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6. ORNITHOLOGY

6.1 Executive Summary

6.1.1 This Chapter details the assessment undertaken for the Rothes III (Elchies) Wind Farm Grid Connection, comprising approximately 24.3 km of 132 kV overhead line (OHL) between a location close to the Rothes III on-site substation and Blackhillock substation near Keith, hereafter referred to as the 'Proposed Development'.

6.1.2 Desk and field surveys were undertaken for identified receptors including sites designated for nature conservation interest (both statutory and non-statutory) and sensitive species according to best practice methodologies. An assessment of the potential effects of the Proposed Development on valued ornithological receptors is presented along with suggested measures to avoid or reduce any potential effects.

6.1.3 Three sites designated for nature conservation, with noted ornithological interests, have been identified within 10 km of the Proposed Development.

6.1.4 Surveys for breeding birds, black grouse, capercaillie and breeding raptors were undertaken during 2021 and additional surveys were undertaken to characterise flights from an identified osprey nest in 2022. No black grouse or capercaillie leks were identified during surveys. Surveys identified osprey (Schedule 1) breeding within proximity to the Proposed Development. Additional Vantage Point (VP) surveys were undertaken to characterise the flights of the pair as birds arrived at and departed from the nest site to determine potential risks to the birds through collision with the OHL. Breeding bird surveys identified a single crossbill (Schedule 1) breeding territory located within forestry near the location for the Rothes III Wind Farm on-site substation. No other Schedule 1 or Annex I species were identified with breeding territories within the Study Area. Several species of birds listed on the Birds of Conservation Concern (BoCC) Amber and Red Lists were found to have breeding territories within proximity to the Proposed Development:

- Red Listed: cuckoo, curlew, lapwing, linnet, mistle thrush, skylark, tree pipit and yellowhammer;
- Amber Listed: common sandpiper, dunnock, grey wagtail, meadow pipit, oystercatcher, reed bunting, song thrush, sedge warbler, wheatear, whitethroat, wren and willow warbler.

6.1.5 Mitigation measures to avoid potential disturbance to breeding birds include the adoption of a Species Protection Plan (SPP) for breeding birds, the development of a site-specific Construction Environmental Management Plan (CEMP) and the employment of an Environmental Clerk of Works (ECoW). The adoption of these mitigation measures will avoid any potential effects on ornithological receptors.

6.2 Introduction

6.2.1 This Chapter evaluates the importance of the ornithological nature conservation interests and the potential effects likely as a result of the Proposed Development. This Chapter outlines the methodologies used to assess potential effects on internationally and nationally protected sites and fauna (avian) both within the footprint of the Proposed Development and the surrounding area. It presents an assessment of the significance of potential impacts on sensitive ornithological receptors, along with suggested mitigation measures to avoid or reduce any effects, and an assessment of likely residual effects of the Proposed Development after mitigation measures have been implemented.

6.2.2 This assessment has been prepared by suitably qualified ecologists, Blairbeg Consulting Ltd, with relevant accreditations (MCIEEM).

6.3 Scope of Appraisal

6.3.1 This assessment is based on the description of the proposal as detailed in **Chapter 3: The Proposed Development** and shown on **Figure 3.1**. The Proposed Development consists of approximately 24.3 km of 132 kV OHL, commencing approximately south-east of Rothes III Wind Farm on-site substation and terminating approximately to the north-west of Blackhillock substation. At either end of the OHL route there will be a sealing end structure to transfer the OHL connection to UGC. To facilitate construction, upgrades to existing access tracks and existing access points, the construction of new access routes and permanent hardstanding areas will be required. Felling will be required in areas of woodland and commercial forestry for the safe operation of the OHL and to facilitate the construction of access tracks.

6.3.2 A 100 m LoD (50 m either side of the alignment) is sought to allow for micro-siting allowances during construction, as shown on **Figure 3.1**. A 30 m LoD is sought for the construction of new access tracks (also shown on **Figure 3.1)**.

