

CHAPTER 9: ORNITHOLOGY

9.	ORNITHOLOGY	9-2
	Executive Summary	9-2
9.2	Introduction	9-3
9.3	Scope of Assessment	9-3
9.4	Legislation, Policy and Guidance	9-6
9.5	Methodology	9-6
9.6	Baseline Conditions	9-14
9.7	Embedded Mitigation/Mitigation by Design	9-17
9.8	Important Ornithological Features Scoped out of Further Assessment	9-18
9.9	Important Ornithological Features Taken Forward for Assessment	9-18
9.10	Potential Effects	9-18
9.11	Mitigation	9-22
9.12	Residual Effects	9-22
9.13	Summary and Conclusions	9-22

Figures (Volume 2 of this EIA Report)

There are no figures associated with this Chapter.

Technical Appendices (Volume 4 of this EIA Report)

Technical Appendix 9.1: Ornithological Technical Report

Technical Appendix 9.2: Habitats Regulations Appraisal for the West Inverness-shire Lochs Special Protection Area (SPA)

9. ORNITHOLOGY

Executive Summary

- 9.1.1 This Chapter considers the potential effects of the Proposed Development on ornithological features and reaches conclusions as to the predicted likely significant effects on ornithology.
- 9.1.2 Methods used to establish the bird species and populations present that may be affected by the Proposed Development as well as determine their Nature Conservation Importance are detailed within this Chapter. From here, either direct or indirect potential effects by the Proposed Development are detailed and the significance of these effects assessed.
- 9.1.3 Desk-based studies and a suite of field surveys were undertaken along the Proposed Development route, as well as established survey buffers to ascertain baseline conditions.
- 9.1.4 As a result of the desk studies and field surveys, it was possible to scope out several species from further assessment, including birds of high Nature Conservation Importance due to low levels of activity, distance from the Proposed Development and the nature and location of noted activity.
- 9.1.5 Four species were included in this assessment; Black-throated Diver, Common Scoter, Black Grouse and Crossbill. These species are considered to be of high Nature Conservation Importance due to their listing as Annex 1 species (Birds Directive) and Schedule 1 of the Wildlife and Countryside Act 1981 or as qualifying features of the West Inverness-shire Lochs Special Protection Area (SPA).
- 9.1.6 Habitat loss arising from the construction of the Proposed Development is unlikely to result in significant adverse effects upon any bird species. Displacement and disturbance impacts, as well as collision risk impacts are also likely to be negligible.
- 9.1.7 Mitigation in the form of bird flight diverters in sensitive areas and species-specific protection plans detailing working methods and disturbance buffers are proposed.
- 9.1.8 As the Proposed Development, in isolation, would have no adverse effect on the regional populations of bird species, cumulative effects of the Proposed Development with existing and planned developments in the area are considered to be unlikely to have a significant effect on existing bird populations.
- 9.1.9 Overall it is considered that the Proposed Development would not have a significant effect on ornithology under the terms of the EIA Regulations.
- 9.1.10 In order for the competent authority to assess the potential effects of the Proposed Development on the integrity of the West Inverness-shire Lochs SPA, information in the form of a shadow Habitat Regulations Assessment (HRA) has been undertaken. The information provided (in **Technical Appendix 9.2**) demonstrates that the Proposed Development would not have an adverse effect on the integrity of this SPA.

9.2 Introduction

9.2.1 This Chapter considers the potential effects, including cumulative effects, of the Proposed Development on ornithology during construction, operation, as well as the rerouting and dismantling of the existing 132 kV overhead lines (OHLs). As described in **Chapter 3: Project Description**, it is anticipated that the effects associated with the construction phase could be considered to be representative of worst-case decommissioning effects on ornithology. As such, a separate assessment of potential decommissioning effects is not included in this Chapter. Where likely significant effects are predicted during construction and operation, appropriate mitigation measures are proposed, and the significance of predicted residual effects are assessed.

9.2.2 This Chapter should also be read in conjunction with **Technical Appendix 9.1: Ornithological Technical Report** and **Technical Appendix 9.2: Habitats Regulations Appraisal for the West Inverness-shire Lochs Special Protection Area (SPA)**.

9.2.3 This assessment has been carried out by EnviroCentre Ltd. A table presenting relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in **Technical Appendix 4.1**, contained within Volume 4 of this EIA Report.

9.3 Scope of Assessment

Study Area

9.3.1 The study area encompasses the area over which all desk-based and field data were gathered to inform the assessment presented in this Chapter. The study area comprises the Proposed Development (plus a 500m buffer for Vantage Point Surveys), the open moorland habitat that the Proposed Development crosses, at around Creag a Chlamhain (plus a 50m buffer), Loch Lundie and shoreline, suitable Black Grouse lekking habitat within 1.5 km from the Proposed Development and suitable habitat ranging from 1 km to 6 km from the Proposed Development for selected raptor species. **Technical Appendix 9.1: Ornithological Technical Report** shows the study area for vantage point watches and moorland breeding bird surveys.

Consultation Responses

9.3.2 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. **Table 9.1** summarises the scoping and consultation responses relevant to ornithology and provides information on where and/or how points raised have been addressed in this assessment.

9.3.3 Further details on the consultation and scoping responses can be found in **Chapter 5: Scoping and Consultation**, and associated appendices.

Table 9.1: Consultation Responses

Consultee	Consultation Type	Response	Action
NatureScot	Pre-Application Advice 29 th November 2021	Advice provided on the survey and assessment methods required to inform the impact assessment, including the requirement for a Habitat Regulations Assessment. Advise that the corridor, route and alignment selection process for the overhead lines is informed by a detailed assessment of impacts including disturbance,	A full suite of surveys were undertaken between October 2021 and September 2022, including vantage point survey targeting the Special Protection Area (SPA) qualifying species. Findings have been used to inform site design. A shadow HRA has been prepared to assess potential impacts on the integrity of the West Inverness-

Consultee	Consultation Type	Response	Action
		displacement and collision risk to West Inverness-shire Lochs SPA qualifying species – Common Scoter and Black-throated Diver.	shire Lochs SPA (see Technical Appendix 9.2: Shadow HRA).
		Cumulative effects to be assessed given the proximity of other overhead line developments	Cumulative effects considered within the EIA chapter in paragraph 9.10.29.
	Route and Alignment Stage Consultation Advice 13 th September 2022	<p>Advice provided on the survey and assessment methods required to inform the impact assessment, including the requirement for a Habitat Regulations Assessment.</p> <p>Advise that the corridor, route and alignment selection process for the overhead lines is informed by a detailed assessment of impacts including disturbance, displacement and collision risk to West Inverness-shire Lochs SPA qualifying species – Common Scoter and Black-throated Diver.</p>	<p>A full suite of surveys were undertaken between October 2021 and September 2022, including vantage point survey targeting the Special Protection Area (SPA) qualifying species. Findings have been used to inform site design.</p> <p>A shadow HRA has been prepared to assess potential impacts on the integrity of the West Inverness-shire Lochs SPA (see Technical Appendix 9.2: Shadow HRA).</p>
		Cumulative effects to be assessed given the proximity of other overhead line developments.	Cumulative effects considered within paragraph 9.10.29 of this EIA Report.

