Scottish & Southern Electricity Networks
TRANSMISSION

VOLUME 2: CHAPTER 9 - ORNITHOLOGY

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9. ORNITHOLOGY

9.1 Executive Summary

9.1.1 This chapter assesses the potential effects of the Proposed Development on ornithology and presents the results of the assessment in terms of the potential significant effects on ornithological receptors. It sets out the methods used to establish the baseline environment in terms of bird species and populations present, together with the method used to determine those species considered to be important ornithological features. The ways in which birds could be affected (directly or indirectly) by the construction and operation of the Proposed Development are assessed.

9.1.2 Desk-based studies and field surveys were carried out in and around the Proposed Development over respective 'Study Areas' to establish baseline conditions and the species and populations present.

9.1.3 It was possible to 'scope out' effects on a number of species by virtue of their ecology, absence, distance from the Proposed Development, small numbers, low levels of activity and the nature and location of this activity as well as the mitigation measures embedded in the Proposed Development which will avoid impacts to a range of species. Twenty-nine species were identified as important ornithological features and taken forward for detailed assessment.

9.1.4 An assessment is made with regards to the significance of these effects for each Section of the Proposed Development and the Proposed Development as a whole. The assessment is structured around the consideration of potential effects that could result from the construction and operation of the Proposed Development upon those ornithological receptors identified during survey work and desk-based study.

9.1.5 Population reductions due to habitat loss, displacement and/or collision mortality are likely to be minimal. Additional mitigation measures have been identified to mitigate impacts on a number of important ornithological features. Where “hot spots” of flight activity have been identified mitigation, by way of line marking with bird flight diverters in Sections A, B, D and E, will significantly reduce the potential for collision effects.

9.1.6 With embedded and additional mitigation measures in place, the likely effects of construction and operation for each of the individual Sections, and for the Proposed Development as a whole, on all bird species are not significant in the context of the EIA Regulations.

9.1.7 Information is summarised in the chapter to allow the competent authority to consider the requirement for an assessment of potential effects of the Proposed Development on the integrity of a number of Special Protection Areas (SPAs). This information demonstrates that the Proposed Development would not have an adverse effect on the integrity of any SPA. More detailed assessments on each relevant SPA or Ramsar Site are presented in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA).**

9.2 Introduction

9.2.1 This chapter provides baseline ornithological information and assesses the potential impacts and significant effects of the Proposed Development on ornithology, including species and protected areas designated for bird interest. The assessment is based on the best practice Guidelines for Ecological Impact Assessment in the UK and Ireland developed by the Chartered Institute for Ecology and Environmental Management’s (CIEEM) (2018 rev 2024)[1].

[1] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

The specific objectives of this chapter are to:

- Describe the scope of assessment and methodology used in completing the impact assessment;
- Describe the ornithological baseline identified through desk-based study and field surveys;
- Evaluate the importance and sensitivity of ornithological features and determine those that need to be considered further within the impact assessment;
- Describe the potential impacts and effects, including direct, indirect and cumulative effects, on ornithological features;
- Describe the mitigation measures proposed to address potential significant effects; and
- Assess the significance of any residual effects remaining following the implementation of mitigation.

9.2.2 Additionally, this chapter and appendices set out information to allow Scottish Ministers to undertake an appropriate assessment of the effects of the Proposed Development on European Sites [(2),(3)]. Further information relating to the appropriate assessment process is provided in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**.

9.2.3 Throughout this chapter, species are given their common names (if available); all scientific names for species referred to within this chapter are presented within **Volume 5, Appendix 8.6: Species Lists**.

9.2.4 The assessment reported in this chapter is based on the key characteristics of the Proposed Development as detailed in **Chapter 3: Project Description.** Impacts on non-avian ecological receptors, including non-bird features of designated sites not assessed in this chapter, are assessed in **Chapter 8: Ecology and Nature Conservation**.

9.2.5 This chapter is further supported by:

- **Volume 5, Appendix 9.1: Ornithology Survey and Assessment Methods**
- **Volume 5, Appendix 9.2: Ornithology Technical Report – Sections A and B**
- **Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E**
- **Volume 5, Appendix 9.4a: Ornithology Confidential Report – Section A and B**
- **Volume 5, Appendix 9.4b: Ornithology Confidential Report - Sections C, D and E**
- **Volume 5, Appendix 9.4c: Additional Sensitive Ornithological Information**
- **Volume 5, Appendix 8.6: Species List**
- **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**

9.3 Scope of Assessment and Methodology

Study Area

9.3.1 The Proposed Development extends approximately 173 km from Spittal to Beauly. Therefore, for the purposes of this EIA Report, the Proposed Development has been split into five sections as illustrated in **Volume 3, Figure 1.1: Overview of the Proposed Development** and listed below:

- Section A: Spittal to Brora;
- Section B: Brora to Loch Buidhe;

[(2)] These are Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs). This protection is also extended to proposed SPAs and proposed SACs. Where Ramsar site interests coincide with qualifying interests protected under an SPA or an SAC it is Scottish government policy to extend the same protection to these features.
[(3)] Scottish Government (2019). Implementation of Scottish Government policy on protecting Ramsar sites.

- Section C: Loch Buidhe to Dounie;
- Section D: Dounie to Near Strathpeffer; and
- Section E: Near Strathpeffer to Beauly.

9.3.2 A Study Area for birds was defined based on the ecology of bird species found or likely to be found within areas which could be affected by the Proposed Development across different seasons. Information on designated sites with bird interest features was searched for out to 20 km, based on the maximum published core foraging ranges and territory sizes of sensitive bird species (NatureScot, 2016)[4].

9.3.3 The extent of the ornithology survey areas throughout the Proposed Development varies depending on survey and species specific ecology and are described in **Volume 5, Appendix 9.1: Ornithology Survey and Assessment Methods, Volume 5, Appendix 9.2: Ornithology Technical Report – Section A and B** and **Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E**, shown on **Volume 3, Figures 9.2 – 9.8** and summarised under **Field Surveys** below.

Zone of Influence

The 'zone of influence' (ZoI) for a project is the area over which ornithological features may be affected by biophysical changes which occur as a result of the Proposed Development and associated activities, usually extending beyond the footprint of the Proposed Development. A ZoI for ornithological features was defined within which impacts on sensitive ornithological receptors have been considered. The ZoI varies based on the impact areas identified as detailed below;

- Loss of supporting habitat from direct and indirect loss of habitat under the permanent and temporary footprint of the Proposed Development, as well as indirect changes to forestry habitat as a result of management felling as defined within **Chapter 8: Ecology and Nature Conservation;**
- Disturbance and displacement, based on a maximum 1km potential disturbance distance for sensitive bird species[5]; and
- Direct loss of birds within the Proposed Development footprint during construction or from collision with the operational infrastructure of the Proposed Development.

The ZoI also takes into account potential connectivity between the area of impact of the Proposed Development and territories, important non-breeding areas and relevant designated site populations of birds, based on published connectivity distance guidance[6].

Consultation and Scoping

9.3.4 The scope of the assessment has been informed by a combination of professional judgement, reference to the relevant guidance documents and consultation with stakeholders through a formal EIA scoping process. Scoping responses and other relevant consultation pertinent to ornithology, relating to consultation on baseline survey methods, are provided **Table 9.1** below**.**

[4] Scottish Natural Heritage (now NatureScot) 2016. Assessing Connectivity with Special Protection Areas (SPAs). Guidance. Version 3.
[5] Goodship, N.M. and Furness, R.W. (MacArthur Green) (2022). Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283.)
[6] Scottish Natural Heritage (2016) Guidance: Assessing Connectivity with Special Protection Areas.

Table 9.1: Scoping and Baseline Survey Methods Consultation Responses

Consultee	Summary of Issue raised	Response/Action Taken
Consultation on Survey Approaches		
NatureScot	Previous casework (mostly onshore wind) has noted inland gull flight activity in the far north-east likely to be associated with the East Caithness Cliffs and North Caithness Cliffs Special Protection Areas (SPA)s. The East Caithness Cliffs SPA supports breeding herring gull, breeding great-black-backed gull and breeding seabird assemblage as qualifying interests and the North Caithness Cliffs have breeding seabird assemblage, to which these species of gull would contribute to, as a qualifying interest. NS note that all gulls are suggested as secondary species for FAS and whilst flights would be recorded in the absence of primary species in flight during watches, some flights might be missed if primary species are active. Potentially adding the SPA gull species to the primary list at least for VP work for the far northern section of the route would give more confidence that representative gull flight activity would be recorded.	The Applicant is aware of potential connectivity to the East Caithness Cliffs and North Caithness Cliffs SPA, and the survey approach include flight activity surveys (FAS) along the adjacent section of the overhead line (OHL) to record flight activity in this area. The Applicant will take this recommendation on board and add SPA gull species to the primary list of target species for relevant sections of the alignment.
	NS recommend requesting advice from the Capercaillie Advisory Officer. The routes are close to SPAs protected for capercaillie and the Capercaillie Advisory Officer may be able to advise on likely movements of birds to and from these SPAs. The Woodland Trust at Ledmore & Migdale, Spinningdale may also be a useful source of information.	Royal Society for the Protection of Birds (RSPB) Scotland's Capercaillie Advisory Officer was contacted for information and records on capercaillie.
	NS do appreciate the project timescales and the need to progress timeously with data gathering. There are however risks associated with splitting the FAS in the way proposed. It might be that you have little option but to progress with your plans but there would need to be recognition of how this might affect results. Recognising that there could be a number of variable scenarios, but as an example, flight activity associated with the early half of the 2023 breeding season that could include failed breeding attempts where birds have now moved away would go unrecorded and attempts may not be repeated in 2024. By their nature surveys are a snapshot in time but under this possible scenario, flight activity could be under recorded leading to underestimation of risk. The important issue is that SSEN will need to be confident that the survey results can enable SSEN to fulfil a robust assessment as part of the project's Environmental Impact Assessment Report. NS strongly suggest that where methods deviate from our guidance that the risks associated with this are clearly presented so that readers of the EIA Report can be clear on the level of confidence they can place on the conclusions.	Within the assessment, the baseline data transparently identifies uncertainties or potential under-recording within the reporting and assessment, and a precautionary approach to potential presence and flight activity of sensitive species has been taken, informed by other available data sources (such as raptor study group and RSPB data on species distribution and nest sites). Ongoing engagement with NatureScot has been undertaken over the results of the surveys.
Scoping Responses		

Consultee	Summary of Issue raised	Response/Action Taken
Ardgay Community Council	A&DCC questions the validity and accuracy of the baseline surveys undertaken since they do not consider the Limit of Deviation (LoD). A&DCC cannot comment on the survey methods and findings as a result of the ambiguity in relation to the LoD. A&DCC request that migration routes and patterns are included in surveys.	The baseline bird surveys were designed to include the LoD and the Proposed Alignment as well as a wider buffer area informed by the ecology of individual species. Surveys included recording of migratory routes during FAS.
NatureScot	NatureScot noted that "the scale and nature of this proposal is such that its effects on important natural heritage have potential to be significant. The Applicant's Scoping Report recognises this and sets out clearly the scope of assessment". NatureScot "agree with the issues the Applicant intends to scope in and out". "NatureScot consider the following sites with ornithological interest at greatest risk of significant effects and where standard mitigation alone may be insufficient to avoid adverse effects. • Caithness and Sutherland Peatlands SPA • Caithness and Sutherland Peatlands Ramsar site Strath Carnaig and Strath Fleet Moors SPA (and Site of Special Scientific Interest (SSSI)) – breeding hen harrier • Novar SPA – breeding capercaillie NatureScot also consider that appropriate survey work will be required to inform the assessments for Special Protection Areas for non-breeding wintering geese, waterfowl and swan species and Special Protection Areas for breeding osprey. It is hoped that the Applicant's suite of General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs) and Construction Environmental Management Plan (CEMP) would largely mitigate significant indirect effects to other designated sites." NatureScot noted that they have provided the Applicant "with details of any specific species records they are aware of and directed them to NatureScots online Standing Advice. We agree with their proposed scope of assessment."	Impacts on the identified sites have been assessed as part of this chapter. In addition, information to inform an Appropriate Assessment has been provided for potential impacts on SPAs and Ramsar sites. Surveys for wintering geese and swan interest have been undertaken, as well as surveys of flight activity over winter for waterfowl and geese in suitable habitats for these species. Breeding raptor surveys have been undertaken, and assessment of osprey territories breeding outside but feeding within SPAs have been undertaken. Consideration of the Applicants GEMPs, SPPs and CEMP has been included in the impact assessment.
RSPB Scotland	Negative impacts on birds associated with construction and operation of OHLs are collision, electrocution, displacement, habitat loss, disturbance and barrier effects all of which must be considered. The Proposed Development would result in likely significant adverse impacts on habitats and species and designated sites including Special Area of Conservation (SAC)s, Ramsar Sites, the Flow Country World Heritage Site (WHS) and a	This chapter of this EIA Report considers and assesses each of these impacts, undertaking detailed assessments for habitat loss, disturbance and displacement and collision. Information to inform Appropriate Assessment (AA) is presented in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**. The

Consultee	Summary of Issue raised	Response/Action Taken
	number of SPAs. Sufficient information must be provided to allow Scottish Ministers to undertake an Appropriate Assessment. RSPB Scotland are concerned the surveys conducted to date are inadequate. FAS for Sections A and B have been split over two breeding seasons. RSPB recommends undertaking two years of field survey for sensitive areas	Highland Council (THC) WHS Toolkit has been completed for The Flow Country WHS and is presented in **Volume 5, Appendix 8.10:** The **Flow Country World Heritage Site (WHS) Impact Assessment Report.** Within the assessment, the baseline data transparently identifies uncertainties or potential under-recording within the reporting and assessment, and a precautionary approach to potential presence and flight activity of sensitive species has been taken, informed by other available data sources (such as raptor study group and RSPB data on species distribution and nest sites).
	RSPB Scotland believe wider height bands for 'at risk flights' should have been used to account for potentially higher towers. The EIA should provide maps showing areas covered vantage points (VPs) and viewsheds.	The maximum height of a pole or tower above ground level is sought to allow a height increase of up to 9 m in general on the proposed tower height presented within **Volume 5, Appendix 3.1: Indicative Tower Schedule**. Sections of the Proposed Development where towers could exceed 70m have been identified, and all flights in these sections in height bands B and C (i.e. all recorded flights above 5 m) have been included in the assessment of effects on a precautionary basis.
	RSPB Scotland are concerned that the breeding bird surveys undertaken in 2023 and 2024 will not be sufficient to inform the impact assessment. The methods used and maps showing the areas covered should be included in the EIA. Desk based work to determine the importance of areas of access track not covered in the baseline surveys are recommended, as are pre-construction surveys.	Survey methods and areas surveyed are set out in the supporting appendices provided as part of this EIA Report. Survey methods were consulted on with NatureScot and feedback incorporated into the survey design and reporting, with Scottish Ministers advising that decisions on bird surveys should be made following discussion with NatureScot.
	Breeding diver surveys should cover all suitable water bodies within 1 km of the Proposed Development. It is unclear whether focal surveys of identified diver lochs were undertaken.	All waterbodies considered to be suitable for breeding diver within 1 km of the LoD of the Proposed Development were surveyed, as set out in the supporting appendices of this EIA Report. Focal surveys of all identified breeding diver waterbodies were not undertaken, in line with the survey methods consulted on prior to commencing surveys. FAS covering the alignment of the Proposed Development provide information on the potential collision risk posed by the Proposed Development to divers.
	RSPB Scotland are concerned that breeding diver, duck and grebe surveys in Sections A and B or the Proposed Development will not be sufficient to inform the assessment. RSPB are concerned about impacts on common scoter and recommend nocturnal surveys and vertical radar with acoustic recorders, remote cameras and surveyor observations during the breeding and migration seasons.	Survey methods and areas surveyed are presented in this EIA Report and supporting appendices. Nocturnal surveys for common scoter have not been undertaken. The suite of surveys consulted on did not include any nocturnal, radar or acoustic surveys, and no requirement for these surveys was raised by NatureScot. No records of breeding common scoter within 5 km of the Proposed Development were identified during the desk-based study within the last 5 years

Consultee	Summary of Issue raised	Response/Action Taken
		and no common scoter were recorded during breeding bird surveys. Review of literature suggests that common scoter are likely to fly above the height of the Proposed Development when travelling to inland breeding sites. A Danish study found[7] that, when nocturnally migrating common scoter cross land, they usually do so at high altitude. This is supported by Madge & Burn (1988)[8] who report that common scoter typically migrate low over water but very high when flying over land. In addition, a study by Kahlert et al. (2012)[9] on the flight altitude of migrating waterbirds, including common scoter, found that mean flight altitude was significantly higher at night (425 m) compared with during the day. These studies indicate that common scoter are unlikely to regularly fly at heights where they might be at risk of collision with the Proposed Development, particularly during nocturnal migration.
	RSPB Scotland have concerns that winter raptor surveys may underestimate impacts and in areas of suitable hen harrier roost habitat, dedicated further surveys should be conducted.	Winter walk over surveys were undertaken in suitable habitat informed by the results of FAS and desk-based study to identify likely areas for use by Schedule 1a raptors during winter.
	The EIA should confirm the location of capercaillie surveys undertaken. Capercaillie can be found outside of known locations and protected sites. Cold searches of all suitable habitat within the length of the proposed development are required. Surveys should cover at least 1.5 km from previously recorded lek site. Consultation should be undertaken with RSPB Scotland to avoid disturbance. RSPBs capercaillie Advisory Office should be consulted for further information.	The scope of capercaillie surveys undertaken are set out in **Volume 5, Appendix 9.1 and Appendix 9.3**. Consultation was undertaken with RSPBs capercaillie officer in August 2023 and capercaillie data held by RSPB was purchased to inform this EIA.
	We recommend that information is provided within the EIAR to demonstrate that the survey coverage and data meet NatureScot requirements,	Information on the survey coverage is presented in this chapter and supporting figures and appendices. Scoping consultation responses from NatureScot are included above in this table.
	RSPB Scotland disagrees with scoping out barrier effects for further assessment at the Scoping Stage.	Based on the comments received, barrier effects have been considered within this EIA Report to provide further assessment to that presented in the Scoping Report. Based on the available information from FAS and bird interactions with existing

[7] Pedersen, M.B. (1988). Spring migration of common scoters across Southwest Jutland. Dansk Ornitologisk Tidsskrift 82, 51-53.
[8] Madge, S. & Burn, H. (1988). Wildfowl. Christopher Helm Ltd., London.
[9] Kahlert, J., Leito, A., Laubek, B., Luigujoe, L., Kuresoo, A., Aaen, K. & Luud, A. (2012). Factors affecting the flight altitude of migrating waterbirds in Western Estonia. Ornis Fennica 89, 241-253.

Consultee	Summary of Issue raised	Response/Action Taken
		OHLs present in the survey area barrier effects are considered to be not significant as set out in **Section 9.4.**
	A robust cumulative assessment should be undertaken including assessing impacts on disturbance, displacement, barrier effects, collision risk and peatland impacts.	The cumulative assessment is presented in **Section 9.10** of this chapter.
	RSPB Scotland identified ornithological sensitivities within each Section of the Proposed Development: These include: • Section A - the Caithness and Sutherland Peatlands SPA, SAC and Ramsar Site and Flow Country World Heritage Site, cumulative impacts with other wind farms and areas of un-developed peat Section B - Strath Carnaig and Strath Fleet SPA and birds commuting along Loch Brora Section C - Strath Carnaig and Strath Fleet SPA and cumulative impacts with wind farms Section D - capercaillie, Novar SPA and Glen Morangie SPA and cumulative impacts with wind farms Section E - cumulative impacts with wind farms and other OHLs, collision risk related to lochnas either side of the Proposed Development and impacts on ancient woodland.	Individual baseline and impact assessments for each Section of the Proposed Development are presented in this chapter.
The Highland Council	An EIAR chapter covering ornithology will be required. This should provide baseline information for the site and establish what species are present. The Highland Council's Ecology Officer is pleased with the concerns identified in the EIA Scoping Report and agrees with the inclusion of international and nationally protected species. The EIAR should cover Highland Nature Biodiversity Action Plan species and habitats, as well as Scottish Biodiversity List (SBL) species. The ecology office agrees with the ornithological evaluations conducted and expects to see the relevant data in the EIAR including a flight map and a comprehensive collision assessment. The EIAR should include a cumulative assessment. The EIAR should assess impacts on nature conservation interests of all designated sites in the vicinity of the proposed development and provide proposals for mitigation to avoid or reduce impacts to a level where they are not significant.	This chapter assesses impacts on ornithology and sets out the baseline information and assesses impacts on important ornithological features including SBL and Highland Nature Biodiversity Action Plan species. Flight activity of target bird species has been mapped based on the results of the vantage point surveys. NatureScot guidance on assessment of OHLs does not recommend undertaking collision risk modelling, so the assessment includes a qualitative assessment of collision risk and identifies areas of high flight activity where additional mitigation will be implemented. Impacts on designated sites and cumulative impacts have been assessed.

Legislation and Guidance

9.3.5 This assessment is carried out in the statutory context of the following legislation:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations);
- Environmental Impact Assessment Directive 2011/92/EU (as amended);
- The Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations');
- The Nature Conservation (Scotland) Act 2004 (as amended); and
- The Council Directive on the Conservation of Wild Birds 2009/147/EC (The EU 'Birds Directive').

9.3.6 This assessment is carried out in accordance with the advice contained within the following guidance documents:

- Scottish Natural Heritage (SNH) Guidance: Assessment and Mitigation of Impacts of Power Lines and Guyed Meteorological Masts on Birds (SNH, 2016 and NS, 2025);
- SNH Guidance: Assessing Connectivity with Special Protection Areas (SPAs) (SNH, 2016);
- SNH Guidance: Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Wind Farms (SNH, 2017); and
- SNH Guidance: Assessing Significance of Impacts from Onshore Windfarms on Birds outwith Designated Areas (SNH, 2018).

Desk-based Research and Data Sources

9.3.7 A desk-based study was undertaken to collate existing bird records/data. Distribution and abundance data were collected from published sources and consultees, including:

- NatureScot Sitelink (online information about designated sites)[10];
- National Biodiversity Network (NBN) Gateway website[11];
- Highland Raptor Study Group (HRSG); information on scarce breeding raptors records within 2 km of the alignment, and out to 6 km for eagle species, for the period 2021 – 2024;
- RSPB; current and historical survey records on various scarce breeding birds from 2006 to 2022;
- Highland Biological Recording Group (HBRG) data;
- The Birds of Conservation Concern (BoCC) (Stanbury et al., 2021)[12];
- Scottish Biodiversity List (Scottish Biodiversity Forum, 2013)[13];
- Natural Heritage Zone Bird Population Estimates (Wilson et al. 2015)[14];
- Highland Nature Biodiversity Action Plan 2021-2026 (Highland Nature, 2020); and
- UK Biodiversity Action Plan (BAP).

[10] Available online at: https://sitelink.nature.scot/home

[11] Available online at: https://data.nbn.org.uk/

[12] Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & 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..

[13] Scottish Biodiversity Forum (2013). Scottish Biodiversity List. Available at www2.gov.scot/Topics/Environment/Wildlife-Habitats/16118/Biodiversitylist/SBL

[14] Wilson, M. W., Austin, G. E., Gillings S. and Wernham, C. V. (2015). Natural Heritage Zone Bird Population Estimates. SWBSG Commissioned report number SWBSG_1504. pp72. Available from:www.swbsg.org.

Field Surveys

9.3.8 The field survey methodology and schedule were based on information gathered from the desk-based study, including data from sources paragraph 9.3.8. The field surveys set out below are informed by the known or potential presence of sensitive bird species along the alignment of the Proposed Development, including qualifying features associated with nearby designated sites. The scope of surveys was consulted on with NatureScot and feedback incorporated into the survey design and reporting.

9.3.9 The following guidance, information and research informed the design of the survey methodology, in addition to species/group specific references listed under the relevant survey methods:

- NatureScot (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms[15];
- NatureScot (2016 and 2025). Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds[16]; and
- NatureScot (2016). Assessing Connectivity with Special Protection Areas (SPAs)[17].

9.3.10 Based on the location and nature of the Proposed Development as well as the desk-based review of available information, the following bird surveys were identified as required to inform this EIA:

- FAS;
- Breeding bird surveys;
- Breeding diver surveys;
- Breeding duck and grebe surveys;
- Breeding woodland grouse surveys;
- Breeding and wintering raptor surveys;
- Winter goose roost surveys; and
- Winter goose foraging surveys.

9.3.11 Survey methods are set out in **Volume 5, Appendix 9.1: Ornithology Survey and Assessment Methods**.

Realistic Worst-Case Assessment of the Proposed Development

The assessment is based on the location of the proposed alignment and access tracks as a realistic worst case, rather than development being present across the whole of the LoD. Although consent is being requested to enable the Applicant to move tower positions within the LoD, assessment of development within the whole LoD is considered to be un-realistic and overly precautionary.

Where greater impacts related to disturbance/displacement from construction activity or presence of tower locations could occur if individual tower locations are moved from the proposed alignment within the LoD, mitigation measures are identified to maintain distances to sensitive receptors and avoid impacts occurring of a higher magnitude than those assessed and presented.

9.3.12 Potential for collision risk has been based on the number of flights crossing the proposed alignment recorded during baseline flight activity surveys. All flights crossing the alignment at height band B (>5 m -70 m) were considered to be at potential collision risk height (CRH). For parts of the alignment where the vertical LoD could

[15] NatureScot (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Version 2
[16] NatureScot (2016 and 2025). Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds
[17] NatureScot (2016). Assessing Connectivity with Special Protection Areas (SPAs). Inverness

increase tower (and therefore earth wire) heights above 70 m, flights in height band C (>70 m) have also been considered to be at potential CRH. Where individual flights crossed the alignment more than once (e.g. where a flight circled back to cross the alignment) the total number of individual crossings has been reported in the chapter, which may differ from numbers presented in the Appendices.

Assessing Significance

9.3.13 The impact assessment has been completed taking account of the CIEEM Ecological Impact Assessment Guidance[18]. The assessment method for ornithology is set out in **Volume 5, Appendix 9.1: Ornithology Survey and Assessment Methods** and is summarised below. It considers the likely effects of construction and operational activities of the Proposed Development on birds of conservation importance. The assessment has been informed by a combination of desk-based study findings, field surveys and consultation with relevant statutory and non-statutory organisations.

9.3.14 The approach to EcIA outlined in the CIEEM Guidance avoids and discourages the use of a matrix approach and categorisation, in an effort to avoid spurious quantification, in which numerical scores or significance rankings / categories are used without a clear definition of the criteria and thresholds that underpin them. Whilst a matrix approach is commonly used by other disciplines in EIA by disciplines other than ecology to assign significant residual effects to categories (e.g. major, moderate, minor), the approach taken for ecology is to identify effects that are either 'not significant' or 'significant' at a defined geographic level.

9.3.15 The assessment uses the ornithological baseline to identify the sensitive receptors that are of importance based on their international, national, regional, and local conservation status, and population / assemblage trends and other relevant criteria (including size, naturalness, rarity, and diversity). This impact assessment follows an approach whereby the sensitivity of an ornithological receptor has been determined and assessed against the magnitude of the effect the activities associated with the Proposed Development may have on that receptor and the subsequent significance.

9.3.16 Mitigation for the Proposed Development is split into two categories: design mitigation, embedded mitigation, and additional mitigation. The Proposed Development was selected via an iterative design process as described in **Chapter 4: The Routeing Process and Alternatives** with avoidance of impacts embedded into the design. This allowed the mitigation hierarchy to be applied and impacts to sensitive receptors were avoided where practicable. Embedded mitigation will comprise the Applicant's GEMPs (**Volume 5, Appendix 3.3: GEMPs**) and SPPs (**Volume 5, Appendix 3.4: SPPs)**, a CEMP (an Outline CEMP has been included in **Volume 5, Appendix 3.8**) and a Construction Traffic Management Plan (CTMP) (an Outline CTMP has been included in **Volume 5, Appendix 14.6**).

9.3.17 The assessment of potential impacts (taking into account design and embedded mitigation) identifies the need for any additional mitigation to reduce the residual effects of the Proposed Development. The residual effects are presented to make clear to the decision maker and stakeholders the potential significance of the effects that will result from the Proposed Development on nature conservation interests with all mitigation measures in place. Reference was made to NatureScot guidance on determining target species for assessment[19]. The importance of ornithological features was determined in relation to relevant European, national and local guidance and taking account the results of baseline surveys, desk study information and the importance of features within the context of the region. This included Natural Heritage Zone (NHZ) populations, SBL and Highland Nature Biodiversity Action Plan Priority Species.

[18] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.
[19] *Assessing Significance of Impact from Onshore Windfarms on Birds Outwith Designated Areas.* 2018 NatureScot, Inverness.

9.3.18 The significance of effects has been determined using standard impact assessment methods and criteria (see below):

- the magnitude of both positive and negative effects, as determined by intensity, frequency and by the extent of the effect in space and time;
- the vulnerability of the habitat or species to the changes likely to arise from the Proposed Development;
- the ability of the habitat, species, or ecosystem to recover, considering both fragility and resilience;
- the viability of component ecological elements and the integrity of ecosystem function, processes, and favourable condition;
- value within a defined geographic frame of reference (e.g., UK, national, regional, local);
- the biodiversity value of affected species, populations, communities, habitats, and ecosystems, considering aspects such as rarity, distinct subpopulations of a species, habitat diversity and connectivity, species-rich assemblages and species distribution and extent;
- designated sites, and where a site has multiple designations the effects on the features of each designation; and
- protected species status.
- Value and magnitude of effect are weighed using professional judgement and impacts are reported as either 'significant' at a particular geographical level (e.g. internationally, nationally, locally), or 'not significant'. A 'significant effect' is an effect "…*that either supports or undermines biodiversity conservation objectives for important ecological features, or for biodiversity in general.*"[20]
- Where significant effects are predicted, additional mitigation is identified to reduce or eliminate effects (where possible). Following the application of additional mitigation, effects are reappraised and residual effects (effects remaining following application of mitigation or compensation) reported. This approach strives to make the EcIA more transparent and demonstrate the adequacy / necessity of proposed additional mitigation.

9.3.19 An assessment is made with regards to the significance of effects for each Section of the Proposed Development and the Proposed Development as a whole. For the Proposed Development as a whole, the assessments for each Section of the Proposed Development that will affect the same species population or designated site are considered together.

9.3.20 Legal protection is considered separately from value. The protection of a particular ecological feature through international or national legislation does not mean that the feature is of international or national importance. For example, the nests of all breeding birds are protected under national legislation, The WCA 1981, but this does not mean that all birds' nests are of national importance.

Cumulative Assessment

9.3.21 Cumulative effects arising from the addition of the Proposed Development to other cumulative developments are assessed. Cumulative developments identified as consented, in planning, those within the public domain, and those deemed reasonably foreseeable, are illustrated alongside the Proposed Development in **Volume 3, Figure 5.1: Cumulative Developments** and in **Chapter 5: EIA Process and Methodology**.

9.3.22 The assessment of cumulative effects is limited to species of international, national or regional importance for which a likely effect has been identified relating to the Proposed Development. Therefore, only effects assessed as minor or above are included in the cumulative assessment. Effects that are assessed to be negligible are not

[20] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

taken forward to the cumulative assessment as it is considered that such effects will not contribute to cumulative effects.

9.4 Potential Effects

9.4.1 The potential effects on ornithology associated with the construction and / or operation of the Proposed Development are:

- direct loss of habitats during construction resulting in in temporary and permanent reductions in breeding or wintering bird populations;
- electrocution mortality during operation resulting in long term/permanent reductions in breeding or wintering bird populations;
- disturbance during construction of the Proposed Development resulting in a short-term displacement or reduction in breeding or wintering bird populations;
- operational maintenance activities resulting in long term/permanent reductions in breeding or wintering bird populations;
- barrier effects during operation resulting in long term/permanent reductions in breeding or wintering bird populations;
- collision mortality during operation resulting in long-term/permanent reductions in breeding or wintering bird populations; and,
- cumulative effects with other nearby development proposals during construction or operation resulting in long/term reductions in breeding or wintering bird populations.

9.4.2 In their Scoping Response, NatureScot agreed that effects on birds from barrier effects and electrocution could be scoped out of the assessment. However, RSPB disagreed with this approach and as a result impacts from both electrocution and barrier effects have been considered in this assessment.

Loss of Habitat and Habitat Modification During Construction and Operation

9.4.3 Habitat loss, both temporary and permanent (where permanent applies to the lifetime (or more) of the project, whilst temporary loss to events of a shorter timeframe and which are reversible) are anticipated across the Proposed Development. Permanent loss will occur as a result of land-take for infrastructure (foundations/bases for towers, permanent access tracks, and ancillary structures). Temporary loss will occur through the creation of construction compounds, lay-down areas, pulling locations and temporary access routes. For assessing loss of supporting habitat on birds, only direct habitat loss from the Proposed Development has been taken into account. Indirect losses (from e.g. changes to hydrology)have not been assessed as the locally affected habitat is still considered to be viable supporting habitat for relevant bird species. The magnitude of the effect of direct loss of habitat depends on the number of individuals of the species population that will be affected and the availability of suitable alternative accessible habitat that species can make use of.

9.4.4 Birds will also be affected by loss of woodland as a result of felling of trees along the Operational Corridor. Felled areas will naturally regenerate to form other natural or semi-natural habitats. These areas will be managed to prevent re-growth of woodland and limit the height of vegetation and will therefore result in a change of habitat structure and distribution along the Proposed Development. Birds may also be affected by any management felling undertaken to mitigate the risk of windblow in commercial forestry plantations (see **Chapter 13: Forestry, Section 13.6**), considered to be an indirect effect. Where management felling is undertaken, the landowner would be required to fully address the replanting of such areas of felling outwith the OC.

9.4.5 The permanent and temporary loss of habitats within each Section of the Proposed Development is assessed in **Chapter 8: Ecology and Nature Conservation**. The effects of this habitat loss on individual bird species are assessed within this chapter.

Electrocution Mortality

9.4.6 Electrocution of birds from OHLs can occur when birds perch on or near live conductors. For a bird to be electrocuted it must either make contact with a conductor whilst on top of a tower, make contact with a conductor and an earth wire at the same time, or make contact with two conductors at the same time. The proposed lattice tower configurations typically include at least 16 m horizontal spacing between conductor bundles, with insulators that hang down approximately 5 m from tower arms supporting the conductors (i.e., a distance of approximately 5 m between the live conductor and tower arm above it) (**Chapter 3: Description of the Proposed Development, Plate 3.2**).

9.4.7 The species present in the Proposed Development area with the largest wingspan is white-tailed eagle, which has a wingspan of 2.4 m. There is therefore considered to be no risk of electrocution from birds perching on conductors and no risk of electrocution for birds sitting on towers. As a result electrocution impacts are considered to be **not significant** and are not assessed further in this chapter.

Disturbance and Displacement During Construction

9.4.8 Construction activity, as well as the permanent presence of the operational towers may result in the disturbance and displacement of sensitive bird species. Disturbance may occur to breeding, roosting or foraging birds which may in turn result in temporary or permanent displacement from supporting habitat. Either disturbance or displacement may result in a range of effects on birds including reduced breeding success, loss of foraging/feeding opportunities or lower survivability. Construction activities will be localised and time-bound but may cause disturbance and localised displacement. By application of the Applicant's in-house best practice mitigation measures (e.g. GEMPs, and SPPs set out in **Volume 5, Appendix 3.3 and 3.4**), this can be reduced, but due to the ecology of some of the species under consideration and / or due to species holding additional protections in the non-breeding season under the WCA, the impact of disturbance and displacement is assessed further in this chapter.

Disturbance and Displacement During Operation

9.4.9 Studies of operational OHLs have not identified evidence of displacement of a variety of bird species[21] [22] and displacement from operational infrastructure is not predicted to result in impacts that could affect species at a population level. Operational maintenance activities would be infrequent, undertaken in line with Applicant's in house best practice mitigation measures **(see Volume 5, Appendix 3.3: GEMPs)** to avoid impacts on birds, and highly unlikely to be a notable source of disturbance. As a result, any potential for disturbance or displacement resulting from maintenance activities associated with the operational phase of the Proposed Development would be negligible, and not significant; therefore displacement during operation is not assessed further in this chapter.

Barrier Effects

9.4.10 Barrier effects occur where the vertical configuration of conductors and towers creates an actual or perceived barrier which birds may not cross. There is an existing 132 kV OHL and 275 kV OHL which run in parallel or in

[21] Pearce-Higgins, J.W., Stephen, L., Langston, R.H.W., Bainbridge, I.P. and Bullman, R. (2009). The distribution of breeding birds around upland wind farms. Journal of Applied Ecology 46, 1323–1331.
[22] Altemuller, M. & Reich, M. (1997). Influence of high-tension power lines on breeding meadow birds (in German with English summary). Vogel und Umwelt 9 (Sonderheft): 111-127.

proximity to the Proposed Development in Section A between Halsary Wind Farm and Ousdale in Section A, at East Clyne and between The River Fleet and Cornhill in Section B and C and at Fairburn and Farley in Section E where baseline FAS frequently recorded birds crossing these existing overhead lines. This, together with survey data from other areas of Scotland, demonstrates that birds habituate to the presence of OHLs. It is considered that birds would not treat the Proposed Development as a barrier to movement. Therefore, the effect of this impact is considered to be negligible and not significant and is not assessed further in this chapter.

Collision Mortality

9.4.11 There is a risk of birds colliding with the operational OHL, resulting in injury or mortality. For any design of OHL, the risk of collision is determined by a range of factors including the location of the OHL, the species involved, and the level of flight activity (e.g., number of flights across the alignment at CRH). Studies of operational OHLs indicate that the incidence of collision increases in relation to the presence of regularly used flight corridors or important feeding or roosting sites which increase the level of flight activity. Species which form large flocks (e.g. some waders, gulls, ducks and geese) can also be prone to higher collision risk[23].

9.4.12 The majority of collisions associated with high voltage OHLs occur with the earth wire which is typically thinner and less visible than conductors. Thicker conductors, or bundles of conductors, are more visible to birds and may be more easily avoided[24].

9.4.13 Guidance from NatureScot on assessing impacts of OHLs on birds does not recommend routinely undertaking collision risk modelling to assess collision risk[25]. The assessment presented in this chapter identifies areas of high collision risk based on the level of flight activity of sensitive species, particularly in relation to flights mapped as crossing the Proposed Alignment. In areas with high volumes of flight activity where there is considered to be a high risk of collision mortality that is predicted to result in a significant effect on a population of a sensitive bird species, additional mitigation measures have been proposed in the form of line marking with bird flight diverters (BFD). The conductors for the Proposed Development are configured into bundles of three, supported by spacers (see **Chapter 3: Description of the Proposed Development** and **Volume 5, Appendix 3.2: Further Engineering Design Information**). This configuration is considered to more visible to birds than single conductors and there is currently no approved BFD for use on this configuration. As a result, where line marking has been identified as additional mitigation, this relates to installing BFDs on the earth wire.

9.4.14 The special arrangements required to facilitate the crossing of the Proposed Development with an existing 132 kV or 275 kV OHL will result in a change to the configuration and heights of existing OHLs which could potentially result in a change in the collision risk with existing infrastructure. Compared to the full length of the Proposed Development and the existing OHLs themselves, the special arrangement sections span very short distances and so are considered to pose a negligible increased risk of collision to birds at these locations.

Summary of Effects Scoped In / Out of Further Assessment

9.4.15 Due to the nature of the Proposed Development, and the specifications of the proposed towers, particularly the distance between conductors and other parts of the towers, the following effects are not assessed further in this chapter:

- effects arising from electrocution mortality during operation of the Proposed Development;
- effects arising from disturbance during operational maintenance of the Proposed Development; and,

[23] Raptor Protection of Slovakia (RPS) (2021) Electrocutions & Collisions of Birds in EU Countries: The Negative Impact & Best Practices for Mitigation. An overview of previous efforts and up-to-date knowledge of electrocutions and collisions of birds across 27 EU member states

[24] AL Drewitt and RHW Langston. 'Collision Effects of Wind-power Generators and Other Obstacles on Birds'. In: Annals of the New York Academy of Sciences 1134.1 (2008), pp. 233–266 (cited on pages 40, 45).

[25] NatureScot (2016 and 2025) Guidance - Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds.

- effects arising due to the Proposed Development acting as a barrier to movement during operation.

9.4.16 The remaining topics scoped in for further assessment are:

- effects arising from habitat loss and/or modification during construction of the Proposed Development (including of management felling on species which utilise coniferous plantation woodland);
- effects arising from disturbance and/or displacement from habitats for feeding, breeding, wintering or roosting during construction of the Proposed Development;
- effects arising from collision mortality during operation of the Proposed Development; and
- cumulative effects with other planned developments.

9.5 Baseline

9.5.1 The following sections set out the baseline conditions for each section of the Proposed Development. The information presented is based on the results of the desk-based study and results of field surveys. The baseline for each Section of the Proposed Development sets out identifies those important ornithological features (IOFs) which have been taken forward for impact assessment, taking into account the implementation of embedded mitigation measures as set out in **Section 9.3**. Where, by virtue of their ecology, absence, distance from the Proposed Development, small numbers, low levels of activity, the nature and location of this activity as well as the mitigation measures embedded in the Proposed Development, effects on a particular species are predicted to be of no greater than local significance, these species have not been taken forward for more detailed assessment.

9.5.2 The baseline is informed by the information presented in **Volume 5, Appendix 9.2: Ornithology Technical Report – Sections A and B, Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E, Volume 5, Appendix 9.4a: Ornithology Confidential Report – Section A and B** and **Volume 5, Appendix 9.4b: Ornithology Confidential Report - Sections C, D and E.**

Designated Sites

9.5.3 **Table 9.2** presents an overview of nationally and internationally designated sites in relation to the Proposed Development and shown in **Volume 3, Figure 9.1**. The following sections provide additional detail for all of the designated sites relevant to each section of the Proposed Development.

Table 9.2: All Designated Sites with Ornithological Interest Assessed

Site	Qualifying feature/s		Sections of Proposed Development
Caithness and Sutherland Peatlands SPA / Ramsar	Wigeon Common scoter Golden plover Dunlin Wood sandpiper Greenshank	Red-throated diver Black-throated diver Golden eagle Hen harrier Short-eared owl Merlin	A, B, C, D
Shielton Peatlands SSSI	Greylag goose Wigeon Golden plover Dunlin Arctic skua	Greenshank Hen harrier Short-eared owl Merlin Peregrine	A
Berriedale Cliffs SSSI	(Black-legged) kittiwake Great black-backed gull Herring gull Common guillemot Razorbill	Black guillemot Cormorant Puffin Fulmar Shag	A
East Caithness Cliffs SPA	Kittiwake Great black-backed gull Herring gull Common guillemot Razorbill	Fulmar Cormorant Shag Peregrine	A, B
Moray Firth SPA	Species-specific citations; • Slavonian grebe;	Waterbird assemblage citation comprising; • Scaup	A, B, E

Site	Qualifying feature/s		Sections of Proposed Development
	• Red-throated diver; and • Great northern diver.	• Eider • Velvet scoter • Common scoter • Goldeneye • Long-tailed duck • Red-breasted merganser • Shag	
Caithness Lochs SPA / Ramsar	Greenland white-fronted goose Whooper swan		A
Loch Watten SSSI	Greylag goose		A
Loch Scarmclate SSSI	Greylag goose		A
Dunbeath Peatlands SSSI	Wigeon Teal Common scoter Red grouse Golden plover Curlew Dunlin Common sandpiper Snipe Greenshank	Arctic skua Red-throated diver Black-throated diver Golden eagle Hen harrier Buzzard Merlin Raven Dipper	A
Strathmore Peatlands SSSI	Black-throated diver Wigeon Common scoter Golden plover	Red-throated diver Golden eagle Hen harrier Short-eared owl	A

Site	Qualifying feature/s		Sections of Proposed Development
	Wood sandpiper Greenshank	Merlin	
Coir' an Eoin SSSI	Golden plover		A
Loch Calder SSSI	Icelandic greylag geese Greenland white-fronted goose Whooper swan		A
North Caithness Cliffs SPA	Kittiwake Common guillemot Razorbill	Puffin Fulmar Peregrine	A
Dornoch Firth and Loch Fleet SPA / Ramsar	Species-specific; • Greylag goose • Wigeon • Bar-tailed godwit • Osprey	Waterbird assemblage; • Greylag goose • Wigeon • Teal • Scaup • Oystercatcher • Curlew • Bar-tailed godwit • Dunlin • Redshank	A, B, C, D
Lairg and Strath Brora Lochs SPA/ SSSI	Black-throated diver		B, C, D
Strath Carnaig and Strath Fleet Moors SPA / SSSI	Black-throated diver Hen harrier		B, C, D

Site	Qualifying feature/s		Sections of Proposed Development
Mound Alderwoods SSSI	Shelduck Teal Red-breasted merganser Cuckoo Water rail	Snipe Redshank Sedge warbler Grasshopper warbler	B, C
Loch Fleet SSSI	Shelduck Eider Oystercatcher Ringed plover Little tern Common tern Arctic tern	Great spotted woodpecker Sedge warbler Treecreeper Wheatear Scottish crossbill Reed bunting	B
Coir' an Eoin SSSI	Golden plover		B
Grudie Peatlands SSSI	Golden plover Dunlin Greenshank		C
Morangie Forest SPA	Capercaillie		D
Novar SPA	Capercaillie		D
Ben Wyvis SSSI	Dotterel		D
Glen Affric to Strathconon SPA	Golden Eagle		D, E
Ben Wyvis SPA/ SSSI	Dotterel		D
Cromarty Firth SPA / Ramsar	Species specific; • Greylag goose	Waterbird assemblage; • Greylag goose	D

Site	Qualifying feature/s		Sections of Proposed Development
	• Whooper swan • Bar-tailed godwit • Common tern • Knot • Osprey	• Whooper swan • Wigeon • Pintail • Scaup • Red-breasted merganser • Oystercatcher • Curlew • Bar-tailed godwit • Knot • Bar-tailed godwit • Dunlin • Redshank	
Cromarty Firth SSSI	Bar-tailed godwit Red-breasted merganser Redshank	Whooper swan Wigeon	D
Inner Moray Firth SPA / Ramsar	Species specific; • Greylag goose • Red-breasted merganser • Bar-tailed godwit • Redshank • Common tern • Osprey	Waterbird assemblage; • Greylag goose • Wigeon • Teal • Scaup • Goldeneye • Goosander • Red-breasted merganser • Oystercatcher • Curlew	D, E

Site	Qualifying feature/s		Sections of Proposed Development
		• Bar-tailed godwit • Redshank • Cormorant	
Beauly Firth SSSI	Greylag goose Goosander Red-breasted merganser		E
Glen Strathfarrar SSSI	Breeding bird assemblage		E
North Inverness Lochs SPA	Slavonian grebe		E
Balnagrantach SSSI	Slavonian grebe		E

Results of Desk-based Study

9.5.4 A summary of the records obtained as part of the desk-based study from HRSG and RSPB are presented below. No bird records within the last five years were obtained from HBRG.

HRSG

9.5.5 **Table 9.3** below summarises the records of Schedule 1 and other notable bird species obtained from HRSG between 2021 and 2024.

Table 9.3: Summary of HRSG Data from 2021-2024 – territories within 2km of the Proposed Development (6 km for eagles)

Species	Section				
	A	B	C	D	E
Osprey	0	0	2	0	4
Honey buzzard	0	0	0	0	1
Golden eagle	3	3	0	3	0
Hen harrier	3	11	0	4	0
Red kite	0	0	0	0	1
Barn owl	0	0	0	0	1
Peregrine	3	3	0	0	1

RSPB Scotland

9.5.6 **Table 9.4** below summarises the records of Schedule 1 and other notable bird species obtained from RSPB between 2020-2022.

Table 9.4: Summary of Schedule 1 and Other Notable Species Records from RSPB Scotland – all records within 1 km unless stated

Species	**Section**				
	A	B	C	D	E
Golden eagle (all records within 6 km)	1	0	0	0	0
White-tailed eagle (all records within 6 km)	1	0	0	0	0
Peregrine falcon (all records within 2 km)	2	0	0	0	0
Barn owl (all records within 2 km)	1	0	0	0	0
Short-eared owl (all records within 2 km)	2	0	0	0	0
Hen harrier (all records within 2 km)	2	0	0	0	0
Merlin (all records within 2 km)	1	0	0	0	0
Curlew	2	0	0	0	0
Dunlin	2	0	0	0	0
Golden plover	2	0	0	0	0
Slavonian grebe	0	0	0	0	1

Section A - Spittal to Brora

Statutory Designated Sites

9.5.7 There are 14 sites with a statutory designation for ornithological interest with potential connectivity to Section A of the Proposed Development[26]. The designations and qualifying features are set out in **Table 9.5** below and shown in **Volume 3, Figure 9.1**.

Table 9.5: Designated Sites with Connectivity to Section A of the Proposed Development

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
Caithness and Sutherland Peatlands SPA / Ramsar	The Caithness and Sutherland Peatlands SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex I species, including: • Red-throated diver (2006, 46 pairs, 3.5% of the GB population); • Black-throated diver (1994, 26 pairs, 15% of the GB population); • Golden eagle (1992, 5 pairs, 1% of the GB population); • Hen harrier (1993 to 1997, mean of at least 14 pairs, at least 2.8% of the GB population); • Merlin (1993 and 1994, an estimated 54 pairs, 4% of the GB population); • Short-eared owl (30 pairs, 2% of the GB population); • Golden plover (1993 and 1994, 1,064 pairs, 5% of the GB population); • Dunlin (1993 and 1994, 1,860 pairs, 20% of the GB population); and, • Wood sandpiper (up to 5 pairs, up to 40% of the GB population). The Caithness and Sutherland Peatlands SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Wigeon (1993/94, at least 43 pairs, <0.1% of the Western Siberia/Northwestern/Northeastern Europe biogeographic population and at least 10.8% of the GB population); • Common scoter (2007, at least 21 pairs, <0.1% of the Western Siberia/Western & Northern Europe/Northwestern Africa biogeographic population and at least 40.4% of the GB population); and, • Greenshank (2009, at least 653 pairs, at least 0.9% of the Europe/Western Africa biogeographic population and at least 59.4% of the GB population). The boundary of the Ramsar and SSSI site is coincident with the Caithness and Sutherland Peatlands SPA, which underpins all the bird features of the Ramsar site (Criteria 1, 2, 4).	Within
Shielton Peatlands SSSI (Part of Caithness and Sutherland Peatlands SPA)	The extent and diversity of the blanket bog and dubh lochans on this site provide suitable habitat for a wide range of breeding birds of prey, waders and waterfowl. Notable birds of prey recorded on the site include: • Hen harrier; • Merlin;	Within

[26] Scottish Natural Heritage (now NatureScot), 2016. Assessing Connectivity with Special Protection Areas – Guidance.

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	• Peregrine; and, • Short-eared owl. A range of wader and waterbird species breed on the site including; • Greylag goose; • Wigeon; • Golden plover; • Dunlin; and, • Greenshank. The Dubh lochans provide ideal breeding habitat for red-throated diver and several pairs of Arctic skua breed on the blanket bog.	
Berriedale Cliffs SSSI (Part of East Caithness Cliffs SPA)	Berriedale Cliffs SSSI supports a nationally important seabird colony. More than 10,000 pairs of 10 different species of seabird breed here including: • Fulmar (more than 1% of the British breeding population); • Cormorant; • Shag (more than 1% of the British breeding population); • Kittiwake (more than 1% of the British breeding population); • Great black-backed gull; • Herring gull; • Guillemot (more than 1% of the British breeding population); • Razorbill (more than 1% of the British breeding population); • Black guillemot; and, • Puffin. Some of the individual bird species within the seabird colony are nationally important in their own right.	0.2
East Caithness Cliffs SPA	East Caithness Cliffs SPA qualifies under Article 4.1 by regularly supporting a population of European importance of the Annex I species: • Peregrine (an estimated 6 pairs, 0.5% of the GB population and selected as one of the most suitable sites for peregrine in GB). East Caithness Cliffs SPA further qualifies under Article 4.2 by regularly supporting populations of European importance of migratory species, including: • Kittiwake (32,500 pairs, 1.0% of north Atlantic biogeographic population); • Herring gull (9,400 pairs, 1.0% of NW European biogeographic population); • Guillemot (106,700 individuals, 3.1% of north Atlantic biogeographic population); • Razorbill (15,800 individuals, 1.8% of total A. t. islandica biogeographic population); and, • Shag (2,300 pairs, 1.8% of the north Europe biogeographic population). East Caithness Cliffs SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual seabirds. It regularly	0.2

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	supports 300,000 individual seabirds including nationally important populations of the following species: • Fulmar (15,000 pairs, 3% of the GB population); • Cormorant (230 pairs, 3% of the GB population); • Shag (2,300 pairs, 6% of the GB population); • Kittiwake (32,500 pairs, 7% of the GB population); • Great black-backed gull (800 pairs, 4% of the GB population); • Herring gull (9,400 pairs, 6% of the GB population); • Guillemot (106,700 individuals, 10% of the GB population); and, • Razorbill (15,800 individuals, 11% of the GB population).	
Moray Firth SPA	The Moray Firth SPA qualifies under Article 4.1 by regularly supporting non-breeding populations of European importance, Annex 1 species, including: • Slavonian grebe (a mean peak annual non-breeding population of 43 individuals (3.9% of the Great Britain population; • Red-throated diver (a mean peak annual non-breeding population of 324 individuals (1.9% of the Great Britain population); and, • Great northern diver (a mean peak annual non-breeding population of 144 individuals (5.8% of the Great Britain population). The Moray Firth SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species, including: • Scaup (a mean peak annual non-breeding population of 930 individuals (17.9% of the Great Britain population); • Eider (a mean peak annual non-breeding population of 1,733 individuals (2.9% of the Great Britain population); • Common scoter (a mean peak annual non-breeding population of 5,479 individuals (5.5% of the Great Britain population); • Velvet scoter (a mean peak annual non-breeding population of 1,488 individuals (59.5% of the Great Britain population); • Long-tailed duck (a mean peak annual non-breeding population of 5,001 individuals (45.5% of the Great Britain population); • Goldeneye (a mean peak annual non-breeding population of 907 individuals (4.5% of the Great Britain population); • Red-breasted merganser (a mean peak annual non-breeding population of 151 individuals (1.8% of the Great Britain population); and, • Shag (at least 6,462 individuals during the non-breeding season (3.2% of the biogeographic population and 5.9% of the Great Britain population) and 5,494 individuals during the breeding season (2.7% of the biogeographic population & 10.2% of the Great Britain population).	0.2
Caithness Lochs SPA / Ramsar	The Caithness Lochs SPA qualifies under Article 4.1 by regularly supporting wintering populations of European importance, Annex 1 species, including: • Greenland white-fronted goose (winter peak mean of 440 representing 3% of GB and 1% of Greenlandic population). The	2.9

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	site lies at the northern limit of these species' wintering distributions and is important to the maintenance of the species' wintering ranges); and, • Whooper swan (winter peak mean of 240 representing 4% of GB and 1% of Icelandic population. The Caithness Lochs SPA further qualifies under Article 4.2 by regularly supporting a wintering population of European importance: Greylag goose (winter peak mean of 7,190 representing 7% of the GB and Icelandic populations). The site lies towards the northern limit of this species' wintering distribution and is important to the maintenance of the species' wintering range. The boundary of the Ramsar site is coincident with the Caithness Lochs SPA, which underpins all the bird features of the Ramsar site (Criterion 6).	
Loch Watten SSSI (Part of Caithness Lochs SPA)	Designated as an important roosting site for wintering greylag geese which are present between late September and late April each year. This is one of the largest roost sites in Caithness for this species. Up to 3,000 greylag geese, equivalent to 3% of the British population.	2.9
Loch Scarmclate SSSI (Part of Caithness Lochs SPA)	Designated as an important roosting site for wintering greylag geese which are present between late September and late April each year. More than 1% of the British population of greylag geese regularly overwinter here. The loch is used mainly as an overnight roost site, but birds sometimes also remain on the loch during the day.	3.4
Dunbeath Peatlands SSSI (Part of Caithness and Sutherland Peatlands SPA)	Designated for breeding bird assemblage. Nationally important high densities of species that breed well above average for the peatlands of Caithness and Sutherland including: • Golden plover; • Dunlin; and • Greenshank. Notable breeding species include: • Red-throated diver; • Black-throated diver; • Golden eagle; • Hen harrier; • Merlin; • Common scoter; and, • Arctic skua.	4.9
Strathmore Peatlands SSSI (Part of Caithness and Sutherland Peatlands SPA)	Designated for nationally important high densities of breeding birds that breed well above average for the peatlands of Caithness and Sutherland including: • Wigeon; • Common scoter; • Golden plover; • Dunlin; and, • Greenshank.	5.7

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	Strathmore Peatlands SSSI is part of the Caithness and Sutherland Peatlands SPA which is designated for the breeding birds listed below: • Red-throated diver; • Black-throated diver; • Golden eagle; • Hen harrier; • Merlin; • Short-eared owl • Wigeon; • Common scoter; and, • Golden plover; • Dunlin; • Wood sandpiper; and, • Greenshank.	
Coir' an Eoin SSSI (Part of Caithness and Sutherland Peatlands SPA)	Designated for a nationally important population of breeding golden plover that breeds at a density significantly greater than average for the peatlands of Caithness and Sutherland.	7.4
Loch Calder SSSI (Part of Caithness Lochs SPA)	Designated for the nationally important populations of wintering geese and swan that roost on the loch between late September and late April each year including: • Icelandic greylag geese; • Greenland white-fronted geese; and, • Whooper swan. The loch is used as an overnight roost, with the geese and swans usually dispersing to feeding areas at dawn and returning at dusk. Whooper swans may remain on the loch throughout the day, using the site for feeding as well as roosting. Loch Calder is relatively deep and has areas of open water when neighbouring shallower lochs are completely iced over. It is particularly important during extended periods of severe weather, when wintering wildfowl from across Caithness roost in this location.	7.4
North Caithness Cliffs SPA	North Caithness Cliffs SPA qualifies under Article 4.1 by regularly supporting a population of European importance, Annex I species: • Peregrine (an estimated 6 pairs, 0.5% of the GB population and selected as one of the most suitable sites for peregrine in GB. North Caithness Cliffs SPA further qualifies under Article 4.2 by regularly supporting a population of European importance of the migratory species: • Guillemot (38,300 individuals, 1% of the North Atlantic biogeographic population). North Caithness Cliffs SPA further qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual seabirds. The site regularly supports 110,000 seabirds including nationally important populations of the following species: • Fulmar (14,700 pairs; 3% of the GB population);	12.8

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	• Kittiwake (13,100 pairs, 3% of the GB population); • Guillemot (38,300 individuals, 4% of the GB population); • Razorbill (4,000 individuals, 3% of the GB population); and, • Puffin (2,080 pairs, 0.4% of the GB population and greater than 2,000 individuals).	
Dornoch Firth and Loch Fleet SPA / Ramsar	The Dornoch Firth and Loch Fleet SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex 1, species including: • Osprey forage throughout the SPA (up to 6 territories within feeding range, 6% of the GB population, with 1 pair breeding within the site, 1% of the GB population); and, • Bar-tailed godwit (winter peak mean of 1,184 individuals, 2% of the GB population. Dornoch Firth and Loch Fleet SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Greylag goose (winter peak mean of 1,146 individuals, 1% of the Icelandic/UK/Ireland biogeographic population); and, • Wigeon (winter peak mean of 15,304 individuals, 2% of the W Siberia/NW & NE Europe biogeographic population). Dornoch Firth and Loch Fleet SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. In the five-year period 1989/90 to 1993/94, a winter peak mean of approximately 34,500 individual waterfowl was recorded, comprising 22,000 wildfowl and 12,500 waders, including nationally important populations of the following species: • Greylag goose (1,146 individuals, 1% of the GB population); • Wigeon (15,304 individuals, 5% of the GB population); • Teal (1,592 individuals, 1.0% of the GB population); • Scaup (123 individuals, 1% of the GB population); • Curlew (1,397 individuals, 1.0% of the GB population); • Bar-tailed godwit (1,184 individuals); and, • Redshank (1,272 individuals, 1% of the GB population). The assemblage additionally includes nationally important populations greater than 2,000 individuals including: • Oystercatcher (winter peak mean of a minimum of 2,459 individuals, 0.8% of the GB population); and, • Dunlin (winter peak mean of 4,088 individuals, 1% of the GB population). The boundary of the Ramsar site is coincident with the Dornoch Firth and Loch Fleet SPA, which underpins all the bird features of the Ramsar site (Criterion 2, 4, 5, 6).	13.4

Species Records and Survey Results

9.5.8 The baseline for Section A has been informed by the survey results set out in **Volume 5, Appendix 9.2: Ornithology Technical Report – Sections A and B** and **Volume 5, Appendix 9.4a: Ornithology Confidential Report – Section A and B.**

Geese and Swans

Greylag goose was recorded in flight on 190 occasions during FAS across Section A, with flights recorded across the majority of Section A. Notable activity was recorded north of Backlass Hill, flights running parallel to the A9 at Tacher, around Lochs Rangag and Stemster, around Badnagie and Dunbeath, at Borgue (including a small number of individuals on Borgue Loch), at Ousdale (following the Ousdale Burn inland), and following the River Helmsdale. The majority of activity was recorded during the migration months April/ May and September/ October, as well as some localised activity in the breeding season around Loch Rangag. Fifty-nine flights were recorded crossing the alignment, 43 of which were at CRH.

During baseline surveys four confirmed and two possible breeding territories of greylag goose were recorded along Section A around Loch Rangag, all of which were within 800 m of the Proposed Alignment, with three of the confirmed and one of the possible territories being within the species' advised 600 m disturbance distance. During wintering geese roost surveys Loch Stemster was confirmed as a winter roost with a peak of two individuals observed in January 2024, with occasional use of Loch of Toftingall recorded. Winter foraging geese surveys were undertaken in fields to the south-west of Loch Watten. A peak count of 400 individuals was recorded November 2023, with the closest field holding foraging birds approximately 500 m west of the Proposed Development.

Caithness Lochs SPA / Ramsar and Dornoch Firth and Loch Fleet SPA / Ramsar are located approximately 3 km and 13.4 km from the Proposed Alignment, respectively, with wintering greylag geese listed as a designated feature of both sites. Given the relatively high level of flight activity and presence of foraging geese within potential disturbance distance (<600 m) of the Proposed Development during baseline surveys, as well as considering the connectivity distance between Section A and Caithness Lochs SPA / Ramsar and Dornoch Firth and Loch Fleet SPA / Ramsar, greylag goose is considered further in the assessment within Section A. Furthermore, the breeding territories recorded through baseline surveys likely form part of the breeding assemblage associated with Sheilton Peatlands SSSI which the Proposed Development intersects with.

Pink-footed goose was recorded in flight 52 times during FAS across Section A, with concentrations of flight activity at Spittal, Lochs Rangag and Stemster and west of Helmsdale. The majority of flights were recorded in April/ May and September/ October, likely of birds on migration. 34 flights were recorded crossing the alignment, 16 at CRH. Wintering geese roost surveys were undertaken at historic roost sites. While pink footed geese were recorded overflying Loch Stemser, no birds were recorded roosting at the loch or at any other surveys roost sites.

9.5.9 Winter foraging geese surveys recorded a peak count of 200 birds across two fields in March 2024, with the closest field holding geese over 2 km from the Proposed Alignment. There are no designated sites within published connectivity distance of Section A where wintering pink-footed goose are a qualifying interest feature. Given the relatively low number of pink-footed geese flights recorded crossing the Alignment during baseline surveys and the lack of foraging or roosting sites within potential disturbance distance, potential effects on pink-footed geese are not considered further in the assessment of Section A.

Whooper swan was recorded on two occasions during FAS of Section A with a single flight crossing the Proposed Alignment at CRH. Flights were recorded in February/ March of 2024. No breeding territories were identified. During winter roost surveys a peak count of eight whooper swans were recorded roosting at Loch of

Toftingall, and during FAS peak counts of seven and 12 birds were recorded on the water at Loch Rangag and Loch Stemster respectively. Each of these waterbodies are within the 600 m disturbance distance for wintering whooper swan from the Proposed Development. During winter foraging surveys around Loch Watten, a peak of three whooper swans was recorded, with all records in fields over 2 km from the Proposed Alignment

9.5.10 Given the presence of a whooper swan roost within potential disturbance distance of the Proposed Development during baseline surveys, and considering the connectivity distance between Section A and Caithness Lochs SPA / Ramsar, whooper swan is considered further in the assessment within Section A.

Other Waterfowl

Wigeon was recorded in flight on single occasion in March 2024 landing on Loch Rangag. The flight did not cross the Proposed Alignment. No breeding territories of wigeon were recorded during baseline surveys in 2023 or 2024. Given the lack of flights across the Proposed Alignment and breeding territories recorded during baseline surveys, wigeon is not considered further in the assessment of Section A.

Teal was recorded in flight on five occasions during FAS of Section A, with three at flights at Loch Toffingall. The majority of flights were below CRH and none crossed the Proposed Alignment. Two confirmed breeding territories were identified, both over 300 m from the Proposed Development. Due to the low level of flight activity and distance of the Proposed Development to recorded breeding territories, teal is not considered further in the assessment of Section A.

Only one flight of eider was observed in relatively close proximity to the Proposed Alignment which was a flight of 15 birds at risk height at Loch Rangag but this did not cross the Proposed Alignment. One probable breeding territory was recorded along the coast, just over 1 km from the Proposed Development and within the Moray Firth SPA but the site is designated for wintering eider. Small numbers of eider were recorded at sea from the FAS but at considerable distance from the Proposed Development. Therefore, although eider is a designated feature of the Moray Firth SPA, given the low number of records from across baseline surveys, eider is not considered further in the assessment of Section A.

No flights of common scoter were recorded across baseline surveys of Section A. The species was recorded on the water on Loch Toftingall (not in flight) during FAS in August 2024 when five adults and 20 juveniles were recorded. Common scoter was also recorded on one occasion on Loch Stemster during goose roost VP surveys in April 2024 when two adults were recorded. No breeding territories were recorded during breeding bird or breeding rare duck surveys in 2023 or 2024. Breeding common scoter are a qualifying feature of the Caithness and Sutherland Peatlands SPA / Ramsar (crossed by the Proposed Development) and non-breeding common scoter are a qualifying feature of the Moray Firth SPA (located approximately 190 m from the Proposed Development). Due to the relatively high number of birds recorded during baseline surveys on waterbodies close to the Proposed Development, common scoter is considered further in the assessment of Section A.

