VOLUME 2: CHAPTER 10 - ORNITHOLOGY

Figures (Volume 3 of this EIA Report)

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10. ORNITHOLOGY

10.1 Introduction

10.1.1 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.

10.1.2 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
- assess the residual effects remaining following implementation of mitigation.

10.1.3 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.

10.1.4 This chapter should also be read alongside **Chapter 9: Ecology** of the EIA report which assesses likely significance in relation to non-ornithological ecological features.

10.1.5 This chapter is supported by **Figure 10.1: 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 10.1.6:

- **Figure 10.1: Designated Ornithological Sites;**

10.1.6 The following appendix is also referred to throughout the chapter:

- **Appendix 10.1**: **Ornithology Survey Report**.
  - **Figure 10.2.1: Breeding Bird survey results**;
  - **Figure 10.2.2: Flight Activity survey results**; and
  - **Figure 10.2.3: Wintering bird foraging results**.

10.1.7 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.**

10.1.8 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; and
- Study Area: The area within which ornithology desk-based studies were undertaken (up to 20 km from the Site, as shown in **Figure 10.1: Designated Ornithological Sites**).

10.2 Scope of the Assessment

Effects Assessed in Full

10.2.1 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.

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

- 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;
- 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

10.2.3 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 10.4: Baseline Conditions**):

- Direct and indirect effects during construction and operation on designated sites and their qualifying features (refer **Appendix 10.1: Ornithology Survey Report**);
- Direct and indirect effects during construction on Schedule 1/Annex 1 bird species through habitat loss and fragmentation, and disturbance during breeding and roosting (refer **Appendix 10.1 Ornithology Survey Report** and **Section 10.4: Baseline Conditions**); and
- Direct and indirect effects during operation on designated sites and their qualifying features (refer **Appendix 10.1: 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 10.1 Ornithology Survey Report** and **Section 10.4: Baseline Conditions**).

10.2.4 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

10.2.5 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 10.1: 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.

10.2.6 The BBS Area is defined as the Site plus a 250 m buffer boundary as shown on **Figure 10.2.1: Breeding Bird survey results**.

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

Table 10.1 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.	5 km
Breeding birds	All BoCC Red and Amber-listed species	2 km

10.2.7 Breeding bird surveys were undertaken within the Site, plus an area of 250 m around the Site where access was granted (**Figure 10.2.1: Breeding Bird survey results)**.

10.2.8 In addition, surveys of the associated Kintore to Tealing 400 kV OHL route included surveys to 2 km distant from the Ornithological surveys were undertaken in line with good practice guidelines for all ornithological features surveyed.

10.3 Assessment Methodology

Legislation, Policy and Guidance

Legislation

10.3.1 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).

10.3.2 Key elements of relevant legislation are detailed within **Appendix 10.1 Ornithology Survey Report.**

Policy

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

- National Planning Framework 4 (Policy 4, 2023)[2];
- Angus Council 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].
- The Scottish Biodiversity List (SBL)[6];
- Tayside Local Biodiversity Action Plan[7]; and

[2] Scottish Government (2023) National Planning Framework 4. Available online: https://www.gov.scot/publications/national-planning-framework-4/
[3] Angus Council (2016) Angus Local Development Plan. Available online: https://www.angus.gov.uk/directories/document_category/development_plan
[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 Tayside Biodiversity Partnership (2016) Tayside Local Biodiversity Action Plan, 2nd Edition 2016 – 2026 Incorporating the local authority areas of Angus and Perth & Kinross. Available online: https://www.angus.gov.uk/sites/default/files/Tayside%20Local%20Biodiversity%20Action%20Plan%202016_2026.pdf Accessed August 2024.

Guidance

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

- NatureScot Guidance: Environmental Impact Assessment Handbook (20188);
- NatureScot Guidance: Assessing connectivity with SPAs (SNH, 20169);
- NatureScot SiteLink web pages (online information on designated sites10);
- SSEN Transmission specific documentation Bird Species Protection Plan11; and
- Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine 4th edition, CIEEM (CIEEM, 202212).

10.3.5 Further guidance in relation to survey methods and the interpretation of ornithological and ecological data is referenced in **Appendix 10.1: Ornithology Survey Report**, where appropriate.

Consultation

In undertaking the assessment, consideration has been given to the consultation responses which has been undertaken as detailed in **Table 10.2: Summary of Consultation**.

Table 10.2: 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: Preferred sub-station sites will not impact directly on any protected areas for nature conservation. However, potential connectivity with a number of SPAs designated for their bird interests: 'Tealing 'site SPAs for greylag and pink-footed geese as well as herring gull. To inform HRA appropriate level of survey work required.	Level and type of survey agreed with NatureScot to fulfil requirement for HRA assessment (HRA screening and assessment –refer to Paragraphs 10.3.26 to 10.3.28).
Angus Council Development Standard Committee March 2024	Formal pre-application consultation	*"Ecological impact, including disturbance, displacement, habitat loss and/ or fragmentation, and opportunities for significant biodiversity enhancement"* is likely to be a main consideration in the determination of the planning application for the Proposed Development.	The assessment considers the likely significant effects upon ornithology from these elements.
NatureScot 30th April 2024	Formal pre-application consultation response sought	NatureScot responded as below: Based on the distance from the Firth of Tay and Eden Estuary SPA and lack of evidence of geese wintering in the immediate area of the sub-station we advise that there would be no likely significant effect on the SPA. This conclusion also	SPA qualifying features are considered within the context of potential impacts associated with the Proposed Development. All SPAs, the qualifying features of which show potential connectivity with the

