VOLUME 2 – CHAPTER 11: ORNITHOLOGY

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11. ORNITHOLOGY

11.1 Introduction

11.1.1 This chapter considers the potential effects of the Proposed Development on ornithology. The assessment constitutes an Ornithological Impact Assessment (OIA) and includes potential effects on ornithological species associated with designated sites, and other relevant protected ornithological species.

11.1.2 The chapter objectives with regard to the Proposed Development are as follows:

- Describe the ornithological baseline (including desk-based studies and field surveys);
- Describe how consultation has informed the scope of the assessment;
- Describe the assessment methodology and significance criteria used in assessing effects on ornithological features;
- Describe the mitigation measures proposed to address potential significant effects (if required); and

11.1.3 Assess the residual effects remaining following implementation of mitigation.

11.1.4 This chapter presents ornithological information relevant to the Proposed Development. This chapter should be read in conjunction with **Chapter 3: Description of the Proposed Development (Volume 2)** of the EIA Report for full details of the Proposed Development.

11.1.5 This chapter should also be read alongside **Chapter 10: Ecology and Biodiversity** of the EIA report which assesses likely significance in relation to non-ornithological ecological features.

11.1.6 This chapter is supported by **Figure 11.1: Designated Ornithological Sites** in **Volume 3**, which is referenced throughout the text and listed below with associated figures included within the technical appendix introduced in Paragraph 11.1.6:

- **Figure 11.1: Designated Ornithological Sites**;

11.1.7 The following appendices are also referred to throughout the chapter:

- **Appendix 11.1: Ornithology Survey Report**:
- **Figure 11.2.1: Ornithology Survey Areas**;
- **Appendix 11.2: Ornithology Confidential Appendix**
- **Figure 11.2.2: Goshawk nest sites (CONFIDENTIAL)** in Confidential Annex

11.1.8 The ornithology assessment was undertaken by LUC. This EcIA was prepared and overseen by experienced ornithological consultants with appropriate memberships of the Chartered Institute of Ecology and Environmental Management (CIEEM), and experience of EcIA in the context of wind farm, grid and mixed-use developments. Field surveys and data collection were undertaken by ornithologists who had extensive experience and training in undertaking ornithological surveys for grid and renewable energy projects. Further details can be found in **Chapter 2: The EIA Report.**

11.1.9 The following terminology will be referred to throughout this chapter:

- Site: all land within the planning application (red line) boundary (**Figure 1.1: Site Location**);
- Proposed Development: The infrastructure including the platform, bays, control buildings, access tracks, drainage and landscape features and temporary construction compounds (see Section 3.3 in **Chapter 3: Description of the Proposed Development**);
- Breeding Bird Survey Area (BBS area): The Site plus a 250 m buffer boundary;
- Study Area: The area within which ornithology desk-based studies were undertaken (up to 20 km from the Site, as shown in **Figure 11.1: Designated Ornithological Sites**) and
- Zone of Influence (ZOI): Area associated with development where potential for likely significant effects (including disturbance)

11.2 Scope of the Assessment

Effects Assessed in Full

11.2.1 This assessment presents the likely effects of construction and operation of the Proposed Development upon those ornithological receptors as identified in the EIA Scoping Report (**Appendix 6.1: Scoping Report**) and informed by review of desk-based information and field surveys, project design and embedded and applied mitigation.

11.2.2 The EIA Scoping process, baseline conditions and professional judgement have identified the following effects for detailed assessment:

11.2.3 Direct effects during construction upon Schedule 1/Annex 1 bird species through habitat loss and fragmentation, and disturbance during breeding and roosting due to construction activities via lighting, noise, pollution or visual disturbance (refer **Appendix 11.1 Ornithology Survey Report, Appendix 11.2 Ornithology Confidential Appendix** and **Section 11.4: Baseline Conditions**);

- Direct effects during construction on Red-listed species of Birds of Conservation Concern (BoCC) through habitat loss and fragmentation, and disturbance during breeding and roosting due to construction activities via lighting, noise, pollution or visual disturbance; and
- Cumulative effects during operation and construction on sensitive ornithological receptors.

Effects Scoped Out

11.2.4 Based on the desk based and field survey work undertaken, professional judgement of the EIA team (**Chapter 2: The EIA Report**), experience from other relevant projects and policy guidance or standards, and feedback received from consultees, the following effects have been 'scoped out' of detailed assessment, as proposed in the EIA Scoping Report, and subsequently confirmed by NatureScot and also as defined following appropriate survey that has been undertaken (refer to Section 11.4: Baseline Conditions):

- Direct and indirect effects during construction and operation on designated sites and their qualifying features (refer **Appendix 11.1: Ornithology Survey Report**);
- Direct and indirect effects during operation on designated sites and their qualifying features (refer **Appendix 11.1: Ornithology Survey Report**), Schedule 1/Annex 1 bird species and Red-listed species of Red-listed species of BoCC through lighting, noise, pollution or visual disturbance during breeding and roosting (refer **Appendix 11.1 Ornithology Survey Report and Section 11.4: Baseline Conditions**).

11.2.5 It is important to note, however, that whilst effects are scoped out because there is no potential for a significant effect in EIA terms, the need to ensure compliance with nature conservation legislation still applies. The presence and potential presence of all species within the Site will require consideration within the Ecological Management Plan, to be prepared by the Principal Contract pursuant to the terms of contract and to discharge planning conditions, which will include adherence to SSEN Transmission's Bird Species Protection Plan (BSPP[1]), and appropriate measures that may be necessary to ensure legislative compliance.

Study Area

11.2.6 The Study Areas adopted in the assessment and reported in this chapter vary by desk and field survey, and by ornithological feature, as defined by best practice (detailed in **Appendix 11.1: Ornithology Survey Report**). The Study Area is defined as an area of search of up 20 km radius centred on the Site and within which ornithology desk-based studies have been undertaken (**Table 11.1: Study Area Descriptions: Desk-Based Studies**).

11.2.7 The BBS Area is defined as the Site plus a 250 m buffer boundary as shown on **Figure 11.2.1: Breeding Bird survey results**.

[1] SSEN Transmission (2023) Bird Species Protection Plan

Table 11.1: Study Area Descriptions: Desk-Based Studies

Ornithological Feature	Designation Type	Buffer from the Site
Statutory Designated Sites [and their ornithological qualifying features]:	• SPAs; and • Ramsar Sites	20 km
	• Sites of Special Scientific Interest (SSSI).	2 km
Non-Statutory Designated Sites	• RSPB Reserves	5 km
Existing records of Schedule 1 species	• All Schedule 1 species' records from the preceding 10 years.	2 km
Breeding birds	• All BoCC Red and Amber-listed species	2 km

11.2.8 Breeding bird surveys were undertaken within the Site, plus an area of 250 m around the Site where access was granted.

11.2.9 Winter/roosting bird surveys as well as surveys for Schedule 1 raptors were undertaken within the Proposed Development red-line boundary (RLB), plus a buffer up to 1 km where access was granted.

11.2.10 Ornithological surveys were undertaken in line with good practice guidelines for all ornithological features surveyed

11.3 Assessment Methodology

Legislation, Policy and Guidance

Legislation

11.3.1 Relevant legislation and guidance documents have been reviewed and taken into account as part of this ornithology assessment. Of particular relevance are:

- The European Council Directive on the Conservation of Wild Birds 2009/147/EC (the Birds Directive);
- The Wildlife and Countryside Act 1981 (WCA) (as amended));
- The Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland); ('The Habitats Regulations'); and
- The Nature Conservation (Scotland) Act 2004 (as amended).
- Key elements of relevant legislation are detailed within Appendix 11.1 Ornithology Survey Report.

Policy

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

- National Planning Framework 4 (Policy 4, 2023)[2];
- Aberdeenshire Local Development Plan[3];
- PAN 60: Planning for Natural Heritage (Scottish Government 2000)[4]; and
- Nature Conservation: Implementation in Scotland of the Habitats and Birds Directives: Scottish Executive Circular 6/1995 as amended (June 2000)[5]; and
- The Scottish Biodiversity List (SBL)[6]; and
- with reference to the North-East Scotland Biodiversity partnership Local Biodiversity Action Plan[7].