Nine flights of goldeneye were observed during FAS of Section A, with flights concentrated around at Loch Ragnag. The majority of flights were below CRH. None of the flights crossed the Proposed Alignment. No breeding territories were recorded during breeding bird surveys. Goldeneye is a designated feature of the Moray Firth SPA, located approximately 1 km from the Proposed Alignment at its closest. Given the lack of flights recorded crossing the Proposed Alignment, and lack of breeding territories recorded, goldeneye is not considered further in the assessment of Section A.

Red-breasted merganser was recorded on two occasions during FAS of Section A. A single flight crossed the Proposed Alignment at Loch Toftingall where two birds flew from the water, crossing the Proposed Alignment at CRH. During breeding bird surveys in 2024 one possible territory was identified at River Helmsdale

approximately 2 km west of the Proposed Alignment. Red-breasted merganser is a qualifying feature of the Moray Firth SPA, located approximately 1 km from the Proposed Alignment at its closest. The closest observation of red-breasted merganser during baseline surveys was made approximately 4.6 km from the SPA. Given the low levels of recorded flight and breeding during baseline surveys, red-breasted merganser is not considered further in the assessment of Section A.

9.5.11 Goosander was observed in flight on four occasions during FAS of Section A. No flights were recorded crossing the Proposed Alignment and no goosanders were recorded during breeding bird or breeding duck surveys. Given the low levels of recorded activity, and lack of breeding evidence, goosander is not considered further in the assessment of Section A.

Woodland Grouse

9.5.12 Black grouse was not recorded during baseline surveys throughout 2023/ 2024 period. During black grouse surveys, there were no observations of leks or breeding activity within the observation area. Additionally, the desk-based study did not identify any records of black grouse within Section A of the Proposed Alignment over the past five years and there are no designated sites within Section A where black grouse is a qualifying feature. Given the results baseline surveys and lack of recent historical records, black grouse is not considered further in the assessment of the Section A.

Waders

A total of 83 oystercatcher flights were recorded during FAS of Section A. Three flights were recorded crossing the Proposed Alignment at CRH. Concentrations of flight activity were recorded south of Tacher; around Loch Rangag and Loch Stemster, around Braehungie, north-west of Latheronwheel and along the River Helmsdale. During breeding bird surveys in 2023, one confirmed and 13 possible territories were recorded, and in 2024 five possible territories were recorded. Of these territories, one was within the published disturbance distance for oystercatcher (100 m) of the Proposed Development. The closest designated site to the Proposed Development of which oystercatcher is a qualifying feature is the Dornoch and Firth and Loch Fleet SPA/ Ramsar site approximately 13.7 km to the south. Given the relatively low level of flight activity across the Proposed Alignment and as embedded mitigation measures will be implemented to avoid and minimise impacts on oystercatcher, this species is not considered further in this assessment of Section A.

Golden plover was recorded in flight on 18 occasions during FAS of Section A. Four flights were observed crossing the Proposed Alignment at CRH at the very north and very south of Section A. Two probable and one possible golden plover breeding territories were recorded during breeding bird surveys in 2023 within Section A. All three territories were within 1 km from the Proposed Development but outside of the 500 m disturbance distance buffer for golden plover. The closest territory was one probable territory to the south of Section A, approximately 600 m from the Proposed Development. The other probable and possible territories were recorded further north and within the Caithness and Sutherland Peatlands SPA / Ramsar site. The closest designated sites for which golden plover is a qualifying interest feature are Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, both of which are crossed by the Proposed Development within Section A. Although flight activity is relatively low, and no breeding territories were recorded during baseline surveys, golden plover is considered further in the assessment of Section A as the Proposed Development passes through supporting golden plover habitat within and connected to the Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI.

Lapwing was recorded on 93 occasions during FAS of Section A with the majority of flights at CRH. The majority of flight activity occurred over farmland at Lochs Rangag and Stemster, around Braehungie; around the Achorn Burn and south of Achorn Road, Dunbeath and around Borgue. Flights crossed the Proposed Alignment 23 times, of which 15 were at CRH. Most of the activity was recorded during the breeding season with low level

of activity associated with wintering or migrant birds. Breeding bird surveys in 2023 recorded one probable and ten possible territories, whilst surveys in 2024 recorded three possible territories. the majority of territories were located along the A9 corridor between Dunbeath and Spittal and west of Dunbeath, with the closest territory approximately 100m from the Proposed Development. There are no designated sties for which lapwing is a qualifying interest feature in Section A. Embedded mitigation measures will be implemented to avoid and minimise impacts on breeding lapwing and the species is not considered further in the assessment of Section A.

No dunlin flights were recorded across baseline surveys but three possible territories were recorded during breeding bird surveys of Section A. Two of these possible territories were recorded adjacent Loch Stemster and the other approximately 1.9 km south of Loch Stemster, towards Cnoc Dubh. Al territories were over 600 m from the Proposed Development. A group of six birds were also recorded on the ground near Loch Stemster during FAS. Since there are three possible breeding records and as the Proposed Development passes through Caithness and Sutherland Peatlands SPA / Ramsar and Shielton Peatlands SSSI which are in part designated for breeding dunlin the species is considered further in the assessment of Section A.

A total of 136 flights of curlew were recorded during FAS of Section A with all flights during March - August. Sixteen flights crossed the Proposed Alignment of which 15 were at CRH. Most of the flights were over pasture with notable activity recorded around Baclass Hill, south of Tacher and around Borgue. Breeding bird surveys recorded one confirmed, two probable and 23 possible territories in 2023 and one probable and 15 possible territories in 2024. A total of 14 territories were recorded within potential disturbance distance (300 m) of the Proposed Development. The closest designated site where curlew is qualifying feature is the Dornoch Firth and Loch Fleet SPA / Ramsar site (approximately 13.4 km south of Section A) where wintering curlew is a qualifying feature. Given the relatively low level of flight activity, and with embedded mitigation measures in place to avoid and minimise impacts to breeding snipe, impacts on this species are not considered further in the assessment of Section A.

9.5.13 A single flight of a whimbrel was recorded during May 2024, which crossed the Proposed Alignment at CRH heading north-east. No breeding activity was recorded during breeding bird surveys. There is a small breeding population of whimbrel in the north of Scotland with the majority of birds breeding in Orkney or Shetland. Given the timing of the flight, it is likely the bird was a spring passage individual on-route to breeding areas further north. Whimbrel is not considered in further in the assessment of Section A.

Four flights of greenshank were recorded during FAS of Section A and no flights crossed the Proposed Alignment. During breeding bird surveys, one possible territory was recorded north of Loch Rangnag approximately 730 m west of the Proposed Development. Another possible territory not identified during breeding bird surveys may be present south of Halsary Windfarm where territorial behaviour was recorded during FAS, with adult birds recorded mobbing a buzzard and singing approximately 980 m east of the Proposed Development. Breeding greenshank is a qualifying feature of the Caithness and Sutherland Peatlands SPA / Ramsar and Shietlon Peatlands SSSI which the Proposed Development passes through. Given the presence of breeding territories recorded during baseline surveys within the core range of greenshank (2km) from Caithness and Sutherland Peatlands SPA / Ramsar site, greenshank is considered further in the assessment of Section A.

Redshank was recorded flying on two occasions at Loch Ragnag. Neither flight crossed the Proposed Alignment. A single possible territory was recorded during breeding bird surveys in 2023, approximately 170 m east of the Proposed Development north-east to the Loch Ragnag. The closest designated site for which redshank is a qualifying interest feature is the Dornoch Firth and Loch Fleet SPA / Ramsar, located approximately 13.4 km south of Section A. Given the lack of flights crossing the Proposed Alignment and low

level of breeding activity recorded during baseline surveys, redshank is not considered further in the assessment of Section A.

9.5.14 Snipe was recorded in flight on 10 occasions during FAS of Section A. No flights were recorded crossing the Proposed Alignment. During breeding bird surveys in 2023 one probable and four possible territories were recorded. Much of the open farmland, moorland and wetland which Section A of the Proposed Development passes through is suitable for breeding snip and the species is relatively cryptic even during the breeding season, and breeding is likely to be more frequent than recorded during baseline surveys. Despite this, given the relatively low level of flight activity, and with embedded mitigation measures in place to avoid and minimise impacts to breeding snipe, impacts on snipe are not considered further in the assessment of Section A.

Three woodcock flights were recorded during FAS of Section A, all below CRH. Birds were recorded flying north of Tacher, south of Borgue, and the last at Ousdale. The closest flight was observed 460 m from the Proposed Alignment. All flights were recorded in winter. No breeding territories were identified during baseline surveys, however species-specific surveys for woodcock were not undertaken, and given the cryptic nature of the species, it is likely it was under-recorded in suitable woodland habitat within Section A. However, as embedded mitigation measures will be implemented to avoid and minimise impacts on breeding woodcock, impacts on this species are not considered further in the assessment of Section A.

Gulls, Skuas and Terns

Arctic skua was recorded on three occasions during FAS of Section A, with one flight of three birds at Loch Rangag and two flights southwest of Dunbeath. The flight at Loch Rangag crossed the Proposed Alignment, with three birds flying southeast in September. One flight crossed the Proposed Alignment at CRH. Breeding bird surveys did not record any breeding activity in either 2023 or 2024. Arctic skua is a qualifying interest feature for Shielton Peatlands SSSI, which the Proposed Development passes through, as well as Dunbeath Peatlands SSSI which is located approximately 4.9 km west of the Proposed Development. Although the level of flight activity of Arctic skua recorded during baseline surveys was relatively low and no breeding territories were recorded, as the Proposed Development passes through Shielton Peatlands SSSI, Arctic skua is considered further in the assessment of Section A.

9.5.15 A total of 508 flights of common gull were recorded during FAS of Section A with flights across all height bands. The majority of flights were recorded running parallel to the A9 between Latheron and Thurso. The habitat along this section of the Proposed Development included extensive areas of open wet grassland and farmland which provides suitable foraging habitat, with the various lochs and lochans providing potential roosting or loafing sites. 119 flights crossed the Proposed Alignment at CRH. During breeding bird surveys in 2023, one probable and six possible territories were recorded and in 2024 four possible territories were recorded with the closest territory within approximately 70 m of the Proposed Development. There are no designated sites of which common gull is a qualifying feature for Section A. Given the number of flights crossing the Proposed Alignment at CRH, however, common gull is considered further in the assessment of Section A.

9.5.16 Lesser black-backed gull was recorded on 52 occasions during FAS of Section A. Fifteen flights were recorded crossing the Proposed Alignment, 25 of which were at CRH. No breeding territories were recorded during surveys in 2023 or 2024. Lesser black-backed gull is not a qualifying feature of any designated sites for Section A. Given the relatively low number of flights crossing the Proposed Alignment of lesser black-backed gull and the lack of breeding territories recorded, and considering the species is not a feature of any nearby designated sites, lesser black-backed gull is not considered further in the assessment of Section A.

A total of 678 flights of herring gull were recorded during FAS across Section A, with flights recorded at all height bands. 194 flights were recorded crossing the Proposed Alignment, of which 182 were at CRH. Flights were recorded at several waterbodies including Loch Toftingall, Dunbeath Water, Borgue Loch, Ousdale Burn,

the River Helmsdale and Loch Rangag and Loch Stemster. A relatively large number of flights were recorded running parallel to the A9 between Latheron and Thruso. Flights were recorded in all months, with peaks in February and May 2024 indicating that the area is used during both the breeding and non-breeding seasons. During breeding bird surveys, four possible territories and two confirmed were recorded in 2023 and four possible territories in 2024. Breeding herring gull is a qualifying feature of the East Caithness Cliffs SPA, located approximately 0.4 km east of the Proposed Development. Given the number of flights recorded crossing the Proposed Alignment, and its status as a qualifying feature of the East Caithness Cliffs SPA, herring gull is considered in further in the assessment of Section A.

Great black-backed gull flights were recorded on 121 occasions during FAS of Section A. Forty-two flights were recorded crossing the Proposed Alignment, of which 61 were at CRH. Activity was observed parallel to the A9 between Latheron and Thurso as well as a concentration of activity at Dunbeath, Borgue, and along the Helmsdale River. No breeding territories were recorded during breeding bird surveys, with great black backed gull predominantly nesting on sea cliffs or on islands. Breeding great black-backed gull is a feature of the East Caithness Cliffs SPA located approximately 0.4 km east of the Proposed Development. Slightly under half (53 flights) of the flight activity was recorded during the greater black-backed gull breeding season (April – August) As a result, greater black-backed gull is considered in further in the assessment of Section A.

9.5.17 One flight of one kittiwake was recorded near the coast by West Garty prior to the repositioning of the Proposed Alignment further inland. No other flights or breeding territories of kittiwake were recorded across baseline surveys. Therefore, although kittiwake is a designated feature of East Caithness Cliffs SPA and North Caithness Cliffs SPA, given the low number of records across baseline surveys, kittiwake is not considered further in the assessment of Section A.

9.5.18 A single flight of Sandwich tern was recorded during FAS in July 2023, when one individual was recorded along the river Helmsdale, approximately 1.3 km west of the Proposed Development. Sandwich tern was not recorded during any other surveys, and is not considered further in this assessment of Section A.

Divers

During FAS within Section A, 13 red-throated diver flights were recorded. Flights were observed at Loch Toftingall and along the A9 in the north of Section A, and north-west of Helmsdale in the south. Three flights crossed the alignment, all at CRH. Red-throated divers were recorded on two waterbodies during breeding bird surveys in 2023 although no breeding activity was recorded. During surveys in 2024, one confirmed territory was recorded on a waterbody approximately 500 m north of the Proposed Development, and non-breeding birds were recorded on another two waterbodies. Flight activity was recorded over waterbodies within connectivity distance of Caithness and Sutherland Peatlands SPA where red-throated diver is considered to be part of the qualifying interest feature population.

9.5.19 Given the results of baseline surveys, historical records, and considering the separation distance between Section A and the nearest designated site where red-throated diver is a feature (Caithness and Sutherland Peatland SPA, crossed by the Proposed Alignment), red-throated diver is considered further in the assessment of Section A.

9.5.20 No black-throated diver were recorded during baseline surveys.

Seabirds

No fulmar flights were recorded across baseline surveys but one confirmed territory and one probable territory were recorded by the coast, approximately 1 km away from the Proposed Development near Badbea. However, although fulmar is a designated feature of East Caithness Cliffs SPA and North Caithness Cliffs SPA, given the

low number of records and likely distance away from disturbance, the species is not considered further in the assessment of Section A.

Cormorants

Cormorant was recorded in flight on 11 occasions during FAS across Section A. The majority of the activity focused on Loch Ragnag with one flights heading north-west towards Loop Burn, and four flights heading south-east over the Loch. The majority of flight activity was recorded during the non -breeding season (mid-September to mid-February) with single flights in March, May and August. A single flight was recorded crossing the Proposed Alignment at CRH with a single bird in September. No breeding bird activity was recorded during baseline surveys. Breeding cormorant is a qualifying feature of the East Caithness Cliffs SPA. However, due to the relatively low level of flight activity and birds crossing the Proposed Alignment and CRH, and the fact that the majority of flight activity was recorded during the non-breeding season, the species is not considered further in the assessment of Section A.

No shag flights were recorded inland across baseline surveys, only a small number of flights at sea recorded during the FAS, all below CRH. Shag was only recorded inland once across baseline surveys, with one individual on Loch Rangag recorded during the FAS. Birds were also recorded on few occasions the water along the coast within the Moray Firth SPA. No breeding evidence was recorded. Therefore, although shag is a designated feature of the East Caithness Cliffs SPA and Moray Firth SPA, given the low number of records from across baseline surveys, shag is not considered further in the assessment of Section A.

Raptors

9.5.21 Results from breeding Schedule 1 raptor surveys are contained within the **Volume 5, Appendix 9.4a: Ornithology Confidential Report– Sections A and B.**

9.5.22 No surveys were undertaken for wintering raptors in Section A as the results of the desk-based study and findings of other surveys did not indicate the likely presence of frequently used Schedule 1 raptor roosts within this Section.

Osprey was recorded in flight on 115 occasions and crossed the alignment on 44 occasions, all of which were at CRH. Flight activity was concentrated at Loch of Toftingall, at Loch Rangag and west of Rumster Forest. The majority of flights were of single birds, with a maximum of four birds recorded at one time.

9.5.23 One probable territory was recorded approximately 550 m west of the Proposed Development, and one confirmed territory was recorded approximately 900 m east of the Proposed Development. The nearest designated site where osprey is a feature is Dornoch Firth and Loch Fleet SPA / Ramsar, approximately 13.4 km to the south. Given the relatively high level of flight activity and proximity of breeding territories to the Proposed Development, osprey is considered further in the assessment of Section A.

9.5.24 Golden eagle was recorded in flight on 36 occasions with 29 flights recorded crossing the Proposed Alignment at CRH. Birds were recorded from along the majority of Section A with activity concentrated north and west of Helmsdale. Golden eagles are known to breed in the wider area. Three territories within the species 6 km core foraging range to the Proposed Development were identified during the desk-based assessment. All territories are located at least 1.5 km from the Proposed Development. Baseline surveys did not confirm breeding at any of these territories, however HRSG data confirmed successful breeding at one territory approximately 2.5 km west of the Proposed Development. No winter roosts of golden eagle were identified during baseline surveys or through the desk-based study. The nearest designated site where golden eagle is a qualifying feature is Caithness and Sutherland Peatlands SPA which Section A passes through. Given the recorded flight activity and presence of known golden eagle territories within foraging range of the Proposed Development, and

considering that Section A is partly located within a designated site where golden eagle is a feature, potential effects on golden eagle are considered further in the assessment of Section A.

Red kite was recorded in flight on 24 occasions in Section A during FAS. Flights were recorded across all height bands, with the majority above CRH. Birds crossed the Proposed Alignment on seven occasions, resulting in six crossings at CRH. Flights were mostly recorded at the western edge of Rumster Forest and in the valley of the Dunbeath Water to the north of Dunbeath. The majority of flight activity was recorded between August and April indicating non-breeding birds, although one possible territory was recorded during breeding bird surveys west of Dunbeath, approximately 300 m west of the Proposed Development. Therefore, red kite is considered further in the assessment of Section A of the Proposed Development.

Hen Harrier was recorded on 99 occasions during FAS of Section A, with the majority of flights at or below CRH. 20 flights were recorded crossing the Proposed Alignment at CRH. Concentrations of activity were recorded to the north-east of Spittal Hill, at Backlass Hill, Shielton, Halsary and Tacher, around Lochs Rangag and Stemster, around Braehungie; south of Achorn Road, Dunbeath; near Borgue and Borgue Loch; south-west of Berriedale Water; east to the Glen Loth Road and around Asc na Grèine (north of Brora).

Across the breeding bird and breeding raptor surveys one possible territory (in 2023) and one probable territory (in 2024) were recorded within 2 km of the Proposed Development. The possible territory was approximately 360m south of the Proposed Development, and the probable territory was approximately 890 m west of the Proposed Development. Two other probable territories were recorded by surveyors undertaking ecology surveys within Section A, with pairs of hen harrier displaying courting or territorial behaviour at each location. Both of these probable locations were within 150 m of the Proposed Development. No historical records or survey results of winter roosts of hen harrier were identified within Section A. The desk-based review identified three historic HRSG hen harrier territories in Section A within 150 m of the Proposed Development. No information on occupancy or breeding success of these territories was provided by HRSG and breeding activity was not recorded in the vicinity of any of these locations during baseline surveys. The nearest designated site where hen harrier is a qualifying feature is Caithness and Sutherland Peatlands SPA/Shielton Peatlands SSSI, which Section A passes through. Given the results of baseline surveys, effects on hen harrier are considered further in the assessment of Section A.

Goshawk was recorded during FAS on four occasions in Section A. Flights were observed near Loch Toftingall close to an area of conifer plantation. Flights were observed in September 2023, February 2024, April 2024 and July 2024.Three were at CRH. None of the flights crossed the Proposed Alignment. Breeding raptor surveys did not record any goshawk territories during baseline surveys within Section A. Given the results of baseline surveys, effects on goshawk are not considered further in the assessment of Section A.

White-tailed eagle was recorded in flight on 21 occasions during FAS within FAS Section A of which 11 crossed the Proposed Alignment at CRH. Most of the activity was at Loch of Toftingall; south of Loch Rangag; west of Borgue Loch; north-east of Ousdale; along the valley of the River Helmsdale; and north-west of Lothbeg. Flight activity was noted in breeding raptor surveys in 2024, however, no breeding behaviour within Section A was observed. No designated sites where white-tailed eagle is a qualifying feature are present within connectivity distance of Section A. Given the results of baseline surveys, flight activity close to the Proposed Alignment, potential effects on white-tailed eagle are considered further in the assessment of the Proposed Development within Section A.

9.5.25 Merlin was recorded in flight on 40 occasions during FAS of Section A. Fourteen crossed the Proposed Alignment at CRH. The south-eastern hills of Section A provide the most suitable breeding habitat for merlin with open heathland habitat abundant. During breeding bird surveys, a single possible breeding territory within the NatureScot advised disturbance distance of 500 m of the Proposed Development was identified west of

Dunbeath, within 30 m of the Proposed Development. Two other possible territories were recorded towards the southern end of Section A, both approximately 600 m from the Proposed Development but just over the species' advised 500 m disturbance distance for the species. The closest designated sites for which merlin is a qualifying interest feature are Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, both of which are crossed by the Proposed Development within Section A. Given the results of the FAS, and the presence of a breeding territory within potential disturbance distance of the Proposed Development and the fact that Section A passes through designated sites where merlin is a qualifying feature, merlin is considered further in the assessment of Section A.

Peregrine was recorded in flight on eight occasions during FAS within Section A. Five of those flights crossed the Proposed Alignment, two of which were at CRH. Flight activity was concentrated along the Berriedale Water and in the coastal area around Ousdale Burn. No breeding behaviour or nest sites were recorded during breeding bird or raptor surveys. The desk-based study identified three historic territories in HRSG data within 2 km of the Proposed Development. However, no information on breeding activity was provided. None of the historic territories were within the 750 m NatureScot advised disturbance distance of the Proposed Development. Peregrine is listed as a qualifying feature of the East Caithness Cliffs SPA which is approximately 200 m from the Proposed Development and although peregrines usually forage up to 2 km from their territories, the species has been recorded travelling as far as 18 km. Flight activity was recorded across the Proposed Alignment within the core foraging range of the SPA. Peregrine has also been recorded in Shielton Peatlands SSSI which the Proposed Development passes through. Given the observed flight activity, historical records and proximity of designated sites to Section A where peregrine is a feature, this species is considered further in the assessment of Section A.

Short-eared owl was recorded on four occasions during FAS of Section A. Birds were observed south of Loch Stemster with peak activity west of the Houstry Burn. Both areas support large areas of grass moor habitat together with populations of vole, a favoured prey for the species. None of the flights crossed the Proposed Alignment at CRH. No breeding territories of short-eared owl were recorded during breeding bird surveys of Section A although given the secretive nature of the species, breeding territories can be hard to detect. One flight was recorded during winter raptor roost surveys, but it did not cross the Proposed Alignment, and no roosting activity was recorded during surveys. The closest designated sites for which short-eared owl is a qualifying interest feature are Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, both of which are crossed by Section A of the Proposed Development. Despite the lack of flight activity across the Proposed Alignment or breeding territories identified during baseline surveys, as short-eared owl is a qualifying interest feature of Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, this species is considered further in the assessment of Section A.

9.5.26 Other raptors recorded during baseline surveys included sparrowhawk, buzzard, kestrel and barn owl. These species are common and widespread and embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on them. A single sighting of a marsh harrier on migration was also recorded however this species is unlikely to be resident within Section A. As a result, these species are not considered further in this assessment of the Proposed Development within Section A.

Passerines

9.5.27 During baseline surveys, 20 BOCC Red and Amber List passerine species were recorded as possible, probable or confirmed breeders within Section A (cuckoo, greenfinch, house martin, house sparrow, linnet, meadow pipit, mistle thrush, redpoll, reed bunting, sedge warbler, skylark, song thrush, spotted flycatcher, starling, twite, wheatear, whinchat, whitethroat, wren, yellowhammer). Two Schedule 1 passerine species: crested tit (single possible territory) and crossbill (three possible territories) were recorded from coniferous plantation woodland within Section A. Embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on passerine species, and impacts on passerines are not considered further in the assessment of Section A.

Section A Baseline Summary

9.5.28 Nineteen species were identified for further consideration within the impact assessment of the Proposed Development within Section A: greylag goose, whooper swan, common scoter, golden plover, dunlin, greenshank, Arctic skua, common gull, herring gull, greater black-backed gull, red-throated diver, osprey, golden eagle, hen harrier, white-tailed eagle, red kite, short-eared owl, merlin, and peregrine.

Section B - Brora to Loch Buidhe

Statutory Designated Sites

9.5.29 There are nine sites with a statutory designation for ornithological interest with potential connectivity to Section B of the Proposed Development[27]. The designations and qualifying features are set out in **Table 9.6** below and shown in **Volume 3, Figure 9.1**.

Table 9.6: Designated Sites with Connectivity to Section B of the Proposed Development

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
Strath Carnaig and Strath Fleet Moors SPA / SSSI	Strath Carnaig and Strath Fleet Moors SPA qualifies under Article 4.1 by regularly supporting a population of European importance, Annex I species: • Hen harrier, 12 breeding pairs (mean value between 2002- 2004), representing about 2.5% of a GB population of 483 pairs. The site spatially overlaps Strath Carnaig and Strath Fleet Moors SSSI which is designated for its diverse mosaic of habitats suitable for nesting and foraging hen harriers.	Within
Dornoch Firth and Loch Fleet SPA / Ramsar	The Dornoch Firth and Loch Fleet SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex 1, species including: • Osprey forage throughout the SPA (up to 6 territories within feeding range, 6% of the GB population, with 1 pair breeding within the site, 1% of the GB population); and • Bar-tailed godwit (winter peak mean of 1,184 individuals, 2% of the GB population). Dornoch Firth and Loch Fleet SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Greylag goose (winter peak mean of 1,146 individuals, 1% of the Icelandic/UK/Ireland biogeographic population); and • Wigeon (winter peak mean of 15,304 individuals, 2% of the W Siberia/NW & NE Europe biogeographic population). Dornoch Firth and Loch Fleet SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. In the five-year period 1989/90 to 1993/94, a winter peak mean of approximately 34,500 individual waterfowl was recorded, comprising 22,000 wildfowl and 12,500 waders, including nationally important populations of the following species:	Adjacent

[27] Scottish Natural Heritage (now NatureScot), 2016. Assessing Connectivity with Special Protection Areas – Guidance.

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	• Greylag goose (1,146 individuals, 1% of the GB population); • Teal (1,592 individuals, 1.0% of the GB population); • Wigeon (15,304 individuals, 5% of the GB population); • Scaup (123 individuals, 1% of the GB population); • Curlew (1,397 individuals, 1.0% of the GB population); • Bar-tailed godwit (1,184 individuals); and, • Redshank (1,272 individuals, 1% of the GB population); The assemblage additionally includes nationally important populations greater than 2,000 individuals including: • Dunlin (winter peak mean of 4,088 individuals, 1% of the GB population); and, • Oystercatcher (winter peak mean of a minimum of 2,459 individuals, 0.8% of the GB population). The boundary of the Ramsar site is coincident with the Dornoch Firth and Loch Fleet SPA, which underpins all the bird features of the Ramsar site (Criterion 2, 4, 5, 6).	
Mound Alderwoods SSSI	Designated for wet woodland, saline lagoon and the breeding birds that the wetland habitats support are of national importance. The designated breeding bird assemblage includes: • Shelduck; • Teal; • Red-breasted merganser; • Water rail; • Snipe; • Redshank; • Cuckoo; • Grasshopper warbler; and, • Sedge warbler.	Adjacent
Moray Firth SPA	The Moray Firth SPA qualifies under Article 4.1 by regularly supporting non-breeding populations of European importance, Annex 1 species, including: • Great northern diver (a mean peak annual non-breeding population of 144 individuals (5.8% of the Great Britain population); • Red-throated diver (a mean peak annual non-breeding population of 324 individuals (1.9% of the Great Britain population); and • Slavonian grebe (a mean peak annual non-breeding population of 43 individuals (3.9% of the Great Britain population). The Moray Firth SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species, including: • Greater scaup (a mean peak annual non-breeding population of 930 individuals (17.9% of the Great Britain population); • Eider (a mean peak annual non-breeding population of 1,733 individuals (2.9% of the Great Britain population)	2.5

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	• Long-tailed duck (a mean peak annual non-breeding population of 5,001 individuals (45.5% of the Great Britain population); • Common scoter (a mean peak annual non-breeding population of 5,479 individuals (5.5% of the Great Britain population); • Velvet scoter (a mean peak annual non-breeding population of 1,488 individuals (59.5% of the Great Britain population); • Goldeneye (a mean peak annual non-breeding population of 907 individuals (4.5% of the Great Britain population); • Red-breasted merganser (a mean peak annual non-breeding population of 151 individuals (1.8% of the Great Britain population); and, • European shag (at least 6,462 individuals during the non-breeding season (3.2% of the biogeographic population and 5.9% of the Great Britain population) and 5,494 individuals during the breeding season ((2.7% of the biogeographic population & 10.2% of the Great Britain population).	
Loch Fleet SSSI (Part of Dornoch Firth and Loch Fleet SPA)	Loch Fleet SSSI is the most northerly inlet on the east coast of mainland Britain, located in the Moray Firth basin. Extensive intertidal flats support nationally important numbers of wintering birds. The surrounding coastal and woodland habitats and the assemblages of plants and breeding birds they support are of national importance. Designated for coastal breeding bird species including: • Ringed plover; • Oystercatcher; • Shelduck; • Eider; • Arctic tern; • Common tern; • Little tern; • Wheatear; • Sedge warbler; and, • Reed bunting. Designated for pine woodland species including: • Scottish crossbill; • Treecreeper; and, • Great spotted woodpecker. Designated for nationally important wintering Eider (approximately 1% of the British wintering population).	3.1
Caithness and Sutherland Peatlands SPA / Ramsar	The Caithness and Sutherland Peatlands SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex 1 species, including: • Red-throated diver (2006, 46 pairs, 3.5% of the GB population), black-throated diver (1994, 26 pairs, 15% of the GB population); • Hen harrier (1993 to 1997, mean of at least 14 pairs, at least 2.8% of the GB population);	6.3

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	• Golden eagle (1992, 5 pairs, 1% of the GB population); • Merlin (1993 and 1994, an estimated 54 pairs, 4% of the GB population); • Golden plover (1993 and 1994, 1,064 pairs, 5% of the GB population); • Wood sandpiper (up to 5 pairs, up to 40% of the GB population); • Short-eared owl (30 pairs, 2% of the GB population); and, • Dunlin (1993 and 1994, 1,860 pairs, 20% of the GB population). The Caithness and Sutherland Peatlands SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Common scoter (2007, at least 21 pairs, <0.1% of the Western Siberia/Western & Northern Europe/Northwestern Africa biogeographic population and at least 40.4% of the GB population); • Greenshank (2009, at least 653 pairs, at least 0.9% of the Europe/Western Africa biogeographic population and at least 59.4% of the GB population); and, • Wigeon (1993/94, at least 43 pairs, <0.1% of the Western Siberia/Northwestern/Northeastern Europe biogeographic population and at least 10.8% of the GB population). The boundary of the Ramsar site is coincident with the Caithness and Sutherland Peatlands SPA, which underpins all the bird features of the Ramsar site (Criterion 1, 2, 4).	
Coir' an Eoin SSSI	• Designated for a nationally important population of breeding golden plover that breeds at a density significantly greater than average for the peatlands of Caithness and Sutherland.	6.3
Lairg and Strath Brora Lochs SPA / SSSI	The Lairg and Strath Brora Lochs SPA qualifies under Article 4.1 by supporting a population of European importance, Annex I species: • Black-throated diver. The site supports six pairs of black-throated diver, representing 3% of the British population. The Lairg and Strath Brora Lochs population has a high productivity. During 1986-1998 the SPA averaged one fledged chick per monitored territory every two years in comparison with a national average of one fledged chick per monitored territory every three and a half years. The combination of large population size and high productivity means that the site makes a significant contribution to the production of fledged chicks in Scotland as a whole. • Lairg and Strath Brora Lochs SSSI has the same boundary as Lairg and Strath Brora Lochs SPA and is designated for black throated diver.	7.6
East Caithness Cliffs SPA	East Caithness Cliffs SPA qualifies under Article 4.1 by regularly supporting a population of European importance of the Annex 1 species: • Peregrine (an estimated 6 pairs, 0.5% of the GB population and selected as one of the most suitable sites for peregrine in GB).	15.7

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	East Caithness Cliffs SPA further qualifies under Article 4.2 by regularly supporting populations of European importance of migratory species, including: • Common guillemot (106,700 individuals, 3.1% of north Atlantic biogeographic population); • Razorbill (15,800 individuals, 1.8% of total A. t. islandica biogeographic population); • Herring gull (9,400 pairs, 1.0% of NW European biogeographic population); • Black-legged kittiwake (32,500 pairs, 1.0% of north Atlantic biogeographic population); and, • European shag (2,300 pairs, 1.8% of the north Europe biogeographic population). East Caithness Cliffs SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual seabirds. It regularly supports 300,000 individual seabirds including nationally important populations of the following species: • Northern fulmar (15,000 pairs, 3% of the GB population); • Cormorant (230 pairs, 3% of the GB population); • European shag (2,300 pairs, 6% of the GB population); • Common guillemot (106,700 individuals, 10% of the GB population); • Razorbill (15,800 individuals, 11% of the GB population); • Black-legged kittiwake (32,500 pairs, 7% of the GB population); • Herring gull (9,400 pairs, 6% of the GB population); and, • Great black-backed gull (800 pairs, 4% of the GB population).	

Species Records and Survey Results

9.5.30 The baseline for Section B has been informed by the survey results set out in **Volume 5, Appendix 9.2: Ornithology Technical Report – Sections A and B** and **Volume 5, Appendix 9.4a: Ornithology Confidential Report – Section A and B.**

Geese and Swans

Greylag goose was recorded in flight on 106 occasions during FAS of Section B, with activity centred around Loch Brora and Strath Fleet with a maximum of 500 birds, with fewer observations made around Loch Buidhe, Loch Salachaidh and Cnoc na Gamhna. Forty-two flights were recorded crossing the Proposed Alignment, 22 of which were at CRH, with a peak count of 500 birds.

9.5.31 During breeding bird surveys in 2023, two confirmed breeding territories of greylag goose were recorded along Section B and within the NatureScot advised disturbance distance buffer of <600 m for breeding greylag goose[28], both approximately 370 m from the closest point of the Proposed Development. Wintering geese roost surveys recorded a probable roost site at Loch Brora, although it was infrequently used, with a flock of seven

[28] NatureScot (2022). Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance.

birds recorded during December 2023. During roost surveys, two flocks (of one bird and 73 birds) were recorded crossing the Proposed Alignment at potential CRH. Another roost was recorded at the mouth of the River Fleet. Greylag geese were recorded on five occasions with a peak count of 14 birds. Since this roost site was located approximately 2.6 km southeast of the Proposed Development, flights associated with the roost did not cross the alignment. Flights of greylag goose were recorded during roost surveys of Loch Horn and Loch Buidhe, however no geese were recorded roosting on these lochs. No foraging wintering geese surveys were conducted within potential disturbance distance of the Proposed Development in Section B due to the lack of extensive suitable foraging habitat or historic records.

9.5.32 Since Section B of the Proposed Development is adjacent to the Dornoch Firth and Loch Fleet SPA / Ramsar at its closest point which is designated for wintering greylag geese, greylag goose is considered further in the assessment of Section B.

9.5.33 Regular pink-footed goose activity was observed during FAS within FAS Section B in two areas during the non-breeding season: Strath Brora and the River Fleet. A total of 27 flights were recorded between September 2023 and early May 2024 with a peak count of 200 birds. Four flights were recorded crossing the Proposed Alignment and none of which at CRH, likely birds on migration.

9.5.34 Pink-footed goose was recorded during wintering geese roost surveys at the mouth of River Fleet approximately 3.8 km southeast of the Proposed Development. A single flock of 170 birds was recorded during February 2024. No flights associated with the roost crossed the Proposed Alignment. No foraging wintering geese surveys were conducted within potential disturbance distance of the Proposed Development in Section B due to the lack of extensive suitable foraging habitat or historic records.

9.5.35 Since no designated site for pink-footed goose is within connectivity distance to Section B, and as the potential roosting area at the mouth of River Fleet is approximately 2.6 km southeast of the Proposed Development and thus over the NatureScot advised wintering disturbance distance buffer of 600 m[29], as well as no flightlines crossing the Proposed Alignment at risk height, pink-footed goose is not considered further in the assessment of Section B.

9.5.36 One flock of four brent geese was recorded flying over Loch Brora and the Proposed Alignment in August 2023, at CRH during FAS within Section BFAS. A second flock of three birds was recorded flying approximately 2.6 km south of the Proposed Alignment in February 2024. No other observations were recorded for this species from any other surveys across the entirety of the Proposed Development. Since no designated site for brent goose is within connectivity distance of Section B, and as no roosting sites and only two flights were recorded, brent goose is not considered further in the assessment of Section B.

9.5.37 A single whooper swan flight was recorded during FAS within FAS Section B, in January 2024. A group of six birds was recorded flying from the direction of the mouth of the River Fleet approximately 2.5 km southeast of the Proposed Alignment. No flights crossed the Proposed Alignment.

During winter roost surveys, whooper swan was recorded at three roost sites within Section B. Three birds were recorded at Loch Brora in March 2024 approximately 1.1 km north of the Proposed Development. Five birds were recorded in fields at the mouth of the River Fleet in March 2024 approximately 2.6 km southeast of the Proposed Development. Whooper swan was more regularly recorded at Loch Lunndaidh approximately 1 km southeast of the Proposed Development where birds were recorded during December 2023 and February and

[29] NatureScot (nd). Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance.

March 2024 with a peak count of six birds. No flights from or too roost sites were recorded crossing the Proposed Alignment.

Given that no designated site for whooper swan is within connectivity distance to Section B of the Proposed Alignment, the lack of flights crossing the Proposed Alignment and the two likely occasional roost locations at Loch Lunndaidh and the mouth of River Fleet being located 1 km and 2.6 km from the alignment and thus outside of the NatureScot advised disturbance distancer[30], whooper swan is not considered further in the assessment of Section B.

There was a single observation of a flight of mute swans recorded during FAS, of two individuals observed flying away from Loch Lunndaidh in a north-westerly direction, crossing the Proposed Alignment at CRH. Given the low level of flights recorded and lack of breeding territories recorded within Section B, mute swan is not considered further in the assessment.

Other Waterfowl

9.5.38 Seven shelduck flights were recorded during FAS of Section B, five of which were at CRH, with a peak count of four birds. All flights were located over the River Fleet approximately 650 m south-east of the Proposed Alignment and therefore did not cross it. During the baseline surveys no breeding territories of shelduck were recorded. Mound Alderwoods SSSI (adjacent to the Proposed Development) and Loch Fleet SSSI (approximately 3.1 km from the Proposed Development) are both in part designated for their breeding shelduck populations. However, as no breeding territories were recorded across baseline surveys, and no flights were recorded crossing the Proposed Alignment, shelduck is not considered further in the assessment of Section B.

9.5.39 Two flocks of wigeon were recorded during FAS of Section B, both flying south-east over the River Fleet in November 2023. Both flights were approximately 200 m southwest of the Proposed Development and neither flight crossed the Proposed Alignment. No further observations of this species were recorded during baseline surveys of Section B. Therefore, although Section B of the Proposed Development is adjacent to the Dornoch Firth and Loch Fleet SPA / Ramsar which is designated for wintering populations of wigeon and therefore within the 500 m disturbance distance buffer, given the lack of wigeon records across baseline surveys, the species is not considered further in the assessment of Section B.

9.5.40 Two flights of teal were recorded during FAS of Section B, both flying north over land just north of the River Fleet. Neither flight crossed the Proposed Alignment. During the baseline surveys, no breeding territories of teal were recorded. Flocks of wintering teel were recorded at the mouth of the River Fleet approximately 2.6 km south-east of the Proposed Development with a peak count of 74 birds. Mound Alderwoods SSSI is designated for breeding teal, and Dornoch Firth and Loch Fleet SPA / Ramsar is designated for wintering teal (both adjacent to the Proposed Development). However, as no flights were recorded crossing the alignment and no breeding territories were recorded, and roosting birds at the mouth of River Fleet are approximately 2.6 km from the Proposed Alignment, the species is not considered further in the assessment of Section B.

Mallard was not recorded during FAS of Section B of the Proposed Development. However, nine confirmed, one probable and seven possible territories were recorded during the breeding bird surveys, scattered around Loch Buidhe, River Fleet, Golspie Burn and Loch Brora. Since mallard is a common and widespread species, and the structure and integrity of the associated breeding waterbodies is not going to be impacted, mallard is not considered further in the assessment of Section B.

[30] NatureScot (nd). Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance.

9.5.41 Eider was not recorded during FAS of Section B of the Proposed Development. Birds were recorded on the River Fleet during FAS in February within 50 m of the Proposed Development. Breeding bird surveys recorded two observations of non-breeding eider in 2023 on the River Fleet approximately 800 m downstream of the Proposed Development. Loch Fleet SSSI is approximately 3.1 km southeast of the Proposed Development and is designated for breeding eider. The Moray Firth SPA is approximately 2.5 km from the Proposed Development in Section B. NatureScot published disturbance distance for eiders 200 m during the breeding season and 500 m during the non-breeding season. As a result of the lack of flight activity or breeding territories identified, and given the distance from the Proposed Development to sites for which eider is a qualifying feature, eider is not considered further in the assessment of Section B.

9.5.42 Common scoter was not recorded during FAS of Section B of the Proposed Development. During breeding bird surveys, common scoters were recorded at Loch Buidhe and Loch Horn however no breeding activity was recorded, and birds were considered to be non-breeding. Breeding common scoter is a qualifying feature of Caithness and Sutherland Peatlands SPA / Ramsar, which is located approximately 6.3 km north of the Proposed Development from the Proposed Alignment. Connectivity distances have not been published for common scoter. However, given the lack of breeding activity and the lack of flights recorded during baseline surveys, common scoter is not considered further in the assessment of Section B.

9.5.43 Two flights of goldeneye were recorded during FAS within Section B, with both flights over Loch Brora with a peak count of four birds. No flights crossed the alignment. No breeding territories for goldeneye were recorded during the baseline surveys. During FAS and wintering geese roost surveys non-breeding goldeneye were recorded on two lochs within the NatureScot advised disturbance distance of 800 m: Loch Brora (peak count of four, over-sailed by the Proposed Development) and An Dubh-lochan (peak count of two birds, approximately 130 m south of the Proposed Development). The Moray Firth SPA (designated for wintering goldeneye) is located approximately 2.5 km from Section B of the Proposed Alignment and therefore is outside of the NatureScot advised disturbance distance of up to 800 m. Moreover, since goldeneye are widespread across lochans in Scotland over winter and given the small numbers of birds utilising waterbodies which are within 800 m of the Proposed Alignment as well as the lack of breeding territories or flights crossing the alignment, goldeneye is not considered further in the assessment of Section B.

One red-breasted merganser flight was recorded during FAS of Section B. The flight was of one bird crossing the alignment at CRH down Strath Fleet between Pittentrail and Morvich in March 2024. No other flights were recorded during baseline surveys of Section B. Two possible breeding territories were recorded in 2023, one at Loch Buidhe which is 130 m north of the Proposed Development at its closest point and another just off and north of Abhainn an t-Sratha Charnaig approximately 190 m north of the Proposed Development. Breeding red-breasted merganser is a qualifying feature of the Mound Alderwoods SSSI, adjacent to the Proposed Development at its closest point. Although there are two possible territories in relatively close proximity to the Proposed Alignment, these territories are 7.1 km and 3.3 km from the Mound Alderwoods SSSI and are unlikely to form part of the designated sites population. Given the low level of flight activity and distance of the identified breeding territories from the SSSI, red-breasted merganser is not considered further in the assessment of Section B.

9.5.44 No goosander flights were recorded during FAS, nor were there any breeding territories recorded during breeding bird surveys. Although flights of goosander were recorded during the raptor roost VP surveys and the wintering geese roost surveys, no flight crossed the Proposed Alignment. Therefore, goosander is not considered further in the assessment of Section B.

9.5.45 No scaup flights were recorded during across FAS, nor were there any breeding territories recorded during breeding bird surveys. Only one individual was recorded on Loch Brora from FAS surveys in March 2024.

Therefore, although scaup is a feature of the Moray Firth SPA, given the lack of records across surveys the species is not considered further in the assessment of Section B.

Tufted duck was not recorded during FAS of Section B of the Proposed Development. Birds were recorded on one occasion during the wintering geese roost surveys on Loch Buidhe, and on another occasion adjacent to Loch Salachaidh during the breeding bird surveys but no possible, probable or confirmed territories were recorded. As a result, tufted duck is not considered further in the assessment of Section B.

Woodland Grouse

9.5.46 Capercaillie was not recorded in Section B and the desk-based study did not identify any records of capercaillie within Section B of the Proposed Alignment over the past five years. There are no designated sites for which capercaillie is a qualifying feature in Section B of the Proposed Development. Therefore, capercaillie is not considered further in the assessment of Section B.

Black grouse was recorded once during FAS of Section B, with a single flight that did not cross the alignment close to Socach Hill, approximately 240 m south of the Proposed Development. During black grouse surveys of Section B, no leks or breeding activity were recorded although birds were heard calling in April 2024 around woodland on the north side of Strath Fleet, with the approximate point of call approximately 500 m west of the Proposed Development although no lek was recorded. There was an incidental observation in early May 2024 during FAS of four male black grouse in Strath Carnaig, approximately 480 m north of the Proposed Development. During winter raptor roost surveys three black grouse flights were recorded in Strath Carnaig north of the Proposed Alignment and did not cross it. The desk-based study did not identify any records of black grouse within Section B of the alignment over the past five years and there are no designated sites within Section B where black grouse is a qualifying feature. Although not recorded during dedicated black grouse surveys, the incidental record of four male black grouse together in early May is suggestive of a lek in the area within potential disturbance distance for the species (750 m) and therefore black grouse is considered further in the assessment of Section B.

Waders

9.5.47 Oystercatcher flights were recorded on nine occasions during FAS of Section B. The majority of flights were recorded at Strath Fleet and Loch Brora, with flights recorded during the breeding and non-breeding season. Three flights crossed the Proposed Alignment at CRH. No breeding territories were identified within 500m of the Proposed Development during breeding bird surveys. Loch Fleet SSSI, designated for breeding oystercatcher is approximately 3.1 km from the Proposed Development, however, given the low level of flights crossing the Proposed Alignment and lack of breeding territories within the 100 m NatureScot advised no breeding oystercatcher from the SSSI are considered to be present within potential disturbance distance of the Proposed Development. The Proposed Development is adjacent to Dornoch Firth and Loch Fleet SPA / Ramsar which is designated for wintering oystercatcher and therefore within the NatureScot advised 300 m non-breeding season disturbance distance. Some of the habitat within 300 m of the Proposed Development (arable fields) is suitable for wintering oystercatcher and flights and birds on the ground were recorded in this area during FAS. As a result, oystercatcher is considered further in the assessment of Section B.

Golden plover was recorded in flight twelve times during FAS of Section B, with flocks varying from one to 20 individuals. One flight of eight birds crossed the Proposed Alignment at CRH. Activity was widespread between the hills to the west and north of Achrimsdale down to Strath Fleet. Breeding bird surveys recorded three possible breeding attempts on the slopes of Meall Coire Aghaisgeig in 2023 and two near Cnoc na Gamhna in 2024, but only one of these was within the 500 m NatureScot advised disturbance distance for breeding golden plover from the Proposed Development. Although breeding golden plover is a qualifying feature of the Caithness and Sutherland Peatlands SPA / Ramsar and Coir' an Eoin SSSI, both are approximately 6.3 km

north of from Section B and outside of the core breeding season foraging range for golden plover (3 km). It is unlikely foraging individuals would utilise the Proposed Development, and all recorded flights were beyond 3 km from the SPA / Ramsar/SSSI boundary. Given the relatively low number of flights crossing the Proposed Alignment at CRH and the relatively low number of territories recorded, which are not connected to designated sites, golden plover and Coir' an Eoin SSSI are not considered further in the assessment of Section B.

9.5.48 Eighteen flights of lapwing were observed during FAS across Section B with all activity recorded in Strath Fleet. One flight crossed the Proposed Alignment at CRH. No breeding territories were identified within 500 m of the Proposed Development during breeding bird surveys. Recorded activity from surveys in 2023 and 2024 within 500m of the Proposed Development was attributed to non-breeding individuals. Given the low level of flights crossing the Proposed Alignment at risk height and lack of breeding territories, lapwing is not considered further in the assessment of the Proposed Development within Section B.

9.5.49 No ringed plover flights were recorded during FAS across Section B. One possible territory was recorded during breeding bird surveys in 2024 at Loch Buidhe, approximately 160 m north of the Proposed Development. Breeding ringed plover is a qualifying feature of Loch Fleet SSSI, approximately 3.1 km south of the Proposed Development, and approximately 10 km from the breeding territory record during baseline surveys. Given the lack of flight activity and low number of breeding territories recorded, which are not linked to any designated site, ringed plover is not considered for further assessment of Section B.

9.5.50 Dunlin was recorded twice during FAS of Section B. Neither flight crossed the Proposed Alignment. No breeding territories were recorded during breeding bird surveys of Section B. Although the Proposed Development is 160 m from the Dornoch Firth and Loch Fleet SPA / Ramsar which is designated for wintering dunlin and therefore within the NatureScot advised 300 m non-breeding season disturbance distance, habitat within 300 m of the Proposed Development is unsuitable for wintering dunlin, comprising agricultural fields and alder woodland. The Proposed Development is approximately 6.3 km from Caithness and Sutherland Peatlands SPA / Ramsar which hosts a breeding population of dunlin, however records of dunlin within Section B were over 11 km from the SPA. Given the relatively low number of records across baseline surveys, dunlin is not considered further in the assessment of Section B.

9.5.51 Forty-one flights of curlew were recorded during FAS of Section B. The majority were located in the River Fleet valley during the non-breeding season and associated with foraging activity within the surrounding agricultural fields. Two of these flights crossed the Proposed Alignment at CRH, with a peak count of 16 birds. Three possible breeding territories were recorded during breeding bird surveys, with one of the territories located within the 300 m NatureScot advised disturbance distance for breeding curlew from the Proposed Development. None of the flight activity described appeared to be related to these locations. As curlew flights were recorded crossing the Proposed Alignment at CRH, and the Proposed Alignment of Section B is approximately 240 m north of the Dornoch Firth and Loch Fleet SPA / Ramsar and within the 650 m NatureScot advised disturbance distance for wintering curlew, the species is considered further in the assessment of Section B.

9.5.52 No flight lines of common sandpiper were recorded during FAS within Section B, however, two probable, and 12 possible, territories were recorded during the breeding bird surveys in 2023 and 2024. Most of the territories were recorded around Loch Buidhe, with the probable territory at that location being approximately 560 m north of the Proposed Alignment. The other probable territory was located approximately 245 m northwest of the Proposed Alignment at Loch Horn. Given the lack of common sandpiper flights recorded and as the species is not a feature of nearby designated sites, common sandpiper is not considered further in the assessment of Section B.

One greenshank flight was observed during FAS of Section B on the shore of Loch Buidhe in May 2024, but the flight did not cross the alignment. One possible greenshank territory was recorded, in 2023 approximately 570 m north of the Proposed Development inland from Golspie. Caithness and Sutherland Peatlands SPA / Ramsar is designated for breeding greenshank but is 6.3 km from Section B of the Proposed Development, however the maximum NatureScot advised foraging range for the species is 3 km. Given the lack of flights recorded crossing the Proposed Alignment or breeding territories within 500 m of the Proposed Development, greenshank is not considered further in the assessment of Section B.

No redshank flights were recorded during FAS within Section B. Two possible territories were recorded, one of which was situated within the NatureScot advised 200 m disturbance distance buffer for breeding redshank between Morvich and Kinnauld. Breeding redshank is a qualifying feature of Mound Alderwoods SSSI which is adjacent to a temporary access track that will be constructed for the Proposed Development. However, the SSSI is over 1.3 km from the closest breeding territory recorded during baseline surveys. Dornoch Firth and Loch Fleet SPA / Ramsar (240 m from the Proposed Alignment) is designated for wintering redshank and is within the 300 m NatureScot advised non-breeding season disturbance distance for the species. Habitats which may be disturbed during construction of the Proposed Development are suitable for non-breeding redshank which are a feature of the Dornoch Firth and Loch Fleet SPA / Ramsar site. As such redshank is taken forward for further assessment in Section B.

9.5.53 Snipe was recorded in flight on five occasions during FAS of Section B, with two flights crossing the Proposed Alignment at CRH. The five flight records were spread out along the Proposed Alignment of the Proposed Development, as were a further five ‘heard only’ records. During breeding bird surveys in 2023 five possible snipe territories were recorded and in 2024 four possible snipe territories were recorded. The closest was approximately 160 m from an access track to be constructed as part of the Proposed Development. Mound Alderwoods SSSI is designated for breeding snipe and is adjacent to the Proposed Development. However, the closest possible territory recorded during baseline surveys was approximately 1.4 km north of the Proposed Development and birds recorded are not considered to form part of the SSSI population. Given the low number of flights recorded crossing the Proposed Alignment, and the lack of breeding territories identified linked to designated sites, snipe is not considered further in the assessment of Section B.

No woodcock flights were recorded during FAS of Section B. One flight of the species was recorded incidentally below risk height after a bird was flushed while surveyors were walking to a raptor roost VP survey location, near Abhainn an t-Stratha Charnaig approximately 100 m north of the Proposed Development. No woodcock was recorded within 500 m of the Proposed Development during breeding bird surveys. Given the lack of flights and breeding records, woodcock is not considered for further assessment of Section B.

Gulls and Terns

Common gull was recorded 120 times in flight during FAS of Section B, with concentrations of flight activity recorded over agricultural fields at Loch Brora and the River Fleet and at Loch Salachaidh associated a colony on an island in the loch. The majority of flight activity (81 flights) was recorded during the breeding season (April – August) with 39 flights recorded during the non-breeding season. The peak count was recorded in August 2023 when 27 flights were recorded, which may in part comprise autumn passage birds. Across all FAS 46 flights crossed the Proposed Alignment at CRH, with a peak flock size of 20 birds. The colony at Loch Salachaidh is approximately 1.3 km north of the Proposed Development and no other common gull breeding territories were recorded during FAS. There are no sites designated for this species within the Study Area for Section B. Although not a feature of a nearby designated site, given the relatively high numbers of flights recorded across the Proposed Alignment at CRH within Section B, common gull is taken forward for further assessment for Section B.

One-hundred and six flights of herring gulls were recorded during FAS of Section B, with flock sizes ranging from one bird to 88 birds. Of these flights 26 were recorded during the herring gull breeding season (April – August) and 80 were recorded in the non-breeding season. Thirty-three flights were recorded crossing the Proposed Alignment at CRH, with a maximum flock size of 27 birds. Nine of those flights were during the breeding season. The majority of the recorded flight activity was in and around Strath Fleet, either associated with the agricultural fields in the valley bottom, or over the slopes running up from the River Fleet to Cnoc Bad a' Chrasgaidh. During wintering geese roost surveys ten herring gull flights with flock size varying between single birds up to flocks of 25 birds. Activity was concentrated around Loch Brora with the remaining activity focused on waterbodies in Strath Fleet, however only one of these flights crossed the Proposed Alignment and it was above CRH. During breeding bird surveys no territories were recorded within 500 m of the Proposed Development. East Caithness Cliffs SPA, approximately 15.7 km from the Proposed Development, is in part designated for breeding herring gull. Onshore connectivity distances have not been published for herring gull, however, the species is known to forage over relatively large distances offshore, with a mean maximum range of 85.6 km[31]. As a result, it is considered possible that some of the birds observed in the breeding season will be birds originating from the SPA. Although the number of birds crossing the Proposed Alignment at CRH during the breeding season is relatively low, herring gull is considered further in the assessment of Section B.

Great black-backed gull was recorded three times during FAS of Section B, once at Strath Carnaig and twice at Strath Fleet. One of these flights, comprising two birds, crossed the Proposed Alignment at CRH. Great black-backed gull was not recorded during breeding bird surveys in 2023 or 2024. Breeding great black-backed gull is a qualifying feature of the East Caithness Cliffs SPA, approximately 15.7 km from the Proposed Development and approximately 21 km from the closest recorded flight within Section B. Given the low levels of flight activity recorded during the baseline surveys, great black-backed gull is not considered further in the assessment of Section B.

9.5.54 Low numbers of other gulls were recorded during FAS of Section B. Two flights of lesser black-backed gull, one flight of black-headed gull and a single flight of little gulls were all recorded crossing the Proposed Alignment at CRH. No territories were recorded for these species during breeding bird surveys of Section B, and there are no designated sites for which they are qualifying features within connectivity distance of Section B. As a result of the low number of flights crossing the Proposed Alignment at CRH and lack of breeding territories recorded, none are considered further in this assessment.

One common tern flight comprising of two birds flying inland up a burn valley just north of Achrimsdale crossed the Proposed Alignment at CRH in late August 2023. Common tern can nest inland on loch islands in Caithness[32], however no breeding records were recorded during breeding bird surveys of Section B. Loch Fleet SSSI, designated in part for its breeding common tern population is approximately 3.1 km from the Proposed Development, but approximately 13 km from the one recorded common tern flight in Section B. Common tern have a mean maximum offshore foraging range of 26.9 km, however this is likely to be less when foraging onshore. Given the record of a single flight in late August towards the end of the common tern breeding season, (May – mid September) and the distance to the Loch Fleet SSSI, common tern is not considered further in the assessment of Section B.

Divers

9.5.55 Red-throated diver was recorded once during FAS of Section B. A single bird was recorded in flight over Loch Brora in August 2023 at CRH but did not cross the Proposed Alignment. Breeding bird surveys in 2023

[31] NaureScot (2013) Guidance Note 3: Guidance to support Offshore Wind applications: Marine Birds - Identifying theoretical connectivity with breeding site Special Protection Areas using breeding season foraging ranges.
[32] Forrester, R.W., Andrews, I.J., McInerny, C.J., Murray, R.D., McGowan, R.Y., Zonfrillo, B., Betts, M.W., Jardine, D.C. and & Grundy, D.S. (2007). The Birds of Scotland. Scottish Ornithologists' Club, Aberlady: 1600pp.

recorded one possible territory at a waterbody approximately 200 m north of the Proposed Development, and further details on the territory are contained within the **Volume 5, Appendix 9.4a: Ornithology Confidential Report – Sections A and B.** Flight activity was recorded during specific diver surveys in 2024 at another waterbody approximately 1.6 km north of the Proposed Development. Breeding was not confirmed but on a precautionary basis it is assumed that red-throated divers may also be breeding at this location as it is a known historic nest site. If breeding did occur in 2024 but not in 2023 it is possible that additional flight activity associated with this territory may occur but have been un-recorded during the flight activity surveys undertaken. Caithness and Sutherland Peatlands SPA / Ramsar is approximately 6.3 km north of the Proposed Alignment, however no flights, which might indicate connectivity between the SPA population and the Proposed Development, were recorded crossing the Proposed Alignment. However, given there is a possible territory within the NatureScot advised disturbance distance for breeding red-throated diver (750 m) of the Proposed Development, the species is considered further in the assessment of Section B.

9.5.56 Two black-throated diver flights were recorded during FAS of Section B. Neither flight crossed the Proposed Alignment. One bird was recorded at CRH over the western shore of Loch Brora (and an additional individual recorded loafing on the water) in August 2023 approximately 800 m south of the Proposed Alignment. The other flight was of two birds recorded at CRH approximately 70 m south of the Proposed Alignment in May 2023. One additional flight of black-throated diver was observed during wintering geese roost surveys over Loch Brora and at CRH approximately 750 m north of the Proposed Alignment. Lairg and Strath Brora Lochs SPA / SSSI (8.3 km), and the Caithness and Sutherland Peatlands SPA / Ramsar (6.3 km) are both within the maximum foraging range (<10 km) for black-throated diver of the Proposed Development. However given the lack of regular commuting or feeding flight activity recorded, the lack of flights crossing the Proposed Alignment and the lack of breeding territories, black-throated diver is not considered further in the assessment of Section B.

9.5.57 No great northern diver flights were recorded during across baseline surveys, nor were there any breeding territories recorded during breeding bird surveys. One individual was recorded on Loch Brora during FAS of Section B in May 2024. Although great northern diver is a feature of the Moray Firth SPA located approximately 2.5 km southeast of Section B), given the lack of flight activity and as the SPA is beyond advised disturbance distance for the species (350m), great northern diver is not considered further in the assessment of Section B.

Seabirds

Fulmar was not recorded during FAS of Section B. One confirmed territory was recorded during the breeding bird surveys on an inland cliff face near Morvich, running alongside the A839 road and approximately 190 m east of the Proposed Development. This territory however is not linked to the East Caithness Cliffs SPA, which designated for breeding populations of fulmar but is located approximately 15.7 km from the Proposed Development and approximately. Therefore, given the lack of flight activity, fulmar is not considered further in the assessment of Section B.

Cormorants

9.5.58 Seven cormorant flights were recorded during FAS of Section B, with all of the individual birds either along the River Fleet valley (2 birds) or over Loch Brora (5 birds). Two of these flights crossed the Proposed Alignment at CRH. No cormorant territories were recorded during breeding bird surveys. One observation of a single cormorant was made during the wintering geese roost surveys, flying over and landing on Loch Brora below CRH and north of the Proposed Alignment. While the breeding population of cormorant is a qualifying feature of the East Caithness Cliffs SPA, the separation distance between the SPA and the recorded cormorant activity in Section B of 20 km indicates that the recorded flight activity is unlikely to be from individuals of the SPA population. Therefore, cormorant is not considered further in the assessment of Section B of the Proposed Development.

9.5.59 One shag flight was recorded during FAS of Section B. In August 2023 a single bird was recorded crossing the Proposed Alignment at CRH at Loch Buidhe. No other records of shag were recorded across the baseline surveys of Section B. East Caithness Cliffs SPA, designated for breeding populations of shag however is located 15.7 km from Section B of Proposed Development and it is unlikely birds from the SPA would forage inland given the availability of suitable marine foraging habitat closer to nest sites. Although the Moray Firth SPA it designated for wintering populations of shag and is located 2.5 km from the Proposed Development and approximately 12.5 km from the recorded flight and the bird is not considered to form part of the wintering SPA population. Given the limited flight activity recorded during baseline surveys, shag is not considered further in the assessment of Section B.

Other Waterbird Species

9.5.60 Other waterbird species recorded during baseline surveys included grey heron, little grebe and moorhen. These species are common and widespread and embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on them. As a result, these species are not considered further in this assessment of the Proposed Development within Section B.

Raptors and Owls

Osprey were consistently seen around six bodies of water: Loch Brora, Loch Horn, Loch Lunndaidh, River Fleet, and Loch Buidhe, with 19 flights recorded during FAS of Section B. Five flights were recorded crossing the Proposed Alignment at CRH with a peak count of two birds. During breeding bird surveys in 2023 and 2024, and breeding raptor surveys in 2024, breeding behaviour was observed in both years. One confirmed territory was recorded in 2023 approximately 1.4 km east of the Proposed Development and one possible territory was recorded in 2024, approximately 920 m south of the Proposed Development. Two breeding osprey territories were identified in HRSG data within osprey's core foraging range of 10 km of the Proposed Development, one within approximately 5 km and one within approximately 6 km. Given the crossings of the Proposed Alignment recorded at CRH, and as Dornoch Firth and Loch Fleet SPA / Ramsar is designated for breeding osprey, the species is considered further in the assessment of Section B.

Twenty-two golden eagle flights were recorded during FAS of Section B. Three flights were recorded crossing the Proposed Alignment at CRH. There was a notable focus of flight activity around Cnoc Bad a' Chrasgaidh, with most records occurring in the breeding season, although the majority of flight activity was well above CRH. Other activity was recorded east of Loch Horn and between the River Fleet and Loch Buidhe No breeding territories were recorded during breeding bird or breeding raptor surveys. However, data was obtained from HRSG of three historic golden eagle territories within the species' core foraging range of 6 km from the Proposed Development. One is approximately 350 m north of the Proposed Development and thus within the 1 km NatureScot advised disturbance distance for breeding golden eagle. However, HRSG do not hold any data on breeding status between 2021 and 2024 and no breeding at this location was recorded during surveys in 2023 and 2024. The second territory is approximately 2.7 km south of the Proposed Development. An adult pair were recorded holding territory at this location in 2021 and successfully fledging two young in 2024. Their status in 2023 was not recorded. The third territory is approximately 5.5 km north of the Proposed Development near Gordonbush however no information was provided on breeding status by HRSG and no map location was provided.

9.5.61 Winter raptor roost FAS were also undertaken focussing on historic roost sites. However, no golden eagle activity was recorded. Given Caithness and Sutherland Peatlands SPA / Ramsar, designated for breeding golden eagle, is located 6.4 km from the Proposed Alignment which is potentially within the maximum 9 km foraging range of golden eagle from the SPA / Ramsar, as well as historic golden eagle territories recorded within the vicinity of the Proposed Alignment, the species is considered further in the assessment of Section B.

Red kite flight activity was regularly recorded during FAS of Section B, with 172 flights recorded over 16 months. Of these, 81 flights (minimum flock size one bird, maximum flock size two birds) were recorded crossing the Proposed Alignment at CRH. Activity was relatively widespread, but a concentration of flight activity was recorded over the River Fleet and adjacent areas between Rogart and Morvich, including Loch Ruagaidh. Breeding bird and breeding raptor surveys recorded three possible territories in 2023 and two in 2024. All territories were beyond the NatureScot advised disturbance distance for breeding red kite from the Proposed Development, with the closest territory approximately 360 m away. HRASG data did not include any red kite territories within 2 km of the Proposed Development. Thirty-seven red kite flights were recorded during winter raptor roost surveys, primarily around Strath Carnaig and Rogart, with most of the activity being at risk height and five of these flights (each of one individual) crossing the Proposed Alignment. A historic roost had been previously identified in Rogart but despite activity levels being high in this area, there was no evidence of red kite landing to roost during surveys. Given the high levels of flight activity including those crossing the Proposed Alignment at risk height, red kite is considered further in the assessment of Section B.