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
		applies to the Loch of Kinnordy and Loch of Lintrathen SPAs As herring gulls will feed on arable land there is a theoretical connectivity between the proposal site and the Outer Firth of Forth and St. Andrews Bay Complex SPA. However, the permanent loss of this small area of potential foraging habitat is unlikely to be significant given the amount of arable land within foraging distance of the SPA. As such, we advise that this proposal will not have an adverse impact on site integrity for the SPA	Proposed Development have been screened out of further HRA processes given no likely significant effect/adverse impact has been identified (HRA screening and assessment – refer to Paragraphs 10.3.26to 10.3.28).
NatureScot 12th July 2024	Formal Scoping consultation	NatureScot confirmed that they were content with the scope of the surveys and assessment. Reference was also made to NatureScot's standing advice and the EIA Handbook.	N/A
Community feedback (including Tealing CC) July 2024	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

10.3.6 A desk study was undertaken to identify known ecological features within the relevant Study Areas as described in **Table 10.1: Study Area Descriptions: Desk-Based Studies** Searches were made for those species and Designated sites agreed through consultation.

10.3.7 The following data sources have informed the assessment:

- The NatureScot SiteLink website (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 10.1: Study Area Descriptions: Desk-Based Studies**);
- National Biodiversity Network (NBN; https://data.nbn.org.uk/[13]);
- 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;
- Data on Schedule 1 and Annex 1 raptors was requested from the local Raptor Study Group; and
- British Trust for Ornithology - BTO publication[14], 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[15].

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

[14] 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.

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

10.3.8 Other published and unpublished literature was consulted, to assist in the interpretation and determination of species behaviour and population sizes. These resources are referenced in the chapter where used.

10.3.9 Further information relating to the desk study method is provided in **Appendix 10.1 Ornithology Survey Report**.

Field Survey

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

- Breeding bird surveys including wading birds (three visits in May and June 2023 inclusive and three visits in April to June 2024, inclusive);
  - Schedule 1 raptors (three visits in May to July 2023 inclusive and April to June 2024 inclusive)
  - Flight Activity surveys (six visits between September 2023 to March 2024 inclusive); and
- Winter foraging bird surveys (three visits from January to March 2023 inclusive).

10.3.11 Ornithology field surveys were undertaken in appropriate weather conditions. Detail of survey methodology and results are provided in **Appendix 10.1 Ornithology Survey Report**.

Assessing Significance

10.3.12 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.

10.3.13 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.

10.3.14 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.

10.3.15 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

10.3.16 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 10.3: Nature Conservation Importance (Sensitivity) of bird receptors**.

Table 10.3: 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.

NCI Sensitivity	Definition
	Species present in regionally important numbers (>1 % regional population).
Low	All other species not covered above

Criteria for Assessing Magnitude of change

10.3.17 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 10.4: Spatial Magnitude of Effect**) and four levels of temporal magnitude (**Table 10.5: Temporal Magnitude of Effect**).

10.3.18 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.

10.3.19 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.

10.3.20 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 10.4 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 10.5 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.

10.3.21 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.

10.3.22 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

10.3.23 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 Eastern Lowlands Natural Heritage Zone (NHZ 16) as defined by NatureScot (SNH 2002)[16]. For wintering and migratory populations (non-breeding), national populations form the appropriate spatial unit.

10.3.24 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.

10.3.25 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 10.6: 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 10.6 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.

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

HRA Screening

10.3.26 The potential for functional connectivity between the Proposed Development and the SPAs in **Table 10.1 Study Area Descriptions: Desk-Based Studies** is present. As such, the relevant steps of the Habitats Regulations need to be adhered to.

10.3.27 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).

10.3.28 Following scoping consultation with NatureScot (refer **Table 10.2: Summary of Consultation**) the Proposed Development has been identified as not having a likely significant effect i.e. assessment beyond Stage 3 is not required. As such, there is no requirement for the competent authority to conduct an Appropriate Assessment.

Assessment Assumptions and Limitations

Assessment Assumptions

10.3.29 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).

Assessment Limitations

10.3.30 No access was granted to Balkemback Farm or private residential buildings to the north-east of the site or a pocket of land to the south-west, but within the survey areas. The grounds were viewed from accessible areas and given the scale of the works required for the Proposed Development, this is not considered to limit the conclusions of the assessment (refer Appendix 10.1 Ornithology Survey Report).

10.4 Baseline conditions

Designated Sites

10.4.1 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 10.7: Statutory Designated Sites Associated with the Proposed Development** and shown in **Figure 10.1: Ornithological Designated Sites**.