6.3.3 The Study Area for this assessment covers approximately 1326 hectares (ha) along a 500 m wide corridor, incorporating all accessible land within 250 m of the centre line of the proposed OHL alignment, with slight increases in width where new access tracks associated with the Proposed Development are planned. Having regard to the LoD to account for micro-siting allowances, this results in a minimum survey buffer of 200 m from proposed infrastructure, with the exception of some areas around proposed new permanent access tracks, which were defined following the completion of surveys. The connection into Rothes III Wind Farm on-site substation and Blackhillock substation would be formed by UGC and would be undertaken under the Applicant's Permitted Development rights. As such these sections are not assessed within the main body of the EA. The potential effects of the UGC sections are considered within **Appendix 1.1.**

6.4 Consultation

6.4.1 The screening opinion received from the ECU in July 2022 determined that the Proposed Development does not constitute an EIA development and does not require a full EIA assessment report. **Table 6.1** below summarises the key points relevant to ecology raised through the screening process and also responses received from NatureScot following consultation undertaken at the alignment options stage.

Table 6.1: Summary of Consultation

Consultee	Consultee Response	Applicant Action
Energy Consents Unit (ECU)	No direct response relating to ornithology was given by ECU.	This chapter identifies all designated sites of relevance to ornithology within the vicinity of the Proposed Development. Sensitive ornithological receptors are identified and potential impacts arising from the Proposed Development upon these receptors are evaluated in **Section 6.7.** Embedded mitigation measures designed to minimise any effects of the Proposed Development on the identified sensitive ecological receptors are detailed in **Section 6.7**, with any further recommended mitigation included in **Section 6.8.**
NatureScot	The route crosses Hunt Hill an area of heathland, where black grouse and some upland wader species have been recorded recently. Hunt Hill also has an approved woodland creation scheme across it. There may be recent survey data available that might help inform an alignment.	Desk studies have been undertaken to identify birds likely to be present within proximity to the Proposed Development. Black grouse lek surveys and breeding bird surveys as described in **Section 6.5** have been undertaken to identify the locations of any sensitive bird species. Several breeding territories of birds listed on the BoCC Red and Amber Lists were found within the Study Area, a full list is provided in Table 6.6. Surveys did not identify any black grouse or capercaillie leks within 500 m of the Proposed Development. Crossbill (Schedule 1) were identified breeding within woodland in the Study Area. Osprey (Schedule 1) were identified breeding out with the Study Area but within proximity to the Proposed Development and are further discussed in Sections 6.6.5, 6.7 and 6.8.3.

6.5 Methodology

Desk Study

6.5.1 A desk study was undertaken to collate available ornithological information in relation to the Site and surrounding area. This comprised a search of publicly available online datasets and desk study resources for information on statutory and non-statutory designated sites, the presence of native woodland habitat and the distribution of species and habitats of conservation concern:

- Joint Nature Conservation (JNCC) website (https://www.jncc.gov.uk/);
- NatureScot Site Link website (https://sitelink.nature.scot/home);
- NatureScot Natural Spaces datasets (https://www.gateway.nature.scot/natural-spaces/datasets);
- Open source data from the National Biodiversity Network (https://nbnatlas.org/);
- Large-scale 1:10,000 Ordnance Survey (OS) maps in conjunction with colour 1:25,000 OS maps;
- North East Scotland Biodiversity Partnership (NESP) (https://www.nesbiodiversity.org.uk); and
- Scottish Biodiversity List (SBL) (https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop-15/scottish-biodiversity-list)

6.5.2 Further information on the nature conservation features that have potential to be affected by the Proposed Development was obtained through searches of relevant published literature (i.e. relevant guidance documents and scientific papers) and surveys undertaken for the Rothes III (Elchies) Wind Farm EIA[1].