Consultee	Consultation Type	Response	Action
	Scoping Response 17 th March 2023	Advise that there is the potential for a likely significant effect from disturbance, displacement and collision and a Habitats Regulations Assessment would need to consider all of these issues both for the proposal on its own and in combination with other projects.	A shadow HRA has been prepared to assess potential impacts on the integrity of the West Inverness-shire Lochs SPA (see Technical Appendix 9.2: Shadow HRA).
		Advise that applicant ensures that all survey methods have followed our Bird Survey Guidance. Also advise that the survey work also covers access routes so to identify any potential mitigation requirements.	A full suite of surveys were undertaken between October 2021 and September 2022, including vantage point survey targeting the Special Protection Area (SPA) qualifying species. Findings have been used to inform site design.
		Advise that an assessment of potential impacts through habitat loss/change, disturbance and/or displacement and collision risk to SPA and wider countryside birds will be required, including cumulative impacts.	Assessment on potential impacts are detailed in Section 9.10 of this EIA Report chapter.
		Mitigation options should be considered as part of the assessment process and recommended that they are included in the EIAR.	Proposed mitigation measures are included within Sections 9.7 and 9.11 of this EIA Report chapter.
		Expect the EIAR to include information on the importance of the Black Grouse leks identified in a local context and consider the potential for indirect effects due to	Impacts on Black Grouse are included in Section 9.10 of this EIA Report chapter.

Consultee	Consultation Type	Response	Action
		the changes to foraging and roosting habitat. Recommended that a 750 m buffer is applied around Black Grouse lek(s) during construction where no construction activity is allowed within this buffer (including vehicle movements along tracks) before 9am in the months of April and May	
Royal Society for the Protection of Birds (RSPB)	Route and Alignment Stage Consultation Advice 13 th July 2022	Consideration of flight lines for the SPA qualifying species – common scoter and black-throated diver in relation to the new OHLs. The critical areas are likely to be where the OHL crosses the gorge below the Garry dam and around Loch Lundie where the OHL will connect to a new sub-station. These areas are likely to include the main flight lines for divers and scoters on migration and in transit and therefore the OHL may present an unacceptable collision risk. It will be important to undertake surveys and data collection to fully assess this risk (including flights through the gorge itself). The route selection should be informed by the data collected.	A full suite of surveys were undertaken between October 2021 and September 2022, including vantage point survey targeting the SPA qualifying species. Findings have been used to inform site design. A shadow Habitats Regulations Appraisal has been prepared to assess potential impacts on the integrity of the West Inverness-shire SPA (see Technical Appendix 9.2: Shadow HRA).

9.4 Legislation, Policy and Guidance

9.4.1 The following legislation has been used to undertake this assessment:

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (The Habitats Directive);
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)
- Environmental Impact assessment (EIA) Directive (2014/52/EU) on assessing the potential effects of projects on the environment;
- Wildlife and Countryside Act 1981 (as amended) (WCA);
- The Nature Conservation (Scotland) Act 2004 (as amended); and
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal.

9.5 Methodology

Desk Study

9.5.1 A comprehensive desk study of published data was undertaken to inform the bird surveys in 2021 and 2022. The results of the desk study were used to identify if the Proposed Development could potentially impact upon

any notable or protected species; to inform the field survey; and to provide information to guide actions and priorities for any ecological mitigation and enhancement.

9.5.2 The 2021 and 2022 desk studies involved a search of the appropriate sources:

- NatureScot Sitelink website¹ for statutory designated sites within a 10 km radius (e.g. Special Protection Areas (SPA), Special Areas of Conservation (SAC), Sites Special of Scientific Interest (SSSI), Ramsar Sites, and non-statutory designated sites (e.g. Ancient Woodland, Local Nature Reserves and Sites of Importance for Nature Conservation);
- Royal Society for the Protection of Birds (RSPB)² and British Trust for Ornithology³ (BTO) websites;
- RSPB data request;
- Birds Of Scotland⁴;
- UK Biodiversity Action Plan (UKBAP)⁵;
- Scottish Biodiversity List (SBL)⁶; and
- A review of impact assessments for nearby projects, such as the Skye Reinforcement Project and the Coire Glas Pump Storage Scheme Project.

Field Survey

9.5.3 In order to fully assess the ornithological effects on site, a suite of surveys was undertaken between October 2021 and September 2022. These surveys are detailed below and described further in **Technical Appendix 9.1: Ornithological Technical Report**.

- Vantage Point Surveys – Were undertaken between 22nd October 2021 and 30th September 2022. A total of five vantage points were used to sufficiently cover the study area. A total of seventy-two hours were collected from each vantage point during the year long survey period, thirty-six hours between November 2021 and 31st March 2022 and thirty-six hours between April and end of September 2022; Vantage Point locations can be found in **Figure 9.2**.
- Moorland Breeding Bird Surveys – were undertaken across the open moorland habitats along the study area. Four surveys were undertaken between April and end of June 2022;
- waterbody searches – Loch Lundie was surveyed on three occasions between end of April and end of June 2022 to specifically search for Black-throated Diver and Common Scoter;
- Black Grouse Lek Surveys – Lek surveys were undertaken in suitable habitat within 1.5 km of the Proposed Development. Once suitable habitat was identified, three visits were undertaken between April and mid-May 2022; and
- Raptor Nest Searches – suitable habitat was searched for nesting raptors. Distances from the Proposed Development ranged from 1 km to 6 km for selected raptor species.

¹ NatureScot SiteLink website. Available at <https://sitelink.nature.scot/map> (Accessed 2021 & 2022)

² RSPB (2012). <http://www.rspb.org.uk/wildlife/birdguide/name>. (Accessed 2021 & 2022)

³ BTO (2012). <http://www.bto.org/about-birds/birdfacts/find-a-species>. (Accessed 2021 & 2022)

⁴ Forrester, R.W., Andrews I.J., McInerny C.J., Murray R.D., McGowan R.Y., Zonfrillo B., Betts M.W., Jardine D.W. & Grundy D.S. (eds). 2012. *The Birds of Scotland. Digital Version*. The Scottish Ornithologists Club, Aberlady.