Twenty-six hen harrier flights were recorded during FAS across Section B, with the greatest level of activity observed north of Achrimsdale and at Strath Carnaig. Seven of the flights crossed the Proposed Alignment at CRH. Following breeding bird and breeding raptor surveys two possible territories were identified in 2023 and two in 2024. In 2023 two possible territories, approximately 840 m and 1km from the Proposed Development were recorded in Strath Carnaig. In 2024 one possible territory was recorded approximately 1.5 km north of the Proposed Development in Strath Carnaig and one was recorded approximately 260 m south of the Proposed Development west of Morvich. As no territory was recorded at Morvich in 2023, and flight activity surveys in 2024 were completed in April/May 2024, it is possible that flight activity associated with this territory later in the 2024 breeding season was under-recorded by the FAS being slit over two breeding seasons. This has been considered when assessing impacts of Section B. Data was also obtained from HRSG of 11 historic hen harrier territories within the species' core foraging range of 2 km from Section B. For five of these, no additional information was available. Six were confirmed as active in either 2021 and 2022 with three successfully fledging young. No breeding activity was recorded at these locations during the 2023 and 2024 surveys. All six of these previously active HRSG recorded territories are located within the advised 750 m disturbance distance for breeding hen harrier from the Proposed Development. Winter raptor roost VPs focussing on historic roost sites did not record any hen harrier activity. Breeding hen harrier is a qualifying feature of the Caithness and Sutherland Peatlands SPA / Ramsar, 6.3 km from the Proposed Development, and the Strath Carnaig and Strath Fleet Moors SPA / SSSI, which the Proposed Development passes through. Due to potential impacts on designated populations of hen harrier and territories being within the NatureScot advised disturbance distance for breeding hen harrier of 750 m, the species is considered further in the assessment of Section B.

Two white-tailed eagle flights from individual birds were recorded during FAS of Section B, with flights south and east of Cnoc Na Gamhna in November 2023 and March 2024. One flight of one bird was recorded crossing the Proposed Alignment at CRH. No white-tailed eagle territories were recorded during breeding bird and raptor surveys in 2023 and 2024. Winter raptor roost VP surveys were undertaken focusing on known historical roost sites, however, no observations of white-tailed eagle were recorded. Given the lack of white-tailed eagle records across baseline surveys the species is not considered further in the assessment of Section B.

Eight flights of merlin were recorded during FAS across Section B. The majority were recorded flying at CRH but only one flight of one bird was recorded to crossing the Proposed Alignment at CRH. Merlin was primarily seen flying north-east of Achrimsdale, in Strath Brora, south of Cnoc na Gamhna, and in Strath Carnaig. During breeding bird surveys in 2023, one confirmed and one possible territory were recorded. No breeding was confirmed in 2024. The confirmed territory was approximately 1.7 km south of the Proposed Development and the possible territory was approximately 900 m north of the Proposed Development. Caithness and Sutherand Peatlands SPA / Ramsar is designated for breeding merlin however this site is 6.3 km from the Proposed Development and thus outside of merlin's core foraging range of < 5 km. Given the low levels of flight activity

and as all territories are outside of the NatureScot advised 500 m disturbance distance for breeding merlin, the species is not considered further in the assessment of Section B.

9.5.62 During FAS of Section B a single peregrine flight was recorded, at risk height, but it did not cross the Proposed Alignment. The individual was observed flying over Carrol Rock near Loch Brora. No breeding territories were identified during breeding bird or breeding raptor surveys. Data on six historic peregrine territories was obtained from HRSG for Section B. Tree of the territories were located within the species' core foraging range of 2 km from the Proposed Development, with two within the NatureScot advised disturbance distance of 750 m. However, none of these territories were confirmed as active within the last five years and breeding was not recorded at any of them during baseline surveys. Therefore, since historic territories do not appear active, the species is not considered further in the assessment of Section B.

Barn owl was not recorded during FAS of Section B. During winter raptor roost VP surveys, an individual barn owl was observed flying to the west of Brae Cottage in Strath Carnaig and to the north of the alignment at CRH. Brae Cottage, and other scattered properties in the Strath, provide suitable nesting opportunities for this species, and the adjacent land (especially further to the east where there is agricultural grazing land) provides suitable foraging. No breeding or roosting locations were recorded during baseline surveys, however two previously used nest sites (used in 2020), both within 30 m of the Proposed Development are known to surveyors. Therefore, despite the low levels of flight activity, due to the presence of these historic breeding records, and barn owl's use of traditional nest and roost sites, barn owl is considered further in the assessment of Section B.

A single flight of short-eared owl was observed in January 2024 during winter raptor roost VP surveys. The observed flight was to the north of Farlary and west of Clais a' Chait approximately 4km north of the Proposed Development, and as such, did not cross the Proposed Alignment. Given the low number of records of short-eared owl during baseline surveys for Section B, the species is not considered further in the assessment of the Proposed Development.

9.5.63 Other raptors recorded during baseline surveys included sparrowhawk, buzzard and kestrel. These species are common and widespread and embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on them. As a result, these species are not considered further in this assessment of the Proposed Development within Section B.

Passerines and Others

During baseline surveys, 13 BoCC Red Listed and 11 BoCC Amber Listed passerine species, seven of which are on the SBL, were recorded as possible, probable or confirmed breeders within Section B of the Proposed Development. One Schedule 1 passerine species, common crossbill, was recorded with one possible territory recorded from coniferous plantation woodland approximately 45 m from the Proposed Development although it is likely that the species is more widespread within suitable habitat within Section B. Embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on passerine species, and impacts on passerines are not considered further in the assessment of Section B.

Section B Baseline Summary

9.5.64 Thirteen species were identified for further consideration within the impact assessment of the Proposed Development within Section B: greylag goose, black grouse, oystercatcher, curlew, redshank, common gull, herring gull, red-throated diver, osprey, golden eagle, red kite, hen harrier, barn owl.

Section C – Loch Buidhe to Dounie

Statutory Designated Sites

9.5.65 There are six sites with a statutory designation for ornithological interest with potential connectivity to Section C of the Proposed Development[33]. The designations and qualifying features are set out in **Table 9.7** below and shown in **Volume 3, Figure 9.1**.

[33] Scottish Natural Heritage (now NatureScot), 2016. Assessing Connectivity with Special Protection Areas – Guidance.

Table 9.7: Designated Sites with Connectivity to Section C of the Proposed Development

Site	Qualifying Feature	Approximate distance from the Proposed Development (km)
Strath Carnaig and Strath Fleet Moors SPA / SSSI	Strath Carnaig and Strath Fleet Moors SPA qualifies under Article 4.1 by regularly supporting a population of European importance, Annex I species including: • Hen harrier, 12 breeding pairs (mean value between 2002- 2004), representing about 2.5% of a GB population of 483 pairs. The site spatially overlaps Strath Carnaig and Strath Fleet Moors SSSI which is designated for its diverse mosaic of habitats suitable for nesting and foraging hen harriers. Strath Carnaig and Strath Fleet Moors SPA / SSSI overlaps part of Lairg and Strath Brora Lochs SPA which is designated for black throated diver.	Within
Mound Alderwoods SSSI (Part of Dornoch Firth and Loch Fleet SPA / Ramsar)	Mound Alderwoods SSSI is designated for its wet woodland, saline lagoon and wetland habitats and breeding bird assemblage including: • Shelduck; • Teal; • Red-breasted merganser • Cuckoo; • Water rail; • Snipe; • Redshank; • Sedge warbler; and • Grasshopper warbler. The site has the same boundary as Mound Alderwoods SAC and provides Alder woodland on floodplains, a priority qualifying habitat. • Mound Alderwoods SSSI overlaps with Dornoch Firth and Loch Fleet SPA / Ramsar site.	9.4
Dornoch Firth and Loch Fleet SPA / Ramsar	The Dornoch Firth and Loch Fleet SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex 1, species including: • Bar-tailed godwit (winter peak mean of 1,184 individuals, 2% of the GB population); and,	9.4

Site	Qualifying Feature	Approximate distance from the Proposed Development (km)
	• Osprey forage throughout the SPA (up to 6 territories within feeding range, 6% of the GB population, with 1 pair breeding within the site, 1% of the GB population). Dornoch Firth and Loch Fleet SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Greylag goose (winter peak mean of 1,146 individuals, 1% of the Icelandic/UK/Ireland biogeographic population); and • Wigeon (winter peak mean of 15,304 individuals, 2% of the W Siberia/NW & NE Europe biogeographic population). Dornoch Firth and Loch Fleet SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. In the five-year period 1989/90 to 1993/94, a winter peak mean of approximately 34,500 individual waterfowl was recorded, comprising 22,000 wildfowl and 12,500 waders, including nationally important populations of the following species: • Greylag goose (1,146 individuals, 1% of the GB population); • Wigeon (15,304 individuals, 5% of the GB population); • Teal (1,592 individuals, 1.0% of the GB population); • Scaup (123 individuals, 1% of the GB population); • Curlew (1,397 individuals, 1.0% of the GB population); • Teal (1,592 individuals, 1.0% of the GB population); • Bar-tailed godwit (1,184 individuals); and • Redshank (1,272 individuals, 1% of the GB population). The assemblage additionally includes nationally important populations greater than 2,000 individuals including: • Oystercatcher (winter peak mean of a minimum of 2,459 individuals, 0.8% of the GB population); and, • Dunlin (winter peak mean of 4,088 individuals, 1% of the GB population). Dornoch Firth and Loch Fleet SPA spatially overlaps Dornoch Firth and Loch Fleet Ramsar site that qualifies under the following criteria: • Ramsar Criterion 2, supporting Osprey (foraging and breeding); • Ramsar Criterion 4, supporting waterbird species at a critical stage in their life cycles (curlew, teal, scaup and redshank); and	

Site	Qualifying Feature	Approximate distance from the Proposed Development (km)
	• Ramsar Criterion 5, regularly supporting waterbirds in numbers of 20,000 individuals or more.	
Lairg and Strath Brora Lochs SPA / SSSI	The Lairg and Strath Brora Lochs SPA qualifies under Article 4.1 by supporting a population of European importance, Annex I species: • Black-throated diver. The site supports six pairs of black-throated diver, representing 3% of the British population. The Lairg and Strath Brora Lochs population has a high productivity. During 1986-1998 the SPA averaged one fledged chick per monitored territory every two years in comparison with a national average of one fledged chick per monitored territory every three and a half years. The combination of large population size and high productivity means that the site makes a significant contribution to the production of fledged chicks in Scotland as a whole. • Lairg and Strath Brora Lochs SSSI has the same boundary as Lairg and Strath Brora Lochs SPA and is designated for black throated diver.	9.1
Caithness and Sutherland Peatlands SPA / Ramsar	The Caithness and Sutherland Peatlands SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex 1 species, including: • Golden plover (1993 and 1994, 1,064 pairs, 5% of the GB population); • Dunlin (1993 and 1994, 1,860 pairs, 20% of the GB population). • Wood sandpiper (up to 5 pairs, up to 40% of the GB population); • Red-throated diver (2006, 46 pairs, 3.5% of the GB population) • Black-throated diver (1994, 26 pairs, 15% of the GB population); • Golden eagle (1992, 5 pairs, 1% of the GB population); • Hen harrier (1993 to 1997, mean of at least 14 pairs, at least 2.8% of the GB population); • Short-eared owl (30 pairs, 2% of the GB population); and • Merlin (1993 and 1994, an estimated 54 pairs, 4% of the GB population). The Caithness and Sutherland Peatlands SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Wigeon (1993/94, at least 43 pairs, <0.1% of the Western Siberia/Northwestern/Northeastern Europe biogeographic population and at least 10.8% of the GB population)	8.1

Site	Qualifying Feature	Approximate distance from the Proposed Development (km)
	• Common scoter (2007, at least 21 pairs, <0.1% of the Western Siberia/Western & Northern Europe/Northwestern Africa biogeographic population and at least 40.4% of the GB population); and • Greenshank (2009, at least 653 pairs, at least 0.9% of the Europe/Western Africa biogeographic population and at least 59.4% of the GB population). Caithness and Sutherland Peatlands SPA shares the same boundary as Caithness and Sutherland Peatlands Ramsar that qualifies under the following criteria: • Ramsar Criterion 1, containing a variety of wetland habitats; • Ramsar Criterion 2, supporting a diverse assemblage of fauna and flora; • Ramsar Criterion 2, supporting ornithological features including: • Golden plover (1993 and 1994, 1,064 pairs, 5% of the GB population); • Wood sandpiper (up to 5 pairs, up to 40% of the GB population); • Dunlin (1993 and 1994, 1,860 pairs, 20% of the GB population) • Red-throated diver (2006, 46 pairs, 3.5% of the GB population); • Black-throated diver (1994, 26 pairs, 15% of the GB population); and • Ramsar Criterion 4, supporting waterbird species at a critical stage in their life cycles including: o Wigeon (1993/94, at least 43 pairs, at least 10.8% of the GB population); o Common scoter (2007, at least 21 pairs, at least 40.4% of the GB population); and o Greenshank (2009, at least 653 pairs, at least 59.4% of the GB population).	
Grudie Peatlands SSSI (Part of Caithness and Sutherland Peatlands SPA / Ramsar)	Designated for nationally important populations of breeding moorland birds that breed in densities well above the average for the peatlands of Caithness and Sutherland. Species including: • Golden plover; • Dunlin; and, • Greenshank.	8.1

Species Records and Survey Results

9.5.66 The baseline for Section C has been informed by the survey results set out in **Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E, Volume 5** and **Appendix 9.4b: Ornithology Confidential Report - Sections C, D and E.**

Geese and Swans

9.5.67 Greylag goose was recorded in flight on twelve occasions during FAS within Section C, with activity concentrated along the middle of the Section. Flights occurred primarily during the 2023/2024 non-breeding season, with a maximum flock size of 60 birds recorded. Flights occurred at CRH , and above CRH (>70 m). Seven flights were recorded crossing the Proposed Alignment, six of which were at CRH. During baseline surveys no breeding territories of greylag goose were recorded along Section C. A flock of 60 birds was recorded in a field approximately 800 m north of the Proposed Alignment, but no other geese were recorded in fields during baseline surveys.

Wintering geese roost surveys recorded roosts on the Kyle of Sutherland between Invershin and Bonar Bridge with a peak count of 49 birds recorded in November 2023, the birds taking off from a field at dusk approximately 1.5 km south of the Proposed Alignment and flying south-east at CRH away from the Proposed Alignment towards Bonar Bridge. Six flights were recorded during roost surveys, all activity located south of the Proposed Alignment, with the majority along the Kyle of Sutherland.

9.5.68 NatureScot connectivity distance guidance states that greylag goose have a core wintering foraging range from their night roost of 15 km – 20 km. Dornoch Firth and Loch Fleet SPA / Ramsar is located approximately 9.4 km from Section C, with wintering greylag geese listed as a designated feature of the site which regularly supporting more than 2,000 roosting birds[34]. Given baseline surveys and considering the connectivity distance between Section C and Dornoch Firth and Loch Fleet SPA / Ramsar, greylag goose is considered further in the assessment of Section C.

9.5.69 Pink-footed goose was recorded during FAS within Section C on six occasions, across the eastern part of the Section. The majority of flights were recorded in April and September 2024, likely of birds on migration. Two of the flights occurred at CRH including a maximum count of 810 birds, both north of the Proposed Alignment. Four flights were recorded crossing the Proposed Alignment, all above CRH (>70 m).

9.5.70 Wintering geese roost surveys recorded a single flock of 74 pink-footed geese at Kyle of Sutherland feeding in a field north of the survey area in November 202X, approximately 1.4 km south of the Proposed Alignment. NatureScot connectivity guidance states that pink-footed goose have a core winter foraging range from their night roost of 15 km – 20 km[26]. There are no designated sites within these connectivity distances to Section C where wintering pink-footed goose are a qualifying interest feature. However, given the records of pink-footed geese during baseline surveys potential effects on pink-footed goose are considered further in the assessment of Section C.

9.5.71 Whooper swan was recorded in flight during FAS of Section C on five occasions during the 2023/2024 winter period. Most records were made along the Kyle of Sutherland. Flights were recorded in all height bands, with one flight of five birds recorded at CRH along the Kyle of Sutherland north of the alignment. One flight of three birds crossed the alignment but above CRH (>70 m). Whooper swan was not recorded during breeding bird or

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

wintering geese surveys. Given the relatively low flight activity and lack of flights across the Proposed Alignment at CRH, whooper swan is not considered further in the assessment of Section C.

9.5.72 One flight of mute swan was recorded during FAS of Section C, with two birds recorded crossing the Proposed Alignment at CRH at the Kyle of Sutherland. No breeding territories were recorded during breeding bird surveys. A peak count of four birds were recorded during roost surveys at the Kyle of Sutherland approximately 2.4 km south-west of the Proposed Development. Due to the relatively low flight activity and records during breeding and roost surveys, mute swan is not considered further in the assessment of Section C.

Other Waterfowl

Mallard was not recorded during FAS of Section C. Two probable mallard territories were recorded during breeding bird surveys at Loch Leisgein, a small loch located east of Invershin, and one possible territory at the waterbody connected to Culrain Burn in the coniferous forestry of Carbisdale Wood. During wintering geese roost surveys 20 mallard were recorded on the water at Kyle of Sutherland in November 2023 and February 2024 and 28 mallards were recorded in Bonar Bridge in November 2023 and four in February 2024. Four incidental flights of mallard were recorded in December 2023 of between 2 - 12 birds although these flights did not cross the Proposed Alignment. Given the low number of territories recorded along Section C and lack of flight activity across the alignment, mallard is not considered further in the assessment of Section C.

9.5.73 Wigeon was recorded on one occasion during FAS of Section C in March 2024 with four birds flying below CRH (0-5 m) noted along the Kyle of Sutherland approximately 1.2 km north of the Proposed Alignment. During baseline surveys no breeding territories of wigeon were recorded. During wintering geese roost surveys nine wigeon were recorded at the start of the dawn survey on the water at Bonar Bridge, approximately 2km south of the Proposed Alignment. Given the limited flight activity, the absence of breeding evidence within Section C and considering the separation distance between Section C and the nearest designated sites, where wigeon is a qualifying feature (approximately 9.4 km to Dornoch Firth and Loch Fleet SPA / Ramsar and approximately 8.1 km to Caithness and Sutherland Peatlands SPA / Ramsar) wigeon is not considered further in the assessment of Section C.

Teal was recorded during FAS on five occasions along Section C. Four of the flights were below CRH (0-5 m) around Loch Leisgein. One flight was noted at CRH which comprised 30 individuals and crossed the Proposed Alignment at Loch Leisgein. Three possible breeding territories were also recorded at Loch Leisgein all within 200 m of the Proposed Alignment. Given the limited flight activity, limited breeding evidence within Section C and considering the separation distance between Section C and the nearest designated sites where teal is a breeding feature (approximately 9.4 km, Mound Alderwoods SSSI) and wintering feature (approximately 9.4 km, Dornoch Firth and Loch Fleet SPA / Ramsar) teal is not considered further in the assessment of Section C.

9.5.74 Goldeneye was not recorded during FAS of Section C and no breeding territories of goldeneye were recorded during baseline surveys. Goldeneye were recorded during winter geese roost surveys at the Kyle of Sutherland and at Bonar Bridge. A peak count of three birds was recorded on the water at Kyle of Sutherland in December 2023 approximately 2 km south-east of the Proposed Alignment, with a peak count of 14 birds recorded at Bonar Bridge in November 2023 approximately 4 km east of the alignment. During winter geese roost surveys, incidental records of goldeneye in flight were recorded on four occasions. Flightlines were recorded including 1-3 birds and no flights crossed the Proposed Alignment. Given the limited records of goldeneye along Section C and the lack of flights across the alignment, goldeneye is not considered further in the assessment of Section C.

9.5.75 Goosander was recorded in flight on one occasion during FAS of Section C in January 2024 along the Kyle of Sutherland. The record consisted of a single bird flying at CRH to the north of the Proposed Alignment. During baseline surveys no breeding territories of goosander were recorded. Given the limited records of goosander

along Section C, lack of breeding evidence and low level of flight activity goosander is not considered further in the assessment of Section C.

9.5.76 Red-breasted merganser was recorded during FAS of Section C on one occasion in May 2024 along the Kyle of Sutherland when one bird was noted at CRH but did not cross the Proposed Alignment. During baseline surveys no breeding territories of red-breasted merganser were recorded. Given the limited flight activity, lack of historical records and breeding evidence within Section C and considering the separation distance between Section C and the nearest designated sites where red-breasted merganser is a breeding feature (approximately 9.4 km, Mound Alderwoods SSSI) red-breasted merganser is not considered further in the assessment of Section C.

Woodland Grouse

9.5.77 Results from breeding woodland grouse surveys are contained within the **Volume 5, Appendix 9.4b: Ornithology Confidential Report – Sections C, D and E**.

9.5.78 Capercaillie was not recorded in Section C and the desk-based study did not identify any records of capercaillie within the Section C over the past five years.

Black grouse was recorded in flight on three occasions during FAS of Section C. None of the flights crossed the Proposed Alignment. Two birds were recorded below CRH (0-5 m) in December 2023 north of Loch Leisgein, one bird was recorded below CRH (0-5 m) in June 2024, south of Cnoc Garbh-airigh, and two birds were recorded at CRH in February 2024, beside Cnoc na Lapaich approximately 1.4 km north west of the Proposed Development. Breeding woodland grouse surveys recorded a total of eight lekking males at two lek sites within Section C. One male black grouse was flushed on two occasions in April 2024 close to the Proposed Alignment, however, was not considered to be lekking. The desk-based study did not identify any records of black grouse within the Section C over the past five years. There are no designated sites within Section C where black grouse is a qualifying feature. As active black grouse leks close to the Proposed Alignment were recorded during baseline surveys, potential effects on black grouse are considered further in the assessment of Section C.

Waders

Golden plover was recorded in flight once during baseline surveys in May 2024 on Cnoc Garbh-airigh. The flight consisted of a pair of birds flying at CRH, approximately 130 m from the Proposed Alignment. Golden plover was not recorded within Section C during breeding bird surveys. Given the low level of flight activity recorded during baseline surveys, the lack of breeding records during breeding bird surveys and the absence of historical breeding records and considering the separation distance between Section C and the nearest designated sites where golden plover is qualifying feature (approximately 8.1 km, Caithness and Sutherland Peatlands SPA / Ramsar and Grudie Peatlands SSSI) golden plover is not considered further in this assessment of Section C.

Lapwing was recorded in flight once during FAS of Section C in January 2024. The flight consisted of two birds flying at CRH which crossed the Proposed Alignment where it intersects with the Kyle of Sutherland. During breeding bird surveys one probable territory was recorded near Loch Leisgein, on the moorland east of Invershin. A pair of birds was observed displaying territorial behaviour including alarm calling on both survey visits. Given the low level of flight activity and low number of breeding territories recorded during baseline surveys lapwing is not considered further in the assessment of Section C.

Snipe was recorded in flight on three occasions during baseline surveys. Flights were noted south of Loch Leisgein and along the Kyle of Sutherland in October 2023 and June 2024. Birds were recorded below (0-5 m)

and at CRH but no flights crossed the Proposed Alignment. During breeding bird surveys two possible territories were recorded within Section C, both of which were located in the northeast of the Section C, with one approximately 100 m north of the Proposed Development and one approximately 25 m south of the Proposed Development.

9.5.79 Much of Section C consists of woodland habitat which is unsuitable breeding habitat for snipe. Habitat in the north of Section C provides more suitable breeding habitat and includes open farmland, wetland and grassland with tussocky vegetation. Given the low level of flight activity and low number of breeding territories recorded during baseline surveys, and considering the separation distance between Section C and the nearest designated site where snipe is a qualifying feature (approximately 9.4 km, Mound Alderwoods SSSI) snipe is not considered further in this assessment of Section C.

Gulls

Flights of gulls were not recorded as target species in Section C due to the lack of designated sites with gulls as a qualifying feature along this Section. However, one common gull colony was recorded along Section C, near Loch Leisgein, on moorland to the east of Invershin and the colony comprised three probable territories. There are no designated sites within Section C where common gull is a feature. Given the low number of territories recorded, common gull is not considered further in this assessment of Section C.

Divers

9.5.80 No flights of diver species were recorded during baseline surveys of Section C.

Two waterbodies were surveyed for red-throated diver along Section C at Culrain Burn Loch and Loch Leisgein, both within 200 m of the Proposed Alignment. Suitable habitat for breeding red-throated divers was noted on these waterbodies, however no divers were recorded during the survey visits.

Cormorants

9.5.81 Cormorant was not recorded during FAS. During baseline surveys no breeding territories of cormorant were recorded and habitat within Section C is mostly unsuitable for breeding cormorant. Cormorant was recorded incidentally during wintering geese roost surveys at Kyle of Sutherland with peak counts of single individuals recorded on the water and in flight. Cormorant was also recorded on the water at Bonar Bridge approximately 2 km southeast of the Proposed Alignment, with a peak count of three individuals. Given the low level of flight activity and lack of breeding activity recorded during baseline surveys cormorant is not considered further in the assessment of Section C.

Raptors

9.5.82 Results from breeding Schedule 1 raptor surveys are contained within the **Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E**.

9.5.83 No surveys were undertaken for wintering raptors in Section C as the results of the desk-based study and findings of other surveys did not indicate the likely presence of frequently used Schedule 1 raptor roosts within this Section.

9.5.84 Osprey was recorded in flight on nine occasions with all but one flight at CRH and birds crossed the Proposed Alignment on eight occasions, seven of which were at CRH. Birds were noted largely along the Kyle of Sutherland and were recorded between June and August 2024. A maximum of three birds were noted at once which included an adult pair and a juvenile bird. Osprey are known to breed within the wider area and the most suitable breeding habitat within Section C is located where the sections intersect with the Kyle of Sutherland

with nesting habitat and foraging resources available. Two territories were identified within 2 km of Section C through the results of the desk-based study however during baseline surveys only one active breeding territory was recorded within Section C on a lattice tower for an existing OHL. NatureScot connectivity guidance suggests that osprey have a core range of 10 km, with some regular foraging up to 20 km, and maximum recorded distance of 28 km [35]. The nest site is within the core range for osprey of Dornoch Firth and Loch Fleet SPA / Ramsar Site and birds may form part of the qualifying feature population of birds nesting outside of the SPA but feeding within it. Given baseline surveys, historical records, and considering the separation distance between Section C and the nearest designated site where osprey is a feature (approximately 9.4 km, Dornoch Firth and Loch Fleet SPA / Ramsar), osprey are considered further in the assessment of Section C.

Honey buzzard was not recorded during baseline bird surveys within Section C; however an incidental record was made during habitat surveys. A single bird was recorded in flight in Section C, in July 2024, with a bird flying at CRH and calling above open land adjacent to woodland approximately 200 m from the Proposed Alignment, exhibiting territorial display behaviour. Display behaviour at this time of the year is either indicative of an active nest or of a juvenile bird declaring an interest in occupying the territory the following year (McInery & Shaw, 2018), but given the species' secretive nature, added weight is given to any observations of the species during the breeding season as indicative of a potential to be breeding. For this reason, the potential effects on honey buzzard are considered further in the assessment of Section C.

Golden eagle was recorded incidentally in flight on one occasion (in February 2024) above CRH (>70 m) with an average height of 300 metres. During this flight, one bird was recorded flying south-west towards Carn Sala Chaidh, then south, then turned and flew northeast towards Breac-Bheinn, crossing the Proposed Alignment. Golden eagles are known to breed within the wider area although during baseline surveys no breeding or roosting territories were recorded within Section C and no records of territories were identified within the core territory range of 6 km from the Proposed Development. Given the limited flight activity, the absence of breeding evidence within Section C and considering the separation distance between Section C and the nearest designated site where golden eagle is a feature (approximately 8.1 km, Caithness and Sutherland Peatlands SPA / Ramsar), golden eagle is not considered further in the assessment of Section C.

9.5.85 Sparrowhawk flights were not recorded during FAS. During breeding raptor surveys one probable breeding territory was recorded within 50 m of the Proposed Alignment with two sightings of a pair in flight in July and August 2024 within 500 m of each other. Suitable nesting habitat is present throughout Section C and particularly in the south and centre, within woodland habitat. Given the very low level of flight activity and low number of breeding territories sparrowhawk is not considered further in the assessment of Section C.

Goshawk was recorded during FAS on two occasions. One bird was noted in October 2023 west of Loch Leisgein flying below (0 – 5 m) and at collision risk in and above a conifer planation. One bird was noted in Carbisdale Wood in June 2024 in and above a conifer plantation at CRH. Both flights crossed the Proposed Alignment, with the bird at Loch Leisgein looping around to cross the Proposed Alignment twice. During breeding raptor surveys one confirmed goshawk breeding territory was recorded within Section C where two adults and a juvenile bird were recorded in August 2024 adjacent to the Proposed Development. Given the results of baseline surveys, including evidence of a breeding territory close to the Proposed Alignment, potential effects on goshawk are considered further in the assessment of Section C.

Hen harrier was recorded during FAS of Section Con twenty-three occasions, seventeen of which were at CRH. The majority of flights were recorded during the 2024 breeding season. Baseline surveys recorded a

[35] NatureScot (2016). Assessing Connectivity with Special Protection Areas (SPAs). Inverness

concentration of flight activity along the northern half of Section C with flights recorded crossing the Proposed Alignment on eleven occasions, eight of which were at CRH. Flights predominantly consisted of solitary (male or female) birds, although flights of two birds were recorded on three occasions. Hen harrier was most recorded around Loch Leisgein though they were also present around Cnoc Garbh-airigh and Cnoc na Lapaich. The north-eastern third of Section C provides the most suitable breeding habitat for hen harrier with open heathland habitat widely present. The densely forested south and central of Section C provides sub-optimal breeding habitat and lacks the open heathland required for hen harrier nesting. During breeding raptor surveys one probable breeding territory was recorded on heathland habitat within 500 m of the Proposed Alignment in Section C. The desk-based study included three RSPB records located within 2 km of the Section C alignment indicate hunting and breeding behaviour. Given the results of baseline surveys, presence of historical records, and considering that Section C is partly located within a designated site where hen harrier is a qualifying feature (Strath Carnaig and Strath Fleet Moors SPA / SSSI) potential effects on hen harrier are considered further in the assessment of Section C.

9.5.86 Red kite was recorded during FAS in flight on forty occasions in Section C across all height bands, with all but two flights consisting of single birds. Birds were recorded in flight widely across the section with the highest concentration around the Kyle of Sutherland. Flights were recorded crossing the Proposed Alignment on twenty-six occasions. Of these occasions twenty flights were recorded at CRH. Red kite was recorded twice during breeding raptor surveys with records of single birds in flight over forestry habitat. However, no breeding or roosting sites were recorded within Section C, although suitable nesting habitat is present particularly in mixed woodland habitat along the Kyle of Sutherland. Although baseline surveys did not record any direct evidence of red kite breeding surveys did reveal a concentration of flight activity around the Kyle of Sutherland. As a result, potential effects on red kite are considered further in the assessment of Section C.

9.5.87 White-tailed eagle was recorded in flight on one occasion during FAS of Section C, in April 2024, with a single bird flying at CRH. The bird was observed flying north along the Kyle of Sutherland and crossing the Proposed Alignment before turning back south and crossing the Proposed Alignment again. During breeding raptor surveys one immature white-tailed eagle was recorded in flight over the survey area in May 2024. Anecdotal evidence was received of a territory approximately 1.5 km north-west of the Proposed Alignment, however no evidence of breeding within Section C was recorded during surveys and no records of white-tailed eagle were obtained from RSPB or HRSG within 6 km of Section C. Given the limited flight activity, the absence of breeding evidence within Section C and lack of historical records, white-tailed eagle is not considered further in the assessment of Section C.

9.5.88 Kestrel flights were not recorded during FAS of Section C. The open heathland and interspersed grassland present provide hunting opportunities whilst the presence of dense forestry provides suitable breeding habitat. During breeding raptor surveys one territory was confirmed within 100 m of the Proposed Alignment, with a female recorded carrying food at Viewfield Wood. While no nest location was identified, it is assumed that kestrel is breeding around this area, where a male was also recorded hunting nearby on the same date. Given the lack of flight activity recorded during baseline surveys, and the low number of breeding territories recorded, kestrel is not considered further in the assessment Section C.

Merlin was recorded in flight on two locations during the 2024 breeding season between Loch Leisgein and Cnoc Garbh-airigh with flights crossing the Proposed Alignment on two occasions. Flights were recorded below (0-5 m) and at CRH. The north-eastern third of Section C provides the most suitable breeding habitat for merlin with open heathland habitat abundant, however no breeding sites were identified within Section C. Given the low level of flight activity during baseline surveys, the lack of breeding territories and the absence of historical breeding records and considering the separation distance between Section C and the nearest designated site

where merlin is a feature (approximately 8.1 km, Caithness and Sutherland Peatlands SPA / Ramsar) merlin is not considered further in the assessment of Section C.

Passerines

9.5.89 During baseline surveys, 10 BOCC Red List passerine species were recorded as possible, probable or confirmed breeders within Section C (cuckoo, skylark, house martin, mistle thrush, whinchat, house sparrow, tree pipit, greenfinch, linnet and lesser redpoll). One Schedule 1 passerine species, common crossbill, was recorded with 26 possible territories recorded from coniferous plantation woodland within Section C. Embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on passerine species, and impacts on passerines are not considered further in the assessment of Section C.

Section C Baseline Summary

9.5.90 Eight species were identified for further consideration within the impact assessment of the Proposed Development within Section C: greylag goose, pink-footed goose, black grouse, osprey, goshawk, honey buzzard, hen harrier, and red kite.

Section D - Dounie to Near Strathpeffer

Statutory Designated Sites

9.5.91 There are 10 sites with a statutory designation for ornithological interest with potential connectivity to Section D of the Proposed Development[36]. The designations and qualifying features are set out in **Table 9.8** below and shown in **Volume 3, Figure 9.1**.

[36] Scottish Natural Heritage (now NatureScot), 2016. Assessing Connectivity with Special Protection Areas – Guidance.

Table 9.8: Designated Sites with Connectivity to Section D of the Proposed Development

Site	Qualifying Feature	Approx. distance from Proposed Development (km)
Novar SPA	The Novar SPA qualifies under Article 4.1 by regularly supporting a breeding population of European importance of the Annex I species; • Capercaillie. The site supports approximately 13 individuals (mean 1999 – 2003), representing about 1.2 % of the GB population.	1.9
Morangie Forest SPA	The Morangie Forest SPA qualifies under Article 4.1 by regularly supporting a breeding population of European importance of the Annex I species; • Capercaillie. The site supports approximately 30 individuals, representing about 2.8 % of the GB population.	7.8
Ben Wyvis SPA / SSSI	Ben Wyvis SPA is of outstanding nature conservation importance within the European Community because it supports a nationally important population: Dotterel; from 1987 to 1993, an average of 20 pairs of dotterels bred within the Ben Wyvis SPA, representing 2% of the British breeding population. This is one of the highest density breeding populations in Britain. In spring, Ben Wyvis SPA acts as a staging area for dotterel that go on to breed elsewhere in Britain and in Scandinavia and it is also important to the species' range in Britain as it lies outside the core population in the Grampians. The site is closely linked to Ben Wyvis SSSI, which is designated in part for its ornithology with one feature - a breeding population of dotterel.	3.2 (1.9 to SSSI boundary)
Glen Affric to Strathconon SPA	Glen Affric to Strathconon SPA qualifies under Article 4.1 by regularly supporting a population of European importance of the Annex I species: • Golden eagle, 10 active territories in 2003 (2.2% of the GB population).	9.4
Cromarty Firth SPA / Ramsar / SSSI	Cromarty Firth SPA qualifies under Article 4.1 by regularly supporting populations of European importance of the Annex I species, including: Whooper swan (1992/93 to 1996/97 winter peak mean of 64 individuals, 1% of the GB population); • Bar-tailed godwit (1,355 wintering individuals, 3% of the GB population); • Common tern (1989 to 1993 mean of 294 pairs; 2% of the GB population); and • Osprey forage throughout the SPA (2008 to 2012, five-year mean of up to 25 territories within feeding range, 12.5% of the GB population, with 1 pair breeding within the site, 1% of the GB population). Cromarty Firth SPA further qualifies under Article 4.2 by regularly supporting a population of European importance of the migratory species:	4.7

Site	Qualifying Feature	Approx. distance from Proposed Development (km)
	• Greylag goose (winter peak mean of 1,782 individuals; 2% of the Iceland/UK/Ireland biogeographic population). Cromarty Firth SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. In the five-year period 1992/93 to 1996/97, a winter peak mean of 30,200 individual waterfowl was recorded, comprising 14,800 wildfowl and 15,400 waders including nationally important populations of the following species: • Greylag goose (1,782 individuals, 2% of the GB population); • Whooper swan (64 individuals). In the five-year period 1991/92 to 1995/96; • Wigeon (9,204 individuals, 3% of the GB population); • Pintail (319 individuals, 1% of the GB population); • Scaup (295 individuals, 3% of the GB population); • Red-breasted merganser (204 individuals, 2% of the GB population); • Curlew (1,313 individuals, 1% of the GB population); • Bar-tailed godwit (1,355 individuals); • Knot (4,312 individuals, 1% of the GB population); and, • Redshank (1,149 individuals, 1% of the GB population). A winter peak mean of 34,847 individual waterfowl was recorded with the assemblage additionally including nationally important populations greater than 2,000 individuals of: • Oystercatcher (2004/5 to 2009/10, 2,702 individuals, 0.8% of the GB population; and, • Dunlin (3,384 individuals, 0.6% of the GB population). The site overlaps with the Cromarty Firth SSSI and Cromarty Firth Ramsar site. Both are designated for its outstanding interest for its overwintering populations of wildfowl and waders, including nationally important populations. The qualifying features of the Ramsar Site are the same as the SPA listed above. The SSSI features are • Whooper swan; • Wigeon; • Red-breasted merganser; • Bar-tailed godwit; and • Redshank.	
Strath Carnaig and Strath Fleet Moors SPA / SSSI	Strath Carnaig and Strath Fleet Moors SPA qualifies under Article 4.1 by regularly supporting a population of European importance, Annex I species including:	7.5

Site	Qualifying Feature	Approx. distance from Proposed Development (km)
	• Hen harrier, 12 breeding pairs (mean value between 2002- 2004), representing about 2.5% of a GB population of 483 pairs. The site spatially overlaps Strath Carnaig and Strath Fleet Moors SSSI which is designated for its diverse mosaic of habitats suitable for nesting and foraging hen harriers.	
Lairg and Strath Brora Lochs SPA / SSSI	The Lairg and Strath Brora Lochs SPA qualifies under Article 4.1 of the EC Wild Birds Directive by supporting a population of European importance of: • Black-throated diver an Annex I species. The site supports six pairs of black-throated diver, representing 3% of the British population. The site spatially overlaps Lairg and Strath Brora Lochs SSSI which is designated for the same breeding black-throated diver population.	17
Inner Moray Firth SPA / Ramsar	Inner Moray Firth SPA qualifies under Article 4.1 by regularly supporting populations of European importance of the Annex I species including: • Bar-tailed godwit (1992/93 to 1996/97 a winter peak mean of 1,090 individuals, 2% of the GB population); • Common tern (310 pairs, 2% of the GB population); and, • Osprey forage throughout the SPA (2008 to 2012, up to 25 territories within feeding range, 12.5% of the GB population, with 4 pairs breeding within the site, 4% of the GB population). The Inner Moray Firth SPA further qualifies under Article 4.2 by regularly supporting populations of European importance of the migratory species (1992/93 to 1996/97 winter peak means): • Greylag goose (2,651 individuals, 3% of the Iceland/UK/Ireland biogeographic population); • Red-breasted merganser (1,184 individuals, 1% of the NW & Central Europe biogeographic population); and, • Redshank (1,621 individuals, 1% of the Eastern Atlantic biogeographic population). Inner Moray Firth SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. Between 1992/93 to 1996/97 a winter peak mean of 26,800 individual waterfowl comprising 16,800 wildfowl and 10,000 waders including nationally important populations of the following species: • Greylag goose (2,651 individuals, 3% of the GB population); Scaup (118 individuals, 1% of the GB population); • Wigeon (7,310 individuals, 3% of the GB population); • Teal (2,066 individuals, 1% of the GB population); • Goldeneye (218 individuals, 1% of the GB population); • Goosander (325 individuals, 4% of the GB population); • Red-breasted merganser (1,184 individuals, 12% of the GB population); • Curlew (1,262 individuals, 1% of the GB population);	14.4

Site	Qualifying Feature	Approx. distance from Proposed Development (km)
	• Bar-tailed godwit (1,090 individuals) • Redshank (1,621 individuals, 1% of the GB population); and • Cormorant (409 individuals, 3% of the GB population). In the five-year period 1991/92 to 1995/96, a winter peak mean of 33,148 individual waterfowl was recorded with the assemblage additionally including a nationally important population, greater than 2,000 individuals of oystercatcher (3,063 individuals, 0.9% of the GB population). The boundary of the Ramsar site is coincident with the Inner Moray Firth SPA, which underpins all the bird features of the Ramsar site. It follows the boundaries of the Beauly Firth SSSI, Longman and Castle Stuart Bays SSSI, Whiteness Head SSSI and most of Munlochy Bay SSSI. The SSSIs together underpin the Ramsar habitat features.	
Dornoch Firth and Loch Fleet SPA / Ramsar	The Dornoch Firth and Loch Fleet SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex I, species including: • Bar-tailed godwit (winter peak mean of 1,184 individuals, 2% of the GB population); and • Osprey forage throughout the SPA (up to 6 territories within feeding range, 6% of the GB population, with 1 pair breeding within the site, 1% of the GB population). Dornoch Firth and Loch Fleet SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Greylag goose (winter peak mean of 1,146 individuals, 1% of the Icelandic/UK/Ireland biogeographic population); and, • Wigeon (winter peak mean of 15,304 individuals, 2% of the W Siberia/NW & NE Europe biogeographic population). Dornoch Firth and Loch Fleet SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. In the five-year period 1989/90 to 1993/94, a winter peak mean of approximately 34,500 individual waterfowl was recorded, comprising 22,000 wildfowl and 12,500 waders, including nationally important populations of the following species: • Greylag goose (1,146 individuals, 1% of the GB population); • Wigeon (15,304 individuals, 5% of the GB population); • Teal (1,592 individuals, 1.0% of the GB population); • Scaup (123 individuals, 1% of the GB population); • Curlew (1,397 individuals, 1.0% of the GB population); • Bar-tailed godwit (1,184 individuals); and, • Redshank (1,272 individuals, 1% of the GB population). The assemblage additionally includes nationally important populations greater than 2,000 individuals including:	12.8

Site	Qualifying Feature	Approx. distance from Proposed Development (km)
	• Oystercatcher (winter peak mean of a minimum of 2,459 individuals, 0.8% of the GB population); and • Dunlin (winter peak mean of 4,088 individuals, 1% of the GB population). The boundary of the Ramsar site is coincident with the Dornoch Firth and Loch Fleet SPA, which underpins all the bird features of the Ramsar site (Criterion 2, 4 and 5).	
Caithness and Sutherland Peatlands SPA / Ramsar	The Caithness and Sutherland Peatlands SPA qualifies under Article 4.1 by regularly supporting populations of European importance, Annex I species, including: • Golden plover (1993 and 1994, 1,064 pairs, 5% of the GB population); • Dunlin (1993 and 1994, 1,860 pairs, 20% of the GB population). • Wood sandpiper (up to 5 pairs, up to 40% of the GB population); • Red-throated diver (2006, 46 pairs, 3.5% of the GB population) • Black-throated diver (1994, 26 pairs, 15% of the GB population); • Golden eagle (1992, 5 pairs, 1% of the GB population); • Hen harrier (1993 to 1997, mean of at least 14 pairs, at least 2.8% of the GB population); • Short-eared owl (30 pairs, 2% of the GB population); and, • Merlin (1993 and 1994, an estimated 54 pairs, 4% of the GB population). The Caithness and Sutherland Peatlands SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species including: • Wigeon (1993/94, at least 43 pairs, <0.1% of the Western Siberia/Northwestern/Northeastern Europe biogeographic population and at least 10.8% of the GB population); • Common scoter (2007, at least 21 pairs, <0.1% of the Western Siberia/Western & Northern Europe/Northwestern Africa biogeographic population and at least 40.4% of the GB population); and, • Greenshank (2009, at least 653 pairs, at least 0.9% of the Europe/Western Africa biogeographic population and at least 59.4% of the GB population). The boundary of the Ramsar site is coincident with the Caithness and Sutherland Peatlands SPA, which underpins all the bird features of the Ramsar site (Criterion 1, 2, 4 and 5).	14.2

Species Records and Survey Results

9.5.92 The baseline for Section D has been informed by the survey results set out in **Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E, Volume 5** and **Appendix 9.4b: Ornithology Confidential Report - Sections C, D and E.**

Geese and Swans

9.5.93 Greylag goose was recorded in flight on twelve occasions during FAS with activity concentrated towards the northern end of Section D. Records consisted of six flights of 1-9 birds and six flights of 10-50 birds flying at and above CRH (>70 m). Greylag goose flights were recorded crossing the alignment on four occasions, three of which were at CRH. Greylag goose was recorded during the first breeding bird survey, but no territories were recorded. No records of greylag geese were made during the wintering geese roost or foraging surveys. Given the recorded activity, and the connectivity distance to the nearest designated sites where greylag geese are a qualifying feature (Cromarty Firth SPA / Ramsar, 4.7 km), potential effects upon greylag goose are considered further in the assessment of Section D.

9.5.94 Pink-footed goose was recorded in flight on thirty-one occasions during FAS. Flock size ranged from 3 to 650 birds. Flights crossed the Proposed Alignment on 16 occasions, including the one flight of 85 birds at CRH. Records were concentrated around autumn and spring migration with the highest concentrations of activity at the northern end of the Section. No records of pink-footed geese were made during the winter roost or foraging surveys. There are no designated sites where pink-footed geese are a qualifying feature within 20 km of the Proposed Development. Although not a feature of any designated sites within published connectivity distance, given the use of roosts close to the alignment, and records of flights across the Proposed Alignment, the potential effects on pink-footed goose are considered further in the assessment of Section D.

Other Waterfowl

9.5.95 Mallard was not recorded during FAS, but was recorded during breeding bird surveys with one probable and ten possible territories located across Section D. Of these, two possible breeding territories were recorded within 100m from the Proposed Development. During wintering geese roost surveys, incidental records 12 and 30 birds respectively were recorded on two occasions roosting on Loch Morie in January 2024, approximately 680m from the Proposed Alignment. Given the lack of flight activity and relatively low levels of activity for this common and widespread species, mallard is not considered further in this assessment of Section D.

9.5.96 No teal were recorded during FAS of Section D. One confirmed, one probable and three possible breeding territories were recorded during breeding bird surveys. Of these, one confirmed and one possible territory were within 100m of the Proposed Development. Given the lack of flight activity and the relatively low level of breeding activity for this common and widespread species, teal is not considered further in this assessment of Section D.

Goldeneye was recorded once in flight, in February 2024, when a pair flew close to Cnoc Ceislein in a westerly direction and crossed the Proposed Alignment at above CRH (>70 m). No breeding territories of goldeneye were recorded, nor was the species recorded across winter goose foraging or roost surveys. Given low levels of activity and considering the distance to the nearest designated site where goldeneye is a qualifying feature (14.4 km, Inner Moray Firth SPA / Ramsar), goldeneye is not considered further in the assessment of Section D.

Goosander was recorded in flight once during FAS, in February 2024, when a pair of birds flew south along the River Averon at CRH south of the Proposed Alignment. No goosanders were recorded during breeding bird or breeding duck surveys. A record of a single goosander was made at Loch Bad a'Bhathaich approximately 1.2 km west of the Proposed Alignment in February. One record was made of *Mergus* sp. in flight and crossing the

Proposed Alignment at CRH. Given no other red-breasted merganser records were made across baseline surveys for Section D and as levels of recorded activity were low for goosander, as well as the absence of historical records, lack of breeding evidence, and distance to the nearest designated site, where goosander (14.4 km, Inner Moray Firth SPA / Ramsar) or red-breasted merganser (4.7 km Cromarty Firth SPA / Ramsar/SSSI) is a qualifying feature, goosander is not considered further in the assessment of Section D.

Woodland Grouse

9.5.97 Results from breeding woodland grouse surveys are contained within **Volume 5, Appendix 9.4b: Ornithology Confidential Report – Sections C, D and E.**

9.5.98 Capercaillie was not recorded during baseline surveys of in Section D, however given its relatively small population and cryptic nature, its presence in suitable habitat in Section D cannot be ruled out. Novar SPA, which is located approximately 1.9 km east of the Proposed Alignment at its closest point is designated for its breeding capercaillie population. Desk study records detail one record of a female bird within 2 km of the Proposed Development within the last five years. There are older historic records of field signs (latrines) of birds within 1.5 km west of the Proposed Development west of Novar between 2013-2014. Numerous records of field signs, leks and breeding territories exist from within and beyond Novar SPA over 2km from the Proposed Development. Given the species rarity, cryptic nature and the presence of suitable habitat along the Proposed Development within potential connectivity distance to the nearest designated site where capercaillie is the qualifying feature, (1.9 km, Novar SPA), potential effects on capercaillie are considered further in the assessment of Section D.

Black grouse was recorded in flight on seven occasions during FAS with two flights of one bird, two flights of two birds, two flights of three birds and one flight and ground registration of five birds. Five of these crossed the Proposed Alignment, three at CRH. Black grouse was most frequently observed close to Cnoc na Bainnse towards the southern end of Section D together with single flights noted over moorland located towards the northern end of Section D. Black grouse observations occurred across woodland grouse and breeding bird surveys, with a total of 12 lekking sites and a combined total of at least 30 lekking males recorded. Eight lek sites were within 500 m of the Proposed Development, three were between 500-750 m of the Proposed Development and one lek was between 750m and 1.5 km from the Proposed Development. There are no designated sites within Section D where black grouse is a feature. Given the level of flight activity, proximity of lek sites, number of lekking males, potential effects on black grouse are considered further in the assessment of Section D.

Waders

Golden plover was recorded once in flight, comprising one female flying at CRH across moorland which did not cross the Proposed Alignment. Four possible and two probable breeding territories were recorded in the northern half of Section D during breeding bird surveys of the Proposed Alignment. Territories extended up to Allt Strath nan Seasgach in the north and south to Allt na Cruaiche. Golden plover was not recorded during any wintering surveys. Given the low level of flight and breeding activity and considering the connectivity distance to the nearest designated site where golden plover is a qualifying feature (12.7 km, Caithness and Sutherland Peatlands SPA / Ramsar), golden plover is not considered further in this assessment of Section D.

No curlew flights were recorded during the FAS, nor were curlew recorded across any other baseline surveys across Section D of the Proposed Development, apart from in the breeding bird surveys. Two possible territories were recorded within 500 m of the Section B of the Proposed Development, both of which were located near Boathmore, but only one of these territories was recorded within 300 m of the Proposed Development. Therefore, given the absence of flight and confirmed breeding activity, curlew is not considered further in this assessment of Section D. Snipe was not recorded during FAS. Snipe was recorded during breeding bird surveys on 17 occasions, with five probable and 12 possible territories recorded, all situated

outwith the Proposed Alignment but within the 500 m buffer. Desk study identified six RSPB records between the years 2020 – 2022, though all relate to locations outwith the 500 m survey buffer. Given the level of baseline data, the absence of confirmed breeding within the Proposed Alignment and despite their moderate sensitivity to disturbance, potential effects on snipe are not considered further in this assessment Section D.

Greenshank was not recorded during FAS but was recorded during breeding bird surveys with two possible territories recorded during breeding bird surveys within Section D at Gledfield Estate. One of these possible territories was within 100m of the Proposed Development and the other possible territory was approximately 550 m of the Proposed Development. Given the breeding evidence recorded in the Section, and acknowledging the inherent difficulty of detecting breeding by the species, the potential effects on the species are considered further in this assessment Section D. Given the breeding evidence recorded in the Section, and acknowledging the inherent difficulty of detecting breeding by the species, the potential effects on the species are considered further in this assessment Section D.

Divers

Red-throated diver was recorded in fight on two occasions in Section D. Both flights comprised single birds crossing the alignment to the west of Ardgay, at CRH and occurred on consecutive days in July/August 2024. One flight was of a bird heading east over the alignment, the second flight was of a bird heading west. Breeding diver surveys recorded one displaying pair on a loch at the beginning of May 2024, located approximately 600 m south of the Section D Proposed Alignment. Further information in included in **Volume 5, Appendix 9.5: Ornithology Confidential Report C, D and E**. Of eighteen other lochs surveyed within the Section, three were considered unsuitable to support breeding divers, and no other lochs had evidence of breeding. No designated sites for which red-throated divers are a qualifying feature were identified within potential connectivity distance of Section D (8km). Although there was limited flight activity, given the evidence of potential breeding and the availability of suitable nesting habitat potential effects on the species are considered further in the assessment of Section D.

Cormorants

9.5.99 Cormorant was not recorded in flight, nor were any breeding territories identified during baseline surveys within Section D. During winter goose surveys in December 2023 and January 2024 incidental individual cormorant flights were noted at Loch Morie, neither of which crossed the Proposed Alignment. Given the low levels of recorded flight and breeding activity by the species and considering the distance between Section D and the nearest designated site where cormorant is a qualifying feature (14.4 km, Inner Moray Firth SPA / Ramsar) potential effects upon cormorant are not considered further in the assessment of Section D.

Raptors and Owls

9.5.100 Results from breeding Schedule 1 raptor surveys are contained within **Volume 5, Appendix 9.4b: Ornithology Confidential Report C, D and E**. No surveys were undertaken for wintering raptors in Section D as no desk records indicating their presence within this section were returned and no evidence of roosting raptors was noted during other ongoing surveys.

Osprey was recorded in flight on one occasion, in June 2024, when a single bird flew west at CRH up Strath Sgitheach, approximately 900 m south of the Proposed Alignment. Osprey are known to breed within the wider area, and a single nest site was confirmed approximately 2.3 km west of the Proposed Development during baseline surveys. No records of breeding territories were identified within 2 km of section D of the Proposed Development during the desk-based study. Given the low number of flights recorded and the lack of records of occupied territories within 2 km of the Proposed Development over the last 5 years potential effects on osprey are not considered further in the assessment of Section D.

Golden eagle was recorded in flight on 11 occasions across all height bands within Section D. Flights comprised nine flights of single birds and two flights of two birds, with flights crossing the Proposed Alignment on two occasions, one of which was at CRH. Activity was concentrated over the autumn and winter periods close to Carn na h-Uigeig. Suitable breeding habitat is present across Section D. During breeding raptor surveys, one occupied golden eagle nest was recorded during baseline surveys approximately 2.3 km west of the Proposed Alignment. The desk-based study identified HRSG records of breeding attempts at this location as well as two other locations between 2021 and 2024 within 6 km of the Proposed Alignment in Section D. The first location comprised an adult pair which failed to successfully breed in 2022 and 2023, the nest situated approximately 5.75 km west of the Section D. The second record comprised another pair approximately 5.9 km west of the Proposed Alignment which was occupied between 2021 – 2024 with birds failing to hatch any young during that time. Given the degree of flight activity, confirmation of breeding and occupied territories within the baseline survey area and the connectivity distance between Section D and the nearest designated site for which golden eagle is a qualifying feature (9.4 km Glen Affric to Strathconon SPA) potential effects on golden eagle are considered further in the assessment of Section D.

9.5.101 Goshawk was recorded in flight on 13 occasions. Flights were all single birds with records concentrated over forestry around Strathrusdale, between 1 – 2 km east of the Proposed Alignment. Four flights crossed the Proposed Alignment, all at CRH. Breeding raptor surveys did not record any evidence for breeding by the species within Section D, although flight activity was recorded over suitable breeding habitat. Given the level of recorded flight activity and because of the inherent difficulty of recording breeding behaviour by the species due to their cryptic nature, potential effects on goshawk are considered further in the assessment of Section D.

9.5.102 Hen harrier was recorded during FAS of Section D on 26 occasions across all height bands with Section D. All flights were of single birds (of both sexes) with four of the flights crossing the alignment at CRH. Activity was concentrated to the area around Cnoc a Loin, and during the spring – autumn period. Breeding raptor surveys did not record confirmed breeding by the species, although two probable breeding territories were located within Section D. One probable territory was situated approximately 100 m west of the Proposed Alignment, with the other probable territory located approximately 900 m west of the Proposed Alignment. The desk-based study identified four historic HRSG records, assumed to relate to two nest locations. The records comprise data from 2021, firstly of an adult pair with a failed breeding attempt within 650 m of the Proposed Alignment, 540 m from of an access track to be constructed as part of the Proposed Development and, secondly, an adult pair with failed breeding attempt situated 1.1 km from the Proposed Alignment. Single male birds relating to each territory were recorded again in 2024 although no breeding activity was recorded. Given the levels of flight and breeding activity recorded, and considering potential connectivity between Section D and the nearest designated site for which hen harrier is a qualifying feature (7.5 km, Strath Carnaig and Strath Fleet Moors SPA / SSSI), potential effects on hen harrier are considered further in the assessment of Section D.

9.5.103 Red kite was recorded in flight on 238 occasions and was the most common raptor recorded during baseline surveys in Section D. Flights were recorded widely across Section D. Flights were recorded at all height bands. 73 flights crossed the alignment, with 66 crossing at CRH. Observations typically comprised 1-2 birds (with a maximum of seven recorded). During breeding raptor surveys one confirmed nest was recorded within the 2 km survey area, located approximately 100 m south of an access track to be constructed as part of the Proposed Development and approximately 330 m west of the Proposed Alignment. One further probable breeding territory was recorded within Section D within approximately 700 m of the Proposed Development. Given the level of flight activity and confirmed presence of breeding, potential effects on red kite are considered further in the assessment of Section D.

9.5.104 White-tailed eagle was recorded in flight once during autumn 2023, over Coire Dubh, comprising individual birds crossing all height bands. The flight consisted of an individual flying within all height bands and it did not cross the Proposed Alignment, nor come within 1 km of it. Breeding raptor surveys did not record any

observations of white-tailed eagle and no records of breeding were identified within 6 km during the desk-based study. Given the limited flight activity, and lack of breeding evidence or records within Section D, the potential effects on white-tailed eagle are not considered further in the assessment of Section D.

9.5.105 Barn owl was not recorded during FAS. During breeding raptor surveys, two barn owl nest sites were recorded within Section D; one in a farm building adjacent to an access track to be constructed as part of the Proposed Development and a second in a farm building approximately 657 m east of the Proposed Development. The nest adjacent to the access track is within the published disturbance distance for barn owl (100 m) from the Proposed Development. As a result, barn owl is considered further in this assessment of Section D.

9.5.106 Merlin was recorded on three occasions during FAS, with two flights at CRH, the third below CRH (0-5 m). None of the flights crossed the Proposed Alignment, though one occurred within 100 m of it. No breeding activity was recorded. The desk-based study did not identify any records of merlin within Section D over the past five years. Given the low levels of flight activity, absence of historical breeding records and considering the distance between Section D and the nearest designated site, for which merlin is a qualifying feature (12.7 km, Caithness and Sutherland Peatlands SPA / Ramsar), merlin is not considered further in this assessment of Section D.

9.5.107 Peregrine was recorded on two occasions during FAS during the 2024 breeding season, with individual birds seen close to Loch Morie. Birds crossed the Proposed Alignment on each occasion, with both of the flights occurring at CRH. No records of breeding territories were identified within 2 km of section D of the Proposed Development during the desk-based study. However, one cliff perch which is a historical peregrine nesting location was recorded with droppings indicating probable peregrine presence approximately 00 m west of the Proposed Development. Although the cliff perch is a probable peregrine territory, it is located outside of potential disturbance distance (up to 750m) for the species. Therefore, given the low levels of peregrine flight activity and lack of historic breeding records in proximity to section D, effects of the Proposed Development upon the species are not considered further in this assessment of Section D.

9.5.108 Other raptors recorded during baseline surveys included sparrowhawk, buzzard, kestrel and tawny owl. These species are common and widespread and embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on them. As a result, these species are not considered further in this assessment of Section D.

Passerines

9.5.109 During baseline surveys, 13 BOCC Red List passerine species were recorded as possible, probable or confirmed breeders within Section D (swift, cuckoo, common gull, skylark, house martin, grasshopper warbler, mistle thrush, spotted flycatcher, whinchat, tree pipit, greenfinch, linnet and lesser redpoll). One Schedule 1 passerine species, common crossbill, was recorded with eight probable and 31 possible territories recorded from coniferous plantation woodland within Section D. Embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on passerine species, and impacts on passerines are not considered further in the assessment of Section D.

Section D Baseline Summary

9.5.110 Twelve species were identified for consideration within the impact assessment of the Proposed Development within Section D: greylag goose, pink-footed goose, whooper swan, capercaillie, black grouse, greenshank, red-throated diver, golden eagle, goshawk, hen harrier, red kite and barn owl.

Section E - Near Strathpeffer to Beauly

Statutory Designated Sites

9.5.111 There are eight sites with a statutory designation for ornithological interest with potential connectivity distance of Section E of the Proposed Development[37]. The designations and qualifying features are set out in **Table 9.9** below and shown in **Volume 3, Figure 9.1.**

[37] Scottish Natural Heritage (now NatureScot), 2016. Assessing Connectivity with Special Protection Areas – Guidance.

Table 9.9: Designated Sites with Connectivity to Section E of the Proposed Development

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
Inner Moray Firth SPA / Ramsar	Inner Moray Firth SPA qualifies under Article 4.1 by regularly supporting populations of European importance of the Annex 1 species including: • Bar-tailed godwit (1992/93 to 1996/97 a winter peak mean of 1,090 individuals, 2% of the GB population); • Common tern (310 pairs, 2% of the GB population); and, • Osprey forage throughout the SPA (2008 to 2012, up to 25 territories within feeding range, 12.5% of the GB population, with 4 pairs breeding within the site, 4% of the GB population). The Inner Moray Firth SPA further qualifies under Article 4.2 by regularly supporting populations of European importance of the migratory species (1992/93 to 1996/97 winter peak means): • Greylag goose (2,651 individuals, 3% of the Iceland/UK/Ireland biogeographic population); • Red-breasted merganser (1,184 individuals, 1% of the NW & Central Europe biogeographic population); and, • Redshank (1,621 individuals, 1% of the Eastern Atlantic biogeographic population). Inner Moray Firth SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. Between 1992/93 to 1996/97 a winter peak mean of 26,800 individual waterfowl comprising 16,800 wildfowl and 10,000 waders including nationally important populations of the following species: • Greylag goose (2,651 individuals, 3% of the GB population); Scaup (118 individuals, 1% of the GB population); • Wigeon (7,310 individuals, 3% of the GB population); • Teal (2,066 individuals, 1% of the GB population); • Goldeneye (218 individuals, 1% of the GB population); • Goosander (325 individuals, 4% of the GB population); • Red-breasted merganser (1,184 individuals, 12% of the GB population); • Curlew (1,262 individuals, 1% of the GB population); • Bar-tailed godwit (1,090 individuals); • Redshank (1,621 individuals, 1% of the GB population); and • Cormorant (409 individuals, 3% of the GB population). In the five-year period 1991/92 to 1995/96, a winter peak mean of 33,148 individual waterfowl was recorded with the assemblage additionally including a nationally important population, greater than 2,000 individuals of oystercatcher (3,063 individuals, 0.9% of the GB population). The boundary of the Ramsar site is coincident with the Inner Moray Firth SPA, which underpins all the bird features of the Ramsar site. It follows the boundaries of the Beauly Firth SSSI, Longman and Castle Stuart Bays SSSI, Whiteness Head SSSI and most of Munlochy Bay SSSI. The SSSIs together underpin the Ramsar habitat features.	4.4

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
Beauly Firth SSSI (Part of Inner Moray Firth SPA)	The Beauly Firth is a shallow estuary located immediately west of Inverness, reaching inland as far as the town of Beauly. It is important for its coastal plants, saltmarsh and wintering wildfowl and waders. There are abundant food resources for a great variety and number of wintering waders and wildfowl. Non-breeding populations of greylag geese, red-breasted merganser and goosander are all notified features of the SSSI. The Beauly Firth SSSI is part of the Inner Moray Firth Special Protection Area (SPA) designated for the birds listed below: • Greylag goose, • Wigeon, • Teal, • Scaup, • Goldeneye, • Goosander, • Red-breasted merganser, • Oystercatcher, • Curlew, • Bar-tailed godwit, • Redshank, • Common tern, • Cormorant, • Osprey, • Waterfowl assemblage.	4.4
Glen Affric to Strathconon SPA	Glen Affric to Strathconon SPA qualifies under Article 4.1 by regularly supporting a population of European importance of the Annex 1 species golden eagle Aquila chrysaetos (10 active territories in 2003, 2.2% of the GB population).	5.1
Moray Firth SPA	The Moray Firth SPA qualifies under Article 4.1 by regularly supporting non-breeding populations of European importance, Annex 1 species, including: • Slavonian grebe (a mean peak annual non-breeding population of 43 individuals (3.9% of the Great Britain population); • Red throated diver (a mean peak annual non-breeding population of 324 individuals (1.9% of the Great Britain population); and, • Great northern diver (a mean peak annual non-breeding population of 144 individuals (5.8% of the Great Britain population).	6.1

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	The Moray Firth SPA further qualifies under Article 4.2 by regularly supporting populations of European importance, migratory species, including: • Greater scaup (a mean peak annual non-breeding population of 930 individuals (17.9% of the Great Britain population); • Eider (a mean peak annual non-breeding population of 1,733 individuals (2.9% of the Great Britain population) • Velvet scoter (a mean peak annual non-breeding population of 1,488 individuals (59.5% of the Great Britain population); • Common scoter (a mean peak annual non-breeding population of 5,479 individuals (5.5% of the Great Britain population); • Long-tailed duck (a mean peak annual non-breeding population of 5,001 individuals (45.5% of the Great Britain population); • Goldeneye (a mean peak annual non-breeding population of 907 individuals (4.5% of the Great Britain population); • Red-breasted merganser (a mean peak annual non-breeding population of 151 individuals (1.8% of the Great Britain population); and, • European shag (at least 6,462 individuals during the non-breeding season (3.2% of the biogeographic population and 5.9% of the Great Britain population) and 5,494 individuals during the breeding season ((2.7% of the biogeographic population & 10.2% of the Great Britain population).	
Glen Strathfarrar SSSI (Part of Glen Affric to Strathconon SPA)	Breeding bird assemblage – 65 species of bird including crested tit and Scottish crossbill. Part of Glen Strathfarrar SSSI is part of Glen Affric to Strathconon SPA and is designated for the bird listed below: • Golden eagle, breeding	5.3
Cromarty Firth SPA/ Ramsar/ SSSI	Cromarty Firth SPA qualifies under Article 4.1 by regularly supporting populations of European importance of the Annex 1 species: • whooper swan (1992/93 to 1996/97 winter peak mean of 64 individuals, 1% of the GB population) • bar-tailed godwit (1,355 wintering individuals, 3% of the GB population). • common tern (1989 to 1993 mean of 294 pairs; 2% of the GB population); and, • osprey forage throughout the SPA (2008 to 2012, five year mean of up to 25 territories within feeding range, 12.5% of the GB population, with 1 pair breeding within the site, 1% of the GB population). Cromarty Firth SPA further qualifies under Article 4.2 by regularly supporting a population of European importance of the migratory species: • greylag goose (1992/93 to 1996/97 winter peak mean of 1,782 individuals; 2% of the Iceland/UK/Ireland biogeographic population). Cromarty Firth SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. In the five-year period 1992/93 to 1996/97, a winter peak mean of 30,200 individual waterfowl was recorded, comprising 14,800 wildfowl and 15,400 waders including nationally important populations of the following species: • greylag goose (1,782 individuals, 2% of the GB population); • whooper swan (64 individuals). In the five-year period 1991/92 to 1995/96. • wigeon (9,204 individuals, 3% of the GB population);	7.6

Site	Qualifying Feature	Approximate distance from Proposed Development (km)
	• pintail (319 individuals, 1% of the GB population); • scaup (295 individuals, 3% of the GB population); • redshank (1,149 individuals, 1% of the GB population); • red-breasted merganser (204 individuals, 2% of the GB population); • curlew (1,313 individuals, 1% of the GB population); • bar-tailed godwit (1,355 individuals); and • knot (4,312 individuals, 1% of the GB population); A winter peak mean of 34,847 individual waterfowl was recorded with the assemblage additionally including nationally important populations greater than 2,000 individuals of: • oystercatcher (2004/5 to 2009/10, 2,702 individuals, 0.8% of the GB population; and • dunlin (3,384 individuals, 0.6% of the GB population). The boundary of the Ramsar and SSSI site is coincident with the Cromarty Firth SPA, which underpins all the bird features of the Ramsar site.	
North Inverness Lochs SPA	North Inverness Lochs SPA qualifies under Article 4.1 by regularly supporting a population of European Importance of the Annex 1 species: Slavonian grebe (1991 to 1995, 7 pairs, 12% of the GB population).	9.4
Balnagrantach SSSI	The lochs support a range of aquatic plant communities reflecting their moderate nutrient status. Around the edges of the lochs there are extensive beds of bottle sedge Carex rostrata which provide nesting habitat for 1-2 pairs of Slavonian grebe. Balnagrantach SSSI is part of North Inverness Lochs SPA designated for Slavonian grebe.	9.4

Species Records and Survey Results

9.5.112 The baseline for Section E has been informed by the survey results set out in **Volume 5, Appendix 9.3: Ornithology Technical Report – Sections C, D and E, Volume 5** and **Appendix 9.4b: Ornithology Confidential Report - Sections C, D and E.**

Geese and Swans

9.5.113 Greylag goose was recorded in flight on twenty-eight occasions across all height bands during FAS within Section E. The species was most regularly recorded in the north of Section E along the River Conon. Flights crossed the Proposed Alignment on 18 occasions, eight of which were at CRH. During baseline surveys no breeding territories of greylag goose were recorded along Section E.