Field Survey

Breeding Bird Survey (BBS)

6.5.1 Four breeding bird surveys were carried out during 2021 within accessible areas of the Study Area. The methodology for breeding bird surveys followed that detailed in NatureScots guidance (formerly SNH) 2017[2] and in Gilbert *et al.* 1998[3] and consisted of walking over the site to a distance of 100 m where access was allowed and recording all birds observed or heard within the Study Area. The following information was recorded for all birds heard or seen: location; species; number; behaviour and age / sex where possible. All registrations were mapped on 1:10,000 scale maps using British Trust for Ornithology (BTO) species codes. Visits were made in daylight hours and acceptable weather conditions. Survey dates were as follows:

- Visit 1: 24 – 27 April 2021;
- Visit 2: 20 – 23 May 2021;
- Visit 3: 21 – 24 June 2021; and
- Visit 4: 25 – 29 July 2021.

6.5.2 Population estimates of birds in the Study Area were derived by comparing the summary maps for each of the main seasonal survey periods. When compiling figures of breeding birds, the approximate central location of all registrations recorded from different visits is used to identify a notional territory centre. Birds displaying breeding behaviour within a territory during more than one visit were assessed as breeding. For species which can be under-recorded such as snipe, birds displaying breeding behaviours, or recorded within suitable breeding habitat during any visit were assessed as breeding.

Breeding Raptor

6.5.3 Three breeding raptor surveys were undertaken following species-specific methodologies as detailed in Hardey *et al*, 2013[4]. Surveys were undertaken using a combination of walkover and short vantage point watches over areas of suitable habitat within 1 km of the proposed alignment. Survey dates were as follows:

- Visit 1: 20 and 22 April 2021;
- Visit 2: 15 – 16 May 2021;
- Visit 3: 9 – 10 June 2021; and
- Visit 4: 18 – 19 July 2021.

Black Grouse and Capercaillie

6.5.4 Black grouse and capercaillie surveys were carried out following the guidance set out in Gilbert *et al*, 1998[3] and consisted of two visits to areas of suitable habitat within 500 m of the proposed alignment, once in April and once in May, between one hour before dawn and two hours after dawn to identify locations of displaying males (leks). The second visit aimed to count the maximum number of displaying males present at an identified lek location. Survey dates were as follows:

- Black grouse 18 – 19 April and 15 – 16 May 2021; and
- Capercaillie 29 – 30 April and 7 – 8 May 2021.

[1] Fred Olsen Renewables (2019) Rothes III Wind Farm Environmental Impact Assessment Report.

[2] Scottish Natural Heritage (2017) Recommended bird survey methods to inform impact assessments of onshore wind farms, Version 2. SNH Guidance. SNH, Battleby

[3] Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods. RSPB, Sandy

[4] Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013) Raptors: a field guide to survey and monitoring (3rd Edition). The Stationery Office, Edinburgh.

Osprey Flight Activity

6.5.5 During breeding raptor surveys undertaken in 2021 as described above, an osprey nest was located within proximity to the Proposed Development, but out with the Study Area. Due to the potential for osprey to utilise the River Spey for foraging, it was deemed appropriate that additional surveys should be undertaken to characterise the flights of ospreys breeding at this nest. A total of 36 hours of observation were completed between April and August 2022 from a Vantage Point (VP) location overlooking the nest site. The surveys followed standard VP guidance for onshore wind farms.[2]

6.5.6 Timings and weather details for field surveys are included in **Appendix 6.1**.

Assessment of Effects

6.5.7 The assessment of the significance of predicted impacts on ornithological receptors has been undertaken in accordance with the current guidance detailed by the CIEEM[5] and NatureScot[6] and is based on the value of a receptor and the nature and magnitude of the effect that the Proposed Development will have on it. Effects on biodiversity may be direct (e.g. habitat loss), or indirect (e.g. noise disturbance) on receptors located within or out with the Study Area.

Valuing Ornithological Receptors

6.5.8 It is impractical for an assessment to consider every species and habitat that may be affected, instead it should focus on valued ornithological receptors (VORs). CIEEM guidelines state that detailed assessment is not required for ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and that will remain viable and sustainable.

