Scottish & Southern Electricity Networks

TRANSMISSION

Environmental Impact Assessment (EIA) Report

LT383 Alyth to Tealing Overhead Line (OHL) 400kV Upgrade

November 2024

VOLUME 2: CHAPTER 8 - ORNITHOLOGY

Figures (Volume 3 of this EIA Report)

Appendices (Volume 4 of this EIAR Report)

There are no Appendices associated with this chapter.

8. ORNITHOLOGY

8.1 Introduction

8.1.1 This chapter assesses the potential impacts and effects of the construction and operation of the Proposed Development on bird species. Where appropriate, it provides details of committed mitigation measures identified to minimise or compensate for adverse effects on ornithological features.

8.1.2 This chapter relates to ornithological features (i.e. bird species and the sites and habitats that support them) only. Chapter 7: Ecology (Volume 2) relates to other ecological features.

8.1.3 Also relevant to this chapter is the Statement to Inform Habitats Regulations Appraisal submitted as part of the Section 37 application in support of the Proposed Development and included as Appendix 7.4 (Volume 4). This describes the assessment conducted to test for adverse effects from the Proposed Development on the qualifying features of European sites, which comprise Special Areas of Conservation (SAC) and Special Protection Areas (SPA), the latter of which are designated for the conservation of bird species. Where appropriate, reference is made in this chapter to analysis presented in the Statement to Inform Habitats Regulations Appraisal.

8.1.4 Throughout this chapter, species are given their common and scientific names when first referred to and their common names only thereafter. All distances are cited as the shortest distance as the crow flies, unless otherwise specified.

8.1.5 The area encompassed by the Limit of Deviation (LOD) shown on Figure 3.1 (Volume 3) is referred to throughout as the Site. Where applicable, reference is also made to the wayleave corridor which is defined as a **45 m** buffer at either side of the overhead line (OHL) route.

8.2 Assessment Method and Significance Criteria

Scope of the Assessment

8.2.1 The scope of survey and assessment described in this chapter was informed by the guidance contained in the Guidelines for Ecological Impact Assessment (EcIA) published by the Chartered Institute of Ecology and Environmental Management (CIEEM) [1,2], on the responses of consultees.

8.2.2 NatureScot has devised 21 Natural Heritage Zones (NHZ) covering the whole of Scotland, which reflect biogeographical differences across the country. Assessment of impacts on birds in this Environmental Impact Assessment (EIA) has been carried out in the context of the Eastern Lowlands Natural Heritage Zone (NHZ 16), within which the Proposed Development is located (see Figure 8.1 (Volume 3)). This includes assessment of cumulative effects which has considered the potential for in-combination effects to arise due to other developments and land use changes within NHZ 16.

8.2.3 The CIEEM guidelines for EcIA recommend that only those features that are important and that could be significantly affected by the Proposed Development require detailed assessment, stating that "*it is not necessary to carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*".

[1] CIEEM (2022). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.2 – Updated April 2022. Chartered Institute of Ecology and Environmental Management, Winchester.

[2] CIEEM publish an updated version (Version 1.3) of the EcIA Guidelines in September 2024. The data publication was after the assessment in this chapter had been prepared, however, the amendments in the updated version of the guidelines were largely related to the way in which peatland and soils should be considered, as well as other minor updates. Therefore, whilst a previous version of this guidelines was used, the assessment in this chapter is still compliant with the guidance in version 1.3 (September 2024).

8.2.4 Consequently, for the purposes of the desk study, field survey and assessment described in this chapter, important ornithological features are taken to include:

- the qualifying features of SPAs and Wetlands of International Importance (Ramsar sites) within 10 km (extended to 20 km for sites designated for non-breeding waterbirds, in particular geese species, which are known to forage up to this distance from designated site boundaries) of the Proposed Development;
- all species listed on Annex I of the Birds Directive[3];
- all species listed on Schedule 1 of the Wildlife and Countryside Act (WCA)[4];
- species listed on the Scottish Biodiversity List (SBL); and
- all species on the Red List of Birds of Conservation Concern 5 (BoCC)[5].

8.2.5 Other species, that may be rare, scarce or otherwise notable, were included where deemed appropriate through available information and/ or professional judgement. This included snipe *Gallinago gallinago* which, although not qualifying under any of the criteria listed above, is considered to be important for the purposes of this Report.

8.2.6 The scope of the Section 37 application is limited to the upgrade and operation of the OHL between Alyth Substation and tower 685, north-west of Tealing Substation. The Proposed Development will not have a fixed operational life, however, it is assumed that it will be operational for 50 years or more. Once the design life of the OHL has been reached, a decision will be taken on whether to decommission and remove the transmission infrastructure or potentially to replace or upgrade it. Consequently, this chapter does not specifically assess potential decommissioning impacts. However, the impacts of decommissioning are likely to be very similar to those associated with the construction of the Proposed Development, which involves upgrading an existing OHL.

8.2.7 The main components of the Proposed Development comprise the replacement of conductors, insulators, and fittings on the existing steel lattice towers of the existing OHL. Where required, tower condition works including steelwork and tower leg foundation work to strengthen existing steel lattice towers will also be undertaken. Associated works required to facilitate the Proposed Development include vegetation clearance, temporary access track construction and track upgrades, crane pads, Equipotential Zones (EPZ) and temporary measures to protect road, rail and water crossings. EPZ will typically consist of metal trackway panels covering an area of approximately 38.9 m by 26 m, with an area of up to **15 m** to allow for bunding etc. Some towers may require two EPZ to be set up, depending on location. For a full project description, see Chapter 3 Project Description (Volume 2).

8.2.8 The assessment of impacts and effects on ornithological features described in this chapter was conducted in accordance with the EcIA guidelines published by CIEEM[1]. The principal steps involved in the CIEEM approach can be summarised as follows:

- determine baseline conditions through targeted desk study and field survey, to identify important features that might be affected;
- evaluate the importance of identified ornithological features on a geographic scale, determining those that need to be considered further;
- describe potential impacts on relevant ornithological features, considering best practice, legislation and embedded design measures;
- assess and quantify (as far as possible) likely effects (adverse or beneficial) on relevant ornithological features;

[3] Council Directive 79/409/EEC on the Conservation of Wild Birds, which is more commonly referred to as the 'Birds Directive'.

[4] The Wildlife and Countryside Act 1981 (as amended), abbreviated in this chapter to the 'WCA'.

[5] Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* **144,** pp 723-747.

- develop measures to avoid, reduce or, if necessary, compensate for predicted significant effects, in conjunction with other elements of the design (including mitigation for other environmental disciplines);
- report residual effects taking into account mitigation or compensation; and
- identify opportunities for biodiversity enhancement.

8.2.9 In line with CIEEM guidelines, the terminology used in this chapter draws a clear distinction between the terms impact and effect. In this chapter, these terms are defined as follows:

- impact – actions resulting in changes to an ornithological feature (e.g. the removal of nesting habitat); and
- effect – the outcome resulting from an impact acting upon the conservation status or structure and/ or function of an ornithological feature (e.g. the loss of nesting habitat may lead to a decline in the population of an important bird species and result in an adverse effect on the conservation status of the population concerned).

