067
Pink-footed goose (*Anser brachyrhynchus*)	3	160	33,644
Peregrine (*Falco peregrinus*)	2	2	240
Merlin (*Falco columbarius*)	2	3	170
Greenshank (*Tringa nebularia*)	2	3	75
Greylag goose	1	2	70
Golden plover	1	11	825
Grey heron (*Ardea cinerea*)	1	1	195
Hen harrier	1	1	366
Osprey	1	1	184
Red-throated diver	1	2	178

9.6.12 Calculations of collision risk mortality have been undertaken for golden eagle and red kite. No other target species recorded during VP flight activity surveys between September 2019 and August 2021 met the defined threshold (three or more 'at collision risk' flights, or over 20 birds), with resulting collision risks for other target species reasonably concluded as being negligible. As described in **Technical Appendix 9.3**, and as per NatureScot guidance (2025), CRM analysis was not undertaken for pink-footed goose given the robust population, high avoidance rate (99.8 %) and because the geese recorded were not considered connected to a SPA (no SPA with qualifying pink-footed goose interest within 20 km of the site).

9.6.13 Predicted collision mortality is summarised in **Table 9.5**, and full details are presented in **Technical Appendix 9.3**.

Table 9.7 – Predicted Collision Mortality

Species	Season	Collision Mortality Estimate (no. of birds/season)		
		Year 1 (2020)	Year 2 (2021)	Average
Golden eagle	Non-breeding season	0.062	0.089	0.076

[2] "At collision risk" – at rotor sweep height (18 - 200 m) and within 300 m of proposed turbine locations for all species. It is based on a worst-case scenario of 200 m tip height, 162 m maximum rotor diameter and 99 - 119 m hub height, thus considering the upper limit of the larger turbines (200 m tip height) and lower limit of the smaller turbines (180 m tip height). Note, given the upper height band was 180+ m, flights at this height band were treated as 'at collision risk' even though in reality, at least some of the flights would be above the 'at collision risk' height.

[3] Duration of each flight is multiplied by the number of birds and summed for each species.

Species	Season	Collision Mortality Estimate (no. of birds/season)		
		Year 1 (2020)	Year 2 (2021)	Average
	Breeding season	0.060	0.141	0.101
Red kite	Non-breeding season	0.066	0.078	0.072
	Breeding season	0.067	0.054	0.061

Moorland Breeding Bird Survey (MBBS)

9.6.14 In summary, the study area was found to support a relatively diverse moorland breeding bird assemblage but with a relatively limited number of territories for most species.

9.6.15 Estimated breeding territory numbers recorded in 2020 (Year 1) and 2021 (Year 2), within the study area are provided in **Table 9.5**, and illustrated in **Figures 9.6a** and **9.6b**, respectively.

9.6.16 Further details of MBBS assemblages recorded are provided in **Technical Appendix 9.1.**

Table 9.8 – MBBS Results

Species	No. of Territories	
	Year 1 (2020)	Year 2 (2021)
Mallard (*Anas platyrhynchos*)	2	0
Teal	1	0
Snipe	5	5
Curlew (*Numenius arquata*)	1	1
Greenshank	1	0
Golden plover	1	1
Oystercatcher (*Haematopus ostralegus*)	0	1
Ptarmigan	1	1
Common crossbill (*Loxia curvirostra*)	2	1
Red grouse (*Lagopus lagopus*)	0	4

Annex 1 and Schedule 1 Breeding Raptors and Owl Searches

9.6.17 Breeding raptor and owl searches recorded confirmed breeding (or suspected breeding) evidence for four Annex 1/Schedule 1 raptor species and one Schedule 1 owl species within the study area: golden eagle, osprey, peregrine, goshawk and barn owl. This sensitive information is detailed in **Confidential Technical Appendix 9.2**, and **Confidential Figures 9.8a** and **9.8b**.

9.6.18 A suspected barn owl (*Tyto alba*) breeding (nest) site was recorded within the site, greater than 1.5 km from the nearest turbine, in Year 1. All breeding Annex 1/Schedule 1 raptors were recorded off-site.

9.6.19 A golden eagle breeding territory (including a suspected nest site in Year 1) was recorded greater than 2 km from the site.

9.6.20 Up to two breeding pairs of osprey were recorded within the study area (out to 6 km, where anecdotal records of breeding raptors was made), with two active nest sites in Year 1 and one of the nest sites also active in Year 2. Both nest sites were greater than 2 km from the site.

9.6.21 A peregrine breeding territory was recorded in Year 1 (but not in Year 2), greater than 2 km from the site.

9.6.22 A suspected goshawk (*Accipiter gentilis*) breeding territory/range was recorded in Year 2 (but not in Year 1), in commercial forestry within 2 km of the site.

9.6.23 Other species recorded comprised red kite (frequent flights, but no definitive breeding evidence recorded during field surveys), white-tailed eagle (very low levels of activity), merlin and short-eared owl, although there was no definitive evidence of breeding of these species during either survey year.

Breeding Black Grouse Searches

9.6.24 Searches for black grouse lek sites were undertaken in 2020 and 2021 and identified a maximum of four lek sites within the study area combining the results from both survey years. These comprised of modest numbers of birds, ranging from one lekking male (plus female) to three lekking males. Two of the four leks were located within the site. Locations of black grouse leks identified during surveys is provided in **Confidential Figures 9.9a** to **9.9c**, with further information provided in **Confidential Technical Appendix 9.2**.

Breeding Diver Searches

9.6.25 Searches of waterbodies for breeding divers were undertaken in 2020 and 2021, comprising both targeted dedicated diver searches, and during other surveys, principally the MBBS and breeding raptor and owl searches.

9.6.26 During all surveys, there was very limited evidence of divers being present, comprising two red-throated diver flights during the VP flight activity surveys, with one of the flights (in Year 2) being of a pair which landed on Loch na Geàrra located within the site. In Year 2, a red-throated diver pair was present on Loch na Geàrra during one of the MBBS visits in June 2020, and one red-throated diver was recorded foraging on Loch Achilty, south of the site, during a breeding raptor and owl search, also in June 2020. However, no breeding diver activity was noted, and no further sightings were made of the divers.

Future Baseline in Absence of Proposed Development

9.6.27 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 grazing (by livestock and deer) and to a lesser extent, forestry works.

9.6.28 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 and deer.

9.6.29 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.

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

9.6.31 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.

9.6.32 The establishment of breeding raptor territories within the site is considered unlikely, given the general absence of suitable nesting habitat features such as deep heather swards, crags, steep scree and mature woodland.

9.6.33 Short-term and small-scale variability in ornithological populations and distributions may occur (for example, number and distribution of breeding wader territories and black grouse leks), and revisions to conservation statuses and designations are possible. However, 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.

9.6.34 Climatic changes may include increased summer and winter temperatures and higher average precipitation rates in summer and winter. These factors are likely to result in an extended breeding bird season with earlier in the year (and likely more) nesting attempts (which has potential to increase breeding productivity, although this will be dependent on prey availability), but contrary to this, the increased rainfall is likely to result in higher rates of fledgling mortality.

9.6.35 The opposing potential effects of climatic change on ornithology features makes predicting future likely outcomes difficult. There is no reason to consider that the breeding bird assemblage presently using the site will change substantially over the next 50 years due to climate change. However, breeding productivity, given the predicted substantially higher rates of average precipitation across the next 50 years, is considered likely to reduce, and this may have notable effects for species which have one brood per year.

9.6.36 In summary, potential effects on ornithology features detailed in this chapter are not predicted to substantively change in relation to climate change over the next 50 years.

9.7 Standard Mitigation

Mitigation through Design

9.7.1 The Proposed Development has been subject to a number of design iterations and evolution in response to constraints identified as part of the baseline studies, intended to reduce environmental effects, including a reduction from 14 turbines to the nine-turbine scheme of the Proposed Development (see **Chapter 2: Site Description and Design Evolution** for further details).

9.7.2 Design considerations have been incorporated to avoid or minimise adverse effects upon ornithological features, as set out below.

9.7.3 The design of the Proposed Development considered the presence of black grouse lek sites (particularly those used in multiple years), with all turbines being located greater than 750 m from identified lek sites (the four leks identified for the survey years combined are 860 m to 1.99 km from the nearest turbine). The Proposed Development was also sensitive to the presence of a ptarmigan breeding territory on the highest land on-site (recorded in both survey years), with all turbines being located greater than 750 m from the identified ptarmigan breeding territory (the nearest turbine is 770 m from the ptarmigan territory).

9.7.4 The modest number of breeding territories for most ground-nesting wetland species (curlew, golden plover and oystercatcher) are located a greater distance from the turbines (respectively 980 m, 670 m and 1.65 km, at their closest), than the documented upper disturbance limits for these target species (300 m for curlew, 500 m for golden plover and 100 m for oystercatcher (Goodship and Furness, 2022)). This may be at least partially reflective of the design of the Proposed Development in so far as possibly avoiding those higher quality peatland habitats, which are likely to be the most optimal habitat for ground-nesting wetland (wader) species within the site.

9.7.5 The proposed turbines have also been appropriately offset from habitat features including woodland edge and lochs as these have potential to be a focal point for some ornithological species (including waterfowl and raptors). Offsetting turbines from lochs is considered appropriate to negate any potential effects on many target species, such as breeding teal and greenshank, recorded breeding in Year 1, with one pair of each species using habitats associated with Loch a' Bhealaich within the site. The nearest turbine is approximately 350 m from Loch a' Bhealaich (which supported breeding teal) and 400 m from the identified greenshank breeding territory. The documented disturbance buffer for greenshank is 300-500 m (Goodship and Furness, 2022), and although no such disturbance buffer is provided for teal, the disturbance buffer stated for wigeon (*Anas penelope*), a comparable duck species, is 100-200 m (Goodship and Furness, 2022). The distance of the nearest turbine to the teal and greenshank breeding territories therefore exceeds the likely disturbance limits for both species (at least of the lower disturbance limit for greenshank), particularly given Loch a' Bhealaich (and its associated habitats) are on lower ground from the Proposed Development, and thus line-of-sight from the waterbody to the Proposed Development will be reduced.

9.7.6 The proposed turbines have also avoided, as much as practically possible, the most suitable golden eagle habitat (GET 6+ habitat) as shown in **Confidential Technical Appendix 9.4**. The Proposed Development has also been designed sensitively to avoid the areas where red kite flight activity was typically highest, especially within the south-west of the site and around Carn Gorm to the east of the site (see **Figure 9.5b** in particular).

9.7.7 The on-site track layout has been designed to minimise ornithological disturbance and land take by maintaining at least a 500 m buffer from most black grouse leks (with the exception of one lek in the north of the site, 'Lek 4' which is 110 m from an area proposed for a new section of access track). There is only one Schedule 1 owl recorded as suspected breeding on-site. The suspected barn owl nest site is 1.55 km from the nearest turbine, so much greater than the disturbance limits of 50-100 m for the species (Goodship and Furness, 2022). The proposed access route follows an existing road which is approximately 80 m from the suspected nest site. Given the disturbance buffer for barn owl, upgrading works to the access track within the context of the nest site being within an active farm setting is considered unlikely to result in disturbance to breeding barn owl.

9.7.8 Pre-construction nesting bird checks described below would ensure that any nest sites that are identified and which may establish in the interim period would be considered during works for the Proposed Development.

Embedded Mitigation Measures

Construction Environmental Management Plan

9.7.9 An Outline Construction Environmental Management Plan (OCEMP) is provided in **Technical Appendix 3.1**. The CEMP would include all good practice construction measures, pollution prevention controls and monitoring to be implemented over the course of construction of the Proposed Development in line with current industry statutory guidance and as detailed within **Chapter 3: Description of the Development**.

9.7.10 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 in 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, or while using or when near a nest containing eggs or young, or to disturb their dependent young.

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

9.7.12 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.

9.7.13 Operational Breeding Bird Protection Plan (OBBPP)

9.7.14 An OBBPP would be prepared to be adopted during the operation phase, to minimise effects on lekking black grouse and foraging raptors (further details are provided in **Section 9.10**). This, like the CBBPP, would be submitted for agreement in consultation with THC and NatureScot.

Ecological Clerk of Works

9.7.15 A suitably qualified Ecological Clerk of Works (ECoW) 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 EcoW would include the following tasks:

- provide briefings and information to all staff on-site, so staff are aware of the ornithological sensitives related with 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 where required; and
- complete site-supervision works as required, in relation to sensitive habitats and protected ornithological species.

Site Clearance Activities

9.7.16 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 ECoW 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 ECoW/appointed ornithologist and following a disturbance risk assessment. This would include all works within the site.

9.7.17 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.

Annex 1/ Schedule 1 Raptors and Owls

9.7.18 To avoid potential disturbance to breeding Annex 1/Schedule 1 listed raptors and owls, all areas within 1 km of construction activities within the site would be surveyed in advance of works being commenced during the core breeding season (1 March to 31 August, inclusive), to identify any nesting locations for such species.

9.7.19 Where necessary, work exclusion buffers around identified nest sites would be established in accordance with best available species guidance applicable at the time and/or as agreed in consultation with NatureScot. No works would be permitted within the implemented exclusion buffer.

Interim Decommissioning Restoration and Aftercare Strategy

9.7.20 At the point of decommissioning, an interim Decommissioning Restoration and Aftercare Strategy will be developed through consultation with THC, SEPA, Transport Scotland and other relevant consultees in line with relevant legislation and guidance at that point in time. This will detail those measures to be adopted to ensure the protection of key ecological/ornithological features. This will typically mirror those measures adhered to in the CEMP and will include pollution prevention protocols and pre-decommissioning surveys.