⁵ UK Biodiversity Action Plan. Available at: <https://jncc.gov.uk/our-work/uk-bap/> (Accessed 2021 & 2022)

⁶ Scottish Biodiversity List. Available at: <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop15/scottish-biodiversity-list> (Accessed 2021 & 2022)

Assessment of Effects

- 9.5.4 The assessment of effect describes how the baseline conditions would change as a result of the project and its associated activities and from other developments. The term 'effect' is commonly used at the conclusion of the EIA process and is usually defined as the consequences for the receptor of an impact after mitigation measures have been taken into account. The EIA Regulations specifically require all likely significant effects to be considered. Therefore, impacts and effects are described separately and the effects for the important ornithological features (IOFs) are assessed as being either significant or not according to the importance and sensitivity of the IOF.
- 9.5.5 Significant cumulative effects can result from the individually insignificant but collectively significant effects of actions taking place over a period of time or concentrated in a location, for example:
- additive / incremental; and
 - associated / connected.

Geographic Importance

- 9.5.6 The importance of each species is determined through consideration of three factors. Firstly, its legal protection; secondly, its conservation status; and finally, the population size at the site as a percentage of the European and national population sizes.
- 9.5.7 These three factors are described in more detail below.

Legal Protection of Bird Species

- 9.5.8 Wild birds within the UK are protected under both European and national legislation. On a European scale, The Birds Directive, or European Directive 2009/147/EC (the codified version of EEC Directive 79/409/EEC as amended), relates to the conservation of all species of naturally occurring birds in the wild state. It covers the protection, management and control of these species and applies to birds, their eggs, nests and habitats.
- 9.5.9 It requires measures to be taken to address the factors that may affect the numbers of birds, namely, the repercussions of man's activities and, in particular, the destruction and pollution of their habitats, in order to maintain populations at a level that corresponds to ecological, scientific and cultural requirements. The Directive requires, in particular, that species mentioned in Annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. Those species that are the subject of special conservation measures under the Directive are referred to as Annex 1 species.
- 9.5.10 Part I of Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) lists those birds that are protected by special penalties at all times and provides the highest level of protection in the UK. Part II lists birds that are protected by special penalties during the close season. Those species that are protected by special penalties under the Act are referred to as Part I of Schedule 1, or Part II of Schedule 1 species.

Conservation Status of Bird Species

- 9.5.11 Wild birds may be listed as Priority Species in Biodiversity Action Plans at national (UK BAP) and local (LBAP) levels. These plans are non-statutory but aim to describe the biological diversity of the UK, and to set out detailed measures for their conservation, in order to contribute to fulfilling the UK's international and national obligations.
- 9.5.12 The global conservation status of birds is defined in the IUCN Red List Categories and Criteria. The general aim of this system is to provide an explicit, objective framework for the classification of species according to their extinction risk. This is the world's most comprehensive inventory of the global conservation status of

species and those categorised as Threatened may be further categorised on a decreasing scale as Critically Endangered, Endangered or Vulnerable.

- 9.5.13 Those species not considered as Threatened may be categorised as Near Threatened when close to qualifying, or if likely to qualify in the future. A species at the lowest level of threat is categorised as Least Concern, and widespread and abundant species are included in this category. When there is inadequate information to make an assessment, a species may be categorised as Data Deficient.
- 9.5.14 The European conservation status of birds is determined by Birdlife International in their European Red List of Birds, which identifies priority species in order that conservation action can be taken to improve their status taken from the IUCN Red List assessment of regional extinction risk. Such birds are described as European Red List of Birds Species (ERLOB).
- 9.5.15 The national conservation status of birds is determined by their listing on the Red, Amber and Green lists of Birds of Conservation Concern (BoCC), as defined by Eaton et al. The criteria used to assign a species to one of these lists reflect each species' global, European and UK status and measure the importance of the UK populations in international terms.
- 9.5.16 BoCC Red List species are either globally Threatened using IUCN criteria; have suffered a severe decline since 1800 without substantial recent recovery; have suffered a severe decline in breeding or non-breeding population of more than 50 % over 25 years; or suffered a severe decline in breeding range of more than 50 %, measured by birds present in 10 km squares, over 25 years.
- 9.5.17 BoCC Amber List species must have been identified as an ERLOB; or have been Red listed for historical decline in a previous review, but with a substantial recent recovery; or have a moderate (25 %-50 %) decline in breeding or non-breeding populations or breeding range over the past 25 years; or have a UK breeding population of fewer than 300 pairs, non-breeding population of fewer than 900 individuals; or have at least 50 % of the UK breeding or non-breeding population found in 10 or fewer sites; or be species of international importance with at least 20 % of the European breeding or non-breeding population found in the UK.
- 9.5.18 BoCC Green List species comprise all regularly occurring species that do not qualify under any of the Red or Amber criteria. The Green list also includes those species listed as recovering from historical decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Population Size at the Site

- 9.5.19 To establish the importance of the population size at the site, the size of the European and national populations need to be estimated. In determining the size of the UK population, reference is made to the websites of three organisations: the RSPB², the British Trust for Ornithology (BTO)³ and the Joint Nature Conservation Committee (JNCC)⁷. Scottish populations are determined using The Birds of Scotland⁴. Where there is variation between the estimates provided by these organisations, the range of estimates is provided.
- 9.5.20 **Table 9.2** shows a procedure for determining the geographical level of importance of bird species. Where a feature is important at more than one level in the table, its overriding importance is that of the highest level. Usually only the highest level of legal protection is listed.

Table 9.2: Geographical Level of Importance of Bird Species

⁷ <https://jncc.gov.uk/>

Level of Importance	Legal Protection	Conservation Status	Population Size
International	Any species within Annex 1 of the EU Birds Directive	Any species which is listed as Critically Endangered or Endangered on the IUCN Red List	Supporting greater than 1% of the EC population
National (UK)	Any species within Schedule 1 of the Wildlife and Countryside Act	Any species that is listed as a Priority Species in the UKBAP; any species on the BoCC Red List	Supporting greater than 1% of the UK population
National (Scotland)		Any species on the Scottish Biodiversity List	Supporting greater than 5% of the Scottish population
Regional		Any species on the BoCC Amber List	Supporting greater than 0.5% of the UK population
County		Any species that is listed as a Priority Species in the LBAP	Supporting greater than 0.05% of the UK population
Local		BoCC Green List; or species with no conservation concern; common and widespread throughout the UK	Supporting less than 0.05% of the UK population

Magnitude of Effect

9.5.21 The CIEEM guidance states that when describing changes/activities and positive or negative impacts on ecosystem structure and function, reference should be made to the following parameters:

- magnitude;
- extent;
- duration;
- reversibility; and
- timing and frequency.