Wintering geese roost surveys recorded movements of greylag goose across the alignment at the intersection with the River Conon. Birds were routinely observed crossing the Proposed Alignment where there was a concentration of flight activity east of Proposed Alignment. A flock of 70 birds landed close to the Propsoed Development after sunrise in December 2023.

9.5.114 Foraging wintering geese surveys recorded greylag goose on five of the survey visits with December 2023 being the only month that the species was not observed. Birds were routinely recorded foraging across the alignment of the Proposed Development in Section E. In March 2024 separate flocks of 70, 80, and 200 birds were recorded simultaneously in a group of fields within potential disturbance distance of the Proposed Development, just north of Muirton Mains. There are three designated sites with greylag goose as a qualifying feature within the published connectivity distance for the species from Section E. Inner Moray Firth SPA / Ramsar and Beauly Firth SSSI are both located approximately 4.2 km from Section E. Cromarty Firth SPA / Ramsar is located approximately 7.6 km from Section E. Given baseline surveys and considering the connectivity distances between Section E and designated sites where wintering greylag goose are a qualifying interest feature, greylag goose is considered further in the assessment of the Proposed Development within Section E.

9.5.115 Pink-footed goose was recorded in flight on 33 occasions across the winter period and mainly in November 2023 during FAS. Birds were often recorded in the north-east of Section E along the River Conon and flights were observed crossing the Proposed Alignment on seven occasions, three of which was at CRH. Twenty-two flights consisted of between 1-100 birds, ten flights consisted of 101-500 birds, and one flight consisted of 2,000 birds.

9.5.116 Wintering geese roost surveys recorded a concentration of pink-footed goose flight activity immediately east of Section E Proposed Alignment and north of the River Conon. During the dusk surveys in November 2023 groups of birds were recorded landing in fields within 1 km of the Proposed Alignment although all birds (c.2,000 individuals) took flight shortly after sunset and flew south and were not recorded roosting. A smaller flock, of 26 pink-footed geese, was recorded in February 2024 beside the River Connon. Pink-footed goose flights were recorded at Loch Kinellan (approximately 430 m from the Proposed Alignment) where approximately 100 pink footed geese were recorded landing at dusk in nearby fields in November. Foraging wintering geese surveys recorded pink-footed goose on one occasion in November 2023. This included 1,250 geese in fields around Wester Moy approximately 1.3 km east of the Proposed Alignment, with a flock of 555 birds later moving to feed close to the Proposed Development in Section E close to Heights of Kinnahaird and a flock of seven birds approximately 450 m east of the Proposed Development.

9.5.117 There are no designated sites within published connectivity distances of Section E where pink-footed goose is a qualifying interest feature. However, given the records of pink-footed geese during baseline surveys potential

effects on pink-footed goose are considered further in the assessment of the Proposed Development within Section E.

9.5.118 Whooper swan was recorded in flight on 12 occasions during FAS within Section E. Flights were recorded between October 2023 and June 2024, likely of birds on migration. Flights comprised four flights of two birds, four flights of 4-8 birds, and four flights of 12-40 birds. Flights were largely concentrated in the north of Section E along the River Conon and were noted crossing the Proposed Alignment on six occasions, four of which observed at CRH. During baseline surveys no breeding territories of whooper swan were recorded along Section E.

During wintering roost surveys whooper swan was recorded at Loch Achonachie approximately 400 m from the Proposed Development. A group of 11 birds, with at least two juveniles, were noted arriving on the loch after sunset and presumably roosting during November 2023. A group of three birds were recorded taking off from the loch just after sunrise in December 2023. A group of 61 birds were noted in flight at CRH during this survey at the River Conon, Moy Bridge, although none landed or took off. A group of 8 birds were also recorded roosting at An Dubh Lochan in December, approximately 230 m from the Proposed Alignment and 120 m from the nearest access route.

Foraging wintering geese surveys recorded whooper swan in October, November, and December 2023. In October 2023 a group of 137 whooper swan were recorded foraging in fields approximately 2.3 km east of the Proposed Alignment, between Marybank and the River Conon. The closest record to the Proposed Development was a flock of seven birds in an arable field approximately 470 m east of the Proposed Development, with another seven recorded approximately 1.3 km east of the Proposed Development.

9.5.119 There are no designated sites for which whooper swan is a qualifying feature within published connectivity distances of Section E, with the closest (Cromarty Firth SPA / Ramsar / SSSI) approximately 7.6 km away. However, given the recorded foraging and roosting activity close to the Proposed Development, whooper swan is considered further in the assessment of the Proposed Development within Section E.

Three flights of mute swan were recorded during the FAS, with a peak count of two birds in flight, all below CRH (<5 m) and none of which crossed the Proposed Alignment. These flights took place approximately 300 m east of the Proposed Alignment south of Loch Kinellan and 1.2 km east of the Proposed Alignment over of Breakachy farm. One probable breeding territory was recorded at Loch Kinellan, approximately 440 m east of the Proposed Development and a peak count of two birds were recorded during roost surveys at the same loch during November and December 2023. Due to the relatively low flight activity and records during breeding and roost surveys, mute swan is not considered further in the assessment of Section E.

Other Waterfowl

Wigeon was not recorded during flight activity or breeding bird surveys. One incidental record of 18 birds was made during wintering geese roost surveys in November 2023, on Loch Kinellan, approximately 430 m from the Proposed Alignment. Given the absence of flight activity or breeding evidence and considering the distance to the nearest designated site where wigeon constitutes a qualifying species (Inner Moray Firth SPA / Ramsar 4.4 km), wigeon is not considered further in the assessment of Section E.

Mallard was not recorded during FAS, but was recorded during breeding bird surveys with four probable and four possible territories located across Section E. Of these, only one probable breeding territory was recorded within 100 m from the Proposed Development. During wintering geese roost surveys, an incidental record of eight birds was made in November 2023, located on Loch Kinellan. In February 2024 one male was noted on An Dubh Lochan, approximately 150 m from the Proposed Alignment. A pair of mallard were noted on Loch nam Bonnach in December 2023 and five birds were recorded on the same loch in February 2024. Given the

lack of flight activity and relatively low levels of activity for this common and widespread species, mallard is not considered further in this assessment of Section E.

Teal was recorded in flight on one occasion with a female and a juvenile bird observed flying over at Loch na Toinnidh below CRH (<5 m). During baseline surveys, two breeding territories of teal were recorded within approximately 600 m west of the Proposed Development at Loch na Crann. Wintering geese roost surveys incidentally recorded teal in February 2024, also at Loch na Toinnidh. Wintering teal is a qualifying feature of the Inner Moray Firth SPA / Ramsar, located approximately 4.2 km from the Section E Proposed Alignment, and at Beauly Firth SSSI, located approximately 6.3 km from the Proposed Alignment. Given the limited flight activity and limited breeding evidence within close proximity to Section E and considering the distance between Section E and the nearest designated sites where teal is a qualifying feature, teal is not considered further in the assessment of Section E.

Goldeneye was recorded in flight on two occasions during FAS within Section E. In December 2023 birds were observed in flight from Loch nam Bonnach to Loch na Toinnidh approximately 400 m south of the Proposed Alignment. Both flights were below CRH (<5 m). During baseline surveys no breeding territories of goldeneye were recorded along Section E. Wintering goose roost surveys incidentally recorded goldeneye on Loch nam Bonnach and Loch na Toinnidh at the start of dawn survey in December 2023 and February 2024. Two birds were also recorded in November 2023, on Loch Kinellan, and, in February 2024, one flight of one bird, occurred at Loch na Crann. In addition, during winter goose foraging surveys there was one incidental record of seven birds on Loch na Crann, approximately 280 m from the Proposed Alignment. Wintering goldeneye is listed as a qualifying feature of the Inner Moray Firth SPA / Ramsar located approximately 4.2 km from the Proposed Alignment, and the Beauly Firth SSSI located approximately 6.3 km away. Given the limited flight activity, lack of breeding evidence within Section E and considering the distance between Section E and the nearest designated sites where goldeneye is a qualifying feature, goldeneye is not considered further in the assessment of Section E.

Goosander was recorded in flight on one occasion along the River Orrin in October 2023, when a single bird was observed crossing the Proposed Alignment at CRH (5-70 m). During breeding bird surveys no breeding territories of goosander were recorded within Section E. Wintering geese roost surveys incidentally recorded goosander in February 2024 with two birds on Loch nam Bonnach and Loch na Toinnidh approximately 400 m south of the Proposed Alignment. Wintering goosander is a qualifying interest feature of the Inner Moray Firth SPA / Ramsar and the Beauly Firth SSSI, both located approximately 4.2 km from the Section E Proposed Alignment. Given the limited flight activity, lack of breeding evidence within Section E and considering the distance between Section E and the nearest designated sites where goosander is a qualifying feature, goosander is not considered further in the assessment of Section E.

Woodland Grouse

9.5.120 Results from breeding woodland grouse surveys are contained within the **Volume 5, Appendix 9.4b: Ornithology Confidential Report– Sections C, D and E**.

9.5.121 No capercaillie were observed during baseline surveys of Section E, however a record was made during woodland grouse surveys of a single capercaillie caecal dropping, located on a forestry track approximately 800 m west of the Proposed Alignment in Section E in June 2024. The record was approximately 12 km south-west of the Novar SPA which is designated for capercaillie. Young female capercaillie disperse on average 12 km from their natal forest during their first year[37] and so it is possible that birds from the SPA could disperse to woodlands crossed by Section E. The desk study did not identify any sightings of capercaillie within the Section E over the past five years. It is likely that very low numbers of capercaillie dispersing from Nover SPA are present within woodlands along Section E of the Proposed Development. However, as signs of capercaillie

being present were recorded in woodlands which the Proposed Development passes through, potential effects on capercaillie are considered further in the assessment of Section E.

Black grouse was recorded in flight on four occasions during FAS within Section E. None of the flights crossed the Proposed Alignment. One flights of one bird and one flight of three birds were at CRH and one flight of one bird and one flight of six birds were below CRH (<5 m). Breeding woodland grouse surveys recorded a total count of 12 lekking males at two lek sites within Section E. Six males were recorded at one lek approximately 100 m west of the Proposed Development with six more recorded at a lek approximately 670 m west of the Proposed Development. In additional, one solitary male was recorded in a small clearing within woodland south of the second lek, but no lekking activity was recorded. The desk study identified no recorded sightings of black grouse within the Section E Proposed Alignment over the past five years although there are a number of records of black grouse from the area before 2019. Anecdotal evidence of a potential lek with three males south of Aultgowrie was provided by a member of the public. There are no designated sites within Section E where black grouse is a qualifying feature. As active black grouse leks close to the Proposed Development were recorded during baseline surveys, potential effects on black grouse are considered further in the assessment of the Proposed Development within Section E.

Grebes

9.5.122 Slavonian grebe was not recorded during flight surveys. No breeding territories of Slavonian grebe were identified although two pairs were recorded present within Section E on a loch approximately 450 m east of the Proposed Alignment and 150m from the closest access track that forms part of the Proposed Development and on an adjacent loch 300m further away. Birds were recorded during the breeding season but no evidence of a nesting attempt was recorded. The desk-based study identified no records for Slavonian grebe within the Study Area of the Section E alignment over the past five years. The closest designated site where breeding Slavonian grebe is a qualifying feature is North Inverness Lochs SPA, approximately 9.4 km south of the Proposed Development. Despite an absence of flight and breeding activity, the presence of two pairs on a loch approximately 450 m from the Proposed Alignment during the breeding season indicates the importance of that site for the species, and breeding may occur in the future. Considering this and the rarity of the breeding population in Scotland, potential effects on Slavonian grebe are considered further in the assessment of Section E.

Waders

9.5.123 Golden plover was not recorded during FAS of Section E. During breeding bird surveys three probable territories were recorded between approximately 340, 430 and 720 m west of the Proposed Development. All territories were located within suitable breeding moorland habitat. There are no designated sites within Section E where golden plover is a qualifying feature. Given the lack of flight activity and low number of breeding territories recorded during baseline surveys, golden plover is not considered further in this assessment of the Proposed Development within Section E.

Ringed plover was not recorded during FAS. During breeding bird surveys one probable territory was recorded on hardstanding at a wind farm north of Loch nam Bonnach, approximately 350m west of the Proposed Development. There are no designated sites within Section E where ringed plover is a qualifying feature. Given the lack of flight activity and limited breeding territories recorded during baseline surveys, ringed plover is not considered further in this assessment of the Proposed Development within Section E.

Woodcock was not recorded during FAS. During breeding bird surveys one possible territory was recorded in the south of this section, approximately 100 m from the Proposed Development where it was noted calling close to woodland near to Breakachy Hill. There are no designated sites within Section E where woodcock is a

qualifying feature. Given the lack of flight activity and limited breeding territories recorded during baseline surveys, woodcock is not considered further in this assessment of the Proposed Development within Section E.

Snipe was recorded in flight on one occasion in June 2024 which consisted of a displaying adult flying at CRH close to Auchederson, approximately 900 m south of the Proposed Alignment. During breeding bird surveys one probable and nine possible territories were recorded across the southern half of Section E. Two potential breeding territories were located during breeding bird surveys, both within 170 m of the Proposed Development. There are no designated sites within Section E where snipe is a qualifying feature. Given the limited flight activity and low number of breeding territories recorded during baseline surveys, snipe is not considered further in this assessment of the Proposed Development within Section E.

Greenshank was not recorded during FAS. During breeding bird surveys one possible territory was recorded to the west of Loch nam Bonnach, approximately 240 m from the Proposed Development. There are no designated sites within Section E where greenshank is a qualifying feature. Given the lack of flight activity and limited breeding territories recorded during baseline surveys, greenshank is not considered further in this assessment of the Proposed Development within Section E.

Curlew was recorded in flight on one occasion in June 2024 with a single bird observed flying at CRH crossing the Proposed Alignment. During breeding bird surveys one probable curlew breeding territory was recorded within Section E, in open habitat close to Creag an t-Suidheachain approximately 70m from the Proposed Development.

9.5.124 There are three designated sites where wintering curlew is qualifying feature within 10km of Section E: Inner Moray Firth SPA / Ramsar; Beauly Firth SSSI (both approximately 4.2 km from the Proposed Development); and Cromarty Firth SPA / Ramsar (approximately 7.6 km from the Proposed Development). However, none which are designated for breeding curlew. Given the limited flight activity, limited breeding evidence within Section E and considering the distance between Section E and the nearest designated sites where curlew is a qualifying feature, curlew is not considered further in the assessment of Section E.

Gulls

Flights of gulls were not recorded as target species in Section E due to the lack of designated sites with gulls as a qualifying feature for this Section. One confirmed and one probable common gull breeding territory were recorded near Loch nam Bonnach approximately 150 m from the Proposed Development. No breeding territories of any other gulls were recorded. During wintering geese roost surveys one glaucous gull was incidentally recorded in flight in December 2023. Given the limited flight activity and lack of designated sites where gulls are a qualifying feature, gulls are not considered further in this assessment of the Proposed Development within Section E.

Divers

Red-throated diver was recorded in flight on four occasions during FAS of Section E. Flights consisted of one to two birds with all flights recorded between April - July. Two flights crossed the Proposed Alignment, one of which was at CRH. Red-throated diver was recorded breeding on two of the eleven lochs surveyed within Section E. One pair of birds was confirmed as breeding on a loch approximately 100 m from an access track which will be constructed for the Proposed Development and approximately 440 m east of the Proposed Alignment. A second breeding pair was confirmed on a loch approximately 630 m west of the of an access track which will be constructed for the Proposed Development and approximately 750 m west of the Proposed Alignment. Four of the waterbodies surveyed for breeding divers had become overgrown with vegetation, lacked open water, and were deemed unsuitable to support breeding. Recreational activity observed at Loch

Achonachie rendered it unsuitable to support breeding divers. In Section E, four additional lochs were deemed suitable to support breeding; however, no divers were observed during the surveys undertaken.

9.5.125 Moray Firth SPA is located approximately 6.3 km from the Section E Proposed Alignment, with red-throated diver listed as a designated non-breeding feature of the site, although no flights of birds during the non-breeding season were recorded during baseline surveys. Given the results of baseline surveys, with breeding birds recorded within potential disturbance distance of the Proposed Development, red-throated diver is considered further in the assessment of the Proposed Development within Section E.

Cormorants

9.5.126 Cormorant was not recorded during FAS, nor were any breeding territories identified during baseline surveys within Section E. During wintering geese roost surveys in November 2023 two birds were recorded taking off and then landing at Loch Achonachie; flights did not cross the Proposed Alignment. Also during wintering geese roost surveys in December 2023 there was one incidental flight of cormorant landing on Loch Kinellan, located outwith the Proposed Alignment but within the 1 km buffer. Given the limited flight activity low levels of recorded flight and breeding activity by the species and considering the distance between Section E and the nearest designated site where cormorant is a qualifying feature (4.2 km, Inner Moray Firth SPA / Ramsar and Beauly Firth SSSI) potential effects upon cormorant are not considered further in the assessment of the Proposed Development within Section E.

Raptors and Owls

9.5.127 Results from breeding Schedule 1 raptor surveys are contained within **Volume 5, Appendix 9.4b: Ornithology Confidential Report– Sections C, D and E**.

9.5.128 Osprey was recorded in flight on 29 occasions during FAS within Section E. Flights crossed the Proposed Alignment on 14 occasions, 12 of which were at CRH. Observations were mostly of single birds although one flight consisted of a pair in flight in April 2024. Flights were concentrated along the River Conon, over Loch nam Bonnach and along the River Beauly. The majority of the flights recorded crossing the Proposed Alignment occurred in the south of Section E along the River Beauly.

9.5.129 Breeding raptor surveys recorded two confirmed territories within 2 km of the Proposed Development. One was approximately 300 m north of the Proposed Development and approximately 380 m north of the Proposed Alignment, and one approximately 1.5 km north of the Proposed Development and 1.7 km north of the Proposed Alignment. Desk study records from HRSG from the previous five years identified three other breeding territories within 2 km of the Proposed Development. The first was an unoccupied breeding location (data from 2021, 2022 and 2024) located approximately 300 m west of the Proposed Development. The second was approximately 150 m north of an access track which would be constructed for the Proposed Development and approximately 500 m to the east, and the third is approximately 720 m to the south of the Proposed Development, which is an alternative nest site for one of the territories located in the raptor surveys. Breeding raptor surveys undertaken in 2024 did not record breeding activity at any of these locations.

9.5.130 Inner Moray Firth SPA / Ramsar and Beauly Firth SSSI sites are both located approximately 4.2 km from the Proposed Alignment, with osprey listed as a designated breeding feature of each site. Cromarty Firth SPA / Ramsar is located approximately 7.6 km from the Proposed Alignment, with osprey listed as a designated breeding feature of the site. Given baseline surveys, historical records, sensitivity to disturbance and considering the connectivity distances between Section E and designated sites where osprey are a qualifying interest feature, osprey are considered further in the assessment of the Proposed Development within Section E.

9.5.131 HRSG provided information on three historical honey buzzard territories, two of which were within 2 km of the Proposed Development. However, no honey buzzard territories or flight lines were recorded during baseline surveys, and the last sighting of a pair at these historic territories was in 2022. Therefore, given the limited flight activity and limited breeding territories recorded during baseline surveys, honey buzzard is not considered further in this assessment of Section E and embedded mitigation measures will be sufficient to avoid and minimise impacts on these historic territories.

9.5.132 Golden eagle was recorded in flight on 17 occasions during FAS along Section E, with flights crossing the Proposed Alignment on four occasions, three of which was at CRH. Most flights comprised a single bird; however, there were seven instances where two birds were recorded flying together. Observations were more frequent in the northern part of Section E, near Cúl Mór.

Breeding raptor surveys did not record any golden eagle territories within Section E. One adult was observed flying close to Loch nam Bonnach in mid-May 2024, and no further sightings were documented during the surveys. The desk-based study did not identify any breeding territories within 6km of Section E, with the closest territory 8.8 km west of the Proposed Development.

9.5.133 Glen Affric to Strathconon SPA is located approximately 5.1 km from the Section E Proposed Alignment, with golden eagle listed as a designated breeding feature of the site. Glen Strathfarrar SSSI is located approximately 5.3 km from the Section E Proposed Alignment, with golden eagle listed as a designated breeding feature of the site. Given the low number of flights across the Proposed Alignment at CRH recorded during baseline surveys and the lack of breeding evidence within Section E and the limited historical records within potential connectivity distance, golden eagle is not considered further in the assessment of Section E.

9.5.134 Goshawk was recorded in flight on two occasions during FAS, neither of which crossed the Proposed Alignment. Both consisted of a female was observed flying near Ruttle Wood on one occasion, and at Torrachilty Forest on the other occasion. An incidental record of a goshawk in flight and circling woodland north of the Proposed Alignment at Breakachy was recorded in May 2024 by habitat surveyors. The woodland habitat, found in dense clusters at both the northern and southern ends of Section E, as well as in scattered areas in the central section offers suitable breeding habitat for goshawk. Breeding raptor surveys recorded one confirmed territory approximately 330 m from the Proposed Alignment and 300 m from the closest construction footprint of the Proposed Development.

9.5.135 The desk-based study did not identify any goshawk territories within 2 km of the Proposed Alignment over the past five years. There are no designated sites within Section E where goshawk is a qualifying feature. Although limited flight activity was recorded, given the presence of a confirmed goshawk territory within 300 m of the Proposed Development, goshawk is considered further in this assessment of Section E.

9.5.136 Hen harrier was recorded in flight on four occasions during FAS, with birds crossing the Proposed Alignment on two occasions, both of which were at CRH. Male and female birds were observed close to Loch nam Bonnach and Loch na Toinnidh, Ruttle Wood and Breakachy Hill. Breeding raptor surveys did not record any territories. The desk-based study did not identify any territories within 2 km of the Proposed Development in Section E within the past five years. There are no designated sites within connectivity distance of Section E where hen harrier is a qualifying feature. Given the limited flight activity and lack of breeding evidence within baseline surveys or desk records, hen harrier is not considered further in this assessment of Section E.

9.5.137 Red kite was recorded in flight on 606 occasions with birds crossing the Proposed Alignment on 206 occasions with 220 flights crossing the Proposed Alignment at CRH. Bird activity was documented throughout the year, with a total of 481 flights involving individual birds, 78 flights with pairs,17 flights featuring three birds, 15 flights with four birds, 11 flights comprising five to nine birds, and four flights that included 11 to 18 birds. Section E

proposed extensive suitable foraging and nesting habitat for red kite. Historical supplemental feeding of red kites at the Tollie feeding station, near Conan Bridge and approximately 4 km east of the northern end of the Proposed Alignment, is also likely to have contributed to high red kite flight activity along Section E. Red kites were fed at the station until January 2024.

9.5.138 Breeding raptor surveys conducted in Section E frequently recorded red kite, as the habitat offers good opportunities for foraging and nesting. Observations mostly consisted of single birds in flight, although 2-3 birds were occasionally recorded. Birds were recorded circling, hunting, perching, calling, and displaying breeding behaviours. Four confirmed breeding territories were recorded along with two probable territories. One confirmed and one probable territory were both within approximately 90 m of the Proposed Alignment and within approximately 30 m of the closest section of proposed access track in separate locations. The other confirmed nest sites were approximately 200 m east of the Proposed Development, 740 m south of the Proposed Development and approximately 1.8 km southeast (1. 2km from closest access tracks) of the Proposed Development. The other probable breeding territory was recorded within approximately 700 m east of the Proposed Development.

9.5.139 Wintering raptor surveys identified three red kite roosts, two in close proximity to one another on different dates. The two roosts in close proximity to one another were located approximately 240 m from the Proposed Alignment and within approximately 210 m of the closest proposed infrastructure for the Proposed Development. Fourteen and 30 birds were recorded entering this roost during surveys in January 2024 and February 2024 respectively. The third roost was located approximately 670 m northeast of the Proposed Development and 230 m from the closest access tracks where approximately 20 birds were recorded roosting in December 2023.

9.5.140 The desk-based study identified one HRSG record of a red-kite territory, approximately 1 km north of the Proposed Development. There are no designated sites within connectivity distance of Section E where red kite is a qualifying feature. Given the level of flight activity and confirmed breeding evidence, potential effects on red kite are considered further in the assessment of the Proposed Development within Section E.

9.5.141 White-tailed eagle was recorded in flight on four occasions during FAS of Section E and no flights crossed the Proposed Alignment. Single birds were recorded in flight, with three flights above CRH (>70m) and one bird recorded in flight across all height bands over Cnoc Ceislein over 1km east of the Proposed Development. Breeding raptor surveys did not record any territories within Section E and the desk-based study did not identify any white-tailed eagle territories within 6km of the Proposed Development in Section E over the past five years. There are no designated sites within Section E where white-tailed eagle is a qualifying feature. Given the limited flight activity and limited breeding territories recorded during baseline surveys, white-tailed eagle is not considered further in this assessment of Section E.

9.5.142 Barn owl was not recorded during FAS. Breeding raptor surveys recorded evidence of barn owl breeding and roosting at three locations within 2 km of Section E. Breeding attempts were unsuccessful at two locations and breeding was not confirmed at the third. All locations were beyond 100 m from the Proposed Development. There are no designated sites within Section E where barn owl is a qualifying feature. Given the limited flight activity, location of the observations relative to the Proposed Alignment and limited desk records barn owl is not considered further in this assessment of Section E.

Merlin was recorded in flight on seven occasions during FAS, crossing the Proposed Alignment on three occasions at collision risk. All flights consisted of single birds with male and female birds recorded across all height bands. All flight activity was observed southwest of Loch nam Bonnach. Breeding raptor surveys recorded a confirmed territory, approximately 140 m from the Proposed Development and approximately 200 m from the Proposed Alignment. The desk study identified no recorded sightings of merlin within the Section E

Proposed Alignment over the past five years. There are no designated sites within connectivity distance to Section E where merlin is a qualifying feature. Although limited flight activity was recorded, given the presence of a confirmed merlin territory within 140 m of the Proposed Development, merlin is considered further in this assessment of Section E.

Peregrine was recorded in flight on five occasions during FAS, with no flights crossing the Proposed Alignment. All observed flights involved individual birds across all height bands, with sightings near Torrachiltyand Ruttle Wood. One confirmed and active nest site was recorded approximately 1 km west of the Proposed Development following breeding raptor and breeding bird surveys. Details of this same nest location were passed on from HRSG during the desk study also. Another nest site was recorded within potential disturbance distance of the proposed Development along the River Beauly. However, no evidence of breeding was recorded, and it is thought likely that recreational use of the river had caused disturbance to the nest site. There are no designated sites within Section E where peregrine is a qualifying feature. Although limited flight activity was recorded, given the presence of a confirmed peregrine territories within potential disturbance distance of the Proposed Development, peregrine is considered further in this assessment of Section E.

9.5.143 Other raptors recorded during baseline surveys included sparrowhawk, buzzard, kestrel, tawny owl and long-eared owl. These species are common and widespread and embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on them. As a result, these species are not considered further in this assessment of the Proposed Development within Section E.

Passerines

9.5.144 During baseline surveys, 12 BOCC Red List passerine species were recorded as possible, probable or confirmed breeders within Section E (cuckoo, skylark, grasshopper warbler, mistle thrush, whinchat, tree sparrow, house sparrow, tree pipit, twite, linnet, lesser redpoll and yellowhammer).

9.5.145 One Schedule 1 passerine species, common crossbill, was recorded with 1 probable and 11 possible territories recorded largely in woodland to the north and the south of Section E including Ruttle Wood and Muirton Wood. Embedded mitigation measures (set out in **Section 9.3**) will be implemented to avoid impacts on passerine species, and impacts on passerines are not considered further in the assessment of the Proposed Development within Section E.

Section E Baseline Summary

9.5.146 Eleven species were identified for consideration within the impact assessment of the Proposed Development within Section E: greylag goose, pink-footed goose, whooper swan, black grouse, Slavonian grebe, red-throated diver, osprey, red kite, goshawk, merlin and peregrine.

9.6 Future Baseline in the Absence of the Proposed Development

9.6.1 The predominate drivers of species composition, distribution and abundance within the Study Area for the Proposed Development are the distribution and management of natural and semi-natural habitats. These habitats and their management are predicted to remain as at present within the Study Area. Some species which have increasing and expanding populations such as white-tailed eagle[38] are predicted to continue current trends. Similarly, species with decreasing population trends due to wider influences such as habitat availability are likely to continue to decrease.

[38] Challis, A., Wilson, M.W., Eaton, M.A., Etheridge, B., Kortland, K., Mattingley, W., Steele, L.D., Stevenson, A., Stirling-Aird, P., Thornton, M., Titherington, J., Wernham, C.V. & Wilkinson, N.I. (2022). Scottish Raptor Monitoring Scheme Trends Summary 2009-2018. BTO Scotland, Stirling.

Implications of Climate Change

9.6.2 Scotland's Environment[39] predicts that the changes in climate that Scotland is already experiencing are projected to continue and intensify, noting that:

- Average temperatures will increase across all seasons;
- Typical summers will be warmer and drier;
- Typical winters will be milder and wetter;
- Intense, heavy rainfall events will increase in both winter and summer;
- Sea levels will rise;
- Reduced frost and snowfall; and
- Weather will remain variable and may become more variable.

9.6.3 Wetter, warmer winters and extreme rainfall events in all seasons may lead to a reduced viability for some areas of forestry. Hotter drier summers may lead to exacerbated drying of wetland / peat forming habitats. Extreme rainfall during the nesting period may result in reduced breeding success for birds if foraging ability is affected or if eggs or young become wet and cold resulting in mortality. Temperature changes may affect the timing of insect prey availability for some species, resulting in a lack of food for adults or young and resulting in lower breeding success. Species composition may change as birds from hotter climates are able to colonise areas further north.

9.7 Important Ornithological Features

9.7.1 Based on the results of the desk-based and field surveys, consultations with statutory consultees and policy guidance, **Table 9.10** sets out the important ornithological features (IOFs) included within the detailed assessment for each relevant section and the importance of those species (in accordance with **Table 9.2**). Based on the baseline information, and with the embedded mitigation measures in place, effects on other bird species are considered to occur at most at a local scale and are not assessed further. The assessment of impacts of Sections A - E are presented individually, followed by the impacts of the Proposed Development as a Whole.

[39] Scotland's Environment https://www.environment.gov.scot/our-environment/climate/changing-climate/ [Accessed 19.07.24].

Table 9.10: Summary of Important Ornithological Features

Species	Designated Site or Wider Countryside Population Importance*	Conservation status	Section of the Proposed Development				
			A	B	C	D	E
Special Protection Areas and their qualifying feature species	International	Sits of European Importance designated under the Conservation (Natural Habitats, &c.) Regulations 1994	✓	✓	✓	✓	✓
Ramsar Sites and their qualifying feature species	International	Sites of international importance designated under the Ramsar Convention of Wetlands of International Importance	✓	✓	✓	✓	✓
Sites of Special Scientific Interest and their qualifying feature species	National	Sites of national importance designated under the Nature Conservation (Scotland) Act 2004	✓	✓	✓	✓	✓
Greylag goose	Regional	SPA qualifying feature BOCC Amber; Sch1(Outer Hebrides, Caithness, Sutherland and Wester Ross only)	✓	✓	✓	✓	✓
Pink-footed goose	Regional	BOCC Amber			✓	✓	✓
Whooper swan	Regional	SPA qualifying feature Amber; Sch1.1; SBL; Ann1; (SPA)	✓				✓
Common scoter	National	SPA qualifying feature, BOCC Red list, HNLBAP	✓				
Capercaillie	National	SPA qualifying feature, BOCC Red; Sch1.1; SBL; Ann1; RBBP, HNLBAP Priority Species				✓	✓
Black grouse	National	BOCC Red; SBL, HNLBAP Priority Species		✓	✓	✓	✓
Oystercatcher	Local	SPA qualifying feature, BOCC Amber		✓			
Golden plover	National International	SPA qualifying feature, BOCC Green; SBL; Ann1, HNLBAP Priority Species	✓				
Curlew	National	SPA qualifying feature, BOCC Red; SBL; HNLBAP Priority Species		✓			
Dunlin	Regional	SPA qualifying feature, BOCC Red, HNLBAP Priority Species	✓				
Redshank	Regional	SPA qualifying feature. BOCC Amber		✓			
Greenshank	National	SPA qualifying feature, BOCC Amber; Sch1.1; HNLBAP Priority Species	✓			✓	
Common gull	National	BOCC Red	✓	✓			

Species	Designated Site or Wider Countryside Population Importance*	Conservation status	Section of the Proposed Development				
			A	B	C	D	E
Great-black backed gull	Regional	SPA qualifying feature, BOCC Red	✓				
Herring gull	National	SPA qualifying feature, BOCC Red; SBL	✓	✓			
Arctic skua	National	SSSI qualifying feature, BOCC Red; SBL;	✓				
Slavonian grebe	National	BOCC Red; Sch1.1; SBL; Ann1; RBBP					✓
Red-throated diver	National	SPA qualifying feature BOCC Green; Sch1; SBL; Ann1; RBBP, HNLBAP Priority Species	✓	✓		✓	✓
Osprey	National	SPA qualifying feature, BOCC Amber; Sch1.1; SBL; Ann1;	✓	✓	✓		✓
Honey buzzard	National	BOCC Amber; Sch1.1; SBL; Ann1;			✓		
Golden eagle	National	SPA qualifying feature BOCC Green; Sch1; SBL; Ann1; RBBP; HNLBAP Priority Species	✓	✓		✓	
Goshawk	Regional	BOCC Green; Sch1.1; HNLBAP Priority Species			✓	✓	✓
Hen harrier	National	SPA qualifying feature, BOCC Red; Sch1; SBL; Ann1; RBBP, HNLBAP Priority Species	✓	✓	✓	✓	
Red kite	National	BOCC Green; Sch1; SBL; Ann1, HNLBAP Priority Species	✓	✓	✓	✓	✓
White-tailed eagle	National	BOCC Amber; Sch1; SBL; Ann1; HNLBAP Priority Species	✓				
Barn owl	National	BOCC Green; Sch1.1; SBL		✓		✓	
Short-eared owl	National	SPA qualifying feature, BOCC Amber, SBL, Ann1	✓				
Merlin	National	SPA qualifying feature, BOCC Red; Sch1.1; SBL; Ann1; HNLBAP Priority Species	✓				✓
Peregrine	National	SPA qualifying feature, BOCC Green; Sch1.1; SBL; Ann1; HNLBAP Priority Species	✓				✓

Key: BOCC – Birds of Conservation Concern, Red, Amber or Green list. SBL – Scottish Biodiversity List. Ann1 – Birds Directive Annex I. Sch 1 – Schedule 1 of the WCA. HNLBAP – Highland Biodiversity Local Biodiversity Action Plan *for species, importance is shown for populations outside of designated sites. The importance of populations which form part of the qualifying feature, or a designated site is the set out under the type of designation in the table (e.g. SPA populations are of international importance, SSSI populations of national importance).

Information on Species Considered Further in the Assessment

9.7.2 Information on the conservation status is described for these species below, which is then utilised in the assessments of the individual sections and the Proposed Development as a whole.

9.7.3 The relevant populations for each species for the assessment of effects on species out-with designated sites are based on Natural Heritage Zone populations (Wilson, M. W. et al, 2015), where available. These comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21). Where the section under assessment is situated at the junction of one (or more) of these NHZs, the most relevant NHZ is applied when evidencing the assessment of impact. For example, in Section C, whilst flight activity of pink-footed geese crosses the junctions of all three zones, reference is only made to NHZ 21 populations, given that the species activity is strongly connected to habitats found only in this section.

9.7.4 For impacts on designated sites, where populations of birds have been assessed as being functionally linked to a designated site, the assessment refers to the relevant population for that site.

Greylag Goose

9.7.5 Flight records of greylag geese were recorded during surveys of Sections A, B, C, D and E of the Proposed Development and roost / foraging surveys conducted in Sections A and E. This species is taken forward for detailed assessment in Sections A, B, C, D and E (as per **Table 9.6**).

9.7.6 Greylag goose is a common winter migrant in Scotland, and also has an expanding, breeding population comprised of native birds (in the northwest of the country), together with naturalised and feral birds elsewhere. (Forrester, R. *et al.,* 2007)[40]. Winter migrants are almost entirely drawn from the Icelandic breeding population. Birds roost on freshwater lochs and ponds and feed on suitable arable fields located in the wider area. During the non-breeding season foraging ranges from overnight roosts reach up to 15-20 km (SNH, 2016).

9.7.7 The winter population is estimated to be in excess of 83,500 migrant birds, which, combined with a native / naturalised breeding population of approximately 20,000 birds gives an overall figure of 103,500 individuals (Forrester, R., *et al*. 2007).

9.7.8 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016) though as an assessment of population significance species against NHZs for this species have not been undertaken, a threshold of significance of 1% population against the national population is suggested, in line with SPA criteria[41] in subsequent analysis.

Pink-footed Goose

9.7.9 Flight activity was recorded during surveys of Sections A, B, C, D and E of the Proposed Development and roost / foraging surveys conducted in Sections A, D and E. The species is taken forward for detailed assessment in Sections A, B, C, D and E (as per **Table 9.6**).

40 Forrester, R.W., Andrews, I.J., McInerny, C.J., Murray, R. D., McGowan, R. Y., Zonfrillo, B., Betts, M. W., Jardine, D. C., & Grundy, D. S., (eds) 2007. *The Birds of Scotland*. The Scottish Ornithologists' Club, Aberlady.

41 https://jncc.gov.uk/our-work/special-protection-areas/#spa-site-information. Website accessed 19/12/2024.

9.7.10 Pink-footed goose is a common winter migrant in Scotland, with the winter population is estimated to be in excess of 360,000 migrant birds, (Musgrove, A. *et al*., 2015)[42]. Migrants are almost entirely drawn from Greenlandic and Icelandic breeding populations. Birds roost on freshwater lochs and ponds and feed on suitable arable fields located in the wider area. During the non-breeding season foraging ranges from overnight roosts reach up to 15-20 km (SNH, 2016).

9.7.11 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts of 2,070 (NHZ 5), 4 (NHZ 7) and 35,370 (NHZ 21), birds, being projected. Peak counts tended to be aligned to the early part of the non-breeding season, reflecting the build-up of arriving migrants prior to their dispersal further south across the UK.

Whooper Swan

9.7.12 Whooper swan was recorded during surveys of Sections A, B, C, D and E of the Proposed Development. The species is taken forward for detailed assessment in Sections A, B, D and E (as per **Table 9.6**).

9.7.13 Whooper swan is a common winter migrant in Scotland and a very rare breeder (Forrester, R. *et al.,* 2007). Wintering birds are almost entirely drawn from the Icelandic breeding population. Birds occupy freshwater lochs and ponds and feed on aquatic vegetation, together with suitable arable fields located nearby, where their diet comprises initially cereal stubble thence root crops and winter cereals and last onto improved grasslands in spring. During the non-breeding season, the foraging range from overnight roosts is typically < 5 km (SNH, 2016)[43].

9.7.14 The non-breeding season population is estimated to comprise a maximum of 11,000 individuals (Wilson, M.W., *et al*. 2015) [44] and during the breeding season there is an extremely small breeding population of between 3-7 pairs. The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts of 190, (NHZ 5), 98 (NHZ 7) and 1,600 (NHZ 21), birds, projected. Intra-seasonal variation in numbers recorded did not follow the same pattern across the NHZs.

Common Scoter

9.7.15 Common scoter four territories, additionally two separate males were recorded during baseline surveys of Section A. The species is taken forward for detailed assessment within Section A.

9.7.16 NHZ have not been calculated for the species. With widespread winter visitors to offshore UK waters, common scoter is a scarce breeding species with around 50 pairs breeding in northern Scotland (Eaton et. all. 2021). However, this represents decline from previous survey in 1995 (Holling et al. 2010).

42 Musgrove, A., Aebischer, N., Eaton, M., Hearn, R., Newson, S., Noble, D., Parsons, M., Risely, K., and Stroud, D. 2013. *Population estimates of birds in Great Britain and the United Kingdom.* British Birds 106, pp 64-100.

43 SNH. Guidance: Assessing Connectivity with Special Protection Areas (SPAs). 2016. SNH Battleby, UK.

44 Wilson, M. W., Austin, G. E., Gillings S. and Wernham, C. V. (2015). Natural Heritage Zone Bird Population Estimates. SWBSG Commissioned report number SWBSG_1504. pp72. Available from:www.swbsg.org.

Capercaillie

9.7.17 Capercaillie is an extremely rare breeder with the entire UK population restricted to Scotland with a (declining) population, determined by the number of lekking male birds, most recently calculated at 300 individuals (Forrester, R. *et al.,* 2007).

9.7.18 NHZ population zones have not been determined for the species and therefore an assessment by NHZ region has not been undertaken.

Black Grouse

9.7.19 Flights of black grouse were recorded during surveys of Sections B, C, D and E of the Proposed Development and lekking males were recorded in the survey buffers of Sections C, D and E. The species is taken forward for detailed assessment in Sections C, D and E (as per **Table 9.6**).

9.7.20 Black grouse is a scarce and declining breeder in Scotland, the population assessed by the number of lekking males, for which the most recent figure indicated a total of 3,344 males, (Wilson, M. *et al.*, 2013). During the breeding season, birds typically forage and breed within < 2 km of the home range.

9.7.21 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts of 30 (NHZ 5), 473 (NHZ 7) and 17 (NHZ 21), birds, projected.

Slavonian Grebe

9.7.22 No flights of Slavonian grebes were recorded during baseline surveys of the Proposed Development. Two pairs of adults were recorded holding territory within the survey buffer of Section E, but no breeding attempt was recorded. Given this potential for breeding activity within the survey buffer, together with the international importance of the species, the species is taken forward for detailed assessment in Section E (as per **Table 9.6**).

9.7.23 Slavonian grebe was recorded during breeding bird surveys in Section E of the Proposed Development. The latest available data from the Rare Breeding Birds Panel indicates that Slavonian grebe is a very rare and declining breeder in the UK with a maximum of 20 breeding pairs, distributed across fifteen sites,[43] with a core of breeding activity located around Inverness [44]. During the non-breeding season, birds relocate to inshore waters.

9.7.24 NHZ population zones have not been determined for the species and therefore an assessment by NHZ region has not been undertaken.

Oystercatcher

9.7.25 Flights of oystercatcher were recorded during baseline surveys of Sections A and B, with possible breeding attempts recorded in Sections A and E. The species is taken forward for detailed assessment in Sections A and B (as per **Table 9.6**).

9.7.26 Oystercatcher is a common breeder in Scotland, occupying a range of habitats across farmland and along the coast with an estimated breeding population between 84,500-116,500 pairs (Forrester, R. *et al.,* 2007).

9.7.27 NHZ population zones have not been determined for the species and therefore an assessment by NHZ region has not been undertaken.

9.7.28 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 3,125 (NHZ 5), 3,009 (NHZ 7) and 94 (NHZ 21) pairs projected.

Curlew

9.7.29 Flights of curlew were recorded during baseline surveys of Sections A and E, with possible breeding attempts recorded in Sections A, B, C and D, alongside one probable breeding attempt recorded in Section A. The species is taken forward for detailed assessment in Sections A, B and E (as per **Table 9.6).**

9.7.30 Curlew is a resident breeder and wintering species with an estimated 30,194 breeding pairs in Scotland (Wilson, M. *et al.,* 2015). Foraging birds typically have a core range of up to 1 km, with a maximum recorded range of 2 km (SNH, 2016).

9.7.31 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 1,737 (NHZ 5), 249 (NHZ 7) and 385 (NHZ 21) pairs projected.

Dunlin

9.7.32 Flights of dunlin were recorded during baseline surveys of Section B, with possible breeding attempts recorded in Section A. The species is taken forward for detailed assessment in Section B (as per **Table 9.6**).

9.7.33 Dunlin is a resident breeder with an estimated 13,313 breeding pairs in Scotland (Wilson, M. *et al.*, 2015). Foraging birds typically have a core range of 0.5 km, with a maximum recorded range of 3 km (SNH, 2016).

9.7.34 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 2,916 (NHZ 5), 90 (NHZ 7) and 0 (NHZ 21) pairs projected.

Redshank

9.7.35 Possible territories were recorded during baseline surveys of Section B. The species is taken forward for detailed assessment in Section B (as per **Table 9.6**).

9.7.36 Redshank is a common resident breeder, with an estimated 11,700-17,500 pairs breeding in Scotland (Forrester et al., 2012). Redshank is not mentioned in connectivity distance range and was not defined within Natural Heritage Zone.

Snipe

9.7.37 Flights of snipe were recorded during baseline surveys of Sections B and C, with possible breeding attempts recorded in Section B, C, D and E, together with probable breeding attempts recorded in Sections D and E. The species is taken forward for detailed assessment in Section B (as per **Table 9.6**).

9.7.38 Snipe is a resident breeder with an estimated 34,594 breeding pairs in Scotland (Wilson, M. *et al.*, 2015). Foraging birds typically have a core range of 500 m, with a maximum recorded range of 3 km (SNH, 2016).

9.7.39 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the

Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 2,673 (NHZ 5), 1,309 (NHZ 7) and 133 (NHZ 21) pairs projected.

Greenshank

9.7.40 Flights of greenshank were recorded during baseline surveys of Sections A and B, and possible breeding attempts were recorded in Sections A, B, D and E. Given the cryptic nature of this species both flight and breeding data are considered to be an under-representation of the actual incidence and level of activity by the species. The species is taken forward for detailed assessment in Sections A, B, C, D and E (as per **Table 9.6**).

9.7.41 Greenshank is an uncommon resident breeder, with an estimated 1,297 pairs breeding in Scotland (Wilson, M. *et al*., 2015). Foraging birds typically have a core range of up to 2 km, extending up to a maximum recorded distance of 3 km (SNH, 2016).

9.7.42 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 421 (NHZ 5), 148 (NHZ 7) and 1 (NHZ 21) pairs projected.

Common Gull

9.7.43 Flights of common gull were recorded during baseline surveys of Section A and B, and breeding territories were recorded in Sections A, C and E. NHZ populations have not been calculated for common gull however the Scottish breeding population was estimated as 48,100 AON in 2007 with a wintering population of 79,700 birds with between 100,000 and 200,000 birds occurring on passage. Given the relatively large populations of common gull and the relatively low predicted collision risk. The species is taken forward for detailed assessment in Sections A and B.

Great Black-backed Gull

9.7.44 Surveys were undertaken for great black-backed gull in Sections A and B only, where birds could be linked to coastal SPA populations, and extensive flight activity recorded in Section A, with limited activity in Section B. No breeding evidence was found within the survey area. The species is taken forward for detailed assessment in Section A (as per **Table 9.6**).

9.7.45 Greater black-backed gull is a common resident breeder, with the population in Scotland estimated to comprise 6,820 pairs (Musgrove, A. *et al.* 2015). There is no data available on inland foraging distances for breeding birds.

9.7.46 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 202 (NHZ 5), 1 (NHZ 7) and 126 (NHZ 21) pairs projected.

Herring Gull

9.7.47 Surveys were undertaken for herring gull in Sections A and B only, where birds could be linked to coastal SPA populations, and extensive flight activity recorded in both of these Sections. No breeding evidence was found within the survey area. The species is taken forward for detailed assessment in Sections A and B (as per **Table 9.6**).

9.7.48 Herring gull is a common resident breeder, with the population in Scotland estimated to comprise 52,089 pairs (Musgrove, A. *et al.* 2015). There is no data available on inland foraging distances for breeding birds.

9.7.49 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 2,962 (NHZ 5), 32 (NHZ 7) and 1,490 (NHZ 21) pairs projected.

Arctic Skua

9.7.50 Arctic skua flights were recorded during baseline surveys of Sections A and B and one calling individual was recorded in Section A although no breeding was confirmed. The species is taken forward for detailed assessment in Section A (as per **Table 9.6**).

9.7.51 Arctic skua is a scarce migrant breeder whose population has experienced a severe decline due to the effects of the recent (2021-2022) outbreak of Highly Pathogenic Avian Influenza (HPRA [bird flu]), (RSPB)[45]. Prior to the outbreak, the population in Scotland was estimated to comprise 2,130 pairs (Musgrove, A. *et al.* 2015), of which the vast number of pairs, were confined to the Northern Isles and Outer Hebrides (2,047 pairs). There is no data available on inland foraging distances for breeding birds.

9.7.52 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 15 (NHZ 5), 0 (NHZ 7) and 0 (NHZ 21) pairs projected.

Red-throated Diver

9.7.53 Red-throated diver flights were recorded during baseline surveys of Sections A, B, D and E of the Proposed Development and breeding attempts recorded during baseline surveys of Sections A, B, D and E, and the species is taken forward for detailed assessment in Sections A, B, D & E (as per **Table 9.6**).

9.7.54 Red-throated diver is a scarce breeder in Scotland, with the population estimated to comprise 1,268 pairs (Musgrove, A. *et al.,* 2015), the majority of breeding pairs located on Orkney and Shetland, the Hebrides and the northwest seaboard. During the breeding season birds have a connectivity range of generally less than 8km, but regular flights of 11-13.5 km recorded on Western Isles. During the breeding season birds have a connectivity range of generally less than 8 km, but regular flights of 11-13.5 km recorded on Western Isles. During the non-breeding season, the species is pelagic.

9.7.55 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 58 (NHZ 5), 39 (NHZ 7) and 2 (NHZ 21) pairs projected.

Osprey

9.7.56 Osprey flights were recorded during baseline surveys of Sections A, B, C, D and E of the Proposed Development and breeding attempts in Sections A, B and E, therefore the species is taken forward for detailed assessment for Sections A, B, C, D and E (as per **Table 9.6**).

9.7.57 Osprey is a summer migrant breeder, with the breeding population estimated at 229 pairs[46]. Birds arrive from March and have usually departed by early October. Foraging birds have a wide connectivity range, varying from

[45] https://www.rspb.org.uk/birds-and-wildlife/avian-influenza-updates. Website accessed 29/11/24

46 Eaton, M.A. & the Rare Breeding Birds Panel (2023). *Rare Breeding Birds in the United Kingdom in 2021*. British Birds 116: 615-676.

a core range of up to 10 km, with some birds foraging up to 20 km, and a maximum recorded foraging distance of 28 km (SNH, 2016).

9.7.58 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 8 (NHZ 5), 8 (NHZ 7) and 35 (NHZ 21) pairs projected.

Honey Buzzard

9.7.59 One observation of a bird calling in flight was recorded from Section C, and whilst no evidence of breeding in the vicinity was confirmed, given the difficulty of observing the species on the wing and the difficulty in locating nest sites, together with the scarcity of the breeding population, the species is taken forward for detailed assessment in Section C (as per **Table 9.6)** on a precautionary basis.

9.7.60 Honey buzzard is scarce migratory breeder in Scotland, with the national population estimated to number 58 pairs (Eaton, M, *et al.*, 2023) and as a consequence of its secretive nature and small population, estimates of breeding numbers by NHZ are not available. Birds arrive in late April to May and have departed by September. Foraging birds have a range between 4-10 km[47]. NHZ population zones have not been determined for the species and therefore an assessment by NHZ region has not been undertaken.

Golden Eagle

9.7.61 Golden eagle flights were recorded during baseline surveys of Sections A, B, C, D and E of the Proposed Development and breeding sites were located within 6 km of the Proposed Development in Sections A, B, C, D and E, therefore the species is taken forward for detailed assessment for Sections A, B, D and E (as per **Table 9.6).**

9.7.62 Golden eagle is a resident breeder, with an estimated 508 pairs breeding across Scotland[48]. Foraging birds have a range typically up to 6 km, and exceptionally to 9 km (SNH, 2016).

9.7.63 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 18 (NHZ 5), 43 (NHZ 7) and 0 (NHZ 21), pairs, projected, out of a total of an estimated 443 pairs (Musgrove *et al.*, 2015). The golden eagle conservation framework (Whitfield *et al.*, 2008)[49] assessed the conservation status of golden eagle as unfavourable in NHZ 5 and NHZ 7 with no assessment carried out for NHZ 21.

Goshawk

9.7.64 Low levels of goshawk flight activity were recorded in Sections A, C, D and E. One breeding attempt was confirmed, in Section D. The species is taken forward for detailed assessment in Sections A, C, D and E (as per **Table 9.6**).

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47 Hardey, J., Crick, H.Q.P., Wernham, C.V., Riley, H., Etheridge, B. & Thompson, D.B.A. 2013. *Raptors, A field guide to survey and monitoring.* The Stationary Office.

48 Hayhow, D.B., Benn, S., Stevenson, A., Stirling-Aird, P.K. & Eaton, M.A. (2017). *Status of Golden Eagle Aquila chrysaetos in Britain in 2015.* Bird Study 64: 281-294.

49 Whitfield, D P, Fielding, A H, McLeod, D R A and Haworth, P F (2008). A conservation framework for golden eagles: implications for their conservation and management in Scotland. Scottish Natural Heritage Commissioned Report No.193 (ROAME No. F05AC306)

9.7.65 Goshawk is a resident breeder, with a population estimated at 283 pairs (Eaton, M, *et al.*, 2023), which is considered to be increasing (Forrester. R, *et al.,* 2007). Foraging birds have a connectivity range varying from a core range between 3-10 km, with a maximum recorded distance of 18 km (SNH, 2016).

9.7.66 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 3 (NHZ 5), 8 (NHZ 7) and 0 (NHZ 21) pairs projected.

Hen Harrier

9.7.67 Hen harrier flights were recorded during surveys of Sections A, B, C, D and E of the Proposed Development and breeding attempts / historic nest site data in Sections A, B, C, D and E, therefore the species is taken forward for detailed assessment for Sections A, B, C, D and E (as per **Table 9.6**).

9.7.68 Hen harrier is a resident breeder, with 460 pairs estimated to breed across Scotland (Eaton, M, *et al*., 2023). After the completion of the breeding season, there is widespread dispersal by juveniles and some adult birds away from breeding grounds, with only some individuals remaining within home territories. Foraging birds have a range between 2-10 km (SNH, 2016).

9.7.69 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 38 (NHZ 5), 18 (NHZ 7) and 1 (NHZ 21) pairs projected.

Red Kite

9.7.70 Red kite flights were recorded during baseline surveys of Sections A, B, C, D and E of the Proposed Development, with high levels of flight activity especially in Sections D and E observed and a breeding attempt recorded in Section C, therefore the species is taken forward for detailed assessment for Sections A, B, C, D and E (as per **Table 9.6**).

9.7.71 Red kite is a resident breeder, with 273 pairs occupying breeding sites across Scotland [50]. The Scottish breeding population of red kite has doubled every 4-6 years since birds were re-introduced, with the population being one of the most productive in Europe[51]. Foraging birds have a range between 4-6 km (SNH, 2016).

9.7.72 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 0 (NHZ 5), 9 (NHZ 7) and 50 (NHZ 21) pairs projected.

White-tailed Eagle

9.7.73 White-tailed eagle flights were recorded during baseline surveys of Sections A, B, C, D and E of the Proposed Development, and anecdotal evidence of a territory was received within Section C, over 1.5 km west of the Proposed Alignment. Given the flight activity recorded the species is taken forward for detailed assessment for Sections A, B, and E (as per **Table 9.6**).

50 Challis, A., Wilson, M.W., Holling, M., Roos, S., Stevenson, A. & Stirling-Aird, P. (2016). *Scottish Raptor Monitoring Scheme Report 2015.* BTO Scotland, Stirling.

51 Scottish Raptor Study Group (2025) Red Kite https://www.scottishraptorstudygroup.org/raptors/red-kite/

9.7.74 White-tailed eagle is a resident breeder, with an estimated breeding population of 150 pairs (Eaton, M, *et al*., 2023). Foraging birds have a range between 5-13 km (SNH, 2016).

9.7.75 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 1 (NHZ 5), 4 (NHZ 7) and 0 (NHZ 21) pairs projected.

Short-eared Owl

9.7.76 Eight short-eared owl flights, all below CRH, were recorded during baseline surveys of Section A of the Proposed Development (as per **Table 9.6**).

9.7.77 Short-eared owl is a resident and migrant breeder, passage and winter migrant with an estimated 1,088 pairs breeding throughout Scotland (Musgrove, A. *et al*., 2015). Foraging birds have a range between 2-5 km (SNH, 2016).

9.7.78 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 55 (NHZ 5), 3 (NHZ 7) and 0 (NHZ 21) pairs projected.

Barn Owl

9.7.79 Flights of barn owl were recorded during baseline surveys of sections B and D, with single possible breeding territory recorded within Section D. NHZ populations have not been calculated for barn owl however the Scottish breeding population was estimated as 500- 1000 pairs in 2007 with a wintering population of 1000-2000 birds. Given presence of historic breeding records and suitable breeding and foraging habitat the species is taken forward for detailed assessment in Sections B and D.

Merlin

9.7.80 Low levels of merlin flight activity were recorded during baseline surveys of Sections A, B, C, D and E of the Proposed Development and one confirmed breeding attempt recorded within Section B. The species is taken forward for detailed assessment in Sections A, B, D and E (as per **Table 9.6**).

9.7.81 Merlin is a scarce resident breeder with an estimated breeding population in Scotland of 733 pairs[52]. Foraging birds typically have a range of up to 5 km. (SNH, 2016).

9.7.82 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 71 (NHZ 5), 30 (NHZ 7) and 0 (NHZ 21) pairs projected.

Peregrine

9.7.83 Peregrine flights were recorded during baseline surveys of Sections A, B, D and E and one confirmed breeding attempt was recorded in Section D. The species is taken forward for detailed assessment in Sections A, B, D and E (as per **Table 9.6**).

52 Ewing, S.R., Rebecca, G.W., Heavisides, A., Court, I., Lindley, P., Ruddock, M., Cohen, S. & Eaton, M.A. (2011). *Breeding status of Merlins Falco columbarius in the UK in 2008*. Bird Study 58: 379–389.

9.7.84 Peregrine is a scarce resident breeder with an estimated breeding population in Scotland of 523 pairs[53]. Foraging birds typically have a core range of 2 km, with a maximum recorded range of 18 km (SNH, 2016).

9.7.85 The Study Areas for the assessment of effects on the species comprise the Peatlands of Caithness and Sutherland Natural Heritage Zone (NHZ 5), the Northern Highlands Natural Heritage Zone (NHZ 7), and the Moray Firth Natural Heritage Zone (NHZ 21), as defined by SNH (2016), with peak counts (number of breeding pairs shown) of 15 (NHZ 5), 15 (NHZ 7) and 6 (NHZ 21) pairs projected.

9.8 Assessment of Significance of Effects on Species and Designated Sites

9.8.1 This section assesses the relevant impacts on those species and designated sites scoped into this EIA. Assessment is undertaken on a species by species and designated site(s) basis, moving through Section A to Section E. The following effects are considered;

- habitat loss and/or modification during construction;
- disturbance to and/or displacement from habitats for feeding, breeding, wintering or roosting species during construction; and
- collision mortality during operation.

9.8.2 The assessment method followed is set out in full in **Volume 5 Appendix 9.1: Ornithology Survey and Assessment Methods**. In assessing significance, only those effects where surveys identified an effect requiring measurement are discussed. For example, if there were no flights recorded by barn owl at CRH, in Section A, then no commentary upon collision risk is provided in that section.

Section A

Impacts by Species

9.8.3 In the species assessments, regional population estimates for the Natural Heritage Zone (NHZ) are referenced. Section A of the Proposed Development is almost entirely situated within NHZ 5 (The Peatlands of Caithness and Sutherland) although approximately 4 km of the northernmost section is situated within NHZ 2 (Orkney and North Caithness), and the species are evaluated based on the regional population estimates for the most relevant NHZ.

Greylag Goose

9.8.4 During construction of the Proposed Development, it is estimated that 8.2 ha of suitable habitat for breeding, foraging, and roosting by greylag goose in Section A will be permanently lost and 30.31 ha temporarily lost. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. There is abundant alternative suitable breeding and foraging habitat for greylag geese in Section A of the Proposed Development, with foraging habitat particularly present east of the Proposed Development at Spittal and southeast of the Proposed Development around Lybster. Birds are expected to return to any areas which they are displaced from during construction once the Proposed Development is operational. As a result, impacts from habitat loss are predicted to be **negligible** and **not significant**.

9.8.5 During baseline surveys of Section A, six breeding territories of greylag goose were recorded, with three confirmed and one of the possible territories being within the species' advised 600 m disturbance distance from

53 Wilson, M.W., Balmer, D.E., Jones, K., King, A.V., Raw, D., Rollie, C.J., Rooney, E., Ruddock, M., Smith, G.D., Stevenson, A., Stirling-Aird, P.K., Wernham, C.V., Weston, J. and Noble, D.G (2018). *The breeding population of Peregrine Falcon Falco peregrinus in the United Kingdom, Isle of Man and Channel Islands in 2014*. Bird Study 65:1-19

the Proposed Development. Embedded mitigation measures will avoid disturbance and displacement to breeding pairs.

During wintering geese roost surveys Loch Stemster was confirmed as a winter roost with a peak of two individuals observed in January 2024, with occasional use of Loch of Toftingall recorded. Winter foraging geese surveys were undertaken in fields to the south-west of Loch Watten. A peak count of 400 was recorded in November 2023, with the closest field holding foraging birds approximately 500 m west of the Proposed Alignment. There is therefore the potential for construction activity during the non-breeding season to disturb and displace wintering birds. However, Loch Stemster (and Loch Rangag) are both adjacent to the A9 and birds using these sites are likely subject to a degree of disturbance, and Loch of Toftingall will largely be shielded from construction activities by existing plantation woodland. There is also abundant alternative suitable foraging habitat beyond 600 m of the Proposed Development which greylag goose will utilise if displaced by the construction of the Proposed Development. As a result, disturbance and displacement effects will be **negligible** and **not significant.**

9.8.6 Greylag goose was recorded in flight during FAS on 190 occasions, 43 flights were recorded crossing the alignment, 25 of which were at CRH. The majority of flight activity was recorded during the migration months April/ May and September/ October. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest greylag geese have a good ability to avoid obstacles in flight (99.8% avoidance)[54]. As a result, there is considered to be a low risk of collision mortality and therefore the impact is assessed to be of **negligible magnitude** and is **not significant**.

Whooper Swan

9.8.7 During construction of the Proposed Development, it is estimated that 8.2 ha of suitable habitat for foraging and roosting by whooper swan in Section A will be permanently lost and 30.31 ha temporarily lost. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. There is abundant alternative suitable breeding and foraging habitat for whooper swan in Section A of the Proposed Development, with foraging habitat particularly present east of the Proposed Development at Spittal and southeast of the Proposed Development around Lybster. Birds are expected to return to any areas which they are displaced from during construction once the Proposed Development is operational. As a result, impacts from habitat loss are predicted to be **negligible** and **not significant**.

During surveys of wintering roosts, a peak count of eight birds were recorded on Loch Toftingall, seven at Loch Rangag and 12 birds at Loch Stemster. All three lochs are within the advised non-breeding season disturbance distance for whooper swans of 600m. As discussed above, Loch Stemster and Loch Rangag are both adjacent to the A9 and birds using these sites are likely subject to a degree of disturbance, and Loch of Toftingall will largely be shielded from construction activities by existing plantation woodland. No whooper swans were recorded in field within potential disturbance distance from the Proposed Development. If swans are temporarily displaced from these roosts, alternative suitable roost sites are present nearby, for example Loch Ruard and Loch Dubh approximately 3 km west of Loch Rangag and Loch Watten approximately 4 km northeast of Loch Toftingall. As a result, disturbance and displacement impacts on whooper swans are predicted to be of **negligible magnitude** and **not significant**.