Table 10.7. Statutory Designated Sites Associated with the Proposed Development

Site Name	Qualifying Features	Distance from Proposed substation at its closest	Connectivity with Proposed Development
Firth of Tay and Eden Estuary Ramsar & SPA	SPA/Ramsar: Bar-tailed godwit (*Limosa lapponica*; non-breeding); common scoter (non-breeding); cormorant (*Phalacrocorax carbo*; non-breeding); dunlin (non-breeding); eider (non-breeding); goldeneye (non-breeding); goosander (non-breeding); grey plover (*Pluvialis squatarola*; non-breeding); greylag goose (non-breeding); Icelandic black-tailed godwit (*Limosa limosa islandica*; non-breeding); little tern (*Sternula albifrons*; breeding); long-tailed duck (non-breeding); marsh harrier (*Circus aeruginosa*; breeding); oystercatcher (non-breeding); pink-footed goose (non-breeding); red-breasted merganser (non-breeding); redshank (non-breeding); sanderling (*Calidris alba*; non-breeding); shelduck (non-breeding); velvet	7.5 km south of the Site	Potential connectivity with greylag and pink-footed geese as within core foraging range 20 km

Site Name	Qualifying Features	Distance from Proposed substation at its closest	Connectivity with Proposed Development
	scoter (non-breeding); waterfowl assemblage (non-breeding)		
Outer Firth of Forth and St. Andrews Bay SPA	SPA: Arctic tern (*Sterna paradisaea*; breeding); black-headed gull (*Chroicocephalus ridibundus*; non-breeding); common gull (non-breeding); common scoter (*Melanitta nigra*; non-breeding); common tern (*Sterna hirundo*; breeding); eider (non-breeding); gannet (*Morus bassanus*; breeding); goldeneye (non-breeding); guillemot (breeding & non-breeding); herring gull (breeding & non-breeding); black-legged kittiwake (breeding & non-breeding); little gull (*Hydrocoloeus minutus*; non-breeding); long-tailed duck (*Clangula hyemalis*; non-breeding); Manx shearwater (*Puffinus puffinus*; breeding); puffin (breeding); razorbill (non-breeding); red-breasted merganser (non-breeding); red-throated diver (*Gavia stellata*; non-breeding); seabird assemblage (breeding and non-breeding); shag (*Phalacrocorax aristotelis*; breeding & non-breeding); Slavonian grebe (*Podiceps auritus*; non-breeding); velvet scoter (*Melanitta fusca*; non-breeding); waterfowl assemblage (non-breeding)	7.5 km south of the Site	Potential connectivity with qualifying species due to distance from Proposed Development (gull mean foraging to 10.5 km from their breeding sites[17])
Loch of Kinnordy SPA, Ramsar and SSSI	SPA: Greylag goose (non-breeding); pink-footed goose (non-breeding) SSSI/Ramsar: additionally – breeding bird assemblage	15.8 km north-west of the Site	Potential connectivity with greylag and pink-footed geese as within core foraging range (20 km)
Loch of Lintrathen SPA, Ramsar and SSSI	SPA/Ramsar/SSSI: Greylag goose (non-breeding).	19.5 km north-west of the Site	Potential connectivity with greylag geese as within core foraging range (20 km).

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

Greylag geese (SPA qualifying species)

10.4.3 No traditional foraging sites of SPA greylag geese are present within the Proposed Development[18]. The species has been noted to have declined in the SPAs since designation, although the population has expanded across the UK, such that new areas have been colonised19. No NBN records of the species were noted within 5 km of the Site.

10.4.4 A count of 22 birds was recorded approximately 750 m to the south-west of the Site on the 20th February 2023 during winter foraging surveys. No further sightings of greylag geese and no flights of the species were recorded during flight activity surveys.

[17] Thaxter CB, Ross-Smith VH, Bouten W, et al. Avian vulnerability to wind farm collision through the year: Insights from lesser black-backed gulls (Larus fuscus) tracked from multiple breeding colonies. J Appl Ecol. 2019;56:2410–2422. https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.13488

[18] Mitchell, C. 2012. Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp

[19] https://www.bto.org/our-science/projects/wetland-bird-survey/publications/webs-annual-report/numbers-trends/methods/analysis-and-presentation/spatial-allocation/53

10.4.5 The UK greylag goose population is made up of a resident Scottish population and a migratory wintering population comprising of birds that breed in Iceland and is classed as Moderate NCI.

10.4.6 With no recorded use of the Site during baseline field surveys, there is no prospect of a significant effect on the greylag goose population and the species is not considered further in this assessment. NatureScot correspondence in April 2024 is in agreement with the conclusions of the surveys and desk records for SPA greylag geese (refer **Table 10.2: Summary of Consultation**) with no likely significant effect predicted for the Proposed Development.

Pink-footed geese (SPA qualifying species)

10.4.7 No significant traditional foraging sites of pink-footed geese are present within 10 km of the Site[20]. The population of birds that used Loch of Kinnordy SPA when it was first designated, appear to have abandoned that SPA and moved to Loch of Lintrathen, i.e. further away from Site.

10.4.8 Seven records of pink-footed geese within 5 km of the Site in the last 10 years were obtained from NBN data search. No records were present of birds within 2 km of the Site.

10.4.9 The UK pink-footed goose population is a migratory wintering population comprising birds that breed in Iceland and is classed as Moderate NCI.

10.4.10 The SPA species pink-footed goose was recorded during flight activity and foraging goose surveys. A maximum count of approximately 950 birds was recorded in close proximity to the Site on 20th February 2023, with birds foraging in fields between Fithie Burn and the Site boundary during foraging goose surveys. No further sightings of the species were recorded in February or March 2023.