9.5.22 **Magnitude:** refers to the size, amount, intensity and volume of an impact, determined on a quantitative basis if possible, but typically expressed in terms of relative severity, such as major, moderate, low or negligible. Extent, duration, reversibility, timing and frequency of the impact can be assessed separately but they tie in to determine the overall magnitude.

9.5.23 **Extent:** the area of which the impact occurs. When the important feature is the habitat itself, magnitude and extent may be synonymous.

9.5.24 **Duration:** the time for which the impact is expected to last prior to recovery or replacement of the IOF. This is defined in relation to ornithological characteristics, rather than human timeframes. The duration of an activity may differ from the duration of the resulting impact caused by the activity and this is taken into account.

9.5.25 **Reversibility:** an irreversible (permanent) impact is one from which recovery is not possible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A reversible (temporary) impact is one from which spontaneous recovery is possible or for which effective mitigation is possible and an enforceable commitment has been made.

9.5.26 Timing and frequency: the number of times an activity occurs will influence the resulting impact. The timing of an activity or change may cause an impact if it happens to coincide with critical life-stages or seasons.

9.5.27 Criteria for describing the magnitude of an impact are presented in **Table 9.3** below:

Table 9.3: Magnitude Criteria

Magnitude	Description
Major	Total or major loss or alteration to the IOF, such that it will be fundamentally changed and may be lost from the site altogether; and/or loss of a very high or high proportion of the known population or range of the IOF.
Moderate	Loss or alteration to the IOF, such that it will be partially changed; and/or loss of a moderate proportion of the known population or range of the IOF.
Low	Minor shift away from the existing or predicted future baseline conditions. Change arising from the loss or alteration will be discernible but the condition of the IOF will be similar to the pre-development conditions; and/or having a minor impact on the known population or range of the IOF.
Negligible	Very slight change from the existing or predicted future baseline conditions. Change barely discernible, approximating to the 'no change' situation; and/or having a negligible impact on the known population or range of the IOF.

Significance of Effect

9.5.28 Significance is a concept related to the weight that is attached to effects when decisions are made. For the purposes of EclA, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for IOFs. In broad terms, significant effects encompass effects on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).

9.5.29 Significant effects are quantified with reference to an appropriate geographic scale (see **Table 9.2** above). The CIEEM guidance has one 'level of importance' and a geographical 'scale of significance'. This is to deal with the fact that the geographical scale at which the effect is significant is not necessarily the same as the geographic level of importance of the IOF.

9.5.30 A sensitivity scale is used to determine the significance of effects, as shown in **Table 9.4**:

Table 9.4: Sensitivity Scale

Term	Definition
High	Tolerance: The IOF has a very limited tolerance of the effect. Adaptability: The IOF is unable to adapt to the effect. Recoverability: The IOF is unable to recover, resulting in permanent or long-term (>10 years) change.

Term	Definition
Medium	Tolerance: The IOF has limited tolerance of the effect. Adaptability: The IOF has limited ability to adapt to the effect. Recoverability: The IOF is able to recover to an acceptable status over the medium term (5-10 years).
Low	Tolerance: The IOF has some tolerance of the effect. Adaptability: The IOF has some ability to adapt to the effect. Recoverability: The IOF is able to recover to an acceptable status over the short-term (1-5 years).
Negligible	Tolerance: The IOF is generally tolerant of the effect. Adaptability: The IOF can completely adapt to the effect with no detectable changes. Recoverability: The IOF is able to recover to an acceptable status near instantaneously (<1 year).

9.5.31 Each effect is evaluated and classified as either significant (major or moderate) or not significant (minor or negligible). If changes to the conservation status of regional population of IOFs are evaluated during the assessment process, these are considered significant in terms of EIA (ie. major or moderate significance). No significant effects include all those which are likely to result in minor (small to barely detectable) or negligible (non-detectable) changes in the conservation status of regional (and therefore national) populations. **Table 9.5** details the significance criteria.

Table 9.5: Significance Criteria

Magnitude	Definition
Major	Detectable changes in the regional population of IOF, with a severe impact on conservation status.
Moderate	Detectable changes in the regional population of IOF, with an impact on conservation status.
Low	Small or barely detectable change in regional population of IOF that will be unlikely to have an impact on conservation status.
Negligible	No detectable change in conservation status of regional population of IOF.

Assessment Criteria - Confidence in Predictions

9.5.32 CIEEM does not cover levels of confidence in predictions adequately, therefore an approach has been adopted whereby a simple, qualitative index based on professional judgement is assigned to each predicted effect as follows:

- A: high confidence.
- B: intermediate confidence.
- C: low confidence.

9.5.33 Factors influencing confidence include:

- the frequency and effort of field sampling;
- constraints to the field survey;
- the completeness of the data (field and desk);
- the age of the data (although recent data are not necessarily always more reliable than old data);
- the state of scientific knowledge relating to the predicted effects of development activities on the IOF (the accuracy of the magnitude assessment); and
- the accuracy of the assessment of significance.

Assessment Criteria – Success of Mitigation

9.5.34 The word 'mitigation' has developed a wider meaning and common usage in environmental assessment than its strict meaning related to reducing the severity of something. Mitigation can sometimes be used as a generic term for a wide range of counter-acting measures, all of which, as the Directive and Regulations prescribe, are intended to prevent, reduce and where possible offset any significant adverse effect on the environment. Mitigation can be used to encompass measures intended to avoid, minimise or compensate for adverse effects (this is the 'mitigation hierarchy').

9.5.35 Mitigation and compensation measures often carry a degree of uncertainty. Uncertainty associated with a design will vary according to a number of factors, such as:

- the technical feasibility of what is proposed;
- the overall quantity of what is proposed;
- the overall quality of what is proposed;
- the level of commitment provided to achieve what is proposed;
- the provision of long-term management; and
- the timescale for predicted benefits.

9.5.36 The following objective scale is used for the success of mitigation:

- certain/near certain: probability estimated at 95 % chance or higher.
- probable: probability estimated above 50 % but below 95 %.
- unlikely: probability estimated above 5 % but less than 50 %.
- extremely unlikely: probability estimated at less than 5 %.