[2] Scottish Government (2023) National Planning Framework 4. Available online: https://www.gov.scot/publications/national-planning-framework-4/

[3] Aberdeenshire Council (2023) Aberdeenshire Local Development Plan. Available online: https://www.a https://www.aberdeenshire.gov.uk/planning/plans-and-policies/ldp-2023

[4] Scottish Government (2000) Planning Advice Note 60: natural heritage. Available online https://www.gov.scot/publications/pan-60-natural-heritage/

5 Scottish Government (2000) Nature Conservation: Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild flora and Fauna and the Conservation of wild Birds (The Habitats Directives)

6 UK Government (2017) The Conservation of Habitats and Species Regulations 2017. Available online: https://www.legislation.gov.uk/uksi/2017/1012/contents

[7] Available online: https://www.nesbiodiversity.org.uk/biodiversity-information-for-developers/important-local-species/

Guidance

11.3.3 This assessment is informed by the principles contained within the following documents:

- NatureScot Guidance: Environmental Impact Assessment Handbook (2018[8]);
- NatureScot Guidance: Assessing connectivity with SPAs (SNH, 2016[9]);
- NatureScot SiteLink web pages (online information on designated sites[10]);
- SSEN Transmission specific documentation Bird Species Protection Plan[11]; and
- Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine 4th edition, CIEEM (CIEEM, 2022[12]).

11.3.4 Further guidance in relation to survey methods and the interpretation of ornithological and ecological data is referenced in **Appendix 11.1: Ornithology Survey Report**, where appropriate.

Consultation

11.3.5 In undertaking the assessment, consideration has been given to the consultation responses which has been undertaken as detailed in **Table 11.2: Summary of Consultation**.

Table 11.2: Summary of Consultation

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Nature Scot 30th May 2023	Pre-application consultation of methodological approach	Protected Areas: NatureScot response in reference to the search for the 'Fiddes' sub-station site. Connectivity with SPAs designated for their bird interests of which Fowlsheugh is within potential connectivity distance with the Proposed Development (**Table 11.7: Statutory Designated Sites Associated with the Proposed Development**)	Level and type of survey agreed with NatureScot to fulfil requirement for HRA assessment
Aberdeenshire Council 24 May 2024	Pre-Application Consultation	Schedule 1 Birds In relation to the potential presence of goshawk (Accipiter gentilis) in the vicinity of theproposed development site, the EIA should include a full assessment on the impact of the development on goshawk in the Natural Heritage Zone (NHZ). Our website has guidance on dealing with environmentally sensitive bird information in EIAs and presenting this in confidential annexes. As goshawk are a Schedule 1 species, they are protected from disturbance during the breeding season. If surveys find active	The assessment considers the likely significant effects upon ornithology, specifically goshawk within NHZ 12 North-East glens regional population (See **Appendix 6.2: Scoping Report**).

8 NatureScot (2018) Environmental Impact Assessment Handbook- Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact assessment process in Scotland. SNH. Battleby

9 NatureScot (2016) Available online https://www.nature.scot/doc/assessing-connectivity-special-protection-areas

10 NatureScot. Planning and Development: Standing Advice and Guidance Documents. Available online: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-standing-advice-and-guidance-documents

11 SSEN Transmission (2023) Bird Species Protection Plan – TG-NET-ENV-505

12 CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.2. Available online: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.2-April-22-Compressed.pdf

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		goshawk nests within 500m of the development, then work within this area may be restricted until after the breeding season (March – mid August).	
Community feedback (ref LT486.PAC2 Consultation)	Feedback from consultation process	Reference to the damage to wildlife (including ornithology) and flora on the proposed site, access roads and surrounding area is likely to be significant in such a rural area and is only now being explored despite plans being advanced.	Assessment made with respect to habitat change with consideration to potential suitable mitigation.

Desk Based Research and Data Sources

11.3.6 A desk study was undertaken to identify known ecological features within the relevant Study Areas as described in **Table 11.1: Study Area Descriptions: Desk-Based Studies** Searches were made for those species and Designated sites agreed through consultation.

11.3.7 The following data sources have informed the assessment:

- The NatureScot SiteLink website[13] (https://sitelink.nature.scot/home) to identify designated nature conservation sites that may have connectivity to the Site (up to 20 km for sites of international importance and where the qualifying feature(s) core range extends to this distance and 2 km for sites of national importance; refer **Table 11.1: Study Area Descriptions: Desk-Based Studies**);
- National Biodiversity Network (NBN; https://data.nbn.org.uk/[14]);
- RSPB - bird records within 2 km of the Proposed Development included Schedule 1 and Annex 1 bird species together with breeding waders and forest grouse;
- Forestry Land Scotland (FLS) provided information on nesting Schedule 1 species at Fetteresso Forest;
- Data on Schedule 1 and Annex 1 raptors was requested from the local Raptor Study Group; and
- British Trust for Ornithology - BTO publication[15], together with the associated publicly available dataset, showing the 'sensitivity' of 1 km squares of wader habitat was used to determine potential breeding wader receptors. Also, publicly available Wetland Bird Survey (WeBS) data[16].

11.3.8 Other published and unpublished literature was consulted, including EIARs of wind-farms and OHLs, to assist in the interpretation and determination of species behaviour and population sizes. These resources are referenced in the chapter where used.

11.3.9 Further information relating to the desk study method is provided in **Appendix 11.1 Ornithology Survey Report**.

Field Survey

11.3.10 The following field surveys were carried out to inform the assessment:

- Schedule 1 breeding raptor surveys (two visits in April 2024);
- Breeding bird surveys (two visits in April and May 2024); and
- Schedule 1 roost surveys (visits from January to March 2023 inclusive).

[13] NatureScot (2024) Online: https://sitelink.nature.scot/home

[14] NBN Atlas (2023). Available [online]: https://scotland.nbnatlas.org/

[15] O'Connell, P., Wilson, M., Wetherhill, A., and Calladine, J. (2021) Sensitivity mapping for breeding waders in Britain: towards producing zonal maps to guide wader conservation, forest expansion and other land-use changes. Report with specific data for Northumberland and north-east Cumbria. BTO Research Report, 740, BTO, Thetford, UK.

[16] https://www.bto.org/our-science/projects/wetland-bird-survey/data

11.3.11 Ornithology field surveys were undertaken in appropriate weather conditions. Detail of survey methodology and results are provided in **Appendix 11.1 Ornithology Survey Report**.

Assessing Significance

11.3.12 The methodology is in line with impact assessment procedures detailed by CIEEM (2018) and NatureScot (SNH, 2018) and takes account of Scottish Government guidance on the implementation of the Birds and Habitats Directives.

11.3.13 Effects are assessed with reference to the baseline ornithological community at the Site, assuming key populations making up the bird community are not significantly adversely affected by any existing influences on distribution, abundance and flight behaviour.

11.3.14 The assessment considers whether the construction and operation of the Proposed Development may lead to any of the effects identified in Effects Scoped into Assessment. In summary, effects on bird populations can arise from:

- Direct habitat loss;
- Habitat modification; and
- Indirect habitat loss, arising from disturbance and displacement.

11.3.15 An effect is defined as a change in a bird population arising from the Proposed Development and the assessment considers the direction of change (beneficial or adverse), its magnitude in terms of spatial and temporal influences, and the likelihood of this effect occurring. The significance of identified effects is assessed by considering three factors:

- The Nature Conservation Importance (NCI) of the affected species;
- The magnitude of the likely effect; and
- The likely outcome of the effect on the conservation status of the species' population.

Criteria for Assessing Sensitivity of Receptors

11.3.16 The NCI of bird species (ornithological receptors) considers the sensitivity of bird populations with reference to their legal status and known recent trends in number, distribution and threat status. NCI is defined according to the definitions set out in **Table 11.3: Nature Conservation Importance (Sensitivity) of bird receptors**.

Table 11.3: Nature Conservation Importance (Sensitivity) of Bird Receptors

NCI Sensitivity	Definition
High	Species listed in Annex 1 of the EU birds Directive. Breeding species listed on Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended)
Moderate	Species on the Red List of BoCC Regularly occurring migratory species, which are either rare or vulnerable, or warrant special consideration on account of the proximity of migration routes, or breeding, moulting, wintering or staging areas in relation to the Proposed Development. Species present in regionally important numbers (>1 % regional population).
Low	All other species not covered above

Criteria for Assessing Magnitude of Change

11.3.17 The magnitude of change has been assessed following consideration of the spatial and temporal elements of the resulting changes. There are five levels of spatial magnitude (**Table 11.4: Spatial Magnitude of Effect**) and four levels of temporal magnitude (**Table 11.5: Temporal Magnitude of Effect**).

11.3.18 Magnitude will consider the likely susceptibility of populations to an effect, taking account of how a species' ecology may influence the response of the population, including their ranging behaviour, seasonality in occurrence or behaviour, reliance on specific habitats, behavioural sensitivity to disturbance effects at different times of the year, and their ability to recover from adverse effects, e.g. by birds being recruited from elsewhere.

11.3.19 Where such information exists from monitoring studies or other research, data on the responses of individual birds and bird populations to sub-station developments and other similar developments are considered.

11.3.20 The predicted magnitude of an effect can be influenced by when it occurs. For example, operations undertaken in daylight hours may have little temporal overlap with the occupancy of birds' night-time roosts; and seasonality in a bird population's sensitivity or occupancy of a site may mean that effects are unlikely during certain periods of the year.