10.4.11 Of the six flight activity survey visits to the survey area (ref **Appendix 10.1: Ornithology Survey Report**) only one did not record pink-footed goose flight activity within 2 km of the Vantage point. Flight activity surveys recorded a flock of 57 pink-footed geese on 27th September 2023 in flight above the Site's tie-in with the Associated SSEN Transmission Developments. Other, smaller flocks, of between one and 12 birds, were recorded across the winter of 2023/2024 with potential to interact with these Associated SSEN Transmission Developments. A further flock of 52 birds on the 27th September 2023 was recorded over the Site but the plotted flight did not interact with Associated SSEN Transmission Developments. Further, a flock of approximately 235 pink-footed geese was recorded foraging to the south of the Site and south of Fithie Burn on 19th March 2024 which was subsequently seen in flight heading north.

10.4.12 Together with desk records, these data point to the Site as being of negligible importance for the species; the nearest roost over 7.5km distant from the Proposed Development. These limited records, principally of birds in flight, with no foraging use recorded within the Site mean that the construction and operation of the Proposed Development has no potential to result in significant effects to the robust pink-footed goose population given that the Proposed Development does not pose a collision risk, and this species is not considered further in this assessment. NatureScot correspondence in April 2024 is in agreement with the conclusions of the surveys and desk records for SPA pink-footed geese (refer **Table 10.2: Summary of Consultation**) with no likely significant effect predicted for the Proposed Development.

Herring gull (SPA qualifying species)

10.4.13 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 distances21.. Only four records of the species were noted on NBN within 2 km of the Site; all records being over 10 years old.

10.4.14 Herring gull (Outer Firth of Forth and St. Andrews Bay SPA qualifying species) was recorded as using the air space only of the Site during the breeding bird surveys. Herring gull was generally recorded in low numbers (max. count 7

[20] Mitchell, C. 2012. Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp

[21] 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.

birds within the Site) during the winter surveys 2023/2024. A flock of 200 mixed gull species, including 80 herring gulls, was recorded on 19th April 2024 foraging in fields 200 m beyond the west of the Study Area, however.

10.4.15 The qualifying features of the Outer Firth of Forth and St. Andrews Bay SPA, include herring gull and other gull species which forage inland from coastal breeding sites, however larger gull species, such as herring gull, forage on average to 10.5 km from their breeding sites with most birds associated with the Outer Firth of Forth and St. Andrews Bay SPA likely nesting on cliffs in Berwickshire22.

10.4.16 NatureScot concluded no adverse impact on site integrity for the Outer Firth of Forth and St. Andrews Bay Complex SPA species foraging herring gull (**refer Table 10.2: Summary of Consultation**). As such, SPA species are not assessed further with regards to the impacts of the Proposed Development.

Whooper swan

10.4.17 Desk records of whooper swan (*Cygnus cygnus*, BoCC Amber-list, Schedule 1 species) are available of birds over 4 km from the Site boundary within the last 10 years. A single flight of three birds only was recorded over the site on 5th December 2023. The Site itself does not present likely foraging area for the species given the distance from open water and with no flooding recorded at the site that is likely to be of sufficient extent and duration to be suitable habitat for whooper swan. As such, there is no prospect of significant effects on the regional population of whooper swan and the species is not considered further.

Schedule 1 Raptors

10.4.18 No recent records of Schedule 1 species were obtained for the Study Area, although NBN desk records of wintering merlin *Falco columbarius* were noted from three locations to 5 km of the Site (latest record of which was from February 2022). The habitats found within the survey area are unlikely to provide suitable breeding sites for diurnal Schedule 1 raptors, however.

10.4.19 No Schedule 1 raptor species were recorded within the BBS across surveys; common buzzard (*Buteo buteo*) was seen, however, during a vantage point watch. The open farmland with a lack of suitable tree cover and mature trees present in the vicinity of the Site suggests that there is little opportunity for nesting Schedule 1 raptor species that could be present in the local area (e.g. red kite *Milvus milvus* and osprey *Pandion haliaetus*).

10.4.20 There is no prospect of significant effects on any regional raptor population and raptor populations are not considered further.

Curlew

10.4.21 Two desk records of curlew (*Numenius arquata*, BoCC Red-listed species, classed as Moderate NCI) are present within 2 km of the Site on NBN within the last 10 years. The Site lies within an area of land considered of low suitability for curlew, with the Site extending to an area ranked two (out of five) for breeding suitability for the species according to BTO modelling data.

10.4.22 Curlew was not recorded within the Study Area in either survey year.

10.4.23 Given the Site's low suitability for the species and lack of survey records, there is no prosect of significant effects on the regional curlew population and curlew is not considered further in this assessment.

Snipe

10.4.24 No desk records were forthcoming for snipe (*Gallinago gallinago*, BoCC Amber-list, classed as low NCI) within the Study Area from either the RSPB or NBN.

10.4.25 Snipe was recorded on one occasion only during surveys (in May '23) when a bird was flushed near a drainage channel into the Fithie Burn. No further sightings were noted, and the species was not thought to be breeding locally.

[22] The Birds of Scotland (eds Forrester R W & Andrews I J) SOC Press 2007

10.4.26 Low NCI species such as snipe are considered to be found in sufficient numbers, either regionally or nationally, such that any effects on their populations are considered negligible. As such ,there is no prospect of significant effects on the regional snipe population and snipe is not considered further in this assessment

Oystercatcher

10.4.27 Two nesting oystercatchers (*Haematopus ostralegus;* BoCC Amber listed species – low NCI) were recorded in May 2023 within the Site (refer **Appendix 10.1 Ornithology Survey Report**). No breeding was recorded in 2024, likely due to different field use/crop planting of the area. The species readily takes advantage of certain field types, including spring-sown crops, for nesting, with the local area providing significant, alternative areas of suitable habitat. The Site does consist of habitat that is classed as suitable for breeding oystercatcher, as defined by the BTO's modelling data.