9.8.8 Whooper swan was recorded in flight on two occasions, with one flight crossing the Proposed Alignment at CRH. Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance

[54] NatureScot (Updated 2025) Wind farm impacts on birds - Use of Avoidance Rates in the NatureScot Wind Farm Collision Risk Model. https://www.nature.scot/doc/wind-farm-impacts-birds-use-avoidance-rates-naturescot-wind-farm-collision-risk-model

rates calculated for onshore wind farms suggest whooper swan have a good ability to avoid obstacles in flight (99.5% avoidance). Given the low number of flights recorded at CRH, the species' high avoidance rates, there is a low risk of collision mortality and therefore the impact is assessed to be of **negligible magnitude** and **not significant**.

Common Scoter

9.8.9 Common scoter nest on the shores and islands of inland waterbodies in northern Scotland and feed on nesting or nearby waterbodies. Birds migrate to coastal bays during the winter. As a result, the Proposed Development will not result in the direct loss of any suitable foraging or breeding habitat.

No breeding territories were recorded during baseline surveys in 2023 or 2024 and disturbance or displacement of breeding birds as a result of construction of the Proposed Development is not predicted. Embedded mitigation measures will avoid disturbance to any breeding pairs that attempt to establish new territories on waterbodies within potential disturbance distance (500 m) of the Proposed Development prior to or during construction. During baseline surveys, adult and juvenile birds were recorded towards the end of the breeding season on Loch Toftingall, likely representing a staging post for juvenile and post-breeding birds prior to birds moving offshore to winter. Construction activity during the passage period has the potential to result in disturbance to this loch. The Caithness and Sutherlands Peatlands SPA / Ramsar breeding common scoter population is estimated at 21 pairs, with typical clutch size of 6-8 eggs. The birds recorded at Loch Toftingall are likely to represent birds from at least four territories. Two adult birds recorded in April on Loch Stemster but not recorded breeding there later in the year may represent spring passage birds migrating to a breeding lochan further inland, and also potentially part of the SPA / Ramsar population, representing another pair, with all birds recorded representing up to 24% of the SPA / Ramsar population. Disturbance or displacement of the SPA population is considered to be a temporary and of **medium magnitude**, resulting in a **significant effect** at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

Common scoter was not recorded in flight during FAS however birds were record on both Loch Toftingall and Loch Stemster. Common scoter is known to migrate at night and birds are likely to cross the Proposed Alignment on route to breeding lochans on passage. Although seaduck can forage feed over 24hrs during the breeding seasons in Arctic areas with continual daylight, they tend to be diurnal at lower latitudes[55] and therefore regular nocturnal flights during the breeding season are considered unlikely. However, given the presence of common scoter recorded on Loch of Toftingall and Loch Stemster, and the potential for these lochs to act as staging posts for birds moving between wintering and breeding grounds, there is the potential for flight activity to be concentrated at these lochs. As a result, at these waterbodies, there is considered to be a relatively high collision risk, with any resulting collision mortality potentially affecting the SPA / Ramsar site population. Given the percentage of the SPA population using the lochs, the impact is considered to be a **medium magnitude** permanent impact, and could result in a **significant effect** at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

Golden Plover

Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 26.50 ha of suitable grassland and moorland habitat for foraging and nesting golden plover. There will be a temporary loss of 150 ha however it is anticipated that golden plover will return to suitable foraging habitat after construction. Due to the widespread alternative available habitat, with embedded mitigation measures in place, the impact

[55] Hancock, M.H., Robson, H.J., Smith, T,D. & Douse, A. (2019) Spatial and temporal patterns of foraging activity by breeding Common Scoters (*Melanitta nigra*) in Scotland. Ornis Fennica 96: 124–141. 2019

upon golden plover supporting habitat is assessed as **negligible** and **not significant** for the NHZ population. The Proposed Development will result in the permanent direct loss of 0.18 ha of habitat within the Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, of which breeding golden plover is a qualifying feature. The Proposed Development will result in the permanent direct loss of 0.0001% of the habitats within the Caithness and Sutherland Peatlands SPA and 0.003% of the habitats within Shielton Peatlands SSSI. Given the abundant alternative suitable habitat, impacts on the SPA and SSSI golden plover population from habitat loss will be **negligible** and **not significant**.

9.8.10 No golden plover territories were recorded during breeding bird surveys in 2023 or 2024 within the species advised disturbance distance of 500 m from the Proposed Development. Embedded mitigation measures will avoid disturbance to any nest site if birds establish new territories close to the Proposed Development during construction. Birds foraging across the Proposed Development, including those from the Caithness and Sutherlands Peatlands population, may be temporarily displaced during construction, however construction activity will be limited to discrete locations at any one time leaving abundant suitable foraging habitat available. Birds are anticipated to return to forage in habitats under and around the OHL during operation. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant.**

9.8.11 Three golden plover flights were recorded crossing the Proposed Alignment at CRH during FAS of Section A and once during the raptor roost VP surveys. Avoidance rates have not been calculated for OHLs or wind farms for golden plover, however birds were observed crossing existing 132 kV OHLs at CRH on four occasions indicating that the species exhibits a degree of avoidance. No flights of golden plover across the Proposed Alignment at CRH were recorded within NatureScot advise core foraging range for golden plover of 3km from the Caithness and Sutherland Peatlands SPA, with a single flight of two birds recorded within the maximum foraging range of 15 km. Given the relatively low number of flights of golden plover the risk of collision with the Proposed Development is considered to be low, with the impact of **negligible** magnitude and **not significant**.

Greenshank

Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 15.95 ha of suitable grassland and moorland habitat for foraging and nesting greenshank. There will be a temporary loss of 90.45 ha however it is anticipated that golden plover will return to suitable foraging habitat after construction. Due to the widespread alternative available habitat, with embedded mitigation measures in place, the impact upon greenshank supporting habitat is assessed as **negligible** and **not significant** for the NHZ population. The Proposed Development will result in the permanent direct loss of 0.18 ha of habitat within the Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, of which breeding greenshank is a qualifying feature. The Proposed Development will result in the permanent direct loss of 0.0001% of the habitats within the Caithness and Sutherland Peatlands SPA and 0.003% of the habitats within Shielton Peatlands SSSI. Given the abundant alternative suitable habitat, impacts on the SPA and SSSI greenshank population from habitat loss will be **negligible** and **not significant**.

9.8.12 No greenshank territories were recorded during baseline surveys within the NatureScot advised disturbance distance of 500m from the Proposed Development. Embedded mitigation measures will avoid disturbance to any nest site if birds establish new territories close to the Proposed Development during construction. Birds foraging across the Proposed Development, including those from the Caithness and Sutherlands Peatlands population, may be temporarily displaced during construction. However, construction activity will be limited to discrete locations at any one time leaving abundant suitable foraging habitat available. Birds are anticipated to return to forage in habitats under and around the OHL during operation. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant.**

9.8.13 No greenshank flights were recorded to crossing the Proposed Alignment during baseline surveys. The risk of collision mortality is therefore considered to be of **negligible magnitude** and **not significant**.

Dunlin

Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 26.50 ha of suitable grassland and moorland habitat for foraging and nesting dunlin. There will be a temporary loss of 150 ha however it is anticipated that dunlin will return to suitable foraging habitat after construction. Due to the widespread alternative available habitat, with embedded mitigation measures in place, the impact upon dunlin supporting habitat is assessed as **negligible** and **not significant** for the NHZ population. The Proposed Development will result in the permanent direct loss of 0.18 ha of habitat within the Caithness and Sutherland Peatlands SPA and Shielton Peatlands SSSI, of which breeding dunlin is a qualifying feature. The Proposed Development will result in the permanent direct loss of 0.0001% of the habitats within the Caithness and Sutherland Peatlands SPA and 0.003% of the habitats within Shielton Peatlands SSSI. Given the abundant alternative suitable habitat, impacts on the SPA and SSSI dunlin population from habitat loss will be **negligible** and **not significant**.

9.8.14 Three possible dunlin territories were recorded during baseline surveys, however none of the territories were within the species' NatureScot advised 200 m disturbance distance of the Proposed Development, with the closest approximately 700m to the west. Embedded mitigation measures will avoid disturbance to any nest site if birds establish new territories close to the Proposed Development during construction. Birds foraging across the Proposed Development, including those from the Caithness and Sutherlands Peatlands population, may be temporarily displaced during construction, however construction activity will be limited to discrete locations at any one time leaving abundant suitable foraging habitat available. Birds are anticipated to return to forage in habitats under and around the OHL during operation. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant**.

9.8.15 No dunlin flights were recorded crossing the Proposed Alignment during baseline surveys. The risk of collision mortality is therefore considered to be of **negligible magnitude** and **not significant**.

Arctic Skua

9.8.16 Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 26.5 ha of suitable moorland habitat for nesting Arctic skua. There will be a temporary loss of 150 ha moorland. No breeding Arctic skua were recorded during baseline surveys and breeding areas are unlikely to be affected. Arctic skua are kleptoparasites, stealing the majority of their food from seabirds at sea or in coastal areas. As a result, the Proposed Development will not affect the abundance of suitable foraging habitat. Due to the lack of impacts on breeding or foraging habitat, the impact upon Arctic skua from loss of habitat is assessed as **negligible** and **not significant** for the NHZ and SSSI population.

9.8.17 Disturbance distances for skuas have not been published by NatureScot, however taking a precautionary 500m disturbance distance (larger than the largest disturbance distance recommended for terns or gulls), no Arctic skua territories were recorded within 500m of the Proposed Development during baseline surveys. Embedded mitigation measures will avoid disturbance to any nest site if birds establish new territories close to the Proposed Development during construction. Arctic skua are primarily aerial foragers in coastal areas, and no disturbance from foraging area is predicted from the Proposed Development. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant.**

9.8.18 Only one Arctic skua flight was recorded crossing the Proposed Alignment at CRH and three flights in total were recorded across baseline surveys for Section A. Arctic skua are extremely manoeuvrable, able to chase and mob terns in flight, and were recorded flying across an existing 132 kV OHL at CRH during baseline surveys, demonstrating an ability to avoid existing OHLs. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest Artic skua have a relatively good ability to avoid obstacles in flight (99.5% avoidance). Given the relatively low number of flights

across the Proposed Alignment and the species high manoeuvrability, the risk of collision mortality is considered to be **negligible** and **not significant.**

Common Gull

9.8.19 Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 8.2 ha of suitable agricultural and grassland habitat for foraging and nesting common gull. There will be a temporary loss of 30.31 ha however it is anticipated that common gull will return to suitable foraging habitat after construction. Due to the widespread alternative available habitat, with embedded mitigation measures in place, the impact upon common gull supporting habitat is assessed as **negligible** and **not significant.**

No common gull breeding colonies were recorded during baseline surveys however during breeding bird surveys in 2023, one probable and six possible territories were recorded and in 2024 four possible territories were recorded along Section A, with the closest territory within approximately 70 m of the Proposed Development. Embedded mitigation measures will avoid disturbance to nest sites during construction, with birds expected to continue to use existing nest sites during operation. Foraging and loafing birds were recorded from agricultural grassland areas and at Lochs Rangag and Stemster. Birds in these areas are likely to be habituated to a degree of disturbance from agricultural activity and road traffic. As a result, disturbance and displacement impacts on breeding and foraging birds are considered to be **negligible** and **not significant**.

During FAS common gull were recorded crossing the Proposed Alignment at CRH on 119 occasions, with a peak flock size of 20 birds. Birds were also regularly recorded crossing an existing 132 kV OHL at CRH within Section A. Avoidance behaviour with altering flight paths around structures was also recorded by gulls in baseline surveys for the Inverary to Crossaig 275 kV OHL Reinforcement Project in Argyll, emphasising the good manoeuvrability of gulls. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest small gulls have a relatively good ability to avoid obstacles in flight (99.2% avoidance)[56]. NHZ populations have not been calculated for common gull however the Scottish breeding population was estimated as 48,100 AON in 2007 with a wintering population of 79,700 birds with between 100,000 and 200,000 birds occurring on passage. Given the relatively large populations of common gull and the relatively low predicted collision risk, the impact of collision mortality is assessed as **negligible** and **not significant**.

Herring Gull

9.8.20 Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 8.2 ha of suitable agricultural and grassland habitat for foraging herring gull. There will be a temporary loss of 30.31 ha however it is anticipated that herring gull will return to suitable foraging habitat after construction. The East Caithness Cliffs SPA and Berriedale Cliffs SSSI are in part designated for breeding herring gull, and birds from the SPA may forage across areas affected by the Proposed Development during the breeding season. However, herring gulls can forage across a wide range of habitats, including at sea and in urban areas as well as habitats affected by the Proposed Development, given the abundant alternative suitable habitat, impacts on both the NHZ and SPA populations from habitat loss will be **negligible** and **not significant**.

9.8.21 During breeding bird surveys, four possible and two confirmed territories were recorded in 2023 and four possible territories in 2024, including territories within 100 m of the Proposed Development. Disturbance distances have not been published for herring gull, however embedded mitigation measures will avoid disturbance to nest sites during construction, with birds expected to continue to use existing nest sites during operation. The majority of birds in the wider area beyond the Proposed Development in Section A are likely to

[56] Furness, R.W. 2019. Avoidance rates of herring gull, great black-backed gull and common gull for use in the assessment of terrestrial wind farms in Scotland. Scottish Natural Heritage Research Report No. 1019.

be cliff nesting birds forming part of the East Caithness Cliffs SPA and Berriedale Cliffs SSSI, however no disturbance to the sea-facing cliffs is anticipated from construction activity. Herring gull are able to forage across a wide range of habitats, including at sea and in urban areas as well as habitats affected by the Proposed Development, and any birds displaced from potential feeding areas during construction will utilise the extensive available alternative habitat. With embedded mitigation measures in place, impacts from disturbance and displacement will be **negligible** and **not significant**.

Herring gulls were recorded a total of 679 times during FAS, crossing the alignment at CRH on 182 occasions in Section A. Activity was concentrated at Loch Toftingall, along the A9 between Latheren and Halsary and over agricultural areas and river valleys, particularly at Borgue and along the River Helmsdale. The majority of flight activity (463 flights) occurred during the breeding season. Avoidance rates have not been calculated for OHLs for herring gull in Scotland; however, avoidance rates calculated for onshore wind farms suggest herring gulls have a good ability to avoid obstacles in flight (99.5% avoidance[56]). Onshore foraging ranges have not been published for breeding herring gull, but the species is known to forage relatively large distances offshore, with a published foraging range of 85.6 km[57]. The East Caithness Cliffs SPA, for which breeding herring gull is a qualifying feature is situated 200 m east of Section A at its closest point. SPA birds flying inland to forage currently cross an existing 132kV OHL, demonstrating an ability to cross existing OHLs. The NHZ 5 population of herring gull is 2,962 pairs however these numbers are likely to have decreased in recent years as a result of avian influenza. The number of flights across the proposed alignment is relatively high and despite the likely high avoidance rate of gulls, given the relatively high number of flights recorded during the breeding season, and the proximity of sections of the Proposed Development to the East Caithness Cliffs SPA, there is relatively high risk of collision mortality, which would impact the SPA population. Given the relatively high number of flights, potential collision mortality is considered to be of up to **medium magnitude** permeant impact and **significant** at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation.**

Great black-backed Gull

9.8.22 Construction of Section A of the Proposed Development is predicted to result in a permanent loss of 8.2 ha of suitable agricultural and grassland habitat for foraging great-black-backed gull. There will be a temporary loss of 30.31 ha however it is anticipated that great black-backed gull will return to suitable foraging habitat after construction. The East Caithness Cliffs SPA and Berriedale Cliffs SSSI are in part designated for breeding black-backed gull, and birds from the SPA may forage across area affected by the Proposed Development during the breeding season. However, great black-backed gulls typically forage in more marine and coastal areas, which will be un-affected by the Proposed Development. Given the abundant alternative suitable onshore habitat, and the lack of impacts on preferred coastal foraging habitat, impacts on both the NHZ and SPA populations from habitat loss will be **negligible** and **not significant**.

9.8.23 No great black-backed gull territories were recorded during baseline surveys of Section A. Great black-backed gull is a coastal breeder preferring nest locations on cliffs and offshore islands to breed. Disturbance impacts on coastal cliffs are not predicted from the Proposed Development, with embedded mitigation measures in place to avoid disturbance to nesting birds. With embedded mitigation measures in place, impacts from disturbance and displacement will be **negligible** and **not significant**.

9.8.24 Great black-backed gull was recorded crossing the Proposed Alignment of Section A at CRH on 61 occasions. However, birds were also regularly recorded crossing the existing 132 kV during baseline surveys

[57] NatureScot (2023) Guidance Note 3: Guidance to support Offshore Wind applications: Marine Birds - Identifying theoretical connectivity with breeding site Special Protection Areas using breeding season foraging ranges https://www.nature.scot/doc/guidance-note-3-guidance-support-offshore-wind-applications-marine-birds-identifying-theoretical

demonstrating an ability to avoid existing OHLs, a trait observed by gulls in surveys for other OHL projects in Scotland. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest large gulls have a good ability to avoid obstacles in flight (99.5% avoidance). The NHZ 5 population of great black-backed gull is 388 pairs however these numbers are likely to have decreased in recent years as a result of avian influenza. Given the proximity of sections of the Proposed Development to the East Caithness Cliffs SPA and Berriedale Cliffs SSSI, the relatively large published foraging distance for great black-backed gulls (73 km)[52] and relatively high number of flights of birds across the Proposed Alignment, despite the likely high avoidance rate of gulls, the risk of collision mortality is assessed as of **medium magnitude permanent impact** and **significant** at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation.**

Red-throated Diver

9.8.25 One confirmed breeding loch was recorded during baseline surveys of Section A, approximately 500 m north of the Proposed Development and therefore within the advised breeding season disturbance distance for red-throated diver. Embedded mitigation measures will avoid disturbance to birds during construction., however as the construction phase activities may extend beyond one year, there is the potential for birds to avoid returning to breeding site due to the presence of construction activities. The impact may be reversible with birds potentially returning following the completion of construction activity. The loss of one breeding pair would equate to 1.7% of the regional territorial population (NHZ 5, total estimated population, 58 pairs) but is not associated with any designated site, being beyond 8 km from the Caithness and Sutherland Peatlands SPA / /Ramsar site. The impact is considered to be of **medium magnitude**, resulting in a **significant effect** at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

9.8.26 Thirteen red-throated diver flights were recorded during FAS of Section A, with three flights crossing the Proposed Alignment, all of which were at CRH. Although the number of flights recorded was relatively low, it is likely that flight activity is higher than that indicated, with additional flights at dawn or dusk to foraging lochs under-recorded by surveys. Given the proximity of a confirmed territory to the Proposed Alignment and the likelihood of birds associated with the territory crossing the Proposed Alignment, there is the potential for collision impacts to affect the confirmed territories in Section A. Collision mortality would lead to the likely failure of an affected pair, representing 1.7% of the NHZ 5 population, and would be an impact of **medium magnitude**, resulting in a **significant effect** at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

Osprey

9.8.27 There will be no direct loss of osprey foraging habitat as a result of the Proposed Development. Felling of forestry, including for the operational corridor and management felling may remove potential nest trees. However, no nests in forestry will be lost as a result of the Proposed Development, and there is abundant alternative suitable woodland nesting habitat available. As a result effects from loss of habitat will be **negligible** and **not significant**.

9.8.28 Breeding raptor surveys recorded one probable territory within potential disturbance distance of the Proposed Development (750 m), situated approximately 550 m west of the Proposed Development. The pair equate to 12.5% of the breeding population for NHZ 5 (8 pairs) (Wilson, M. et al. 2015). The territory is beyond potential connectivity distance from the Dornoch Firth and Loch Fleet SPA / Ramsar which is the closest site which osprey is a qualifying feature of. With embedded mitigation measures in place, including implementation of the Applicants Bird SPP, effects will be **negligible** and **not significant**.

Osprey was recorded in flight on 115 occasions with 46 flights crossing the Proposed Alignment, 44 of which were at CRH. Osprey was mostly recorded near Loch of Toftingall and Loch Rangag, as well as along the north-western boundary of Rumster Forest. Baseline surveys of Section A and other sections (Sections B and C) regularly recorded ospreys crossing existing OHLs. It is anticipated that this same degree of learnt behaviour and familiarity will develop in association with the new OHL of the Proposed Development, once it is installed. However, given the relatively high number of flights across the alignment at Loch Toftingall the risk of collision is considered to be relatively high, resulting in a permanent impact of **medium magnitude** and a **significant effect** at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

Golden Eagle

9.8.29 No golden eagle territories were identified within the NatureScot advised disturbance distance for the species (1 km) during baseline surveys or from desk-based records for the last five years, with the closest territory approximately 1.5 km west of the Proposed Development. As a result, no disturbance is anticipated to nest sites of these pairs during the construction and operational phases of the Proposed Development.

9.8.30 Three territories were identified within the species 6 km core foraging range from the Proposed Development. By crossing the three territories, there is the possibility that the Proposed Development could result in a loss of suitable hunting habitat within each territory during construction of the Proposed Development if birds are displaced by the presence of construction activities. During operation it is assumed that eagles will fly and hunt across the Proposed Development, with baseline surveys confirming flights by golden eagles across existing OHLs. In a study of behavioural response to grid infrastructure by a related species (Bonelli's eagle), response was observed to vary between individual eagles, with some birds being attracted by the additional perch points offered by the new lattice towers, whereas others exhibit avoidance behaviour of the new structure (Marques, A. et al., 2022)[58]. None of the territories were located within the Caithness and Sutherland Peatlands SPA / SSSI which is in part designated for golden eagle however one territory is within potential connectivity distance of the SPA / SSSI boundary.

9.8.31 Considering each territory in turn, for the territory closest to the Proposed Development (1.5 km west) 13 flights were recorded within the core foraging range of 6 km from the nest site during baseline surveys, with six crossing the Proposed Alignment. It is therefore likely that birds from this territory forage across the Proposed Alignment. Assuming a 6 km core territory and avoidance of birds from a 1 km corridor along the Proposed Alignment during construction, birds could theoretically be displaced from approximately 12.8 km^2 within the territory during construction, representing approximately 11% of their hunting range.

9.8.32 For the nest located 2.5 km west of the Proposed Development, five flights were recorded within the core foraging range from the nest site during baseline surveys of which one crossed the Proposed Alignment. This low level of activity is also suggestive that the location of the Proposed Alignment will have little impact upon foraging activity by the pair occupying this territory, with abundant suitable habitat situated to the north and west of the nest area. Assuming a 6 km core territory and avoidance of birds from a 1 km corridor along the Proposed Alignment during construction, birds would be displaced from approximately 11.6 km^2 within the territory during construction, representing approximately 10% of their hunting range.

9.8.33 For the nest located 5.5 km west of the of the Proposed Development, three flights were recorded within the core foraging range from the nest site during baseline surveys, of which two crossed the Proposed Alignment. This nest site is approximately 500 m from the Caithness and Sutherland Peatlands SPA / SSSI and the pair

[58] Individual variability of responses to power lines on a long-lived territorial raptor. Marques, A.T., Palma, L., Lourenço, R., Cangarato, R., Leitão, A., Mascarenhas, M., Tavares, J.T., Tomé, R., Moreira, F. & Beja, P. 2022 Ecology and Evolution. doi: 10.1002/ece3.8811

here may form part of the qualifying feature golden eagle population. The relatively low level of activity recorded during baseline surveys is suggestive that the location of the Proposed Development does not represent a key component of the foraging habitat for the pair occupying this territory, with more suitable foraging habitat situated to the west of the Proposed Development closer to the nest site. Assuming a 6 km core territory and avoidance of birds from a 1 km corridor along the Proposed Alignment during construction, birds could theoretically be displaced from approximately 5.2 km^2 within the territory during construction, representing approximately 4.6% of their hunting range.

9.8.34 However construction activity will not take place across the whole footprint of the Proposed Development at once, and birds will not be displaced from the whole of the Proposed Development footprint area at any one time. The impact would be temporary and reversible, with birds expected to return to areas following construction. If birds are displaced from around areas of construction activity, they will hunt over other areas of their territory, which appear to be favoured hunting areas based on the results of baseline surveys.

9.8.35 The three territories identified within Section A comprise 17% of the regional (NHZ 5, 18 pairs). However given the low-level of flight activity recorded during baseline surveys, the temporary and reversible nature of the impact, and the availability of other suitable alternative hunting habitat within each of the territories affected, the impact is assessed as being of **small magnitude** and **not significant**.

Golden eagle was recorded in flight on 36 occasions with 29 instances of flights crossing the Proposed Alignment at CRH. Flight activity was fairly evenly spaced along the alignment with the largest concentration of flight activity centred north and west of Helmsdale. Flight activity was recorded within the core foraging range for golden eagle (6 km) of the Caithness and Sutherland Peatlands SPA / SSSI. FAS recorded a number of instances of golden eagle crossing existing 132 kV and 275 kV OHLs across Section A indicating the species ability to successfully cross existing OHLs. Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance rates calculated for onshore wind farms suggest golden eagles have a good ability to avoid obstacles in flight (99% avoidance). Given the relatively high number of flights, there is a risk of collision between birds and sections of the Proposed Development, including birds from the Caithness and Sutherland Peatlands SPA / Shielton Peatlands SSSI. As a result, and given the relatively small population of golden eagle, there is considered to be the potential for a permanent impact of **medium magnitude** resulting in a **significant effect** at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

Red Kite

9.8.36 During construction of the Proposed Development, it is estimated that 8.47 ha of suitable habitat for foraging by red kite in Section A will be permanently lost, and 30.84 ha will be temporarily lost. An additional 38 ha will be converted through felling of forestry but still available for foraging. An additional 78.64 ha of conifer plantation may be subject to management felling by relevant landowners in Section A, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13 Forestry, Section 13.6**). Given red kite's foraging range of between 4-6 km and relatively wide range of prey species loss and changes to habitat are predicted to result in a **negligible magnitude** and be **not significant**.

9.8.37 There is little recent population data for the species, but a breeding population estimate of more than 273 pairs was determined in 2015 (Challis et al., 2016) with the wintering Scottish population estimated at 300-350 birds. (Forrester, R. et al., 2007). NHZ 5 was not considered to support a breeding population when estimates were calculated in 2105, however as the population has since expanded. The number of breeding pairs in Scotland has doubled every 4-6 years[59] and a population of 56 pairs was estimated for the Highland region in 2021

[59] Scottish Raptor Study Group (2025) Scottish Raptors - Red Kite https://www.scottishraptorstudygroup.org/raptors/red-kite/ Accessed 21/02/2025 .

(Challis *et al* 2023). One possible territory was recorded during baseline surveys at the maximum red kite disturbance distance of 300 m from the Proposed Development. As a result, and with embedded mitigation measures in place, the effects of the construction phases within Section A are considered to be of **negligible magnitude** and **not significant**.

Red kite was recorded in flight on 24 occasions with eight flights crossing the Proposed Alignment, six of which were at CRH. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest red kite have a high ability to avoid obstacles in flight (99% avoidance). During baseline surveys, birds were recorded crossing existing 132 kV OHL on numerous occasions, just north of Brora and near Badnagie, demonstrating a good ability to avoid existing OHLs. Therefore, due to the species' high avoidance rate, and the relatively low number of flights at CRH, and the increasing population, there is considered to be a low risk of collision mortality affecting the population and therefore the impact is of **negligible magnitude** and is **not significant**.

Hen Harrier

9.8.38 Section A passes through two designated sites for which hen harrier is a qualifying feature: Caithness and Sutherland Peatlands SPA (with the SPA holding a mean of at least 14 pairs, at least 2.8% of the GB population) and Shielton Peatlands SSSI which includes breeding hen harrier as a qualifying species.

9.8.39 During construction of the Proposed Development, it is estimated that 26.59 ha of suitable habitat for breeding, foraging and roosting by hen harrier in Section A will be permanently lost and 150 ha temporarily lost. A further 38 ha of habitat will be permanently converted as a result of felling forestry along the Proposed Alignment. Hen harriers have a core foraging range of 2 km, extending up to 10 km. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. The results of baseline surveys recorded hen harriers flying and foraging across and in close proximity to existing OHLs and therefore displacement from the operational Proposed Development is not predicted. Given the relatively small areas of habitat that will be lost and the availability of other suitable habitat, impacts will be **negligible** and **not significant**.

9.8.40 During construction breeding hen harrier may be displaced within the NatureScot advised 350-750 m disturbance distance for the species. Three probable, one possible and three historic breeding territories were identified through baseline surveys or data provided by HRSG within 750 m of the Proposed Development. If all of these territories were displaced, this would equate to 18% of the population for NHZ 5 (Wilson, M. *et al.* 2015). The three historic territory locations and one probable territory are within the core range for hen harrier (2km) of the Caithness and Sutherland Peatlands SPA and would represent 28.6% of the SPA population if all were occupied. No winter hen harrier roosts were recorded during baseline surveys. Embedded mitigation measures, including avoiding construction works that could disturb breeding birds, and oversight of works by an ECoW will avoid disturbance to breeding pairs. If birds are displaced from suitable breeding habitat during construction of the Proposed Development, they are likely to use suitable alternative habitat which is abundant to the east and west of the Proposed Development and which has been used historically. Displacement during operation is not predicted. As a result, impacts from displacement and disturbance of breeding territories during construction will be **negligible** and **not significant**.

Hen harrier was recorded in flight on 99 occasions within Section A, with 31 flights crossing the Proposed Alignment, 20 of which were at CRH. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest hen harrier have a good ability to avoid obstacles in flight (99% avoidance). Baseline surveys recorded hen harriers foraging across and under existing OHLs and the species is considered to generally have a low risk of collision with OHLs. However anecdotal evidence indicates a higher risk of juvenile birds colliding with OHLs. As a result, given the relatively

high concentration of historic territories in the north of Section A around Caithness and Sutherland Peatlands SPA / Ramsar site /Shielton Peatlands SSSI, in the absence of mitigation there is the potential for a permanent **medium magnitude** impact resulting in a **significant effect** at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section A Additional Mitigation**.

White-tailed Eagle

9.8.41 No white-tailed eagle territories were recorded during baseline surveys, and the desk-based study did not identify any historic territories within 6 km of the Proposed Development in the last 5 years. Embedded mitigation measures will avoid construction works affecting any new territories which are established prior to the start of construction works. Construction of the Proposed Development will result in the permanent conversion of 38 ha of woodland to open habitats as a result of felling along the Proposed Alignment, with a potential loss of suitable nesting habitat for white-tailed eagle. An additional 78.64 ha of conifer plantation may be subject to management felling by relevant landowners in Section A, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13 Forestry, Section 13.6**). However, there is abundant suitable alternative available nesting habitat in the form of remaining forestry and sea cliffs for white-tailed eagles to colonise. As a result, impacts from disturbance and displacement and habitat loss impacts will be **negligible** and **not significant**.

White-tailed eagle was recorded in flight on twenty-one occasions with eight flights crossing the Proposed Alignment, eleven of which at CRH. The NHZ 5 population is stated as 1 pair, however the more recent Scottish Raptor Monitoring data for Highland gives an estimate of 67 pairs, although the majority of these birds are likely to nest in the western highlands. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest white-tailed eagle have a relatively poor ability to avoid obstacles in flight (95% avoidance compared to 99% or above for most species for which avoidance rates have been calculated). Baseline surveys recorded white-tailed eagles crossing existing OHLs and the species is considered to generally have a low risk of collision with OHLs. However, given the species relatively poor avoidance rate, and the concentration of flight activity around Loch of Toftingall, in the absence of additional mitigation there is the potential for a permanent impact of **small magnitude** but this is considered to be **not significant** at a regional scale.

Merlin

During construction of the Proposed Development, it is estimated that 26.59 ha of open habitats suitable for merlin within Section A will be permanently lost and 150 ha temporarily lost. A further 38 ha of habitat will be permanently converted as a result of felling forestry along the Proposed Alignment. The loss of small areas of moorland habitat under the construction footprint and presence of towers of the Proposed Development will not prevent hunting activity for merlin and there is abundant alternative suitable nesting habitat outwith the Proposed Development footprint. As a result, habitat loss associated with the Proposed Development will be **negligible** and **not significant**.

9.8.42 Baseline surveys recorded one possible breeding merlin territory within the species' advised disturbance distance of 500 m in Section A. Embedded mitigation measures will avoid disturbance to this nest location during the breeding season, however the presence of the constructed towers and permanent access track of the operational development may cause birds to abandon this nest location. Some pairs re-nest within 300 m of a previous year's nest in subsequent years, and some up to 3.5 km from previous nest (Hardey et al, 2013). As a result, it is anticipated that if displaced from the operational Proposed Development, birds will nest in alternative suitable habitat which is abundant within the area. As a result, effects on disturbance and displacement will be **negligible a**nd **not significant.**

9.8.43 Merlin was recorded in flight on 40 occasions with 20 flights crossing the Proposed Alignment, 14 of which at CRH. Merlin typically hunt over moorland rapidly pursuing passerine prey and are highly manoeuvrable. As a result, the risk of collision is considered to be **negligible** and the effect to be **not significant**.

Peregrine

9.8.44 During baseline surveys no nest sites were recorded within Section A within 2 km of the Proposed Development. Three territories within 2 km were identified during the desk-based assessment, however none were within the advised disturbance distance for peregrine of 750 m. Access tracks to be constructed for the Proposed Development are approximately 200 m from the East Caithness Cliffs SPA which is in part designated for breeding peregrine, although the Proposed Alignment is approximately 900 m from the SPA. No breeding territories were located in areas of the SPA within potential disturbance distance from the Proposed Development, and visual disturbance to nesting cliffs will not occur. Embedded mitigation measures will avoid disturbance to any nest site if birds establish new territories close to the Proposed Development during construction. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant.**

9.8.45 Peregrine are primarily aerial hunters, and the construction of the proposed Development is not anticipated to result in the loss of any suitable foraging habitat or known nest sites. As a result, loss of habitat is considered to be **negligible** and **not significant**.

9.8.46 Peregrine was recorded in flight on eight occasions with five flights crossing the Proposed Alignment, two of which were at CRH. Peregrine are manoeuvrable fliers with acute eyesight and are considered to have a good ability to avoid collisions. During baseline surveys, individuals were recorded crossing existing OHLs at CRH. As a result of the low number of flights across the alignment, the risk of collision is considered to be low, resulting in a **negligible magnitude** which is **not significant**.

Short-eared Owl

9.8.47 During construction of the Proposed Development, it is estimated that 26.59 ha of suitable habitat for breeding, foraging and roosting by short-eared owl in Section A will be permanently lost and 150 ha temporarily lost. A further 38 ha of habitat will be permanently converted as a result of felling forestry along the Proposed Alignment. Short-eared owls have a core foraging range of 2 km, extending up to 5 km. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. The results of baseline surveys recorded hen harriers flying and foraging across and in close proximity to existing OHLs and therefore displacement from the operational Proposed Development is not predicted. Given the relatively small areas of habitat that will be lost and the availability of other abundant suitable habitat nearby, impacts will be **negligible** and **not significant**.

9.8.48 No breeding territories were identified during baseline surveys in Section A, and no records were identified during the desk-based study of birds breeding within 2 km of the Proposed Development. Embedded mitigation measures will avoid disturbance to any nest site if birds establish new territories close to the Proposed Development during construction. Birds foraging across the Proposed Development may be temporarily displaced during construction, however construction activity will be limited to discrete locations at any one time leaving abundant suitable foraging habitat available. Birds are anticipated to return to forage across the Proposed Development during operation. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant.**

9.8.49 No short-eared owl flights were recorded to cross the Proposed Alignment at CRH, with the majority of all flights recorded below CRH of birds hunting low over grassland. The risk of collision mortality is therefore considered to be of **negligible magnitude** and **not significant**.

Impacts on Designated Sites

9.8.50 Designated sites have been taken forward for more detailed assessment where the results of baseline surveys have identified potential impacts on qualifying features within published connectivity distances. Impacts on all other designated sites have been assessed as **not significant**. Impacts on European Sites and Ramsar sites are discussed further in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**.

Caithness and Sutherland Peatlands SPA / Ramsar

9.8.51 Ten qualifying features of the Caithness and Sutherland Peatlands SPA / Ramsar Site; golden plover, dunlin, red-throated diver, golden eagle, hen harrier, merlin, short-eared owl, greenshank, wigeon and common scoter were recorded during baseline surveys of the Proposed Development, all within connectivity distances to the SPA / Ramsar. All species apart from short-eared owl which has not been assessed, and common scoter, which is in unfavourable condition, are in favourable condition. The SPA / Ramsar site will be directly affected by the Proposed Development as Section A of the Proposed Alignment passes through the SPA / Ramsar site.

9.8.52 Construction of the Proposed Development will result in approximately 0.13 ha of permanent direct habitat loss and approximately 7.46 ha of temporary direct habitat loss within the SPA / Ramsar site boundary. Indirect effects resulting in potential changes in plant species composition around proposed infrastructure may also occur, but these are not expected to alter the suitability of affected habitats for qualifying bird species. The habitats lost to the Proposed Development within the SPA / Ramsar site predominantly comprise blanket bog and wet grassland. The area of permanent direct habitat lost equates to approximately 0.00013% of the total area of the SPA / Ramsar site. With embedded mitigation measures in place to minimise the Proposed Development footprint and re-use excavated peat, as well as the management of the operational corridor for the lifetime of the Proposed Development, the impact of habitat loss within the SPA / Ramsar is assessed as **negligible** and **not significant**.

9.8.53 Embedded mitigation measures will avoid disturbance and displacement impacts on breeding features of the SPA, however construction activity has the potential to result in disturbance of the qualifying feature common scoter population on passage to SPA breeding grounds. As a result, in the absence of mitigation, disturbance impacts on common scoter are predicted to be a temporary effect of **medium magnitude** and **significant** at an international scale. As a result, additional mitigation is presented in **Section 9.8 – Section A Additional Mitigation.**

9.8.54 Although flight activity of SPA / Ramsar qualifying features was relatively low in the SPA / Ramsar site and within the core foraging ranges of qualifying species, the Proposed Alignment crosses the SPA / Ramsar and is in close proximity to a number of important habitats for SPA / Ramsar species. Flight activity of common scoter, golden eagle and hen harrier could result in collision mortality impacts on the SPA / Ramsar population resulting in a permanent effect of **medium magnitude** and **significance** at an international scale. As a result, additional mitigation is presented in **Section 9.8 – Section A Additional Mitigation.**

Shielton Peatlands SSSI

Eleven qualifying features of the Shielton Peatlands SSSI; golden plover, dunlin, red-throated diver, greylag goose, hen harrier, merlin, peregrine, short-eared owl, greenshank, wigeon and Arctic skua were recorded during baseline surveys of the Proposed Development, all within connectivity distances (where available) of the SSSI. All species are assessed as in favourable condition. The SSSI will be directly affected by the Proposed Development as Section A of the Proposed Alignment crosses the SSSI.

9.8.55 Construction of the Proposed Development will result in approximately 0.18 ha of permanent direct habitat loss and approximately 7.45 ha of temporary direct habitat loss within the SSSI site boundary. The habitats lost to the Proposed Development within the SSSI predominantly comprise blanket bog and wet grassland. The area of habitat lost equates to approximately 0.003 % of the total area of the SSSI. With embedded mitigation measures in place to minimise the Proposed Development footprint and re-use excavated peat, as well as the management of the operational corridor for the lifetime of the Proposed Development, the impact of habitat loss within the SSSI is assessed as **negligible** and **not significant**.

9.8.56 Embedded mitigation measures will avoid disturbance and displacement impacts on breeding features of the SSSI, and impacts are assessed as **negligible** and **not significant.**

9.8.57 Although flight activity of SSSI qualifying features was relatively low in the SSSI site and within the core foraging ranges of qualifying species, the Proposed Alignment crosses the SSSI and is in close proximity to a number of important habitats for SSSI species. Flights at CRH of golden eagle and hen harrier could result in permanent collision mortality impacts on the SSSI population of **medium magnitude** and **significant** at a national scale. As a result, additional mitigation is presented in **Section 9.8 – Section A Additional Mitigation.**

East Caithness Cliffs SPA

9.8.58 Seven qualifying species of the East Caithness Cliffs SPA were recorded during baseline surveys of the Proposed Development: northern fulmar, peregrine, shag, cormorant, herring gull, great black-backed gull, and kittiwake. The population of fulmar, peregrine and kittiwake is assessed as favourable and cormorant, great black-backed gull, herring gull and shag are assessed as unfavourable.

9.8.59 Since the Proposed Alignment will not overlap SPA, no direct habitat loss of the SPA will occur. No foraging or hunting habitat for northern fulmar, peregrine, shag or cormorant or kittiwake will be lost due to these species' reliance on marine, freshwater and coastal habitats, or in peregrine's case as it is primarily an aerial hunter. Although small areas of inland foraging areas for herring gull may be temporarily or permanently lost, there is abundant alternative suitable foraging habitat for these species during the breeding season and impacts from habitat loss will be **negligible** and **not significant.**

9.8.60 At its closest point, the SPA is approximately 200 m from a new permanent access track that will be constructed as part of the Proposed Development and approximately 900 m from the Proposed Alignment. The A9 runs between the Proposed Development and the SPA for its entire length, and disturbance and displacement to nesting cliffs from the construction of access tracks will not cause disturbance to sea facing cliffs. Construction from the Proposed Alignment is beyond NatureScot advised disturbance distance for all SPA species for which distances have been published. Embedded mitigation will further avoid disturbance to breeding SPA birds. As a result, impacts from disturbance and displacement will be **negligible** and **not significant.**

9.8.61 Regular flights of herring gull and occasional flights of great black-backed gull were recorded crossing the Proposed Alignment at CRH. As discussed for the individual species above, the permanent impacts from collision mortality on herring gull and great-black backed gull are assessed as of **medium magnitude** and would be **significant** at an international scale**.** As a result, additional mitigation is presented in **Section 9.8 – Section A Additional Mitigation.**

Berriedale Cliffs SSSI

9.8.62 As for the East Caithness Cliff SPA, impacts from habitat loss and disturbance and displacement on the SSSI are considered to be **negligible** and **not significant**, and permanent impacts from collision mortality on herring gull and great black-backed gull are considered to be of **medium magnitude** and **significant** at a national scale**.** As a result of the potential impacts of collision morality on the SSSI populations of these species, additional mitigation is presented in **Section 9.8 – Section A Additional Mitigation**.

Caithness Lochs SPA / Ramsar

9.8.63 Caithness Lochs SPA / Ramsar is designated to regularly support non-breeding populations of waterfowl and migratory birds, including two species which were recorded during the baseline surveys of the Proposed Development within potential connectivity to the SPA: greylag goose and whooper swan. Both species are classed as being in favourable condition.

9.8.64 The SPA / Ramsar site is approximately 3 km from the Proposed Development and there will be no direct loss of habitat or disturbance to birds within the SPA / Ramsar site. Birds originating from the SPA / Ramsar site may be temporarily displaced from feeding areas in agricultural fields during construction of the Proposed Development. However, construction activity will take place in discrete areas of the Proposed Development footprint at any one time, and there is abundant suitable alternative foraging habitat with any displaced birds will be able to utilise if temporarily displaced. As a result, impacts from habitat loss and disturbance and displacement are considered to be **negligible** and **not significant**.

9.8.65 Given the relatively low number of flights recorded across the Proposed Alignment during baseline surveys, impacts from collision mortality on SPA species will be **negligible** and **not significant**.

Loch Watten, Loch Scarmclate and Loch Calder SSSIs

Loch Watten, Loch Scarmclate and Loch Calder are the constituent SSSIs of the Caithness Lochs SPA / Ramsar site. Two of the qualifying features greylag goose (a qualifying feature of all three SSSI) and whooper swan (a qualifying features of Loch Calder) were recorded during baseline surveys. As for the Caithness Lochs SPA / Ramsar site above, impacts from the Proposed Development from habitat loss, disturbance and displacement and collision mortality are considered to be **negligible** and **not significant**.

Dunbeath Peatlands SSSI, Strathmore Peatlands SSSI and Coir' an Eoin SSSI

Dunbeath Peatlands SSSI (4.9 km west of the Proposed Development), Strathmore Peatlands SSSI (5.7 km west of the Proposed Development) and Coir' an Eoin SSSI (7.4 km west of the Proposed Development) are constituent SSSIs of the Caithness and Sutherland Peatlands SPA / Ramsar site. There will be no direct loss of habitat or disturbance to birds within any of these SSSIs from the Proposed Development. Construction of the Proposed Development has the potential to result in temporary or permanent loss of habitat for the following species within the core range from the SSSIs:

- Dunbeath Peatlands – red-throated diver, black-throated diver, golden eagle and merlin; and,
- Strathmore Peatlands - red-throated diver, black-throated diver and golden eagle.

In addition, common scoter (a qualifying feature of both Dunbeath Peatlands SSSI and Strathmore Peatlands SSSI) was recorded on waterbodies close the Proposed Development on passage during baseline surveys.

Impacts on SSSI populations of red-throated diver, black-throated diver and merlin are considered to be **negligible** and **not significant.** One golden eagle territory is located within connectivity distance of Dunbeath Peatlands SSSI as well as the Proposed Development, and construction impacts could result in displacement from potential foraging areas. Impacts are assessed as of **small magnitude**, and **not significant**. Potential disturbance to passage common scoter which may form part of the Dunbeath Peatlands SSSI and Strathmore Peatlands SSSI populations would result in a **medium magnitude** impact and be **significant** at a national scale. As a result, additional mitigation is presented in **Section 9.8 – Section A Additional Mitigation.**

Dornoch Firth and Loch Fleet SPA / Ramsar/SSSI – International/National Importance

9.8.66 Section A is within connectivity distance of the Dornoch Firth and Loch Fleet SPA / Ramsar Site/SSSI for two species: osprey and greylag goose.

9.8.67 There is limited suitable foraging habitat along the Proposed Development within the species 20 km foraging range of the SPA along Section A, and the closest records of greylag goose within Section A were approximately 22 km north of the SPA. Section A of the Proposed Development is beyond the core foraging range of 10 km for osprey from the SPA, with a single osprey flight recorded in Section A within the maximum foraging range of 20 km from the SPA. Given the low level of flight activity recorded within connectivity distance for Section A, impacts from Section A on the SPA / Ramsar Site / SSSI are considered to be **negligible** and **not significant.**

Section A Additional Mitigation

Common Scoter

A flock of post breeding common scoter was recorded on Loch Toftingall in August 2024, equating to at least 24% of the SPA breeding population, indicating that the loch is likely to be an important staging post for post-breeding birds. As a result, all felling and construction work within the advised common scoter disturbance distance (500 m) of Loch Tofingall undertaken during August and September will be overseen by an ECoW, with buffer zones implemented to avoid disturbance to common scoter flocks on the loch. It is assumed that any management felling undertaken would be undertaken in line with best practice, avoiding disturbance to pre-or post breeding flocks of common scoter.

Common scoter was recorded on Loch Stemster in April 2024, suggesting birds utilise the site as a staging post to breeding lochans further inland. All works within the advised common scoter disturbance distance (500 m) of Loch Stemster in April and May will be overseen by an ECoW with buffer zones implemented to avoid disturbance to common scoter on the loch. With these mitigation measures in place, residual effects from disturbance and displacement on common scoter will be **negligible** and **not significant**.

Common Scoter – Collision Risk

9.8.68 Pre- and post-breeding common scoter were recorded on Loch Toftingall and Loch Stemster during baseline surveys. As a result, bird flight diverters will be installed along the earth wire of the Proposed Development adjacent to both lochs (Towers N14 - N22 and N46 - N51). Given the potential for common scoter to migrate at night, flight diverters which are visible at night will be installed. With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Herring Gull – Collision Risk

Herring gull flight activity was recorded widely across Section A during baseline surveys, particularly at Loch Toftingall, along the A9 between Latheren and Halsary and over agricultural areas and river valleys, particularly at Borgue and along the River Helmsdale. The majority of flight activity along the A9 was birds flying north-south or vice versa in parallel with the Proposed Alignment. However, at Loch Toftingall, Borgue and the River Helmsdale flights were frequently recorded crossing the Proposed Alignment at CRH. As a result, bird flight diverters will be installed along the earth wire of the Proposed Development between Towers N14 - N22 (at Loch Toftingall) N95- N99 (at Borgue) N146 - N149 (at River Helmsdale). With this additional mitigation measure in place, residual effects on herring gull, including the East Caithness Cliffs SPA population, will be **negligible** and **not significant**.

Great black-backed Gull – Collision Risk

The greatest concentration of great black-backed gull flight activity recorded during baseline surveys of Section A was between the coast and Borgue Loch. As a result, bird flight diverters will be installed along the earth wire of the Proposed Development between Towers N95 - N99. With this additional mitigation measure in place, residual effects on great black-backed gull, including the East Caithness Cliffs SPA population will be **negligible** and **not significant**.

Red-throated Diver – Disturbance and Displacement

9.8.69 One red-throated diver breeding loch was identified within potential disturbance distance from the Proposed Development, with regular activity at a second but no breeding recorded. Red-throated divers are highly sensitive to disturbance and additional mitigation during the construction and operational phases are required.

All construction / operational work will, where possible, be restricted to the non-breeding season. If works are required during the breeding season, works will be undertaken in line with SSENs Bird SPP. If the need is identified by the ECoW, visual or noise reducing screening will be erected to avoid disturbance to waterbodies.

9.8.70 With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Red-throated diver – Collision Risk

9.8.71 In order to reduce the risk of collision around known breeding lochans, bird flight diverters will be installed along the earth wire of the Proposed Development along the section which runs in parallel to the breeding lochan, with tower locations detailed in **Volume 5, Appendix 9.4c**. Flight diverters installed at Loch Toftingall (Towers N14 - N22) will also benefit reduce the risk of collision of red-throated divers foraging at this loch. With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Osprey – Collision Risk

The highest concentration of osprey flight activity across and along Section A of the Proposed Alignment was recorded in relation to birds foraging at Loch Toftingall. As a result, bird flight diverters will be installed along the earth wire of the Proposed Development adjacent to Loch Toftingall (Towers N14 - N22). With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Golden Eagle – Collision Risk

9.8.72 Flight activity for golden eagle was widely spaced across Section A. Bird flight diverters which will be installed to reduce collision risk to a number of other species will also benefit golden eagle in areas where concentrations of flights were recorded. This includes sections proposed for red-throated diver, common scoter (Towers N46 - N51), osprey (Towers N14 - N22) and hen harrier (Towers N24 - N29, N33 -N38, and N55 - N66). With this additional mitigation measure in place, residual effects will be **negligible** and **not significant.**

Hen Harrier – Collision Risk

Flight activity for hen harrier was widely spaced across Section A. Bird flight diverters which will be installed to reduce collision risk to a number of other species will also benefit hen harriers in areas where concentrations of flights were recorded. This includes sections proposed for herring gull (Towers N95 - N99), and common scoter (Towers N46- N51). In addition, bird flight diverters will be installed between Towers N55 - N66 where a relatively high number of flights were recorded. Flight diverters will also be installed between Towers N24 - N29 and N33- N38 where the Proposed Development passes through the Caithness and Sutherland Peatlands SPA / Ramsar site and Shielton Peatlands SSSI to reduce collision risk to hen harriers breeding in these sites. With this additional mitigation measure in place, residual effects will be **negligible** and **not significant.**

Residual Effects

9.8.73 As a consequence of the application of embedded and additional mitigation measures, the residual effects predicted would be **not significant** for the ornithological interests identified in Section A of the Proposed Development in the context of the EIA Regulations. **Table 9.11** summarises the residual effects in Section A.

Table 9.11: Summary of Residual Effects – Section A

Species	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Greylag goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Whooper swan	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Common scoter	Not significant	**Significant – international scale**	**Significant – international scale**	Not significant	Not significant	Not significant
Golden plover	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Dunlin	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Greenshank	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Common gull	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Great black-backed gull	Not significant	Not significant	**Significant – international scale**	Not significant	Not significant	Not significant
Herring gull	Not significant	Not significant	**Significant – international scale**	Not significant	Not significant	Not significant
Arctic skua	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Red-throated diver	Not significant	**Significant – regional scale**	**Significant – regional scale**	Not significant	Not significant	Not Significant
Osprey	Not significant	**Significant – regional scale**	**Significant – regional scale**	Not significant	Not significant	Not significant
Golden eagle	Not significant	Not significant	**Significant – international scale**	Not significant	Not significant	Not significant
Hen harrier	Not significant	Not significant	**Significant – regional scale**	Not significant	Not significant	Not significant
Red kite	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
White-tailed eagle	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Short-eared owl	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Merlin	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Peregrine	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Designated Sites						

Species	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Caithness and Sutherland Peatlands SPA / Ramsar	Not significant	**Significant – common scoter**	**Significant – International – common scoter, golden eagle, hen harrier**	Not significant	Not significant	Not significant
Shielton Peatlands SSSI	Minor significance	Not significant	**Significant – national - golden eagle, hen harrier**	Not significant	Not significant	Not significant
East Caithness Cliffs SPA	Not significant	Not significant	**Significant – International - herring gull and great black-backed gull**	Not significant	Not significant	Not significant
Berriedale Cliffs SSSI	Not significant	Not significant	**Significant – national - herring gull and great black-backed gull**	Not significant	Not significant	Not significant
Caithness Lochs SPA / Ramsar	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Loch Watten SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Loch Scarmclate SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Loch Calder SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Dunbeath Peatlands SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Strathmore Peatlands SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Coir' an Eoin SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Dornoch Firth and Loch Fleet SPA / Ramsar	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

Section B

Impacts on Species

9.8.74 Section B is situated entirely within the boundary of NHZ 5 (The Peatlands of Caithness and Sutherland). However, where applicable, the most relevant NHZ population is employed in the impact assessment. For example, greylag geese have greater connectivity with the habitats encompassed within NHZ 21 (Moray Firth) and therefore this area is employed in assessing impact upon regional population levels of that species. As a result throughout the species assessments, reference is made to these two NHZ population estimates.

Greylag Goose

9.8.75 Important foraging areas for greylag goose were not recorded during baseline surveys with larger flocks only recorded feeding in locations 5 km from the Proposed Development and impacts from habitat loss will therefore be **negligible** and **not significant.**

9.8.76 Two confirmed breeding territories were recorded within the 600 m[60] disturbance distance maximum for the species during baseline surveys. Birds within Section B are likely to be part of the naturalised population rather than the native Scottish population, based on distributions presented in Forester et al, 2007. Embedded mitigation measures will avoid disturbance to breeding pairs. There is abundant alternative suitable breeding habitat for birds to utilise if displaced during construction and pairs are anticipated to be able to relocate to alternative breeding sites nearby. Impacts from disturbance and displacement are assessed as **negligible** and **not significant**.

9.8.77 Greylag geese were recorded during FAS crossing the Proposed Alignment at CRH on 22 occasions, with a peak count of 500 birds. Activity was concentrated in Strath Fleet comprising commuting flights together with a secondary pattern of activity recorded along Strath Brora. Greylag geese were observed crossing pre-existing 132 kV and 275 kV OHLs on 23 occasions, indicating an ability to avoid infrastructure. NHZ populations have not been calculated for greylag geese, however, the estimated national winter population for the species in Scotland is 105,000[54]. Avoidance rates have not been calculated for OHLs for bird species in Scotland; but avoidance rates calculated for onshore wind farms suggest greylag geese have a good ability to avoid obstacles in flight (99.8% avoidance[55]). The recorded flights, however, do have potential connectivity (within the core foraging range of 20 km) to the Dornoch Firth and Loch Fleet SPA, which is situated 0.2 km away, and for which greylag goose is a contributory qualifying species. Given the relatively large number of flights together with the numbers of birds recorded, the risk of collision mortality could result in a permanent **small magnitude** impact upon the internationally important population resulting in a **significant effect** in the absence of mitigation. As a result, additional mitigation has been identified in **Section 9.8 – Section B Additional Mitigation**.

Black Grouse

9.8.78 Section B the Proposed Development will result in the permanent loss of 44.46 ha and temporary loss of 13.13 ha of suitable breeding and displaying habitat for the species (including woodland and open habitats). An additional 52.76 ha of conifer plantation may be subject to management felling by relevant landowners in Section B, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13 Forestry, Section 13.6**). However temporary impacts are predicted to be reversible, and permanent impacts represent a small fraction of the alternative suitable habitat within the wider area around the Proposed

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

Development. As a result, the loss of supporting habitat for black grouse is considered to be **negligible** and **not significant**.

9.8.79 One potential lek site supporting up to four males was recorded incidentally during FAS, this record equating to 13.3% (4 out of 30 calling males) of the regional (NHZ 5) population. The potential lek was situated < 500 m from the Proposed Development and within the advised potential disturbance distance (750 m). With embedded mitigation in place, disturbance to the potential lek during the breeding season will be avoided. There is an existing OHL approximately 200 m south of the potential lek, between the potential lek and the Proposed Development, indicating that birds in this area have not been displaced by the presence of the OHL or towers. It is anticipated that birds will continue to this potential lek site during operation of the Proposed Development. As a result, the impact of disturbance and displacement is considered to be **negligible** and **not significant**.

9.8.80 Black grouse was recorded once during FAS, the flight occurring below CRH and not crossing the Proposed Alignment. In addition, a further three black grouse flights were recorded incidentally, located north of, and not seen to cross, the Proposed Alignment. Given this low level of flight activity, collision mortality from the Proposed Development is assessed as **negligible** and **not significant**.

Oystercatcher

9.8.81 Oystercatcher is a qualifying species (a part of the winter wader population assemblage) of the Dornoch Firth and Loch Fleet SPA. Wintering oystercatchers were observed foraging in habitat located within the species' advised 300 m disturbance distance of the Proposed Development. Suitable alternative foraging habitat is available close by beyond 300 m from the Proposed Development, which oystercatcher will utilise if temporarily displaced from foraging habitat during construction activity. Construction will result in the temporary loss of approximately 9.12 ha and permanent loss of approximately 2.37 ha of suitable arable and grassland foraging habitat within Strath Fleet. Given the relatively small area of habitat lost and availability of alternative suitable habitat nearby, the effects of habitat loss and disturbance / displacement on the wintering oystercatcher population are assessed as **negligible** and **not significant**. In order to monitor any displacement and use of nearby fields in relation to the Dornoch Firth and Loch Fleet SPA population, additional mitigation measures are set out in in **Section 9.8 – Section B Additional Mitigation**.

9.8.82 Oystercatcher were recorded in flight on nine occasions during FAS, with flight activity focussed on Strath Fleet and Strath Brora. Three of the flights crossed the Proposed Alignment at CRH. NHZ populations have not been calculated for oystercatcher, however, the estimated national winter population for the species in Scotland is 80,00-120,000 birds[54]. Given this low level of flight activity, collision mortality from the Proposed Development is assessed as **negligible** and **not significant**.

Curlew

9.8.83 Construction of the Proposed Development in Section B will result in the temporary loss of 9.12 ha and permanent loss of 2.37 ha of open grassland and farmland habitat which baseline surveys indicated curlew preferred foraging in within Section B. Due to the widespread alternative available habitat, with embedded mitigation measures in place, the impact upon curlew supporting habitat is assessed as **negligible** and **not significant**.

9.8.84 Three possible breeding territories, comprising 0.17% of the total breeding population of NHZ 5 (1,737 pairs) were recorded during breeding bird surveys. One of the territories, was located within the advised 300 m breeding season disturbance distance for the species from the Proposed Development. For wintering birds, for which curlew populations form a qualifying element of the Dornoch Firth and Loch Fleet SPA (winter wader population assemblage), there is potential for birds to be displaced and disturbed during the construction phase. During the non-breeding season, the advised disturbance distance for curlew is 650 m and birds may be

displaced up to this distance from construction activities. Given the abundance of suitable alternative habitats nearby however, any curlew which are displaced are expected to utilise this habitat. As a result, the effects of disturbance and displacement on curlew assessed as **negligible** and **not significant**. In order to monitor any displacement and use of nearby fields in relation to the Dornoch Firth and Loch Fleet SPA population, additional mitigation measures are set out in in **Section 9.8 – Section B Additional Mitigation**.

9.8.85 Curlew was recorded in flight on 41 occasions during FAS, with activity focussed east of the Proposed Development in Strath Fleet and concentrated within the non-breeding season. Three of the flights crossed the Proposed Alignment at CRH. Curlew were also recorded crossing existing OHL infrastructure on eight occasions, demonstrating at least an awareness and avoidance ability. Given the low level of flight activity, collision mortality from the Proposed Development is assessed as **negligible** and **not significant**.

Redshank

9.8.86 Due to the widespread alternative available breeding and foraging habitat present in Section B, with embedded mitigation measures in place, the impact upon redshank supporting habitat is assessed as **negligible** and **not significant**.

9.8.87 Two possible redshank breeding territories were recorded, one of which was situated within the NatureScot advised 200 m disturbance distance for breeding redshank from the Proposed Development. With embedded mitigation measures in place, disturbance to breeding territories will be avoided. If birds are displaced, there is abundant alternative suitable habitat nearby for birds to establish alternative breeding territories in. NHZ populations have not been calculated for redshank, though the breeding population in Scotland is estimated to number between 11,700- 17,500 pairs (Forrester, R., *et al.,* 2007). Breeding redshank is a qualifying feature of Mound Alderwoods SSSI (0.16km from the Proposed Development). However, no breeding redshank were recorded from within the SSSI, with the closest breeding territory approximately 1.3 km to the north.

9.8.88 Given this availability of suitable alternative habitat nearby, together with the small number of breeding pairs at risk of disturbance and / or displacement, the effects of habitat loss and disturbance and displacement on the breeding population are assessed as **negligible** and **not significant.**

9.8.89 Redshank was not recorded during FAS, and as such collision mortality from the Proposed Development is assessed as **negligible** and **not significant**.

Common Gull

During construction, habitat loss will result in in the temporary loss of approximately 8.78 ha and permanent loss of approximately 2.37 ha suitable agricultural and grassland foraging habitat, but that with a plentiful availability of suitable alternate foraging habitat in the locality, this loss is assessed as **negligible** and **not significant.** There was no recorded breeding attempt by the species within the survey area for the Proposed Development, with the closest breeding colony situated 1.3 km to the north at Loch Salachaidh. As such the colony will be unaffected by displacement or disturbance during the construction phase. With embedded mitigation measures in place, the impact upon breeding by common gull is thereby assessed as **negligible** and **not significant**.

9.8.90 Common gulls were recorded crossing the Proposed Alignment at CRH on 46 occasions, with a peak count of 20 birds. Birds were also recorded crossing existing 132 kV and 275 kV OHLs at CRH on 39 occasions during surveys, demonstrating an ability to avoid existing OHLs. Avoidance behaviour by gull species altering their flight paths around structures has been recorded in comparative surveys[57]. Avoidance rates have not been calculated for OHLs for common gull in Scotland; however, avoidance rates calculated for onshore wind farms suggest small gulls have a good ability to avoid obstacles in flight (99.2% avoidance[58]). NHZ populations have not been calculated for common gull however the Scottish breeding population was estimated as 48,100 AON

in 2007 with a wintering population of 79,700 birds with between 100,000 and 200,000 birds occurring on passage. Given the relatively large populations of common gull and the relatively low predicted collision risk, the impact of collision mortality is assessed as **negligible** and **not significant**.

Herring Gull

During construction of Section B of the Proposed Development, habitat loss will result in the temporary loss of approximately 8.78 ha and permanent loss of approximately 2.37 ha of suitable agricultural and grassland foraging habitat. The closest breeding territory for herring gull recorded during baseline surveys was situated >900 m to the north of the Proposed Development near Loch Salachaidh. With a plentiful availability of suitable alternate foraging and breeding habitats in the locality, together with the species' ability to forage across a wide range of habitats, effects of habitat loss and disturbance and displacement upon herring gull are assessed as **negligible** and **not significant.**

9.8.91 Herring gulls were recorded during FAS on 106 occasions, with flights comprising between 1 – 27 birds. Thirty-three of these flights were recorded crossing the alignment at CRH. Activity was concentrated in Strath Fleet, with the majority (80 out of the 106 flights) occurring during the non-breeding season. Birds flying up Strath Fleet from the coast will have to cross an existing 132 kV OHL which crosses Loch Fleet approximately 2.5 km southeast of the Proposed Development, as well as the existing 275 kV OHL to the north of the Proposed Alignment, demonstrating an ability to cross over existing OHLs. Avoidance rates have not been calculated for OHLs for herring gull in Scotland; however, avoidance rates calculated for onshore wind farms suggest herring gulls have a good ability to avoid obstacles in flight (99.5% avoidance58). Onshore foraging ranges have not been published for breeding herring gull, but the species is known to forage relatively large distances offshore. The East Caithness Cliffs SPA, for which breeding herring gull is a qualifying feature is situated 15.7 km north of Section B and Strath Fleet, where the majority of flight activity was recorded, is approximately 30 km from the East Caithness Cliffs SPA. The majority of flights recorded across the alignment were during the non-breeding season. The NHZ 5 population of herring gull is 2,962 pairs and the NHZ21 populations is 1,490, however these numbers are likely to have decreased in recent years as a result of avian influenza. However, given the relatively low number of flights recorded during the breeding season, together with the relative distance between Section B and breeding cliffs, including the East Caithness Cliffs SPA from the Proposed Development, and the likely high avoidance rate of gulls, the impact of collision mortality is assessed as **negligible** and **not significant.**

Red-throated Diver

9.8.92 One breeding record (of one possible territory) was recorded in Section B during baseline surveys within potential disturbance distance[61] for the species. With embedded mitigation measures in place, disturbance to the breeding pair will be avoided. However, if construction activity is ongoing close to the breeding lochan when birds return to breeding territories in the spring, birds may choose to nest elsewhere or not to breed. The impact is considered to be reversible with birds likely to return following the completion of construction activity. The single breeding territory equates to 1.7% of the regional population (NHZ 5, total estimated population, 58 pairs). Breeding red-throated diver is a qualifying feature of the Caithness and Sutherlands Peatlands SPA / Ramsar site, however the SPA is approximately 8km north of the identified diver territory, at the edge of the species regular foraging range in mainland Scotland and not considered to be part of the SPA population. The temporary loss of one the territory due to disturbance and displacement therefore would be an impact of **medium magnitude**, resulting in a **significant** effect at a regional scale. As a result, additional mitigation is identified in **Section 9.8 – Section B Additional Mitigation**.