Table 11.4: Spatial Magnitude of Effect

Magnitude	Definition
Very high	Total/near total loss of a bird population due to mortality or displacement. Total/near total loss of productivity in a bird population due to disturbance. Guide: >80 % of regional population affected.
High	Major reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Guide: 21-80 % of regional population affected.
Moderate	Partial reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Guide: 6-20 % of regional population affected.
Low	Small but discernible reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Guide: 1-5 % of the regional population affected.
Negligible	Very slight reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Reduction barely discernible, approximating to the "no change" situation. Guide: <1 % of regional population affected.

Table 11.5: Temporal Magnitude of Effect

Magnitude	Definition
Permanent	Effects continuing indefinitely, extending beyond the average span of a human generation (approximately 25-30 years). If there is a high certainty of substantial improvement after this period, for example following project decommissioning or the establishment of high-value habitat, effects could be classified as long-term.
Long-term	Approximately 15-30 years.
Medium-term	Approximately 5-15 years.
Short-term	Up to approximately 5 years.
Negligible	Less than 1 year.

11.3.21 Where the available data allows, the conservation status of each potentially affected species population is considered at the appropriate spatial scale. NatureScot advise that effects on a species' national conservation status are considered, by formulating a judgement on how predicted effects on regional populations may influence a species' conservation status at the national level (SNH 2018). For this assessment, conservation status is taken to mean the sum of the influences acting on a population which may affect its long-term distribution and abundance. Conservation status is considered to be favourable where:

- A species appears to be maintaining itself on a long-term basis as a viable component of its habitats;
- The natural range of the species is not being reduced, nor is likely to be reduced for the foreseeable future; and
- There is (and will probably continue to be) sufficient habitat to maintain the species population on a long-term basis.

11.3.22 Effects that will adversely affect the favourable conservation status of a species or prevent its recovery to favourable conservation status in Scotland, will be judged as of concern.

Criteria for Assessing Significance

11.3.23 Where potential effects relate to bird populations that constitute all or part of the qualifying interest of an existing (or proposed) internationally or nationally designated site (i.e. a SPA, Ramsar site or Site of Special Scientific Interest (SSSI)), then effects are judged against whether the Proposed Development could significantly affect the site population

or its distribution. Where bird populations do not form part of the qualifying interest of a designated site, effects are evaluated in relation to 'wider countryside' populations at a regional scale, assuming that robust information exists or can be derived on population size, range and distribution at this scale. For this assessment, 'wider countryside' populations of potentially affected breeding bird species are spatially defined by the North-East Glens Natural Heritage Zone (NHZ 12) as defined by NatureScot (SNH 2002)[17]. For wintering and migratory populations (non-breeding), national populations form the appropriate spatial unit.

11.3.24 Following the classification of each species' NCI and consideration of the magnitude of each effect, professional judgement is used to make a reasoned assessment of the likely effect on the conservation status of each potentially affected species within the region.

11.3.25 Each likely effect is evaluated and classified as either Significant or Not Significant. The significance levels of effect on bird populations are described in **Table 11.6: Significance Criteria.** Detectable changes, i.e. those of 'Major' or 'Moderate' significance, in the conservation status of regional populations of NCI are considered to be significant effects for the purposes of this EIA. Non-significant effects are those which are likely to result in barely detectable (Minor) or non-detectable (Negligible) changes in the conservation status of regional (and therefore national) bird populations.

Table 11.6: Significance Criteria

Significance of effect	Description
Major	A detectable change to regional populations of High or Moderate NCI, resulting in total population loss or severe impacts to their conservation status.
Moderate	A detectable change to regional populations of High or Moderate NCI, resulting in population losses that are likely to impact their conservation status.
Minor	Small or barely detectable changes to regional populations of High or Moderate NCI, that are unlikely to impact their conservation status.
Negligible	No or barely discernible changes to regional populations of High or Moderate NCI, with no impact on their conservation status.

Habitats Regulations Appraisal (HRA) Screening

11.3.26 The potential for functional connectivity between the Proposed Development and the SPAs in **Table 11.7 Statutory Designated Sites Associated with the Proposed Development** is present. As such, the relevant steps of the Habitats Regulations need to be adhered to.

11.3.27 The method for assessing the significance of a likely effect on an SPA is different from that employed for wider-countryside ornithological interests. The Habitats Directive is transposed into domestic legislation by the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland). Regulation 48 includes a number of stages to be taken by the competent authority before granting consent (these are referred to here as a Habitats Regulations Appraisal (HRA).

11.3.28 The proposed development has been identified as not having a likely significant effect i.e. assessment beyond Stage 3 is not required, with the qualifying feature within potential connectivity, herring gull, scoped out of this assessment due to the habitats presented at the Site. As such, there is no requirement for the competent authority to conduct an Appropriate Assessment.

11.4 Assessment Assumptions and Limitations

Assessment Assumptions

11.4.1 The following assumption has been made when undertaking the assessment of effects:

- Construction will coincide with both the breeding bird season(s) and non-breeding season(s).

[17] SNH (2002) Natural Heritage Zones: A national assessment of Scotland's landscapes. Battleby, SNH

Assessment Limitations

11.4.2 No access was granted to the site from the 20th June until 15th September 2024. As such, a planned third site visit in late June was not carried out. Given that NatureScot does not consider survey of woodland passerines, especially in commercial conifer forest, as required for commercial developments (e.g. wind farms), this is not considered as a limitation to survey assessment.

11.4.3 From 16th May 2024, FLS requested that no access be granted to an area near to a potential Schedule 1 species. The species is included in Appendix 11.2 Ornithology Confidential Appendix. Given that the presence of a requested survey buffer is consistent with breeding, this does not affect the assessment and is not a limitation to conclusions drawn.

11.4.4 Information gaps have been identified; however, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on ornithology. Where information is not available due to the access issues identified above, the 'worst-case' scenario is assumed

11.5 Baseline Conditions

Designated Sites

11.5.1 The statutory designated sites that coincide with or where their designated features show connectivity, e.g. where core ranges of the qualifying species coincide with the Proposed Development, are set out in **Table 11.7: Statutory Designated Sites Associated with the Proposed Development** and shown in **Figure 11.1: Ornithological Designated Sites**.

Table 11.7: Statutory Designated Sites Associated with the Proposed Development

Site Name	Qualifying Features	Distance from Proposed substation at its closest	Connectivity with Proposed Development
Fowlsheugh SPA and SSSI	SPA: Supporting in excess of 20,000 individual seabirds: migratory species common guillemot (*Uria aalge*), black-legged kittiwake (*Rissa tridactylis*) and breeding razorbill (*Alca torda*), northern fulmar (*Fulmaris glacialis*) and herring gull (*Larus argentatus*). SSSI/Ramsar: Additionally – breeding bird assemblage.	7.8 km east of the Proposed Development	Potential connectivity with qualifying species due to distance from Proposed Development (gull mean foraging to 10.5 km from their breeding sites). However, Site habitat of plantation woodland unsuitable for foraging herring gull.

11.5.2 Fowlsheugh is also a RSPB Nature Reserve and incorporates the inland portion of the Fowlsheugh SPA (ref. **Table 11.7: Statutory Designated Sites Associated with the Proposed Development**). The RSPB reserve does, however, lie out with the 5km buffer for non-statutory sites.

11.5.3 There are no non-statutory designations, e.g. nature reserves, for ornithological interest with potential connectivity to the Site.

Herring Gull (SPA qualifying species)

11.5.4 Herring gull (Red-listed on BoCC; classed as Moderate NCI) may range on average 10.5 km from breeding sites with some foraging flights potentially to greater distances[18]. The Site itself and the surrounding area is largely plantation forestry, unsuitable for foraging gull species

11.5.5 Herring gull (Fowlsheugh SPA qualifying species) was not recorded during the winter surveys 2023/2024. In addition, further visits in April and May 2024 did not record the species using the BBS area for foraging (given habitat of plantation woodland unsuitable for foraging birds this is as expected).

[18] Thaxter, C. B. et al. (2019) Avian vulnerability to wind farm collision through the year: Insights from lesser black-backed gulls (*Larus fuscus*) tracked from multiple breeding colonies. Journal of Applied Ecology, 56(11), p.2410-2422.

11.5.6 Given the distance from the SPA and unsuitable habitat present within the Site, herring gull and other SPA species are not assessed further with regards to the impacts of the Proposed Development.

Schedule 1 Raptors

11.5.7 No records of Schedule 1 species were present within the RSPB desk record data set for the study area.

11.5.8 Raptor Study Group data was requested but has not been received at the time of completion of this ornithological assessment.

Red Kite Milvus milvus

11.5.9 Breeding bird surveys did not record breeding red kite (Schedule 1/1A, High NCI) within 250 m of the Site with no birds recorded within 1 km of the Proposed Development across the course of all breeding season surveys.