10.4.28 Site use by oystercatcher (a species of Low NCI) is unlikely to have potential for significant adverse effects on the regional and/or national population of the species as a result of construction or operation of the Proposed Development. and the species is not considered further in this assessment.

Breeding birds (BoCC)

10.4.29 BoCC Red and Amber-list species were noted from the NBN data search as being present within 2 km of the Site (refer **Appendix 10.1 Ornithology Survey Report** for NBN records and territories from survey).

10.4.30 A range of species associated with the farmland habitats present (low-lying pasture and arable land with burn-side vegetation) was recorded during the breeding bird surveys of 2023 and 2024, including BoCC red-list (Moderate NCI) species such as skylark *Alauda arvensis*, tree sparrow *Passer montanus* and yellowhammer *Emberiza citrinella*. In addition, amber-listed species reed bunting *Emberiza schoeniclus*, dunnock *Prunella vulgaris* and wren *Troglodytes troglodytes* were also recorded in breeding territories (refer Appendix 10.1 Ornithology Survey Report). The territories of the Red-list BoCC species recorded within the Site are considered further within this assessment since it is considered likely that territories will be lost during the construction phase of the Proposed Development.

Future Baseline in the Absence of the Proposed Development

10.4.31 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.

10.4.32 The Site is managed farmland which, in the absence of the Proposed Development, is anticipated to remain relatively unchanged. The hedgerows could become longer and denser with a following change in species' use when managed or could be lost completely because of farm management practices.

10.4.33 Settlement is likely to continue to locally change the nature of the study area, particularly given the Site's proximity to the city of Dundee, creating pressure for new housing. A number of small settlements are located in close proximity to each other, with potential future expansion of settlements, even if small in scale, likely to increase the presence of settlement in the east of the study area. Changes in farming and land management practices, driven by policy regimes or climate change, may affect the appearance of the agricultural landscape, for example the further proliferation of polytunnels within open fields.

10.4.34 Despite this the constituent habitats and species present within the Study Area and their current range and distribution are likely to stay similar to the existing baseline.

Implications of Climate Change for Baseline Conditions

10.4.35 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.

10.4.36 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 summer and winter temperatures are likely to be elevated compared to the current baseline with winter rainfall increased and summer rainfall decreased.

The predicted effects of climate change have the potential to affect the future ornithological community in the vicinity of the Site.

10.4.37 The Angus Council Local Climate Impacts Profile, 2nd edition (LCLIP) (2012) highlights the region's vulnerability to severe weather events and the impact it has on infrastructure, based on the 2009 Met Office Climate Projections and analysis of severe weather in the council area from 2009[12]. It notes that the most frequently experienced severe weather in Angus was high winds, heavy rain, and heavy snow – all of which '*significantly affect infrastructure*'[23]. Damage to infrastructure, which includes roads, railways and communications networks, was noted as the second largest affected service. The damage includes structural and access issues as a result of fallen trees/ windblown forestry and damage to road surfaces. An updated LCLIP based on the 2018 Climate Projections has not been provided.

10.4.38 Qualitative predictions of avian population change (notably wildfowl) in the UK in relation to climate change have been attempted: the BTO in 2004 noted that '*the number of wintering …geese might be predicted to fall as (they) will have to move shorter distances south to avoid harsh winter conditions of the highest latitudes*'[24]. The UK Icelandic-breeding pink-footed goose population has, however, risen substantially in the last 20 years to over 450,000 wintering birds, driven by factors in the breeding and winter grounds, including increased productivity and food availability associated with higher temperatures[25].

10.4.39 Thus, the predicted temperature and precipitation changes across the 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, including the wintering wildfowl population, is considered to provide a valid description of the ornithological assemblage over the lifespan of the Proposed Development, with some species' groups e.g. wintering goose populations, likely to remain stable or even increase with the predicted increase in winter temperatures.

10.4.40 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.

10.5 Mitigation and Monitoring

10.5.1 There are no significant impacts predicted with respect to the qualifying species of Designated sites that show potential connectivity with the Proposed Development or any Schedule 1 species. 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.

Embedded Mitigation

10.5.2 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.

- 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 3.2: Landscape Zonal Plan**).
- O2: Sustainable drainage systems (SuDS) have been designed to allow for wet grassland habitats to be created which offer the potential for local biodiversity enhancement in the longer term which will also include opportunities for breeding birds (see **Figure 3.2: Landscape Zonal Plan**).

[23] Angus Council (2012). Angus Council Local Climate Impacts Profile. [Online] Available at: https://www.angus.gov.uk/sites/default/files/LCLIPv2_0.pdf

24 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.

[25] 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.

- O3: The retention and bolstering of existing hedgerow lines with additional planting to enhance the quality and consistency of the existing defunct hedgerows where these cannot be retained (see **Figure 3.2: Landscape Zonal Plan**).

Applied Mitigation

10.5.3 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 10.8: 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 Angus Council through planning conditions.