6.5.9 The value of an ornithological receptor is based on the sensitivity of a receptor on the basis of the geographical context described in **Table 6.2** below. The criteria are based on the conservation status of individual bird species and includes three main attributes:

- Schedule 1 species listed in the Wildlife and Countryside Act and Annex 1 species of the Birds Directive. Under this Directive the UK is committed to take 'the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitat for all species of naturally occurring birds in the wild state';
- Following a review of the status of all bird species in the UK, the country's leading non-governmental organisations agreed priorities for bird conservation, defined in the Birds of Conservation Concern (BoCC)[7]. Species listed on the Red list are species of high conservation concern, species whose population or range is in rapid decline, recently or historically and those of global conservation concern. Amber list species are those whose population is in a moderate decline, rare breeders, internationally importance and localised species, and those of an unfavourable conservation status in Europe; and
- UK Priority BAP species which have been identified as part of the UK biodiversity initiative.

6.5.10 The value of species' populations is assessed with reference to a combination of factors as described above, alongside professional judgement. Species' populations have been valued using the following scale: International, National, Regional, Local, Less than local. The approach taken in this assessment is that a species' population that is considered to be of Medium or greater importance in biodiversity conservation terms is considered to be a VOR. It is not considered that the Proposed Development will have a significant effect on receptors valued as less than Medium (e.g. Local and Less than local). Exceptions are made if the species population has been identified as having a high social or economic value or if the species is legally protected.

[5] CIEEM (2018, updated September 2019). Guidelines for ecological impact assessment in the United Kingdom. Winchester. Chartered Institute of Ecology and Environmental Management

[6] Scottish Natural Heritage (2016) Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. SNH Guidance, SNH, Battleby.

[7] Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021) *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747

Table 6.2: Scale of Value

Value of Receptor	Examples
International (Very High)	An internationally important site e.g. Special Protection Area (SPA), or a site proposed for, or considered worthy of such a designation. A regularly occurring substantial population of an internationally important species.
National (High)	Species present at nationally important numbers (>1% UK population) Ecologically sensitive species such as rare birds (<300 breeding pairs in the UK) A species listed under Schedule 1 of the Wildlife and Countryside Act (UK Government, 1981, as amended)[8] of Annex I of the Birds Directive (Council Directive 92/43/EEC)[9]
Regional (Medium)	Species present in regionally important numbers (>1% of the regional population) Species occurring within SPAs but not crucial to the integrity of the site.
Local (Low)	A regularly occurring, substantial population of a nationally scarce species, including species listed on the UK and Local BAPs e.g. skylark. Sites containing viable breeding populations of species known to be county rarities (e.g. included in the county BAP).
Less than Local (Very Low)	Undesignated sites, features of species considered to appreciably enrich the habitat resource within the immediate environs of the site. All other species that are widespread and common and which are not present in locally important numbers and which are considered to be of low conservation concern (e.g. UK BoCC Green List species).

Magnitude of Effect

6.5.11 Effects can be permanent or temporary; direct or indirect; adverse or beneficial. Effects can vary according to scales of size, extent, duration, timing and frequency of impacts. These factors are brought together to assess the magnitude of the effect on the 'conservation status' of the particular valued receptors, and on the 'integrity' of the habitats that support them:

- integrity is the coherence of the ecological structure and functions of a site or habitat that enables it to sustain its plant and animal communities and populations; and
- conservation status is the ability of species' community or population to maintain its distribution and / or extent / size.

6.5.12 Conservation status is therefore largely determined by the extent to which integrity is maintained. Wherever possible, the magnitude of the effect is quantified. Professional judgement is then used to assign the effects on the receptors to one of four classes of magnitude, as defined in **Table 6.3** below.