11.5.10 Non-breeding roost surveys carried out from 17th January 2024 to 3rd April 2024 inclusive, did not record any red kite activity within 2 km of the Proposed Development as using the area for roosting/breeding.

11.5.11 The survey results indicate that there is no prospect of a significant effect on the regional red kite population and the species is not considered further here.

Goshawk (Accipiter gentilis)

11.5.12 Breeding goshawks were recorded within the survey area, with nesting pairs present (further information in Appendix 11.2 Ornithology Confidential Appendix**)**. Goshawk is a Schedule 1, BoCC Green list species. The Scottish population of goshawk is estimated at 283 pairs as of 2021[19] with the regional NHZ 12 North East glens regional population given as 25 pairs[20] (as estimated in 2015 and considered a very conservative estimate based on the population at the time of c. 130 pairs since when the Scottish population has increased).

11.5.13 FLS records report that there was one pair of nesting goshawk in 2024 within the survey area, with recent records of up to a further two pairs nesting within the survey area considered likely; suggesting that up to 12% of the regional NHZ 12 population is present within the survey area (this is, however, likely to be an over-estimate of the NHZ 12 population given that the national population is considered significantly higher in 2024 than in the 2015 estimate – essentially double the population estimate). The survey area population is considered as being of regional importance.

11.5.14 Goshawks are vulnerable to disturbance during the breeding season. In addition, clearance of woodland as part of the Proposed Development could mean the clearance of potential areas suitable for nesting birds which in turn would mean that the (NHZ 12) population of the species has the potential to be significantly impacted by the Proposed Development. As such, the species is considered further within this impact assessment.

Other Raptors

11.5.15 Sparrowhawk (Accipiter nisus) and Buzzard (Buteo buteo) were recorded during the winter roosting bird survey's watches. NBN records also report the species as present within 2 km of the Proposed Development. Both are likely to breed within Fetteresso forest, however there was no indication of either species breeding within the BBS survey area.

11.5.16 Approximately 30,500 breeding pairs of sparrowhawk are present in the UK[21]. Sparrowhawk is predominantly a woodland specialist, favouring denser stands of conifers which offer protection from predation by such species as goshawk.

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

[20] Wilson, M.W., Austin, G.E., Gillings, S. and Wernham, C. V. (2015) Natural Heritage Zone bird Population Estimates. SWBSG Commissioned report SWBSG_1504.pp72

[21] Woodward, I., Aebischer, N., Burnell, D., Eaton, M., Frost, T., Hall, C., Stroud, D.A. & Noble, D. (2020). Population estimates of birds in Great Britain and the United Kingdom. British Birds 113: 69–104.

11.5.17 The common buzzard population has increased considerably in the last 30 years, with up to 20,000 pairs now present in Scotland, and it is considered as the most common Scottish raptor. North-east Scotland is an area of high abundance of the species[22].

11.5.18 Given the national populations of sparrowhawk and buzzard, it is considered that the Proposed Development would have no significant effect on sparrowhawk or buzzard, with implementation of the BSPP protecting active nest site. As such, these species are not considered further in this assessment.

Waders

11.5.19 No records of breeding waders were present within the RSPB desk record data set for the study area.

11.5.20 Oystercatcher (*Haematopus ostralegus)* was recorded breeding over 1.5 km of the Proposed Development during survey visits in 2023 carried out for the Kintore to Tealing 400kV OHL (Associated SSEN Transmission Development) (refer **Kintore to Tealing 400kV OHL Scoping Report**). No breeding waders were recorded in the BBS survey area in 2024.

11.5.21 The footprint of the Site coincides with BTO wader sensitivity ratings of 2 (from a scale of 1 to 5, with 1 being lowest) for lapwing (*Vanellus vanellus)* and for oystercatcher suggesting that the habitats within the survey area have the possibility to support nesting of these species, although the local area is defined as sub-optimal. Given that the Site is presently dominated by commercial forestry, these species would be restricted, if present, to areas of open heath and grassland.

11.5.22 Since there is no prosect of significant effects on any regional wader population, waders are not considered further.

Breeding Birds (BoCC)

11.5.23 BoCC Red and Amber-list species were noted from the NBN data search as being present within 2 km of the Site (refer **Appendix 11.1 Ornithology Survey Report** for NBN records and territories from survey). NBN data search recorded a range of species including BoCC Amber-listed species such as song thrush *Turdus philomelos*, mistle thrush *Turdus viscivorus*, willow warbler *Phylloscopus trochilus* and bullfinch *Pyrrhula pyrrhula* (as well as a range of species associated with largely plantation woodland e.g. coal tit *Peripatus ater* and siskin *Spinus spinus*. With no identified likely significant effect on the regional population of these species, the passerine breeding bird assemblage is not considered further.

11.5.24 Schedule 1 species Crossbill (*Loxia curvirostra*) (BoCC Green-list) was recorded within the forestry associated with the Site during the breeding bird surveys (**Appendix 11.1 Ornithology Survey Report**). Nesting was not confirmed; however, it is considered likely that birds were breeding within the associated conifer plantations. In addition, NBN desk records are present within the BBS survey area.

11.5.25 Crossbill associate with coniferous woodland and take advantage of the food sources presented within them. The species favours the seeds of pine (Pinus spp.), spruce (Picea spp.) and larch (Larix spp.) as well as the young shoots of such plants. Nesting can occur across the year, with the birds timing nesting to take advantage of ripe crops. An estimated 5,000 – 50,000 birds are present in Scotland[23] with the population subject to significant change between years depending on the available food both in the local and wider area. Birds arrive in Scotland from Europe when food is short on the mainland with these birds potentially staying in the UK to boost the local population.

11.5.26 The increase in human activity during construction, and the associated disturbance is unlikely to be of high impact for crossbill: during operation of the Proposed Development impacts are likely to be very limited; however, habitat loss associated with construction will include the removal of breeding habitat for the species. As such, it is likely that construction may have long-term effects. As a worst-case scenario, 117 ha of plantation forestry, which represents breeding and foraging habitat for crossbill, would be lost ((although only a part of this area would likely be suitable

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

[23] Summers, R. and Buckland, S. (2010) A first survey of the global population size and distribution of the Scottish crossbill Loxia scotica. Bird Conservation Intl 20, 186-198

nesting habitat) which would be considered as having negligible effect on the species' population given the extent of suitable habitat available, the fluidity of breeding areas used together with a population that is linked to a wider European area. The implementation of the embedded mitigation, together with foraging and breeding opportunities continuing to be available at distances beyond the influence of construction activities, would mean that the species is scoped out from further assessment.

Future Baseline in the Absence of the Proposed Development

11.5.27 Ornithological features are rarely static in their extent, distribution and condition. Habitats and their associated species' populations are dynamic and so the prediction of future baseline is complex.

11.5.28 The land within the Site is currently a commercially managed coniferous forestry. Felling plans provided by Forestry Land Scotland (FLS) with a variety of felling, restocking and no management regimes across the Site suggesting that while the exact locations, age structures and species mixes within the Site may change over time, this area would remain a commercially managed coniferous forest in the absence of the Proposed Development.

11.5.29 The constituent habitats and species present within the Study Area and their current range and distribution are likely to stay broadly similar to the existing baseline.

Implications of Climate Change for Baseline Conditions

11.5.30 Extreme weather events and changes in average temperature and precipitation can affect bird habitats and the phenology, survival and productivity of animals, including the timing of bird nesting, roosting and migration during the operational phase of the Proposed Development.

11.5.31 The UK Climate Change Projections 2018 (UKCP18) predicts changes in key climate characteristics on the east coast of Scotland up to the 2070s, In summary, the projections suggest that by the 2070s temperatures are likely to be elevated compared to the current baseline (especially in the summer) with winter rainfall increased, summer rainfall decreased, and an increase of winter storms expected. The predicted effects of climate change have the potential to affect the future ornithological community in the vicinity of the Site.

11.5.32 Aberdeenshire Council Local Climate Impact Profiles (LCLIP) 2019 – 2022[24] highlights the region's vulnerability to severe weather events and the potential impacts on its infrastructure, based on the UK Climate Projections 2018 (UKCP18)[25]. It notes that the most frequently experienced severe weather in Aberdeenshire were frost/snow and ice, followed by excessive rainfall (with associated flooding), which have the potential to cause "*damage to infrastructure*". Damage to transport and infrastructure, which includes flood damage to roads, rail and bridges, and power and communication outages, was listed as one of the frequent impacts to services.

11.5.33 Qualitative predictions of avian population change in the UK in relation to climate change have been attempted[26]. Thus, the predicted temperature and precipitation changes across the East and North-east of Scotland may result in changes to bird distribution and bird behaviour in the longer-term, however there is uncertainty as to the direction of change. Nevertheless, the baseline bird community as described, is considered to provide a valid description of the ornithological assemblage over the lifespan of the Proposed Development[27].