Assessment Limitations

9.5.37 The available information on bird populations at the Natural Heritage Zone (NHZ) and regional level is limited, and available information on the results of monitoring, mitigation and enhancement work at other existing and proposed developments is sparse. Therefore, as is standard with these assessments, use is necessarily made of the available literature and professional judgement to inform the assessment.

9.5.38 Unlike for wind turbines there are no defined methods for modelling an estimation of collision risk for birds and OHLs. Bespoke methods are beset with issues and inevitably rely on the inclusion of an avoidance rate which is most often derived from non-empirical data. In line with current guidance from NatureScot, emphasis is put on

mitigation where the assessment has indicated potential risks. Results of baseline surveys have been analysed to identify any 'hot-spots' of flight activity where mitigation may be required.

9.6 Baseline Conditions

Existing Baseline

Designated Sites

- 9.6.1 Loch Lundie, which lies approximately 450 m from the Proposed Development, is the most easterly component loch of the West Inverness-shire Lochs SPA complex.
- 9.6.2 West Inverness-shire Lochs SPA consists of Lochs Affric, Cluanie, Loyne (including Lochan Bad an Losguinn), Garry (including Loch Poulary), Lundie and Blair. For the most part, the site includes the habitats ten metres landward of the lochs' shorelines.
- 9.6.3 West Inverness-shire Lochs SPA qualifies under Article 4.1 by regularly supporting a population of European Importance of the Annex 1 species Black-throated Diver (*Gavia arctica*) (average number between 1990 and 2005 – 6.6 pairs, 3.4 % of the maximum estimate of the GB population of 189 pairs).
- 9.6.4 West Inverness-shire Lochs SPA also qualifies under Article 4.2 by regularly supporting a population of European importance of the migratory species Common Scoter (*Melanitta nigra*) (average number between 1994-2000 and 2004-2005 – 7.8 pairs, 8.2 % of the GB population of 95 pairs).

Bird Species

- 9.6.5 A total of fifty-five bird species were recorded during the suite of surveys undertaken within the study area, plus ad-hoc sightings.
- 9.6.6 Seven of the species recorded are either included on Annex 1 of the Birds Directive or within Schedule 1 Part 1 of the Wildlife and Countryside Act 1981, and thus are afforded maximum protection under either European or national legislation:
- Osprey (*Pandion haliaetus*) and Peregrine (*Falco peregrinus*) are included in both Annex 1 and Schedule 1;
 - Common Crossbill (*Loxia curvirostra*) and Greenshank (*Tringa nebularia*) is included on Schedule 1; and
 - Golden Eagle (*Aquila chrysaetos*), Hen Harrier (*Circus cyaneus*) and Red Kite (*Milvus milvus*) are included in both Annex 1 and Schedule 1 and are three of the four species found within the UK which are afforded further protection at all times of year through their inclusion on Schedule 1A and/ or Schedule A1.
- 9.6.7 Five of the species recorded are included as Priority Species on the UKBAP and therefore on the Scottish Biodiversity List:
- Hen Harrier;
 - Skylark (*Alauda arvensis*);
 - Cuckoo (*Cuculus canorus*);
 - Herring Gull (*Larus argentatus*); and
 - Song Thrush (*Turdus philomelos*).
- 9.6.8 In addition to the above, 12 further species appear on the Scottish Biodiversity List:
- Golden Eagle,

- Red Kite;
- Osprey;
- Peregrine;
- Kestrel (*Falco tinnunculus*);
- Black Grouse (*Tetrao tetrix*);
- Hooded Crow (*Corvus cornix*);
- Lesser Redpoll (*Acanthis cabaret*);
- Linnet (*Linaria cannabina*);
- Siskin (*Spinus spinus*);
- Reed Bunting (*Emberiza schoeniclus*); and
- Redwing (*Turdus iliacus*).

9.6.9 Ten of the species recorded have been placed on the Red List of the BoCC:

- Hen Harrier and Black Grouse have suffered historical declines;
- Kittiwake (*Rissa tridactyla*), Cuckoo, Skylark, Linnet, Lesser Redpoll, Fieldfare (*Turdus pilaris*) and Mistle Thrush (*Turdus viscivorus*) have all suffered severe breeding population declines over 25 years/ longer term. Fieldfare is also a rare breeding bird in the UK. And Kittiwake is an ERLOB (European red list status); and
- Herring Gull has suffered a severe breeding population decline over the last 25 years/longer term as well as a severe decline in non-breeding populations.

9.6.10 Twenty-one of the species recorded have been placed on the Amber List of the BoCC:

- Common Snipe (*Gallinago gallinago*) is threatened in Europe and has also suffered moderate breeding range and non-breeding population declines;
- Osprey is recovering from historical declines and is a breeding rarity;
- Greenshank (*Tringa nebularia*) and Redwing are both breeding rarities;
- Common Sandpiper (*Actitis hypoleucos*), Song Thrush, Dunnock (*Prunella vulgaris*), Kestrel, Sparrowhawk (*Accipiter nisus*), Willow Warbler (*Phylloscopus trochilus*), Wheatear (*Oenanthe oenanthe*), Meadow Pipit (*Anthus pratensis*), and Reed Bunting have all suffered moderate breeding population declines (Song Thrush has recently been downgraded from Red listing, but Sparrowhawk has been upgraded from Green);
- Woodpigeon (*Columba palumbus*), and Wren (*Troglodytes troglodytes*) all have UK breeding populations of international importance (Wren has recently been upgraded from Green listing);
- Greylag Goose (*Anser anser*), Eurasian Teal (*Anas crecca*) and Mallard (*Anas platyrhynchos*) have both suffered moderate non-breeding population declines, and the UK non-breeding population of all three species are also of international importance; and
- The UK non-breeding population of Pink-footed Goose (*Anser brachyrhynchus*) Common Gull (*Larus canus*) is of international importance.

Sensitive Bird Species Summaries

Golden Eagle

9.6.11 Over the course of 360 hours of Vantage Point Surveys (October 2021 through to September 2022), only six flightlines were recorded within the Proposed Development Survey Area, totalling 1248 seconds of flight time. An adult was recorded flying high west over VP4 on 6th December 2021, an adult flying high west over the Fort Augustus substation from VP5 and an adult and a juvenile were recorded from VP2, to the south of the Proposed Development on 15th April 2022. Of the 1248 seconds of flight time observed, only 30 seconds were

below 60 m, considered to be within the risk window for collision. None of these were within the Proposed Development footprint.

- 9.6.12 No Golden Eagle nest sites were recorded within 1 km of the Proposed Development. The nearest known nest site is located approximately 4 km away.