9.8 Features Considered for Assessment

9.8.1 The results of the desk study and field survey were used to inform the identification of important ornithological features (IOFs) within and around the site to be considered in the assessment.

9.8.2 Through consultation (see **Table 9.5**) and by virtue of the spatial separation and documented core foraging distances of qualifying species (from SNH, 2016a), potential for effects upon those qualifying features of the Cromarty Firth SPA and Ramsar site, and Inner Moray Firth SPA and Ramsar site (with the exception of non-breeding greylag goose) are scoped out of this assessment, given lack of identified pathways of effects to other qualifying interests (breeding osprey, common tern and over-wintering waterbirds).

9.8.3 In accordance with NatureScot guidance (SNH, 2017a) effects on passerines, which are not sensitive to wind farm developments, are also scoped out of detailed assessment, and are not considered further.

9.8.4 A summary of identified IOFs in the study area relevant to the Proposed Development is provided in **Table 9.5**, and details of whether each feature is scoped in or out of the assessment, with justification provided.

Table 9.9 – Summary of Sensitive/Important Ornithological Feature Sensitivity

IOF	Sensitivity	Scoped In or Out?	Justification
Glen Affric to Strathconon SPA	High / International	In	The Glen Affric to Strathconon SPA is 3.05 km from the site boundary and has breeding golden eagle as its qualifying interest. The SPA is located within the core foraging range for golden eagle from the site (6 km, taken from SNH, 2016a). Across the two years of VP flight activity surveys, a total of 23 'at collision risk' golden eagle flights were recorded. The baseline data gathering exercise identified a suspected golden eagle nest site in Year 1, and a breeding territory in a similar locality (out to 6 km from the site) in Year 2. The desk study revealed two known golden eagle pairs, with one within 6 km of the site, and the other greater than 6 km from the site. It is considered that the eagle activity recorded is likely representative of at least one of these known breeding pairs (the pair within 6 km of the site which is located within the SPA boundary), and thus the site, and surrounding area, is part of a breeding pair's territory, and eagles (likely from the SPA) did use the site for traversing/ foraging. This single golden eagle territory represents 10 % of the Glen Affric to Strathconon SPA population estimate (which is 10 pairs based on the SPA citation dated 2010, as reported within NatureScot's Sitelink, 2025). In accordance with **Table 9.2**, the IOF is thus considered of 'High/ International' sensitivity given the eagle territory represents >1 % of the SPA population. **Effects on the Glen Affric to Strathconon SPA (breeding golden eagle) are scoped into detailed assessment.**
Ben Wyvis SPA	High / International	Out[4]	The Ben Wyvis SPA is 2.38 km from the site boundary and has breeding dotterel as its qualifying interest. The baseline data gathering exercise did not record any evidence of dotterel in the study areas. The species was not recorded during two years of survey, nor did the desk study return any contemporary records since 2010. Only two historic records were returned from 1998 and 1999 of breeding dotterel within the Ben Wyvis SPA, greater than 2 km from the site boundary. Dotterel typically breed in high altitude sites (over 900 m above sea level (a.s.l) where they breed on scree slopes, boulder fields and corries where they nest hidden in rock cavities and between rocks (Rare Breeding Birds Panel, 2023). The site is considerably lower than 900 m, with the highest area in the extreme north-east of the site (763 m a.s.l), but with most of the site (and all turbines) located at less than 500 m a.s.l. As well as the site being considerably lower than the breeding sites which dotterel use, the site also does not contain suitable nest sites, like scree and boulder fields. The site is therefore not considered suitable for supporting breeding dotterel. The field surveys did not identify any dotterel activity through the site (dotterel was a target species during VP flight activity surveys and MBBS), and the historic desk study information suggests breeding dotterel are confined to the highest peaks (> 900 m a.s.l) within the Ben Wyvis SPA. **Effects on the Ben Wyvis SPA (breeding dotterel) are scoped out of detailed assessment.** However, information to inform an HRA is provided in **Section 9.14**, in relation to Ben Wyvis SPA.
Ben Wyvis SSSI	High / National	Out	The Ben Wyvis SSSI is 1.35 km from the site boundary and has breeding dotterel as its qualifying interest. As above with regards to the Ben Wyvis SPA, there is no evidence the site is used by dotterel, and conditions on-site are suboptimal for the species. **Effects on the Ben Wyvis SSSI (breeding dotterel) are scoped out of detailed assessment.**
Ben Wyvis NNR	High / National	Out	The Ben Wyvis NNR is 1.35 km from the site boundary and although it does not have specific qualifying ornithological interest, species

[4] But information to inform an HRA is provided in relation to likely significant effects on the international designated sites.

IOF	Sensitivity	Scoped In or Out?	Justification
			listed as being possible to see within the NNR are golden eagle, dotterel, ptarmigan and snow bunting. Effects on golden eagle are scoped into detailed assessment, and effects on the other listed species are scoped out of detailed assessment (with full justification provided). **With respect to ornithology interest of the Ben Wyvis NNR, effects are scoped out of detailed assessment.**
Cromarty Firth SPA & Ramsar site	High / International	Out[4]	The Cromarty Firth SPA and Ramsar site is 10.82 km from the site boundary and has non-breeding greylag goose, non-breeding waterbird assemblage, breeding osprey and breeding common tern as qualifying interests. The SPA supports 1,782 non-breeding greylag geese (based on the SPA citation dated 2018, as reported in NatureScot's Sitelink, 2025). The distance of the SPA and Ramsar site exceeds the core foraging range (where documented) for qualifying species (see SNH, 2016a), with the exception of greylag goose with a core range of 15-20 km. However, as stated in the guidance (SNH, 2016a) the distribution of feeding geese from Mitchell (2012) enables identification of areas where impacts on geese may be of concern, or conversely where areas (although within 20 km of a goose SPA) have no connectivity with the qualifying interests. The known greylag goose feeding distributions from Mitchell (2012) reveal that the site (and adjacent habitats) does not constitute important feeding grounds for greylag goose from the SPA and Ramsar site. Furthermore, the site and immediately surrounding area (out to 500 m) are unsuitable for foraging or roosting geese. During the baseline data gathering exercise only very low greylag goose activity was recorded (across the two years of survey), comprising of two 'at collision risk' flights in Year 1 (total of 17 geese) and one such flight in Year 2 (two geese). These flights were recorded in November 2019, April 2020 and October 2020. One of the flights with the greatest number of geese (15 birds in November 2019) comprised of a direct flight at the highest height band (180 + m). Note, flights within this height band are treated as 'at collision risk' as a precaution given some of the turbines have tip heights of up to 200 m. The reality is flights recorded solely at 180 + m, particularly with regards to traversing migratory geese (not associated with habitats on-site, or close to the site), are likely to have been considerably higher than 'at collision risk'. No CRM analysis was carried out on greylag goose, given the very limited number of 'at collision risk' flights recorded. Accordingly, collision risk for the species is considered to be negligible. The maximum number of geese passing through 'at collision risk' (at the highest height band, 180 + m) was 15 birds, which is <1 % of the SPA population. The Proposed Development is not anticipated to have any adverse effects on greylag geese from the Cromarty Firth SPA and Ramsar site, through effects on feeding habitat, through collision risk, or through any displacement/barrier effect on any established movement routes. **Effects on the Cromarty Firth SPA and Ramsar site are scoped out of detailed assessment.** However, information to inform an HRA is provided in **Section 9.14**, in relation to Cromarty Firth SPA and Ramsar site (non-breeding greylag goose).
Inner Moray Firth SPA & Ramsar site	High / International	Out[4]	The Inner Moray Firth SPA and Ramsar site is 16.58 km from the site boundary and has non-breeding greylag goose, non-breeding waterbird assemblage, breeding osprey and breeding common tern as qualifying interests. The SPA supports 2,651 non-breeding greylag geese (based on the SPA citation dated 2018, as reported in NatureScot's Sitelink, 2025). The distance of the SPA and Ramsar site exceeds the core foraging range (where documented) for qualifying species (see SNH, 2016a), with the exception of greylag goose with a core range of 15-20 km.

IOF	Sensitivity	Scoped In or Out?	Justification
			The same justification as provided for the Cromarty Firth SPA & Ramsar site (above) is relevant also here and is not repeated for the sake of brevity. **Effects on the Inner Moray Firth SPA and Ramsar site are scoped out of detailed assessment.** However, information to inform an HRA is provided in **Section 9.14**, in relation to Inner Moray Firth SPA and Ramsar site (non-breeding greylag goose).
Golden eagle	High / International	In	Golden eagle is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Across the two years of VP flight activity surveys, a total of 23 'at collision risk' golden eagle flights were recorded. During baseline data gathering exercise, surveys identified a suspected golden eagle nest site in Year 1, and a breeding territory in a similar locality (out to 6 km from the site) in Year 2. The desk study revealed two known breeding golden eagle pairs, with one within 6 km of the site, and the other greater than 6 km from the site. It is considered that the eagle activity recorded is likely representative of, at least, one of these known breeding pairs (pair within 6 km of the site, which is within the boundary of the Glen Affric to Strathconon SPA). Thus the site, and surrounding area, is part of a breeding pair's territory (potentially on the outer edge of an eagle territory, see **Confidential Technical Appendix 9.4**), and eagles did use the site for traversing/ foraging. A single golden eagle territory represents 2.3 % of the NHZ7 population estimate (which is 43 pairs, based on Wilson *et al*., 2015). However, as stated above, the territory is considered likely to be part of the Glen Affric to Strathconon SPA population, and thus the territory represents 10 % of the Glen Affric to Strathconon SPA population estimate (which is 10 pairs based on the SPA citation from 2010, reported within NatureScot's Sitelink, 2025). In accordance with **Table 9.2**, the IOF is thus, as a precaution, considered of 'High/ International' sensitivity given the eagle territory represents >1 % of the SPA population. **Effects on golden eagle are scoped into detailed assessment.**
Red kite	Medium / Regional	In	Red kite is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Across the two years of VP flight activity surveys, a total of 23 'at collision risk' red kite flights were recorded. During the baseline data gathering exercise, surveys did not identify any definitive breeding activity, however the relatively high kite activity recorded during surveys is considered indicative for the site (and surrounding habitats) as being part of a red kite breeding territory. The site is considered to be used for foraging/traversing by red kite. The desk study revealed one known red kite pair within 2 km of the site. A single red kite territory represents 11.1 % of the NHZ7 population estimate (which is nine pairs, based on Wilson *et al*., 2015). In accordance with **Table 9.2**, the IOF is thus considered of 'Medium/ Regional' sensitivity given a kite territory represents >1 % of the NHZ7 population. Note, the NHZ21 'Moray Firth' which is >6 km from the site has a very high red kite population (50 breeding pairs, based on Wilson *et al*., 2015), and although 6 km exceeds the documented maximum foraging range for the species (SNH, 2016a) there is the potential for some of the kites from the considerable NHZ21 population to be moving (potentially establishing) into the less populated NHZ7 population (which is only nine pairs). It is thus considered precautionary to consider effects on the NHZ7 population, which will be the worst-case scenario given the much lower NHZ7 population, compared to NHZ21. **Effects on red kite are scoped into detailed assessment.**
Black grouse	Medium / Regional	In	Black grouse is a BoCC Red-listed species. No 'at collision risk' flights were recorded during the survey period (2019-21), with only one black grouse recorded in flight during two years of survey. Black grouse activity within the site is thus very

IOF	Sensitivity	Scoped In or Out?	Justification
			limited. Furthermore, black grouse typically fly below collision risk height of modern turbine specifications reducing the risk of collisions. A total of four leks were recorded across the survey years. No lek sites recorded are within 750 m of turbines, and most other infrastructure of the Proposed Development (such as access tracks) is at least 500 m from leks. The exception is one lek which is 110m from a proposed new access track. The four identified leks are also on the periphery of the Proposed Development, with no leks within the proposed turbine envelope. The peak number of lekking males recorded during any one survey year was six which represents 1.27 % of the respective NHZ7 population estimate (which is 473 males, based on Wilson *et al.,* 2015). In accordance with **Table 9.2**, the IOF is thus considered of 'Medium/ Regional' sensitivity given the number of lekking males recorded represents >1 % of the NHZ7 population. It is considered that during the construction and operational phases, without further mitigation (additional to that within the CEMP, see **Section 9.7**), effects on one identified lek (which is 110 m from a proposed new access track) may occur. **Effects on black grouse are scoped into detailed assessment.**
Osprey	Medium / Regional	Out	Osprey is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). One 'at collision risk' flight was recorded during the survey period (2019-21). A maximum of two osprey pairs were confirmed as breeding in the wider area (> 2 km from the site) during the surveys. Two pairs represents 25 % of the NHZ7 population estimate (which is eight pairs, based on Wilson *et al.,* 2015). The nest sites are greater than 2 km from the site boundary and well exceed the upper limit for disturbance (750 m) documented for the species (Goodship and Furness, 2022). Given the considerable spatial separation from the site to the nest sites identified during surveys, effects on breeding osprey by the Proposed Development are not anticipated. Only one 'at collision risk' flight was recorded. Therefore, the site is not considered to be on a regular flight path for the species. Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**, including pre-construction nesting bird checks), significant adverse effects upon osprey can be avoided. **Effects on osprey are scoped out of detailed assessment.**
Peregrine	Medium / Regional	Out	Peregrine is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Two 'at collision risk' flights were recorded during the survey period (2019-21). One peregrine pair was confirmed as breeding in the wider area (> 2 km from the site) during the Year 1 survey (not in Year 2). One pair represents 6.66 % of the NHZ7 population estimate (which is 15 pairs, based on Wilson *et al.,* 2015). The nest site is greater than 2 km from the site boundary, and well exceeds the upper limit for disturbance (750 m) documented for the species (Goodship and Furness, 2022). Given the considerable spatial separation from the site boundary to the nest site identified during surveys, effects on breeding peregrine by the Proposed Development are not anticipated. Only two 'at collision risk' flights were recorded; therefore, the site is not considered to be on a regular flight path for the species.