8.2.10 Impacts are assessed in view of the conservation of the bird species under consideration. NatureScot defines the conservation status of a species as "*the sum of the influences acting on it which may affect its long-term distribution and abundance, within the geographical area of interest*"[6]. A species' conservation status is considered to be favourable when:

- population dynamics indicate that the species is maintaining itself on a long-term basis as a viable component of its habitat;
- the natural range of the species is not being reduced, nor is it likely to be reduced for the foreseeable future; and
- there is (and probably will continue to be) a sufficiently large habitat to maintain its population on a long-term basis.

8.2.11 NatureScot recommends that the concept of the favourable conservation status of a species should be applied at national (Scottish) level in order to determine the level of significance of an effect arising from the impact(s) of a development[77]. However, as highlighted above, this assessment has also been conducted in the context of NHZ 16, within which the Proposed Development is located. Therefore, even where an impact may not affect the conservation status of a species at the national level, the potential for effects on the conservation status of that species within the NHZ has also been considered.

8.2.12 In this assessment, the geographical level of Regional is defined as the area encompassed by NHZ 16, and Local as the area within **10 km** of the Proposed Development.

8.2.13 The assessment of impacts on ornithological features follows the industry-standard guidelines for EcIA published by CIEEM[1], and does not follow the matrix-based approach described in Chapter 5: EIA Approach and Methodology (Volume 2), as such a method is not recommended by CIEEM. Therefore, for the purposes of this EIA, effects predicted to be significant on an ornithological feature at the Regional, National or International geographic levels are considered to be Significant in broader EIA terms, whereas those predicted to be significant only at the Local or Negligible levels are considered to be Not Significant.

[6] SNH (2018). Assessing the Significance of Impacts from Onshore Windfarms on Birds out with Designated Areas. Version 2 – February 2018. (online) Available from: https://www.nature.scot/doc/guidance-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect-protected. [Accessed: July 2024]

[7] SNH (2018). Assessing Significance of Impacts from Onshore Windfarms on Birds out with Designated Areas. Version 2 – February 2018. (online) Available at: https://www.nature.scot/doc/guidance-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect-protected [Accessed: July 2024]

Extent of the Study Area

8.2.14 The Zone of Influence (ZoI) of the Proposed Development is the area over which an ecological effect might extend as a result of its construction and operation. This will vary for different ornithological features and impacts depending on their sensitivity to environmental change. It is therefore appropriate to identify different ZoI for different features and impacts. As recommended[5], professionally accredited or published studies and guidance, where available, were used to help determine the likely ZoI, as well as professional judgement. However, CIEEM also highlight that establishing the ZoI should be an iterative process informed by both desk study and field survey[1]. Where limited information was available, the Precautionary Principle[8] was adopted and a ZoI estimated on that basis.

8.2.15 The desk study and field survey areas were designed to allow sufficient data to be collected to establish the baseline condition of ornithological features and determine the impacts of the Proposed Development. The ZoI can extend beyond a development and beyond the survey area. However, at a distance from a development its impacts might not result in significant effects (these being the focus of EcIA according to CIEEM guidance[5]), and even where a significant effect might occur over a large distance, this does not necessarily require the field survey to extend to such distances[9]. The field survey areas adopted for this assessment were sufficiently precautionary to allow assessment of potentially significant effects from the Proposed Development on ornithological features, including within the wider ZoI beyond the field survey areas.

Consultation Carried Out to Date

8.2.16 NatureScot was consulted by letter on the proposed scope of ornithology survey on 8th March 2024. On 27th March 2024, NatureScot confirmed agreement with the proposed ornithological survey scope and provided pre-application advice in relation to international designated sites, as set out in Table 8-1.

Table 8-1 NatureScot Pre-application Advice

Designated Site	NatureScot Pre-application Advice
Outer Firth of Forth and St Andrews Bay Complex SPA	It is unlikely that there will be significant activity by herring gull *Larus argentatus* breeding within this site given the distance between the SPA and the Proposed Development. It would be reasonable to conclude that there will be no likely significant effect on this designation.
Loch of Lintrathen SPA	Within potential connectivity distance of foraging geese. The agricultural land use around Alyth and Meigle offers foraging opportunities, but there are extensive foraging opportunities in the wider area here, and the Proposed Development will impact on relatively few fields over a short duration. NatureScot considered that an assessment of no likely significant effects on this SPA could be reached based on information available to them at the time of providing their advice.
Firth of Tay and Eden Estuary SPA	Within potential connectivity distance of foraging geese. The Proposed Development will affect a small proportion of the overall goose foraging resource at any time and will be of short duration. Targeted raptor surveys should provide sufficient information to be confident that impacts on breeding marsh harrier *Circus aeruginosus* can be avoided.

[8] UNESCO (2005). The Precautionary Principle. United Nations Educational, Scientific and Cultural Organisation, Paris. (online) Available from: https://unesdoc.unesco.org/ark:/48223/pf0000139578. [Accessed: July 2024]

[9] By way of a theoretical example to illustrate this concept: many important bird species hold large home ranges and use the habitat within these for foraging. Construction activities within the home range of a given pair of birds could be said to have ZoI which extends to the full home range, which may extend to several kilometres from a nest site, and cover thousands of hectares. However, these works may only have a significant effect on the impacted birds in their immediate vicinity, for example by preventing them from foraging within a few hundred metres of the activities. The field survey in this case would focus on the area over which significant effects could occur, rather than the potential ZoI, which could encompass the entire home range.

Designated Site	NatureScot Pre-application Advice
	NatureScot considered that, based on information available to them at the time, it would be possible to reach a conclusion of no likely significant effects on non-breeding geese, and that surveys will inform the assessment for breeding marsh harrier *Circus aeruginosus* (however, given the nature and location of work, it is unlikely that this species will be impacted).
Loch of Kinnordy SPA	As for Loch of Lintrathen SPA.

Method of Baseline Data Collation

Guidance and Standards

8.2.17 The following guidance was used when designing the field survey carried out to inform this assessment and to determine the scope and method of the assessment itself:

- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Coastal, Freshwater and Marine*[10];
- *Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds*[11];
- *Recommended bird survey methods to inform impact assessment of onshore wind farms*[12] (SNH, 2017);
- *Assessing Significance of Impacts from Onshore Wind Farms on Birds out with Designated Areas*[6];
- *Assessing Connectivity with Special Protection Areas (SPAs)*[11]; and
- *Assessing the Cumulative Impact of Onshore Wind Energy Developments*[13].

Desk Study

8.2.18 A desk study was carried out to identify nature conservation designations and records of important bird species (as defined in Paragraph 8.2.4) potentially relevant to the Proposed Development. A stratified approach was taken when defining the desk study area, based on the likely ZoI of the Proposed Development on different ornithological features. Accordingly, the desk study sought to identify:

- international nature conservation designations (SPAs and Ramsar sites) within 10 km of the Proposed Development, this being extended to 20 km for sites designated for non-breeding waterbirds, especially geese;
- Sites of Special Scientific Interest (SSSI) within 2 km of the Proposed Development;
- local non-statutory nature conservation designations within 1 km of the Proposed Development; and,
- records of important bird species within 1 km of the Proposed Development.