Hen Harrier

- 9.6.13 Over the course of 360 hours of Vantage Point Surveys (October 2021 through to September 2022), only one flightline was recorded within the Proposed Development Survey Area. This comprised a ringtail to the west of Loch Lundie on 14th January 2022, approximately 800 m from the Proposed Development footprint.

- 9.6.14 No Hen Harrier nest sites were recorded within 1 km of the Proposed Development.

Red Kite

- 9.6.15 One Red Kite flightline was recorded over the course of the Vantage Point survey period, a bird recorded from VP5 to the east of the Caledonian Canal on 17th March 2022, approximately 1 km from the Proposed Development footprint.

- 9.6.16 No Red Kite nest sites were recorded within 1 km of the Proposed Development.

Osprey

- 9.6.17 Over the course of 360 hours of Vantage Point Surveys (October 2021 through to September 2022), only two flightlines were recorded within the Proposed Development Survey Area. These comprised a single bird foraging along the west side of Loch Lundie in June 2022, well away from the Proposed Development footprint.

- 9.6.18 No Osprey nest sites were recorded within 1 km of the Proposed Development. The nearest known nest site is located approximately 3 km away.

Peregrine

- 9.6.19 One Peregrine flightline was recorded over the course of the Vantage Point survey period, a bird recorded from VP5 to the east of the Caledonian Canal on 19th January 2022, well away from the Proposed Development footprint.

- 9.6.20 No Peregrine nest sites were recorded within 1 km of the Proposed Development.

Black-throated Diver

- 9.6.21 No Black-throated Divers were recorded during the Vantage Point Surveys. No divers were recorded during loch searches at Loch Lundie. Information received from the RSPB indicated the presence of a pair of Black-throated Diver on Loch Lundie on 24th May 2022. However, these birds were not present on the loch prior to and after this date, indicating that this was an early failed breeding pair, or non-breeding pair from elsewhere within the SPA complex. Divers were also present on Loch Lundie in 2021.

Common Scoter

- 9.6.22 No Common Scoter were recorded during the Vantage Point Surveys. No scoters were recorded during loch searches at Loch Lundie. Information received from the RSPB also confirmed the absence of scoters at Loch Lundie in 2022.

Greenshank

9.6.23 A single bird was recorded in May 2022 along the shoreline at Loch Lundie in May 2022. However, it was not subsequently seen and confirmation of breeding (successful or otherwise) could not be ascertained. The record from May 2022 was approximately 600m from the Proposed Development.

Black Grouse

9.6.24 A lek site, consisting of three males, was recorded on the west side of Loch Lundie, approximately 1 km from the Proposed Development. No nests were recorded within the survey area.

Crossbill

9.6.25 No targeted Crossbill surveys were undertaken for the Proposed Development, but birds were frequently recorded throughout the survey period and do breed within the forest areas within and in the vicinity of the Proposed Development.

Future Baseline

9.6.26 Provided the existing land-management of the area continues as at present, changes in the bird population during the medium to long-term are likely to be typical of those associated with areas of commercial plantation forest, open moorland, waterbodies, open rough grazing and enclosed farmland.

Climate Change

9.6.27 It is now generally agreed that Climate Change projections suggests that Scotland will experience hotter and drier summer months (June to August), along with warmer and wetter winter conditions (December to February).

9.6.28 Changes to climate may have the following implications:

- More rainfall in spring/early summer could result in reduced invertebrates and increased energy expenditure for birds finding food;
- More rainfall could result in ground nesting birds being subjected to egg chilling; and
- Warmer summer weather could improve the nesting conditions for a variety of species.

9.7 Embedded Mitigation/Mitigation by Design

9.7.1 The assessment has been undertaken in the knowledge that a Bird Protection Plan (BPP), devised in consultation with NatureScot, would be in place prior to the onset of construction and dismantling activities (see **Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**, which includes the Applicants bird SPP). The overall BPP and the species-specific plans in place for certain species would describe the survey methods for the identification of sites used by protected birds and details protocols for the prevention, or minimisation, of disturbance to birds as a result of activities associated with the Proposed Development. The BPP would be overseen by the Ecological Clerk of Works (ECoW).

9.7.2 The BPP would also describe the surveys to locate the nests or other key sites (e.g. roosts) of birds listed in Schedules 1 and 1A of the Wildlife and Countryside Act 1981, in advance of construction and dismantling works progressing. In the event that an active nest or roost of a Schedule 1 or Schedule 1A species is discovered within distances given by Ruddock & Whitfield (2007) (or within a 500 m radius of the nest for Schedule 1 species not listed), a disturbance risk assessment would be prepared under the BPP and any measures considered necessary to safeguard the breeding attempt or roost (e.g., exclusion zones or restrictions on timing of works), would be submitted to NatureScot for agreement before recommencing work. Similarly, although the species is not listed on Schedule 1, surveys to locate Black Grouse lek sites would be undertaken and appropriate measures to safeguard relevant lek sites would be agreed with NatureScot and included within the BPP. Standard forestry guidance would be followed in the case of tree felling operations.

9.8 Important Ornithological Features Scoped out of Further Assessment

9.8.1 On the basis of the field surveys undertaken, the professional judgement of the chapter authors and experience on similar infrastructure projects, a number of species have been scoped out of the assessment. Following consideration of the potential for the Proposed Development to give rise to significant effects on relevant ornithological features, it has been considered that significant effects are unlikely. These species are detailed below:

- raptors (Golden Eagle, Hen Harrier, Red Kite, Osprey, Peregrine, Kestrel and Sparrowhawk);
- wildfowl;
- gulls;
- waders; and
- passerines (excluding Crossbill).

9.8.2 These species were recorded during the baseline surveys, however they were either recorded very infrequently (in the case of raptors species), in small numbers or recorded a distance away from the vicinity of the Proposed Development.

9.8.3 The reliance of these species on the habitats and airspace present in the vicinity of the Proposed Development is considered to be very low and there would be negligible effects on relevant populations of these species or species groups as a result of the Proposed Development. In addition, given the regional abundance and behavioural sensitivity of some of these species or species groups, there is considered to be no significant adverse effect on regional populations as a result of the construction and operation of the Proposed Development.

9.9 Important Ornithological Features Taken Forward for Assessment

The IOFs taken forward for assessment are as follows:

- Black-throated Diver (as qualifying species of West Inverness-shire Lochs SPA) – International importance;
- Common Scoter (as qualifying species of West Inverness-shire Lochs SPA) – International importance;
- Black Grouse – National (Scotland) importance; and
- Crossbill – National (UK) importance.