IOF	Sensitivity	Scoped In or Out?	Justification
			Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon peregrine can be avoided. **Effects on peregrine are scoped out of detailed assessment.**
Barn owl	Low / Local	Out	Barn owl is listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). No 'at collision risk' flights were recorded during the survey period (2019-21). One suspected barn owl nest site was recorded within the site during the Year 1 survey. The nest site is greater than 1.5 km from the nearest turbine and well exceeds the upper limit for disturbance (100 m) documented for the species (Goodship and Furness, 2022). The nest site is 80 m from an existing access track (which will likely require upgrading). The location of the suspected nest site is an active farm setting, and thus any barn owls present will have some level of habituation to human activity. Given the spatial separation from the site to the suspected nest site identified during surveys, the species' tolerance to some level of disturbance and the farm setting effects on breeding barn owl by the Proposed Development are not anticipated. Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon barn owl can be avoided. This will include pre-construction checks for evidence of nesting birds, by a suitably licensed ornithologist. **Effects on barn owl are scoped out of detailed assessment.**
Goshawk	Medium / Regional	Out	Goshawk is listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). One 'at collision risk' flight was recorded during the survey period (2019-21). One goshawk breeding territory/range was suspected during Year 2 surveys (but not in Year 1). One pair represents 12.5 % of the NHZ7 population estimate (which is eight pairs, based on Wilson *et al.,* 2015). No nest site was located, but the suspected breeding territory is > 1 km from the site boundary and exceeds the upper limit for disturbance (500 m) documented for the species (Goodship and Furness, 2022). Given the considerable spatial separation from the site to the breeding territory identified during surveys, effects on breeding goshawk by the Proposed Development are not anticipated. Only one 'at collision risk' flight was recorded, therefore the site is not considered to be on a regular flight path for the species. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon goshawk can be avoided. **Effects on goshawk are scoped out of detailed assessment.**
Golden plover	Low / Local	Out	Golden plover is listed on Annex 1 of the EU Birds Directive. Two 'at collision risk' flights were recorded during the survey period (2019-21). One golden plover breeding territory was recorded (in both Years 1 and 2). One pair represents 0.03 % of the NHZ7 population estimate

IOF	Sensitivity	Scoped In or Out?	Justification
			(which is 3,009 pairs, based on Wilson *et al.,* 2015). The site therefore only supported a very small proportion of the NHZ7 population. The breeding territory was 670 m from the nearest turbine, which exceeds the upper limit for disturbance (500 m) documented for the species (Goodship and Furness, 2022). Given the spatial separation from the Proposed Development's turbines to the breeding territory identified during surveys, effects on breeding golden plover by the Proposed Development are not anticipated, with the breeding pair considered likely to continue using the site for breeding. This is particularly given the breeding territory was on the periphery of the site (in the north-east) and not within the turbine envelope itself (i.e. not surrounded by turbines). Only two 'at collision risk' flights were recorded; therefore, the site is not considered to be on a regular flight path for the species, or is habitat that birds associated with the breeding territory typically use for foraging. Other construction works associated with the Proposed Development (including upgrading or creation of new sections of access track) will be temporary and localised in nature, and thus effects on breeding golden plover are not anticipated as a result of these activities. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon golden plover can be avoided. **Effects on golden plover are scoped out of detailed assessment.**
Curlew	Low / Local	Out	Curlew is a BoCC Red-listed species. No 'at collision risk' flights were recorded during the survey period (2019-21). One curlew breeding territory was recorded (in both Years 1 and 2). One pair represents 0.4 % of the NHZ7 population estimate (which is 249 pairs, based on Wilson *et al.,* 2015). The site therefore only supported a very small proportion of the NHZ7 population. The breeding territory was 980 m from the nearest turbine, which well exceeds the upper limit for disturbance (300 m) documented for the species (Goodship and Furness, 2022). Given the spatial separation from the Proposed Development's turbines to the breeding territory identified during surveys, effects on breeding curlew by the Proposed Development are not anticipated, with the breeding pair considered likely to continue using the site for breeding. This is particularly given the breeding territory was on the periphery of the site (in the north) and not within the turbine envelope itself (i.e. not surrounded by turbines). Given no 'at collision risk' flights were recorded, the site is not considered to be on a regular flight path for the species or typically used for foraging. Other construction works associated with the Proposed Development (including upgrading or creation of new sections of access track) will be temporary and localised in nature, and thus effects on breeding curlew are not anticipated as a result of these activities. Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed

IOF	Sensitivity	Scoped In or Out?	Justification
			in **Section 9.7**) significant adverse effects upon curlew can be avoided. **Effects on curlew are scoped out of detailed assessment.**
Greenshank	Low / Local	Out	Greenshank is listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Two 'at collision risk' flights were recorded during the survey period (2019-21). One greenshank breeding territory was recorded, associated with habitats near Loch a' Bhealaich, in Year 1 (not in Year 2). One pair represents 0.68 % of the NHZ7 population estimate (which is 148 pairs, based on Wilson *et al.,* 2015). The site therefore only supported a very small proportion of the NHZ7 population. The breeding territory was 400 m from the nearest turbine, which exceeds the lower limit for disturbance (300 m), but is lower than the upper limit for disturbance (500 m) documented for the species (from Goodship and Furness, 2022). The distance of the nearest turbine to the greenshank breeding territory is considered likely to exceed, at least, the lower disturbance limit (300 m), particularly given Loch a' Bhealaich (and its associated habitats, where the greenshank pair breed) are on lower ground from the Proposed Development, and thus the line-of-sight from the waterbody to the Proposed Development will be reduced. Given the spatial separation from the Proposed Development's turbines to the breeding territory identified during surveys, effects on breeding greenshank by the Proposed Development are not anticipated, with the breeding pair considered likely to continue using the site for breeding. Only two 'at collision risk' flights were recorded; therefore, the site is not considered to be on a regular flight path for the species or typically used for foraging. Other construction works associated with the Proposed Development (including upgrading or creation of new sections of access track) will be temporary and localised in nature, and thus effects on breeding greenshank are not anticipated as a result of these activities. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon greenshank can be avoided. **Effects on greenshank are scoped out of detailed assessment.**
Oystercatcher	Low / Local	Out	No 'at collision risk' flights were recorded during the survey period (2019-21). One oystercatcher breeding territory was recorded, in Year 2 (not in Year 1). The site therefore only supported very small numbers of breeding oystercatcher. The breeding territory was 1.65 km from the nearest turbine, which well exceeds the upper limit for disturbance (100 m) documented for the species (Goodship and Furness, 2022). Given the spatial separation from the Proposed Development's turbines to the breeding territory identified during surveys, effects on breeding oystercatcher by the Proposed Development are not anticipated, with the breeding pair considered likely to continue using the site for breeding. This is particularly given breeding territory was on the periphery of the site (in the north-west) and not within the turbine envelope itself (i.e. not surrounded by turbines).

IOF	Sensitivity	Scoped In or Out?	Justification
			Given no 'at collision risk' flights were recorded, the site is not considered to be on a regular flight path for the species. Other construction works associated with the Proposed Development (including upgrading or creation of new sections of access track) will be temporary and localised in nature, and thus effects on breeding oystercatcher are not anticipated as a result of these activities. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon oystercatcher can be avoided. **Effects on oystercatcher are scoped out of detailed assessment.**
Teal	Low / Local	Out	One 'at collision risk' flight was recorded during the survey period (2019-21). One teal breeding territory was recorded, associated with Loch a' Bhealaich, in Year 1 (not in Year 2). The site therefore only supported very small numbers of breeding teal. The breeding territory was 350 m from the nearest turbine, which exceeds the likely upper limit for disturbance (likely around 200 m, which is based on information for wigeon, a comparable duck species, in the absence of specific information for teal (Goodship and Furness (2022)). The distance of the nearest turbine to the teal breeding territory is considered likely to exceed the disturbance limit, particularly given Loch a' Bhealaich (where the teal pair bred) is on lower ground from the Proposed Development, and thus line-of-sight from the waterbody to the Proposed Development will be reduced. Given the spatial separation from the Proposed Development's turbines to the breeding territory identified during surveys, effects on breeding teal by the Proposed Development are not anticipated, with the breeding pair being considered likely to continue using the site for breeding. Only one 'at collision risk' flight was recorded, therefore the site is not considered to be on a regular flight path for the species. Other construction works associated with the Proposed Development (including upgrading or creation of new sections of access track) will be temporary and localised in nature, and thus effects on breeding teal are not anticipated as a result of these activities. Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon teal can be avoided. **Effects on teal are scoped out of detailed assessment.**
Snipe	Low / Local	Out	No 'at collision risk' flights were recorded during the survey period (2019-21). Five snipe breeding territories were recorded, in both Years 1 and 2. Five pairs represents 0.38 % of the NHZ7 population estimate (which is 1,309 pairs, based on Wilson *et al.,* 2015). The site therefore only supported a very small proportion of the NHZ7 population. A maximum of two breeding snipe territories are within 500 m of the turbines, with three out of the five recorded in the north of the study area in Year 1 being located over 500 m from the turbines and four out of five in the north of the study area in Year 2 being located over 500m from the turbines.

IOF	Sensitivity	Scoped In or Out?	Justification
			Given the spatial separation from the Proposed Development's turbines to the majority of the breeding territories identified during surveys, effects on breeding snipe by the Proposed Development are not anticipated, with the breeding pairs considered likely to continue using the site for breeding. This is particularly given most breeding territories were on the periphery of the study area (in the north) and not within the turbine envelope itself (not surrounded by turbines). Given no 'at collision risk' flights were recorded, the site is not considered to be on a regular flight path for the species. Other construction works associated with the Proposed Development (including upgrading or creation of new sections of access track) will be temporary and localised in nature, and thus effects on breeding snipe are not anticipated as a result of these activities. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon snipe can be avoided. **Effects on snipe are scoped out of detailed assessment.**
Ptarmigan	Low / Local	Out	One breeding ptarmigan territory was recorded on high ground during the surveys (in both Years 1 and 2). There was no other activity for the species recorded. Like black grouse the species is considered likely to typically fly below collision risk height. The ptarmigan breeding territory was 770 m from the nearest turbine. In the absence of species-specific disturbance limits, the upper disturbance limit of 750 m for black grouse, a comparable species (thus considered a proxy), is considered an appropriate measure (Goodship and Furness, 2022). Accordingly, the nearest turbine exceeds this upper disturbance limit. Potential for significant effects are not anticipated given no potential for loss or disturbance to ptarmigan is identified, and the adoption of good practice measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP, see **Section 9.7**, to protect breeding birds (including ptarmigan). **Effects on ptarmigan are scoped out of detailed assessment.**
Greylag goose	Low / Local	Out	Two 'at collision risk' flights were recorded during the survey period in Year 1 (2019-20) and one 'at-risk' flight in Year 2 (2020-21). These flights respectively comprised of 17 geese in Year 1 and two in Year 2. One of the flights with the greatest number of geese (15 birds in November 2019) comprised of a direct flight at the highest height band (180 + m). Note, flights within this height band are treated as 'at collision risk' as a precaution given some of the turbines have tip heights of up to 200 m. The reality is flights recorded solely at 180 + m, particularly with regards to traversing migratory geese (not associated with habitats on-site, or close to the site) are likely to have been considerably higher that 'at-risk'. No CRM analysis was carried out on greylag goose, given the very limited number of 'at collision risk' flights recorded. Accordingly, collision risk for the species is considered to be negligible. Only three 'at collision risk' flight was recorded across two survey years, therefore the site is not considered to be on a regular flight path for the species. The site is 10.82 km and 16.58 km respectively from the Cromarty Firth SPA and Ramsar site, and Inner Moray Firth SPA and Ramsar site, which has non-breeding greylag goose as a qualifying species. The SPAs and Ramsar sites, support respectively 1,782 and 2,651 non-breeding (migratory) greylag geese (based on SPA citations reported in NatureScot's Sitelink, 2025). The maximum number of