[8] Bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) - https://www.legislation.gov.uk/ukpga/1981/69/schedule/1

[9] Bird species listed on Annex I of the EC Directive of the Conservation of Wild Birds (Birds Directive) – http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm

Table 6.3: Magnitude of Effect

Magnitude	Definition
High	A permanent or long-term effect on the integrity of a site or conservation status of a habitat, species assemblage / community, population or group. If adverse, this is likely to threaten its sustainability; if beneficial, this is likely to enhance its conservation status.
Medium	A permanent or long-term effect on the integrity of a site or conservation status of a habitat, species assemblage / community, population or group. If adverse, this is unlikely to threaten its sustainability; if beneficial; this is likely to be sustainable but is unlikely to enhance its conservation status.
Low	A short-term but reversible effect on the integrity of a site or conservation status of a habitat, species assemblage / community, population or group that is within the range of variation normally experienced between years.
Negligible	A short-term but reversible effect on the integrity of a site or conservation status of a habitat, species assemblage / community population or group that is within the normal range of annual variation.

Significance of Effect

6.5.13 The significance of an effect is determined through a standard method of assessment based on professional judgement and available evidence, considering the sensitivity (nature conservation and conservation status) of the receptor and the characterisation of the impact, in a reasoned way.

6.5.14 **Table 6.4** below details the significance criteria that have been used in assessing the effects of the Proposed Development. Major and Moderate effects are considered significant.

Table 6.4: Significance Criteria

Significance of Effects	Definition
Major	Significant effect, as the impact is likely to result in a long term significant negative effect on the conservation status of the feature.
Moderate	Significant effect, as the impact is likely to result in a medium term or partially significant negative effect on the conservation status of the feature.
Minor	The impact is likely to have a negative effect on the feature at an insignificant level by virtue of its limited duration and/or extent, but there will probably be no effect on its conservation status. The level of effect would be Minor and Not Significant.
Negligible	No material effect. The effect is assessed to be Not Significant.

Issues Scoped Out

6.5.15 In line with current guidance from NatureScot[10], a generic collision risk modelling approach, typically carried out for wind farm developments, has not been undertaken as part of this assessment as this is considered to be less appropriate for assessing collision risk with overhead power lines. Instead, current guidance recommends that emphasis is put on mitigation where the assessment has indicated potential risks. Results of baseline surveys will be analysed to identify any hot-spots where mitigation may be required.

[10] Scottish Natural Heritage (2016) Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. SNH Guidance, SNH, Battleby.

Survey Limitations

6.5.16 Since the completion of surveys, indicative locations of construction access tracks have been provided, the majority of which are within the 500 m corridor of the Study Area however, some are located out with the Study Area, where bird surveys have not been undertaken. Due to the year to year changes in breeding bird distributions, prior to construction commencing a full suite of pre-construction surveys for breeding birds would be undertaken to update the ecological baseline of the area, which will cover all areas within 1 km from new infrastructure including access tracks to search for breeding raptors and 500 m for breeding waders and black grouse.

6.5.17 Access to arable fields were restricted at the time of survey to avoid disturbance to crops and livestock. Surveys were undertaken from field boundaries or from public roads.

6.6 Baseline Conditions

Desk Study

Statutory and Non-Statutory Designated Sites

6.6.1 **Figure 6.1** displays the location of any Special Protection Areas (SPA) and Sites of Special Scientific Interest (SSSI) designated for ornithological features within 10 km of the Proposed Development. A summary of citations of the designated sites within 10 km is provided in **Table 6.5.** No known non-statutory designated sites (such as local nature reserves) are present within 10 km.

Table 6.5: Sites of Nature Conservation within 10 km

Site Name	Distance from Proposed Development and Direction	Reason for Designation
Moray and Nairn Coast SPA	8.5 km north	Comprising the Culbin Bars, Findhorn Bay and Spey Bay which together form the easternmost estuarine component of the Moray Basin ecosystem. Qualifying breeding species: - Osprey (*Pandolin haliaetus*) Qualifying non-breeding species - bar-tailed godwit (*Limosa lapponica*); - pink-footed goose (*Anser brachyrhynchus*); - greylag goose (*Anser anser*); - redshank (*Tringa totanus*); - red-bresasted merganser (*Mergus serrator*); - dunlin (*Calidris alpina alpina*); - oystercatcher (*Haematopus ostralegus*); and - wigeon (*Anas penelope*).
Tips of Corsemaul and Tom Mor SPA and SSSI	9.3 km south	Covering two areas of moorland near the border between Moray and Aberdeenshire. Situated on the summits of two adjacent hills. Qualifying breeding interests: - common gull (*Larus canus*)
Gull Nest SSSI	1.5 km north	An area of approximately 250 ha of blanket bog located in the hills above Glenlatterach and Glen Rothes. Although not a notified feature of the site, breeding golden plover is recognised as being an important feature of the site.