11.5.34 Considering that habitats within the Site are predominantly intensively managed coniferous woodland plantations, it is considered unlikely that the ornithological features described would utilise this Site to a greater extent in the future as a result of climate change.

[24] Aberdeenshire Council (2024) Local Climate Impact Profile (LCLIP) 2019 – 2022. Available online: https://aberdeenshirestorage.blob.core.windows.net/acblobstorage/4209a2d3-9811-419f-a171-5614962cce76/lclip-2019---2022.pdf
[25] Met Office *(2018) UK Climate Projections (UKCP). Available online: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index..
[26] Brides, K., K.A. Wood, S.N.V. Auhage, A. Sigfússon & C. Mitchell. 2021. Status and distribution of Icelandic-breeding geese: results of the 2020 international census. Wildfowl & Wetlands Trust Report, Slimbridge. 19pp.
[27] Burton, N.H.K., Daunt, F., Kober, K., Humphreys, E.M. and Frost, T.M. (2023) Impacts of Climate Change on Seabirds and Waterbirds in the UK and Ireland. MCCIP Science Review 2023, 26pp.

11.5.35 As such, in-combination climate change effects are scoped out of the assessment since there is no prospect of these resulting in significant effects on ornithological receptors.

11.6 Mitigation and Monitoring

11.6.1 There are no significant impacts predicted with respect to the qualifying species of Designated sites that show potential connectivity with the Proposed Development. However, although no mitigation measures are proposed with respect to reducing the predicted (non-significant) impacts on these species, the application of the Applied Mitigation described below is considered good environmental management practice.

11.6.2 Schedule 1 species crossbill and goshawk were recorded as breeding either within the Site or within potential species-specific disturbance distance of works related to construction and/or operation of the Site. The application of the Applied mitigation measures described below is considered both good environmental management practice and necessary to ensure compliance with the WCA.

Embedded Mitigation

11.6.3 Topic-specific embedded mitigation (mitigation achieved through design) is outlined below (refer to **Chapter 5: EIA Process and Methodology** for a description of what constitutes embedded mitigation).

11.6.4 O1: Ornithological mitigation will take advantage of screening bunds around the substation platform which are developed as part of habitat creation proposals. In conjunction with ecology, the areas will be used to include areas of native deciduous tree planting, areas of scrub, and grassland planting, together with the creation of wet grassland habitats (see **Figure 3.3: Landscape Design**).

Applied Mitigation

11.6.5 The WCA requires that birds are fully protected in Scotland, and that any planned activity, which may affect them or their nesting sites, requires careful consideration to ensure compliance. The Applicant is committed to the implementation of Applied Mitigation, summarised in **Table 11.8: Applied Mitigation**, which comprise of the Applicant's General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs) to the extent to which they are relevant. These plans will be secured as conditions of the Principal Contract between the Applicant and the Principal Contractor. Further, the Principal Contractor would be required to prepare additional plans, as a requirement of the Principal Contract which will include an Ecological and Ornithological Management Plan. In addition to delivering this Applied Mitigation through contract, the Applicant expects that such mitigation will also be secured by Aberdeenshire Council through planning conditions.

Table 11.8: Applied Mitigation

Mitigation Measure	Project Stage/Timing	Responsibility
O2: Implementation of SSEN Transmission "Bird Species Protection Plan" Adherence to the BSPP will be employed to ensure careful timing of construction activities near to sensitive locations to avoid effects on all breeding birds. Appropriate species-specific working buffers would be employed to assure that minimal disturbance is achieved. Implementation of the BSPP would be overseen by a suitably experienced Environmental Clerk of Works (ECoW) with further detail on the definition of this role and implementation as part of an outline Construction Environment Management Plan (see O3 below).	Prior to and during construction	Principal Contractor
O3: Preparation and implementation of CEMP which will incorporate an Ecological and Ornithological Management Plan pursuant to the contractual requirements of the Principal Contractor.	Prior to and during construction	Principal Contractor
O4: The Applicant will implement on-site and off-site Biodiversity Net Gain (BNG) measures, as defined in the BNG Report included with the planning application. BNG measures will deliver no less than a 10% net gain in biodiversity units which will include measures designed to provide habitat for ornithological species.	Prior to operation	Applicant

Further Survey Requirements and Monitoring

11.6.6 The BSPP will require pre-commencement surveys to determine nesting sites of all breeding birds within the ZOI of Proposed Development works. The ZOI will differ according to species' disturbance sensitivities as such a series of distance buffers from construction works, with specific methods dependent on target species, affected habitat and the likely stage of the breeding cycle will be employed. Of importance is the requirement to consider breeding goshawk. The disturbance distance for goshawk during the breeding season is between 300 m and 500 m[28]. A 300 m buffer around an active goshawk nest would likely be considered sufficient (with appropriate monitoring), given the current levels of disturbance within the Site boundary in relation to commercial forestry operations. Further goshawk surveys would be required to ensure there are no attempts at nest occupation within 300m of the Site during the period March to August. Liaison with FLS who monitor breeding goshawk in Fetteresso forest is recommended.

11.6.7 Nest monitoring will be required for nests discovered during pre-commencement surveys and at other subsequent times throughout the duration of construction works, within the species-dependent ZOI of the works.

Enhancement

11.6.8 Enhancement will be delivered through BNG (O4).

11.7 Assessment of Likely Residual Significant Effects – Construction

11.7.1 The assessment of effects identified above is based on the project description as detailed in **Chapter 3: Description of the Proposed Development** and the embedded and applied mitigation measures described in **Section 11.5: Mitigation and Monitoring**. Unless otherwise stated, potential effects identified are considered to be adverse.

Predicted Construction Effects

11.7.2 The construction phase of the Proposed Development will lead to increased levels of noise and visual disturbance due to the presence of vehicles, site machinery and site personnel. Activities associated with construction will include earthworks to form the substation platform, access track construction, the formation of landscape and drainage structures, the creation of hard-standing and substation construction together with cabling and tie-in works.

11.7.3 Disturbance can lead to indirect habitat loss, as it has the potential to displace birds from key foraging habitats or important sites like nesting or roosting areas. As such, it is likely that some breeding bird territories of Moderate and High sensitivity species, defined below, will be lost during the construction phase of the Proposed Development due to habitat loss, an effect that will be permanent in temporal magnitude. In addition, increased levels of human activity would also be expected to lead to disturbance of species using the Site. The predicted construction effects on the Schedule 1 species goshawk are described below. Schedule 1 species crossbill having been scoped out of the assessment given population and the extent of suitable habitat available.

Goshawk

11.7.4 Goshawks are considered to show a level of 'medium sensitivity to disturbance distance[29] with the sensitivity especially noticeable during the breeding season when nest building and during the early stages of incubation. Thus, there is potential for breeding birds to be disturbed during construction activities of the Proposed Development.

11.7.5 Traditional nesting sites are located within 100m of the Site. The distance of the successful 2024 nest site from the Site means there is a potential disturbance risk at this location, over a period of four years during the construction phase, due to vehicle movements, which will taper off in the fourth year; and construction of the substation, including associated felling (disturbance distances of 300-500 m are suggested for goshawk at the nesting site. The proximity of the nesting areas to the Site indicates that there is a risk of abandonment as a result of the construction works, including felling required to accommodate the substation ; however, it is considered overly precautionary to assume that this would result in the loss of breeding pair(s) from the regional population given the potential for alternative nesting areas

[28] NatureScot (2024b) Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance. Accessed at: https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance on 10.07.2024
[29] NatureScot (2022) Guidance note: Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance, Battleby

to be used and new ones established in the wider area, with goshawk known to move up to 2.5 km to another nest site should disturbance occur.

11.7.6 Goshawks can become conditioned to some types of regular disturbance, such as road traffic, if the disturbance is present from the start of nesting. There is reference to successful breeding attempts in close proximity (80 m and 170 m) to the main access track for the existing Mid Hill Wind Farms in 2015 and 2018[30]. Further, a nesting goshawk pair with chicks did not respond to logging trucks which were recorded passing within 80m of the nest site[31]. Therefore, goshawks can be relatively tolerant of human activities depending upon the situation, and although the Proposed Development is relatively isolated, it has been subject to disturbance including forestry activities and activity in relation to the existing substation site, while supporting successful nesting goshawks. The BSPP will include measures to avoid disturbance to any active nest site.