8.2.19 The desk study was carried out using the data sources detailed in Table 8 2.

[10] CIEEM (2022). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.2 – Updated April 2022. Chartered Institute of Ecology and Environmental Management, Winchester.
[11] SNH (2016). Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. Version 1 – July 2016. (online) Available at: https://www.nature.scot/doc/guidance-assessment-and-mitigation-impacts-power-lines-and-guyed-meteorological-masts-birds. [Accessed: July 2024]
[12] SNH (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Version 2 – March 2017.(online) Available at: https://www.nature.scot/doc/recommended-bird-survey-methods-inform-impact-assessment-onshore-windfarms. [Accessed: July 2024]
[13] SNH (2018). Assessing the Cumulative Impact of Onshore Wind Energy Developments. August 2018. (online) Available at: https://www.nature.scot/doc/guidance-assessing-cumulative-impacts-onshore-wind-farms-birds. [Accessed: July 2024]

Table 8-2 Desk Study Data Sources

Data Source	Date Last Accessed	Data Obtained
Angus Local Development Plan website[14]	6th August 2024	Local Development Plan (LDP) policies relevant to nature conservation.
Perth & Kinross Local Development Plan 2 website[15]	6th August 2024	Local Development Plan 2 (LDP2) policies relevant to nature conservation, including supplementary guidance relating to development and biodiversity.
NatureScot SiteLink website[16]	6th August 2024	Information on statutory designated sites.
Tayside Local Biodiversity Action Plan[17]	6th August 2024	Information on locally important ecosystems, habitats and species.
National Biodiversity Network (NBN) Atlas Scotland[18]	3rd June 2023	Commercially available records of protected/important species within **1 km** of the Site, made since 2000.
Royal Society for the Protection of Birds (RSPB) website[19]	6th August 2024	Information on potentially relevant RSPB reserves.

Field Survey

8.2.20 Ornithology field surveys were completed in suitable habitat within **2 km** of the Proposed Development between April and July 2024. Surveys were designed and carried out with cognisance of the *Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds*[11] and *Recommended bird survey methods to inform impact assessment of onshore wind farm*[12], as well as the following relevant guidance:

- the Brown and Shepherd (1993)[20] method for censusing upland waders;
- species-specific approaches for surveying raptors described in Hardey *et al* (2013)[21]; and
- the species-specific method for survey of black grouse *Tetrao tetrix* described in Gilbert *et al* (1998)[22].

8.2.21 The methods used for ornithological field surveys are described beneath the following sub-headings. Survey areas are shown on Figure 8.3 (Volume 3).

Moorland Breeding Bird Survey

8.2.22 Survey for moorland breeding birds was carried out in suitable habitat within **500 m** of the Proposed Development (from Balkello Farm to the plantation on Henderston Farm) following an adapted version of the methodology. In

[14] Angus Council (2016). Angus Local Development Plan. (online) Available at: https://www.angus.gov.uk/directories/document_category/development_plan [Accessed: July 2024]
[15] Perth and Kinross Council (2019). Perth and Kinross Local Development Plan 2. (online) Available at: https://www.pkc.gov.uk/media/45242/Adopted-Local-Development-Plan-2019/pdf/LDP_2_2019_Adopted_Interactive.pdf?m=1576667143577 [Accessed: July 2024]
[16] NatureScot (2024). SiteLink. (online) Available at: https://sitelink.nature.scot/home [Accessed: July 2024]
[17] Tayside Biodiversity Partnership (2016). Tayside Local Biodiversity Action Plan. 2nd Edition 2016-2026. (online) Available at: https://www.taysidebiodiversity.co.uk/action-plan/action-plan-new-lbap-2015/ [Accessed: July 2024]
[18] NBN Atlas Partnership (2023). NBN Atlas Scotland. (online) Available at: https://scotland.nbnatlas.org/ [Accessed: July 2024]
[19] RSPB (2024). Visit a Nature Reserve. (online) Available at: https://www.rspb.org.uk/days-out/reserves [Accessed: July 2024]
[20] Brown, A.F. and Shepherd, K.B. (1993). A method for censusing upland breeding waders. *Bird Study* **40**, pp 189-195.
[21] Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. (2013). Raptors: A Field Guide for Surveys and Monitoring. 3rd Edition. Stationary Office, Edinburgh.
[22] Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods. The Royal Society for the Protection of Birds, Sandy.

line with recommendations made by Calladine *et al*[23], four survey visits were made between April and July 2024, as detailed in Table 8-3. During the moorland breeding bird surveys, waders and passerines were also recorded.

Table 8-3 Moorland Breeding Bird Survey Visit Details

Date	Survey Visit	Start Time/ End Time	Weather
3rd April 2024	1	09:00-11:00	Overcast with rain, northeasterly breeze.
24th May 2024	2	08:30-11:40	Light southeasterly breeze, clear skies, dry.
24th June 2024	3	08:00-12:00	Mild, partial cloud cover, gentle southwesterly breeze, dry.
11th July 2024	4	09:30-13:00	Mild (13 °C), overcast, moderate northwesterly breeze, dry.

8.2.23 Pre-determined survey routes were devised which allowed surveyors to approach all parts of the survey area to within approximately 100 m. The route taken to walk the moorland breeding bird survey transects was varied between survey visits. Stops were made at regular intervals to scan for birds and to listen for song and calls. Surveys were conducted between 08:00-18:00, in generally favourable weather conditions, with wind speeds below Beaufort force 4.

8.2.24 Birds encountered were recorded and mapped using standard British Trust Ornithology (BTO) notation, including a description of activity/behaviour. Where necessary, additional field notes were taken.

Breeding Raptor Surveys

8.2.25 Survey for breeding raptors listed on Schedule 1 of the WCA and/or Annex I of the Birds Directive was carried out in areas of suitable habitat within 2 km of the Proposed Development. Surveys were carried out between March and July 2024 and were conducted under favourable weather conditions. Survey details are provided in Table 8-4.

Table 8-4 Breeding Raptor Survey Visit Details

Date	Survey Visit	Start Time/End Time	Weather
27th March 2024	1	08:00-16:00	Cold (3-7°C), overcast, light rain with sleet/snow, moderate northeasterly wind.
20th May 2024	2	15:15-18:20	Clear skies, very light wind, dry.
26th June 2024	3	10:45-14:30	Overcast, light easterly breeze, drizzly.
10th July 2024	4	14:30–17:50	Overcast, light northerly breeze, drizzly (following heavy rain earlier in day).

[23] Calladine, J., Garner, G., Wernham, C. and Thiel, A. (2009). The influence of survey frequency on population estimates of moorland breeding birds. *Bird Study* **56**, pp 381-388.

8.2.26 During preliminary visits, suitable nesting habitats within the survey area were searched for signs of occupancy. This involved a driven transect of the survey area, with short vantage point watches being made from suitable locations to observe areas of potentially suitable habitat and search for birds, noting any behaviour indicative of breeding (e.g. displaying, alarm calling, etc.). All raptor species (or evidence) encountered were recorded and mapped.

Lekking Black Grouse Survey

8.2.27 Survey for lekking (displaying) black grouse followed the methods for this species described in Gilbert et al (1998)[22]. Survey dates and weather conditions are given in Table 8-5.

Table 8-5 Black Grouse Survey Visit Details

Date	Survey Visit	Sunrise	Start Time/End Time	Weather
2nd April 2024	1	06:38	06:35-09:15	6-7°C, light-moderate rain, moderate northeasterly breeze.
3rd April	1	06:35	06:40-09:36	5-6°C, light-moderate rain, moderate northeasterly breeze.
16th April	2	06:01	05:01-07:01	4-8 °C, dry, moderate breeze.