[26]Table 10.8: Applied Mitigation

Mitigation Measure	Project Stage/Timing	Responsibility
O4: 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 as well as foraging SPA species. 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 O5 below).	Prior to and during construction	Principal Contractor
O5: Preparation and implementation of CEMP which will incorporate an Ecological Management Plan pursuant to the contractual requirements of the Principal Contractor.	Prior to and during construction	Principal Contractor
O6: The Applicant will implement on-site and off-site BNG measures, as defined in the BNG Report (refer Paragraph 9.5.9). 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

10.5.4 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.

10.5.5 Nest monitoring will be required for nests discovered during pre-commencement surveys and also at other times, within the species-dependent ZOI of the works.

Enhancement

10.5.6 Enhancement will be delivered through the delivery of BNG (O6).

10.6 Assessment of Likely Residual Significant Effects - Construction

10.6.1 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 10.5: Mitigation and Monitoring**. Unless otherwise stated, potential effects identified are considered to be adverse.

Predicted Construction Effects

10.6.2 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. 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 Red-listed species (Moderate sensitivity species) 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 passerine breeding bird assemblage Red-list species, are described below.

Skylark

10.6.3 A total of 16 territories of skylark were estimated within the BBS, eight of which lie within the Site. A significant part of the skylark breeding habitat within the Site will be permanently lost as a result of the Proposed Development. Displacement due to disturbance may also occur, although skylark is relatively tolerant of human disturbance and do readily use open ground associated with active developments.

10.6.4 As a worst-case scenario, where all breeding territories within the Site would be considered lost completely, a long-term or permanent effect of the Proposed Development is predicted. No NHZ population number of skylark is available, however the species is widespread in Scotland with over 290,000 pairs present. As such, the loss of eight territories would be considered to have a spatial magnitude of Negligible effect, and as such considered of Negligible significance with no additional mitigation (No or barely discernible changes to regional populations of High or Moderate NCI, with no impact on their conservation status.).

Tree sparrow

10.6.5 An estimated six pairs of tree sparrow were present within the Site during 2024 breeding bird surveys (Appendix 10.1 Ornithology Survey Report). Tree sparrow regularly seek out areas near human dwellings, with large gardens and farmland a main habitat for the species. The increase in human activity during construction, and the associated disturbance is unlikely to be of high impact for the species. Habitat loss associated with construction will include the removal of breeding habitat for the species, however. As such, it is likely that construction may have long-term effects. As a worst-case scenario, up to six pairs of tree sparrow would be lost were they not to re-colonise the areas of suitable habitat planted in the landscaping of the Proposed Development. The mitigation described in **Table 10.8: Applied Mitigation** including the potential for planting and provision of nesting boxes, is intended to help reduce or eliminate this loss, however. No NHZ population is described for the species, however the east of Scotland appears to be a stronghold for tree sparrow, with the species showing a slight population increase over the last 20 years27. Between 4,600 and 8,100 pairs are estimated in Scotland. The loss of up to six pairs during and following construction, potentially negated by embedded mitigation, would be considered as being of a Negligible spatial magnitude and of Negligible significance to the species' population.

Yellowhammer

10.6.6 A maximum of four yellowhammer territories were recorded within the Site. The species appears highly linked to both arable and pasture farmland, notably where hedges and other scrub-like habitat persists28. Habitat loss, including the removal of existing hedgerows (see Paragraph 9.4.19 of Chapter 9: Ecology for a description of these hedgerows)

[27] https://www.bto.org/understanding-birds/birdfacts/tree-sparrow
[28] https://www.bto.org/understanding-birds/birdfacts/yellowhammer

during construction, as well as the increase in associated disturbance, will potentially lead to the temporary loss of breeding territories within the Site but the mitigation described in Paragraph 10.5.310.5.2 would include the establishment of habitat that would favour yellowhammer. No regional population estimates for the species are published, however, the Scottish population of over 140,000 pairs has been shown to be increasing since 1995 (in contrast to the rest of the UK and Europe). In the unlikely event that the mitigation proposed would not create new yellow hammer breeding territory, the loss of four yellowhammer pairs is considered as being of Negligible significance on the regional population of yellowhammer.

Summary of Predicted Construction Effects

10.6.7 The effect of the Proposed Development on the breeding bird assemblage recorded, both during field surveys and following desk studies, including breeding BoCC species of Moderate sensitivity are likely of negligible impact, and it is unlikely that disturbance impacts would affect the conservation status of these species in the longer-term.

10.6.8 As such, the impact of construction is likely to be of Negligible significance. Moreover, the implementation of the BSPP (O4, **Table 10.8: 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 10.1 Ornithology Survey Report** and prescribed in the SSEN Transmission BSPP.

Additional Mitigation

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

Residual Construction Effects

10.6.10 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.

10.7 Assessment of Residual Significant Effects - Operation

Predicted Operational Effects

10.7.1 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

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

Residual Operational Effects

10.7.3 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.

10.8 Assessment of Residual Significant Effects - Decommissioning

10.8.1 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.

10.9 Assessment of Residual Cumulative Effects

Introduction

10.9.1 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 16. 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 displacement, collision risk and barrier effects.

10.9.2 **Table 10.9: Cumulative Assessment: Associated SSEN Transmission Developments** provides a cumulative assessment of the Proposed Development with the Associated SSEN Transmission Developments.

Table 10.10: Cumulative Assessment: Other Projects provides a cumulative assessment of the Proposed Development with other reasonably foreseeable SSEN Transmission and 3rd party developments .