11.7.7 Goshawk need access to the nest to be sufficiently open below the tree canopy to allow entrance/egress. Plantation blocks of conifers become more favourable when trees are c. 40-60 years of age and at the end of the commercial cycle, and/or when thinning or windthrow has occurred, to provide enough space between trees. Fetteresso Forest is made of predominantly Sitka spruce (*Picea* spp.) stands of different ages with topographical variety and habitat richness that attract goshawk and allows it to breed in relatively high numbers (over 10% of the Scottish population are present within the NHZ 12 region). It is considered that a significant measurable effect on the regional population is unlikely with multiple alternative forestry blocks outside the Proposed Development that would ensure continuity of goshawk nesting habitat within Fetteresso Forest and the connected area. Also, nesting and foraging habitat within commercial conifer plantations is subject to constant change due to the nature of rotational harvesting.

11.7.8 Foraging by goshawks in the breeding and non-breeding seasons may be affected by construction activities, with birds potentially limiting foraging activity in areas in close proximity to construction work. In addition, prey densities may be reduced near to construction work resulting in lower hunting efficiency; both factors leading to short-term adverse effects on productivity and survival. Foraging goshawks could be displaced from habitat in the vicinity of construction activities and, in theory this could lower foraging efficiency, leading to short-term adverse effects on breeding productivity or survival; however, goshawk hunting ranges are relatively large, extending to forested and open ground habitats several kilometres from nesting areas (core foraging range is given as 3 km[32], but may extend to 10 km from the nest), and overlapping with neighbouring goshawks, so large parts of their foraging range will be unaffected by construction work at any one time. Fetteresso Forest offers some good breeding and hunting habitat for goshawk, with plentiful mature forest stands available for nesting. In addition, the loss of plantation forestry at 117 ha is unlikely to significantly impact prey availability, with the opening of the site for rides/tracks potentially increasing the foraging opportunities for the species. It is therefore considered that there would be no significant effect on the conservation status of goshawk in terms of habitat loss or displacement caused by construction of the proposed development on foraging birds.

11.7.9 Details of mitigation measures to prevent or minimise any disturbance to breeding goshawks will be included in the BSPP. These will include pre-construction nest monitoring for breeding activity with the implementation of an appropriate buffer around active nests, together with monitoring for disturbance events during the nesting period. Construction works necessary within the buffer will be delayed until the nest is confirmed as being inactive. The embedded mitigation measures will be sufficient to prevent disturbance to breeding goshawks.

11.7.10 In summary, with nesting goshawks safeguarded through the BSPP and foraging opportunities for goshawks continuing to be available at distances beyond the influence of construction activities, the overall effect of construction activities on goshawk is deemed to be **minor negative magnitude** and **not significant** at the regional NHZ 12 level**.**

[30] As per Fred Olsen Renewables Fetteresso Wind Farm EIA report 2019 (Chapter 7: Ornithology – online: Fetteresso

[31] Goodship, N.M. and Furness, R.W. 2022. Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. A report from MacArthur Green to NatureScot.

[32] SNH (2016) Assessing connectivity with Special Protection Areas. SNH/NatureScot. Battleby

Summary of Predicted Construction Effects

11.7.11 The effect of the Proposed Development on the breeding bird assemblage recorded, both during field surveys and following desk studies, including breeding Schedule 1 species of High sensitivity are likely of minor impact magnitude and it is considered that disturbance impacts and habitat loss would not significantly affect the conservation status of these species in the longer-term.

11.7.12 As such, the impact of construction is not likely to be significant with regards to the regional population of the species. Moreover, the implementation of the BSPP (O3, **Table 11.8: Applied Mitigation**), the general level of protection afforded to wild birds, the timing of works, and the appropriate action required in compliance with legislation with respect breeding birds are stated in **Appendix 11.1 Ornithology Survey Report** and prescribed in the SSEN Transmission BSPP.

Additional Mitigation

11.7.13 Since no significant effects arising from the Proposed Development have been predicted, no additional mitigation measures are proposed.

Residual Construction Effects

11.7.14 Since no significant effects arising from the Proposed Development have been predicted during construction, residual construction effects are predicted as being Negligible and not significant for all bird species.

11.8 Assessment of Residual Significant Effects – Operation

Predicted Operational Effects

Goshawk

11.8.1 Disturbance/displacement effects arising from substation operation are likely to be significantly reduced compared to the construction effects described above. Human activity will largely be confined to the substation site itself with forestry tracks used for access/egress by vehicle. As such disturbance will be minimal with birds also likely to habituate to such activity; goshawk are already known to breed in Fetteresso forest with territories overlapping existing track and substation. No additional habitat loss/felling is predicted following the construction of the Proposed Development.

11.8.2 As such, it is considered that operational effects of the proposed Fetteresso development will be of **negligible magnitude** across the long-term and **not significant** at the regional NHZ 12 level.

11.8.3 Since no significant effects arising from operation of the Proposed Development have been predicted, no mitigation measures are proposed during the operational phase.

Additional Mitigation

11.8.4 No additional mitigation is proposed since no significant effects arising from operation of the Proposed Development are predicted.

Residual Operational Effects

11.8.5 Since no mitigation is proposed the residual operational effects are the same and are predicted as being Negligible and not significant for all bird species.

11.9 Assessment of Residual Significant Effects – Decommissioning

11.9.1 Functional habitat developed across the Proposed Development's lifetime as part of any habitat management plan should be maintained to provide continuation of a stable nesting/foraging resource; damage from the decommissioning stage should be kept to a minimum. Decommissioning will also be associated with increased human presence on site, leading to potential disturbance to breeding birds. As such implementation of the BSPP would be required to ensure compliance with legislation, however while decommissioning effects are not assessed further, it is unlikely that the significance of effects experienced at that time will be greater than those assessed for the construction phase.

11.10 Assessment of Residual Cumulative Effects

Introduction

11.10.1 Predicted adverse effects on ornithology arising from the construction and operation of the Proposed Development have the potential to contribute to cumulative effects upon wider regional populations, in this case populations within NHZ 12. The EIA Regulations require that these 'in-isolation' effects be considered alongside predicted effects from other plans or projects. NatureScot guidance (SNH 2018b) on assessing cumulative effects has been followed, which recommends using an additive approach to predicting and assessing effects arising from disturbance/displacement, collision risk and barrier effects where present.

11.10.2 **Table 11.9: Cumulative Assessment: Associated SSEN Transmission Developments** provides a cumulative assessment of the Proposed Development with the Associated SSEN Transmission Developments defined in **Chapter 1: Introduction** and detailed in **Appendix 5.1: Cumulative Developments**.

11.10.3 **Table 11.10: Cumulative Assessment: Other Projects** provides a cumulative assessment of the Proposed Development with other reasonably foreseeable SSEN Transmission and 3rd party developments detailed in **Appendix 5.1: Cumulative Developments**.

Table 11.9: Cumulative Assessment: Associated SSEN Transmission Development[33] [34]

	Construction		Operation	
Project	**Disturbance/displacement effects upon qualifying features of the SPAs**	**Disturbance and displacement effects** on Schedule 1 raptors	**Collision risk** and disturbance and displacement associated with qualifying features of the SPAs	**Collision risk and disturbance and displacement effects on Schedule 1 raptors**
Kintore to Tealing 400 kV OHL	The Proposed Development is not predicted to have a significant effect given that these qualifying species were not identified using the Site during surveys and therefore there are no associated disturbance/displacement effects predicted (insert ref).	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). The extent of the Kintore to Tealing 400kV OHL, is limited within the NHZ 12 North-east glens region with construction impacts likely to be short-term and of low/moderate negative magnitude and with no prospect of significant additional impact. There is therefore no likely significant cumulative effect predicted during construction.	The Proposed Development does not in and of itself create a collision risk as it includes no overhead structures with which birds might collide. Accordingly, it does not represent a source of cumulative collision risk or cumulative risk to the SPA as a result of mortality of qualifying species.	For the same reason, the Proposed Development does not present a collision risk to Schedule 1 raptors. Given the very low level of activity associated with operations and maintenance, the Proposed Development does not in and of itself represent a source disturbance/displacement impact. Accordingly, it does not represent a source of cumulative impact when considered in combination with the Kintore to Tealing 400kV OHL.
Summary	The Proposed Development is not predicted to give rise to significant cumulative effects when combined with relevant Associated Kintore to Tealing 400kV OHL Transmission Projects during its construction phase due to the limited presence of the qualifying and/or protected species within the Site and wider Study Area with minimal effects predicted on the regional Schedule 1 goshawk population.		The Proposed Development is not predicted to give rise to significant cumulative effects during its operational phase when combined with relevant Associated SSEN Transmission Developments. The Proposed Development is not a source of collision risk. Given the absence of significant effects on breeding bird populations from the Proposed Development, no significant cumulative effects are likely.	

[33] As defined in **Chapter 1: Introduction**

[34] The proposed Emmock Substation is remote from the Proposed Development and is not considered here.