IOF	Sensitivity	Scoped In or Out?	Justification
			geese passing through 'at collision risk' (at the highest height band, 180 + m) was 15 birds, which is <1 % of the SPA populations. Mitchell (2012) reveals that the site (and adjacent habitats) does not constitute important feeding grounds for greylag goose from the SPA and Ramsar site. The Proposed Development is not anticipated to have any adverse effects on greylag geese, through effects on feeding habitat, through collision risk, or through any displacement/barrier effect on any established movement routes. **Effects on greylag goose are scoped out of detailed assessment.**
Pink-footed goose	Low / Local	Out	The site is not within 20 km of any international designated site with pink-footed goose as a qualifying species, nor are the habitats within the site considered suitable for supporting foraging wintering or roosting goose flocks, or identified as known important foraging habitats (Mitchell, 2012). Only very low levels of flight activity were recorded (three 'at collision risk' flights in Year 2, and no 'at collision risk' flights in Year 1). Of the 'at collision risk' flights, all flights were at the highest height band (180 + m) either for the whole flight (two of the three flights) or for part of the flight (one of the three flights). As noted above for greylag goose, the reality is many of the goose flights would have likely been above collision risk height, as the highest height band (180 + m) is treated as 'at collision risk' even though some of the Proposed Development's turbines have a tip height of 180 m. As only three 'at collision risk' flights were recorded across two survey years, the site is not considered to be on a regular flight path for the species. The Proposed Development is not anticipated to have any adverse effects on pink-footed goose, through effects on feeding habitat, collision risk, or displacement/barrier effects on any established movement routes. **Effects on pink-footed goose are scoped out of detailed assessment.**
Whooper swan	Low / Local	Out	The site is not within 10 km of any international designated site with whooper swan as a qualifying species, nor are the habitats within the site considered suitable for supporting foraging wintering or roosting swan flocks. The Cromarty Firth SPA which is >10 km from the site has whooper swan as a qualifying species, however, the documented core foraging range for whooper swan is <5 km (SNH, 2016a), and thus potential connectivity with the SPA swan population is discounted (in accordance with the approach agreed through consultation, see **Table 9.1**). Only very low levels of flight activity were recorded (two 'at collision risk' flights in Year 1, and no 'at collision risk' flights in Year 2). Of the 'at collision risk' flights, both (which were recorded on same survey within 15 minutes of one another) were at the highest height band (180 + m) for the whole flight duration. As noted above for greylag and pink-footed goose, the reality is those traversing swan flights would have likely been above collision risk height, as the highest height band (180 + m) is treated as 'at collision risk' even though some of the Proposed Development's turbines have a tip height of 180 m. As only two 'at collision risk' flights were recorded across two survey years, the site is not considered to be on a regular flight path for the species. The Proposed Development is not anticipated to have any adverse effects on whooper swan, through effects on feeding habitat, collision risk, or displacement/barrier effects on any established movement routes. **Effects on whooper swan are scoped out of detailed assessment.**

IOF	Sensitivity	Scoped In or Out?	Justification
Hen harrier	Low / Local	Out	Hen harrier is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). One 'at collision risk' flight was recorded during the survey period (2019-21). No evidence of hen harrier breeding was identified during the surveys (no breeding territories were identified), with overall flight activity being very limited. Given only one 'at collision risk' flight was recorded, the site is not considered to be a regular foraging area or on a commuting route for the species. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon hen harrier can be avoided. **Effects on hen harrier are scoped out of detailed assessment.**
Merlin	Low / Local	Out	Merlin is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Two 'at collision risk' flights were recorded during the survey period (2019-21). No evidence of merlin breeding was identified during the surveys (no breeding territories were identified), with overall flight activity being very limited. Given only two 'at collision risk' flights were recorded, the site is not considered to be a regular foraging area or on a commuting route for the species. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon merlin can be avoided. **Effects on merlin are scoped out of detailed assessment.**
Short-eared owl	Low / Local	Out	Short-eared owl is listed on Annex 1 of the EU Birds Directive. No 'at collision risk' flights were recorded during the survey period (2019-21). No evidence of short-eared owl breeding was identified during the surveys (no breeding territories were identified), with overall flight activity very limited (restricted to one bird hunting in the north of the site recorded during one MBBS). Given the very limited on-site activity recorded, the site is not considered to be a regular foraging area or on a commuting route for the species. Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon short-eared owl can be avoided. **Effects on short-eared owl are scoped out of detailed assessment.**
White-tailed eagle	Low / Local	Out	White-tailed eagle is listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). One 'at collision risk' flight was recorded during the survey period (2019-21). No evidence of white-tailed eagle breeding was identified during the surveys (no breeding territories were identified), with overall flight activity very limited.

IOF	Sensitivity	Scoped In or Out?	Justification
			Given only one 'at collision risk' flight was recorded, the site is not considered to be a regular foraging area or on a commuting route for the species. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon white-tailed eagle can be avoided. **Effects on white-tailed eagle are scoped out of detailed assessment.**
Divers	Low / Local	Out	Red-throated and black-throated divers are listed on Annex 1 of the EU Birds Directive and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Two 'at collision risk' red-throated diver flights were recorded during the survey period (2019-21). No evidence of red-throated diver breeding was identified during the surveys (no breeding territories were identified), with overall flight activity very limited. Birds (including a pair) were irregularly recorded using Loch na Geàrra on-site and Loch Achilty to south of the site, but with no signs of breeding. Note, Loch na Geàrra was appraised as being suboptimal for supporting breeding divers mainly due to unsuitable loch margins for nesting on. Given only two 'at collision risk' flights were recorded, the site is not considered to be on a regular flight path for the species. No black-throated divers were recorded during surveys (with no evidence of breeding). Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon divers can be avoided. **Effects on divers are scoped out of detailed assessment.**
Other wetland species (including mallard, grey heron & goosander)	Low / Local	Out	Two mallard breeding pairs were recorded on-site (in Year 1, not in Year 2), with very limited flight activity being recorded during surveys. One 'at collision risk' grey heron flight was recorded during the survey period (2019-21), but with no evidence of breeding. No 'at collision risk' goosander flights were recorded during the survey period (2019-21), and there was no evidence of breeding. Overall flight activity for the species was very low (only one flight during the two years of survey). Given the low number and activity of these species during surveys, the site is not considered to be on a regular flight path for these species. All of these species are considered to be of low sensitivity to onshore wind farm developments. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon other wetland species, including mallard, grey heron and goosander can be avoided. **Effects on other wetland species (including mallard, grey heron and goosander) are scoped out of detailed assessment.**
Other species (including common crossbill, red	Low / Local	Out	Up to two common crossbill breeding territories associated with commercial forestry were recorded on the site's periphery (in Year 1) and four red grouse breeding territories were recorded in open

IOF	Sensitivity	Scoped In or Out?	Justification
grouse, raven , snow bunting & dotterel)			habitats in the study area (in Year 2). A small number of anecdotal records of snow bunting was made during surveys. These were typically relatively small numbers of buntings passing through the site in early spring 2020). No evidence of dotterel was recorded during surveys. Raven flight activity was low during the surveys, with no evidence of breeding. These species are considered to be of low sensitivity to onshore wind farm developments. See also the Ben Wyvis SPA section above in this table with regards to dotterel of the SPA. Through design considerations, embedded mitigation including the implementation of good practice construction measures to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) are considered adequate to avoid any potentially significant adverse effects upon other species, including common crossbill, red grouse and raven. Through design considerations, and embedded mitigation, such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon other species, including common crossbill, red grouse and raven can be avoided. **Effects on other species (including common crossbill, red grouse and raven) are scoped out of detailed assessment.**
Commoner Raptors (buzzard, kestrel & sparrowhawk)	Low / Local	Out	Low levels of flight activity for these three raptors was recorded during surveys, and there was evidence that all three species were breeding in the wider area (within 2 km of the site). These species are considered to be of low sensitivity to onshore wind farm developments. Through design considerations, and embedded mitigation such as the implementation of good practice construction measures (and pre-construction nesting bird checks and preparation of a CBBPP) to be included within the Proposed Development's CEMP (as detailed in **Section 9.7**) significant adverse effects upon commoner raptors (buzzard, kestrel and sparrowhawk) can be avoided. **Effects on commoner raptors (buzzard, kestrel and sparrowhawk) are scoped out of detailed assessment.**
Slavonian grebe & capercaillie	Low / Local	Out	These species were considered as requested through consultation (see **Table 9.1**). The site is not within 10 km of any international designated site where either species is listed as a qualifying interest. The desk study data gathering exercise revealed no records of capercaillie, and no recent records of Slavonian grebe; a historic record of a Slavonian grebe pair was returned from 1997, but >3 km from the site. The upper disturbance limit for the species is 350 m (Goodship and Furness, 2022). The site does not provide suitable habitat for either species given it is open, upland habitat. The waterbodies on-site are within open habitat with no tree cover of note surrounding them. Slavonian grebes favour moderately sized (typically shallow) waterbodies with a good proportion of marginal tree cover (Summers *et al.*, 2011). It is considered unlikely that capercaillie are present at the locality, given the restricted distribution of the species. The commercial forestry in the wider area near the site (which will be unaffected by the Proposed Development; out to 1 km, which is the upper disturbance limit for lekking male capercaillie and 100 m is the limit for nesting females, from Goodship and Furness, 2022) is considered highly unlikely to support capercaillie. This is because he forest is relatively limited in extent (and is quite isolated from other large areas of commercial forestry, and thus fragmented in terms of

IOF	Sensitivity	Scoped In or Out?	Justification
			forestry habitat), is adjacent to a road network (A835) and given the lack of nearby SPAs with capercaillie interest. There is no suitable capercaillie breeding/nesting habitat within or near to the site. Capercaillie are restricted to dense pinewoods and are vulnerable to disturbance, particularly where the habitats provide less cover (Marshall, 2005). **Effects on Slavonian grebe and capercaillie are scoped out of detailed assessment.**

9.9 Potential Effects

9.9.1 This section presents an assessment of effects upon IOFs (**Table 9.9**) as a result of the Proposed Development alone.

9.9.2 The IOFs scoped-in and carried forward to this stage of the assessment are:

- Glen Affric to Strathconon SPA;
- golden eagle;
- red kite; and
- black grouse.

9.9.3 The Proposed Development has been assessed for an operational lifespan of 50 years.

9.9.4 The following potential effects have been assessed:

- inadvertent destruction of in-use nests during construction;
- 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 Proposed Development 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.

Construction

9.9.5 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 and immediately surrounding areas resulting in the removal of potentially suitable habitat.

9.9.6 Potential effects are assessed on the assumption that embedded mitigation measures, as detailed in **Section 9.7** and within **Chapter 2: Site Description and Design Evolution**, and **Chapter 3: Description of the Development** will be implemented thoroughly and effectively.

9.9.7 During construction, 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.

9.9.8 During 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.

9.9.9 The construction period is anticipated to last approximately 23 months.

<u>Designated Site for Nature Conservation</u>

9.9.10 The Glen Affric to Strathconon SPA is 3.05 km south-west of the site at its closest point. Potential impacts to the Glen Affric to Strathconon SPA (and breeding golden eagle within the SPA boundary itself, which is the qualifying species) during construction are therefore considered to be no more than of Negligible magnitude, resulting in a **Negligible adverse** effect which is considered Not Significant.

9.9.11 The potential for impacts upon golden eagles which may be affiliated with the SPA, and which use habitats associated with the site during the construction of the Proposed Development are discussed under the individual species section below where relevant.

9.9.12 A summary of information relevant to inform an HRA in relation to the Glen Affric to Strathconon SPA (as well as Ben Wyvis SPA, Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site), is provided in **Section 9.14.**

Golden Eagle

Displacement / Disturbance

9.9.13 A total of 48 golden eagle flights were recorded during VP flight activity surveys (September 2019 to August 2021).

9.9.14 Construction works associated with the Proposed Development would occur at a sufficient distance from any identified golden eagle eyrie, to preclude the likelihood of disturbance to nesting pairs (which have a disturbance range of 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.

9.9.15 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 on the site over the course of construction works. However, golden eagle territories are considerably sized, and there are notable areas of suitable eagle habitat at the locality (see Confidential Technical Appendix 9.4), with the site suspected as being on the periphery of the breeding pair's territory (which is suspected as being part of the Glen Affric to Stathconon SPA population). Furthermore, eagle activity across the two-year survey period was relatively modest.

9.9.16 Any such impacts would be short-term, and would constitute an impact of Negligible magnitude, resulting in effects of **Negligible adverse** significance, which is Not Significant at the Regional NHZ7 and Glen Affric to Strathconon SPA population levels.

Habitat Loss

9.9.17 The site is open moorland habitat, and the most suitable eagle habitat ('GET 6+') is principally in the south, west and north-east of the site, with central parts of the site of lower suitability for eagles (see Confidential Technical Appendix 9.4).

9.9.18 Golden eagle activity was relatively random within the site, as shown in Figures 9.4b and 9.5b, although at least in Year 2, the main focal area of eagle activity was around peaks in the south-west of the site. This may be reflective of the known golden eagle pair in the wider area (out to 6 km to the south-west) potentially traversing into the site from that direction. As detailed in Confidential Technical Appendix 9.4, the site is considered to be on the edge of at least one golden eagle pair's territory with the glen associated with Loch Garve to the south of the site potentially acting as a range boundary.

9.9.19 There would be no direct loss of known or potentially suitable undisturbed nesting habitat for golden eagle resulting from construction. 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 golden eagle territory. The GET model (see **Confidential Technical Appendix 9.4** for details) predicts an insignificant loss of suitable golden eagle habitat during the construction stage of the Proposed Development; given such a small proportion (maximum of 5.1 %, likely to be considerably less than this) of suitable habitat (GET 6+ habitat) within the golden eagle's estimated range would be lost.

9.9.20 Overall direct habitat losses would not be considered to affect the perceived quality of the potential foraging range of golden eagles, result in reduced breeding success, or subsequent abandonment by the golden eagle pair in the wider area (> 6 km).

9.9.21 Such impacts of habitat loss for both breeding and non-breeding eagles would be long-term, but no more than a Low magnitude, resulting in an effect of Minor adverse significance, which is Not Significant at the Regional NHZ7 and Glen Affric to Strathconon SPA population levels.

Red Kite

Displacement / Disturbance

9.9.22 A total of 46 red kite flights were recorded during VP flight activity surveys (September 2019 to August 2021).

9.9.23 No definitive evidence of breeding by red kites was identified during surveys, although the flight activity during surveys suggested that the site is part of a red kite pair's breeding territory. The desk study revealed a known red kite nest site greater than 700 m from the site boundary.