Table 10.9: Cumulative Assessment: Associated SSEN Transmission Developments[29][30]

	Construction			Operation		
Project	**Disturbance/displacement effects upon qualifying features of the SPAs**	**Disturbance and displacement effects on Schedule 1 raptors**	**Breeding birds**	**Collision risk associated with qualifying features of the SPAs**	**Collision risk and disturbance and displacement effects on Schedule 1 raptors**	**Breeding birds**
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 (refer Paragraph 10.4.3). The additional land take and disturbance/displacement associated with the construction of the Kintore to Tealing 400 kV OHL does not introduce a significant additional loss of habitat or increased disturbance/displacement and therefore there is no predicted significant cumulative effect.	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors since their presence in the survey area is limited with none recorded during surveys in 2023 and 2024 (Paragraph 10.4.20). Due to the fact that the presence of these species both within the Site and the wider Survey Area (which encompasses part of the Survey Area for the Kintore to Tealing 400kV OHL), is very limited, there is therefore no likely significant cumulative effect.	The Proposed Development will result in the loss of habitat for some breeding birds including the Red-list species skylark, tree sparrow and yellowhammer although with embedded mitigation, there is no significant effect upon the populations of these species (Paragraph 10.6.7). The likely disturbance and land take associated with the Kintore to Tealing 400 kV OHL during construction will not remove significant additional habitat and therefore there is no predicted cumulative significant effect.	The Proposed Development does not in and of itself create a collision risk for qualifying species of the SPAs considered in the assessment. 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.	The Proposed Development is not predicted to have a significant effect upon Schedule 1 raptors since their presence in the survey area is limited with none recorded during surveys in 2023 and 2024 (Paragraph 10.4.20). 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.	The loss of habitat used by breeding birds as a result of the Proposed Development is not predicted to have significant effects on breeding bird populations. The temporary loss of habitat used by breeding birds as a result of the Kintore to Tealing 400kV OHL (temporary access tracks, habitat removal during tower construction) is substantially less in duration and spatial extent within the survey area than that permanently lost to the Proposed Development. It follows that in combination, the Proposed Development and the Kintore to Tealing 400kV OHL will have

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

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

	Construction			Operation		
						no cumulative effect on breeding bird populations. (Paragraph 10.9).
Alyth to Tealing Tie-in	As Above	As Above	As Above	As Above	As Above	As Above
Westfield to Tealing Tie-in	As Above	As Above	As Above	As Above	As Above	As Above
Emmock to Tealing Tie-ins	As Above	As Above	As Above	As Above	As Above	As Above
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 10.10: Cumulative Assessment: Other Projects

	Construction			Operation		
Project	**Disturbance/displacement effects upon qualifying features of the SPAs**	**Disturbance and displacement effects on Schedule 1 raptors**	**Breeding birds**	**Collision risk associated with qualifying features of the SPAs**	**Collision risk and disturbance and displacement effects on Schedule 1 raptors**	**Breeding birds**
400kV upgrade of the existing Alyth to Tealing OHL	The Proposed Development is not predicted to have a significant effect given that no qualifying species were identified as using the Site during surveys (refer Paragraph 10.4.3) and therefore there are no associated	The Proposed Development is not predicted to have a significant effect given on Schedule 1 raptors given that these species were not identified as using the Site during surveys (Paragraph 10.4.20) and therefore there are no associated	The Proposed Development is not predicted to have a significant effect on the population of Red-listed species recorded and therefore there are no associated significant disturbance/displace	The Proposed Development does not in and of itself create a collision risk for qualifying species of the SPAs considered in the assessment During the operational phase of this inter-development, the new OHL	The Proposed Development is not predicted to have a significant effect given that these species were not identified as using the Site during surveys (Paragraph 10.4.20) and	The loss of habitat used by breeding birds as a result of the Proposed Development is not predicted to have significant effects on breeding bird populations. During the operational phase of this inter-

	Construction			Operation		
	disturbance/displacement effects predicted. This Project only involves the reconductoring so that the OHL can operate at 400 kV rather than 275 kV. All existing towers will be retained and therefore there is no greater landtake and only negligible disturbance during construction. There is therefore no likely significant cumulative effect.	disturbance/displacement effects predicted. This inter-development only involves the reconductoring so that the OHL can operate at 400 kV rather than 275 kV. All existing towers will be retained and therefore there is no greater landtake and only negligible disturbance during construction. There is therefore no likely significant cumulative effect.	ment effects predicted. This inter-development only involves the reconductoring so that the OHL can operate at 400 kV rather than 275 kV. All existing towers will be retained and therefore there is no greater landtake and only negligible disturbance during construction. There is therefore no likely significant cumulative effect.	will follow the same corridor and alignment as the existing and therefore there is no increase in the collision risk that will be experienced relative to the baseline. There is therefore no likely significant cumulative effect.	therefore there are no associated disturbance/displacement effects predicted. The Proposed Development has and makes no cumulative contribution to collision risks. During the operational phase of this inter-development, the new OHL will follow the same corridor and alignment as the existing and therefore there is no greater land take or disturbance. There is therefore no likely significant cumulative effect.	development, the new OHL will follow the same corridor and alignment as the existing and therefore there is no greater land take or disturbance. There is therefore no likely significant cumulative effect.
400 kV upgrade of the existing Tealing to Westfield OHL	As above	As above	As above	As above	As above	As above
Fithie Energy Park	The Proposed Development is not predicted to have a significant effect on qualifying species and their associated Designated Sites given that these species were not identified as using the Site during surveys (refer	As presented above, the Proposed Development is not predicted to have a significant effect on Schedule 1 raptor species; no disturbance/displacement effects predicted, therefore.	As presented, the Proposed Development is not predicted to have a significant effect on breeding birds of conservation concern, given that these	The Proposed Development does not in and of itself create a collision risk with overhead infrastructure by qualifying species of the SPAs considered in the assessment. Accordingly, it	The Proposed Development has and makes no cumulative contribution to collision risks. The Proposed Development is	As described already, neither the Proposed Development nor the Energy Park, in isolation and therefore together, is predicted to have a significant effect on populations of breeding