8.2.28 Areas considered potentially suitable for black grouse (for lekking or generally as suitable supporting habitat) within approximately 1.5 km of the Proposed Development were identified through the extended Phase 1 habitat survey completed in March 2023, and a review of aerial images. The first survey visit to locate possible leks was carried out in early April, during which surveyors walked slowly, listening for lekking black grouse and scanning from suitable vantage point locations with binoculars. Following information from a landowner on the location of a possible lek, the second visit in mid-April targeted this specific location to count males at the lek. Surveyors got in position at a vantage point an hour before dawn and scanned/ listened for lekking grouse. Surveys were conducted in generally calm weather and commenced around one hour before dawn and continued until at least one hour after sunrise.

Limitations and Assumptions

8.2.29 The aim of the desk study was to help characterise the baseline context of the Proposed Development and provide background information that may not be captured by field survey alone. Information obtained during the desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not necessarily mean they do not occur in the study area. Likewise, the presence of records for a particular species does not automatically mean that these still occur within the area of interest or are relevant to the Proposed Development.

8.2.30 Visibility was fairly poor at some points during the first black grouse visit, however no black grouse were heard lekking during this visit and visibility was excellent during the second visit so this is not considered to have significantly affected the survey results.

8.2.31 There were no other significant limitations to the desk study, field survey or subsequent analysis which could affect the reliability of this impact assessment.

8.3 Baseline Conditions

Designated Sites

Statutory Designated Sites

8.3.1 There are four statutory sites designated for ornithological features within the possible ZoI of the Proposed Development. These are detailed in Table 8-6 and their locations relative to the Proposed Development are shown on Figure 8.2 (Volume 3).

Table 8-6 Statutory Designated Sites for Bird Conservation

Designated Site	Reason for Designation	Relationship to the Proposed Development
Outer Firth of Forth and St Andrews Bay Complex SPA	A large number of breeding and non-breeding seabirds and waterbirds, as well as the non-breeding waterfowl assemblage	Located approximately **8.5 km** south of the Proposed Development. There is a direct, though distant (circa **8 km**), hydrological connection between the SPA and the Proposed Development. Intervening land comprises agricultural fields and the city of Dundee.
Loch of Lintrathen SPA and Ramsar site	Non-breeding greylag goose *Anser anser*	Located approximately **6.75 km** north of the Proposed Development. Intervening land comprises predominantly agricultural fields with areas of woodland and the River Tay.
Firth of Tay and Eden Estuary SPA and Ramsar site	A large number of non-breeding waterbirds, and the non-breeding waterfowl assemblage, as well as the non-breeding waterfowl assemblage.	Located approximately **8 km** south-east of the Proposed Development. There is a direct, though distant (circa **8 km**), hydrological link between the SPA/Ramsar site and the Proposed Development. Intervening land comprises agricultural fields and the city of Dundee.
Loch of Kinnordy SPA and Ramsar site	The following habitats and species: Eutrophic loch; • open water transition fen; • breeding bird assemblage; • non-breeding greylag goose; and • non-breeding pink-footed goose *Anser brachyrhynchus*.	Located approximately **8.7 km** north-east of the Proposed Development at closest. Intervening land comprises predominantly agricultural fields with areas of woodland and the River Tay SAC.

8.3.2 There are no SSSIs designated for ornithological features within 2 km of the Proposed Development.

Non-statutory Designated Sites

8.3.3 Perth & Kinross Council are currently conducting the Local Nature Conservation Sites Project whereby local biodiversity sites (and local geodiversity sites) will be selected. A selection of sites is proposed, but formal adoption of these is not anticipated to be concluded until mid-2025.Therefore, sites are subject to change and additional sites may be designated which are within or near the Site. At the time of writing, no Local Nature Conservation Sites (LNCS) have been proposed within the ZoI of the Proposed Development by Perth & Kinross Council.

8.3.4 The Communities Committee for Angus Council formally designated 28 sites as LNCS in November 2023[24] which will be included in the forthcoming LDP2 due to be finalised in 2029[25]. Three LNCS within Angus Council local authority area are situated within the ZoI of the Proposed Development; Pitnappie Moss, Oak Wood, and Redmire Wood.

8.3.5 Pitnappie Moss LNCS covers approximately 20 ha and comprises marshy grassland, basin mire and woodland. It is located approximately 785 m south-west of the Site. The LNCS is hydrologically connected to the Site by tributaries of Auchterhouse Burn and separated from the Site by a single arable field.

8.3.6 Oak Wood LNCS comprises approximately 17 ha of semi-natural broadleaved woodland and unimproved grassland. It is situated approximately 1.2 km north of the Site. This LNCS is hydrologically connected to the Site via the River Isla, however, the Site lies downstream of the LNCS. Intervening land comprises Alyth Substation, mixed woodland and farmland (mainly intensively farmed arable fields).

8.3.7 Redmire Wood LNCS contains approximately 20 ha of wet birch *Betula* sp. woodland and lowland basin mire. It is approximately 6.5 km north-east of the Site. Intervening land is intersected by the River Isla and largely comprises arable fields. Though not hydrologically connected, there is an almost continuous canopy cover between the LNCS and the Site where the River Isla is fringed by a line of trees, continuing along Dean Water to Crow Wood.

Moorland Breeding Birds

8.3.8 A total of 36 species were recorded during the moorland breeding bird surveys. Of the 36 species recorded, 17 are considered to be important in the context of this EIA (as defined in Paragraph 8.2.4). A list of these important species is provided in Table 8-7.

Table 8-7 Important Bird Species Recorded During Moorland Breeding Bird Survey

BTO Code	Common Name	Scientific Name	Conservation Designation
BF	Bullfinch	*Pyrrhula pyrrhula*	SBL
CR	Common crossbill	*Loxia curvirostra*	WCA Schedule 1
CK	Cuckoo	*Cuculus canorus*	Red List BoCC, SBL
HS	House sparrow	*Passer domesticus*	Red List BoCC, SBL
P.	Grey partridge	*Perdix perdix*	Red List BoCC, SBL
K.	Kestrel	*Falco tinnunculus*	SBL
L.	Lapwing	*Vanellus vanellus*	Red List BoCC, SBL
LR	Lesser redpoll	*Acanthis cabaret*	Red List BoCC, SBL
LI	Linnet	*Linaria cannabina*	Red List BoCC, SBL
M.	Mistle thrush	*Turdus viscivorus*	Red List
RG	Red grouse	*Lagopus lagopus*	SBL
RB	Reed bunting	*Emberiza schoeniclus*	SBL
S.	Skylark	*Alauda arvensis*	Red List BoCC, SBL

[24] Smith, A. (2023). Local Nature Conservation Sites in Angus - Initial Phase of Local Biodiversity Sites. Communities Committee – 21 November 2023. (online) Available at: https://www.angus.gov.uk/committees/communities_committee/communities_committee_21_november_2023 [Accessed: July 2024]
[25] Angus Council (2023). Development Plan Scheme and Participation Statement 2023. (online) Available at: https://www.angus.gov.uk/sites/default/files/2023-12/Development%20Plan%20Scheme%20and%20Participation%20Statement%202023.pdf [Accessed: July 2024]