Table 11.10: Cumulative Assessment: Other SSEN Transmission Developments

	Construction		Operation	
Project	**Disturbance/displacement effects upon qualifying features of the SPAs**	**Disturbance and displacement effects on Schedule 1 raptors**	**Collision risk** and disturbance and displacement associated with qualifying features of the SPAs	**Collision risk and disturbance and displacement effects on Schedule 1 raptors**
Fetteresso 400 kV substation extension	The additional land take and disturbance/displacement associated with the construction of the Fetteresso 400 kV substation extension does not introduce a significant additional loss of habitat or increased disturbance/displacement for SPA species and therefore there is no predicted to have a significant cumulative effect [No SPA species recorded during 2024 surveys]	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the development at Fetteresso substation was assessed for its potential to contribute to cumulative effects. A known nesting site of goshawk is present within the survey area for Fettereso substation; this was not used in 2024 and is also present within the survey area for the Proposed Development. Since no significant effect is predicted for the Proposed Development and the coincident nesting site was not used there is no potential for cumulative effects.	As for construction effects assessed in the adjacent column.	As for construction effects assessed in the adjacent column.
Network Rail Drumlithie	As Fetteresso 132 kV substation extension above	As Fetteresso 132 kV substation extension above	As Fetteresso 132 kV substation extension above	As Fetteresso 132 kV substation extension above
Fiddes 132 kV replacement	As Kintore to Tealing 400 kV OHL above	As Kintore to Tealing 400 kV OHL above	As Kintore to Tealing 400 kV OHL above	As Kintore to Tealing 400 kV OHL above
SSEN Transmission Offshore Grids Project	As Kintore to Tealing 400 kV OHL above	A As Kintore to Tealing 400 kV OHL above	As Kintore to Tealing 400 kV OHL above	As Kintore to Tealing 400 kV OHL above
Glendye Wind Farm Grid Connection	As Fetteresso 132 kV substation extension above	As Fetteresso 132 kV substation extension above	As Fetteresso 132 kV substation extension above	As Fetteresso 132 kV substation extension above

	Construction	Operation
Summary	The Proposed Development is not predicted to give rise to significant cumulative effects when combined with relevant Associated SSEN Transmission Projects during its construction phase due to the limited presence of the qualifying and/or protected species within the Site and wider Study Area.	The Proposed Development is not predicted to give rise to significant cumulative effects during its operational phase, when combined with relevant Associated SSEN Transmission Developments. The Proposed Development is not a source of collision risk. Given the absence of significant effects on breeding bird populations from the Proposed Development, no significant cumulative effects are likely.

Table 11.11: Cumulative Assessment: Other Third Party Projects within NHZ 12 north-east glens

	Construction		Operation	
Project	**Disturbance/displacement effects upon qualifying features of the SPAs**	**Disturbance and displacement effects on Schedule 1 raptors**	**Collision risk and disturbance and displacement associated with qualifying features of the SPAs**	**Collision risk and disturbance and displacement effects on Schedule 1 raptors**
Bowdun Offshore Wind Farm Onshore Cable Connection – this commercial developer led project would involve the construction of a new substation/convertor station in the vicinity of the Proposed Development together with an underground cable connecting to a new landfall on the East Coast.	Given that the possible Bowdun substation/convertor station may be constructed in the vicinity of the Proposed Development and in similar habitat, impacts on qualifying features of the SPA might have been considered. However, given that no qualifying species have been identified as using the Site, the Proposed Development is not predicted to have a significant effect upon the SPA. It follows that no cumulative effects are predicted. station. Taking into account that the Proposed Development has predicted no significant effects on the SPA and qualifying species, it follows that no significant cumulative effects are likely either.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the development at Bowdun was assessed for its potential to contribute to cumulative effects. Given that the possible Bowdun substation/convertor station may be constructed in the vicinity of the Proposed Development and in similar habitat, impacts might have been considered. However, given the Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors, there is no potential for cumulative effects.	As the Proposed Development involves no infrastructure with which birds might collide, and as maintenance activities are unlikely to give rise to disturbance, no effects are predicted. It follows that no cumulative effects would be predicted, either.	As for the assessment set out adjacent.

	Construction		Operation	
Quithel BESS – battery energy storage system 50mW capacity	The proposed BESS would lie some c. 1 km to SW of Site within 10.5 km of Fowlsheugh SPA. The proposed BESS has been screened out of EIA. However, on the basis that the Proposed Development has been assessed to have no significant effect on the SPA qualifying species, it follows that no significant cumulative effects would arise.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, Quithel BESS was assessed for its potential to contribute to cumulative effects. The BESS is proposed within farmland out with Fetteresso Forest, as such no likely impact on Schedule 1 species goshawk (or crossbill) predicted in construction phase, and there is no prospect of likely significant cumulative effects as a result.	As for construction effects assessed in the adjacent column.	As for construction effects assessed adjacent.
Aultmore wind farm (16 turbines; Application received)	The proposed wind farm lies beyond 10.5 km from Fowlsheugh SPA, and is therefore outwith the foraging distance of the SPA. There is no potential for cumulative effects as a result.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. The proposed Aultmore wind farm includes development within potential disturbance distance of nesting Schedule 1 raptor (goshawk). Disturbance/displacement effects during construction of the windfarm are considered as being short-term and not significant with usual mitigation in place. No sites in addition to the Aultmore Wind Farm recorded goshawk as potentially breeding within 1km. Notwithstanding, the assessment presented here demonstrates that the Proposed Development will not give rise to a significant effects on goshawk. Taking that, and the unlikely effect from the proposed wind farm, the potential for significant cumulative effect is negligible.	The proposed wind farm development lies beyond 10.5km from Fowlsheugh SPA. No consideration required for cumulative effects on SPA qualifying features.	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Baseline surveys – the cumulative total of goshawks recorded during flight activity surveys was 13 (the majority of which were during the spring (March/ April and involving single birds). All activity involved birds in flight. Only 3 birds were recorded flying through the wind farm at potential collision risk height, which produced a negligible annual collision estimate (<0.005 birds per year). The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. There is therefore no likely significant cumulative effect.

	Construction		Operation	
Cairds Hill wind farm (4 turbines; application received)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Goshawk recorded in flight activity surveys only, not breeding at Cairds Hill (from Non-technical summary). No significant effects predicted due to construction displacement/disturbance impacts. There is therefore no potential for cumulative effects.	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Schedule 1 species goshawk recorded in flight activity surveys only. Non-technical summary points to no predicted effects due to collision with turbines. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. There is therefore no likely significant cumulative operational effect.
Cairnborrow wind farm (5 turbines; operational)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects .	As above	As for construction effects assessed in the adjacent column.
Clashindarroch wind farm (18 turbines; operational)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Schedule 1 goshawk recorded during flight activity surveys. There was also one	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Schedule 1 goshawk recorded during flight activity surveys. The survey data led to

	Construction		Operation	
		confirmed nest and a probable nest within the survey area. (conclusions as per Aultmore). No significant cumulative impacts are predicted.		predicted collision rates ranging from one goshawk every six years (95 % avoidance) to one every 32 years (99 % avoidance); mean of 0.13 per annum. This collision rate would not result in a meaningful effect on the annual survival rate for the population present in the region. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact As such, no likely significant cumulative effect is predicted.
Clashindarroch – 2 wind farm (14 turbines; consented)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. One regularly used nesting area is located within 500 m of the proposed wind farm. The wider area, within c. 2 km of the proposed development, supports a population of 2-3 pairs, which is considered to be of Regional scale importance for the species. The assessment of felling / construction-related disturbance and displacement of breeding goshawk is considered to be no greater than Low in the short-term, resulting in an effect significance level of Minor which is Not Significant. No significant effect of wind farm construction predicted on Regional population.	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. The collision risk to the goshawk population is considered to be Low in the long-term, resulting in an effect significance level of Minor, which is Not Significant (0.05 birds per annum). The relatively low level of estimated level of annual collision across those wind farms considered in the cumulative assessment (of which Clashindarroch at 0.13 per annum was the only one where a potential effect was considered), in combination with the lower predicted rate for the proposed development (0.05), would not result in a meaningful effect on the annual survival rate for the population present in the region and does not warrant any change to the

	Construction		Operation	
				assessment of collision risk for goshawk for the Clashindarroch II wind farm. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. As such, no likely significant cumulative effect is predicted.
Clashindarroch - western extension (22 turbines; application received)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Flight activity recorded with 2 pairs nesting within 2 km of Site. Survey results and data obtained from Forestry Commission Scotland confirm the presence of two active territories within 2 km of the Site. Therefore, the local population is approximately 2.9 % of the monitored nests in North-East Scotland, and 1.5 % of the (2015 estimate) Scottish population. However, the Site is considered unlikely to be of value at the National Level given that it does not include suitable nesting or high-value foraging habitat for goshawk. Whilst there is potential for adverse effects on the local population of goshawk to occur because of development within the Site, the distribution of nesting and flight activity observed during survey work suggests that the risk of any effects occurring will be low. Therefore, the Site is unlikely to be of value to goshawk at any more than the Local level. Negligible construction effects only	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Collision risk model predicted 0.11 collisions per annum of Schedule 1 species goshawk. Effects of collision not predicted as significant at the regional level. The cumulative effect of collision mortality of goshawk is unlikely to be significant beyond the Local level. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. As such, no likely significant cumulative effect is predicted.