	Construction			Operation		
	Paragraph 10.4.3) and therefore there are no associated disturbance/displacement effects predicted. Fithie Energy Park lies immediately east of the Proposed Development Site extending to an area of some 39 ha, (https://www.onpathenergy.com/fithie-energy-park/) and is therefore entirely within the Study Area for qualifying species. Construction would take place between 2031 and 2032, and therefore after the Proposed Development has been commissioned. As no qualifying species were identified, it follows that the Fithie Energy Park is also unlikely to give rise to significant effects on qualifying species and their associated Designated Sites (at least so far as disturbance/displacement is concerned; moreover, the fact that construction activity will not overlap further reduces the possibility of cumulative effects from disturbance) (note: there is no information available on the extent or character of the Energy Park, but it is unlikely that qualifying species are using the site indicated this area in significant numbers. given their absence It follows that significant cumulative effects arising from the	From the information referenced, the Energy Park lies entirely within the Study Area adopted for Schedule 1 species. None were identified during the surveys, and it is reasonable to conclude that the Energy Park would give rise to no impacts on Schedule 1 species. It follows that cumulative effects on Schedule 1 species are unlikely.	species are not using the Site in significant numbers. The Energy Park lies entirely within the breeding birds Survey Area, and it is likely that its site will support similar species to those discussed in section 10.4 above. In relation to Red List species, 16 skylark territories were identified during the survey, 8 of which lie within the Site. Assuming the loss of all territories as a result of the Proposed Development and a further 16 territories to the Energy Park, this loss combined loss would still be negligible in the context of the number of breeding pairs across Scotland. Cumulative effects on skylark would negligible. Six pairs of tree sparrow were recorded at the Site. Assuming a similar number at the Energy Park site, the loss of 12 pairs would be negligible in the context of regional and national numbers. Four yellowhammer	does not represent a source of cumulative collision risk or cumulative risk to the SPA as a result of mortality of qualifying species	not predicted to have a significant effect upon Schedule 1 raptors since their presence in the survey area is limited as previously stated. It follows, that even when combined with the Energy Park, the absence of Schedule 1 raptors in the Study Area, which comprises both the Proposed Development and the Energy Park, is unlikely to give rise to cumulative effects. There is no detailed information available on the nature of the Energy Park or its impacts upon Schedule 1 raptors, and whilst there is the potential for this inter project to disturb and displace Schedule 1 raptors, any cumulative impact is no greater than the inter-project's	birds of conservation concern. Moreover, as the landscape design of the Proposed Development matures, new breeding territories are likely. Whether or not the Energy Park would also involve the creation of new habitat, or example, through landscaping, any cumulative effect, irrespective of how small, will reduce over time.

	Construction			Operation		
	Proposed Development in combination with the Energy Park, are unlikely.		territories were identified on the Site. Assuming 8 territories are lost as a combined result, this loss would be negligible in the wider context. It follows that cumulative effects on breeding bird species of conservation concern would be negligible.		impacts in isolation.	
Balnuith BESS	The Balnuith Battery Energy Storage Facility (https://balnuithbess.co.uk/) is proposed to occupy a small site (2.7 ha) some 200 m east of the Site and immediately south of the Fithie Energy Park, and therefore within the Study Areas reported herein. Consequently, the information used to inform the ornithological assessment of the Proposed Development would reasonably apply to the Balnuith BESS. The assessment of the cumulative effects of the Proposed Development and the Balnuith BESS is therefore the same as that described for the Fithie Energy Park. Moreover, in its consultation response to the planning application, NatureScot confirmed that 'it is unlikely that the proposal will impact on protected species, including ornithological interests'. It is therefore concluded that there is no significant cumulative effect with the Proposed Development.					
Myreton BESS	The Myreton BESS lies outwith the Survey areas adopted in the assessment presented in this Chapter. The information provided by the developer of the Myreton BESS includes limited information in relation to Ornithology in their screening request although they do state that their site is of very limited ecological significance. It is therefore concluded that there is no significant cumulative effect with the Proposed Development.					
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.			For the same reasons, significant cumulative effects during the operation of the Proposed Development and other identified projects in the vicinity are considered unlikely.		

10.10 Summary of Significant Effects

10.10.1 **Table 10.11: Summary of Significant Effects** summarises the predicted residual effects of the Proposed Development on ornithology prior to and following the application of additional mitigation. No significant effects on ornithology are predicted as a result of the Proposed Development.

Table 10.11: Summary of Significant Effects

Predicted Effects	Significance Prior to Additional Mitigation	Mitigation	Significance of Residual Effects Following Additional Mitigation
Construction			
All receptors	Negligible	N/A	Negligible
Operation			
All receptors	Negligible	N/A	Negligible
Cumulative	Negligible	N/A	Negligible