9.8.93 One flight was recorded during FAS which did not cross the Proposed Alignment. Whilst red-throated divers have been calculated to have a good ability to avoid onshore wind farms (99.5% avoidance[64]) similar calculations have not been made for avoidance of OHLs. It is likely that red-throated divers coming to and from

coastal foraging areas will have crossed and avoided the existing 132 kV OHL which runs parallel to the Proposed Development approximately 3-4 km to the east, thereby indicating some ability to avoid similar infrastructure. However, given the location of the Proposed Alignment and the likelihood of birds associated with the identified territory within disturbance distance to cross it whilst descending to the breeding lochan, there is the potential for collision impacts to affect this territory. Birds from the historic territory identified to the north of the Proposed Development and birds recorded foraging at Loch Brora may also commute across the alignment, with the level of flight activity associated with the historic territory potentially under-recorded as a result of splitting surveys across two breeding seasons. As a result, collision impact effects could represent a permanent impact of **medium magnitude**, resulting in a **significant** effect at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section B Additional Mitigation**.

Osprey

9.8.94 Given the ecology of the species, the effects of habitat loss are confined to removal of suitable nesting sites, typically mature Scots pine trees. In Section B, the Proposed Development will result in the permanent felling of approximately 44.46 ha of woodland and temporary felling of 13.13 ha of woodland as well as an additional 52.76 ha of management felling. However, none of the woodland which will be felled is in areas with known osprey territories. The area of woodland which will be felled represents a fraction of the available woodland in Section B. As a result, the impact of habitat loss on osprey is assessed to be **negligible** and **not significant.**

Three confirmed and one possible nest sites were identified within Section B, records comprising a combination of breeding bird observations and HRSG records covering the previous five years. All locations are situated outwith the advised disturbance distance for the species of 750m [83]. As a result, and with embedded mitigation measures in place to avoid impacts on any newly established nest sites closer to the Proposed Development, disturbance and displacement impacts on nest sites will be **negligibl**e and **not significant.** Construction works undertaken within disturbance distance of waterbodies used for foraging have the potential to impact upon foraging birds. However, this is likely to be very limited in extent within the context of an osprey's available foraging range (10 km core range[82]) and there is abundant alternative foraging habitat available nearby. The effects of disturbance and displacement upon foraging osprey is therefore also assessed as **negligible** and **not significant**.

9.8.95 During FAS, osprey crossed the alignment at CRH on five occasions (1-2 birds). Birds were also recorded crossing existing 132 kV and 275 kV OHLs within the Section B at CRH on five occasions, demonstrating an ability to avoid existing OHLs. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest osprey have a relatively good ability to avoid obstacles in flight (98% avoidance[84]). Due to the species' high avoidance rate, demonstrated avoidance of existing OHLs and the relatively low level of flight activity, there is a low risk of collision mortality for osprey associated with the Proposed Development, including any travelling birds associated with the Dornoch Firth and Loch Fleet SPA / Ramsar, and therefore the impact is of **negligible magnitude** and is **not significant**.

Golden Eagle

9.8.96 Flight activity by golden eagle was relatively low within Section B. Of 13 observed flights at CRH, only three crossed the Proposed Alignment, although it is possible that by splitting FAS across two breeding seasons flight activity of birds which successfully bred in 2024 but not 2023 was under recorded. It is unlikely that flight activity involved individuals from the breeding population of Caithness and Sutherland Peatlands Section SPA / Ramsar, for which golden eagle is a qualifying species, as the Proposed Development lies beyond the 6 km core foraging range for the species. Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance rates calculated for onshore wind farms suggest golden eagles have a good ability to avoid obstacles in flight (99% avoidance) and FAS recorded golden eagles crossing existing OHLs. As a result, the risk of collisions for the majority of eagle flight activity is considered to be negligible. However, the

Proposed Development is located within 350m of a previously used nest site, and it is possible that the Proposed Development could represent a higher collision risk to fledging birds at this nest site. As a result, without additional mitigation measures in place, the Proposed Development could cause collision mortality to young from one pair, representing 5.6% of the regional population (NHZ 5, 18 pairs), which would represent a **medium magnitude** impact which would be **significant** at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section B Additional Mitigation**.

9.8.97 Three breeding territories for golden eagle were located from desk records, situated 350 m, 2.7 km and 5.5 km from the Proposed Development. As such, the closer nest (350 m) is located within the NatureScot advised disturbance distance for the species during the breeding season of 1 km.

9.8.98 If birds attempt to breed at this location during the construction phase of the Proposed Development, embedded mitigation measures are designed avoid disturbance and displacement of the birds. However once constructed, the presence of the Proposed Development may result in the displacement of birds from this nest site. Golden eagles, however, typically build a number of nest locations (eyries) across their home range and will select from these that which is perceived as the most suitable eyrie for in any one breeding season. It is therefore likely therefore, that if the Proposed Development leads to the temporary or permanent abandonment of the one eyrie, the breeding pair will turn to an alternative nest site within their overall territory. Moreover, as the nest site in question has not been recorded as in use since prior to 2021, it is suggestive that the breeding pair have already moved to a new location or only occasionally use this location. However, the territory represents 5.6% of the total regional population (NHZ 5, 18 pairs) and applying a precautionary principle, if birds were permanently displaced, the effects on the regional population from disturbance and displacement is assessed as of **medium magnitude**, resulting in a permanent **significant** effect at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section B Additional Mitigation**.

9.8.99 By crossing three territories there is the possibility that the Proposed Alignment could result in a loss of suitable hunting habitat within each territory during construction of the Proposed Development. During operation it is assumed that eagles will fly and hunt across the Proposed Development, with baseline surveys confirming flights by golden eagles across existing OHLs. In a study of behavioural response to grid infrastructure by a related species (Bonelli's eagle), response was observed to vary between individual eagles, with some birds being attracted by the additional perch points offered by the new lattice towers, whereas others exhibit avoidance behaviour of the new structure (Marques, A. et al., 2022) [61].

9.8.100 Considering each territory in turn, for the nest site situated 0.35 km from the Proposed Development, there were 16 flights recorded with potential connectivity to this location (of between 1-2 birds), though only four of these flights occurred adjacent to the historic nest site itself, with the remainder occurring at a distance of >2 km. Given the proximity of the nest location to the Proposed Development, it Is likely that birds will forage across the Proposed Development. Assuming a 6 km core territory and avoidance of foraging birds from a 1 km corridor along the Proposed Alignment during construction, birds would be displaced from approximately 12.3 km^2 within the territory during construction, representing approximately 11% of their hunting range.

9.8.101 For the nest site situated 2.7 km from the Proposed Development, a pair were recorded breeding successfully in the 2024 breeding season. There were only two recorded flights with potential connectivity to the territory, suggesting that the majority of hunting activity takes place to the south of the nest site, away from the Proposed Development although as the breeding status in 2023 is unknow, it is possible that flight activity when birds successfully breed (as in 2024) was under recorded by splitting the FAS over two breeding seasons. Assuming a 6 km core territory and avoidance of foraging birds from a 1 km corridor along the Proposed Alignment during

[61] Individual variability of responses to power lines on a long-lived territorial raptor. Marques, A.T., Palma, L., Lourenço, R., Cangarato, R., Leitão, A., Mascarenhas, M., Tavares, J.T., Tomé, R., Moreira, F. & Beja, P. 2022 Ecology and Evolution. doi: 10.1002/ece3.8811

construction, birds would be displaced from approximately 10.7 km^2 within the territory during construction, representing approximately 9% of their hunting range.

9.8.102 For the nest site situated approximately 5.5 km north of the Proposed Development, only a single flight was recorded within the core foraging range, and it is likely that the majority of foraging activity associated with this nest site takes place to the north of the Proposed Development. Assuming a 6 km core territory and avoidance of foraging birds from a 1 km corridor along the Proposed Alignment during construction, birds would be displaced from approximately 10.1 km^2 within the territory during construction, representing approximately 9% of their hunting range.

9.8.103 Construction activity will not take place across the whole footprint of the Proposed Development at once, and birds will not be displaced from the whole of this area at any one time. The impact would be temporary and reversible, with birds expected to return to areas following construction. If birds are displaced from around areas of construction activity, they will hunt over other areas of their territory, which appear to be favoured hunting areas based on the results of baseline surveys.

9.8.104 The three territories identified within Section B comprise 16.7% of the regional population (NHZ 5, 18 pairs). Given the low-level of flight activity recorded during baseline surveys, the temporary and reversible nature of the impact, and the availability of other suitable alternative hunting habitat within each of the territories affected, the impact is assessed as being of **small magnitude** and **not significant** at a regional scale.

Red Kite

9.8.105 During construction of the Proposed Development, it is estimated that 2.37 ha of suitable open habitat for breeding, foraging and roosting by red kite in Section B will be permanently lost, and 8.78 ha will be temporarily lost. An additional 44.46 ha of woodland will be converted through felling of forestry but will still available for foraging. An additional 52.76 ha of conifer plantation may be subject to management felling by relevant landowners in Section B, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13 Forestry, Section 13.6**).Given red kite's foraging range of between 4-6 km and relatively wide range of prey species loss and changes to habitat are predicted to result in a **negligible** magnitude and be **not significant**.

9.8.106 There is little recent population data for the species, but a breeding population estimate of more than 273 pairs was determined in 2015 (Challis et al., 2016) with the wintering Scottish population estimated at 300-350 birds. (Forrester, R. et al., 2007), though there are no known breeding pairs situated within NHZ 5. As no territories or roosts within the disturbance buffer for the species were identified within Section B, effects from disturbance and displacement during the construction phase are considered to be of **negligible magnitude** and **not significant**.

9.8.107 Red kites were recorded crossing the alignment during FAS at CRH on 81 occasions, with a peak count of 2 birds. However, birds were also recorded crossing existing 132 kV and 275 kV OHLs during surveys of Section B on 76 occasions, demonstrating a good ability to avoid existing OHLs. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest red kites have a relatively good ability to avoid obstacles in flight (99% avoidance[87]). The Scottish breeding population of red kite has doubled every 4-6 years since birds were re-introduced, with the population being one of the most productive in Europe[62]. Any small increase in additional mortality resulting from collision with the OHL is therefore not predicted to affect the expanding population. Therefore, due to the species' high

[62] Scottish Raptor Study Group (2025) Red Kite https://www.scottishraptorstudygroup.org/raptors/red-kite/

avoidance rate and increasing population, the risk of collision mortality affecting the regional population is considered to **negligible** and is **not significant**.

Hen Harrier

Hen harrier is one of the qualifying species of the Strath Carnaig and Strath Fleet Moors SPA and SSSI, with the SPA holding an average of 12 pairs / 2.5% of the GB population. Section B of the Proposed Development overlaps with the SPA for approximately 9.6 km.

9.8.108 During construction of the Proposed Development, it is estimated that 12.42 ha of suitable open habitat for breeding, foraging and roosting by hen harrier in Section B will be permanently lost and 67.66 ha temporarily lost. Approximately 44.46 ha of woodland habitat will be permanently converted as a result of felling forestry along the Proposed Alignment. Hen harriers have a core foraging range of 2 km, extending up to 10 km. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature The results of baseline surveys recorded hen harriers flying and foraging across and in close proximity to existing OHLs in Section B and therefore displacement from the operational OHL are not predicted. During operation, there will be a permanent conversion of 44.46 ha of woodland to open habitats as a result of felling along the Proposed Alignment, which will benefit hen harrier in the long term by providing additional suitable foraging habitat. With embedded mitigation measures in place, the impact upon hen harrier supporting habitat is assessed as **negligible** and **not significant**.

No winter hen harrier roosts were recorded during baseline surveys. During construction breeding birds may be displaced within the published 350-750 m disturbance distance for the species from the Proposed Development. Desk studies and field surveys identified seven possible breeding territories within the 750 m disturbance distance for the species[63] of the Proposed Alignment. Six of these territories are historic sites, where a breeding attempt has taken place during 2021 or 2022, together with the seventh active breeding location that was located during 2024 baseline surveying. Applying a precautionary principle whereby if all territories were occupied at the time of construction, disturbance and displacement effects would negatively impact 18.4% of the breeding NHZ 5 population[79] and 1.5% of the national breeding population. The six historic territories are located within the Strath Carnaig and Strath Fleet Moors SPA and SSSI and represent 50% of the SPA population. Through the application of embedded mitigation measures, principally the avoidance of construction works during the breeding season, disturbance to nest sites will be avoided. All of the historic territories are located within 750 m of existing OHLs which are closer to the territories than the Proposed Development. As such birds are expected to continue to use territories during operation of the Proposed Development. As a result the impacts of displacement and disturbance on the SPA, NHZ, national population are considered to be **negligible** and **not significant.**

During FAS, hen harriers were observed crossing the alignment of the Proposed Development within Section B on seven occasions at CRH. It is possible that flight activity surveys under-recorded hen harrier flight activity at Morvich due to the presence of a possible territory in this area in 2024. Avoidance rates for OHLs have not been calculated for birds in the UK; however, hen harrier avoidance rates for wind turbines have been estimated at 99%[54] indicating a relatively good ability to avoid colliding with structures whilst in flight. Baseline surveys recorded hen harriers foraging across and under existing OHLs and the species is considered to generally have a low risk of collision with OHLs. However anecdotal evidence indicates a higher risk of juvenile birds colliding with OHLs. As a result, given the relatively high concentration of historic territories along Section B in Strath Carnaig and importance of the Strath Carnaig and Strath Fleet hen harrier populations, in the

[63] NatureScot (2022) Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance

absence of mitigation there is the potential for a permanent **medium magnitude** impact resulting in a **significant** effect at an international scale as a result of impacts on the population within the SPA. As a result, additional mitigation has been identified in **Section 9.8 – Section B Additional Mitigation**. Even taking a precautionary approach to the level of flight activity associated with other isolated possible territories outside of the SPA, the magnitude of impacts is considered to be **negligible** and no additional mitigation is proposed..

Barn Owl

9.8.109 Barn owl typically forage over farmland and associated margins, preferably with rough grassland, however the moorland habitat which the Proposed Alignment runs through in Section B may also offer suitable mammal prey resources. Construction activity will result in a permanent loss of 2.37 ha of grassland and agricultural foraging habitat and a temporary loss of 8.78 ha; however, this loss is anticipated to be more than compensated by associated forestry works that will in due course release foraging habitat following planned woodland clearance. As for nesting and roosting, no suitable buildings are proposed to be lost through the creation of Section B of the Proposed Alignment. Therefore the, the impact of habitat loss on barn owl is assessed to be of **negligible magnitude** and **not significant.**

9.8.110 Two confirmed territories were identified within disturbance distance for the species[89] from the Proposed Development in Section B. NHZ population estimates have not been calculate for barn owl, but there are estimated to be between 500-1,000 pairs in Scotland (Forrester, R., *et al,* 2007) and the latest records for Highland Region recorded 41 monitored breeding attempts[88]. Embedded mitigation measures such as working outside of the breeding season or establishing suitable buffer zones to avoid disturbance will not be able to fully implemented as barn owls frequently occupy the same nesting habitats as roost locations through winter and birds may be disturbed and displaced due to the proximity of the Proposed Development. In a worst-case, whereby the two confirmed territories are abandoned during the construction phase (equating to approximately 5% of the monitored Highland Region population), the effect has potential to be of **medium magnitude** and **significant** at a local scale. Additional mitigation is presented in **Section 9.8 – Section B Additional Mitigation**.

9.8.111 One barn owl flight was recorded across the baseline surveys, but did not cross the Proposed Alignment, though given the species' ecology, activity is often under-recorded. Barn owls have a home range of between 1 km during the breeding season, extending up to 4 km in the non-breeding season, and therefore there is a high probability for birds from both locations to come into contact with the Proposed Development during its operational phase. The level of collision risk by barn owls with overhead lines is poorly understood, and whilst birds can avoid collision, younger birds are believed to be at particular risk when they first disperse from the nest site. Additional mitigation in the form of line marking is proposed for other species along sections of the Proposed Development where barn owl territories are present (see **Section 9.8 – Section B Additional Mitigation**). These measures will also increase the visibility of the Proposed Development for barn owl. With these measures in place, the impact will be of **negligible magnitude** and is **not significant**.

Impacts on Designated Sites

9.8.112 Designated sites have been taken forward for more detailed assessment where the results of baseline surveys have identified potential impacts on qualifying features within published connectivity distances. Impacts on all other designated sites have been assessed as Not Significant. Impacts on European Sites and Ramsar sites are discussed further in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**.

Strath Carnaig and Strath Fleet Moors SPA and SSSI

Strath Carnaig and Strath Fleet Moors SPA / SSSI, designated for breeding hen harrier, will be directly affected by the Proposed Development with Section B of the Proposed Development overlapping with the SPA for approximately 9.6 km. The SPA / SSSI is designated for its breeding hen harrier population, supporting 12

breeding pairs / 2.5% of the UK population. The site is currently in unfavourable condition, with pressures relating to agricultural operations, burning, development, forestry operation, game / fisheries management and plant pests and diseases.

9.8.113 During construction of the Proposed Development is estimated that there will be a permanent direct loss of approximately 35.63 ha of permanent habitat loss and approximately 50.35 ha of temporary direct habitat loss, across both Sections B and C within the SPA boundary resulting from the construction of 30 towers in Section B and four towers in Section C and related access tracks. Of this 35.63 ha of permanent loss, 27.95 ha comprises coniferous plantation forest, which will be permanently converted to open habitats which will benefit hen harrier. Approximately 30 ha may also be subject to management felling within the SPA however this is expected to be re-stocked to coniferous plantation forestry. The area of habitat that will be permanently lost equates to approximately 0.24% of the total area of the SPA / SSSI. Excluding coniferous woodland, the permanent loss equates to 0.05% of the SPA. The non coniferous-woodland habitats lost to the Proposed Development comprise predominantly open moor / heather moorland.

9.8.114 The area of land-take resulting from the construction of the Proposed Alignment in Section B will have a **negligible** impact on the availability of suitable foraging habitat for hen harrier, given the abundance of suitable alternative and therefore will be **not significant**. In addition, the removal of 20.18 ha of forestry and conversion to open habitats within the SPA will help towards improving the favourable conservation status of the SPA, as one of the pressures on the site is the forestation of open habitats.

The six historic hen harrier breeding territories were recorded within potential disturbance distance from the Proposed Development are all within the SPA / SSSI. However, with embedded mitigation measures in place, including avoiding construction works that could disturb breeding birds, and oversight of works by an ECoW, disturbance and displacement of potential nest sites will be avoided and therefore the assessment is that the impact of the Proposed Development upon the SPA / SSSI will be **negligible** and **not significant**.

Anecdotal evidence indicates a higher risk of juvenile hen harrier colliding with OHLs. As a result, given the relatively high concentration of historic territories along Section B in Strath Carnaig and importance of the Strath Carnaig and Strath Fleet SPA / SSSI hen harrier population, in the absence of mitigation there is the potential for a **medium magnitude** impact resulting in a **significant** effect at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section B Additional Mitigation**.

Dornoch Firth and Loch Fleet SPA, Ramsar and SSSI

9.8.115 Potential effects on four qualifying features of the Dornoch Firth and Loch Fleet SPA, Ramsar Site and SSSI from the Proposed Development have been identified: breeding osprey, and wintering; greylag goose, oystercatcher and curlew. All species populations are classified as being in favourable condition.

9.8.116 The SPA / Ramsar supports six osprey territories, equating to 6% of the GB population with one pair breeding within the SPA and six pairs that have connectivity to the SPA for foraging. Wintering greylag geese, curlew, dunlin, teal, wigeon, redshank and oystercatcher host a peak mean wintering population of 1,146 birds, 1,397 birds, 4,088 birds, 1,592 birds, 15,304 birds, 1,272 birds and 2,459 birds, respectively.

9.8.117 As the Proposed Development will not cross the designated site, no direct habitat loss of the SPA / Ramsar/SSSI will occur. The Proposed Development will result in the temporary and permanent loss of terrestrial habitat within potential connectivity distance of the SPA. However, for each of the species that could be affected, there is abundant alternative suitable habitat which birds will utilise if temporarily displaced during construction activities, and the permanent habitat loss during operation is considered to be negligible. As a result, the impact of habitat loss is assessed as **negligible** and **not significant**.

9.8.118 A temporary access track to be constructed as part of the Proposed Development will be adjacent to the SPA / Ramsar/SSSI and the Proposed Alignment is located approximately 240 m north of the site. As a result, there is the possibility for construction activity to cause disturbance to the SPA / Ramsar / SSSI.

9.8.119 For wintering species, there is potential for disturbance and displacement to occur, given the advised disturbance distances for species recorded during baseline surveys: greylag geese (600 m), curlew (650 m) and oystercatcher (300 m). Impacts of disturbance/displacement of these species are likely to be short-term and reversible, with wintering populations of these species associated with the designated site predicted to continue to forage within these fields underneath the Proposed Alignment after construction. However, in order to reduce disturbance during construction, additional mitigation measures are set out in in **Section 9.8 – Section B Additional Mitigation**.

For breeding osprey, works adjacent to lochans and suitable foraging habitat within the 10 km core foraging range of the species may cause temporary displacement from foraging habitat during the construction period, however this is likely to be very limited in extent within the context of an ospreys available foraging range and the abundance of similar, suitable habitat in the immediate surrounding area. Moreover, all known breeding territories were situated outwith the disturbance distance buffer for the species. With embedded mitigation measures in place, disturbance and displacement of breeding osprey associated with the SPA / Ramsar/SSSI will be **negligible** and **not significant**.

9.8.120 Given the level of recorded flight activity by all qualifying species with the exception of greylag geese, impacts from collision effects on the SPA / SSSI will be **negligible** and **not significant**. However, given the extent and number of greylag goose flight activity, the impact from collision risk with the Proposed Development upon this qualifying species of the SPA is assessed as of **medium magnitude** and **significant** at an international scale. As a result, additional mitigation measures are set out in in **Section 9.8 – Section B Additional Mitigation**.

Mound Alderwoods SSSI

9.8.121 Mound Alderwoods SSSI is designated to support a breeding bird assemblage, including species which were recorded during the baseline surveys of the Proposed Development within potential connectivity to the SSSI: teal, shelduck, red - breasted merganser, snipe and redshank. All species are classified as being in favourable condition.

9.8.122 No direct habitat loss to the SSSI will occur from the Proposed Development and thus habitat loss is assessed as **negligible** and not **significant.**

9.8.123 A temporary access track which will be constructed as part of the Proposed Development is adjacent to the SSSI, and the Proposed Alignment is approximately 240 m to the north. As a result, there is potential for disturbance/displacement effects to occur on qualifying features of the SSSI. Baseline surveys, however found no breeding territories of qualifying features within the SSSI, and with embedded mitigation measures in place, disturbance and displacement of the breeding assemblage associated with the SSSI is assessed as **negligible** and not **significant**.

9.8.124 Given the low level of recorded flight activity by all of the designated species, particularly flights crossing the Proposed Development at CRH, impacts from collision effects on the SSSI will be **negligible** and **not significant.**

Moray Firth SPA

9.8.125 Moray Firth SPA is designated to regularly support non-breeding populations of waterfowl and migratory birds, including species which were recorded during the baseline surveys of the Proposed Development within potential connectivity to the SPA: goldeneye, eider, common scoter, red-breasted merganser, red -throated

diver, scaup, great northern diver and shag. All species apart from goldeneye are classed as being in favourable condition.

9.8.126 Since the Proposed Alignment will not overlap with the designated site, no direct habitat loss of the SPA will occur, and effects of habitat loss are assessed as **negligible** and **not significant**. Moreover, since the designated site is 2.5 km from the Proposed Alignment and therefore outside published disturbance distances, disturbance and displacement effects for all species are assessed as **negligible** and **not significant**.

9.8.127 Given the low level of recorded flight activity by all of the designated species, impacts from collision effects on the SSSI are assessed as **negligible** and **not significant**.

Loch Fleet SSSI

9.8.128 Loch Fleet SSSI is located approximately 3.1 km from the closes point of the Proposed Development and approximately 4.1 km from the Proposed Alignment. The site is designated for its breeding bird assemblage, including species which were recorded during the baseline surveys of the Proposed Development within potential connectivity distance of the SSSI. Potential effects were identified on breeding osprey.

9.8.129 Since the Proposed Development will not overlap with the designated site, no direct habitat loss of the SSSI will occur. Construction works undertaken within disturbance distance of waterbodies used for foraging have the potential to impact upon foraging osprey. However, this is likely to be very limited in extent within the context of an osprey's available foraging range (10 km core range[82]) and there is abundant alternative foraging habitat available nearby. The effects of disturbance and displacement upon foraging osprey features of the SPA is therefore assessed as **negligible** and **not significant**.

9.8.130 Given the relatively low level of recorded osprey flight activity, impacts from collision effects on the SPA / SSSI are assessed as **negligible** and **not significant**.

Caithness and Sutherland Peatlands SPA / Ramsar

9.8.131 Caithness and Sutherland Peatlands SPA / Ramsar is located approximately 6.3 km north of the Proposed Development at its closest point. The SPA / Ramsar site is designated for supporting breeding populations of species which were recorded during the baseline surveys of the Proposed Development: wigeon, common scoter, golden plover, dunlin, greenshank, red-throated diver, black-throated diver, golden eagle, hen harrier, and merlin. All species apart from common scoter are classed as being in favourable condition. Potential effects were identified from Section B of the Proposed Development on red-throated diver, golden eagle and hen harrier.

Since Section B of the Proposed Development will not overlap the designated site, no direct habitat loss of the SPA / Ramsar will occur. Section B of the Proposed Development is outwith the core connectivity range for both hen harrier (2 km) and golden eagle (6 km) and thus no loss of supporting habitat outwith the SPA for these species is predicted. The Proposed Development is within the core foraging range of red-throated diver (<8 km) however there will be no direct loss of foraging (lochan or coastal marine) habitat. As a result, impacts from habitat loss are predicted to be **negligible** and **not significant**.

9.8.132 A single red-throated diver flight was recorded within potential connectivity distance from the SPA during baseline surveys of Section B, however the flight was north of the Proposed Development of a bird taking off from Loch Brora, indicating that if birds are commuting from the SPA population to coastal feeding areas, Loch Brora north of the Proposed Alignment could be a preferred foraging area. Given the relatively low level of recorded flight activity, the lack of flights across the Proposed Alignment within connectivity distance and evidence of avoidance of existing OHL while crossing them at CRH, impacts from collision effects on the SPA / SSSI are assessed as **negligible** and **not significant**.

Section B Additional Mitigation

Red-throated Diver – Disturbance and Displacement

9.8.133 One possible red-throated diver breeding loch was identified within potential disturbance distance from the Proposed Development, Red-throated divers are highly sensitive to disturbance and additional mitigation during the construction and operational phases are required.

All construction / operational work will, where possible, be restricted to the non-breeding season. If works are required during the breeding season, works will be undertaken in line with SSENs Bird SPP. If the need is identified by the ECoW, visual or noise reducing screening will be erected to avoid disturbance to waterbodies.

9.8.134 With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Golden Eagle – Disturbance and Displacement

9.8.135 For the golden eagle territory closest to the Proposed Development, if works are required during the breeding season, this will necessitate the production and approval of a species protection plan, incorporating control of vehicle / pedestrian movements, and toolbox talks to all personnel in line with The Applicant's Bird SPP. With these measures in place, the likelihood of the breeding pair within 350 m of the Proposed Development being displaced will be minimised. In the unlikely event that birds are displaced, it is anticipated that they will move to an alternative nest site within their territory. Monitoring will be undertaken, in collaboration with HRSG if possible, to identify other nest sites within this territory and confirm that birds remain resident in the territory.

9.8.136 In addition, the Proposed Development's Offsite Biodiversity Net Gain and Irreplaceable Habitat Off-Site Strategy (included in **Volume 5 Appendix 8.8 Biodiversity Net Gain Report, Annex C**) will include measures to improve habitat for golden eagle in the wider region. As a result, with the additional mitigation measures in place, residual effects will be **negligible** and **not significant.**

Barn Owl – Disturbance and Displacement

Within Section B, two confirmed historical nest sites were located immediately adjacent to the Proposed Alignment or associated infrastructure (access tracks). These nest sites will be monitored, and if birds cease to use them following construction, barn owl nest boxes will be situated in suitable habitat within the territory outwith 100 m from the Proposed Development. With the additional mitigation measures in place, residual effects will be **negligible** and **not significant.**

Greylag Goose, Red-throated Divers, Golden Eagle, Hen Harrier - Collision Risk

9.8.137 Given the relatively high number of flights recorded across various parts of Section B, flight diverters will be installed to reduce the potential for collision risk for greylag goose, red-throated and black-throated divers, golden eagle and hen harrier. Bird flight diverters will be installed at 10m spacing, along the earth wire, which presents the greatest collision risk[64]. Flight diverters will be subject to a regular programme of maintenance and overhaul for the lifetime of the Proposed Development.

9.8.138 For greylag goose, flight diverters will be placed across the earth wire of the Proposed Alignment between Towers N 219 - N223 inclusive to reduce collision risk of birds commuting up and down Loch Brora.

[64] Raptor Protection Slovakia (2021) Electrocutions & Collisions of Birds in EU Countries: The Negative Impact & Best Practices for Mitigation An overview of previous efforts and up-to-date knowledge of electrocutions and collisions of birds across 27 EU member states .

9.8.139 For red-throated divers, flight diverters will be installed between Towers N219 - N223 to mitigate collision risk for birds foraging at Loch Brora. Flight diverters will be installed on the earth wire in sections of the line adjacent to breeding lochans, at locations as set out in **Volume 5, Appendix 9.4c.**

9.8.140 For golden eagle, flight diverters will also be installed along a section of the Proposed Alignment in close proximity to the historic golden eagle nest site within 350 m from the Proposed Development. Specific flight diverter locations are detailed in **Volume 5, Appendix 9.4.c**

For hen harrier, flight diverters will be installed between Towers N270 – N297 within the Strath Carnaig and Strath Fleet SPA.

9.8.141 The installation of flight diverters along the proposed sections of the Proposed Development will also benefit other species, including barn owl and red kite.

Dornoch Firth and Loch Fleet SPA / Ramsar Site – Oystercatcher and Curlew - Disturbance and Displacement

Construction activity has the potential to result in disturbance and displacement of wintering oystercatcher and curlew wintering populations within Strath Fleet which are part of the Dornoch Firth and Loch Fleet SPA / Ramsar population. There is abundant suitable alternative feeding habitat adjacent to the Proposed Development which birds will be able to exploit if displaced from construction activity. However, to minimise disturbance, an ECoW will be employed during the non-breeding season to enforce disturbance buffers around flocks of SPA/Ramsar site waders up to 650 m for curlew and 300 m for oystercatcher. With the additional mitigation measures in place, residual effects will be **negligible** and **not significant.**

Residual Effects

9.8.142 As a consequence of the application of embedded and additional mitigation measures, the residual effects predicted would be **negligible** and therefore **not significant** for the ornithological interests identified in Section B of the Proposed Development in the context of the EIA Regulations. **Table 9.12** summarises the residual effects in Section B.

Table 9.12: Summary of Residual Effects - Section B

	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Species						
Greylag goose	Not significant	Not significant	**Significant - international**	Not significant	Not significant	Not significant
Black grouse	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Oystercatcher	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Curlew	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Redshank	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Common gull	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	**Disturbance and displacement**	**Collision mortality**	**Habitat loss**	**Disturbance and displacement**	**Collision mortality**
Herring gull	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Red-throated diver	Not significant	**Significant - regional**	**Significant - regional**	Not significant	Not significant	Not significant
Osprey	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Golden eagle	Not significant	**Significant - regional**	**Significant - regional**	Not significant	Not significant	Not significant
Hen harrier	Not significant	Not significant	**Significant - regional**	Not significant	Not significant	Not significant
Red kite	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Barn owl	Not significant	**Significant - local**	Not significant	Not significant	Not significant	Not significant
Designated Sites						
Strath Carnaig and Strath Fleet Moors SPA and SSSI	Not significant	Not significant	**Significant – international – hen harrier**	Not significant	Not significant	Not significant
Dornoch Firth and Loch Fleet SPA, Ramsar and SSSI	Not significant	Not significant	**Significant – international - greylag goose**	Not significant	Not significant	Not significant
Mound Alderwoods SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Moray Firth SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Loch Fleet SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Caithness and Sutherland Peatlands SPA / Ramsar	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

Section C

Impacts on Species

Greylag Goose

There is little suitable foraging habitat for greylag geese within Section C, although a flock of 60 birds was recorded using fields approximately 800 m north of the Proposed Alignment outside of published disturbance distances for the species (200-600 m). Greylag geese were recorded roosting at the Kyle of Sutherland, however, the closest recorded roost was approximately 1.5 km from the Proposed Alignment. There is abundant alternative foraging habitat within the core foraging range of greylag geese (15-20 km) further

downstream of the Kyle of Sutherland around the Dornoch Firth, and upstream towards Loch Shin and along the River Oykel and any disturbance and displacement associated with construction of the Proposed Development will be temporary and reversable. The land take and associated disturbance from the construction phases within Section C is considered to be of **negligible magnitude** and **not significant**.

9.8.143 Greylag geese were recorded crossing the Proposed Alignment at CRH on six occasions (1,2,2,3,3 & 16 birds respectively) giving a total of 26 birds. Birds were also recorded crossing existing 132 kV and 275 kV OHL within the section at CRH on 10 occasions (1,2,2,2,3,3,4,5,11 & 21, birds respectively) during surveys demonstrating an ability to avoid existing OHLs. NHZ populations have not been calculated for greylag goose, however the estimated national winter population for the species in Scotland is 105,000 (Forrester *et al.,* 2007). Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest greylag geese have a high ability to avoid obstacles in flight (99.8% avoidance). Given the low number of flights recorded at CRH and the species' high avoidance rate, there is a low risk of collision mortality and therefore the impact is of **negligible magnitude** and is **not significant.**

Pink-footed Goose

9.8.144 Within Section C, no pink-footed geese were recorded foraging / feeding within the published disturbance distance for the species (200-600 m)[17] and there is limited suitable foraging habitat within this section, and abundant suitable foraging habitat within the species core foraging range of 15-20 km from the Proposed Development. Therefore, the land take and associated disturbance from the construction phases within Section C is of a **negligible magnitude** and therefore **not significant**.

9.8.145 Birds were recorded crossing the Proposed Alignment on four occasions, all of them at CRH. Birds were also recorded crossing existing 132 kV and 275 kV OHL within the section on eight occasions (4, 45, 50, 60, 60, 90, 180, & 810 birds). The NHZ 21 (Moray Firth and associated firths) population is 35,370 (Wilson. M, *et al.,* 2015) wintering birds. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest pink-footed geese have a high ability to avoid obstacles in flight (99.8% avoidance). Given the low number of flights recorded at CRH and the species' high avoidance rates, there is a low risk of collisions, resulting in a **negligible magnitude** which is **not significant**.

Black Grouse

9.8.146 Section C the Proposed Development will result in the permanent loss of 51.71 ha and temporary loss of 12.07 ha of suitable breeding and displaying habitat for the species (including woodland and open habitats). An additional 292.18 ha of conifer plantation may be subject to management felling by relevant landowners in Section C, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). However temporary impacts are predicted to be reversible, and permanent impacts represent a small fraction of the alternative suitable habitat within the wider area around the Proposed Development. As a result, the loss of supporting habitat for black grouse is considered to be **negligible** and **not significant**.

9.8.147 Two lek sites supporting of a total of eight males were recorded during baseline surveys of Section C. Both leks were situated >1 km from the Proposed Alignment, and no disturbance to these is predicted. A single male bird was flushed from close to the Proposed Alignment during surveys in April but was not considered to be lekking. As a result of the construction of the Proposed Development it is estimated that 51.71 ha of suitable woodland habitat for breeding, foraging and roosting by black grouse in Section C will be lost. However, given the abundance of similar suitable alternative habitat within Section C, impacts from habitat loss are assessed as of **negligible** and **not significant.**

9.8.148 No birds were recorded crossing the Proposed Alignment at CRH during flight activity or other surveys. As a result, collision impacts of the Proposed Development on black grouse within Section C will be of **negligible magnitude** and therefore **not significant**.

Osprey

9.8.149 There will be no direct loss of osprey foraging habitat as a result of the Proposed Development. Felling of forestry, including for the operational corridor and management felling may remove potential nest trees. However, no nests in forestry will be lost as a result of the Proposed Development, and there is abundant alternative suitable woodland nesting habitat available. As a result effects from loss of habitat will be **negligible** and **not significant**.

Ospreys show a varying degree of sensitivity to disturbance, with some birds tolerating a high degree of disturbance whereas other birds can be extremely wary (Ruddock, M. & Whitfield, D.P. 2007, revised Goodship, N. M, & Furness, R.W. 2022). The published disturbance distance for osprey is 350 m – 750 m and during the construction phases of the Proposed Development, nests within this distance of the works may be disturbed. Baseline surveys recorded one active osprey nest within this distance on a lattice tower of an existing OHL equating to 12.5% of the breeding population for NHZ 5 (Wilson, M. *et al.* 2015). The nest is within foraging distance of the Dornoch Firth and Loch Fleet SPA / Ramsar Site and represents 16.7% of the breeding population of birds foraging within those sites. As part of the Special arrangements works for the Proposed Development, the lattice tower which the nest is on will be replaced. To avoid causing disturbance to the nesting birds, the existing nest will be removed from the lattice tower during the non-breeding season (assuming it is not destroyed naturally by winter storms). It is predicted that birds will either use one of the other previously used nest sites within their territory, or construct a new nest at a suitable location when they return for the following breeding season[65]. Application of appropriate embedded mitigation, principally by confining construction and operational works within 750 m of the nest site to outwith the breeding season, will avoid any disturbance or displacement from the new nest site. With mitigation measures in place, the effects of disturbance are assessed as **negligible** and **not significant**.

9.8.150 Ospreys were recorded crossing the line of the Proposed Alignment at CRH on eight occasions within Section C, with flights comprising between one and three birds. Flight activity related to the one nest located on the lattice tower, with all recorded flight activity relating to movements to and from this nest. Flight activity is indicative of the birds having become used to existing infrastructure, with the birds recorded crossing the existing OHL at CRH on six occasions as they flew to and from the nest site. It is anticipated that this same degree of learnt behaviour and familiarity will develop in association with the new OHL of the Proposed Development, once it is installed.

9.8.151 Given the relatively low level of flight activity, and demonstrated avoidance of existing OHLs, the risk of collision mortality is assessed to be **negligible** and therefore **not significant**.

Honey Buzzard

9.8.152 In northern Scotland, honey buzzard is a species closely associated with mature coniferous woodland and mixed broadleaved woodland (Forrester, R., *et al.,* 2007). As a breeding raptor, honey buzzards are extremely difficult to observe, being rare, secretive and elusive. The population in NHZ 7 (northern highlands) is not recorded, but the total Scottish population is estimated to number 58 pairs of which the majority breed in the Highland region (Eaton *et al*, 2021).

[65] The Applicant has taken advice from the Roy Dennis Wildlife Foundation on how best to mitigate for the need to undertake works on the lattice tower and the approach described follows the advice received..

A single possible honey buzzard territory was recorded during baseline surveys within Section C, within approximately 200 m of the Proposed Alignment, within the published 100-200 m disturbance distance limit for the species (Ruddock, M. & Whitfield, D.P. 2007, revised Goodship, N. M, & Furness, R.W. 2022). By the employment of appropriate mitigation at each stage, however, principally by confining works to outwith the breeding season (May to August inclusive), impacts from disturbance and displacement during construction will be mitigated and therefore are assessed as **negligible** and **not significant**.

9.8.153 Honey buzzards have a foraging range that typically extends from 4 -6 km to a maximum of 10 km [66]. During construction of the Proposed Development, it is estimated that 51.71 ha of mature forest will be cleared along the Proposed Alignment in Section C, of which some 47.33 ha is within the identified possible honey buzzard territory (assuming a foraging range of 6km). As a result approximately 1% of breeding and foraging woodland habitat within the possible territory will be converted from woodland to open habitats and/or scrub as a result of felling in the operational corridor, based on Ordinance Survey (OS) woodland cover mapping. An additional 292.18 ha of conifer plantation may be subject to management felling by relevant landowners in Section C, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). However, breeding woodlands usually include open glades, wooded rides and clear-felled compartments (Forrester, R, et al, eds, 2007) and so felling of trees along the right of way is expected to have a neutral impact on the suitability of habitat within the territory. Given the relatively small area of habitat affected, and the flexibility of honey buzzards shown in relation to foraging range, birds are expected to use alternative suitable foraging habitat to make up for the permanent habitat loss, which is abundant in the surrounding area. Within a territory, returning pairs may use the same, an existing alternative or a new nest site (Forrester, R. *et al* eds., 2007) and so are likely to find an alternative suitable nest site within the same woodland if a nest is removed during the non-breeding season as part of the felling. With mitigation measures in place, impacts of habitat loss are predicted to be **negligible** and **not significant**.

9.8.154 The one incidental flight recorded was at CRH and within 200 m of the Proposed Alignment. The low-level of flight activity recorded for honey buzzard in Section C reflects the cryptic nature of the species, which is difficult to detect outside brief periods of courtship display and post-breeding dispersal of young. However, it also indicates the relatively low level of flight activity within this section associated with a possible territory. There are existing OHLs passing through areas of woodland within the possible territory (within 4 km of the incidental record) indicating that birds will co-exist with OHLs. Given the lack of flight activity recorded, there is considered to be a low risk of collision mortality, of **negligible magnitude** and **not significant**.

Red Kite

9.8.155 Breeding was not confirmed within Section C, although activity levels are indicative of red kites being a regular presence in the section and they can reasonably be anticipated to breed at some stage in the future. There is little recent population data for the species, but a breeding population estimate of more than 273 pairs was made in 2015 (Challis *et al.*, 2016) and in 2007 (Forrester, R. *et al.,*) the wintering Scottish population was estimated to number between 300-350 birds. At present in NHZ 7 (north highlands) there are an estimated nine breeding pairs, whilst in NHZ 21 (Moray Firth), there are an estimated 50 pairs. Embedded mitigation measures will avoid disturbance to nests and habitually used winter roosts if these are established in the area in future. With mitigation measures in place, the impact of disturbance during construction is considered to be **negligible** and **not significant**.

9.8.156 During construction of the Proposed Development it is estimated that 0.33 Ha of suitable habitat for foraging red kite in the Section will be permanently lost and 2 ha will be temporarily lost during construction. An additional

[66] Hardey, J., Crick, H.Q.P., Wernham, C.V., Riley, H., Etheridge, B. & Thompson, D.B.A. 2013. *Raptors, A field guide to survey and monitoring.* The Stationary Office.

51.71 ha will be converted through felling of forestry but still available for foraging. An additional 292.18 ha of conifer plantation may be subject to management felling by relevant landowners in Section C, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**).Given red kite's foraging range of between 4-6 km and relatively wide range of prey species, loss and changes to habitat are predicted to result in a **negligible** impact and be **not significant**.

9.8.157 Red kites were recorded crossing the alignment on 26 occasions, of which 11 flights were at CRH. Flights were all of single birds, save for one occasion when three birds were observed flying together. Of the flights recorded crossing the Proposed Alignment, birds were observed crossing existing OHL infrastructure at CRH on 17 occasions, thereby indicating both a relatively high degree of acclimatisation with the infrastructure, and little evidence of the OHL acting as a barrier to activity. Avoidance rates for OHLs have not been calculated for birds in the UK; however, red kite avoidance rates for wind turbines have been estimated at 99% (SNH, 2018) indicating a relatively good ability to avoid colliding with structures whilst in flight.

9.8.158 Given the relatively low number of flights recorded crossing Section C the degree to which birds have exhibited familiarity and avoidance of existing OHL infrastructure, and given the steady and continuing increase in the Scottish population, the risk of collision mortality within Section C affecting the regional population is considered to be **negligible** and **not significant**.

Hen Harrier

Hen harrier is the qualifying feature of the Strath Carnaig and Strath Fleet Moors SPA and SSSI, with the SPA holding an average of 12 pairs / 2.5% of the GB population.

During construction breeding birds may be displaced within the published 350-750 m disturbance distance for the species. One probable hen harrier nest was located within 500 m of the alignment, equating to 2.64% of the breeding population for NHZ 5 (Wilson, M. *et al.* 2015) and 8% of the SPA / SSSI population, and desk records outlined in **Section 9.5** indicate the northern part of Section C has previously been used for breeding and foraging by the species. No winter hen harrier roosts were recorded during baseline surveys, and all flight activity was recorded between March and October indicating birds are present during the breeding and autumn passage season. Embedded mitigation measures, including avoiding construction works that could disturb breeding birds, and oversight of works by an ECoW will avoid disturbance to breeding pairs. As a result, impacts from displacement and disturbance of breeding territories during construction are considered to be **negligible** and **not significant**.

9.8.159 During construction of the Proposed Development, it is estimated that 2.96 ha of suitable habitat for breeding, foraging and roosting by hen harrier in Section C will be permanently lost and 11.88 ha temporarily lost. A further 51.71 ha of habitat will be permanently converted as a result of felling forestry along the Proposed Alignment. Hen harriers have a core foraging range of 2 km, extending up to 10 km. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature The results of baseline surveys recorded hen harriers flying and foraging across and in close proximity to existing OHLs and therefore displacement from the operational OHL are not predicted. During operation, there will be a permanent conversion of 51.71 ha of woodland to open habitats as a result of felling along the alignment, which will benefit hen harrier in the long term by providing additional suitable foraging habitat. With embedded mitigation measures in place, the impact upon hen harrier supporting habitat is assessed as **negligible** and **not significant**.

9.8.160 Hen harriers were observed crossing the Proposed Alignment within Section C on 11 occasions, of which ten flights occurred at CRH, all flights of individual birds. Of these eight flights, six continued to cross an existing OHL at CRH, with numerous flights across other sections also crossing existing OHLs. This behaviour is

suggestive of birds having developed a degree of familiarity with existing OHLs, whereby they do not represent a barrier to movement or high risk of collision. Avoidance rates for OHLs have not been calculated for birds in the UK; however, hen harrier avoidance rates for wind turbines have been estimated at 99% (SNH, 2018) indicating a relatively high collision avoidance with structures whilst in flight. Given the relatively low number of flights, evidence of avoidance and low predicted collision risk, the risk of collision mortality is considered to be low, and therefore **of negligible magnitude** and **not significant**.

Goshawk

9.8.161 One confirmed nest, equating to 12.5% of the regional population (NHZ 7, northern highlands), was located in the 2024 breeding season; location details are presented in **Volume 5, Appendix 9.4b: Ornithology Confidential Report – Sections C, D and E**.

The confirmed nest was located within 50 m of the closest proposed tower location. Embedded mitigation measures, including establishment of buffer zones out to 500 m from nest sites and oversight of construction activity by an ECoW, will avoid disturbance to the nest during construction. However, given the woodland clearance and, once constructed, the presence of a new lattice tower so close to the confirmed nest location, it is likely that the nest location will be lost or abandoned after construction. Goshawks are known to construct multiple (between one and five) nests within an overall territory[67], with alternate nest sites being on average 266 m apart[68] and movement between nest sites in some cases occurring form year to year. As a result, it is anticipated that the breeding pair will relocate to a suitable alternate nest site in the vicinity within the wider territory if the confirmed nest site is lost or becomes unfavourable once construction has been completed.. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant**.

In Scotland, goshawk is a species closely associated with large stands of mature coniferous woodland. During construction of the Proposed Development, it is estimated that 51.71 ha of mature forest in Section C will be cleared, at Carbisdale woodland and in the forestry to the north-east of the Invershin. In their study of tolerance to woodland felling upon goshawks fidelity to the nest area, however, Penteriani, V., & Faivre, B. 2001[69] determined that as long as woodland felling does not exceed >30% of the total woodland cover in the territory, the species is unlikely to be displaced from the nest area. Therefore, although the degree of woodland clearance required within the identified territory comprises 33.18 ha (assuming a 3 km core foraging range), this represents approximately 3% of the total woodland area in the territory, based on OS woodland cover mapping. An additional 292.18 ha of conifer plantation may be subject to management felling by relevant landowners in Section C, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**) and the felling will mimic the rotational felling management of the conifer plantations in the wider area, Goshawks often hunt outside of woodland areas, with rabbits often the most abundant mammal prey (Forrester et al, eds, 2007). As a result, it is predicted that woodland felling associated with the Proposed Development will not affect the goshawk population within Section C, resulting in a **negligible magnitude** and be **not significant**.

The low-level of flight activity recorded for goshawk in Section C in part reflects the cryptic nature of the species, which is comparatively difficult to record in flight outwith of the courtship breeding and juvenile dispersal phases of the breeding season. Two flights were recorded at CRH crossing the Proposed Alignment, one of which also crossed the existing OHL infrastructure at CRH. Goshawk predominantly hunt in woodland

[67] Schaffer, W., Beck, b., Beck, J., Bonar, R., & Hunt, L. 1999. Northern goshawk reproductive habitat suitability index model. Version 3.

[68] Speiser, R., Bosakowski, T. 1991. *Nesting phenology, site fidelity, and defense behavior of northern goshawks in New York and New Jersey*. Journal of Raptor Research. 25(4):132-135.

[69] Penteriani, V. & Faivre, B. 2001. *Effects of harvesting timber stands on goshawk nesting in two European areas*. Biological Conservation 101 (2001) 211–216.

and are highly agile and considered to have a high ability to avoid collisions. As a result, the risk of collision is considered to be **negligible** and the effect to be **not significant**.

Impacts on Designated Sites

9.8.162 Designated sites have been taken forward for more detailed assessment where the results of baseline surveys have identified potential impacts on qualifying features within published connectivity distances. Impacts on all other designated sites have been assessed as Not Significant. Impacts on European Sites and Ramsar sites are discussed further in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**.

Dornoch Firth and Loch Fleet SPA, Ramsar and SSSI

9.8.163 Two qualifying features of the Dornoch Firth and Loch Fleet SPA, Ramsar Site and SSSI, greylag goose and osprey, were recorded during baseline surveys of the Proposed Development within connectivity distances from the SPA. Both species being classified as being in favourable condition.

9.8.164 The SPA and Ramsar citation states that the site supports six osprey territories, equating to 6% of the GB population with one pair breeding within the SPA and six pairs that have connectivity to the SPA for foraging. Wintering greylag geese are a qualifying feature, with a mean wintering population of 1,146 birds.

9.8.165 Given the distance from the Proposed Development to the SPA, Ramsar and SSSI boundary within Section C (approximately 9.4 km at its closest point), no disturbance impacts on birds within the SPA / Ramsar/SSSI will occur. Impacts on disturbance and displacement of foraging greylag geese during construction are assessed as **negligible** and **not significant**, based on the relatively limited area of suitable habitats and temporary duration of the impacts.

Within Section C, a single osprey nest was recorded within potential disturbance distance from the Proposed Development which is within potential connectivity distance to the SPA and could form part of the SPA population. The nest is approximately 15 km from the SPA boundary. Habitats within the SPA are therefore beyond the core foraging range for birds in this territory (10 km), but within the distance where some regular foraging may occur regular (20 km). Although the nest will be removed during the breeding season as part of the works for the Special Arrangements, it is predicted that birds will either use one of the other previously used nest sites within their territory, or construct a new nest at a suitable location when they return for the following breeding season. Application of appropriate embedded mitigation, principally by confining construction and operational works within 750 m of the nest site to outwith the breeding season, will avoid any disturbance or displacement from the new nest site. As a result the impact of the Proposed Development upon the SPA will be **negligible** and **not significant**.

9.8.166 Given the low level of recorded flight activity by both species assessed above, impacts from collision effects will be **negligible** and **not significant**.

9.8.167 Whooper swan is a qualifying feature of the Dornoch Firth and Loch Fleet SSSI, which overlies part of the related SPA feature. However, all flights were beyond the published core range connectivity distance (5km) for whooper swan from the SSSI and impacts on the SSSI population are considered to be **negligible** and **not significant**.

Strath Carnaig and Strath Fleet Moors SPA and SSSI

Strath Carnaig and Strath Fleet Moors SPA / SSSI, designated for breeding hen harrier, will be directly affected by the Proposed Development, as the Proposed Alignment within Section C is situated partially within the designated site boundary. The SPA / SSSI is designated for its breeding hen harrier population, supporting 12 breeding pairs, equating to 2.5% of the UK population. The site is currently in unfavourable condition, with

pressures relating to agricultural operations, burning, development, forestry operation, game / fisheries management and plant pests and diseases.

9.8.168 During construction of the Proposed Development is estimated that there will be a permanent direct loss of approximately 35.63 ha of permanent direct habitat loss and approximately 50.35ha of temporary direct habitat loss, across both Sections C and B within the SPA boundary resulting from the construction of four towers from Section C and 30 towers from Section B and related access tracks. . Of this 35.63 ha of permanent loss, 27.95 ha comprises coniferous plantation forest, which will be permanently converted to open habitats which will benefit hen harrier. Approximately 30 ha may also be subject to management felling within the SPA however this is expected to be re-stocked to coniferous plantation forestry. The area of habitat that will be permanently lost equates to approximately 0.24% of the total area of the SPA / SSSI. Excluding coniferous woodland, the permanent loss equates to 0.05% of the SPA. The non coniferous-woodland habitats lost to the Proposed Development comprise predominantly open moor / heather moorland.

9.8.169 Given the small size of land-take within the SPA, part of which (the conifer plantation), is unsuitable foraging habitat for hen harriers, the impact of habitat loss within the SPA is assessed as **negligible** and **not significant**. In addition, the removal of 20.18 ha of forestry and conversion to open habitats within the SPA will help towards improving the favourable conservation status of the SPA, as one of the pressures on the site is the forestation of open habitats.

A single probable hen harrier territory was recorded within Section C during baseline surveys; however, it was approximately 3 km from the SPA, outwith the 2 km core foraging range from the SPA, and is not considered to be part of the SPA population.

9.8.170 Baseline surveys recorded two hen harrier flights within the SPA boundary along Section C, with one flight below CRH and one at CRH. Neither flight crossed the Proposed Alignment. Another three hen harrier flights were recorded across the Proposed Alignment along Section C outside of the SPA but within the core range for hen harrier of 2 km, suggesting the recorded birds may form part of the SPA population. Of these five flights, four were seen to cross an existing OHL at below CRH, suggestive that the OHL was not acting as a barrier to hen harrier foraging activity.

9.8.171 These combined low levels of species activity, coupled with the anticipated low level of disturbance anticipated by maintenance activity required along the Proposed Development result in the assessment that operational effects, barrier effects and collision mortality risk of the Proposed Development on the SPA / SSSI in Section C are considered to be of **negligible magnitude** and **not significant**. Additional mitigation measures proposed for the hen harrier within the wider SPA as a result of predicted impacts in Section B are presented in **Section 9.8 – Section C Additional Mitigation.**

Section C Additional Mitigation

9.8.172 No additional mitigation has been recommended for Section C.

Residual Effects

9.8.173 As a consequence of the application of embedded mitigation measures, the residual effects predicted would be **negligible** and therefore **not significant** for the ornithological interests identified in Section C of the Proposed Development in the context of the EIA Regulations. **Table 9.13** summarises the residual effects in Section C.

Table 9.13: Summary of Residual Effects - Section C

Species	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Greylag goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Pink-footed goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Black grouse	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Osprey	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Honey buzzard	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Red kite	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Hen harrier	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Goshawk	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Designated Sites						
Dornoch Firth and Loch Fleet SPA, Ramsar and SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Strath Carnaig and Strath Fleet Moors SPA and SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

Section D

Impacts on Species

9.8.174 Throughout the species assessments, reference is made to two Natural Heritage Zone (NHZ) population estimates. Section D, whilst situated entirely within the boundary of NHZ 7 (north Highland), is also located immediately adjacent to NHZ 21 (Moray Firth) towards the southern end of the Section. Where applicable, the most relevant NHZ population is employed in the conduction of assessments, for example, greylag geese have greater connectivity with the habitats encompassed within NHZ 21 and therefore this area is employed in assessing impact upon regional population levels of that species.

Greylag Goose

9.8.175 Important foraging areas for greylag goose were not recorded during baseline surveys in Section D. Moreover, there is widespread alternative foraging and roosting habitat in the wider area around the Proposed Development within Section D which birds will be able to make use of if displaced by construction activity. Disturbance and displacement associated with construction of the Proposed Development will be temporary and reversible. As a result, disturbance from the construction phase will be **negligible** and **not significant**.

Greylag geese were recorded in flight on 12 occasions with flight activity concentrated west of Ardgay, and around Evanton and Strathpeffer, respectively. From the total recorded flights, four of these flights, comprised of 4,43,50 & 62 birds crossed the Proposed Alignment at CRH. NHZ populations have not been calculated for greylag goose; however, the estimated national winter population for the species in Scotland is 105,000 (Forrester et al., 2007). Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest greylag geese have a high ability to avoid obstacles in flight (99.8% avoidance).

9.8.176 Whilst the recorded flights have potential connectivity (within the core foraging range of 20km) to the Cromarty Firth SPA and Inner Moray Firth SPA (approximately 4,7 km from the Proposed Development), for which greylag goose is a contributory qualifying species, given the low number of flights recorded at CRH and the species' high avoidance rate, there is a low risk of collision mortality and therefore the impact is of **negligible magnitude** and is **not significant**.

Pink-footed Goose

9.8.177 Important foraging areas for pink-footed goose were not recorded during baseline surveys and impacts from habitat loss will be **negligible** and **not significant.** Moreover, although no wintering birds were recorded within potential disturbance distance (up to 600 m) from Section D, there is widespread alternative foraging and roosting habitat, such as the Cromarty Firth, in the wider area around the Proposed Development within Section D which birds will be able to make use of if displaced by construction activity. Thus, disturbance and displacement associated with construction of the Proposed Development will be temporary and reversible. As a result, disturbance from the construction phase will be **negligible** and **not significant**.

Pink-footed geese were recorded in flight of 31 occasions, with activity concentrated to the west side of Ardgay in the north of the section, along with secondary areas of flight activity along the Dingwall – Strathpeffer axis. From the total number of flights recorded, 16 of these flights crossed the alignment, with all except one flight (of 85 birds), crossing above CRH. The estimated wintering population in NHZ 21 (Moray Firth and associated firths) is 35,370 birds (Wilson. M, et al., 2015). Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance rates calculated for onshore wind farms suggest pink-footed geese have a high ability to avoid obstacles in flight (99.8% avoidance). Given the low number of flights recorded at CRH, the species' high avoidance rates, there is a low risk of collisions, resulting in a **negligible magnitude** impact which is **not significant.**

Capercaillie

9.8.178 No evidence of breeding capercaillie was recorded during baseline surveys of the Proposed Development with Section D. Desk records (covering the period 2019-2024) obtained from the RSPB indicated one field record located within the 2 km survey buffer of the Proposed Development. Capercaillie have a moderate to high sensitivity to disturbance with non-breeding birds tolerant to disturbance to within 100 m. During the breeding season, however, this distance increases to 150 m for nesting females and 1,000 m for displaying males (NatureScot 2024). Given that none of records fall within the minimum distances for disturbance, however, the risk of disturbance during the construction phase is assessed as of **negligible magnitude** and **not significant**.

Construction of the Proposed Development and maintenance of the operational corridor in Section D is estimated to result in the permanent loss of 107.98 ha and temporary loss of 23.99 ha of woodland located approximately 1.9 km at its closest to the west of Nover SPA. This woodland comprises primarily conifer plantation (89.83 ha) and whilst in itself representing a sub-optimal habitat for breeding capercaillie it does offer a source of cover and limited feeding potential by the species and thereby may help facilitate dispersal of birds from the established population at Novar SPA. An additional 125.01 ha of conifer plantation may be subject to management felling by relevant landowners in Section D, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter: 13 Forestry, Section 13.6**). The loss of the habitat represents a negligible loss of the overall area of suitable habitat for capercaillie within Section D, given the abundance of other coniferous and mixed woodland within the wider area. However, the permanent conversion of forest to open habitats along the operational corridor could potentially cause fragmentation and create barriers to capercaillie dispersal. Telemetry studies in Sweden found that capercaillie movement changes in open habitats, with birds speeding up to cross areas of open bog, potentially to reduce the potential for predation in areas with little cover. Birds crossed young (<5 years old) clear felled areas (which would be similar to the operational corridor which will be subject to targeted felling every 4 years) mores slowly. The authors of the study inferred that this may be as a result of increased feeding opportunities along woodland edges (Kämmerle et al 2021)[70], or as a result of recently felled areas being more difficult for birds to cross due to the presence of brash and felled trees. Given the ongoing population decline for capercaillie, and the importance of the Novar SPA population, the potential effect of reducing dispersal for the population is considered to be a permanent impact of **small magnitude** on the internationally important population and to be **significant** at an international scale in the absence of mitigation. As a result, additional mitigation has been identified in **Section 9.8 – Section D Additional Mitigation**.

9.8.179 No flights by capercaillie were recorded during baseline surveys. During the breeding season flight movements of capercaillie involve smaller distances are less than during pre- and post-breeding dispersal phases when (predominantly female) birds have been recorded moving up to 20 km from established territories. (Fletcher, K. and Baines, D., 2020)[71] , (Moss, R. and Picozzi, N., 1994)[72]. Capercaillie are categorised as being more vulnerable to collision risk with overhead wires, compared with many other birds, due to their high wing loading, with the risk exacerbated if a line is situated between feeding and roosting and lekking areas[73]. The route of the Proposed Alignment passes (at its closest point) within 1.9 km of the Novar SPA, for which the species is the qualifying feature. Capercaillie have relatively small home ranges (range of 0.12 – 0.4km^2 for three females studied in Strathspey) but disperse more widely during the spring or autumn (Fletcher, K. and Baines, D., 2020). As a result, resident SPA birds are predicted to be unlikely to interact with the Proposed Development, however birds dispersing from this population may cross the Proposed Alignment. Capercaillie typically fly relatively low to the ground, with collision with deer fences recognised as potentially impacting on juvenile survival rates[74]. Studies in Norway have recorded collision of capercaillie with OHLs, however, included a range of different voltages from 22 kV to 300 kV, likely including OHLs at lower heights than those planned as part of the Proposed Development. Given their relatively low flight height, and the small number of flights which will occur of dispersing birds, the risk of collision with the conductors or earth wire of the Proposed Development are considered to be very low. Birds could conceivably collide with towers supporting the OHL, however the towers which will be installed for the Proposed Development are large steel lattice structures which will be more visible than deer fences which are known to be a cause of collision, and birds are predicted to be

[70] Kämmerle JL, Taubmann J, Andrén H, Fiedler W, Coppes J. 2021. Environmental and seasonal correlates of capercaillie movement traits in a Swedish wind farm. Ecol Evol.;11(17):11762-11773.
[71] Fletcher, K., and Baines, D. 2020. Observations on breeding and dispersal by Capercaillie Strathspey. Scottish Birds 40, pp 27-34.
[72] Moss, R. & Picozzi, N. 1994. Management of Forestry for Capercaillie in Scotland. Forestry Bulletin 113. Institute for Terrestrial Ecology, Banchory.
[73] Bevanger, K., Bird interactions with utility structures; collision and electrocution, causes and mitigation measures. Ibis 136: 412-425

able to avoid the towers, as they avoid trees in their woodland habitat. As a result, the risk of impacts on the capercaillie population from collision are predicted to be **negligible** and **not significant**.

Black Grouse

9.8.180 Twelve lek sites supporting up to 30 males were recorded, equating to 6.34% (30 out of 473 calling males) of the regional (NHZ 7) population. Eleven leks were situated within 750m of the Proposed Development , with eight of these within 500m of the Proposed Development. During construction, embedded mitigation will avoid disturbance to leks. However once the Proposed Development is operational, birds may be displaced or abandon leks due to the proximity of permanent infrastructure. In the absence of any mitigation, displacement or abandonment of leks during the operational phase is assessed as a permanent impact of **medium magnitude** and a **significant** effect at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section D Additional Mitigation**.

9.8.181 Construction of the Proposed Development and maintenance of the operational corridor in Section D is estimated to result in the permanent loss of 107.98 ha and temporary loss of 23.99 ha of suitable woodland habitat for the species. An additional 125.01 ha of conifer plantation may be subject to management felling by relevant landowners in Section D, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). However impacts represent a small fraction of the alternative suitable habitat within the wider area around the Proposed Development. As a result, the loss of supporting habitat for black grouse is considered to be **negligible** and **not significant**.

9.8.182 Black grouse was recorded in flight on seven occasions, with five of these flights crossing the Proposed Alignment, of which three were at CRH. Given the relatively low level of flight activity, collision mortality from the Proposed Development cannot be discounted entirely but are assessed as **negligible** and **not significant**.

Greenshank

9.8.183 During breeding bird surveys, two possible territories were identified during surveys of Section D, both of which were located within the published disturbance distance for the species (up to 500 m). The two territories equate to 1.35% of the regional population total (NHZ 7, 148 pairs). Embedded mitigation will avoid disturbance of breeding birds during the breeding season during the construction phase, however during operation, the presence of the constructed operational towers in open moorland so close to their territories may cause birds to abandon these locations in favour of other locations. There is abundant suitable alternative habitat in the wider area which birds will utilise if they are displaced. As a result, impacts are considered to be **negligible** and **not significant.**

9.8.184 Loss of supporting habitat for greenshank associated with construction of the Proposed Development within Section D (e.g., access tracks and tower bases), is estimated at 27.19 ha of temporary loss and 16.25 ha of permanent loss. However temporary impacts are predicted to be reversible, and permanent impacts represent a small fraction of the alternative suitable habitat within the wider area around the Proposed Development. As a result, the loss of supporting habitat for black grouse is considered to be **negligible** and **not significant**.

9.8.185 No flights by greenshank were recorded during baseline surveys within Section D and therefore the risk of collision with the Proposed Development is assessed to be **negligible** and **not significant**.

Red-throated Diver

9.8.186 The one breeding record within Section D (of a possible territory) occurred from a location that falls within the disturbance buffer for the species and as such there is potential for the territory to be abandoned during the construction phase of the Proposed Development, in the absence of appropriate mitigation. The impact may be reversible with birds potentially returning following the completion of construction activity. The single breeding

territory equates to 2.56% of the regional territorial population (NHZ 7, total estimated population, 39 pairs) and loss of the territory would be a temporary impact of **medium magnitude**, resulting in a **significant** effect at a regional scale. The Applicants Bird SPP may be sufficient, however additional mitigation may be required. As a result, additional mitigation has been identified in **Section 9.8 – Section D Additional Mitigation**.