9.9.24 Construction works associated with the Proposed Development would occur at a sufficient distance from the known red kite nest site, to preclude the likelihood of disturbance to nesting pairs (which have a disturbance range of 150 - 300 m, based on expert opinion; Goodship and Furness, 2022). As such, no disturbance to breeding red kites at their nest site would occur.

9.9.25 The establishment of future red kite nest sites in construction working areas is not anticipated given the lack of suitable mature trees within the site. It is considered that construction may result in some level of disturbance, in the short-term, to individual birds which choose to utilise habitats in the vicinity of working areas over the course of construction works.

9.9.26 Red kites have a considerable foraging range (out to a maximum of 6 km, as per SNH, 2016a) and range out to these distances foraging for food resources to scavenge. The site is therefore not considered likely to represent a focal foraging habitat for kites.

9.9.27 Such impacts would however be short-term and would constitute an impact of Low magnitude resulting in an effect of **Minor/Negligible adverse** significance, which is Not Significant at the Regional NHZ7 population level.

Habitat Loss

9.9.28 The site is open moorland habitat, which offers foraging habitat for red kite, particularly given it is predominantly used for livestock grazing.

9.9.29 Red kite activity was relatively random within the site, as shown in Figures 9.4b and 9.5b, although at least in Year 2 the main focal area of kite activity was around peaks in the south-west of the site, and Carn Gorm to the east of the site.

9.9.30 There would be no direct loss of known or potentially suitable undisturbed nesting habitat for red kite, given the lack of suitable trees on-site. Potential direct moorland foraging habitat losses as a result of the Proposed Development are also considered to be 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 red kite territory.

9.9.31 Overall direct habitat losses would not be considered to affect the perceived quality of the potential foraging range of red kites or result in reduced breeding success or subsequent abandonment by any red kite pair in the wider area (> 700 m which is the distance of the site boundary from a red kite nest site identified from the desk study, but not recorded during field surveys).

9.9.32 Such impacts of habitat loss for both breeding and non-breeding kites would be long-term, but no more than a Low magnitude resulting in an effect of **Minor/Negligible adverse** significance, which is Not Significant at the Regional NHZ7 population level.

Black Grouse

Displacement / Disturbance

9.9.33 Only one black grouse flight was recorded during VP flight activity surveys (September 2019 to August 2021), comprising a single male in November, not 'at collision risk'. A total of four leks were recorded across the survey years. No lek sites recorded are within 750 m of turbines, and other infrastructure of the Proposed Development (such as access tracks) is at least 500 m from leks. Surveys thus suggested limited activity by the species through the site. The only exception is one lek (with three males) which is 110 m from a proposed new access track. The four identified leks are also on the periphery of the Proposed Development, with no leks within the proposed turbine envelope (i.e., potentially encircled by turbines).

9.9.34 Construction works associated with the Proposed Development would occur at a sufficient distance from most leks, to preclude the likelihood of disturbance to lekking birds (500 - 750 m is the distance to which disturbances on lekking black grouse have been identified; ; Goodship and Furness, 2022). As such, no disturbance to most identified lek sites is anticipated.

9.9.35 Construction works, although short-term, in the absence of additional mitigation has the potential to displace black grouse from one identified lek ('Lek 4' on Confidential Figure 9.9c), given it is 110 m from the proposed new access track, and thus well within the disturbance limits for the species.

9.9.36 The lek supported three males, which represents 0.63 % of the respective NHZ7 population estimate (which is 473 males, based on Wilson et al., 2015). The magnitude of impact is 'Negligible' as per Table 9.3, given <1 % of the NHZ7 population may be affected.

9.9.37 Such impacts would be short-term and would constitute an impact of Negligible magnitude which would result in an effect of **Negligible adverse** significance, which is Not Significant at the Regional NHZ7 population level. However, additional mitigation is proposed as stated in **Section 9.10**, to reduce unnecessary disturbance/displacement to leks on-site.

Habitat Loss

9.9.38 The site is open moorland habitat, which offers suitable habitat for lekking black grouse. The site supported two lek sites (and a further two leks off-site), with all lek sites were greater than 750 m from the nearest turbine (but one 110 m of a proposed access track).

9.9.39 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 is used by lekking birds. This is particularly

given that the minimal black grouse flight activity on-site implies that the site is not readily used by black grouse.

9.9.40 Overall direct habitat losses would not be considered to affect the perceived quality of the potential range of any breeding black grouse at the locality or result in reduced breeding success or subsequent abandonment by any breeding birds.

9.9.41 Such impacts of habitat loss for both breeding and non-breeding birds would be long-term, but no more than of Negligible magnitude resulting an effect of **Negligible adverse** significance, which would be Not Significant at Regional NHZ population levels.

Operation

9.9.42 Potential operational ornithological effects associated with the Proposed Development are considered to relate to disturbance / displacement and collision risk 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.

9.9.43 Collision risk analysis has been undertaken for golden eagle and red kite only, on the basis of the low incidence of 'at collision risk' flight activity recorded for all other IOF species brought forward for assessment, and thus inconsequential collision risk effects are predicted for those other species.

9.9.44 Full details are provided in **Technical Appendix 9.3: Collision Risk Modelling.**

Designated Site for Nature Conservation

9.9.45 The Glen Affric to Strathconon SPA is 3.05 km south-west of the site at its closest point. Potential operational effects to the Glen Affric to Strathconon SPA (and breeding golden eagle within the SPA boundary, which is the qualifying species) is therefore considered to be of a Negligible magnitude of impact, resulting in a **Negligible adverse** effect which is considered Not significant.

9.9.46 The potential for impacts upon golden eagle (which is the ornithological interest of SPA, and for which the eagles are considered likely to be associated with) during the operation of the Proposed Development is discussed under individual species sections below where relevant.

9.9.47 A summary of information relevant to inform an HRA in relation to the Glen Affric to Strathconon SPA (as well as Ben Wyvis SPA, Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site), is provided in Section 9.14.

Golden Eagle

Displacement / Disturbance

9.9.48 During the surveys, one breeding golden eagle territory was identified and the desk study revealed the presence of two known breeding pairs, with one within 6 km of the site, and the other greater than 6 km (although the breeding territory likely extends to within 6 km of the site). There were 23 'at collision risk' golden eagle flights during the VP flight activity surveys across the survey period (48 flights in total). It is considered likely that the golden eagle activity recorded during surveys is from at least one of the breeding pairs (likely to be the pair within the Glen Affric to Strathconon SPA). The GET model revealed that the site is likely to be on, or close to, a range boundary with the glen associated with Loch Garve to the south, the possible boundary between the two breeding pairs. As such, the site (and its associated habitats) is considered likely to be peripheral habitat used by breeding golden eagles.

9.9.49 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. variations in topography between monitored sites). A second study carried out at Beinn an Tuirc Wind Farm also identified 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).

9.9.50 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.

9.9.51 On the basis of best and currently available evidence at Scottish wind farm developments, displacement and indirect loss of habitat for foraging golden eagles is calculated for areas encompassing the turbine layout, and a buffer out to a maximum distance of 300 m[5] of the outermost turbine locations including the area between turbines. Based on this approach, approximately 283 ha of the site is suitable GET 6+ habitat, referred to as 'good' eagle habitat (see **Confidential Technical Appendix 9.4**).

9.9.52 The output from the GET model is detailed in **Confidential Technical Appendix 9.4** and has assumed a theoretical golden eagle range of 5,500 ha. Thus, a total of 5.1 % of the range is estimated to be lost to the Proposed Development (although, in reality, it is likely to be lower than 5.1 %; and considered insignificant).

9.9.53 The GET model similarly reports insignificant levels of indirect 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 0.4 % of GET 6+ habitat would be lost at that scale as a result of the Proposed Development.

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

9.9.55 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.

9.9.56 Furthermore, given the amount of suitable eagle habitat on-site and in the wider surrounding area, as well as the site being suspected to be on the edge of at least one eagle pair's breeding territory and thus likely to be peripheral in its importance, no barrier effects on eagle movements are anticipated as a result of the Proposed Development. This is particularly the case given the 'closed' (dense) forestry and Loch Garve on the periphery of the site is already considered suboptimal for eagles and not a habitat birds will likely forage/traverse over.

9.9.57 Operational displacement/disturbance impacts (tantamount to indirect habitat loss), whilst long-term, are therefore considered to be of no more than a Low magnitude resulting in an effect of **Minor adverse** significance, which is Not Significant at Regional NHZ7 and Glen Affric to Strathconon SPA population levels.

Collision Risk Mortality

9.9.58 CRM analysis for golden eagle has been completed using flight activity data for the non-breeding seasons (September 2019 to January 2020, and September 2020 to January 2021), and breeding seasons (February to August 2020, and February to August 2021). The results predict an annual mortality rate of 0.122 to 0.23 birds (see **Technical Appendix 9.3**). This represents up to 0.267 % of the NHZ7 population estimate (43 pairs, thus 86 territorial adult birds, so not accounting for unpaired and immature birds), and 1.15 % of the Glen Affric to Strathconon SPA population (10 pairs, and thus 20 territorial adults).

9.9.59 Estimated adult survival rates for golden eagle are stated as 95 % (Watson, 1997), which gives a baseline (natural) mortality of 5 % for adult birds. Assuming a Regional NHZ7 population estimate of 43 pairs (86 birds); the natural mortality rate in the absence of the Proposed Development would be four adult birds per year. The estimated maximum annual mortality resulting from the Proposed Development (0.23 birds) represents a potential 5.8 % increase in annual baseline Regional NHZ7 mortality. In terms of the Glen Affric to Strathconon SPA which has natural mortality rate of one adult bird per year, annual mortality as a result from the Proposed Development (0.23 birds) would represent a potential 23 % increase in annual baseline mortality of the SPA.

9.9.60 It is understood that there have been seven golden eagle collision fatalities at operational wind farms, over an approximate ten year period, 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 (see **Confidential Technical Appendix 9.4[6]**). There is no evidence to indicate that golden eagle collisions occur to such an extent that they could affect regional population levels. As discussed above in relation to operational phase disturbance/displacement, recent research (Fielding *et al*., 2021a and b) documents that golden eagles are displaced from wind farm developments, 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 that estimated from CRM analysis, given the recent advancements in our understanding of the effects of wind farm developments on golden eagles and that birds clearly cannot be both displaced and at risk of collision at the same time.

9.9.61 As a precaution, carcasses (deer and sheep) from the site will be readily removed to discourage eagles (and other raptors) from potentially foraging close to operational wind turbines, which may increase the

[5] In line with the buffer distance used within the GET model.
[6] Noting, that within this Technical Appendix, six known eagle deaths are stated (but there has been one reported from southern Scotland in the interim period, hence seven stated in this chapter).

potential for collisions, and this additional mitigation is stated in **Section 9.10**. Note, this mitigation is not considered in the significance determination (given no such activity of eagles being attracted to the site by carcasses was noted during surveys), but it is considered a prudent measure to minimise eagles (and raptors more widely) being attracted towards the Proposed Development.

9.9.62 Overall collision mortality risks to golden eagle (breeding and non-breeding), whilst long-term, are therefore considered to represent no more than a Low magnitude which would result in an effect of **Minor adverse** significance, which is Not Significant at the Regional NHZ7 and the Glen Affric to Strathconon SPA population levels.

Red Kite

Displacement / Disturbance

9.9.63 There were 23 'at collision risk' red kite flights recorded during the VP flight activity surveys, across the survey period (46 flights in total). No definitive evidence of breeding red kite was recorded, although given the relatively high levels of kite activity recorded, the site and surrounding area is considered to be part of at least one breeding pair's territory. The desk study revealed a known red kite breeding pair within 1 km of the site, and thus flights may be from this established pair.

9.9.64 There is limited evidence for displacement effects upon red kites as a result of operational wind farms, with kites often reported foraging close to wind farm sites (e.g. Hötker *et al*., 2017), and a review by Madders and Whitfield (2006) reporting sensitivity of the species to displacement by wind farms as being low. A long-term study of potential effects (including displacement) upon red kite at the Braes of Doune Wind Farm near Stirling in central Scotland, found that red kites continue to use the area and frequently passed through the operational wind farm (Duffy and Urquhart, 2014).

9.9.65 The habitat within 300 m of the Proposed Development's turbines is open habitat, with no notable trees that could provide suitable nesting habitat for red kite. The site's habitats are considered suitable for providing some foraging and traversing habitat for red kite, especially given the site is used for livestock grazing, and thus there is a potential food resource on-site (carrion). Although, the recorded red kite flight activity was largely random within the site (see **Figures 9.4b** and **9.5b**), at least in Year 2; the main focal area of kite activity was around peaks in the south-west of the site, and Carn Gorm to the east of site. During the operation of the Proposed Development and given, as stated above, kites will typically continue to use wind farm sites, with little evidence of displacement, it is considered likely that red kite will continue to forage and traverse the site, including in these south-west and eastern focal areas.

9.9.66 For the purposes of a precautionary assessment, the Proposed Development may have a limited effect on the potential foraging range for one known breeding pair of red kites, but is not likely to result in reduced breeding success or subsequent abandonment of the territory by the pair (given that the spatial separation between the Proposed Development and the nest site exceeds the upper disturbance limit for the species (Goodship and Furness, 2022), and the considerable extent to which red kites can forage (out to 6 km, from SNH, 2016a).