9.10 Potential Effects

9.10.1 This section considers the potential impacts and associated effect significance of the construction, rerouting and dismantling of the existing 132kV OHL to the south and east of Loch Lundie and operation of the Proposed Development based on the typical activities described in **Chapter 3: Project Description**.

Construction Effects

9.10.2 Potential effects on the ornithological features to be assessed associated with the construction and/or operation of the Proposed Development are:

- loss of habitat and habitat modification – The loss of critical habitats due to land take for infrastructure and habitat modification changes due to changes in land management may occur. This includes the restructuring of forest habitats due to proposed felling works to accommodate the Proposed Development. Changes may be temporary or long-term. In terms of felling works, the Proposed Development is predicted to result in the total direct and gross loss of 65.82 ha of forestry and woodland; this includes 58.18 ha of commercial woodland removal and 7.64 ha of ancient and semi

natural native woodland removal, due to the requirement to create an Operational Corridor (OC) for the construction and safe operation of the proposed OHL, including the creation of access tracks. See **Chapter 14: Forestry and Technical Appendix 14.1: Woodland Reports (Volume 4)** for a detailed breakdown.

- disturbance/displacement – Disturbance of breeding birds, roosting birds (particularly during winter) and displacement of feeding/foraging birds in suitable habitats may occur, primarily during construction works and dismantling of the existing OHL. Temporary disturbance of breeding birds is likely to result from activities associated with people and machines in the vicinity of the Proposed Development.

West Inverness-shore Lochs SPA

Black-throated Diver

9.10.3 Information received from the RSPB indicated the presence of a pair of Black-throated Diver on Loch Lundie on 24th May 2022. However, these birds were not present on the loch prior to or after this date, indicating that this was an early failed breeding pair from elsewhere within the SPA complex. Black-throated Diver are known to nest regularly on Loch Garry, predominately the western half of the loch.

Common Scoter

9.10.4 During the field surveys undertaken during the breeding period in 2022, no Common Scoter were present on Loch Lundie. Data obtained from the RSPB also showed that no Common Scoter were present on Loch Lundie during their visit on 24th May 2022. However, a single bird was recorded on a visit on 17th May 2021. Common Scoter are known to nest regularly on Loch Garry, predominately the western half of the loch.

9.10.5 As described in the Habitats Regulations Appraisal (**Technical Appendix 9:2**), and as detailed in the Embedded Mitigation Measures in Section 9.7, any Black-throated Diver and Common Scoter nests identified within 750 m of the Proposed Development for Black-throated Diver and 500 m for Common Scoter, will be protected from disturbance through the provision of species-specific protection plans (see **Technical Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**). These will detail accepted disturbance exclusions zones and timing of works to prevent disturbance. This will be overseen by the ECoW.

9.10.6 If no Black-throated Diver are identified as nesting within 750 m, or no Common Scoter within 500 m, of the Proposed Development, construction works can proceed without the requirement of a protection plan.

9.10.7 Therefore, it is concluded that likely effects of the Proposed Development on the integrity of the West Inverness-shire Lochs SPA, and its qualifying features, through the construction period are **negligible** and **not significant** under the terms of the EIA Regulations. The confidence of the assessment is **A: High**

Black Grouse

9.10.8 During the field surveys, a lek site comprising of three males was located on the west side of Loch Lundie, approximately 1 km from the Proposed Development. No other lek sites were recorded within 1.5 km.

9.10.9 All Lek and nests sites will be identified and protected from disturbance during the construction period through specific protection plans (see **Technical Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**) as part of the Embedded Mitigation Measures described in Section 9.7. These plans will detail safe working practices, particularly during sensitive timescales during the Black Grouse Lekking period (March to mid-May). This would be overseen by the site ECoW.

9.10.10 Therefore, it is concluded that likely effects of the Proposed Development on Black Grouse through the construction period are **negligible** and **not significant** under the terms of the EIA Regulations. The confidence of the assessment is **A: High**

Crossbill

9.10.11 No targeted Crossbill surveys were undertaken for the Proposed Development, but birds were frequently recorded throughout the survey period and do breed within the forest areas within and in the vicinity of the Proposed Development. This includes the forestry within Glengarry Forest and Auchterawe.

9.10.12 There is the potential for the destruction or damage to nests if site clearance works during site construction occur within the breeding season. However, as all bird nests are protected under the Wildlife and Countryside Act 1981, any destruction to nests would constitute an offence. Nests sites will be identified and protected from disturbance during the construction period through specific protection plans as part of the Embedded Mitigation Measures described in Section 9.7 (see **Technical Appendix 3.2: General Environmental Management Plans (GEMPs)** and **Species Protection Plans (SPPs)**). This would be overseen by the site ECoW.

9.10.13 Although there will be a loss of habitat as a result of construction works (as detailed in 9.10.2), there is plenty of suitable and available habitat for breeding Crossbills in the vicinity of the Proposed Development without impacting on the local, and regional, population of this species.

9.10.14 Therefore, it is concluded that likely effects of the Proposed Development on Crossbill through the construction period are **low** and **not significant** under the terms of the EIA Regulations. The confidence of the assessment is **A: High**

Operation Effects

9.10.15 Potential Operation effects include:

- collision risk for certain species as a result of the Proposed Development; and
- disturbance/displacement – Disturbance of breeding attempts, wintering roost sites and displacement of birds foraging in suitable habitats may occur during maintenance. Temporary disturbance of breeding birds is likely to result from activities associated with people and machines in the vicinity of the Proposed Development.

West Inverness-shire Lochs SPA

Black-throated Diver

9.10.16 No flightlines of Black-throated Diver were recorded during the vantage point surveys for the Proposed Development in 2022. It is known that birds have historically bred on Loch Garry, Loch Lundie, Loch Loyne and Loch Cluanie so it is conceivable that there are flights between these lochs (components of the West Inverness-shire SPA) and theoretically at risk of collision. It is also possible that they would fly along glens to reach other large lochs and the sea.

Common Scoter

9.10.17 No flightlines of Common Scoter were recorded during the vantage point surveys for the Proposed Development in 2022. It is known that birds have historically bred on Loch Garry and Loch Loyne which are important lochs for this species, so it is conceivable that there are flights between these component lochs of the West Inverness-shire SPA) and theoretically at risk of collision. It is also possible that they will fly along glens to reach other large lochs and the sea.

9.10.18 As described in the shadow HRA, in **Technical Appendix 9.2**, there is the potential for both Black-throated Diver and Common Scoter to commute between lochs within the SPA complex. The closest loch to Loch Lundie (which is the closest loch to the Proposed Development) is Loch Garry which regularly supports breeding populations of both species.