9.8.187 Two red-throated diver flights were recorded during FAS of Section D, with both flights occurring at CRH and crossing the Proposed Alignment. Neither flight was recorded within potential connectivity distance of the identified breeding loch. Although the number of flights recorded was relatively low, it is likely that flight activity associated with the breeding territory is under recorded due to the crepuscular nature of much diver flight activity. Given the proximity of the territory to the Proposed Alignment and the likelihood of birds associated with the territory to cross the Proposed Alignment, there is the potential for collision impacts to affect this territory. The loss of the breeding territory would be a permanent impact of **medium magnitude**, resulting in a **significant** effect at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section D Additional Mitigation**.

Golden Eagle

9.8.188 Flight activity by golden eagle was relatively low within Section D. Of 11 observed flights, only two of which crossed the Proposed Alignment, one of which was at CRH. Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance rates calculated for onshore wind farms suggest golden eagle have a high ability to avoid obstacles in flight (99% avoidance). Given the level of flight collision risk with the Proposed Development is assessed as **negligible magnitude** and **not significant**.

The three breeding locations for golden eagle are all situated outwith the published disturbance distance for the species of 1000 m, located approximately 2.3, 5.8 and 5.9 km respectively away from the Proposed Development. As a result, no disturbance is anticipated to nest sites of these pairs during the construction and operational phases of the Proposed Development. By crossing the three territories, however, there is the possibility that the OHL could result in a loss of suitable hunting habitat within each territory during construction of the Proposed Development. During operation it is assumed that eagles will fly and hunt across the Proposed Development, with baseline surveys confirming flights by golden eagles across existing OHL. In a study of behavioural response to grid infrastructure by a related species (Bonelli's eagle), response was observed to vary between individual eagles, with some birds being attracted by the additional perch points offered by the new lattice towers, whereas others exhibit avoidance behaviour of the new structure (Marques, A. et al., 2022)[75].

9.8.189 Considering each territory in turn, for the nest site closest to the line of the Proposed Development (2.3 km to the west of the Proposed Development), recorded activity was low, with five flights observed within 2 km of the Proposed Development during the survey period with potential connectivity to the nest location (the flights recorded at 1.5, 3.2, 6.1, 6.9. and 8.1 kms respectively away from the nest location at their closest points). Only one of these flights crossed the Proposed Development (the flight recorded commencing 6.9 km from the nest location), and the flight height was below CRH. The location of the flights and the level of activity suggests that the area to the east of Proposed Development does not represent an important foraging area for the pair, with more suitable foraging habitat situated to the west of the nest area. Assuming a 6 km core territory and avoidance of birds from a 1 km corridor along the Proposed Alignment during construction, birds would be displaced from approximately 10.5 km^2 within the territory during construction, representing approximately 9% of their hunting range.

[75] Marques, A.T., Palma, L., Lourenço, R., Cangarato, R., Leitão, A., Mascarenhas, M., Tavares, J.T., Tomé, R., Moreira, F. & Beja, P. 2022 Individual variability of responses to power lines on a long-lived territorial raptor. Ecology and Evolution. doi: 10.1002/ece3.8811

9.8.190 For the nest located 5.75 km west of the Proposed Development, three flights with potential connectivity to the nest site were recorded over the survey period, of which one crossed the Proposed Alignment, with the two other flights occurring more than 2 km from the Proposed Development. This low level of activity is also suggestive that the location of the Proposed Alignment will have little impact upon foraging activity by the pair occupying this territory, with more suitable habitat situated to the north and west of the nest area. Assuming a 6km core territory and avoidance of birds from a 1 km corridor along the Proposed Alignment during construction, birds would be displaced from approximately 7 km^2 within the territory during construction, representing approximately 4% of their hunting range.

9.8.191 For the nest located 5.93 km west of the of the Proposed Development, five flights with potential connectivity to the nest site were recorded over the survey period, of which none crossed the line of the Proposed Alignment with four flights occurring within 2 km of the Proposed Development. Once again, this low level of activity is suggestive that the location of the Proposed Development does not represent a key component of the foraging habitat for the pair occupying this territory, with more suitable foraging habitat situated to the west of the nest area. Assuming a 6 km core territory and avoidance of birds from a 1 km corridor along the Proposed Alignment during construction, birds would be displaced from approximately 1.5 km^2 within the territory during construction, representing approximately 0.7% of their hunting range.

9.8.192 Construction activity will not take place across the whole footprint of the Proposed Development at once, and birds will not be displaced from the whole of this area at any one time. The impact would be temporary and reversible, with birds expected to return to areas following construction. If birds are displaced from around areas of construction activity, they will hunt over other areas of their territory, which appear to be favoured hunting areas based on the results of baseline surveys.

9.8.193 The three territories identified within Section D comprise 6.98% of the regional (NHZ 7, 43 pairs). Given the low-level of flight activity recorded during baseline surveys, the temporary and reversible nature of the impact, and the availability of other suitable alternative hunting habitat within each of the territories affected, the impact is assessed as being of **small magnitude** and therefore **not significant** at a regional scale.

Goshawk

9.8.194 No evidence for breeding by the species was determined during surveys, but flight activity was suggestive of one potential breeding location, situated 1 – 2 km from the line of the Proposed Development and therefore outwith the published disturbance distance for the species during the breeding season (500 m). Given the relative distance to identified breeding territories, the effects of disturbance and displacement are assessed as **negligible** and **not significant**.

9.8.195 During construction of the Proposed Development, it is estimated that 107.98 ha of mature forest in Section D will be cleared as part of the operational corridor. Studies of goshawk habitat preference determined that as long as woodland felling does not exceed >30% of the total woodland cover in the territory, the species is unlikely to be displaced from the nest area (Penteriani, V., & Faivre, B. 2001). Therefore, although the degree of woodland clearance required within the identified territory comprises 18.9 ha (assuming a core range of 3 km), this represents approximately 2% of the available woodland habitat within the territory based on OS woodland cover data. An additional 125.01 ha of conifer plantation may be subject to management felling by relevant landowners in Section D, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**) and the felling will mimic the rotational felling management of the conifer plantations in the wider area, Goshawks often hunt outside of woodland areas, with rabbits often the most abundant mammal prey (Forrester et al, eds, 2007). In addition, mitigation measures identified for capercaillie will reduce the area of felled forestry that is maintained as open habitat. As a result, it is predicted that woodland felling associated with the Proposed Development will not affect the foraging habitat available to the goshawk population within Section D, are assessed as **negligible** and **not significant**.

Goshawk was recorded crossing the Proposed Alignment at CRH on four occasions in Section D. This low-level of flight activity in part reflects the cryptic nature of the species, which is comparatively difficult to record in flight outwith of the courtship, breeding and juvenile dispersal phases of the breeding season. Goshawk predominantly hunt in woodland and are highly agile and considered to have a high ability to avoid collisions. As a result of their agility, and the relatively low number of flights across the Proposed Alignment recorded, the risk of collision is considered to be **negligible** and the effect to be **not significant**.

Hen Harrier

9.8.196 Hen harrier is one of the qualifying species of the Strath Carnaig and Strath Fleet Moors SPA and SSSI, with the SPA holding an average of 12 pairs, equating to 2.5% of the GB population. The SPA is located 7.5 km from Section D at its closest point and as such falls within the upper range for foraging distance by this species (hen harriers have a core foraging range of 2 km, extending up to 10 km).

9.8.197 During construction of the Proposed Development, it is estimated that 18.97 ha of suitable habitat for breeding, foraging and roosting by hen harrier in Section D will be permanently lost and 34.99 ha temporarily lost. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. In conclusion therefore, subject to embedded mitigation measures being in place, the impact upon hen harrier supporting habitat is assessed as **negligible** and **not significant**.

9.8.198 During construction breeding birds may be displaced within the published 350-750 m disturbance distance for the species. One probable hen harrier nest was located within potential disturbance distance (750 m), situated approximately 100 m west of the Proposed Development. This territory equates to 5.55% of the breeding population for NHZ 7 (Wilson, M. et al. 2015), and desk records outlined in Section 9.8 indicate the central portion of Section D has previously been used for breeding and foraging by the species, with an historic territory within potential disturbance distance approximately 650 m east of the Proposed Development. Embedded mitigation measures, including avoiding construction works that could disturb breeding birds, and oversight of works by an ECoW will avoid disturbance to breeding pairs. The desk-based study records indicate potential alternative nest sites within territories, and birds historically nesting further to the east of the Proposed Development. If birds are displaced from suitable breeding habitat during construction of the Proposed Development, they are likely to use suitable alternative habitat which is abundant to the east and west of the Proposed Development and which has been used historically. Displacement during operation is not predicted. As a result, impacts on the NHZ population are considered to be **negligible** and **not significant**.

9.8.199 No winter hen harrier roosts were recorded during baseline surveys. Flight activity was concentrated between March and October, with only one of the 26 recorded flights occurring outwith this period and no impacts on winter roosts are predicted.

9.8.200 Hen harriers were observed crossing the alignment of the Proposed Development within Section D on six occasions, of which four flights, all by individual birds, occurred at CRH. Avoidance rates for OHLs have not been calculated for birds in the UK; however, hen harrier avoidance rates for wind turbines have been estimated at 99% (SNH, 2018) indicating a relatively high ability to avoid colliding with structures whilst in flight. The risk of collision mortality is therefore considered to be low, and therefore of **negligible magnitude** and **not significant**.

Red Kite

9.8.201 During construction of the Proposed Development, it is estimated that 1.55 Ha of suitable habitat for foraging by red kite in Section D will be permanently lost, and 2.23 Ha will be temporarily lost. An additional 134.80 ha will be converted through felling of forestry but still available for foraging. An additional 125.01 ha of conifer

plantation may be subject to management felling by relevant landowners in Section D, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). Given red kite's foraging range of between 4-6 km and relatively wide range of prey species loss and changes to habitat are predicted to result in a **negligible magnitude** and be **not significant**.

9.8.202 There is little recent population data for the species, but a breeding population estimate of more than 273 pairs was determined in 2015 (Challis et al., 2016) with the wintering Scottish population estimated at 300-350 birds. (Forrester, R. et al., 2007). Of the breeding population, nine breeding pairs are estimated to be present in NHZ 7 (north highlands), together with 50 pairs from the adjacent NHZ 21 (Moray Firth), from where the red kite population has expanded following a successful reintroduction programme in this locality in the late 20th century[76]. Both NHZs are used in the assessment for this species in lieu of the significance of the reintroduction programme in influencing relative abundance of the species in proximity to Section D. Two nest locations were recorded during surveys within the 2 km survey buffer, comprising one confirmed nest and one probable nest, equating to 22.2% (NHZ 7) / 4% (NHZ 21) of each regional NHZ population.

9.8.203 The two breeding locations were situated approximately 300 m and 807 m respectively, from the Proposed Development. All nest sites were located at or beyond the published disturbance distance for the species (300 m). As a result, with embedded mitigation measures in place, disturbance impacts will be **negligible** and **not significant.**

Red kite was recorded in flight on 238 occasions and was the most common raptor recorded during baseline surveys in Section D. Flights were recorded widely across the Section, and comprised primarily 1-2 birds, with concentrations of activity; south of Strathpeffer, at the Heights of Fodderty, Glen Glass and Strathrusdale. Given the number of observations and the relatively small home range occupied by the species (birds forage up to 6 km, SNH, 2016), it is suggested that many of the observations represent repeat flights by the same bird or birds within a territory. At Strathpeffer, however, the proximity of a (currently closed) feeding station for red kites, is likely to have contributed to the high number of birds recorded in this vicinity, many of which are likely to be non-territorial sub-adults.

Flights were recorded at all height bands, with 73 flights crossed the alignment, of which 66 crossed at CRH. Avoidance rates for OHLs have not been calculated for birds in the UK; however, red kite avoidance rates for wind turbines have been estimated at 99% (SNH, 2018) indicating a relatively good ability to avoid colliding with structures whilst in flight. The Scottish breeding population of red kite has doubled every 4-6 years since birds were re-introduced, with the population being one of the most productive in Europe[77]. Any small increase in additional mortality resulting from collision with the OHL is therefore not predicted to affect the expanding population. Therefore, due to the species' high avoidance rate and increasing population, the risk of collision mortality affecting the regional population of NHZ 7 and NHZ 21 is considered to **negligible** and is **not significant**.

Barn Owl

9.8.204 During breeding raptor surveys on barn owl nest sites was recorded within potential disturbance distance (100m) of the Proposed Development within Section D; in a farm building adjacent to a proposed access track. The building may also be used year-round as a roost. Construction and use of the access track may result in disturbance to birds using the building as a roost and abandonment of the location. NHZ populations have not been calculated for barn owl, but the most Scottish Raptor Monitoring Scheme records for the Ross-shire area

[76] RSPB Scotland (2018) The history and future of red kite conservation. Available online at https://community.rspb.org.uk/ourwork/b/scotland/posts/red-kite-conservation. Website accessed 28/01/25
[77] Scottish Raptor Study Group (2025) Red Kite https://www.scottishraptorstudygroup.org/raptors/red-kite/

identified 14 active territories in 2022 (Challis, A. et al., 2023) although this is likely to be an underestimate. If a pair is displaced, this would affect 7% of the Ross-shire population and would be a **medium magnitude** impact on the local population, resulting in a **significant** effect at the local scale. As a result, additional mitigation has been identified in **Section 9.8 – Section D Additional Mitigation**.

9.8.205 No flights by barn owl were recorded during surveys, though given the species' ecology, activity is often under-recorded. Barn owls have a home range of between 1 km during the breeding season, extending up to 4 km in the non-breeding season[78], and therefore there is a high probability for birds from both territories recorded during baseline surveys to come into contact with the Proposed Development during its operational phase. The level of collision risk by barn owls with overhead lines is poorly understood, and whilst birds can avoid collision, younger birds are believed to be at particular risk when they first disperse from the nest site[79]. If dispersing birds suffer collision mortality, the impacts are considered to be of **small magnitude** and will be **not significant**.

Effects on Designated Sites

9.8.206 Designated sites have been taken forward for more detailed assessment where the results of baseline surveys have identified potential impacts on qualifying features within published connectivity distances. Impacts on all other designated sites have been assessed as **not significant**. Impacts on European Sites and Ramsar sites are discussed further in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA).**

Cromarty Firth SPA / Ramsar / SSSI

9.8.207 Three qualifying features of the SPA, Ramsar Site and SSSI, greylag goose, whooper swan and osprey, were recorded during baseline surveys of Section D of the Proposed Development within connectivity distances from the SPA. Two of the qualifying species - greylag goose and osprey - are classified as being in favourable condition, whilst the third - whooper swan – has been classified as being in unfavourable condition since prior to 2010[80].

9.8.208 The SPA and Ramsar citation states that during the breeding season the site supports up to 25 osprey territories, equal to 12.5% of the GB population, with one pair breeding within the SPA, equal to 1% of the GB population. During the non-breeding season mean wintering populations of greylag geese, 1,782 birds, (equal to 2% of the UK population); together with 64 whooper swans (1% of the GB population) are qualifying features.

9.8.209 Given the distance from the Proposed Development to the SPA, Ramsar and SSSI boundary within Section D (approximately 4.7 km at its closest point), no disturbance impacts on birds within the SPA / Ramsar/SSSI will occur. Impacts of disturbance and displacement on foraging by the qualifying species during construction are assessed as **negligible** and **not significant**, based on the distance between foraging areas and the Proposed Development, the relatively limited area of suitable habitats which will be affected by disturbance, the temporary duration of the impacts and the abundant alternative suitable foraging habitat closer to the SPA which birds will be able to use if displaced.

Within Section D, a single osprey nest was recorded outwith potential disturbance distance from the Proposed Development but within potential connectivity distance to the SPA and could form part of the SPA population. The nest is approximately 11 km from the SPA boundary. Habitats within the SPA are therefore beyond the core foraging range for birds in this territory (10 km), but within the distance where some regular foraging may occur regular (20 km). With embedded mitigation measures in place, disturbance and displacement of the nest

[78] https://www.barnowltrust.org.uk/barn-owl-facts/barn-owl-home-range/. Website accessed 29/01/25.
[79] https://www.barnowltrust.org.uk/hazards-solutions/electrocution-wires-barn-owls/. Website accessed 29/01/25.
[80] Scotland's Environment – Protected Nature Sites - https://informatics.sepa.org.uk/ProtectedNatureSites/. Website accessed January 2025

will be avoided and therefore the assessment is that the impact of the Proposed Development upon the SPA will be **negligible** and **not significant**.

9.8.210 Given the low level of recorded flight activity at CRH by all three species, impacts from collision effects will be **negligible** and **not significant**.

Dornoch Firth and Loch Fleet SPA / Ramsar / SSSI

9.8.211 Two qualifying features of the Dornoch Firth and Loch Fleet SPA / Ramsar / SSSI, greylag goose and osprey, were recorded during baseline surveys of the Proposed Development of Section D within connectivity distances from the SPA. Both species being classified as being in favourable condition.

9.8.212 The SPA and Ramsar citation states that the site supports six osprey territories, equating to 6% of the GB population with one pair breeding within the SPA and six pairs that have connectivity to the SPA for foraging. Wintering greylag geese are a qualifying feature, with a mean wintering population of 1,146 birds.

9.8.213 Given the distance from the Proposed Development to the SPA / Ramsar / SSSI boundary within Section D (approximately 13 km at its closest point), no disturbance impacts on birds within the SPA / Ramsar / SSSI will occur. Impacts on disturbance and displacement of foraging greylag geese outside of the SPA during construction are assessed as **negligible** and **not significant**, based on the relatively limited area of suitable habitats that will be affected, the temporary duration of the impacts and the abundant alternative suitable foraging habitat closer to the SPA which birds will be able to use if displaced.

Within Section D, a single osprey nest was recorded but was situated both outwith potential disturbance distance from the Proposed Development and outwith potential connectivity distance to the SPA, situated approximately 39 km from the SPA boundary. Habitats within the SPA are therefore beyond the core foraging range for birds. Therefore, the impact of the Proposed Development upon this qualifying feature of the SPA will be **negligible** and **not significant**.

9.8.214 Given the relatively low level of recorded flight activity by both species, impacts from collision effects will be **negligible** and **not significant.**

Inner Moray Firth SPA / Ramsar

9.8.215 Baseline surveys of Section D of the Proposed Development recorded two qualifying features of the Inner Moray Firth and SPA / Ramsar within potential connectivity distance, greylag goose and osprey. Both the osprey and greylag goose populations of the SPA is classified as being in favourable condition.

9.8.216 The SPA / Ramsar citation states that during the species the location supports up to 25 osprey territories, equal to 12.5% of the GB population, with four pairs breeding within the SPA, equal to 4% of the GB population.

Within Section D, a single osprey nest was recorded but was situated both outwith potential disturbance distance from the Proposed Development and beyond the core foraging range of osprey from the SPA, situated approximately 13 km from the SPA boundary. Therefore, the impact of the Proposed Development upon this qualifying feature of the SPA will be **negligible** and **not significant**.

9.8.217 Given the relatively low level of recorded flight activity by both species, impacts from collision effects will be **negligible** and **not significant.**

Morangie Forest SPA

9.8.218 The site supports approximately 30 individuals, representing about 2.8% of the GB population. The capercaillie population in the SPA is classified as being in favourable condition.

9.8.219 Given the distance from the Proposed Development to the SPA boundary within Section D (approximately 8 km at its closest point), no disturbance nor displacement impacts on birds within the SPA will occur during the construction phase and therefore these are assessed as **negligible** and **not significant**, based on the distance between potential foraging areas outside the SPA and the Proposed Development and the relatively limited area of suitable habitat.

9.8.220 Given the absence of recorded flight activity, in relation to the location of the SPA, impacts from collision effects during the operational phase will be **negligible** and **not significant**.

Novar SPA

9.8.221 The site supports approximately 13 individuals, representing about 1.2% of the GB population. The capercaillie population in the SPA is classified as being in favourable condition.

9.8.222 Given the distance from the Proposed Development to the SPA boundary within Section D (approximately 2 km at its closest point), no disturbance nor displacement impacts on birds within the SPA will occur during the construction phase and therefore these are assessed as **negligible** and **not significant**.

9.8.223 Potential habitat fragmentation and loss as a result of forest clearance and maintenance of the operational corridor could result in a loss of foraging or dispersal habitat for birds originating from the SPA. This could result in a **small magnitude** effect on the SPA capercaillie population, resulting in a **significant** effect at an international scale in the absence of mitigation. As a result, additional mitigation has been identified in **Section 9.8 – Section D Additional Mitigation**.

9.8.224 No capercaillie flights were recorded during baseline surveys, however small numbers of birds dispersing from the SPA may cross the Proposed Development, particularly during spring or autumn dispersal. However capercaillie typically fly relatively low, and the risk of collision mortality with the OHL is considered to be negligible. Birds are considered unlikely to collide with the lattice towers which will be constructed for the Proposed Development, given their size and visibility. As a result, impacts from collision mortality on the SPA population are considered to be **negligible** and **not significant**.

Strath Carnaig to Strath Fleet Moors SPA / SSSI

9.8.225 Strath Carnaig and Strath Fleet Moors SPA / SSSI, designated for breeding hen harrier, will be directly affected by the Proposed Development, as the Proposed Alignment passes directly through the site within Sections B and C. Section D is situated approximately 8 km from the nearest point of the SPA and as such has is outwith the core foraging range by the qualifying species (2km) but within the potential maximum range (10 km). The SPA / SSSI is designated for its breeding hen harrier population, supporting 12 breeding pairs / 2.5% of the UK population. The site is currently in unfavourable condition, with pressures relating to agricultural operations, burning, development, forestry operation, game / fisheries management and plant pests and diseases.

9.8.226 The breeding records for hen harriers in Section D were located approximately 22 km and 27 km respectively from the nearest point of the SPA and as such have no connectivity with the site, comprising a separate population.

9.8.227 Two flights, both at a distance of more than 9km from the SPA, were recorded within Section D during baseline surveys. Both flights were at CRH, but given the low incidence of flights, together with their relative distance

from the SPA, the impact of collision mortality adversely affecting the status of the SPA is assessed as **negligible** and **not significant**.

9.8.228 Equally the small area of land-take resulting from the construction of the OHL in Section D will have a **negligible** effect on the availability of suitable foraging habitat for hen harrier outwith the SPA, given the abundance of suitable alternative habitat closer to the SPA within the core range from the SPA (2 km) and therefore **not significant**.

Section D Additional Mitigation

Capercaillie – Habitat loss

9.8.229 Clearance of 107.98 ha of mature forest within Section D for construction and the operational corridor in areas with potential connectivity for foraging and dispersing capercaillie will lead to a reduction in the amount available foraging and roosting habitat and potential fragmentation of forested areas and reduced dispersal. An additional 125.01 ha of conifer plantation may be subject to management felling by relevant landowners in Section D, although it is anticipated that these areas will be re-stocked back to conifer plantation. Within the Operational Corridor, under-planting of lower-growing native shrubs (e.g. blaeberry) between Towers S111 and S129 will provide suitable compensatory mitigation through supplying foraging habitat and encouraging birds to enter and cross the operational corridor, whilst also meeting maintenance and operational Health and Safety (H&S) requirements for maintaining access and conductor clearance for the OHL. Providing sufficient ground cover will also allow birds to move across the operational corridor and reduce habitat fragmentation. Subject to the levels of browsing by deer, the area will be over-planted to accommodate a degree of loss to deer browsing. With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Black Grouse – Disturbance and Displacement

9.8.230 With 11 of a total of the 12 identified lek sites located within the disturbance buffer (<750 m) for the species relative to the Proposed Alignment, there is the potential for some leks closest to the alignment to be displaced or abandoned during operation. To improve overall habitat for black grouse, the Proposed Development's Offsite Biodiversity Net Gain and Irreplaceable Habitat Off-Site Strategy (included in **Volume 5 Appendix 8.8 Biodiversity Net Gain Report, Annex C**) will include measures to improve habitat for black grouse in the wider region. As a result, with the additional mitigation measures in place, residual effects will be **negligible** and **not significant.**

Red-throated Diver – Disturbance and Displacement

9.8.231 The one identified breeding site for red—throated diver is situated 511 m from the line of the Proposed Development, thereby falling within the disturbance distance limit (750 m) for the species. Red-throated divers are highly sensitive to disturbance and additional mitigation during the construction and operational phases are required.

All construction / operational work within disturbance distance of the breeding lochan will, where possible, be restricted to the non-breeding season. If works are required during the breeding season, works will be undertaken in line with SSENs Bird SPP. If the need is identified by the ECoW, visual or noise reducing screening will be erected to avoid disturbance to waterbodies.

9.8.232 With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Red-throated Diver – Collision Risk

9.8.233 Although no flights were recorded of red-throated diver commuting to or from the identified breeding lochan, the proximity of the Proposed Development to the territory represents a potential collision risk. Commuting flights

are likely to be to the east, away from the Proposed Alignment to the Cromarty Firth, however the potential exists for birds circling to land on the loch or flying to lochs to the west such as Loch Shin, to cross the Proposed Alignment. As a result, bird flight diverters will be installed along the earth wire of the Proposed Development in the proximity of the breeding lochan, with specific flight diverter tower locations detailed in **Volume 5, Appendix 9.4c**. With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Barn Owl – Disturbance and Displacement

As a result of construction activity, a single barn owl nest/roost may be temporarily lost. The nest site will be monitored, and if birds cease to use it following construction, a barn owl nest box will be situated in suitable habitat within the territory outwith 100 m from the Proposed Development. With the additional mitigation measures in place, residual effects will be **negligible** and **not significant.**

Residual Effects

9.8.234 As a consequence of the application of embedded and additional mitigation measures, the residual effects predicted would be **negligible** and therefore **not significant** for the ornithological interests identified in Section D of the Proposed Development in the context of the EIA Regulations. **Table 9.14** summarises the residual effects in Section D.

Table 9.14: Summary of Residual Effects - Section D

Species	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Species						
Greylag goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Pink-footed goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Capercaillie	**Significant - international**	Not significant	Not significant	Not significant	Not significant	Not significant
Black grouse	Not significant	**Significant - regional**	Not significant	Not significant	Not significant	Not significant
Greenshank	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Red-throated diver	Not Significant	**Significant – regional**	**Significant – regional**	Not significant	Not significant	Not significant
Golden eagle	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Goshawk	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Hen harrier	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Red kite	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

Species	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Barn owl	Not significant	**Significant – local**	Not significant	Not significant	Not significant	Not significant
Designated Sites						
Cromarty Firth SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Dornoch Firth SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Inner Moray Firth SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Morangie SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Novar SPA	**Significant, international, capercaillie**	Not significant	Not significant	Not significant	Not significant	Not significant
Strath Carnaig and Strath Fleet SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

Section E

Impacts on Species

9.8.235 Throughout the species assessments, reference is made to two Natural Heritage Zone (NHZ) population estimates. Section E, whilst situated mostly within the boundary of NHZ 7 (north highland), is also located within NHZ 21 (Moray Firth) and towards the northern extent Section E. Where applicable, the most relevant NHZ population is employed in the conduction of assessments.

Greylag Goose

9.8.236 During construction of the Proposed Development, it is estimated that 1.68 ha of suitable habitat for foraging and roosting by greylag goose in Section E will be permanently lost and 14.12 ha temporarily lost. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. There is abundant alternative suitable foraging habitat for greylag goose in Section E, particularly east of the Proposed Development around Dingwall, Muir of Ord and Beauly and loss of habitat is predicted to be **negligible** and **not significant**.

9.8.237 Foraging greylag geese were recorded during baseline surveys, with flocks of 80, 200, 70, 47 and 17 birds recorded within potential disturbance distance (600m) of the Proposed Development. A flock of 70 birds was recorded landing to roost in field next to the Proposed Development. There is widespread alternative foraging and roosting habitat in the wider area around the Proposed Development within Section E which birds will be able to make use of if displaced by construction activity. Disturbance and displacement associated with construction of the Proposed Development will be temporary and reversible. As a result, disturbance from the construction phase will be **negligible** and **not significant**.

9.8.238 Greylag goose flights crossed the Proposed Alignment on 18 occasions, eight of which were at CRH. Flight activity was associated with foraging behaviour and the birds' preferences for specific fields or clusters of fields located in the north-east of the alignment. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest greylag geese have a high ability to avoid obstacles in flight (99.8% avoidance). Given the relatively low number of flights recorded at CRH and the species' high avoidance rate, there is a low risk of collision mortality and therefore the impact is assessed to be of **negligible magnitude** and is **not significant**.

Pink-footed Goose

During construction of the Proposed Development, it is estimated that 1.68 ha of suitable habitat for foraging and roosting by pink footed goose in Section E will be permanently lost and 14.12 ha temporarily lost. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas; however, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. There is abundant alternative suitable foraging habitat for pink-footed goose in Section E, particularly east of the Proposed Development around Dingwall, Muir of Ord and Beauly and loss of habitat is predicted to be **negligible** and **not significant**. Foraging wintering geese surveys recorded pink-footed goose on one occasion in November 2023 within potential disturbance distance (600m) of the Proposed Development when a flock of 555 birds and flock of 7 birds were recorded. A peak count of 100 pink-footed geese were recorded roosting at Loch Kinellan approximately 430 m east of the Proposed Development during winter roost counts. Roosting birds were also recorded during baseline surveys around the River Connon. There is widespread alternative foraging and roosting habitat in the wider area around the Proposed Development within Section E which birds will be able to make use of if displaced by construction activity. Moreover, Loch Kinellan is situated on the outskirts of Strathpeffer and subjected to a degree of disturbance from residential areas and recreational disturbance and birds using the roost may be habituated to a degree of human activity. Disturbance and displacement associated with construction of the Proposed Development will be temporary and reversible. As a result, disturbance from the construction phase will be **negligible** and **not significant**.

9.8.239 Pink-footed goose flights were recorded crossing the Proposed Alignment on four occasions, three of which was at CRH comprising 15, 22 & 140 birds. Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance rates calculated for onshore wind farms suggest pink-footed geese have a high ability to avoid obstacles in flight (99.8% avoidance). Given the low number of flights recorded at CRH, the species' high avoidance rates, there is a low risk of collision mortality and therefore the impact is assessed to be **negligible** which is **not significant**.

Whooper Swan

9.8.240 During construction of the Proposed Development, it is estimated that 1.68 ha of suitable habitat for foraging and roosting by pink footed goose in Section E will be permanently lost and 14.12 ha temporarily lost. Construction activity will result in a temporary loss of habitat associated with displacement of birds from construction areas. However, this impact will be restricted to individual tower locations at any one time and will be short term and temporary in nature. There is abundant alternative suitable foraging habitat for whooper swan in Section E, particularly east of the Proposed Development around Dingwall, Muir of Ord and Beauly and loss of habitat is predicted to be **negligible** and **not significant**.

Winter foraging surveys recorded one flock of whooper swans within the published disturbance distance for the species (200-600 m)[17] of the Proposed Development. During wintering roost surveys a flock of 11 whooper swans were recorded at Loch Achonachie approximately 100 m from the Proposed Development and approximately 300 m northwest of the Proposed Alignment. Any disturbance and displacement associated with construction of the Proposed Development will be temporary and reversible. There is widespread alternative

foraging and roosting habitat in the wider area around the Proposed Development within Section E which birds will be able to make use of if displaced by construction activity. Loch Achonachie is a relatively large waterbody (approximately 2 km long) and if birds are displaced from the eastern end, it is likely that they will use areas further west on the loch. As a result, impacts from disturbance and displacement will be temporary and reversible and of **negligible magnitude** and **not significant**.

9.8.241 Whooper swan was recorded in flight on 12 occasions with flight activity mostly concentrated in the north of Section E immediately north of the River Conon and within the far north-east of Section E. Flights crossed the alignment on six occasions, four of which observed at CRH comprising 25 birds in total. Avoidance rates have not been calculated for OHLs for bird species in Scotland, however, avoidance rates calculated for onshore wind farms suggest whooper swan have a high ability to avoid obstacles in flight (99.5% avoidance). Given the low number of flights recorded at CRH, the species' high avoidance rates, there is a low risk of collision mortality and therefore the impact is assessed to be of **negligible magnitude** which is **not significant**.

Capercaillie

No breeding evidence of capercaillie was recorded during baseline surveys within Section E, though one caecal dropping (indicative of a roost location) was located on a track edging woodland to the north of Strathpeffer, 800 m west of the proposed alignment. The record was approximately 12 km southwest of Nover SPA. The Ben Wyvis & Strathpeffer Woodlands Land Management Plan recognises there are occasional records of hen capercaillie in these woodlands[81] although no records of leks were identified during the desk-based review within Section E, indicating birds in the area are unlikely to represent a distinct breeding population. Capercaillie have a moderate to high sensitivity to disturbance with non-breeding birds tolerant to disturbance to within 100 m. During the breeding season, however, this distance increases to 150 m for nesting females and 1,000 m for displaying males (NatureScot 2024). The number of birds present within woodlands within Section E is likely to be low, given the distance from the nearest confirmed breeding population at Novar SPA, and the with embedded mitigation measures in place, the risk of disturbance during the construction phase is assessed as of **negligible magnitude** and **not significant**.

Construction of the Proposed Development and maintenance of the operational corridor is estimated to result in the permanent loss of 67.64 ha and temporary loss of 18.12 ha of woodland within Section E. This woodland comprises primarily conifer plantation and whilst in itself representing a sub-optimal habitat for breeding capercaillie it does offer a source of cover and limited feeding potential by the species and may help to support the capercaillie population in woodlands northwest of Strathpeffer. An additional 41.29 ha of conifer plantation may be subject to management felling by relevant landowners in Section E, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). Given its sub-optimal nature and the distance from the nearest confirmed breeding population at Novar, and the fact that the majority of the woodland is plantation forestry subject to regular rotational felling, the loss of the habitat within Section E represents a negligible loss of suitable habitat for capercaillie. As a result, the loss of woodland habitat within Section E is assessed as of **negligible magnitude** and **not significant**.

9.8.242 No flights by capercaillie were recorded during baseline surveys. During the breeding season flight movements of capercaillie involve smaller distances are less than during pre- and post-breeding dispersal phases when (predominantly female) birds have been recorded moving up to 20 km from established territories. (Fletcher, K. and Baines, D., 2020)[82] , (Moss, R. and Picozzi, N., 1994)[83]. The route of the proposed alignment within section

[81] Ben Wyvis & Strathpeffer Woodlands Land Management Plan - 2017-2027 (2017) Forestry and Land Scotland https://forestryandland.gov.scot/media/5vmngp2b/benwyvis_strathpeffer_woodlands_lmp_text.pdf

[82] Fletcher, K., and Baines, D. 2020. Observations on breeding and dispersal by Capercaillie Strathspey. Scottish Birds 40, pp 27-34.

[83] Moss, R. & Picozzi, N. 1994. Management of Forestry for Capercaillie in Scotland. Forestry Bulletin 113. Institute for Terrestrial Ecology, Banchory.

E is approximately 11.5 km from the Novar SPA, for which the species is the qualifying feature. Given the distance from the SPA, the number of capercaillie present in woodlands within Section E is likely to be low, and the risk of collision mortality similarly low. As a result, the risk of collision mortality is assessed as of **negligible magnitude** and **not significant**.

Black Grouse

9.8.243 Construction of the Proposed Development and maintenance of the operational corridor is estimated to result in the permanent loss of 67.64 ha and temporary loss of 18.12 ha of woodland within Section E. An additional 41.29 ha of conifer plantation may be subject to management felling by relevant landowners in Section E, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). However permanent impacts represent a small fraction of the alternative suitable habitat within the wider area around the Proposed Development. As a result, the loss of supporting habitat for black grouse is considered to be **negligible** and **not significant**.

9.8.244 Two active black grouse leks were recorded during baseline surveys of Section E. Six males were recorded at one lek approximately 100 m west of the Proposed Development with six more recorded at a lek approximately 750 m west of the Proposed Development. The loss of these two leks would impact 12 males, equating to 2.5% (12 out of 473 calling males) of the regional (NHZ 7) population. Both leks are within potential disturbance distance and could be impacted by construction of the Proposed Development. During construction, embedded mitigation will avoid disturbance to leks. However once the Proposed Development is operational, birds may be displaced or abandon leks due to the proximity of permanent infrastructure. In the absence of mitigation, displacement or abandonment of leks during operation is assessed as a permanent impact of **medium magnitude** and a **significant** effect at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation**.

9.8.245 Black grouse was recorded in flight on four occasions. None of the flights crossed the Proposed Alignment. Two flights were at CRH. Given the relatively low number of flights at CRH and considering none of the flights crossed the Proposed Alignment, collision impacts are assessed to be of **negligible magnitude** and **not significant.**

Slavonian Grebe

9.8.246 During breeding bird surveys, two pairs of adults were recorded holding territory within the survey buffer of Section E, although no breeding was confirmed. One pair was recorded within potential disturbance distance of a temporary access track which will form part of the Proposed Development and could be subject to disturbance if construction activity occurs during the breeding season. There are no NHZ population estimates for Slavonian grebe, however the national population is estimated to be approximately 20 pairs[84]. As birds were not confirmed breeding, embedded mitigation would not require the establishment of buffer zones, however disturbance may still cause birds to be displaced from suitable habitat which may be used for breeding in future. Disturbance and displacement of one pair could therefore result in the loss of 5% of the potential breeding population. This would be **medium** magnitude and a **significant** effect a national scale. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation**.

9.8.247 No flights of Slavonian grebes were recorded during baseline surveys of the Proposed Development and the risk of collision with the Proposed Development is assessed as of **negligible magnitude** and **not significant**. Similarly, no loss of Slavonian grebe habitat is predicted as a result of the Proposed Development, and the effects of habitat loss are assessed as no effect and are **not significant**.

[84] British Birds (2023) Rare Breeding Birds in the UK in 2021. British Birds Vol.116 609-684.

Red-throated Diver

9.8.248 Two breeding lochs were recorded during baseline surveys of Section E. Both confirmed territories were located within potential disturbance distance (750m) of the Proposed Development and as such there is potential for both territories to be abandoned during the construction phase of the Proposed Development. The impact may be reversible with birds potentially returning following the completion of construction activity. The loss of both pairs would equate to breeding territory equates to 5.1% of the regional territorial population (NHZ 7, total estimated population, 39 pairs) and would be an impact of **medium** magnitude, resulting in a **significant** effect at a regional scale. The Applicants Bird SPP may be sufficient, however additional mitigation may be required. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation**.

9.8.249 Four red-throated diver flights were recorded during FAS of Section D, with two flights crossing the Proposed Alignment, of which one was at CRH. Although the number of flights recorded was relatively low, it is likely that flight activity associated with the breeding territories is under recorded. Given the proximity of confirmed territories to the Proposed Alignment and the likelihood of birds associated with the territory crossing the Proposed Alignment, there is the potential for collision impacts to affect the confirmed territories in Section E. Collision mortality would lead to the likely failure of an affected pair, and would be an impact of **medium** magnitude, resulting in a **significant** effect at a regional scale. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation**.

Osprey

9.8.250 There will be no direct loss of osprey foraging habitat as a result of the Proposed Development. Felling of forestry, including for the operational corridor and management felling may remove potential nest trees. However, no nests in forestry will be lost as a result of the Proposed Development, and there is abundant alternative suitable woodland nesting habitat available. As a result effects from loss of habitat will be **negligible** and **not significant**.

9.8.251 Breeding raptor surveys recorded one confirmed territory within potential disturbance distance of the Proposed Development (750), situated approximately 300 m north of the Proposed Development and approximately 380 m north of the Proposed Alignment. The pair equate to 2.9% of the breeding population for NHZ 21 (Wilson, M. *et al.* 2015). The nest is within foraging distance of the Inner Moray Firth SPA / Ramsar, Beauly Firth SSSI and Cromarty Firth SPA / Ramsar all of which list breeding osprey as a qualifying feature. Details of another breeding site within potential disturbance distance was also obtained from the HRSG but data from the last four years indicate that it has been unoccupied and therefore it has not been taken forward for assessment. With embedded mitigation measures in place, including implementation of the Applicants Bird SPP, effects on the confirmed territory will be avoided and therefore, effects will be **negligible** and **not significant**.

9.8.252 Osprey was recorded in flight on twenty-nine occasions with 14 flights crossing the Proposed Alignment, 12 of which were at CRH. Baseline surveys of other sections (Sections A, B and C) regularly recorded ospreys crossing existing OHLs. It is anticipated that this same degree of learnt behaviour and familiarity will develop in association with the new OHL of the Proposed Development, once it is installed. However given the relatively high number of flights across the alignment where it spans the River Beauly, the risk of collision is considered to be relatively high, resulting in an impact of **medium magnitude** and a **significant** effect at an international scale. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation**.

Goshawk

9.8.253 One confirmed nest, equating to 12.5% of the regional population (NHZ 7, northern highlands), was located in the 2024 breeding season; location details are presented in **Volume 5, Appendix 9.4b: Ornithology Confidential Report – Sections C, D and E**.

The confirmed nest was located within 250 m of the closest proposed tower location. Embedded mitigation measures, including establishment of buffer zones out to 500m from nest sites and oversight of construction activity by an ECoW, will avoid disturbance to the nest during construction. Construction of the Proposed Development will not result in any felling of forestry within the woodland block where the current nest is located. Goshawks are known to construct multiple (between one and five) nests within an overall territory[85], with alternate nest sites being on average 266 m apart[86] and movement between nest sites in some cases occurring from year to year. As a result, it is anticipated that the breeding pair will relocate to a suitable alternate nest site in the vicinity within the wider territory if the confirmed nest site becomes unfavourable once construction has been completed. As a result, impacts from disturbance and displacement are considered to be **negligible** and **not significant**.

In Scotland, goshawk is a species closely associated with large stands of mature coniferous woodland. During construction of the Proposed Development, it is estimated that 32.6 ha of mature forest within the identified goshawk territory will be felled, assuming a core foraging range of 3 km. This represents approximately 3% of the total wooded area within the territory based on OS woodland cover data. Penteriani, V., & Faivre, B. 2001[87] determined that as long as woodland felling does not exceed >30% of the total woodland cover in the territory, the species is unlikely to be displaced from the nest area. An additional 41.29 ha of conifer plantation may be subject to management felling by relevant landowners in Section E, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**) and the felling will mimic the rotational felling management of the conifer plantations in the wider area, Goshawks often hunt outside of woodland areas, with rabbits often the most abundant mammal prey (Forrester et al, eds, 2007). As a result, it is predicted that woodland felling associated with the Proposed Development will not affect the goshawk population within Section E, resulting in a **negligible magnitude** and be **not significant**.

The low-level of flight activity recorded for goshawk in Section E in part reflects the cryptic nature of the species, which is comparatively difficult to record in flight outwith of the courtship breeding and juvenile dispersal phases of the breeding season. No flights were recorded at CRH crossing the Proposed Alignment. Goshawk predominantly hunt in woodland and are highly agile and considered to have a high ability to avoid collisions. As a result, the risk of collision is considered to be **negligible** and the effect to be **not significant**.

Red Kite

9.8.254 During construction of the Proposed Development, it is estimated that 1.68 ha of suitable habitat for foraging by red kite in Section E will be permanently lost, and 14.12 ha will be temporarily lost. An additional 67.64 ha will be converted through felling of forestry but still available for foraging. An additional 41.29 ha of conifer plantation may be subject to management felling by relevant landowners in Section E, although it is anticipated that these areas will be re-stocked back to conifer plantation (see **Chapter 13: Forestry, Section 13.6**). Given red kite's foraging range of between 4-6 km and relatively wide range of prey species loss and changes to habitat are predicted to result in a **negligible** and be **not significant**.

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[85] Schaffer, W., Beck, b., Beck, J., Bonar, R., & Hunt, L. 1999. Northern goshawk reproductive habitat suitability index model. Version 3.

[86] Speiser, R., Bosakowski, T. 1991. *Nesting phenology, site fidelity, and defense behavior of northern goshawks in New York and New Jersey*. Journal of Raptor Research. 25(4):132-135.

[87] Penteriani, V. & Faivre, B. 2001. *Effects of harvesting timber stands on goshawk nesting in two European areas*. Biological Conservation 101 (2001) 211–216.

9.8.255 There is little recent population data for the species, but a breeding population estimate of more than 273 pairs was determined in 2015 (Challis et al., 2016) with the wintering Scottish population estimated at 300-350 birds. (Forrester, R. et al., 2007). Of the breeding population, nine breeding pairs are estimated to be present in NHZ 7 (north highlands), together with 50 pairs from the adjacent NHZ 21 (Moray Firth), from where the red kite population has expanded following a successful reintroduction program in this locality in the late 20th century[88]. The number of breeding pairs in Scotland has doubled every 4-6 years[89]. Both NHZs are used in the assessment for this species in lieu of the significance of the reintroduction program in influencing relative abundance of the species in proximity to Section E, and the populations are likely to underestimate the actual current population.

9.8.256 Four confirmed and two probable nest locations were recorded during surveys within the 2 km survey buffer. Three of these were within potential disturbance distance of the Proposed Development in Section E. Construction of the Proposed Development is likely to result in the loss or displacement of these breeding sites due to the presence of the towers once constructed, and the felling of woodland around nest locations as part of construction works. This would represent 5% of the combined NHZ 7 and NHZ 21 population. Given the rapid expansion of the red kite population this is likely to be an overestimate of the percentage impact.

9.8.257 There is abundant alternative suitable breeding habitat present around each of the nest sites that could be lost, and it is anticipated that pairs will build new nests nearby if displaced. Given the expanding population, any vacated territories are likely to be filled by birds dispersing from other areas. As a result, disturbance impacts will be **negligible** on the regional population and **not significant.**

9.8.258 Red kite was recorded in flight on 606 occasions with 255 flights crossing the Proposed Alignment, 220 of which were at CRH. Avoidance rates have not been calculated for OHLs for bird species in Scotland; however, avoidance rates calculated for onshore wind farms suggest red kite have a relatively high ability to avoid obstacles in flight (99% avoidance). The Scottish breeding population of red kite has doubled every 4-6 years since birds were re-introduced, with the population being one of the most productive in Europe[90]. Any small increase in additional mortality resulting from collision with the OHL is therefore not predicted to affect the expanding population. Therefore, due to the species' high avoidance rate and increasing population, the risk of collision mortality affecting the regional population of NHZ 7 and NHZ 21 is considered to **negligible** and is **not significant**.

Merlin

9.8.259 Breeding raptor surveys recorded a confirmed territory, approximately 140 m from the Proposed Development and approximately 200 m from the Proposed Alignment, within the published disturbance distance for merlin of 500 m. Embedded mitigation measures will avoid disturbance to this nest location during the breeding season, however the presence of the constructed towers and permanent access track of the operational development may cause birds to abandon this nest location. Some pairs re-nest within 300 m of a previous year's nest in subsequent years, and some up to 3.5 km from previous nest (Hardey et al, 2013). As a result, it is anticipated that if displaced from the operational OHL, birds will nest in alternative suitable habitat which is abundant within the area. As a result, effects on disturbance and displacement will be **negligible a**nd **not significant.**

During construction of the Proposed Development, it is estimated that 11.92 ha of open habitats within Section E will be permanently lost. The loss of small areas of moorland habitat under the construction footprint and presence of towers of the Proposed Development will not prevent hunting activity for merlin and there is

[88] RSPB Scotland (2018) The history and future of red kite conservation. Available online at https://community.rspb.org.uk/ourwork/b/scotland/posts/red-kite-conservation. Website accessed 28/01/25
[89] Scottish Raptor Study Group (2025) Scottish Raptors - Red Kite https://www.scottishraptorstudygroup.org/raptors/red-kite/ Accessed 21/02/2025 .
[90] Scottish Raptor Study Group (2025) Red Kite https://www.scottishraptorstudygroup.org/raptors/red-kite/

abundant alternative suitable nesting habitat outwith the Proposed Development footprint. As a result, habitat loss associated with the Proposed Development will be **negligible** and **not significant**.

9.8.260 Merlin was recorded in flight on seven occasions during FAS, crossing the Proposed Alignment on three occasions at collision risk. Merlin typically hunt over moorland rapidly pursuing passerine prey and are highly manoeuvrable. As a result, the risk of collision is considered to be **negligible** and the effect to be **not significant**.

Peregrine

9.8.261 During surveys one peregrine nest site was recorded within potential disturbance distance of the proposed Development along the River Beauly. No evidence of breeding was recorded, and it is thought likely that recreational use of the river had caused disturbance to the nest site. Embedded mitigation measures will avoid disturbance to this nest site if birds attempt to breed in the same location during construction of the Proposed Development. As a result, the effect is considered to be of **negligible** magnitude and **not significant.**

9.8.262 Peregrine are primarily aerial hunters, and the construction of the proposed Development is not anticipated to result in the loss of any suitable foraging habitat or known nest sites. As a result, loss of habitat is considered to be **negligible** and **not significant**.

9.8.263 Peregrine was recorded in flight on five occasions during FAS, with no flights crossing the alignment. Peregrine are manoeuvrable fliers with acute eyesight. As a result, the risk of collision is considered to be **negligible** and the effect to be **not significant**.

Impacts on Designated Site(s)

9.8.264 Designated sites have been taken forward for more detailed assessment where the results of baseline surveys have identified potential impacts on qualifying features within published connectivity distances. Impacts on all other designated sites have been assessed as not significant. Impacts on European Sites and Ramsar sites are discussed further in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**.

Inner Moray Firth SPA / Ramsar

9.8.265 The SPA / Ramsar is approximately 5 km from the Section E Proposed Alignment and qualifies by regularly supporting an assemblage of migratory birds including osprey, common tern, waterfowl and waders. Osprey forage throughout the SPA (2008 to 2012, up to 25 territories within feeding range, 12.5% of the GB population, with 4 pairs breeding within the site, 4% of the GB population). Osprey was recorded in flight within Section E on twenty-nine occasions with eleven flights crossing the Proposed Alignment, nine of which at CRH. Breeding raptor surveys within Section E recorded two confirmed territories within 2 km of the Proposed Development, one within potential disturbance distance. Both nests were within potential connectivity distance of the SPA (10 km core range with regular foraging up to 20 km). With embedded mitigation measures in place, potential disturbance and displacement to breeding osprey will be **negligible** and **not significant**. Flight activity of osprey across the proposed alignment was concentrated between Towers S228 and S229 and could involve birds from the SPA population, resulting in a **significant** effect. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation.**

The SPA supports greylag goose (2,651 individuals, 3% of the Iceland /UK / Ireland biogeographic population) and whilst flights crossed the Section E Proposed Alignment on 13 occasions, eight of which were at CRH, flight activity was largely associated with foraging behaviour and the birds' preferences for specific fields or clusters of fields located in the north-east of the Proposed Alignment. Birds were frequently observed foraging outwith within 1 km of the Proposed Development. Similarly wintering geese roost surveys recorded movements of greylag goose more generally north of the River Conon. Given the core foraging range from

overnight roosts of greylag geese (15-20 km) it is possible that the birds recorded could form part of the SPA population. However, there is widespread alternative foraging and roosting habitat suitable for greylag goose outside of the Proposed Alignment. Effects on the SPA greylag goose population are therefore considered to be **negligible** and **not significant**.

9.8.266 In the baseline surveys, four qualifying species from the Inner Moray Firth SPA were identified: teal, goldeneye, curlew, and cormorant. No additional qualifying species were noted within Section E. Given the low level of flight activity and limited records of teal, goldeneye, curlew, and cormorant within Section E, in addition to the distance between Section E and the Inner Moray Firth SPA, these species were not carried forward through to assessment, as no impacts are anticipated.

Beauly Firth SSSI

9.8.267 The SSSI is approximately 5 km from the Proposed Alignment in Section E and is part of the Inner Moray Firth SPA. Non-breeding populations of greylag geese, red-breasted merganser and goosander are all notified features of the SSSI. The assessment of the impact significance for Beauly Firth SSSI greylag goose population mirrors the previous evaluation conducted for Inner Moray Firth SPA greylag goose population, and effects will be **negligible** and **not significant.**

Moray Firth SPA

9.8.268 The SPA is approximately 1 km from the Proposed Alignment in Section E and qualifies by regularly supporting non-breeding populations of waterfowl and migratory birds. The only qualifying feature species recorded during baseline surveys was red-throated diver. However, all observations of red-throated diver were recorded during the breeding season rather than the non-breeding season. Non-breeding red-throated diver typically winter offshore and will not be affected by the Proposed Development. The impact is assessed to be of **negligible magnitude** and **not significant**.

Cromarty Firth SPA / Ramsar/ SSSI

9.8.269 The Cromarty Firth SPA / Ramsar / SSSI is approximately 7.6 km from Section E of the Proposed Development and qualifies by regularly supporting an assemblage of breeding osprey and common tern and non-breeding waterfowl and waders.

9.8.270 Osprey forage throughout the site (2008 to 2012, up to 25 territories within feeding range, 12.5% of the GB population, with 1 pair breeding within the site, 1% of the GB population). Osprey was recorded in flight within Section E on twenty-nine occasions with eleven flights crossing the Proposed Alignment, nine of which at CRH. Breeding raptor surveys within Section E recorded two confirmed territories within 2 km of the Proposed Development, one within potential disturbance distance. Both nests were within potential connectivity distance of the SPA (10 km core range with regular foraging up to 20 km). Given the potential connectivity distance to the SPA, the recorded nests could form part of the SPA population. With embedded mitigation measures in place, potential disturbance and displacement to breeding osprey will be **negligible** and **not significant**. Flight activity of osprey across the proposed alignment was concentrated between Towers S228 and S229 and could involve birds from the SPA population, resulting in a **significant** effect. As a result, additional mitigation has been identified in **Section 9.8 – Section E Additional Mitigation.**

Cromarty Firth SPA / Ramsar / SSSI provides habitat for a wintering population of whooper swan, with a peak mean of 64 individuals recorded from the winter seasons of 1992/93 to 1996/97, representing 1% of the Great Britain population. Baseline surveys recorded foraging and roosting whooper swans in Section E of the Proposed Development. If birds are displaced from the Proposed Development area during construction, it is anticipated that they will use alternative abundant suitable habitat. In addition, Section E is outwith the core

foraging range from overnight roosts of whooper swan (5 km) and as a result, impacts on the SPA whooper swan population are not predicted.

9.8.271 The SPA supports greylag goose (1,782 individuals, 2% of the Iceland / UK / Ireland biogeographic population). Surveys of Section E recorded greylag geese in flight across the Proposed Alignment and roosting and foraging in fields close the Proposed Development. Given the core foraging range from overnight roosts of greylag geese (15-20 km) it is possible that the birds recorded could form part of the Cromarty Firth SPA/ Ramsar/ SSSI population. However, there is widespread alternative foraging and roosting habitat suitable for greylag goose. If birds are displaced from the Proposed Development during construction, it is anticipated that they will use this alternative available habitat. As a result, impacts on the SPA population will be **negligible** and **not significant**.

9.8.272 The impacts of habitat loss, disturbance or displacement, and collision risk mortality during the construction and operational phases of the Proposed Development within Section E will not adversely affect the integrity of Cromarty Firth SPA / Ramsar / SSSI or its qualifying features. The impact is assessed to be of **negligible** magnitude and **not significant**.

Section E Additional Mitigation

Black Grouse - Disturbance and Displacement

9.8.273 Black grouse have small home ranges, and lek sites are often long-established features, therefore provision of suitable alternative areas for this part of the breeding cycle is not straightforward. Male birds stay close to the lek site, whereas post-breeding females can disperse over several kilometres[91]. In mitigating against lek site loss, therefore it is recommended that a wider-scale management programme aimed at improving the species' habitat is drawn together and implemented. To improve overall habitat for black grouse, the Proposed Development's Offsite Biodiversity Net Gain and Irreplaceable Habitat Off-Site Strategy (included in **Volume 5 Appendix 8.8 Biodiversity Net Gain Report**) will include measures to improve habitat for black grouse in the wider region. As a result, with the additional mitigation measures in place, residual effects will be **negligible** and **not significant.**

Slavonian Grebe - Disturbance and Displacement

Construction activity within potential disturbance distance (350 m) of lochs used by Slavonian grebe during the breeding season could result in disturbance and displacement of potential breeding pairs. As a result, no construction activity will take place within 350 m of identified lochs occupied by Slavonian grebe during the breeding season unless check surveys are undertaken by an ECoW and works are overseen to check birds are not disturbed. If the need is identified by the ECoW, visual or noise reducing screening will be erected to avoid disturbance to waterbodies. These measures will be implemented through the production and approval of a species protection plan, incorporating, control of vehicle / pedestrian movements, and toolbox talks to all personnel. With the proposed mitigation in place, impacts will be avoided and will be **not significant.**

Red-throated Diver – Disturbance and Displacement

9.8.274 Two identified breeding sites for red-throated diver were identified, a northern site situated approximately 50 m from the Proposed Development, and a southern site situation approximately 530 m from the Proposed Development. Both fall within the disturbance distance limit (750 m) for the species. Red-throated divers are highly sensitive to disturbance and additional mitigation during the construction and operational phases are required.

[91] Game and Wildlife Conservation Trust (undated) Conserving the black grouse. Available online at https://www.gwct.org.uk/media/262659/Conserving-the-Black-Grouse.pdf

All construction / operational work within disturbance distance of breeding lochans will, where possible, be restricted to the non-breeding season. If works are required during the breeding season, works will be undertaken in line with SSENs Bird SPP. If the need is identified by the ECoW, visual or noise reducing screening will be erected to avoid disturbance to waterbodies.

9.8.275 With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Red-throated Diver – Collision Risk

9.8.276 In order to reduce the risk of collision around known breeding lochans, bird flight diverters will be installed along the earth wire of the Proposed Development in the proximity of the confirmed breeding lochans with specific flight diverter tower locations detailed in **Volume 5, Appendix 9.4c**. With this additional mitigation measure in place, residual effects will be **negligible** and **not significant**.

Osprey – Collision Risk

9.8.277 Given the relatively high number of flights across the River Beauly recorded during baseline surveys, flight diverters will be installed on the earth wire between Towers S228 and S229. With these measures in place, collision risk will be reduced, and effects will be **negligible** and **not significant**.

Residual Effects

9.8.278 As a consequence of the application of embedded and additional mitigation measures, the residual effects predicted would be **negligible magnitude** and **negligible** significance for the ornithological interests identified in Section E of the Proposed Development in the context of the EIA Regulations. **Table 9.15** summarises the residual effects in Section E.

Table 9.15: Summary of Residual Effects – Section E

	Pre-Mitigation Level of significance			Residual Level of significance		
Species	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Species						
Greylag goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Pink-footed goose	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Whooper swan	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Capercaillie	Not significant	Not significant	Not Significant	Not significant	Not significant	Not significant
Black grouse	Not significant	**Significant – regional**	Not significant	Not significant	Not significant	Not significant
Slavonian grebe	Not significant	**Significant – national**	Not significant	Not significant	Not significant	Not significant
Red-throated diver	Not significant	**Significant - regional**	**Significant - regional**	Not significant	Not significant	Not significant
Osprey	Not significant	Not significant	**Significant - international**	Not significant	Not significant	Not significant

Species	Pre-Mitigation Level of significance			Residual Level of significance		
	Habitat loss	Disturbance and displacement	Collision mortality	Habitat loss	Disturbance and displacement	Collision mortality
Red kite	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Goshawk	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Peregrine	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Merlin	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Designated Sites						
Inner Moray Firth SPA / Ramsar	Not significant	Not significant	**Significant – international - osprey**	Not significant	Not significant	Not significant
Beauly Firth SSSI	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Moray Firth SPA	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Cromarty Firth SPA/ Ramsar/ SSSI	Not significant	Not significant	**Significant – international - osprey**	Not significant	Not significant	Not significant

9.9 The Proposed Development as a Whole

The above sections assess the effects on IOFs from the individual Sections of the Proposed Development. These are summarised in **Table 9.16** and **Table 9.** below, showing both pre-mitigation and residual significance. Some receptors (including populations of birds from designated sites and from wider countryside populations) may be affected by more than one Section of the Proposed Development (e.g. hen harrier populations in Strath Carnaig and Strath Fleet SPA). In some cases, different regional populations of the same species will be affected (e.g. different NHZ populations affected by different Sections). However, with mitigation measures identified for individual Sections in place, effects from the Proposed Development as a whole on all bird species will be **not significant**.

Table 9.16: Summary of Residual Effects on Species

Species	Section A		Section B		Section C		Section D		Section E		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual
Greylag goose	Not Significant	Not Significant	**Significant - international**	Not significant	Not Significant	Not Significant	Not significant	Not significant	Not significant	Not significant	**Significant - international**	Not significant
Pink-footed goose	-	-	-	-	Not Significant	Not Significant	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Whooper swan	Not Significant	Not Significant	-	-	-	-	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Capercaillie	-	-	-	--	-	-	**Significant - international**	Not significant	Not significant	Not significant	**Significant - international**	Not significant
Black grouse	-	-	Not significant-	Not significant	Not Significant	Not Significant	**Significant - regional**	Not significant	**Significant - regional**	Not significant	**Significant - regional**	Not significant
Common scoter	**Significant - international**	Not significant	-	-	-	-	-	-	-	-	**Significant - international**	Not significant
Oystercatcher	-	-	Not significant	Not significant-	-	-	-	-	-	-	Not significant	Not significant-
Curlew	-	-	Not significant	Not significant-	-	-	-	-	-	-	Not significant	Not significant-
Golden plover	Not significant	Not significant	-	-	-	-	-	-	-	-	Not significant	Not significant-
Greenshank	Not significant	Not significant	-	-	-	-	Not significant	Not significant	-	-	Not significant	Not significant-
Redshank	-	-	Not significant	Not significant-	-	-	-	-	-	-	Not significant	Not significant-

Species	Section A		Section B		Section C		Section D		Section E		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual
Dunlin	Not significant	Not Significant	-	-	-	-	-	-	-	-	Not significant	Not significant-
Arctic skua	Not significant	Not significant	-	-	-	-	-	-	-	-	Not significant	Not significant-
Common gull	Not significant	Not significant	Not significant	Not significant-	-	-	-	-	-	-	Not significant	Not significant-
Herring gull	**Significant - international**	Not significant	Not significant	Not significant-	-	-	-	-	-	-	**Significant - international**	Not significant
Great black-backed gull	**Significant - international**	Not significant	-	-	-	-	-	-	-	-	**Significant - international**	Not significant
Slavonian grebe	-	-	-	-	-	-	-	-	**Significant – national**	Not significant	**Significant – national**	Not significant
Red-throated diver	**Significant - regional**	Not significant	**Significant - regional**	Not significant	-	-	**Significant - regional**	Not significant	**Significant - regional**	Not significant	**Significant - regional**	Not significant
Osprey	**Significant - regional**	Not significant	Not significant	Not significant	Not Significant	Not Significant	-	-	**Significant - international**	Not significant	**Significant - international**	Not significant
Golden eagle	**Significant - international**	Not significant	**Significant - regional**	Not significant	-	-	Not significant	Not significant	-	-	**Significant - international**	Not significant
White-tailed eagle	Not significant	Not significant	-	-	-	-	-	-	-	-	Not significant	Not significant
Honey buzzard	-	-	-	-	Not Significant	Not Significant	-	-	-	-	Not Significant	Not Significant
Red kite	Not significant	Not significant	Not significant	Not significant	Not Significant	Not Significant	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant

Species	Section A		Section B		Section C		Section D		Section E		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual	Pre-mitigation	Residual
Hen harrier	**Significant - international**	Not significant	**Significant - international**	Not significant	Not Significant	Not Significant	Not significant	Not significant	-	-	**Significant - international**	Not significant
Goshawk	-	-	-	-	Not Significant	Not Significant	Not Significant	Not Significant	Not significant	Not significant	Not significant	Not significant
Peregrine	Not significant	Not significant	-	-	-	-	-	-	Not significant	Not significant	Not significant	Not significant
Merlin	Not significant	Not significant	-	-	-	-	-	-	Not significant	Not significant	Not significant	Not significant
Short-eared owl	Not significant	Not significant	-	-	-	-	-	-	-	-	Not significant	Not significant
Barn owl	-	-	**Significant - local**	Not significant	-	-	**Significant – local**	Not significant	-	-	**Significant - local**	Not significant

Table 9.17: Summary of Residual Effects on Designated Sites

Designated Site	Relevant Sections		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual
Caithness and Sutherland Peatlands SPA / Ramsar	**Section A Significant – international - common scoter, golden eagle, hen harrier**	Section A- Not significant	**Significant – international - common scoter, golden eagle, hen harrier**	Not significant
	Section B - Not significant	Section B - Not significant		
Strath Carnaig and Strath Fleet Moors SPA and SSSI	**Section B - Significant – international – hen harrier**	Section B – Not significant	**Significant – international – hen harrier**	Not significant

Designated Site	Relevant Sections		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual
	Section C - Not Significant	Section C - Not Significant		
	Section D – Not Significant	Section D – Not Significant		
Shielton Peatlands SSSI	**Section A - Significant – national - golden eagle, hen harrier**	Section A - Not significant	**Significant - national - golden eagle, hen harrier**	Not significant
East Caithness Cliffs SPA	**Section A - Significant – international - herring gull and great black-backed gull**	Section A - Not significant	**Significant – international - herring gull and great black-backed gull**	Not significant
Berriedale Cliffs SSSI	**Section A - Significant – national - herring gull and great black-backed gull**	Section A - Not significant	**Significant - national – herring gull and great black-backed gull**	Not significant
Caithness Lochs SPA / Ramsar	Section A - Not significant	Section A - Not significant	Not significant	Not significant
Loch Watten SSSI, Loch Scarmcalte SSSI, Loch Calder SSSI	Section A - Not significant	Section A - Not significant	Not significant	Not significant
Dunbeath Peatlands SSSI	Section A - Not significant	Section A - Not significant	Not significant	Not significant
Strathmore Peatlands SSSI	Section A - Not significant	Section A - Not significant	Not significant	Not significant
Coir' an Eoin SSSI	Section A - Not significant	Section A - Not significant	Not significant	Not significant

Designated Site	Relevant Sections		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual
Dornoch Firth and Loch Fleet SPA / Ramsar	Section A - Not significant	Section A - Not significant	**Significant – international - greylag goose**	Not significant
	Section B – Significant – international - greylag goose	Section B – Not significant		
	Section C – Not significant	Section C – Not significant		
Dornoch Firth SPA	Section D – Not significant	Section D – Not significant	Not significant	Not significant
Mound Alderwoods SSSI	Section B – Not significant	Section B – Not significant	Not significant	Not significant
Inner Moray Firth SPA / Ramsar	Section D – Not significant	Section D – Not significant	**Significant – international, osprey**	Not significant
	Section E – Significant – international, osprey	Section E – Not significant		
Beauly Firth SSSI	Section E – Not significant	Section E – Not significant	Not significant	Not significant
Loch Fleet SSSI	Section B – Not significant	Section B – Not significant	Not significant	Not significant
Cromarty Firth SPA/ Ramsar/ SSSI	Section D – Not significant	Section D – Not significant	**Significant – international, osprey**	Not significant
	Section E – Significant – international, osprey	Section E – Not significant		

Designated Site	Relevant Sections		Propsoed Development as a Whole	
	Pre-mitigation	Residual	Pre-mitigation	Residual
Morangie SPA	Section D – Not significant	Section D – Not significant	Not significant	Not significant
Novar SPA	**Section D - Significant, international, capercaillie**	Section D - Not significant	**Significant - international, capercaillie**	Not significant

9.10 Cumulative Effects

A cumulative assessment ZoI was developed based on the connectivity distances[92] from the Proposed Development of the assessed IOFs, to identify other developments which may result in cumulative impacts on populations of the same species. For designated sites, the ZoI was extended to encompass projects within connectivity distances of relevant qualifying feature species to include other developments which may impact bird populations from the same designated sites. Relevant current and planned developments within the ZoI are shown in **Table 9.18** below. Projects are presented in distance order, starting with projects closest to the Proposed Development, and then from Section A to Section E. Those projects that were, at the time of writing at an early stage of development or at the screening stage, are identified in italicised text and are considered collectively under **Section 9.10 - Projects at Early- Stage Development (**paragraph 9.10.65**)**

[92] Scottish Natural Heritage (now NatureScot) 2016. Assessing Connectivity with Special Protection Areas (SPAs). Guidance. Version 3.