Field Surveys

6.6.2 A total of 53 species were recorded during breeding bird surveys. The breeding bird survey recorded several species of conservation concern (SBL species and / or listed as Amber or Red in BoCC) considered to be breeding within the Study Area:

- Schedule 1: crossbill sp.;
- Annex I: golden plover;
- Red Listed: cuckoo, curlew, herring gull, house sparrow, lapwing, linnet, mistle thrush, skylark, tree pipit and yellowhammer;
- Amber Listed: common gull, common sandpiper, dunnock, grey wagtail kestrel, lesser black-backed gull, mallard, meadow pipit, oystercatcher, reed bunting, song thrush, sedge warbler, wheatear, whitethroat, woodpigeon, wren, willow warbler; and
- SBL species not already included above: bullfinch, siskin.

6.6.3 All breeding bird survey results are shown in **Table 6.6** and displayed on **Figure 6.2a-e**.

Table 6.6: Results of Breeding Bird Survey

Common Name	Number of Breeding Territories	Non-Breeding	Conservation Status
Blackbird	34	✓	n.a
Blackcap	6		n.a
Bullfinch	1		SBL
Blue tit	13		n.a
Buzzard	2		n.a
Carrion crow	n.a	✓	n.a
Chiffchaff	10		n.a
Chaffinch	51		n.a
Cuckoo	1		Red / SBL
Common gull	n.a	✓	Amber
Common sandpiper	1		Amber
Coal tit	19		n.a
Curlew	1		Red / SBL
Dunnock	3		Amber / SBL
Grey wagtail	1		Amber
Goldfinch	11		n.a
Golden plover	n.a	✓	Annex I / SBL
Great spotted woodpecker	2		n.a
Great tit	24		n.a
Grey heron	3		n.a
Herring gull	n.a	✓	Red / SBL
House sparrow	1	✓	Red listed / SBL
Jay	3		n.a
Jackdaw	n.a	✓	n.a
Kestrel	n.a	✓	Amber / SBL
Lapwing	1		Red
Lesser black-backed gull	n.a	✓	Amber
Linnet	4		Red / SBL
Long-tailed tit	8		n.a
Mistle thrush	5		Red
Mallard	1		Amber
Magpie	7		n.a

Common Name	Number of Breeding Territories	Non-Breeding	Conservation Status
Meadow pipit	20		Amber
Oystercatcher	2		Amber
Pheasant	3		n.a
Pied wagtail	3	✓	n.a
Robin	30		n.a
Reed bunting	6		Amber / SBL
Rook	n.a	✓	n.a
Skylark	22		Red listed / SBL
Siskin	17		SBL
Swallow	n.a	✓	n.a
Sand martin	6		n.a
Song thrush	4		Amber / SBL
Sedge warbler	5		Amber
Tree pipit	2		Red / SBL
Wheatear	1		Amber
Whitethroat	3		Amber
Woodpigeon	n.a	✓	Amber
Wren	5		Amber
Willow warbler	40		Amber
Crossbill sp.	1		Schedule 1
Yellowhammer	13		Red / SBL

Black Grouse and Capercaillie Surveys

6.6.4 No black grouse or capercaillie were recorded during surveys. The previously known lek site located approximately 1 km east of Hunt Hill did not have any lekking birds present during the visits.

Breeding Raptor Surveys

6.6.5 Breeding raptor surveys identified a breeding osprey territory in Sourden Woods. No other Schedule 1 raptor nests were identified during surveys. Overflying birds recorded during surveys, but not considered breeding included buzzard, kestrel and sparrowhawk.