BTO Code	Common Name	Scientific Name	Conservation Designation
SN	Snipe	*Gallinago gallinago*	-
ST	Song thrush	*Turdus philomelos*	SBL
TP	Tree pipit	*Anthus trivialis*	Red List BoCC, SBL
Y.	Yellowhammer	*Emberiza citrinella*	Red List BoCC, SBL

8.3.9 A single cuckoo was recorded singing north of Scotston Hill and is likely to have bred somewhere within the moorland to the north of the Site. Lapwing were recorded on two occasions within fields on Balkello Farm. Red grouse were flushed, and likely to have bred, in several locations on the moorland south of Auchterhouse Hill and Scotston Hill. Several skylark territories were identified in the moorland and rough grassland around Balkello Hill and within a grassy patch surrounded by moorland just east of Scotston Hill. A single snipe territory was also identified within this grassy patch to the east of Scotston Hill. Tree pipit was recorded singing on one occasion within the rough grassland on Scotston Farm. Common crossbill, lesser redpoll and linnet were all recorded in the moorland/rough farmland/pine woodland north of the Site and may also have bred within the survey area but as they nest in groups (and are not territorial) it is difficult to determine if and where they bred.

8.3.10 Some important farmland and woodland birds (defined in Paragraph 8.2.4) were incidentally recorded during the moorland breeding bird surveys. One reed bunting territory was recorded at the pond on Henderston Farm. House sparrows were nesting in the buildings/hedges at Scotston Farm and a bullfinch was recorded in the adjacent woodland. Mistle thrush were also recorded around Scotston Farm on multiple visits. A pair of grey partridge were recorded in a field near Balkeerie, **500 m** from the proposed access track. Song thrush and yellowhammer territories were recorded in and around Balkello Farm.

Raptors

8.3.11 Records of barn owl *Tyto alba*, merlin *Falco columbarius* and marsh harrier were identified by the desk study.

8.3.12 In addition, an active osprey *Pandion haliaetus* nest was present near Alyth Substation. A single chick fledged from this nest.

8.3.13 The following raptor species were recorded during the course of ornithology field surveys:

- Buzzard *Buteo buteo* (three sightings of at least one bird in the woodland northeast of Alyth Substation, two flights over Balkello woodland, two flights over the moorland north of Auchterhouse, one bird flushed out of the plantation on Henderston Farm and one flushed out of a smaller block of woodland just north of this);
- Kestrel *Falco tinnunculus* (one flight over the moorland north of Balkello Woodland, one flight over the moorland north of Auchterhouse, one bird seen hovering over grassland at Scotston Farm and one flight into a small block of woodland on Henderston Farm);
- Sparrowhawk *Accipiter nisus* (two flights over Balkello Woodland); and
- Red kite *Milvus milvus* (a single flight over the moorland north of Balkello Woodland).

8.3.14 The only breeding by a bird species listed on Schedule 1 of the WCA suspected to have taken place within 1 km of the Proposed Development during the survey period was by osprey, near to the location of Alyth Substation.

8.3.15 A possible buzzard nest location was found just outside the Site, within a small strip of woodland south of River Isla (shown on Figure 8.3 (Volume 3)). A further three possible buzzard nests were suspected, all outside the Site - one within the woodland north of Alyth Substation, one within a small block of woodland north-east of Kinpurney Tower, and one within a small block of woodland on Balkello Farm (see also Figure 8.3 (Volume 3)). There may be other buzzard nests within the Site, particularly in and around Balkello Woodland.

8.3.16 A possible kestrel nest location was also found within a small block of woodland on Henderston Farm (shown on Figure 8.3 (Volume 3)).

Black Grouse

8.3.17 No records of black grouse were identified during the NBN data search.

8.3.18 Habitat suitable for black grouse exists within the moorland and rough farmland to the north of the Site between Balkello Farm and Henderston Farm. Anecdotal evidence from a landowner also suggests that black grouse (up to eight males and five females) sometimes lek on the hill at Scotston Farm but are usually further north on the moorland, this information suggests they could potentially lek within the Site.

8.3.19 However, no lekking black grouse were recorded during any targeted survey. A potential, but unconfirmed, female was observed during the first survey visits on Scotston Farm at the south-east corner of the plantation (the bird was flushed, and a good view was not possible), but no confirmed sightings of black grouse were made, either during the black grouse lek survey or during the course of other ornithological (and wider ecological) field surveys for the Proposed Development.

Future Baseline

Baseline at the Time of Construction

8.3.20 Construction of the Proposed Development is expected to commence in July 2026 and take approximately three years to complete.

8.3.21 The Proposed Development will follow the route of the existing Alyth – Tealing OHL which largely crosses agricultural land and some upland fringe. Routine farming practices will continue to cause regular changes to habitat through activities such as ploughing, crop growing, and use of land as pasture. This is consistent with the existing baseline conditions. In the more upland areas, there are not expected to be any major land use changes prior to the commencement of construction.

8.3.22 The Proposed Development does not cross any land which is zoned for development in either Angus LDP or Perth & Kinross LDP2, with the exception of land identified as being in a ‘Pipeline Consultation Zone’ in Angus LDP. Any pipeline installation would involve excavation and subsequent reinstatement of land to its former condition. Therefore, no significant change to baseline conditions would be expected, even if construction of new pipelines was to take place.

8.3.23 Minor changes in the distribution of some species (e.g. nesting birds) may occur due to small scale changes in habitat structure as a result of farming activities, ecological succession, or other natural processes. Given the relatively short period of time before construction is expected to start, and that significant changes in land management practices are unlikely in the intervening period, any such changes are likely to be within the range of normal short-term variation in the distribution and abundance of species populations.

8.3.24 It is thus expected that the current baseline conditions will remain largely unchanged at the time of construction of the Proposed Development.

Baseline in the Absence of the Proposed Development

8.3.25 In the absence of the Proposed Development, and for this purpose taking a point 30 years in the future, there are unlikely to be significant changes from the current baseline. The existing overhead power line would remain in place. Furthermore, current land management practices, in particular farming, are likely to continue as at present, and significant changes of land use are unlikely, especially in the more upland areas. Small changes might occur,

for example through spread of invasive non-native species. Some impact from climate change could also occur, however it is difficult to predict the direction of change on habitats and species. In summary, the future baseline in the absence of the Proposed Development is likely to be largely the same as the current baseline.

8.4 Issues Scoped Out

8.4.1 As stated in the Scope of the Assessment section, relevant ornithological features are those that are important and have the potential to be significantly affected by the Proposed Development[1]. In view of the baseline data obtained through desk study and field survey, the features in Table 8-7 have been excluded from further assessment because:

a) available data indicates that they are likely to be absent from the ZoI of the Proposed Development;

b) it is clear that no impact from the Proposed Development is possible; and/or

c) they are features that, although identified as being important by the criteria given in this chapter, are common and widespread and their conservation status is clearly not threatened by the Proposed Development.