9.9.67 Furthermore, given the amount of suitable kite habitat on-site and the wider surrounding area, as well as those parts of the site subjected to the greatest kite activity typically being greater than 300 m from the Proposed Development's turbines, no barrier effects on kite movements is anticipated as a result of the Proposed Development. This is particularly the case given the lack of suitable mature trees/forestry on-site which kites could use for nesting and/or roosting.

9.9.68 Operational displacement/disturbance impacts, whilst long-term, are therefore considered to be of no more than a Low magnitude resulting in an effect of **Minor/Negligible adverse** significance, which is Not Significant at Regional NHZ7 population level.

Collision Risk Mortality

9.9.69 CRM analysis for red kite has been completed using flight activity data for the non-breeding seasons (September 2019 to February 2020, August 2020 to February 2021 and August 2021), and breeding seasons (March to July 2020, and March to July 2021). The results predict an annual mortality rate of 0.132 to 0.133 birds (see **Technical Appendix 9.3)**. This represents up to 0.739 % of the NHZ7 population estimate (nine pairs, thus 18 territorial adult birds, so not accounting for unpaired and immature birds).

9.9.70 Estimated adult survival rates for red kite are stated as 61 % (BTO 'Birdfacts', 2025), which gives a natural mortality of 39 % for adult birds. Assuming a Regional NHZ7 population estimate of nine pairs (18 birds); the natural mortality rate in the absence of the Proposed Development would be seven adult birds per year. The estimated maximum annual mortality (0.133 birds) resulting from the Proposed Development represents a potential 1.9 % increase in annual baseline Regional NHZ7 mortality.

9.9.71 Incidents of red kite collision fatalities at operational wind farms in the UK are uncommon, but not unprecedented (e.g. Braes of Doune Wind Farm). Despite the potential for collisions, red kite populations are demonstrated to continue to increase in key areas with an increasing number of operational and proposed wind farm development (Sansom *et al*., 2016). A recent study in Wales found little evidence that

wind farm developments will result in a decline in the red kite population, and as a worst-case scenario may result in a slight reduction in the rate that kite population is increasing (Hereward *et al*., 2024).

9.9.72 As a precaution, carcasses (deer and sheep) from the site will be readily removed to discourage red kite (and other raptors) from potentially foraging close to operational wind turbines, which may increase the potential for collisions, and this additional mitigation is stated in **Section 9.10**. Note, this mitigation is not considered in the significance determination (given no such activity of kites being attracted to the site by carcasses was noted during surveys), but it is considered a prudent measure to minimise kites (and raptors more widely) being attracted towards the Proposed Development.

9.9.73 Overall collision mortality risk to red kite (breeding and non-breeding), whilst long-term, is therefore considered to represent an impact of no more than a Low magnitude resulting in an effect of **Minor/Negligible adverse** significance, which is Not Significant at Regional NHZ7 population level.

Black Grouse

Displacement / Disturbance

9.9.74 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).

9.9.75 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).

9.9.76 The locations of lek sites identified during baseline surveys has been considered as part of the evolution of scheme design, and as such, no lek site is located within 750 m of any turbine (which exceeds the upper disturbance limit for the species). One lek is located 110 m from a proposed access track. Operational displacement of male black grouse utilising most of these lek sites are therefore highly unlikely on the basis of best available evidence. Whilst the displacement of individual lekking males at some lek sites (especially the lek close to the proposed access track) cannot be entirely precluded during the operation phase, such effects would not be attributable to local population losses, particularly given the lek site 110 m from the access track represents only 0.63 % of the NHZ7 population.

9.9.77 Operational displacement / disturbance impacts, although long-term, are therefore considered to comprise no more than an impact of Negligible magnitude resulting in an effect of **Negligible adverse** significance, which is Not Significant at the Regional NHZ7 population level. However, additional mitigation is proposed as stated in **Section 9.10**, to reduce unnecessary disturbance/displacement to leks on-site.

Collision Risk Mortality

9.9.78 No 'at collision risk' black grouse flights were recorded during VP flight activity surveys. As a result, CRM analysis for the species has not been completed due to the inconsequential levels of collision mortality risk for the species that would reasonably be predicted. Furthermore, the species is acknowledged as being at low risk of collision with turbine blades due to their typical low flight heights and tendency to spend much of their time on the ground. High rates of collisions by black grouse with turbine bases themselves are not anticipated given the lack of activity of black grouse recorded within the site, particularly in close proximity to locations of the Proposed Development's turbines.

9.9.79 The impact of collision risk mortality for the species is considered to be of Negligible magnitude resulting in an effect of **Negligible adverse** significance, which is Not Significant at Regional NHZ7 population level.

Decommissioning

9.9.80 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 IOF.

9.9.81 The future condition of the bird community at the time of decommissioning (50 years) is unknown and cannot be reasonably assumed with any certainty.

9.9.82 In the absence of mitigation, decommissioning effects may result in the destruction of nest sites and disturbance and displacement of IOFs identified in **Table 9.9**.

9.9.83 Providing the implementation of good practice measures such as those outlined in **Section 9.7** is included (and presented in a Decommissioning, Restoration and Aftercare Plan at the point of decommissioning), it is unlikely that significant effects upon IOFs would occur due to decommissioning.

9.10 Additional Mitigation and Enhancement

Mitigation

9.10.1 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 9.7**) are not required.

9.10.2 However, it is considered prudent that precautionary additional mitigation is adopted to reduce displacement / disturbance effects on black grouse using the site for breeding/lekking. The location of black grouse leks would 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 (Goodship and Furness, 2022). Adopting these findings, no construction works within 750 m of any identified main lek sites would be undertaken prior to 9 am in the months of April and May. This is particularly prudent for works associated with the stretch of upgraded access track which passes within 110 m at its closest point of a lek (termed 'Lek 4' in **Confidential Figure 9.9c**). Note, this measure also should include a 'no-stop' policy in relation to works vehicles within 750 m of lek sites (particularly 'Lek 4') during the main lekking period as defined above, both during the construction and operational phases of the Proposed Development. These measures will be defined respectively within a CBBPP and OBBPP (see also **Section 9.7**).

9.10.3 These measures would serve to avoid unnecessary potential construction and operational phase disturbance of lekking male black grouse using the site.

9.10.4 Separately, as a precautionary additional measure, during the operation phase of the Proposed Development, any carcasses (deer and sheep) would be readily removed from the site to minimise encouraging raptors (principally golden eagle and red kite in the context of this assessment, and other scavenging raptor species as well) onto the site and particularly towards operational turbines, where they would potentially be at increased risk of collision. In advance of commencement of the Proposed Development (if consented) an OBBPP will detail how this measure is to be implemented during the operation phase of the Proposed Development.

Enhancement

9.10.5 Enhancement measures designed to benefit ornithological features on-site will be adopted. The measures will contribute to compliance with NPF4, particularly with regards to enhancement of biodiversity, improvement of peatland and restoration of woodland (NPF4 policies 3 and 4).

9.10.6 A detailed NEMP would be produced post-consent for agreement by THC and NatureScot, and with a Steering Group (including THC and NatureScot) established to oversee the success of the enhancement measures (**Technical Appendix 8.5**). 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 curlew. An outline NEMP setting out the broad habitat enhancement principles is provided in **Technical Appendix 8.5** and is summarised below.

9.10.7 Peat restoration, including rewetting via blocking of drains, would be undertaken in appropriate areas of the site. Native broad-leaved riparian tree planting is proposed within the site, which would enhance habitat connectivity and shelter for bird species, including black grouse.

9.10.8 The outline NEMP will also include information on monitoring to be undertaken if the Proposed Development is consented. This was a request following consultation (see **Table 9.1**), and would include ornithological monitoring, including breeding bird surveys and carcass searches during the operational phase, with the protocol to be agreed with THC and NatureScot.

9.11 Residual Effects

9.11.1 No likely significant residual effects are predicted to occur upon any IOF as a result of the construction, operation or decommissioning of the Proposed Development. As such, residual effects for all IOFs are Not Significant.

9.12 Cumulative Assessment

9.12.1 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, 2018c). The assessment considers operational, consented, under construction and in planning 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.

9.12.2 Note, further information of the wind farm developments considered including their location in relation to the site are provided in **Figure 7.14a**. This list of wind farms within NHZ7, provided by NatureScot on 19

December 2024 (see **Table 9.1**), were considered in this assessment. These were the wind farm developments with specific information relevant for the particular scoped-in IOFs.

9.12.3 No such cumulative effects are considered on black grouse given the lack of adverse residual effects anticipated resulting from the Proposed Development, and from the other wind farm developments listed in **Table 9.10**. The schemes listed in **Table 9.10** report no collision risks for black grouse, nor any significant displacement of lek sites. Any displacement reported is considered to be minimal with any modest numbers of lekking males affected predicted to remain within the respective sites/study areas and use alternative lek sites, if required (thus predicting no displacement of lekking males).

9.12.4 Potential cumulative effects on IOFs are considered at the NHZ7 population level, with exception of golden eagle (which is the qualifying species for the Glen Affric to Strathconon SPA) and effects are considered at the SPA eagle population. 'In combination' likely significant effects (LSEs) on the SPA are presented as information to inform HRA in **Section 9.14**.

Collision Risk Mortality

9.12.5 Cumulative collision risk for both golden eagle and red kite, at the operational phase, is considered to have the potential to be significant for the purposes of this assessment, given these target species were subject to CRM analysis for the Proposed Development. Collision risk rates for all other target species is considered to be so unlikely (negligible) such that the Proposed Development would not contribute to the cumulative collision mortality risk of these species and is not considered further in this section.

9.12.6 Wind farm developments considered in the assessment are listed in **Table 9.10**, together with a summary of collision risk mortality estimates predicted. This includes estimates from wind farm developments until approximately June 2024. Note, where '-' is stated, no estimate was provided and thus for the purpose of this assessment there is considered to be no collision risk from those wind farms. Note, 99 % avoidance rates were used for all golden eagle collision risk estimates and all red kite collision risk estimates, with the exception of the red kite estimate for Corriemoillie which used 98 %. Other than Corriemoillie, avoidance rates used are in accordance with NatureScot guidance (SNH, 2017b).

Table 9.10 – Cumulative Collision Risk Estimates – Target Species

Wind Farm	**Approximate Distance from the Site Boundary (km)**	**Annual Collision Risk Estimate**	
		Golden eagle	Red kite
Abhainn Dubh	9.5	-	0.112
Beinneun	58	0.145	-
Bhlaraidh Extension	40	0.180	0.025
Bunloinn	60	0.035	-
Chrathaich	40	0.067	-
Coire na Cloiche	23	0.008	-
Corriemoillie	8	0.021	0.20
Corrimony	37	0.042	-
Kirkan	7	0.054	-
Loch Liath	36	0.005	-
Millennium & Extensions I & II	55	0.009	-
Millennium South	55	0.007	-
Strathrory	36	-	0.130
Tomchrasky	50	0.035	-
Proposed Development	n/a	0.23	0.133
Total	**n/a**	**0.838**	**0.60**

Golden Eagle

9.12.7 The cumulative collision risk estimates for golden eagle for the NHZ7 region is calculated at 0.838 birds per year (see **Table 9.10**), which represents 0.97 % of the NHZ7 (86 adults) population estimate.. In relation to the Glen Affric to Strathconon SPA population, the cumulative collision risk estimates for golden eagles represents 4.19 % of the SPA population.

9.12.8 As detailed in **Section 9.9** in relation to collision risk from the Proposed Development on its own, 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 actual collision risk mortality of golden eagles would be considerably lower than the cumulative annual mortality of up to 0.838 birds, given the advancements in our understanding of the effects of wind farms on golden eagles.

9.12.9 Given, the predicted over-estimation of golden eagle annual collision mortality (due to stronger displacement effects, as recently established (Fielding *et al*., 2021a and b)), overall cumulative collision mortality risks to golden eagle are considered to represent an impact of no more than a Low magnitude resulting in an effect of **Minor adverse** significance, and which is Not Significant at the Regional NHZ7 or Glen Affric to Strathconon SPA population levels.

Red Kite

9.12.10 The cumulative collision risk estimate for red kite for the NHZ7 region is calculated at 0.60 birds per year (see **Table 9.10**), which represents 3.33 % of the NHZ7 (18 adults) population estimate.

9.12.11 As detailed, in **Section 9.9** in relation to collision risk from the Proposed Development on its own, incidents of red kite collision fatalities at operational wind farms in the UK are uncommon, but not unprecedented (e.g. Braes of Doune Wind Farm). However, despite the potential for collisions, red kite populations are continuing to increase including within areas with an increasing number of operational and proposed wind farm development.

9.12.12 Overall cumulative collision mortality risks to red kite, whilst long-term, are therefore considered to represent an impact of no more than a Low magnitude resulting in an effect of **Minor/Negligible adverse** significance, which is Not Significant at Regional NHZ7 population level.

Disturbance, Displacement and Habitat Loss

9.12.13 In this section, disturbance/displacement and habitat loss effects for golden eagle and red kite have been considered as being potentially significant for the purposes of this assessment, given these target species are predicted to be subject to some displacement effects from the Proposed Development. Note, this part of the assessment considers the disturbance/displacement and habitat loss effects at the construction and operational phases of the schemes. Displacement and habitat loss effects for all other target species is considered to be unlikely (negligible) such that the Proposed Development would not contribute to the cumulative displacement effects of these species and is not considered further in this section.

Golden Eagle

9.12.14 Information on displacement effects on golden eagle for those listed wind farm developments in **Table 9.10** was provided by NatureScot on 24 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.