- 9.10.19 If flights between component lochs does occur, then it is more likely that flights will follow the most direct and efficient route possible between lochs, utilising the lowest intervening topography. Between Loch Garry and Loch Lundie, this would be from the east end of Loch Garry to the southwest side of Loch Lundie. The Proposed Development does not cross this likely theoretical flight path. Therefore, it is considered unlikely for there to be a collision risk to birds commuting between these two lochs.
- 9.10.20 Although no flightlines were recorded during surveys, it is possible that both Black-throated Diver and Common Scoter would utilise the gorge south of Glen Garry dam for commuting to larger lochs (such as Loch Lochy) and the sea.
- 9.10.21 Line marking remains the most common and practical form of wire collision mitigation worldwide, and research shows that it can reduce bird collisions by 50-94% (evidence reviewed in Prinsen et al., 2012). Therefore, it is proposed that line marking between Towers 31 and 38 would be undertaken. Between these towers, The earth wire would be marked using reflective Bird Flight Diverters. Markers would be spaced at 5 m intervals and maintained for the duration of the operational period.
- 9.10.22 Therefore, it is concluded that the likely effects of the Proposed Development on all bird species during operation are **negligible** and therefore **not significant** under the terms of the EIA Regulations. The confidence level of this is **A: High**
- Black Grouse
- 9.10.23 No Black Grouse flights were recorded during the survey period. Black Grouse are predominately low flying birds, often vulnerable to collision with deer fences. Therefore, collision risk with OHL is considered minimal.
- 9.10.24 Through the Embedded Mitigation Measures described in Section 9.7, the provision of a species-specific protection plan (see **Technical Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**) will avoid the risk of disturbance to Black Grouse during any required maintenance works during the sensitive lekking period.
- 9.10.25 Therefore, it is concluded that likely effects of the Proposed Development on Black Grouse through the operation period are **negligible** and **not significant** under the terms of the EIA Regulations. The confidence of the assessment is **A: High**
- Crossbill
- 9.10.26 Crossbill are not considered to be a species at risk of collision with OHL. Therefore, collision risk with OHL is considered minimal.
- 9.10.27 Through the Embedded Mitigation Measures described in Section 9.7, the identification of nests and provision of a species-specific protection plan (see **Technical Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**) will avoid the risk of disturbance to Crossbill during any required maintenance works during the sensitive breeding period.
- 9.10.28 Therefore, it is concluded that likely effects of the Proposed Development on Crossbill through the operation period are **negligible** and **not significant** under the terms of the EIA Regulations. The confidence of the assessment is **A: High**
- Cumulative Effects*
- 9.10.29 Other projects of relevance to the consideration of cumulative effects include the proposed Loch Lundie Substation (Associated Works to the Proposed Development, pre-application), the proposed Coire Glas Switching Station (Associated Works to the Proposed Development, pre-application), the proposed Skye Reinforcement Project (In Planning - Ref: ECU000043395), consented Coire Glas Pumped Storage Scheme

(Original Scheme ECU 00000577) and Revised Scheme ECU00000577) and the Bharaidh Windfarm Ext Grid Connection (ECU00004639). However, given there are no predicted adverse residual effects during the construction and operational phases of the Proposed Development in isolation, where all effects are assessed as **negligible**, it is considered highly unlikely that the Proposed Development would contribute cumulatively to adverse effects on the conservation status of regional populations of any bird species. Therefore, there is no requirement for a cumulative assessment.

9.11 Mitigation

Mitigation During Construction

9.11.1 Other than the Embedded Mitigation Measures described in Section 9.7, no further mitigation measures are proposed during the construction phase.

9.11.2 The success of mitigation is considered **certain/near certain**.

Mitigation During Operation

9.11.3 Line marking is proposed along the earth wire from Towers 31 to 38. The earth wire will be marked using reflective Bird Flight Detectors and spaced at 5 m intervals. These will be maintained for the duration of the operational period.

9.11.4 In addition the Embedded Mitigation Measures described in Section 9.7 will avoid disturbance during maintenance works through the operational phase of the Proposed Development.

9.11.5 The success of Mitigation is considered **Probable**.

9.12 Residual Effects

9.12.1 This section considers the potential residual effects and associated effect significance of the construction and operation of the Proposed Development, following the implementation of the mitigation measures proposed in Section 9.11.

Construction Residual Effects

9.12.2 The residual effects during construction of the Proposed Development are considered to be **not significant**. No further mitigation, other than the Embedded Mitigation Measures (Section 9.7) that would be implemented by the Applicant is proposed.

Operation Residual Effects

9.12.3 With the implementation of line markers between Towers 31 and 38, and the Embedded Mitigation Measures in Section 9.7, the residual effects during operation are considered to be **not significant**.

Cumulative Residual Effects

9.12.4 As described in paragraph 9.10.24, given there are no predicted adverse residual effects during the construction and operational phases of the Proposed Development in isolation, where all effects are assessed as negligible, it is considered highly unlikely that the Proposed Development would contribute cumulatively to adverse effects on the conservation status of regional populations of any bird species. Therefore, there is no residual cumulative effects.

9.13 Summary and Conclusions

9.13.1 This Chapter has considered the potential effects of the Proposed Development on ornithology. It details the methods used to establish the bird species and populations present, together with the process used to

determine their Nature Conservation Importance. The ways in which birds could be affected (directly or indirectly) by the construction, operation and dismantling phases of the Proposed Development are explained.

- 9.13.2 An assessment is made with regards to the significance of these effects for the Proposed Development. The assessment is structured around the consideration of potential effects that could result from the construction (including the dismantling of the existing 132kV OHL) and operation of the Proposed Development, upon those ornithological receptors identified during survey work. The likely effects of the Proposed Development were evaluated in accordance with the methods and the significance of each potential effect. An assessment was also made on the potential cumulative effects of the Proposed Development in conjunction with other nearby proposed and consented developments.
- 9.13.3 Embedded Mitigation Measures described in Section 9.7 (see **Technical Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**) would significantly reduce the potential effects of construction works on breeding Black-throated Diver, Common Scoter, Crossbill and Lekking Black Grouse. The use of line marking parts of the new OHL across the gorge south of Glen Garry dam and towards Loch Lundie (Towers 31 to 38) would significantly reduce the potential for collision effects and implementation of these precautionary measures would lead to no or non-detectable changes in the conservation status Black-throated Diver and Common Scoter.
- 9.13.4 It is concluded that the likely effects of the Proposed Development, on all bird species are **not significant** under the terms of the EIA Regulations.
-