Table 8-7 Ornithological Features Scoped Out of Further Assessment

Ornithological Feature	Rationale for Exclusion from Further Assessment in this Chapter
National statutory designated sites	There are no SSSIs for which bird species are notified features within **2 km** of the Proposed Development. Other SSSIs further afield underly SPAs and are thus considered as part of the assessment of impacts on these international sites.
Non-statutory designated sites	There are currently three locally designated non-statutory designated sites within the likely ZoI of the Proposed Development, Pitnappie Moss, Oak Wood and Redmire Wood LNCS.
General assemblage of breeding birds	The general assemblage of breeding birds was found from survey to comprise a typical range of species, the majority of which are common and widespread, locally, within NHZ 16 and across Scotland. The works associated with the Proposed Development will be temporary and will take place in habitats of limited value, many of which are already subject to routine disturbance through agricultural activities. Species for which further assessment is required have been assessed individually.
Breeding raptors (with exception of osprey)	No specially protected raptors listed on Schedule 1 of the WCA are believed to have bred within Site of the Proposed Development in 2024. Buzzard, which is a common and widespread species is believed to have bred in four locations, all outside of the Site and wayleave corridor. Kestrel, also a common and widespread species, is believed to have bred in one location within the Site and wayleave corridor.

8.5 Assessment of Effects, Mitigation and Residual Effects

Standard Good Practice Mitigation

8.5.1 A range of measures that are standard good practice for development of this type, and which are required to comply with environmental protection legislation, will be implemented. These are well-developed and have been successfully used on infrastructure projects across the country, and there is a high degree of confidence in their success. They can therefore be treated as 'embedded' mitigation. These will include:

- all personnel involved in the construction of the Proposed Development will be made aware of the ornithological features within the ZoI and the mitigation measures and working procedures that must be adopted. This will be achieved as part of the induction process and through the delivery of Toolbox Talks, where required;

- an Environmental Clerk of Works (ECoW) will be appointed for the duration of the construction of the Proposed Development. The remit of the ECoW will include, but may not be limited to:
  - carrying out pre-works checks for important bird species and nesting birds;
  - advising on exact infrastructure placement within micro-siting tolerances;
  - monitoring of, and advising on, storage of materials;
  - advising on habitat reinstatement; and
  - monitoring of pollution control measures and advising on placement of mitigation measures to minimise habitat damage;
- sightings of protected and/or important bird species within the site of the Proposed Development during the construction period will be recorded. If any evidence or sightings of specially protected bird species listed on Schedule 1 of the WCA suggest that a nest site may be present within **1 km** of active or planned near term works, then works in that area will stop immediately and the ECoW will be contacted for further advice;
- a Construction Environmental Management Document (CEMD) will be prepared and submitted for approval by Angus Council and Perth & Kinross Council, in consultation with the Scottish Environment Protection Agency (SEPA), where necessary, prior to the commencement of construction. The CEMP will set out all environmental management measures and the roles and responsibilities of personnel;
- during the construction phase, pollution prevention measures will be adopted, following SEPA Pollution Prevention Guidelines (PPG) and Guidance on Pollution Prevention (GPP), including the following:
  - controls and contingency measures will be provided to manage run-off from construction areas and to manage sediment;
  - all oils, lubricants or other chemicals will be stored in an appropriate secure container in a suitable storage area, with spill kits provided at the storage location and at places across the Proposed Development site; and
  - in order to avoid pollution impacts to soils, vegetation and watercourses/ waterbodies during construction, all refuelling and servicing of vehicles and plant will be carried out in a designated area which is bunded and has an impermeable base. This will be situated at least **50 m** away from any watercourse;
- works near or at any retained trees will follow good practice to protect these features, including their roots;
- any artificial lighting required for construction works will be directional to avoid or minimise light spill beyond the immediate works areas; and,
- All works will follow SSEN's General Environmental Management Plans and the Bird Species Protection Plan.

The Potential Impacts of the Proposed Development

8.5.2 As set out in Chapter 3: Project Description (Volume 3), the Proposed Development involves the reconductoring of the existing OHL between Alyth and Tealing. No new towers are required and the height of all existing towers will remain unchanged.

8.5.3 The following broad categories of impact could arise during the construction of the Proposed Development and are considered, where potentially relevant, in relation to each of the ornithological features scoped in to detailed assessment in Table 8-8:

- temporary loss of habitat which supports important bird species;
- disturbance to and/or displacement of species during construction;
- accidental destruction of active bird nests; and
- cumulative impacts arising in combination with other developments or due to land use changes within NHZ 16.

8.5.4 There are no likely pathways for pollution of surface water, groundwater, soils or vegetation given that industry-standard good practice measures will be implemented to meet legal and regulatory requirements, as described in Paragraph 8.5.1. These measures are considered as embedded and this impact is therefore not considered for any ornithological feature.

8.5.5 There are no significant operational phase impacts of the Proposed Development. The alignment of the existing OHL will remain unchanged, as will the existing tower heights. There is consequently no change to the baseline in terms of the risk of birds colliding with the OHL. Maintenance works during the operational phase would be infrequent and are very unlikely to result in greater levels of disturbance than those caused by existing activities, in particular agriculture.

Importance of Ornithological Features

8.5.6 The assessed importance of those ornithological features identified in the baseline conditions, and which have not been scoped out in Table 8-7, is set out in Table 8-8, together with rationale. Importance has been assessed considering geographic scale, in accordance with CIEEM (2022)[1].

8.5.7 When considering geographic scale, for the purposes of this assessment, the geographical level of 'Regional' is defined as the area encompassed by NHZ 16, and 'Local' as the area within **10 km** of the Proposed Development.

Table 8-8 Importance of Ecological Features

Ornithological Feature	Importance	Rationale
Outer Firth of Forth and St Andrews Bay Complex SPA	International	These sites have been selected, and legally protected, for their internationally important bird populations.
Loch of Lintrathen SPA and Ramsar site		
Firth of Tay and Eden Estuary SPA and Ramsar site		
Loch of Kinnordy SPA and Ramsar site		
Lapwing	Local	Although this species is in decline within the UK, it is widespread and relatively common in Scotland. Only a single territory was noted within proximity of the Site and it is therefore of Local significance.
Snipe	Local	Although this species is in decline within the UK, it is widespread and relatively common in Scotland. Only a single territory was noted within proximity of the Site and it is therefore of Local significance.
Black grouse	Local	Although this species is in decline within the UK, it is widespread and relatively common in Scotland. Consultation indicates only a small population is present within proximity of the Site and is therefore of Local significance.
Osprey	Regional	The osprey breeding population in Scotland is estimated to be between 250-300 pairs[26], meaning the single nest at Alyth Substation would represent well below 1% of the national population. Regional importance is therefore considered to be most appropriate.

26 https://www.nature.scot/plants-animals-and-fungi/birds/freshwater-birds/osprey#:~:text=There%20are%20now%20thought%20to,and%20parts%20of%20the%20north.

Construction Phase

Impacts on European Sites and Ramsar Sites

8.5.8 A detailed assessment of the potential impacts and effects of the Proposed Development on European sites, including: Outer Firth of Forth and St Andrews Bay Complex SPA; Loch of Lintrathen SPA; Firth of Tay and Eden Estuary SPA; and, Loch of Kinnordy SPA, is provided in the Statement to Inform Habitats Regulations Appraisal (Appendix 7.4 (Volume 4)). Although not specifically addressed in the latter document, Loch Lintrathen Ramsar site and Loch of Kinnordy Ramsar site underly the SPAs of the same name, and the assessment is thus applicable to these designations.