	Construction		Operation	
		predicted and as such, no likely significant cumulative effect.		
Coreen Hills wind farm (14 turbines; design/scoping stage)	As above	No ES/EIA	As above	No ES/EIA
Cormaud wind farm (14 turbines; design/scoping stage)	As above	No ES/EIA	As above	No ES/EIA
Craigneil wind farm (Craigneil Hill) (7 turbines; design/scoping)	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, Craigneil wind farm was assessed for its potential to contribute to cumulative effects. No breeding sites of Schedule 1 goshawk recorded and disturbance/displacement effects considered to be not significant and , no likely significant cumulative effect.	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Limited flight activity of Schedule 1 species goshawk recorded - collision effect considered negligible and not significant. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. No likely significant cumulative effect of operational effect predicted.
Craig watch wind farm (11 turbines; application received)	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. One goshawk breeding territory was recorded during the 2019 surveys, which	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Flight activity recorded - collision effect considered not significant (fewer than 0.5

	Construction		Operation	
		represents >1% of both published regional NHZ population estimate (4% for NHZ12). Disturbance/displacement effects considered to be not significant (minor adverse). No likely significant cumulative effect of construction is predicted.		goshawk/year; minor adverse). Cumulative collision risk estimates for goshawk are calculated at 0.194 – 0.95 birds per year, which represents up to 1.9% of the respective most recent breeding population estimate of NHZ12 (50 adults), and up to a 10.6% increase in annual baseline mortality of the NHZ12 breeding estimates. Overall cumulative collision mortality risks to goshawk are therefore considered to represent no more than a long-term, Low/ Medium magnitude of impact at the Regional NHZ population. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. No likely significant cumulative effect of operational effect is predicted.
Dorenell wind farm (59 turbines; operational)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects	As above	As for construction effects assessed in the adjacent column.
Dorenell – extension (98 turbines; design/scoping)	As above	No information available	As above	No information available
Drumderg wind farm (16	As above	No information available	As above	No information available

	Construction		Operation	
turbines; operational)				
Edintore wind farm (6 turbines; operational)	As above	No information available	As above	No information available
Fetteresso wind farm (10 turbines; consented)	Wind farm development predicted to have no effect on the SPA population due to disturbance/displacement effects [no SPA qualifying species recorded as using the site for foraging]. There is therefore no likely significant cumulative effect.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Up to 5 territories of goshawk were located - impacts during construction predicted to be short-term of low/moderate negative magnitude and not significant. It is considered that a measurable effect on the local or regional population of goshawk is unlikely. Alternative stands of forestry outside the proposed Wind Farm development will ensure continuity of goshawk nesting habitat across Fetteresso Forest. No sites assessed (wind farms within 25 km of the Fetteresso wind farm) in addition to the proposed development recorded goshawk as potentially breeding within 1 km. As such no disturbance/displacement impacts are predicted in addition to those already anticipated for the proposed Wind Farm development, and therefore no significant cumulative impacts are predicted.	The Proposed Development does not in and of itself create a collision risk for qualifying species of the SPAs considered in the assessment Wind farm development with low magnitude of predicted effect due to collision risk on herring gull. No specific mitigation measures required with no measurable effect on the local/regional population considered likely. There is therefore no potential for cumulative effects.	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Estimated collision of 1.8 birds/year representing 3.60% of the total NHZ 12 population estimate, and 0.66% of the total Scottish goshawk population. The value of 1.8 birds per annum provides the maximum cumulative estimate for this species. Following mitigation to remove mature forestry from the vicinity of turbines, this collision rate is unlikely to be realised. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. Therefore, collision mortality is not considered to be significant at a regional population level and therefore no significant cumulative impact is predicted.
Garbet wind farm (7 turbines; consented)	Wind farm development lies beyond 10.5km from Fowlsheugh SPA. No consideration required for cumulative effects on SPA qualifying features.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not	Wind farm development lies beyond 10.5km from Fowlsheugh SPA. No consideration required for cumulative effects on SPA qualifying features.	As for construction effects assessed in the adjacent column.

	Construction		Operation	
		recorded during surveys, there is therefore no potential for cumulative effects		
Glenbeg wind farm (4 turbines; design/scoping stage)	As above	No information available	As above	No information available
Glendye wind farm (26 turbines; consented)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. No breeding pairs of goshawk recorded within 2km of the site. There is therefore no likely significant cumulative effect of construction.	As above	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Goshawk flight activity recorded (6 flights only)- considered as of local value. No flights were at potential collision height and as such, operational/collision effects are considered negligible & non-significant. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment. Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. There is therefore no likely significant cumulative operational effect
Hill of Fare wind farm (16 turbines; operational)	Wind farm development predicted to have no effect on the SPA population due to disturbance/displacement effects [no SPA qualifying species recorded as using the site for foraging] . There is therefore no likely significant cumulative effect.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects	The Proposed Development does not in and of itself create a collision risk for qualifying species of the SPAs considered in the assessment. The SPA species herring gull scoped out of assessment due to low flight activity at Hill of fare. There is therefore no potential for cumulative effects	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Goshawk flight activity recorded, however CRM recorded fewer than 0.1 birds assessed as colliding per year with species scoped out of the assessment. The Proposed Development does not in and of itself create a collision risk for Schedule 1 species considered in the assessment.

	Construction		Operation	
				Accordingly, the Proposed Development does not represent a source of cumulative collision risk nor cumulative disturbance/displacement impact. Therefore, there is no potential for cumluative effects.
Hill of Towie wind farm (21 turbines; operational)	Wind farm development lies beyond 10.5km from Fowlsheugh SPA. No consideration required for cumulative effects on SPA qualifying features.	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects	Wind farm development lies beyond 10.5km from Fowlsheugh SPA. No consideration required for cumulative effects on SPA qualifying features.	Goshawk not assessed.
Hill of Towie 2 (16 turbines; consented)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects	As above	As for construction effects assessed in the adjacent column.
Hunthill wind farm (4 turbines; consented)	As above	No information available	As above	No information available
Kildrummy wind farm (8 turbines; operational)	As above .	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not	As above	As for construction effects assessed in the adjacent column..

	Construction		Operation	
		recorded during surveys, there is therefore no potential for cumulative effects		
Meikle Carewe wind farm (12 turbines; operational)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects	As above	As for construction effects assessed in the adjacent column.
Midhill wind farm Phase 1 (25 turbines; operational)	As above	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects	As above	As for construction effects assessed in the adjacent column.
Midhill wind farm Phase 2 (8 turbines; operational)	As above .	The Proposed Development at Hurlie is not predicted to have a significant effect upon Schedule 1 raptors (goshawk). Nevertheless, the named wind farm development was assessed for its potential to contribute to cumulative effects. Since Schedule 1 species goshawk was not recorded during surveys, there is therefore no potential for cumulative effects.	As above	As for construction effects assessed in the adjacent column.
Tullymurdoch wind farm (7	As above	No information available	As above	No information available

	Construction		Operation	
turbines; operational)				
Welton of creuchie wind farm (4 turbines; operational)	As above	No information available	As above	No information available
Summary	No qualifying and/or protected species and no significant populations of breeding birds of conservation interest have been identified in the Survey Areas, within which the Proposed Development and the other projects addressed here are proposed; No significant construction effects have been identified in connection with the Proposed Development and it follows that significant effects arising from the Proposed Development together with other projects in the vicinity are also unlikely, based on the information on these projects which is currently available.		Significant cumulative effects during the operation of the Proposed Development and other identified projects in the region (NHZ 12) are considered unlikely given that the Proposed Development does not in and of itself create a collision risk and that cumulative assessments carried out for regional wind farm projects do not predict significant effects.	

11.11 Summary of Significant Effects

11.11.1 **Table 11.12: Summary of Significant Effects** summarises the predicted residual effects of the Proposed Development on ornithology prior to and following the application of additional mitigation.

11.11.2 No significant effects on ornithology are predicted as a result of the Proposed Development.

Table 11.12: Summary of Significant Effects

Predicted Effects	Significance Prior to Additional Mitigation	Mitigation	Significance of Residual Effects Following Additional Mitigation
Construction			
Goshawk	Minor (not significant)	N/A	Minor (not significant)
All other receptors	Negligible	N/A	Negligible
Operation			
Goshawk	Negligible	N/A	Negligible
All other receptors	Negligible	N/A	Negligible
Cumulative	Negligible	N/A	Negligible