9.12.15 It is accordingly considered that those other wind farm developments in NHZ7 (including those in **Table 9.10**) did not report displacement effects on golden eagle, and any such effects for all other NHZ7 wind farm developments are considered negligible, and are not considered further in this section.

9.12.16 The information provided confirms loss of some principally foraging habitat for the above listed developments, extending to potential displacement of an eagle pair at Bunloinn. However, the assessment for Bunloinn concludes that the pair would not be displaced but instead would likely use an alternative nest site within the pair's range. Accordingly, no golden eagle pairs are anticipated to be displaced due to any of the above listed wind farm developments.

9.12.17 Overall cumulative displacement/disturbance and indirect habitat loss effects to golden eagle, whilst long-term, are therefore considered to represent an impact of no more than a Low magnitude resulting in an effect of **Minor adverse** significance, which is Not Significant at the Regional NHZ7 or Glen Affric to Strathconon SPA population levels.

Red Kite

9.12.18 Information of displacement effects on red kite for those listed wind farm developments in **Table 9.10** was provided by NatureScot on 24 January 2025, and is summarised below:

- Strathrory – potential displacement during construction.

9.12.19 The information provided confirms some potential, short-term, displacement during construction for Strathrory only. It is considered that given the potential displacement is attributed to during the construction phase, effects would only be short-term and would not be significant.

9.12.20 Overall cumulative displacement/disturbance and indirect habitat loss effects to red kite, whilst short-term, are therefore considered to represent no more than a Low magnitude, of **Minor/Negligible adverse** significance, which is Not Significant at Regional NHZ7 population level.

9.13 Summary

9.13.1 Baseline ornithological conditions to inform the design and assessment of the Proposed Development have been established through a desk study review of existing information and ornithological field surveys, informed through consultation with NatureScot, RSPB, species-specialists and ornithological recording groups.

9.13.2 The site is located approximately 3 km from the Glen Affric to Strathconon SPA, which has breeding golden eagle as a qualifying species. The site is within the documented foraging distance of golden eagle. As well as potential impacts to the Glen Affric to Strathconon SPA, potential impacts are also considered to Ben Wyvis SPA (and the SPA's qualifying species, dotterel), and to Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site in relation to non-breeding/migratory greylag goose (given the site is located respectively 10.82 km and 16.58 km from these SPAs and Ramsar sites, which are within the documented maximum foraging range of non-breeding greylag geese).

9.13.3 Baseline studies have established the site and adjacent habitats is used primarily by foraging golden eagle and red kite and breeding black grouse, and other ground-nesting species including modest numbers of waders and ptarmigan.

9.13.4 Potential effects of the Proposed Development during construction, operation, and decommissioning on golden eagle (including with respect to the Glen Affric to Strathconon SPA), red kite and black grouse are considered in the assessment. Other considered ornithological features (including IOFs) were scoped out of detailed assessment, and justification for this is provided in **Table 9.9**.

9.13.5 Information to inform HRA is provided within the assessment, in relation to the Glen Affric to Strathconon SPA, Beny Wyvis SPA, Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site (and listed qualifying species). There was no evidence found to suggest the integrity of any of these designated sites would be affected by the Proposed Development.

9.13.6 Collision risk mortality has been determined for golden eagle and red kite using the standard CRM modelling methodology advocated by NatureScot. This calculated annual mortality estimates of 0.23 birds for golden eagle and 0.133 for red kite. The mortality rate for golden eagle is however, considered to be a substantial over-estimation based on recently published research on the displacement effects of wind farms on golden eagles, which means in reality collisions are extremely rare events. No significant collision risk mortality effects on the golden eagle and red kite NHZ populations (and Glen Affric to Strathconon SPA population for golden eagle) are predicted.

9.13.7 Potential displacement effects on golden eagle are detailed in a GET model which is included within the application. The GET model was completed by an independent specialist consultant who is a recognised expert on the subject. Whilst some level of localised displacement may occur, this is thought to be too small as to represent a threat to territory viability and so significant displacement effects on golden eagles are not considered likely to occur. Displacement effects on red kite and black grouse are considered in the assessment, with no significant effects predicted.

9.13.8 The effects of habitat loss on golden eagle are considered in the GET model, and similar to potential displacement effects no significant effects of habitat loss on golden eagles are considered likely to occur. Effects of habitat loss on red kite and black grouse are also considered in the assessment, and no significant effects are predicted.

9.13.9 Embedded mitigation (e.g. design of turbine location) and pre-construction checks (as required by the CEMP and directed by an appointed suitably qualified ECoW) would ensure that features such as nesting birds are protected from works associated with the Proposed Development. Some precautionary additional mitigation is proposed to be implemented to minimise unnecessary disturbance to lekking black grouse (during the construction and operation phases of the Proposed Development), and to minimise potentially attracting scavenging raptors on-site during the operation phase of the Proposed Development.

9.13.10 The Proposed Development provides an opportunity to deliver notable habitat improvements on-site, including the proposed peatland restoration and native woodland planting which is detailed in an ONEMP (**Technical Appendix 8.5**), which would benefit many key bird species and would mean the Proposed Development accords with NPF4 policies 3 and 4.

9.13.11 Potential effects of the Proposed Development have been assessed in combination with effects from other operational, in construction and consented wind farms. The assessment has concluded no likely significant in combination effects in relation to collision risk, displacement/disturbance and habitat loss. No significant

residual effects upon any IOFs are therefore predicted to occur (due to the Proposed Development alone, or in combination with the other wind farm developments considered).

9.13.12 A summary of potential effects is provided in **Table 9.11**. Note, potential effects during the decommissioning phase are comparable to those identified during the construction phase and are not specifically listed in **Table 9.11**. The 'effect' and 'impact' provided is pre-mitigation measures.

Table 9.11 – Summary of potential significant effects of the Proposed Development

IOF	Effect	Impact	Mitigation	How Implemented	Residual Effects
Construction					
Glen Affric to Strathconon SPA	Displacement / Disturbance	**Negligible**, Not Significant	Embedded mitigation. Additional / secondary mitigation not required.	Through scheme design of Proposed Development.	**Negligible**, Not Significant.
Golden Eagle	Displacement / Disturbance	**Negligible**, Not Significant	Embedded mitigation and good practice protocols included as part of the CEMP to ensure legislative compliance for breeding birds as part of the CBBPP. Additional / secondary mitigation not required.	Through scheme design of Proposed Development. Through a CEMP and CBBPP, agreed post consent and prior to construction commencing.	**Negligible**, Not Significant.
	Habitat Loss	**Minor adverse**, Not Significant	Embedded mitigation. Additional / secondary mitigation not required.	Through scheme design of Proposed Development.	**Minor adverse**, Not Significant.
Red Kite	Displacement / Disturbance	**Minor/ Negliglble adverse**, Not Significant	Embedded mitigation and good practice protocols included as part of the CEMP to ensure legislative compliance for breeding birds as part of the CBBPP. Additional / secondary mitigation not required.	Through scheme design of Proposed Development. Through a CEMP and CBBPP, agreed post consent and prior to construction commencing.	**Minor/Negligible adverse**, Not Significant.
	Habitat Loss	**Minor/ Negliglble adverse**, Not Significant	Embedded mitigation. Additional / secondary mitigation not required.	Through scheme design of Proposed Development.	**Minor/Negligible adverse**, Not Significant.
Black Grouse	Displacement / Disturbance	**Negligible**, Not Significant	Not required, however additional mitigation is to be adopted, as a precaution, to minimise unnecessary disturbance to lekking birds. Works in April and May would not be undertaken prior to 9 am within 750 m of identified lek sites. 'No-stop' protocol within the sensitive area for works vehicles. Embedded mitigation and good practice protocols included as part of the CEMP to ensure legislative compliance for breeding birds as part of the CBBPP.	Through scheme design of Proposed Development. Through a CEMP and CBBPP, agreed post consent and prior to construction commencing. The CBBPP would include information regarding restrictions in close proximity to lek sites during the most sensitive lekking period.	**Negligible**, Not Significant.

IOF	Effect	Impact	Mitigation	How Implemented	Residual Effects
	Habitat Loss	**Negligible**, Not Significant	Embedded mitigation. Additional / secondary mitigation not required.	Through scheme design of Proposed Development.	**Negligible**, Not Significant.
Operation					
Glen Affric to Strathconon SPA	Displacement / Disturbance	**Negligible**, Not Significant	Additional / secondary mitigation not required.	n/a	**Negligible**, Not Significant.
Golden Eagle	Displacement / Disturbance	**Minor adverse**, Not Significant.	Additional / secondary mitigation not required.	n/a	**Minor adverse**, Not Significant.
	Collision Mortality	**Minor adverse**, Not Significant.	Additional / secondary mitigation not required. Although as a precaution carcasses from site will be removed to minimise eagles being attracted to the site.	An OBBPP would provide good practice measures to be adopted during the operational phase, and this would include carcass removal as required.	**Minor adverse**, Not Significant.
Red Kite	Displacement / Disturbance	**Minor/ Negligible adverse**, Not Significant.	Additional / secondary mitigation not required.	n/a	**Minor/Negligible adverse**, Not Significant.
	Collision Mortality	**Minor/ Negligible adverse**, Not Significant.	Additional / secondary mitigation not required. Although as a precaution carcasses from site will be removed to minimise red kite being attracted to the site.	An OBBPP would provide good practice measures to be adopted during the operational phase, and this would include carcass removal as required.	**Minor/Negligible adverse**, Not Significant.
Black Grouse	Displacement / Disturbance	**Negligible**, Not Significant.	Not required, however additional mitigation is to be adopted, as a precaution, to minimise unnecessary disturbance to a very small number of lekking birds. 'No-stop' protocol within 750 m of identified lek sites for operational works vehicles prior to 9 am in April and May.	An OBBPP would provide good practice measures to be adopted during the operational phase, and this will include restrictions in close proximity to lek sites during the most sensitive lekking period.	**Negligible**, Not Significant.
	Collision Mortality	**Negligible**, Not Significant.	Additional / secondary mitigation not required.	n/a	**Negligible**, Not Significant.
Cumulative Construction					
Golden Eagle	Displacement, Disturbance & Habitat Loss	**Minor adverse**, Not Significant	Additional / secondary mitigation not required.	n/a	**Minor adverse**, Not Significant.
Red Kite	Displacement, Disturbance & Habitat Loss	**Minor/ Negligible adverse**, Not Significant.	Embedded mitigation and good practice protocols included as part of the CEMP to ensure legislative compliance for breeding birds as part of the CBBPP. Additional / secondary mitigation not required.	Through scheme design of Proposed Development. Through a CEMP and CBBPP, agreed post consent and prior to construction commencing.	**Minor/ Negligible adverse**, Not Significant.
Cumulative Operation					

IOF	Effect	Impact	Mitigation	How Implemented	Residual Effects
Golden Eagle	Collision Mortality	**Minor adverse**, Not Significant.	Additional / secondary mitigation not required.	n/a	**Minor adverse**, Not Significant.
Red Kite	Collision Mortality	**Minor/ Negligible adverse**, Not Significant.	Additional / secondary mitigation not required.	n/a	**Minor/Negligible adverse**, Not Significant.
Golden Eagle	Displacement, Disturbance & Habitat Loss	**Minor adverse**, Not Significant.	Additional / secondary mitigation not required.	n/a	**Minor adverse**, Not Significant.
Red Kite[7]	Displacement, Disturbance & Habitat Loss	Not Significant.	Additional / secondary mitigation not required.	n/a	Not Significant.

9.14 Information to Inform Habitats Regulations Appraisal

9.14.1 Information is presented for the competent authority to determine whether an appropriate assessment is required, through identifying whether there are any Likely Significant Effects 'LSEs' as a result of the Proposed Development on international designated sites. This part of the assessment signifies the screening stage of the HRA.

9.14.2 This section summarises information relating to the potential for LSEs upon ornithological qualifying interests of the Glen Affric to Strathconon SPA (breeding golden eagle), Ben Wyvis SPA (breeding dotterel), Cromarty Firth SPA and Ramsar site (in relation to non-breeding greylag goose) and the Inner Moray Firth SPA and Ramsar site (in relation to non-breeding greylag goose) as a result of the Proposed Development either on its own or in combination with other projects.

9.14.3 The Glen Affric to Strathconon SPA is 3.05 km from the site boundary to the south-west of Loch Garve and the A835. The core foraging range during the breeding season for golden eagle is 6 km (SNH, 2016a) and thus exceeds the spatial distance between the site and the SPA.

9.14.4 Ben Wyvis SPA is 2.38 km from the site boundary and is located on higher ground to the north-east of the site. The SPA is designated for breeding dotterel. In the absence of species-specific foraging ranges for dotterel, it is precautionarily considered that the spatial separation between the site and the SPA is within the foraging distance for the species.

9.14.5 The Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site are respectively 10.82 km and 16.58 km from the site boundary. Although the core foraging range for most qualifying species is lower than 10 km, the core foraging range for non-breeding greylag goose is 15-20 km, and accordingly the potential for LSEs are considered on non-breeding greylag goose associated with these designated sites.

9.14.6 Within this section, SPA populations are taken from the SPA citations (dated 2010 for Glen Affric to Strathconon SPA and 2018 for Cromarty Firth and Inner Moray Firth SPAs, which are reported in NatureScot's Sitelink, 2025).

9.14.7 The Proposed Development would need to ensure that it does not contravene the conservation objectives for the above listed SPAs (extended to be applicable to the corresponding Ramsar sites where relevant). These are:

- To avoid deterioration of the habitats of the qualifying species 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.