8.5.9 It was concluded in the Statement to Inform Habitats Regulations Appraisal that there would be no likely significant effects on the qualifying features of these European sites. In EIA terms, it is therefore concluded that there will be **Negligible effect** on European sites, and this is **Not Significant**.

Mitigation for European Sites

8.5.10 No mitigation is required in relation to European sites.

Residual Effects on European Sites

8.5.11 It is concluded in the Statement to Inform Habitats Regulations Appraisal that there will be no likely significant effects on the qualifying features of the European sites and therefore no likely significant effects on the integrity of any European site as a result of the construction of the Proposed Development. Adopting EcIA terminology, it is concluded that there will be **Negligible effect** on European sites from the construction of the Proposed Development, and this is **Not Significant.**

Impacts on Lapwing

8.5.12 During field survey, lapwing were recorded within the **500 m** survey buffer, at nearest, **100 m** from the Site east of the Balkello woodland. The nearest proposed works would involve upgrades to an existing road/track resulting in effectively no habitat loss and likely very limited disturbance, if any.

8.5.13 It is therefore concluded that there will be **Negligible effect** on lapwing from the construction of the Proposed Development, and this is **Not Significant**.

Impacts on Snipe

8.5.14 During field survey, snipe were recorded within the **500 m** survey buffer, at nearest, **115 m** from the Site. Due to the distance from the Site, it is anticipated that snipe will not be directly impacted or disturbed by the Proposed Development.

8.5.15 There may be a small amount of temporary suitable foraging habitat loss for this species but this will be insignificant. It is therefore concluded that there will be **Negligible effect** on snipe from the construction of the Proposed Development, and this is **Not Significant**.

Impacts on Black Grouse

8.5.16 Black grouse were not definitively recorded during the baseline surveys carried out in 2024. However, in the area around Scotston Hill, suitable habitat for this species exists, and anecdotal evidence was found that a lek may exist on Scotston Farm.

There may be a temporary minor loss of suitable habitat that black grouse could use to lek but the anecdotal evidence along with the lack of sightings during the targeted surveys suggest that they more often lek further north, outside of the Site. Assuming that construction works would commence at least one hour after sunrise in April and May, the birds could potentially still use the suitable lekking habitat within Scotston Farm at dawn and dusk. Even if deterred from this area by the construction activities during the day it is apparent that they could still utilise suitable habitat to the north of Scotston Hill for both foraging and lekking.

It is considered that the possibility of a temporary minor loss of suitable lekking habitat and possible chance of disturbance (although not during lekking hours), will have a **Negligible effect** on black grouse from the construction of the Proposed Development, and this is **Not Significant**.

Impacts on Osprey

Osprey were confirmed to nest in the vicinity of Alyth Substation in 2024. A pair of birds is understood to have nested at this location for multiple years, and successfully fledged chicks during the construction period of Alyth Substation. This species is known to be relatively tolerant of human activities[27] as evidenced by the fact that this pair nested despite the construction works taking place. The construction contractor for Alyth Substation implemented a Risk Assessment, with incorporated mitigation measures, to ensure that osprey nesting in this location were protected. This will be continued during the construction phase of the Proposed Development. With this, and considering the tolerance of this pair (and ospreys more generally) to human activities, it is considered very unlikely that there will be disturbance of nesting osprey and there will be **Negligible effect** on this species. This is **Not Significant**.

Cumulative Effects

8.5.17 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location[1] The assessment of cumulative effects has been carried out in the context of the Eastern Lowlands NHZ (NHZ 16). However, to assess every development in the whole of NHZ 16 would be impossible due to number of developments this would include and the lack of available data for many. This constraint is recognised by NatureScot[13].

8.5.18 A list of schemes for which cumulative assessment is therefore identified in Chapter 5: EIA Approach and Methodology, Section 5(Volume 2). The full list of schemes is not reproduced here, but those most important to ornithological features are considered those that are happening at the same time as this Proposed Development, and which are located within the local area to the Proposed Development. The key schemes for cumulative assessment for ornithology are therefore those set out in Table 8-9 and Table 8-10 and shown, indicatively, on Figure 5.1 (Volume 3).

27 https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance

Table 8-9 Interactive (intra) cumulative assessment for Associated SSEN Developments

Development	Ref. on Figure 5.1	Location	Description	Status	Residual Significant Effects (if known) / information from any available sources on likely significant effects	Cumulative Assessment	Additional Mitigation
Tealing -Westfield 275 kV OHL upgrade	A	Tealing-Westfield / Glenrothes	Upgrade of approximately **37 km** of an existing 275 kV OHL between Tower 182 (west of Tealing Substation) and the licence boundary with Scottish Power Energy Networks (SPEN) (Westfield/ Glenrothes) (midspan between Towers 66 and 65) to enable operation at 400 kV.	EIAR in preparation (alongside the EIAR for the Proposed Development	No significant residual effects.	No likely significant cumulative effects.	None.
Emmock (Tealing) substation	B	Near Emmock Road, Tealing	Construction of a new 400 kV substation in Tealing	Scoping Report submitted 2nd July 2024.	Not available.	The Scoping Report determined that effects on ecological receptors within and using the Site are anticipated and have some potential to be significant. However, in terms of cumulative effects, no likely impact pathways have been identified for European Sites as a result of this proposed development. There is potential significant effects from loss of habitat and habitat modification, or disturbance to lapwing as a result of this proposed development, though the habitats present are considered to have lower BTO wader sensitivity ratings. Negligible cumulative effects expected. Therefore, no likely significant effects.	None.

Development	Ref. on Figure 5.1	Location	Description	Status	Residual Significant Effects (if known) / information from any available sources on likely significant effects	Cumulative Assessment	Additional Mitigation
Kintore- Tealing 400 K Connection	C	Kintore-Tealing	Construction of a new 400 kV OHL between Kintore and Tealing.	In Preparation – no screening or scoping submitted.	Not available.	Information not available. However, avoidance and mitigation measures similar to those to be implemented by the Proposed Development will be implemented and no likely residual significant effects. Therefore, no likely significant cumulative effects.	None.
Alyth-Tealing and Tealing-Westfield OHL Tealing (Emmock) substation tie-ins and associated tower dismantling	D	Tealing	Construction of a new OHL originating at some point on the existing OHLfrom the Alyth-Tealing OHL between Tower 680 and Tower 682, as well as the Proposed Development between Tower 180 and Tower 182 (likely Tower 181), connecting to the new proposed Tealing (Emmock) substation. This will enable the removal of approximately **1.5 km** of redundant OHL between Towers 680/682 and the existing Tealing Substation	In Preparation – no screening or scoping submitted.	Not available.	Information not available. However, avoidance and mitigation measures similar to those to be implemented by the Proposed Development will be implemented and no likely residual significant effects. Therefore, no likely significant cumulative effects.	None.