Osprey Flight Activity Surveys

6.6.6 A total of 8 flights of osprey were recorded during flight activity surveys between May and July 2022, these are displayed on confidential **Figure 6.3**. All 8 flights were of single birds either flying toward or away from the identified nest site, with four flights crossing the proposed alignment. All flights were of birds flying above 20 m, with the majority flying above 40 m.

6.7 Potential Impacts

6.7.1 Based on the consultation responses and known environmental sensitivities, this assessment considers the following potential effects on ornithological receptors:

- damage to bird nests on or in the vicinity of the works;
- disturbance to the nests or young of species listed on Schedule 1 of the Wildlife and Countryside Act in the vicinity of works;
- the permanent or temporary displacement of birds during construction which may result from noise, lighting or vehicular movements. This effect may include affecting breeding, roosting and foraging behaviour of raptors, waders and wildfowl;
- the accidental mortality of birds due to collision resulting from contact with the pole structures and OHL.

6.7.2 The project construction method indicates that construction procedures would accommodate a number of measures designed to minimise impacts on ornithological receptors, including the development of a Construction Environmental Management Plan (CEMP) detailing measures to protect species and prevent pollution (see **Section 6.8**).

Statutory Designated Sites

6.7.3 Breeding osprey are a qualifying feature of the Moray and Nairn Coast SPA, located 8.5 km north of the Proposed Development. Osprey are known to have a core territory range of 10 km, with some regularly foraging up to 20 km from nest sites, meaning the pair nesting within proximity to the Proposed Development could be connected with the Moray and Nairn Coast SPA. Due to the connectivity with the SPA, osprey is considered a valued ornithological receptor of Very High (International) value. Without appropriate mitigation measures, the Proposed Development has potential to have an adverse effect on the osprey pair breeding within proximity to the site. Flightline monitoring indicate flights crossing the proposed alignment are infrequent and above collision height. Potential effects on osprey are through disturbance to the pair during the breeding season.

6.7.4 Breeding common gull are a qualifying feature of the Tips of Corsemaul and Tom Mor SPA and SSSI. Five flights totalling 9 birds were recorded overflying the Study Area during the course of breeding bird surveys. No indicative breeding behaviour was recorded. Given the low frequency of the qualifying species recorded within the Study Area, potential effects on the SPA/SSSI are likely to be negligible.

6.7.5 Golden plover is not a notified interest of Gull Nest SSSI, but they are recognised as an important bird found breeding within the designation. A single flight was recorded during the course of breeding bird surveys, with no indicative breeding behaviour recorded. Given the lack of evidence of breeding golden plover within the Study Area, potential effects on Gull Nest SSSI are likely to be negligible.

Species

6.7.6 As discussed above, osprey could be disturbed by the construction of the Proposed Development during the breeding season. Upgrades to access tracks would be the nearest construction works to the nest site, within approximately 700 m of the nest site. Disturbance distance for osprey is between 500 and 750m[11,12].

6.7.7 Crossbill are a Schedule 1 woodland species, an ornithological receptor of National (High) value. One breeding territory was identified during breeding bird surveys within the conifer plantation near the Rothes III Wind Farm on-site substation. Felling and construction activities related to the Proposed Development have the potential to impact nests of

[11] Ruddock, M. & Whitfield, D.P. (2007). A Review of Disturbance Distances in Selected Bird Species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage

[12] Goodship, N.M. & Furness, R.W. (MacArthur Green) Disturbance Distance Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283.

Crossbill, either through accidental destruction or, more likely, disturbance. Crossbill nest early in the year, hatching chicks in February and March, but have been known to breed year-round when there are good cone crops available[13].

6.7.8 Several territories of breeding Red and Amber listed species were identified within the Study Area. Red and Amber listed species are ornithological receptors of Local (Low) value. Felling and construction of the Proposed Development may result in damage or disturbance to bird nests if access occurs in spring.