9.14.8 Note, the (breeding) golden eagle population for Glen Affric to Strathconon SPA, and the non-breeding greylag goose for the Cromarty Firth SPA and Ramsar site and Inner Moray Firth SPA and Ramsar site

[7] No displacement, disturbance and habitat loss reported by other wind farm developments in relation to red kite at the operation phase.

are listed as being in 'favourable status' (SEPA, 2024). While the (breeding) dotterel population for Ben Wyvis SPA is listed as being in 'unfavourable status' (SEPA, 2024).

9.14.9 The site is located sufficiently away from all of the above listed SPAs and Ramsar sites to avoid potential impacts of disturbance on qualifying species within the SPA and impacts on habitat processes and distribution within the SPAs and Ramsar sites are not anticipated. This section thus considers maintaining the population (and distribution if applicable) of the qualifying ornithological species of the SPAs and Ramsar sites.

9.14.10 The information provided in this section is relevant to the assessment of LSEs on qualifying species of the Cromarty Firth Ramsar site and Inner Moray Firth Ramsar site (which have the same qualifying species composition of the SPAs, considered in this section). This also includes the above conservation objectives for the SPAs, which are also considered applicable to protection of the integrity of the Ramsar sites.

Glen Affric to Strathconon SPA

9.14.11 During the surveys, 23 'at collision risk' golden eagle flights were recorded across two years of survey (2021-23). The desk study results revealed two known breeding pairs with one pair within 6 km of the site boundary. It is considered that the eagle activity recorded is from at least one of the breeding pairs. The location of the nest sites from the site well exceeds the upper disturbance limit for golden eagles (Goodship and Furness, 2022) and subsequently, no direct effects on nesting golden eagle (including within the SPA boundary) are predicted.

9.14.12 The GET model (**Confidential Technical Appendix 9.4**) revealed that the Proposed Development is unlikely to result in any significant effects on golden eagles through habitat loss or displacement.

9.14.13 The CRM analysis (**Technical Appendix 9.2**) revealed an annual mortality of 0.122 to 0.23 birds, which represents up to 1.15 % of the SPA population estimate (ten pairs, thus 20 territorial adult birds, so not accounting for unpaired and immature birds). The estimated maximum annual mortality (0.23 birds) resulting from the Proposed Development represents a potential 23 % increase in annual natural mortality of the SPA population.

9.14.14 However, given the advancements in our understanding of the effects of wind farms on golden eagles (golden eagles typically avoid wind turbines), the fact that golden eagle collisions with wind turbines are extremely rare, and given there is no evidence to indicate that eagle collisions occur to such an extent that they could affect regional population levels, it is reasonable to predict that collision risk mortality rates would be considerably lower than those estimates from CRM analysis. Based on the results of this assessment with regards to overall golden eagle collision mortality risks from the Proposed Development **no LSEs** are anticipated, with respect to the conservation objectives for the SPA, listed above.

9.14.15 The breeding territories of up to two golden eagles extend within 6 km of the site. The GET model however predicts inconsequential losses of suitable eagle habitat as a result of the Proposed Development. As such, in terms of displacement (tantamount to indirect habitat loss) impacting on golden eagles of the Glen Affric to Strathconon SPA during construction and operation, **no LSEs** are anticipated.

<u>In Combination Impacts</u>

9.14.16 For golden eagle, the CRM analysis revealed an annual in combination mortality of 0.838 birds, which represents 4.19 % of the SPA population (20 birds based on the SPA citation). Given the advancements in our understanding of effects of wind farms on golden eagles (golden eagles typically avoid wind turbines), the fact that golden eagle collisions with wind turbines are extremely rare, and given there is no evidence to indicate that eagle collisions occur to such an extent that they could affect regional population levels, it is reasonable to predict that collision risk mortality rates would be considerably lower than those estimates from CRM analysis.

9.14.17 The Proposed Development will only result in the habitat loss and displacement of a small proportion of a golden eagle range. All other wind farm developments (considered for in combination impacts) reported modest displacement of golden eagles, with none reporting the complete displacement (or 'loss') of an eagle pair.

9.14.18 In terms of collision risk and disturbance/displacement (indirect habitat loss), no significant impacts are predicted based on the results of the GET model, desk study, field surveys and considering documented disturbance limits for the species.

9.14.19 Based on the results of this assessment with regards to in combination impacts from the Proposed Development on the golden eagle population associated with the Glen Affric to Strathconon SPA, **no LSEs** are anticipated.

9.14.20

Ben Wyvis SPA

9.14.21 The SPA supports an average of 20 breeding dotterel pairs (taken from SPA citation dated 1998, as reported in NatureScot's Sitelink, 2025), although it is considered likely that this population has reduced,

given the documented contracted range and notable decline in number of the species across Scotland including in the Highlands (Hayhow *et al.*, 2015). Note, climatic change (and implications of this, on for example, prey for dotterel) is considered a likely major factor for this decline, especially in more recent years surveyed (between 1999 and 2011).

9.14.22 The baseline data gathering did not record any evidence of dotterel in the study areas. The species was not recorded during two years of survey, nor did the desk study return any contemporary records since 2010. Only two historic records were returned from 1998 and 1999 of breeding dotterel greater than 2 km from the site boundary, from within the Ben Wyvis SPA boundary.

9.14.23 Dotterel typically breed in high altitude sites (over 900 m a.s.l) where they breed on scree slopes, boulder fields and corries, where they nest hidden in rock cavities and between rocks (Rare Breeding Birds Panel, 2023). The site is considerably lower than 900 m, with the highest area in the extreme north-east of the site (763 m a.s.l), but with most of the site (and all turbines) located at less than 500 m a.s.l. As well as the site being at a considerably lower altitude than the breeding sites which dotterel use, the site also does not contain suitable nest sites, like scree and boulder fields. The site is therefore not considered suitable for supporting breeding dotterel.

9.14.24 The field surveys did not identify any dotterel activity through the site (dotterel was a target species during VP flight activity surveys and MBBS, and anecdotal records would also have been made during all other surveys), and the historic desk study information suggests any breeding dotterel are confined to the highest peaks (> 900 m a.s.l) within the Ben Wyvis SPA. The SPA is over 2.3 km from the site boundary and extends further north-east away from the site into more remote, higher altitude, upland habitat, which is considered more suitable than the site for supporting dotterel. These higher altitude areas (within and adjoining the SPA) are also considered the likely movement routes for any migrating and traversing dotterel, given the SPA is known to a 'staging-post' for dotterel moving to other parts of Britain and northern Europe (taken from the SPA citation, dated 1998, and as reported in NatureScot Sitelink, 2025).

9.14.25 As such, in terms of mortality risks, displacement (and habitat loss) as a result of the Proposed Development on dotterel of the Ben Wyvis SPA, **no LSEs** are anticipated.

In Combination Impacts

9.14.26 For dotterel, no evidence of the species was recorded (relevant to the site) during baseline data gathering, with no impacts anticipated.

9.14.27 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.

9.14.28 Based on the results of this assessment the Proposed Development will not contribute to any in combination **LSEs** with regards to dotterel of the Ben Wyvis SPA.

Cromarty Firth SPA and Ramsar site

9.14.29 Potential for effects on the Cromarty Firth SPA and Ramsar site are screened out for most qualifying features principally due to the higher spatial separation of the Proposed Development from the SPA/Ramsar site compared to the foraging distances for the species where documented (from SNH, 2016a) and unsuitability of habitats on-site for the SPA/Ramsar site qualifying species. Further details are provided in **Table 9.7**. The exception is non-breeding greylag goose.

9.14.30 The Cromarty Firth SPA and Ramsar site is 10.82 km from the site boundary and has non-breeding greylag goose as a qualifying interest. The SPA supports 1,782 non-breeding greylag geese (based on the SPA citation from NatureScot's Sitelink, 2025). The site is distanced from the SPA and Ramsar site, within the core foraging range (out to 15-20 km, from SNH, 2016a) for greylag goose.

9.14.31 However, as stated in the guidance (SNH, 2016a) the distribution of feeding geese from Mitchell (2012) enables identification of areas where impacts on geese may be of concern, or conversely where areas (although within 20 km of a goose SPA) have no connectivity with the qualifying interests. The known greylag goose feeding distributions from Mitchell (2012) reveal that the site (and adjacent habitats) does not constitute important feeding grounds for greylag goose from the SPA and Ramsar site, with SPA/ Ramsar site geese typically foraging in areas adjacent to the SPA and Ramsar site boundary, and/or within 10 km of the coast. The site also does not provide suitable foraging or roosting habitat for migratory geese.

9.14.32 During the baseline data gathering only very low greylag goose activity was recorded (across the two years of survey), comprising of two 'at collision risk' flights in Year 1 (total of 17 geese) and one such flight in Year 2 (two geese). These flights were recorded in November 2019, April 2020 and October 2020. One of the flights with the greatest number of geese (15 birds in November 2019) comprised of a direct flight at the highest height band (180 + m). Note, flights within this height band were treated as 'at collision risk' as a precaution given some of the turbines have tip heights of up to 200 m. The reality is flights recorded solely at 180 + m, particularly with regards to migrating / traversing migratory geese (not associated with habitats on-site, or close to the site) are likely to have been considerably higher than 'at collision risk'. No CRM analysis was carried out on greylag goose, given the very limited number of 'at collision risk' flights

recorded. The maximum number of geese passing through 'at collision risk' (at the highest height band, 180 + m) was 15 birds, which is <1 % of the SPA population. Accordingly, collision risk for the species is considered to be negligible and inconsequential in terms of the SPA population.

9.14.33 As such, in terms of mortality risks, displacement (and habitat loss) as a result of the Proposed Development on non-breeding greylag goose of the Cromarty Firth SPA and Ramsar site, **no LSEs** are anticipated.

In Combination Impacts

9.14.34 For non-breeding greylag goose, there was only very limited activity associated with the site, with collision risk considered inconsequential.

9.14.35 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 considering documented disturbance limits, and based on the known foraging range of the species.

9.14.36 Based on the results of this assessment with regards to in combination impacts from the Proposed Development on the non-breeding greylag goose population associated with the Cromarty Firth SPA and Ramsar site, **no LSEs** are anticipated.

9.14.37

Inner Moray Firth SPA and Ramsar site

9.14.38 Potential for effects on the Inner Moray Firth SPA and Ramsar site are screened out for most qualifying features principally due to the higher spatial separation of the Proposed Development from the SPA/Ramsar site compared to the foraging distances for the species where documented (from SNH, 2016a), and the unsuitability of habitats on-site for the SPA/Ramsar site qualifying species. Further details are provided in **Table 9.7**. The exception is non-breeding greylag goose.

9.14.39 The Inner Moray Firth SPA and Ramsar site is 16.58 km from the site boundary and has non-breeding greylag goose as a qualifying interest. The SPA supports 2,651 non-breeding greylag geese (based on the SPA citation from NatureScot's Sitelink, 2025). The site is distanced from the SPA and Ramsar site, within the core foraging range (out to 15-20 km, from SNH, 2016a) for greylag goose.

9.14.40 However, as stated in the guidance (SNH, 2016a) the distribution of feeding geese from Mitchell (2012) enables identification of areas where impacts on geese may be of concern, or conversely where areas (although within 20 km of a goose SPA) have no connectivity with the qualifying interests. The known greylag goose feeding distributions from Mitchell (2012) reveal that the site (and adjacent habitats) does not constitute important feeding grounds for greylag goose from the SPA and Ramsar site, with SPA/ Ramsar site geese having a restricted range, typically foraging in areas adjacent to the SPA and Ramsar site boundary, and/or within 10 km of the coast. The site also does not provide suitable foraging or roosting habitat for migratory geese. Note, the results from Mitchell (2012) provides evidence that there is a high degree of overlap between the foraging areas for geese from the Inner Moray SPA and Ramsar site, and the Cromarty Firth SPA and Ramsar site.

9.14.41 During the baseline data gathering only very low greylag goose activity was recorded (across the two years of survey), comprising of two 'at collision risk' flights in Year 1 (total of 17 geese) and one such flight in Year 2 (two geese). These flights were recorded in November 2019, April 2020 and October 2020. One of the flights with the greatest number of geese (15 birds in November 2019) comprised of a direct flight at the highest height band (180 + m). Note, flights within this height band were treated as 'at collision risk' as a precaution given some of the turbines have tip heights of up to 200 m. The reality is flights recorded solely at 180 + m, particularly with regards to migrating / traversing migratory geese (not associated with habitats on-site, or close to the site) are likely to have been considerably higher than 'at collision risk'. No CRM analysis was carried out on greylag goose, given the very limited number of 'at collision risk' flights recorded. The maximum number of geese passing through 'at collision risk' (at the highest height band, 180 + m) was 15 birds, which is <1 % of the SPA population. Accordingly, collision risk for the species is considered to be negligible and inconsequential in terms of the SPA population.

9.14.42 As such, in terms of mortality risks, displacement (and habitat loss) as a result of the Proposed Development on non-breeding greylag goose of the Inner Moray Firth SPA and Ramsar site, **no LSEs** are anticipated.

In Combination Impacts

9.14.43 For non-breeding greylag goose, there was only very limited activity associated with the site, with collision risk considered inconsequential.

9.14.44 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 considering documented disturbance limits, and based on known foraging ranges of the species.

9.14.45 Based on the results of this assessment with regards to in combination impacts from the Proposed Development on the non-breeding greylag goose population associated with the Inner Moray Firth SPA and Ramsar site, **no LSEs** are anticipated.

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