Table 8-10 In-combination (inter) cumulative assessment for Other SSEN and 3rd Party Developments

Development	Ref. on Figure 5.1	Location	Description	Status	Residual Significant Effects (if known) / information from any available sources on likely significant effects	Cumulative Assessment	Additional Mitigation
Muir of Pert Energy Storage Facility	E	Muir of Pert Farm, Tealing, Dundee DD4 0QL	Energy storage facility up to 50 MW, compound of equipment, access, fencing, security cameras, landscaping, tree planting, demolition of derelict buildings and other associated works.	Proposal of Application (PAN) Approved Subject to Conditions 12th July 2023 and EIA Screening Request submitted and determined EIA Not Required 11th July 2023.	Not available.	No significant effects identified ithrough Screening Request, no likely significant cumulative effects.	None.
Moatmill Bridge Tealing Energy Storage Facility	F	Land at Moatmill Bridge, Tealing	Energy storage facility up to 50 MW, compound of equipment, meter building, fencing, security cameras, new belt of native trees and landscaping	PAN Approved Subject to Condition 3rd May 2023	Not available.	The proposed development site would measure around 3.8 ha and comprises agricultural land and therefore will likely be no significant cumulative effects.	None.
Tealing Solar Energy Park	G	Near Duntrune, DD4 0PR	Application for Installation of a solar energy park of approximately 100 MW and all associated infrastructure.	Application submitted 17th November 2023 EIA not required	The ecology documents submitted with this application do not refer to ornithology. However, solar farms generally have limited impacts on bid species, and habitat measures described in the Biodiversity Management Plan for this project are likely to benefit bird species.	No likely significant cumulative effects	None.

Development	Ref. on Figure 5.1	Location	Description	Status	Residual Significant Effects (if known) / information from any available sources on likely significant effects	Cumulative Assessment	Additional Mitigation
Tealing Battery Energy Storage Farm	H	Land to the north-east of Gagie Home Farm, Duntrune, DD4 OPR	Application for Installation of an 80 MW Battery Energy Storage Facility and associated infrastructure	Status: Application consented 13th December 2023	The Preliminary Ecological Appraisal Report for this project states that the site is of low value to birds and is likely to support only common and widespread species. A variety of habitat enhancement measures are proposed that will benefit bird species, including grassland/wildflower establishment, and planting of native shrubs and hedgerow.	No likely significant cumulative effects.	None.
Fithie Energy Park BESS	I	Land to the north-west of Tealing Substation	Construction and Operation of up to 1400 MW battery energy storage system (BESS) and associated infrastructure.	Screening Report submitted 23rd February 2024.		The closest Special Protection Areas are the Firth of Tay and the Eden Estuary, which are approximately **8 km** away. Pink-footed goose and greylag are the two qualifying species of relevance. Ornithological surveys are underway, however given the relatively small site area and a lack of ornithological interest features within the Site it is not considered likely that significant adverse effects will arise as a result of the proposed Development. No likely significant cumulative effects	None.

Development	Ref. on Figure 5.1	Location	Description	Status	Residual Significant Effects (if known) / information from any available sources on likely significant effects	Cumulative Assessment	Additional Mitigation
Ark Hill Wind Farm Extension	J	Approximately 2.5 km north-east of Alyth-Tealing	Extension of Ark Hill Wind Farm consisting of the erection of four wind turbines measuring a maximum height of **89.5 m** (to blade tip) with a rotor diameter of **71 m**, the formation of access tracks and associated hardstanding areas, set down areas, construction compound, electrical substation and borrow pit.	Application validated 21st October 2021, awaiting decision. EIA Required.	Ornithology - Published 28th September 2021	Due to the small size of the site, the habitat present and the ornithological survey results, it is considered that the integrity of qualifying species for the Loch of Lintrathen or Loch Kinnordy SPAs, within the specified distances as recommended by SNH would not be impacted upon. No likely significant cumulative effects.	None.
Balnuith Farm BESS (Tealing)	K	Balnuith Farm, Tealing, DD4 0RE	The construction and operation of a battery energy storage facility for the storage of up to a 249 MW of electricity together with associated infrastructure, substation, security fencing, CCTV, security lighting and landscaping.	Screening Opinion issued 6th September 2023.	Not available.	It is considered that potential disturbance is likely to arise during the construction phase; however, the operational phase is unlikely to create a level of disturbance greater than the disturbance from the current farming practices onsite. Given the agricultural use of the site, the location of the development, and the opportunity to create landscape features, provide landscape buffers and habitat improvements, it is not considered that any impacts would be significant in the context of the EIA regulations No significant effects identified ithrough Screening Request, no likely significant cumulative effects.	None.
Myreton BESS	L	Land to the south of Tealing Substation	A proposed battery energy storage system with an installed capacity of around 750 MW.	Screening Report submitted 22nd February 2024.	Not available.	It is considered that the potential environmental impacts of the proposed BESS on nearby 'sensitive areas,' would not	None.

Development	Ref. on Figure 5.1	Location	Description	Status	Residual Significant Effects (if known) / information from any available sources on likely significant effects	Cumulative Assessment	Additional Mitigation
						be 'significant', subject to the proposed assessments and mitigations set out in the screening report. No likely significant cumulative effects.	

8.5.19 During the appraisal process, the results of which are described in this chapter, there were no impacts identified that were considered likely to result in a residual effect of greater than Negligible effect.

8.5.20 All ornithological construction effects are considered likely to be Negligible with the specific black grouse mitigation outlined above in place and adhered to. There are no likely significant operational effects on ornithological features. As such, the Proposed Development offers no ornithological adverse effects with which there could be cumulative effects, either between aspects of the Proposed Development itself or with other plans or developments as listed in Table 8-9 and Table 8-10.

8.5.21 It is concluded that the Proposed Development has no likely significant effects either itself or cumulatively on ornithological receptors. This relies on the mitigation described in this chapter to avoid or minimise the risk on important ornithological features, and on the other developments which formed part of the cumulative assessment also doing the same (e.g. managed through project-specific CEMDs).

8.6 Enhancement

8.6.1 Planning policy 3a of National Planning Framework 4 (NPF) requires that all "*development proposals contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats and building and strengthening nature networks and the connections between them*".

8.6.2 Furthermore, policy 3b applies to EIA projects and states that these developments will "*only be supported where it can be demonstrated that the proposal will conserve, restore and enhance* [emphasis added] *biodiversity, including nature networks so that they are in a demonstrably better state than without intervention*".

8.6.3 NPF4 does not specify or require a particular assessment approach or methodology to be used in order to demonstrate that biodiversity will be in a better state post-development. However, the following criteria must all be met:

a) The proposal for enhancement must be "*based on an understanding of the existing characteristics of the site and its local, regional and national ecological context prior to development, including the presence of any irreplaceable habitats*;

b) Wherever feasible, nature-based solutions should be integrated and made best use of;

c) An assessment of potential negative effects [must be provided] which should be fully mitigated in line with the mitigation hierarchy prior to identifying enhancements;

d) Significant biodiversity enhancements [must be] provided, in addition to any proposed mitigation. This should include nature networks, linking to and strengthening habitat connectivity within and beyond the development, secured within a reasonable timescale and with reasonable certainty. Management arrangements for their long-term retention and monitoring should be included, where appropriate; and

e) *Local community benefits of the biodiversity and / or nature networks have been considered*."

8.6.4 As part of the Applicant's Sustainability Strategy, a commitment was made to deliver biodiversity net gain (BNG) from future projects. To support assessments of BNG, the Applicant developed their own metric, known as the 'SSEN Biodiversity Toolkit'. An assessment of BNG has therefore been carried out for the Proposed Development using the SSEN Biodiversity Toolkit. This is reported in the Biodiversity Net Gain Report (Appendix 7.6 (Volume 4).