6.7.9 The Applicant has developed Species Protection Plans (SPPs) for breeding birds, as detailed in **Appendix 3.2,** these, together with the mitigation measures set out in **Section 6.8** below will avoid any potential significant effects on breeding birds.

6.8 Mitigation

6.8.1 To limit and further minimise potential impacts on ornithological features within the Study Area, best practice mitigation measures as detailed below are proposed.

6.8.2 General mitigation measures:

- The Applicant has developed General Environmental Management Plans (GEMPs) and SPPs for construction works that may negatively impact upon breeding birds. The SPPs outline the procedures that must be followed where there is a potential for bird nests to be present. Each SPP outlines the responsibilities of SSEN Transmission and their Contractors, legislative protection for the bird species, best practice measures to follow and an approved methodology for carrying out certain mitigation activities. This suite of SPPs has been approved by NatureScot and would be adopted where relevant to the project. SSEN Transmission's SPPs are set out in **Appendix 3.2.**
- A CEMP would be developed by the successful Contractor detailing measures to manage, control and monitor the potential effects of noise, dust, litter, pollution and personnel / vehicular movements. Best practice pollution control measures, with reference to Guidance for Pollution Prevention (GPPs)[14] and COSHH guidelines[15], would be included in the CEMP. Particular reference would be made to managing handling, storage and use of hazardous chemicals and fuels used during the construction process. A detailed spill response plan would be developed as part of the CEMP and fully-briefed to all site operatives.
- An ECoW would be appointed, specifically to provide monitoring of construction activities relating to the installation of infrastructure. The ECoW would also identify and monitor sensitive receptors immediately prior to, during and immediately after the construction phase. The ECoW will have the authority to 'stop the job / activity' if a breach or potential breach of mitigation or legislation occurs.
- Pre-construction checks should be undertaken by a qualified ecologist / ornithologist to identify, and mitigate for, the presence of protected bird species and nests. Survey areas will be species specific and will include a buffer of 1 km from the Proposed Development to search for breeding raptors, and 500 m for breeding waders and gulls. To avoid accidental destruction of bird nests, all nests within proximity to works will be identified, marked and made known to contractors prior to works commencing
- Should a nest of any bird species be located during the course of construction activities, works will be stopped within 30 m of the nest and advice sought from a qualified ecologist / ornithologist, and if necessary local NatureScot staff.

[13] Summers, R. (2018) Foraging patterns of common crossbills (*Loxia curvirostra*) on spruces (*Picea spp.*) in Scotland. *Forestry* 91(4):444-450

[14] Guidance for Pollution Prevention (GPPs). NetRegs. Environmental guidance for your business in Northern Ireland and Scotland https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/

[15] Control of Substances Hazardous to Health (COSHH) https://www.hse.gov.uk/coshh/

6.8.3 Measures specific to osprey:

- Construction works would take place over a period of approximately 22 months and therefore it is not possible for all works to be undertaken out with the breeding bird season (late March to end of July inclusive). To avoid delays to construction, it is advised that the access track upgrade works which fall within the disturbance zone for the nest is undertaken out with the breeding season.
- Pre-construction checks should be undertaken for breeding birds within proximity to construction works by a qualified ecologist / ornithologist to identify and mitigate for the presence of protected bird species and nests. Survey areas will be species specific and will include a buffer of 1 km from the Proposed Development to search for breeding raptors, and 500 m for breeding waders and gulls. To avoid accidental destruction of bird nests, all nests within proximity to works will be identified, marked and made known to contractors prior to works commencing; and
- Should a nest of any bird species be located during the course of construction activities, works will be stopped within 30 m of the nest and advice sought from a qualified ecologist / ornithologist, and if necessary local NatureScot staff.

6.9 Summary

6.9.1 No significant effects (pre-mitigation) were identified. Nevertheless, good practice management measures have been identified, as detailed in **Section 6.8** above, to further avoid and reduce effects. The construction of the Proposed Development is not considered likely to have a significant effect on any ornithological features of significance or conservation importance. Any temporary disturbance to species resulting from the construction phase would be mitigated for by employing best practice methods to minimise potential effects.