Table 9.18: Relevant Current and Planned Developments Situated Within the Cumulative Assessment ZoI

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Projects considered for "intra-project" effects				
Banniskirk 400 kV Substation and HVDC Converter Station	Adjacent	A	Under Consideration	Caithness Lochs SPA / Ramsar qualifying features - Greenland white-fronted goose, greylag goose and whooper swan.
Carnaig 400 kV Substation	Adjacent	B, C	Under Consideration	Strath Carnaig and Strath Fleet Moors SPA / SSSI - breeding hen harrier; Dornoch Firth & Loch Fleet, SPA / Ramsar / SSSI qualifying features - breeding osprey, wintering greylag goose; Lairg and Strath Brora Loch s SPA / SSSI qualifying feature - breeding black-throated diver.
Fanellan 400kV Substation and HVDC Converter Station	Adjacent	E	Under Consideration	Inner Moray Firth SPA and Cromarty Firth SPA / Ramsar qualifying feature - breeding osprey; Potential significant effects on schedule 1 raptors - osprey, red kite, and peregrine.
Projects considered for "inter-project" effects				
Banniskirk – Sinclair's Bay HVDC UGC	Adjacent	A	Early Development	See paragraph 9.10.63.
Banniskirk – Spittal 275 kV UGC Connection	Adjacent	A	Early Development	See paragraph 9.10.63.
Ayre Offshore Wind Farm	Adjacent	A	Scoping Application Decision Issued	Caithness Lochs SPA qualifying features - non-breeding populations of greylag goose, Greenland white-fronted goose and whooper swan; Golden eagle as a qualifying feature of Caithness and Sutherland Peatlands SPA.
Ouglassy Wind Farm	Adjacent	A	Scoping Application Decision Issued	Caithness Lochs SPA qualifying features; non-breeding populations of: Greenland white-fronted goose, greylag goose and whooper swan; East Caithness Cliffs SPA qualifying features - great black-backed gull and herring gull.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Watten Wind Farm	Adjacent	A	Under Consideration	Caithness and Sutherland Peatlands SPA qualifying features - breeding: red-throated diver, hen harrier, and merlin; East Caithness Cliffs SPA qualifying feature - breeding herring gull; Potential significant impact identified on breeding population and habitat loss for osprey, curlew and lapwing.
West of Orkney Wind Farm Onshore Transmission	Adjacent	A	Application Permitted	No significant impacts identified on designated sites / qualifying features.
Carnaig – Loch Buidhe 275 kV UGC Connection	Adjacent	B, C	Early Development	See paragraph 9.10.63.
Garvary Wind Farm	Adjacent	B, C	Under Consideration	Strath Carnaig and Strath Fleet Moors SPA / SSSI qualifying feature - breeding hen harrier; Lairg and Strath Brora Lochs SPA / SSSI qualifying feature – black-throated diver; Caithness and Sutherland Peatlands SPA / Ramsar / SSSI qualifying features - breeding: red-throated diver, black-throated diver, golden plover, dunlin, wood sandpiper, golden eagle, hen harrier, short-eared owl, and merlin; Dornoch Firth & Loch Fleet SPA / Ramsar / SSSI – qualifying features -breeding osprey, non-breeding greylag geese, wintering wader and waterfowl; Morangie Forest SPA qualifying feature – capercaillie; Moray Firth SPA / Ramsar qualifying features – wintering waterfowl; Populations of National / Regional Conservation Importance – black grouse, black-throated diver, red-throated diver, curlew, dunlin, greenshank, golden eagle, red kite, hen harrier, white-tailed eagle, short-eared owl, merlin, and peregrine.
Inveroykel Wind Farm	Adjacent	C	Scoping Application Decision Issued	Caithness and Sutherland SPA / Ramsar / SSSI; Grudie Peatlands SSSI, Dornoch Firth & Loch Fleet SPA / Ramsar / SSSI; potential significant effects on qualifying features - greylag goose, pink-footed goose, black grouse, red-throated diver, greenshank, osprey, golden eagle, red kite, white-tailed eagle, and hen harrier.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Braelangwell Wind Farm	Adjacent	C	Scoping Application Decision Issued	Likely significant effects on designated sites were dismissed and warrant no further consideration within this EIA Report; Potential impacts on - Annex I / Schedule 1 species and species of national conservation concern not included within the above categories but that are present within the Study Area in nationally or regionally important numbers;
Abhainn Dubh Wind Farm	Adjacent	D	Under Consideration	Glen Affric to Strathconon SPA qualifying feature - golden eagle; Black grouse leks in the local context, and consideration of the potential for indirect effects due to changes to foraging and roosting habitat; Potential significant impacts identified on breeding populations and habitat loss of red kite, hen harrier, and merlin.
Abhainn Dubh 132 kV OHL Wind Farm Connection	Adjacent	D	Screening Application EIA Required	See paragraph 9.10.63.
Western Isles HVDC UGC	Adjacent	D, E	Early Development	See paragraph 9.10.63.
Balblair Wind Farm	Adjacent	C	Scoping Application Decision Issued	Potential cumulative impacts could occur with Strath Carnaig and Strath Fleet Moors SPA, Caithness and Sutherland Peatlands SPA / Ramsar and Dornoch Firth & Loch Fleet SPA /Ramsar.
Ceislein Wind Farm	Adjacent	D	Scoping Application Decision Issued	Potential cumulative impacts affecting Novar SPA, Cromarty Firth SPA / Ramsar, Morangie Forest SPA, Ben Wyvis SPA / SSSI, Inner Moray Firth SPA / Ramsar, Dornoch Firth & Loch Fleet SPA / Ramsar and Loch Eye SPA/ Ramsar/ SSSI as a result of the designated sites proximity to the Ceislein Wind Farm.
Creachan Wind Farm	Adjacent	D	Scoping Application Decision Issued	Dornoch Firth & Loch Fleet SPA / Ramsar/ SSSI qualifying species – breeding osprey, non-breeding greylag geese. Potential cumulative impacts could occur to black grouse, common sandpiper, dunlin, golden eagle, golden plover, goshawk, greenshank, greylag goose, hen harrier, herring gull, merlin, pink-footed goose, red kite, red-throated diver, snipe and white-tailed eagle;

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL	Adjacent	E	Scoping Application Decision Issued	Inner Moray Firth SPA / Ramsar: osprey Darnaway and Lethen Forest SPA: capercaillie Moray and Nairn Coast SPA and Ramsar Site: osprey Pink-footed goose, osprey, red kite, goshawk, capercaillie, black grouse, breeding wader assemblage, common gull..
Loch Toftingall BESS	1 km west	A	Under Consideration	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features – breeding: wigeon red-throated diver, black-throated diver, golden plover, greenshank, hen harrier and merlin.
Ballach Wind Farm	1 km west	E	Scoping Application Decision Issued	Glen Strathfarrar SSSI qualifying features – breeding bird assemblage; Glen Affric to Strathconon SPA qualifying feature, breeding golden eagle; Inner Moray Firth SPA / Ramsar qualifying features – breeding: osprey and common tern; non-breeding: greylag goose, teal, wigeon, goldeneye, scaup, red-breasted merganser, oystercatcher, curlew, bar-tailed godwit, goosander, redshank, cormorant, and non-breeding waterfowl assemblage; North Inverness Lochs SPA qualifying feature – breeding Slavonian grebe; Cromarty Firth SPA / Ramsar qualifying features – breeding: osprey, common tern; non-breeding: greylag goose, whooper swan, wigeon, scaup, pintail, red-breasted merganser, oystercatcher, curlew, bar-tailed godwit, dunlin, knot, redshank, and its non-breeding waterfowl assemblage; Ben Wyvis SPA qualifying feature – dotterel; Achanault Marshes SPA qualifying feature – breeding wood sandpiper.
Golticlay Wind Farm Redesign	2 km east	A	Approved by Scottish Ministers	East Caithness Cliffs SPA qualifying features - breeding herring gull and great black-backed gull; Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - greenshank hen harrier, and merlin; Shielton Peatlands SSSI qualifying feature - golden plover; Caithness Lochs SPA / Ramsar qualifying features - non-breeding whooper swan and greylag goose; Loch Watten and Loch Scarmaclate SSSI qualifying feature – greylag goose; Additionally, lapwing, snipe, lesser black-backed gull, osprey as species of a local significance.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Hill of Lynchrobbie Wind Farm	2 km east	A	Scoping Application Decision Issued	Potential receptors include qualifying features of the East Caithness Cliffs SPA and Caithness and Sutherland Peatlands SPA / Ramsar.
Acheilidh Wind Farm (formerly known as Lairg III)	2 km north	B, C	S36 Raise Objection	Strath Carnaig and Strath Fleet Moors SPA / SSSI qualifying feature - breeding hen harrier; Lairg and Strath Brora Lochs SPA / SSSI, Caithness and Sutherland Peatlands SPA / Ramsar; qualifying feature – black-throated diver; Dornoch Firth & Loch Fleet SPA / Ramsar qualifying feature – osprey; Potential receptors also include red-throated diver and golden eagle.
Tormsdale Wind Farm	2 km west	A	S36 Raise Objection	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - hen harrier and short-eared owl.
Lairg II Wind Farm Redesign	3 km north	C	Application Permitted	No information on the potential effects on ornithology receptors available online. Permission for the development was received with no objection from NatureScot.
Carn Fearna Wind Farm	5 km northwest	D	Scoping Application Decision Issued	Glen Affric to Strathconon SPA qualifying feature - breeding golden eagle; Cromarty Firth SPA / Ramsar, Inner Moray Firth SPA / Ramsar qualifying feature – wintering greylag geese.
Carn Fearna 132 kV OHL Wind Farm Connection	5 km west	D	Awaiting Decision	See paragraph 9.10.63.
Tarvie Wind Farm	5 km west	D	Scoping Application Decision Issued	Potentially significant effect on Schedule 1 raptors; Glen Affric to Strathconon SPA qualifying feature - breeding golden eagle; Ben Wyvis SPA / SSSI qualifying feature - breeding dotterel; Cromarty Firth SPA / Ramsar qualifying features – breeding osprey, non-breeding greylag geese and waterfowl assemblage.
Strathrory Wind Farm Redesign	6 km east	D	Appeal Allowed	Capercaillie and pink-footed goose as species of international level of concern, black grouse and curlew as species of regional concern and snipe as a species of local concern.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Swarclett Wind Farm	7 km to north-east	A	Under Consideration	Caithness and Sutherland Peatlands SPA / Ramsar qualifying feature - breeding black throated diver (other species outwith recognised core connectivity range); Caithness Lochs SPA / Ramsar / SSSI qualifying features - non-breeding whooper swan, Greenland white-fronted goose and greylag goose; North Caithness Cliffs SPA – qualifying feature – peregrine.
Cogle Moss	8 km east	A	Application Permitted	East Caithness Cliffs SPA qualifying features – breeding seabird assemblage: fulmar, kittiwake, razorbill, guillemot, puffin; and breeding peregrine; North Caithness Cliffs SPA qualifying feature breeding seabird assemblage: fulmar, great black-backed gull, herring gull, kittiwake, guillemot, razorbill, puffin, cormorant, shag – peregrine; Caithness and Sutherland Peatlands SPA / Ramsar qualifying features – wigeon, common scoter, golden plover, dunlin, greenshank, wood sandpiper, red-throated diver, black-throated diver, golden eagle hen harrier, short-eared owl, and merlin Caithness Lochs SPA / Ramsar qualifying features - non-breeding whooper swan, Greenland white-fronted goose and greylag goose.
Thurso BESS	9 km north	A	Under Consideration	See paragraph 9.10.63.
Camster II Wind Farm	10 km northeast	A	Appeal Allowed	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - breeding hen harrier, merlin, short-eared owl and greenshank; Caithness Lochs SPA / Ramsar qualifying features - non-breeding whooper swan, Greenland white-fronted goose and greylag goose; East Caithness Cliffs SPA qualifying features - breeding peregrine, guillemot, razorbill, herring gull, kittiwake and shag; Seabird assemblage of national importance, including great black-backed gull, cormorant, fulmar, razorbill, guillemot.
Achany Extension Wind Farm	10 km north	C	Approved by Scottish Ministers	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - golden eagle, hen harrier, merlin, curlew, dunlin, golden plover and greenshank qualifying as internationally important species.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Cnoc Farasd Wind Farm	10 km south-west	E	Scoping Application Decision Issued	Glen Affric to Strathconon SPA qualifying feature - breeding golden eagle; Glen Strathfarrar SSSI qualifying feature – breeding bird assemblage; North Inverness Lochs SPA, Loch Knockie and Nearby Lochs SPA / SSSI, Dubh Lochs SSSI, Balnagrantach SSSI, Loch Ruthven SPA / SSSI, and Loch Ashie SPA, qualifying feature for all sites – breeding Slavonian grebe;
Allt An Tuir Renewable Energy Park	12 km northwest	C	Scoping Application Decision Issued	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - golden plover, curlew, dunlin, greenshank, golden eagle, and hen harrier; Osprey and white-tailed eagle as species of international importance.
Creag Riabhach Wind Farm Connection	13 km north	C	Under Construction	Data not available but route passes adjacent to; Caithness and Sutherland Peatlands SPA / Ramsar, Strath Carnaig and Strath Fleet Moors SPA / SSSI, and Lairg and Strath Brora Lochs SPA / SSSI.
Cairnmore Hill Wind Farm (Re-design)	14 km northwest	A	Under Consideration	Caithness Lochs SPA / Ramsar qualifying features – non-breeding: greylag goose, Greenland white-fronted goose, and whooper swan.
Chrathaich Wind Farm	14 km southwest	E	S36 Raise No Objection	Glen Affric to Strathconon SPA qualifying feature - breeding golden eagle; North Inverness Lochs and Loch Knockie and nearby Lochs SPAs qualifying feature - Slavonian grebe; West Inverness-shire Lochs SPA qualifying features - black-throated diver and common scoter; Regional important species: black grouse; County important species: dunlin, greenshank; Locally important species: golden plover, curlew, dunlin, greenshank, red-throated diver.
Limekiln Extension Wind Farm	16 km north-west	A	Approved by Scottish Ministers	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - wigeon, common scoter, red-throated diver, black-throated diver, golden plover, wood sandpiper, golden eagle, hen harrier, short-eared owl, and merlin; Caithness Lochs SPA / Ramsar qualifying features - non-breeding: whooper swan, Greenland white-fronted geese, greylag geese; North Caithness Cliffs SPA qualifying feature – peregrine;

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
				Additionally, white-tailed eagle, golden eagle, goshawk, peregrine, osprey, barn owl, greenshank, and dunlin as High Nature Conservation Importance species; woodcock as a Moderate Nature Conservation Importance species.
Chleansaid Wind Farm	15 km north-west from section B 15 km north from section C	B, C	Approved by Scottish Ministers	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - greylag goose, breeding black-throated diver; Lairg and Strath Brora Lochs SPA and SSSI qualifying feature - breeding black-throated diver; Strath Carnaig and Strath Fleet Moors SPA / SSSI qualifying feature - breeding hen harrier; Dornoch Firth & Loch Fleet SPA / Ramsar qualifying feature - breeding osprey; Wood sandpiper as a regionally important species.
Hollandmey Energy Development	15 km north-east	A	Approved by Scottish Ministers	Caithness Lochs SPA / Ramsar qualifying features – non-breeding whooper swan and Greenland white-fronted goose; Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - golden plover, and hen harrier; Icelandic greylag goose, curlew as species of moderate conservation importance.
Lochend Wind Farm extension	15 km north-east	A	Under Consideration	Caithness and Sutherland Peatlands SPA / Ramsar qualifying feature - hen harrier; Caithness Lochs SPA / Ramsar qualifying features - Greenland white-fronted goose and greylag goose; North Caithness Cliffs SPA potential impacts on qualifying feature – peregrine; Greylag goose, whooper swan, curlew, hen harrier as high/ moderate nature conservation importance species.
Meall Buidhe Wind Farm	16 km west	C	Appeal Allowed	Golden eagle, white-tailed eagle, hen harrier, red-throated diver, black throated diver, black grouse, golden plover, snipe and greenshank as Medium or High Nature Conservation Importance receptors.
Slickly Wind Farm	16 km north -west	A	Appeal Allowed	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features -hen harrier, golden plover and red-throated diver; Caithness Lochs SPA / Ramsar qualifying features - non-breeding: whooper swan and greylag geese;

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
Limekiln Wind Farm	17 km north-west	A	Approved by Scottish Ministers	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - wigeon, common scoter, red-throated diver, black-throated diver, golden plover, wood sandpiper, golden eagle, hen harrier, short-eared owl, and merlin; Caithness Lochs SPA / Ramsar qualifying features - non-breeding: whooper swan, Greenland white-fronted geese, greylag geese; North Caithness Cliffs SPA qualifying feature – peregrine; Additionally, white-tailed eagle, golden eagle, goshawk, peregrine, osprey, barn owl, greenshank, and dunlin as High Nature Conservation Importance species; woodcock as a Moderate Nature Conservation Importance species.
Strath Tirry Wind Farm	17 km north-west	B, C	Application Permitted	Lairg and Strath Brora Lochs SPA and SSSI qualifying feature - breeding black-throated diver; Strath Carnaig and Strath Fleet Moors SPA / SSSI qualifying feature -breeding hen harrier.
Forss III Wind Farm	19 km north-west	A	Application Permitted	Caithness and Sutherland Peatlands SPA / Ramsar qualifying feature - black-throated diver; Caithness Lochs SPA / Ramsar qualifying features - non-breeding: whooper swan, Greenland white-fronted geese, greylag geese; North Caithness Cliffs SPA qualifying feature – peregrine.
Limekiln Wind Farm Connection	19 km north-west	A	Under Construction	Caithness and Sutherland Peatlands SPA / Ramsar qualifying feature - wigeon, golden plover, wood sandpiper, hen harrier and short-eared owl; Caithness Lochs SPA / Ramsar qualifying features - non-breeding: whooper swan, Greenland white-fronted geese, greylag geese; North Caithness Cliffs SPA qualifying feature – peregrine. Additional species recorded in significant number – pink-footed goose; Schedule 1 species – crossbill and Birds of High / Medium Nature Conservation Concern -teal, oystercatcher, curlew, lapwing, snipe and common sandpiper and herring gull.
Shinness Wind Farm	20 km north-west	B	Under Consideration	Lairg and Strath Brora Lochs SSSI and SPA qualifying features – breeding black-throated diver Strath Carnaig and Strath Fleet Moors SPA qualifying features – breeding hen harrier Strath Duchally SSSI qualifying featured- breeding dunlin, golden plover and greenshank.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
				Caithness and Sutherland SPA / Ramsar qualifying features – breeding black throated diver, red throated diver, dunlin, golden plover, greenshank, wood sandpiper, hen harrier, merlin and golden eagle. Additionally, wood sandpiper and merlin as a High Nature Conservation Importance species.
Strath Oykel Wind Farm	20 km west	B, C	Approved by Scottish Ministers	Golden eagle, hen harrier, merlin, osprey, peregrine, white-tailed eagle and curlew as species of Nature Conservation Importance.
Coillie Beith Wind Farm	21 km west	C	Scoping Application Decision Issued	Potentially significant effects predicted on Schedule 1 raptors, divers, breeding redwing and black grouse; Potentially significant effects predicted on qualifying features of Grudie Peatlands SSSI and Caithness and Sutherland Peatlands SPA / Ramsar.
Carn Na Saobhaidh Wind Farm	21 km south-east	E	Scoping Application Decision Issued	No significant effects predicted on ornithological receptors.
Baledigle Wind Farm	22 km north-west	A	Scoping Application Decision Issued	Numerous protected and notable bird species have been recorded within 10 km of the site within the last 15 years, some qualifying features of designated sites. Caithness and Sutherland Peatlands SPA / Ramsar site, Rumsdale Peatlands SSSI and Sletill Peatlands SSSI; Potential impacts on a diverse assemblage of species with consultation opinion recommended undertaking surveys for golden eagle, white-tailed eagle, wintering surveys for roosting raptors, and guidance on black grouse, capercaillie and common scoter.
Ackron Wind Farm	25 km west	A	Scoping Application Decision Issued	Potential for impacts on greylag goose, common scoter, red-throated diver, hen harrier, merlin, peregrine, golden eagle, white-tailed eagle and the qualifying features of Caithness and Sutherland Peatlands SPA / Ramsar, Caithness Lochs SPA / Ramsar and North Caithness Cliffs SPA; Scoping Report predicts no significant residual impacts on important ornithological features or on the qualifying features of designated sites
Forsinain Forest Wind Farm	25 km north-west	A	Scoping Application Decision Issued	Potential for impacts on raptors, divers, wildfowl and waders; Potential for impacts on breeding birds (including waders) within areas adjacent to the site;

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
				Potential for impacts on qualifying feature species of the Caithness and Sutherland Peatlands SPA / Ramsar and other designated sites.
Kirkton Energy Park	25 km west	A	Awaiting Decision	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - red-throated diver, black-throated diver, golden plover, dunlin, greenshank, golden eagle, and hen harrier; Caithness Lochs SPA qualifying feature – non-breeding whooper swan; Lochan Buidhe Mires SSSI - curlew as part of the breeding bird assemblage; North Caithness Cliffs SPA, West Halladale, East Halladale and Lochan Buidhe Mires SSSI; qualifying features peregrine and breeding bird assemblage. Pink-footed goose as an amber-listed and BoCC species.
Strathy Wood Wind Farm Grid Connection	25 km west	A	Under Consideration	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - golden plover, greenshank, red-throated diver, black-throated diver, hen harrier, and merlin; West Halladale SSSI qualifying features - breeding: common scoter, black-throated diver and breeding bird assemblage; Lochan Buidhe Mires SSSI qualifying features - greylag goose, golden plover, curlew, dunlin, greenshank, red-throated diver, black throated diver, golden eagle, merlin, and peregrine; Osprey and white-tailed eagle a Regional Conservation importance.
Strathy South Wind Farm Grid Connection	25 km west	A	Scoping Application Decision Issued	Potential effects could occur for qualifying species of Caithness and Sutherland Peatlands SPA / Ramsar, West Halladale SSSI, East Halladale SSSI, North Caithness Cliffs SPA, Caithness Lochs SPA / Ramsar site.
Sallachy Wind Farm	25 km north- west	C	Application Permitted	Negligible magnitude impacts predicted on all receptors.
Lynemore Wind Farm	25 km south-east	E	Scoping Application Decision Issued	Potential for impacts on golden eagle, hen harrier, red kite, short-eared owl and upland waders including golden plover, dunlin and curlew. Potential for impacts on non-breeding greylag goose, connected to the Inner-Moray Firth SPA / Ramsar and Slavonian grebe a qualifying feature of Loch Ashie SPA and Loch Ruthven SPA.
Melvich Wind Energy Hub	27 km north-west	A	Awaiting decision	Potential for impacts on red-throated diver, black-throated golden plover, diver, dunlin, greylag goose, hen harrier, merlin, peregrine, and common scoter.

Development	Distance from Proposed Development	Relevant Sections of the Proposed Development	Status	Ornithology Features Identified in neighbouring EIA reports
				Potential for impacts on Caithness and Sutherland Peatlands SPA / Ramsar, North Caithness Cliffs SPA and Caithness Lochs SPA / Ramsar.
Coille Line (formerly known as Fiag) WF	28 km north-west	C	Scoping Application Decision Issued	Potential for impacts on merlin, goshawk, golden eagle, white-tailed eagle, osprey, red-throated and black-throated diver. Potential for impacts on the breeding bird features of Caithness and Sutherland Peatlands SPA / Ramsar and breeding golden plover, dunlin and greenshank at Strath Duchally SSSI.
Creag Riabhach Extension Wind Farm	28 km north	C	Approved by Scottish Ministers	Caithness and Sutherland Peatlands SPA / Ramsar qualifying features - golden plover, dunlin, greenshank, red-throated diver, black-throated diver, golden eagle, hen harrier, and merlin; Foinaven SPA qualifying feature – golden eagle; Lairg & Strath Brora Lochs SPA / Ramsar qualifying feature – black-throated diver. Additional Birds of High / Medium Conservation Concern identified – greylag goose, pink-footed goose, barnacle goose, whooper swan, black grouse, Arctic skua, wood sandpiper, barn owl, peregrine, cuckoo, fieldfare, and snow bunting.

Intra-Project Developments

Banniskirk 400 kV Substation and HVDC Converter Station

9.10.1 Erection and operation of an air insulated switchgear 400 kV substation and HVDC converter station with associated buildings, installation of new platforms, drainage infrastructure, temporary construction compound, landscaping, mounding and other ancillary works are located adjacent to the Proposed Development. The EIA Report and HRA predicted potentially significant effects on Caithness Lochs SPA / Ramsar site on foraging or resting Greenland white-fronted goose, graylag goose and whooper swan.

9.10.2 However, the proposed substation and converter station will be constructed on land which has been classified as predominantly modified grassland, which is not considered to be optimal foraging habitat for wintering geese and swans. Additionally, baseline surveys did not record any SPA species using the fields which will be affected by the proposed Substation and HVDC Converter Station for foraging and/ or resting. It was concluded that the project would not adversely impact the features of the SPA. The Proposed Development will result in a negligible area of habitat loss for SPA species. As such, the cumulative impacts upon birds with the Proposed Development are assessed as **not significant.**

Carnaig 400 kV Substation

9.10.3 The application seeks planning permission for the construction of a new 400 kV substation to interconnect with the Proposed Development. Key impacts anticipated to arise are disturbance to breeding and foraging hen harrier (the qualifying feature of the Strath Fleet and Strath Carnaig SPA), during the construction phase. Mitigation will comprise pre-construction surveys for hen harrier and minimising the potential impacts on birds during construction (through implementation of the Bird SPP) and the effects of more environmentally hazardous construction activities (through implementation of GEMPs). If construction timelines for the Carnaig Substation and the Proposed Development overlap, there is the potential for cumulative disturbance impacts.

However, implementation of SSENs Bird SPP will avoid disturbance and displacement to breeding birds or birds at regularly used winter roosts. The planned felling of plantation woodland for an associated peat management area will result in an overall gain in the area of open habitats preferred by hen harrier. The reduction in areas of forestry within the Strath Fleet and Strath Carnaig SPA as a result of the Proposed Development mean changes in habitat are likely to have an overall **minor positive** cumulative effect on supporting habitats for hen harrier. Cumulative effects on other species are considered to be **negligible** and **not significant**.

Fanellan 400 kV Substation and HVDC Converter Station

9.10.4 A proposed new 400 kV substation and HVDC converter station comprising new buildings, platform, plant and machinery, access, laydown/work compound area(s), landscaping, site drainage, and other ancillary works (National Development) are located adjacent to the Proposed Development. The Scoping Application Decision (published 14.06.2024) predicted potentially significant effects on schedule 1 raptors. Aside from Schedule 1 raptors, other ornithological interests were scoped out. The EIA Report assessed impacts on osprey, peregrine, red kite and honey buzzard but predicted that with embedded mitigation measures in place, there would be **no significant** effects on ornithological receptors. As such, the cumulative impacts upon birds with the Proposed Development are assessed as **not significant.**

Inter-Project Developments

Ayre Offshore Wind Farm

9.10.5 An onshore grid connection for the proposed Ayre Offshore Wind Farm including substation, inter-array cables, export cables and associated infrastructure which will be located adjacent to the Proposed Development. The

Onshore Scoping Report (issued 22.04.2024) defined important ornithological areas in the vicinity such as Caithness Lochs SPA / Ramsar site for non-breeding populations of greylag goose, Greenland white-fronted goose, whooper swan and Caithness and Sutherland Peatlands SPA for golden eagle. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ayre Offshore Wind Farm will assess cumulative impacts with the Proposed Development.

Ouglassy Wind Farm

Ouglassy onshore wind farm comprises eight wind turbines located adjacent to the Proposed Development. The Onshore Scoping Report (issued 05.04.2024) idnetified important ornithological areas in the vicinity comprising; Caithness Lochs SPA / Ramsar site for non-breeding populations of Greenland white-fronted goose, greylag goose and whooper swan and East Caithness SPA for great black-backed gull and herring gull and Schedule 1 raptors. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ouglassy Wind Farm will assess cumulative impacts with the Proposed Development.

Watten Wind Farm

9.10.6 A proposed seven wind turbine wind farm adjacent to the Proposed Development. The EIA Report predicted potentially significant effects on Caithness and Sutherlands SPA / Ramsar for breeding hen harrier, merlin, and red-throated diver, and herring gull and great black-backed gull from East Caithness Cliffs SPA. In addition to this, impacts on osprey, curlew and lapwing as wider countryside birds were also assessed. NatureScot concluded that with appropriate mitigation measures in place, including a habitat management plan, the project would not adversely impact the features of the SPAs or the three other species. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site and East Caithness Cliffs SPA. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

West of Orkney Wind Farm Onshore Transmission

9.10.7 A permitted development adjacent to the Proposed Development comprising the construction of a substation and the undergrounding of up to five export cable circuits laid in separate trenches over a distance of approximately 35 km to tie-in with the National Grid at Spittal sub-station. The EIA Report predicted negligible effects upon designated sites and / or species, and determined that as all impacts were negligible, a cumulative impact assessment was neither necessary nor possible to be undertaken. Consequently, given the negligible magnitude of all impacts from the project, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Garvary Wind Farm

9.10.8 A consented wind farm development comprised of 25 turbines, with associated battery energy storage system (BESS) facility and infrastructure, located adjacent to the Proposed Development. The EIA Report identified potentially significant impacts upon the six designated sites and their qualifying species, though subsequent assessment concluded that as a stand-alone development, it presented no significant impacts. The cumulative assessment, concluded that there were no significant effects arising from disturbance and displacement upon

qualifying species and designated sites, but did identify potentially significant cumulative impacts of collision risk (in relation to both the SPA and NHZ populations), for greylag goose, pink-footed goose, golden plover, golden eagle, and hen harrier, and therefore a (cumulative) collision risk assessment was carried out for the five species. The assessment concluded that with the adoption of embedded mitigation measures and a specific management plan for golden eagle, the cumulative collision risk for all species was low / not significant. As such, given the negligible collision mortality predicted for the Proposed Development, the cumulative impacts upon birds are assessed as **not significant**.

Inveroykel Wind Farm

A proposed 29 turbine wind farm, with associated battery BESS facility and infrastructure adjacent to the Proposed Development. The Scoping Report (issued 25.09.2024) identified important ornithological areas in the vicinity comprising; Caithness and Sutherland SPA/ Ramsar site, Grudie Peatlands SSSI, Dornoch Firth & Loch Fleet SPA / Ramsar. Important receptors identified include greenshank, greylag goose, pink-footed goose, black grouse, red-throated diver, golden eagle, white-tailed eagle, hen harrier, osprey, and red kite. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of writing this report to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Inveroykel Wind Farm will assess cumulative impacts with the Proposed Development.

Braelangwell Wind Farm

A proposed 17 wind turbines located adjacent to the Proposed Development. The Scoping Report (issued 12.11.2024) identified important ornithological areas in the vicinity comprising species of Annex I of European Directive, Schedule 1 to the Wildlife and Countryside protected species, and species of national conservation concern not included within the above categories but which are present within the Study Area in nationally or regionally important numbers. Likely significant effects on designated sites were dismissed and warranted no further consideration within this EIA Report. There is the potential for cumulative impacts on identified receptors with the Proposed Development. However, there was insufficient information available at time of writing to undertake a cumulative assessment. It is assumed that when prepared, the EIA Report for Braelangwell Wind Farm will assess cumulative impacts with the Proposed Development.

Balblair Wind Farm

A proposed nine turbine wind farm located adjacent to Proposed Development. The Scoping Report (issued 23.09.2024) defined important ornithological areas in the vicinity comprising Strath Carnaig and Strath Fleet Moors SPA, Caithness and Sutherland Peatlands SPA / Ramsar site and Dornoch Firth and Loch Fleet SPA / Ramsar site. However, there was insufficient information available at the time of writing this report to be able to conduct a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Balblair Wind Farm will assess cumulative impacts with the Proposed Development.

Abhainn Dubh Wind Farm

A proposed 13 turbine wind farm located adjacent to the Proposed Development. The EIA Report and HRA predicted potential effects on black grouse, golden eagle, hen harrier, merlin and red kite. The EIA Report concluded that the Abhainn Dubh Wind Farm project would not result in significant effects and so no additional mitigation was considered. . There will be increased levels of disturbance during construction and a cumulative loss of plantation forestry from both the project and the Propsoed Development. However, with embedded and additional mitigation measures in place, the Proposed Development will have negligible impacts on all of the species identified for potentially significant effects in the Abhainn Dubh Wind Farm EIA Report. As such, the cumulative impacts upon birds with the Proposed Development are assessed as **not significant**.

Ceislein Wind Farm

A proposed wind farm comprising up to 20 turbines located adjacent to the Proposed Development. The Scoping Report (issued 23.09.2024) identified important ornithological areas in the vicinity comprising; Novar Estate SPA, Cromarty Firth SPA / Ramsar site/ SSSI, Morangie Forest SPA, Ben Wyvis SPA / SSSI, Inner Moray Firth SPA / Ramsar site, Dornoch Firth & Loch Fleet SPA, and Loch Eye SPA / Ramsar site. Ceislein Wind Farm is considered to have potential effects upon black grouse, capercaillie, hen harrier, red-throated diver, osprey, peregrine, red kite and barn owl. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ceislein Wind Farm will assess cumulative impacts with the Proposed Development.

Creachan Wind Farm

A proposed up to 21 turbines located adjacent to the Proposed Development. The Scoping Report (issued 04.09.2024) identified important ornithological areas in the vicinity comprising; Novar Estate SPA, Cromarty Firth SPA / Ramsar site / SSSI, Morangie Forest SPA, Ben Wyvis SPA / SSSI, Inner Moray Firth SPA / Ramsar, Dornoch Firth and Loch Fleet SPA & Loch Eye SPA / Ramsar site, and Caithness and Sutherland Peatlands SPA / Ramsar site. Additionally, the scoping report identified important nature conservation species comprising; black grouse, hen harrier, red-throated diver, osprey, peregrine, red kite and barn owl. There is the potential for cumulative impacts on these receptors with the Proposed Development. However there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Creachan Wind Farm will assess cumulative impacts with the Proposed Development.

Beauly to Blackhillock to New Deer to Peterhead 400kV OHL

9.10.9 A proposed new double-circuit steel 400 kV OHL between Beauly, Blackhillock, New Deer and Peterhead, measuring approximately 194 km in length. The proosed development includes the diversion of an existing 400kV OHL into a proposed new Coachford 400 kV substation near Blackhillock, removal of the existing 132kV OHL from Beauly to Knocknagael substations, and rationalisation and crossings of the existing transmission network located adjacent to the Proposed Development. Although the EIA Report has not been submitted, information has been provided by SSEN prior to finalising the EIA Report. This has therefore been used to undertake a cumulative assessment, but is subject to change following finalisation of the BBNP EIA Report. The informtion provided identified important ornithological features as; Inner Moray Firth SPA and Ramsar site, Darnaway and Lethen Forest SPA, Moray and Nairn Coast SPA /Ramsar Site as well as pink-footed geese, capercaillie, black grouse, red kite, osprey, goshawk, hen harrier common gull and a breeding wader assemblage. The assessment seen predicted no significant effects on any receptors with additional mitigation measures in place. Cumulative effects on the osprey population of the Inner Moray Firth SPA/Ramsar site could occur from collision impacts, however with the additional mitigation measures proposed for the Proposed Development and Beauly to Blackhillock to New Deer to Peterhead 400kV OHL in the form of line marking, significant cumulative effects on osprey are not predicted. Projects will affect different metapopulations of capercaillie, and with additional mitigation measures in place for both the project and Proposed Development significant cumulative effects are not predicted. Overall, cumulative effects on all receptors are predicted to be **not significant**..

Loch Toftingall BESS

The proposed Loch Toftingall BESS is located 1 km west of the Proposed Development. The area affected by the BESS will affect an area of approximately 1.05 ha. The EIA Report and HRA predicted potentially significant effects on black-throated diver, red-throated diver, wigeon, hen harrier, merlin, golden plover and greenshank as qualifying features of the Caithness and Sutherland Peatlands SPA / Ramsar site. The EIA Report

concluded, overall, that the effects of the proposed BESS on all bird species are likely to be negligible with embedded mitigation, and no additional mitigation was proposed. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Ballach Wind Farm

A proposed wind farm comprised of up to 36 wind turbines located 1 km west to the Proposed Development. The scoping report identified Important Ornithological Areas within a 20 km radius comprised of; Glen Strathfarrar SSSI, Glen Affric to Strathconon SPA, Cromarty Firth SPA / Ramsar site / SSSI, North Inverness Lochs SPA, Acahnault Marches SPA, Ben Wyvis SPA, and Inner Moray Firth SPA / Ramsar site. The scoping report identified important nature conservation species comprising; black grouse, pink-footed goose, whooper swan, golden plover, curlew, dunlin, snipe hen harrier, osprey, red kite, golden eagle, white-tailed eagle, merlin, and peregrine. There is the potential for cumulative impacts on these receptors with the Proposed Development. However there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared the EIA Report for Ballach Wind Farm will assess cumulative impacts with the Proposed Development.

Golticlay Wind Farm Redesign

9.10.10 A proposed wind farm comprised of up to 13 wind turbines located 2 km east to the Proposed Development. The EIA Report and HRA predicted potentially significant effects on lapwing, snipe, lesser black-backed gull and osprey. Additionally, potential significant effects were identified for designated sites and their qualifying species, comprising; Caithness Lochs SPA / Ramsar site (greylag goose and whooper swan), Caithness and Sutherland Peatlands SPA / Ramsar site (golden plover, hen harrier, greenshank, merlin), East Caithness Cliffs SPA (breeding herring gull, great black-backed gull). The EIA Report concluded that the proposed varied wind farm design would not have significant effect on any of the bird species scoped into the assessment. Additionally, no LSE were predicted for any of the nearby SPAs, either alone or in-combination with other wind farm developments. As a result, the cumulative impacts upon bird with the Proposed Development are assessed as **not significant.**

Hill of Lynchrobbie Wind Farm

A proposed wind farm comprised of two turbines located approximately 2 km east to the Proposed Development. The Onshore Scoping Report (issued 06.07.2023) identified important ornithological areas in the vicnity comprising; East Caithness Cliffs SPA, Caithness and Sutherland Peatlands SPA / Ramsar site, Moray Firth SPA, , Berriedale Cliffs SSSI, Dunbeath Peatlands SSSI, Strathmore Peatlands SSSI and Shielton Peatlands SSSI. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Hill of Lynchrobbie Wind Farm will assess cumulative impacts with the Proposed Development.

Acheilidh Wind Farm

A proposed 12 turbine wind farm located approximately 2 km from the Proposed Development at its closest point and immediately adjacent (0.1 km) to the Strath Carnaig and Strath Fleet Moors SPA / SSSI. No significant effects were identified in the EIA Report for Acheilidh Wind Farm on bird receptors. However, there is likely to be some loss of habitat outwith the SPAs used by SPA populations within their core foraging ranges of the SPAs. The land-take within the site is 16.72 ha which represents a very small proportion of the land

available within the core foraging distances for hen harrier (2 km), black-throated diver (10 km) and osprey (10 km); and in the context of the areas of the SPAs. There is no direct loss of any SPA habitat resulting from the installation of the Wind Farm. With appropriate mitigation measures in place, including a habitat management plan and bird protection plan, NatureScot advised that the wind farm would not adversely impact the features of the SPA and could be progressed. Cumulative impacts could occur on Strath Carnaig and Strath Fleet Moors SPA / SSSI. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / SSSI, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant.**

Chleansaid Wind Farm

Chleansaid Wind Farm is a consented wind farm located approximately 15 km north of the closest point of the Proposed Development and approximately 7.9 km north of the Strath Carnaig and Strath Fleet Moors SPA / SSSI. No significant effects were identified in the EIA Report on identified bird receptors and as such, the cumulative impacts upon birds with the Proposed Development are assessed as **not significant**.

Lairg II Wind Farm

9.10.11 A consented 10 turbine wind farm located 3 km to the northwest of the Proposed Development, with proposed additional 12 turbines as part of the Lairg III extension. The EIA Report states that there will be no likely significant effects (including cumulatively) on bird receptors. As such the cumulative impacts upon birds with the Proposed Development are assessed as **not significant**.

Tormsdale Wind Farm

9.10.12 Tormsdale Wind Farm is a proposed wind farm comprising of 10 wind turbines and ancillary infrastructure located approximately 2 km west of the Section A of Proposed Development. Potential impacts were identified for hen harrier and short-eared owl as part of the Caithness and Sutherland Peatlands SPA. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Carn Fearna Wind Farm

A proposed nine turbine wind farm, located 5 km northwest of the Proposed Development. The Scoping Report for the project identifies potential effects on golden eagle as a qualifying feature of Glen Affric to Strathconon SPA. The Wind Farm could also have potential significant effects on foraging wintering geese as it is within the connectivity distance from the Cromarty Firth SPA and Ramsar site, and Inner Moray Firth SPA and Ramsar site designated for those species. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there is insufficient information available at this time to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Carn Fearna Wind Farm will assess cumulative impacts with the Proposed Development.

Tarvie Wind Farm

A proposed five turbine wind farm located 5 km west of the Proposed Development. The Scoping Report for the project identifies potentially significant effects on Schedule 1 raptors and on qualifying feature species of the Glen Affric to Strathconon SPA, Ben Wyvis SPA and Cromarty Firth SPA / Ramsar site (breeding golden eagle,

dotterel, osprey & non-breeding greylag goose and waterfowl assemblage). There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Tarvie Wind Farm will assess cumulative impacts with the Proposed Development.

Strathrory Wind Farm Redesign

9.10.13 A consented seven turbines wind farm located 6 km east to the Proposed Development. With additional mitigation measure in place, including restrictions on the timing of construction activity to avoid disturbance to lekking capercaillie, no significant effects were predicted in the EIA Report on identified bird receptors. As such, with embedded and additional mitigation measures taken into account for the Proposed Development, the cumulative impacts upon birds are assessed as **not significant**.

Swarclett Wind Farm

9.10.14 A proposed wind farm located comprised of two turbines, situated 7 km north-east of the Proposed Development. The EIA Report identified potentially significant effects on one of the designated sites, Caithness Lochs SPA / Ramsar site (on greylag goose and whooper swan), together with potentially significant effects upon a further four species of nature conservation importance - pink-footed goose, lapwing, curlew and barn owl. With the application of embedded mitigation measures the EIA Report concluded that impacts upon both the designated site and identified species would be negligible and not significant and as such, cumulative impacts upon birds with the Proposed Development are assessed as **not significant**.

Cogle Moss Wind Farm

9.10.15 A consented wind farm comprising 12 turbines and associated infrastructure, located 8 km east of the Proposed Development. Permission was granted for the development in 2018, though no construction has been undertaken. The EIA Report assessed potential collision impacts on qualifying features of four SPA /Ramar sites: Caithness Lochs SPA / Ramsar site (greylag goose and whooper swan), North Caithness Cliffs SPA (great black-backed gull and peregrine), East Caithness Cliffs SPA (great black-backed gull and peregrine), and Caithness and Sutherland Peatlands SPA / Ramsar site (golden plover and hen harrier) and concluded effects on all receptors would be not significant. Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. With embedded and additional mitigation measures for the Proposed Development in place, effects on these designated sites will also be negligible, and cumulative impacts are assessed as **not significant**.

Camster II Wind Farm

9.10.16 A proposed 11 turbine wind farm located approximately 10 km north-east of the Proposed Development. The EIA Report and HRA predicted potentially significant effects on Caithness and Sutherland Peatlands SPA / Ramsar site qualifying breeding species; hen harrier, merlin, short-eared owl and greenshank. NatureScot concluded, however, that the project would not adversely impact the features of the SPA or any other ornithological features, given the mitigation set out in the EIA Report. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted.

Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Achany Extension Wind Farm

A proposed wind farm extension comprising 20 turbines located approximately 10 km north of the Proposed Development and adjacent to the Caithness and Sutherland Peatlands SPA / Ramsar Site. The EIA Report and HRA predicted potential effects on Caithness and Sutherland Peatlands SPA / Ramsar site for qualifying species comprising breeding; greylag goose, teal, wigeon, common scoter, red and black-throated diver, golden plover, dunlin, curlew, wood sandpiper, greenshank, Arctic skua, hen harrier, golden eagle, short-eared owl, and merlin, and on Grudie Peatlands SSSI for breeding dunlin, golden plover and greenshank. However, with appropriate mitigation measures in place, NatureScot recommended that the wind farm extension would not adversely impact the features of the SPA / Ramsar site / SSSI. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site with the Proposed Development. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Cnoc Farasd Wind Farm

A proposed wind farm comprising up to nine turbines and associated infrastructure and BESS located 10 km south-west of the Proposed Development. The Scoping Report (issued 15th October 2024) suggested that given the relative location to the wind farm and low levels of flight activity, the Glen Affric to Strathconon SPA qualifying feature – breeding golden eagle – should be scoped out from further assessment. The Scoping Report also identifies potential impacts upon Slavonian grebe as although connectivity distances are note available for the species, applying a precautionary 20 km buffer meant that several locations designated for the species were identified. The Scoping Report also identified that there is potential for adverse effects upon Annex I / Schedule 1 species, together with species of high to moderate nature conservation importance. However, there is insufficient information available at this time to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Cnoc Farasd Wind Farm will assess cumulative impacts with the Proposed Development.

Allt An Tuir Renewable Energy Park

9.10.17 A proposed nine turbine wind farm located 12 km northwest of the Proposed Development. The EIA Report and HRA predicted potential effects on Caithness and Sutherland Peatlands SPA / Ramsar site qualifying breeding species comprising; golden plover, hen harrier, golden eagle, greenshank and dunlin, as well potential effects upon regional populations of and curlew, black grouse and white-tailed eagle. The impact assessment predicted no significant residual impact on any of the listed species with mitigation measures in place. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site with the Proposed Development. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Creag Riabhach Wind Farm Connection

An approved application, currently under construction, comprising the installation of 22 km of OHL for a 132 kV circuit to connect Creag Riabhach Wind Farm to the National Grid at Dalchork substation in Lairg. The route of the OHL passes adjacent / close to three sites designated for ornithology interest: Caithness and Sutherland Peatlands SPA / Ramsar site, Strath Carnaig and Strath Fleet Moors SPA / SSSI, and Lairg and Strath Brora Lochs SPA / SSSI. Scottish Ministers concluded that with mitigation in place, no adverse effects on the integrity of any site would occur alone or in-combination with other projects. The associated EIA Report for Creag Riabhach Wind Farm, located 28 km away from the Proposed Development, is assessed in paragraph 9.10.62.

Cairnmore Hill Wind Farm (Re-design)

9.10.18 A proposed application, described as a re-design, proposing a reduced number of turbines (five turbines), which has reduced predicted collision impacts on all the Caithness Lochs SPA / Ramsar qualifying species. The proposed wind farm is approximately 14 km from the Proposed Development. The key potential impact from the wind farm was the potential loss of geese and whooper swan foraging habitat and collision risk. Based on the available information, cumulative impacts with the Proposed Development would be **not significant**.

Chrathaich Wind Farm

9.10.19 A proposed 14 turbine wind farm located 14 km northwest of the Proposed Development. Proposed mitigation measures through a CEMP and HMP were identified to manage the potential impacts of the Wind Farm on those ornithological receptors during construction and operation. No significant residual effects were identified, and it was therefore concluded that the Chrathaich Wind Farm could proceed without having an adverse effect on the ornithological receptors assessed in the EIA Report. Given the lack of predicted significant effects and the distance from the Proposed Development and lack of predicted impacts on the same receptors, cumulative impacts upon birds with the Proposed Development are assessed as **not significant.**

Limekiln Extension Wind Farm

9.10.20 A proposed five turbine wind farm situated 15 km northwest of the Proposed Development which is an extension to the Limekiln Wind Farm (paragraph 9.10.42) comprised of 18 turbines. The latest variation to the application states that effects on ornithology associated with the S36c Application for the five additional turbine development are considered to not be significant. This assessment represented no change to the conclusions outlined in the 2020 EIA Report, including predicting no significant effects on the Caithness and Sutherland Peatlands SPA / Ramsar site. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site with the Proposed Development. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Hollandmey Renewable Energy Development

9.10.21 A proposed 10 turbine wind farm located 15 km northeast from the Proposed Development. The EIA Report and HRA predicted potentially significant effects on Caithness Lochs SPA / Ramsar site for whooper swan and Greenland white-fronted goose; Caithness and Sutherland Peatlands SPA / Ramsar site for golden plover, greylag goose and breeding hen harrier and curlew as a wider countryside bird species of moderate conservation importance. It was concluded that with appropriate mitigation measures in place, including a habitat management plan, the project would not adversely impact the features of the SPA / Ramsar sites nor curlew. With embedded and additional mitigation measures in place for the Proposed Development, the cumulative impacts upon birds are assessed as **not significant**.

Lochend Wind Farm Extension

9.10.22 A proposed five turbine wind farm extension situated 15 km north-east of the Proposed Development. The EIA Report and HRA predicted potentially significant effects on Caithness and Sutherland Peatlands SPA / Ramsar site qualifying species; greylag goose and hen harrier; Caithness Lochs SPA / Ramsar qualifying species; greylag goose, and North Caithness Cliffs SPA qualifying species; peregrine, common guillemot, Northern fulmar, black-legged kittiwake, razorbill and Atlantic puffin. Additionally, potentially significant effects were predicted on species of nature conservation importance comprising; greylag goose, whooper swan, and curlew. Of the species mentioned above, greylag goose, Greenland white-fronted goose, whooper swan and hen harrier were taken forward for assessment in the EIA Report, with the assessment predicting negligible or not significant effects with appropriate mitigation measures in place. With embedded and additional mitigation measures in place for the Proposed Development, the cumulative impacts upon birds are assessed as **not significant**.

Meall Buidhe Wind Warm

9.10.23 A proposed eight turbine wind farm located 16 km west of the Proposed Development. The EIA Report and HRA identified potentially significant effects on golden eagle, white-tailed eagle, hen harrier, red-throated diver, black-throated diver, black grouse, golden plover, snipe and greenshank, as species of medium or high nature conservation importance known to be present within the application site or surrounding areas. However, following the assessment of impacts and with appropriate mitigation in place, NatureScot were content that the wind farm would not result in significant effects on ornithology receptors. As such and considering the distance between the wind farm and the Proposed Development, and the availability of suitable alternative foraging habitat for the species assessed, the cumulative impacts upon birds with the Proposed Development are assessed as **not significant**.

Slickly Wind Farm

9.10.24 A proposed 11 turbine wind farm located 16 km north-west of the Proposed Development. The EIA Report and HRA predicted potentially significant effects on Caithness and Sutherlands SPA / Ramsar site qualifying breeding species comprising; hen harrier, golden plover and red-throated diver and for Caithness Lochs SPA / Ramsar site qualifying species, whooper swan and greylag goose. The application was granted permission on appeal in 2022, with NatureScot advising that the project could proceed without affecting the integrity of the any SPAs with appropriate mitigation in place, including a habitat management plan. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site and Caithness Lochs SPA / Ramsar site with the Proposed Development. However, with the embedded and additional mitigation measures in place for the Proposed Development, direct cumulative impacts are not predicted on SPA qualifying species, Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Limekiln Wind Farm

9.10.25 An operational wind farm comprising 21 wind turbines situated 17 km north-west of the Proposed Development. The Application under Section 36 of the Electricity Act 1989 to vary the consent to increase the number of turbine from 15 to 21 and to increase the blade tip height from 126/130 m to 149.9 m was Approved by Scottish Ministers. The original EIA Report (2016) concluded that the likely effects on Designated Sites and for all bird species were not significant, subject to the application of embedded and additional mitigation. An additional Environmental Statement (2017) commissioned to assess the impact of the development upon golden eagle flight activity re-concluded that there was no predicted adverse impact. Cumulative impacts could occur on

Caithness and Sutherland Peatland SPA / Ramsar site with the Proposed Development. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Forss 3 Wind Farm

9.10.26 A permitted application to add one turbine to the operational wind farm at Forss, located 19 km north-west of the Proposed Development. The EIA Report for the related Forss Wind Farm (2020) used as the basis for this application, concluded that there were no likely significant impacts upon the two of the Designated Sites: Caithness and Sutherland Peatlands SPA / Ramsar site, and North Caithness Cliffs SPA. For the third site, Caithness Lochs SPA / Ramsar site, a likely significant effect upon foraging by greylag geese was identified but given the temporal and only occasional nature of this foraging activity, the effect was assessed as not significant. There are two species with potential connectivity to the Proposed Development – greylag goose – a qualifying species of Caithness Lochs SPA / Ramsar site, and black throated diver, with the latter being a qualifying species of Caithness and Sutherland Peatlands SPA / Ramsar site. For black-throated diver at this distance relative to the Proposed Development, it would be at the extreme upper end of its foraging range. For foraging greylag geese, the land-take required for the one additional turbine, and wide availability of suitable alternative foraging habitat, together with relative distance from the Proposed Development also represents a negligible impact upon the species and as such the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Limekiln Wind Farm Connection

An approved OHL development, under construction, covering a distance of 5 km to deliver a 132 kV circuit to connect Limekiln Wind Farm north to the substation at Douneray. The EIA Report identified two Designated Sites and eight species requiring assessment and concluded that there were negligible- low effects upon the Designated Sites: Caithness and Sutherland SPA / Ramsar site, Caithness Lochs SPA / Ramsar site, and species taken forward for assessment (greylag goose, pink-footed goose, whooper swan, wigeon, golden plover, hen harrier, short-eared owl and crossbill) even prior to the application of embedded mitigation measures. With embedded and additional mitigation measures in place for the Proposed Development, cumulative impacts are assessed as **not significant**.

Shinness Wind Farm

A proposed 16 turbine wind farm situated 20 km north-west of the Proposed Development. The EIA Report assessed impacts on Lairg and Strath Brora Lochs SSSI and SPA for breeding black-throated diver; Strath Carnaig and Strath Fleet Moors SPA for breeding hen harrier; Caithness and Sutherland Peatlands SPA / Ramsar site for breeding black throated diver, red throated diver, dunlin, golden plover, greenshank, wood sandpiper, hen harrier, merlin and golden eagle and Strath Duchally SSSI for breeding dunlin, golden plover and greenshank;. Additionally, potentially significant effects were assessed for a range of wider countryside birds. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar site and Strath Carnaig and Strath Fleet Moors SPA with the Proposed Development. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Strath Oykel Wind Farm

9.10.27 A proposed 11 wind turbine wind farm situated 11 km west of the Proposed Development. The EIA Report and HRA identified potentially significant effects on golden eagle, hen harrier, merlin, osprey, peregrine, white-tailed eagle and curlew, as species of medium or high nature conservation importance known to be present within the application site or surrounding areas. However, following the assessment of impacts and with appropriate mitigation in place, NatureScot were content that the wind farm would not result in significant effects on ornithology receptors. In theory cumulative effect could occur with the Proposed Development on features of the Caithness and Sutherland Peatlands SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant.**

Strath Tirry Wind Farm

9.10.28 A consented four turbines wind farm located 17 km north-west of the Proposed Development. The EIA Report dated December 2020 predicted potentially significant effects on Caithness and Sutherlands SPA / Ramsar site qualifying breeding species comprising; hen harrier, golden plover and red-throated diver; and for Caithness Lochs SPA / Ramsar site for the qualifying species whooper swan and greylag goose. With appropriate mitigation measures in place, including a habitat management plan, it was concluded that the project would not adversely impact qualifying features of the SPA / Ramsar sites. In theory cumulative effect could occur with the Proposed Development on features of both of these SPA / Ramsar sites. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted on any of the SPA / Ramsar site species. Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Coillie Beith Wind Farm

A proposed 19 turbine wind farm situated 15 km west of the Proposed Development. The Scoping Report dated July 2024 predicted that the development may have potentially significant effects on Schedule 1 raptors, divers, breeding redwing, black grouse and on qualifying features of designated sites including Grudie Peatlands SSSI and Caithness and Sutherland Peatlands SPA / Ramsar site. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of writing this report to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Coillie Beith Wind Farm will assess cumulative impacts with the Proposed Development.

Carn Na Saobhaidh Wind Farm

A proposed 29 turbine wind farm located 21 km south-east of the Proposed Development. The Scoping Report dated 01.08.2024 provides a summary of baseline ornithological conditions that have been established to March 2024 and predicts no likely significant effects on key ornithological characteristics or on the qualifying features of designated sites. The Scoping Response from The Highland Council dated 11.11.2024 stated that the presence of Schedule 1 birds and qualifying interests of SPAs and other areas designated for ornithological interests must be included and considered as part of the planning application process as well as priority species. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of writing this report to be able undertake a

cumulative assessment. It is assumed that when it is prepared, the EIA Report for Carn Na Saobhaidh Wind Farm will assess cumulative impacts with the Proposed Development.

Baledigle Wind Farm

A proposed 13 turbine wind farm located 22 km north-west of the Proposed Development. The Scoping Report dated 21.06.2024 detailed that numerous protected and notable bird species recorded within 10 km of the site within the last 15 years. Of these 15 species are Annex I, 18 species are listed on Schedule 1 and 25 species are listed on the SBL. The proposd site is adjacent to the Caithness and Sutherland Peatlands SPA / Ramsar site and there is the potential for cumulative impacts on features of these sites with the Proposed Development. However, there is insufficient information available on the impacts of the Baledigle Wind Farm at the time of writing this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Baledigle Wind Farm will assess cumulative impacts with the Proposed Development.

Ackron Wind Farm

A proposed 11 turbine wind farm situated 25 km west of the Proposed Development. The Scoping Report dated 23.11.2023 scoped in the following ornithological features; greylag goose, common scoter, red-throated diver, hen harrier, merlin, peregrine, golden eagle, white-tailed eagle together with the qualifying features of Caithness and Sutherland Peatlands SPA / Ramsar site, Caithness Lochs SPA / Ramsar site and North Caithness Cliffs SPA. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ackron Wind Farm will assess cumulative impacts with the Proposed Development.

Forsinain Forest Wind Farm

9.10.29 A proposed 17 turbine wind farm situated 25 km north-west of the Proposed Development. The Scoping Report dated 20.09.2023 detailed potential impacts for Annex I and Schedule 1 species including raptors, divers, wildfowl and waders to be displaced by the development or suffer direct mortality through collision with turbines. Key species identified include common scoter, golden eagle, merlin, greenshank, golden plover, dunlin, peregrine, wood sandpiper and hen harrier. The Scoping Report also identified that the wind farm is likely to result in breeding birds (including waders) within or adjacent to the site being disturbed and/or displaced, as well as for individuals to collide with the turbines. The Scoping Report identified the potential for impacts on qualifying feature species of the Caithness and Sutherland Peatlands SPA / Ramsar and other designated sites with the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for the Forsinain Forest Wind Farm will assess cumulative impacts with the Proposed Development.

Kirkton Energy Park

9.10.30 Construction and operation of 11 wind turbines located 25 km west from the Proposed Development. The EIA Report predicted potentially significant effects on the following designated sites and species; Caithness and Sutherland Peatlands SPA / Ramsar site; North Caithness Cliffs SPA; Caithness Lochs SPA / Ramsar site; West Halladale SSSI; East Halladale SSSI; Red Point Coast SSSI; and Lochan Buidhe Mires SSSI. The EIA Report assessed impacts on greylag goose; pink-footed goose; curlew; lapwing; golden eagle; whooper swan; golden plover; dunlin; hen harrier; merlin; greenshank; and peregrine. However, with appropriate mitigation measures in place, including a habitat management plan, the EIA Report concluded that the project would not adversely impact the features of any of the SPAs or other ornithological receptors. In theory cumulative effects could occur with the Proposed Development on features of both the Caithness and Sutherland Peatlands SPA / Ramsar site and Caithness Lochs SPA / Ramsar site. However, with the embedded and additional mitigation

measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted on any of the SPA / Ramsar site species. Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Sallachy Wind Farm

9.10.31 A consented nine turbine wind farm 25 km north-west of the Proposed Development. The EIA Report dated April 2021 concluded that with embedded and additional mitigation measures in place residual effects on ornithological receptors associated with the development would be negligible, including no likely significant effects on any qualifying features of Caithness and Sutherland Peatlands SPA / Ramsar site. In theory cumulative effect could occur with the Proposed Development on features of the Caithness and Sutherland Peatlands SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant.**

Strathy Wood Wind Farm Grid Connection

9.10.32 A 4.5 km long OHL located 25 km west to the Proposed Development. The EIA Report predicted potentially significant effects on Caithness and Sutherland Peatlands SPA / Ramsar site for the qualifying breeding species; golden plover, greenshank, red-throated diver, black-throated diver, hen harrier and merlin, together with West Halladale SSSI for breeding populations of; common scoter, black-throated diver and its breeding bird assemblage; and Lochan Buidhe Mires SSSI for greylag goose, golden plover, curlew, dunlin, greenshank, red-throated and black throated divers, merlin, peregrine and golden eagle. Additionally, osprey and white-tailed eagle were assessed as species of Regional Conservation Importance. Potentially significant impacts were identified for red-throated diver and hen harrier and additional mitigation was implemented for both species. With the implementation of additional mitigation measures, the EIA Report predicted that impacts on all ornithological receptors would be not significant. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar Site red-throated diver and hen harrier populations. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement and collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Strathy South Wind Farm Grid Connection

9.10.33 An onshore 11 km grid connection for the proposed Strathy South Wind Farm including removal of existing wood pole infrastructure will be located 25 km west from the Proposed Development. The EIA Report identified important ornithological features as Caithness and Sutherland Peatlands SPA / Ramsar site, West Halladale SSSI, East Halladale SSSI, North Caithness Cliffs SPA, Caithness Lochs SPA / Ramsar site and qualifying features of these sites included; greylag goose, common scoter, golden plover, red-throated diver, black-throated diver, golden eagle, hen harrier, merlin, peregrine, whooper swan, curlew, osprey white-tailed eagle and barn owl. With embedded mitigation measures in place, the EIA Report identified potentially significant effects from collision mortality on red-throated diver. As a result, additional mitigation was proposed comprising line marking at sensitive locations and installation of artificial nest rafts for breeding divers. With this mitigation in place, effects on all ornithological receptors were predicted to be not significant. Cumulative impacts could occur on Caithness and Sutherland Peatland SPA / Ramsar Site red-throated diver populations. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative

disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible and will not affect red-throated diver breeding habitat, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Lynemore Wind Farm

A proposed 10 turbine wind farm 25 km south-east of the Proposed Development. Informed by baseline surveys and consultation the Scoping Report dated April 2024 indicated the following species will be the primary focus of the EIA Report: golden plover, curlew, dunlin, golden eagle, hen harrier, and red kite. The Scoping Response from NatureScot dated 31.05.2024 identified the potential for impacts on non-breeding greylag goose, connected to the Inner-Moray Firth SPA / Ramsar site and potential for impacts to wider countryside birds such as golden eagle, red kite, short-eared owl and upland waders. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for the Lynemore Wind Farm will assess cumulative impacts with the Proposed Development.

Melvich Wind Energy Hub

9.10.34 A proposed 12 turbine wind farm located 27 km north-west of the Proposed Development. Important Ornithological Features taken forward for further consideration within the EIA Report (March 2023) comprised: three internationally designated sites; Caithness and Sutherland Peatlands SPA / Ramsar site North Caithness Cliffs SPA and Caithness Lochs SPA / Ramsar site, and four nationally designated sites; West Halladale SSSI, East Halladale SSSI, Loch Buidhe Mires SSSI and Red Point SSSI. A total of eight SPA, Ramsar and/or SSSI qualifying species; greylag goose, red-throated diver, black-throated diver, golden plover, dunlin, hen harrier, merlin, and peregrine, were recorded during baseline surveys and these eight species along with a ninth, common scoter, were the focus of the assessment. With the successful implementation of standard mitigation measures, the EIA Report predicted barely perceptible or low effects which were of no significance upon the identified ornithological receptors. In theory cumulative effects could occur with the Proposed Development on features of both the Caithness and Sutherland Peatlands SPA / Ramsar site and Caithness Lochs SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted on any of the SPA / Ramsar site species. Although the Proposed Development will overlap supporting habitat within the Caithness and Sutherland Peatlands SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as **not significant**.

Coille Line (formerly known as Fiag) Wind Farm

A proposed 22 turbine wind farm situated 28 km north-west of the Proposed Development. The wind farm is partially within the boundary of Caithness and Sutherland Peatlands SPA / Ramsar site and Strath Duchally SSSI where breeding golden plover, dunlin and greenshank are features. The Scoping Report (June 2024) reported that in the 2023 breeding season five pairs of greenshank, four pairs of golden plover and a single pair of dunlin, were recorded within the breeding bird survey area. All these territories were located outwith the developable area in the open ground in the north-west section of the survey area. Breeding raptor and diver surveys undertaken recorded Annex I and Schedule 1 species comprising red-throated diver, black-throated diver, osprey, golden eagle, goshawk, white-tailed eagle, and merlin within the survey area. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there is insufficient information available at the time of writing this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for the Coille Line (formerly known as Fiag) Wind Farm will assess cumulative impacts with the Proposed Development.

Creag Riabhach Extension Wind Farm

9.10.35 An approved extension to the consented Creag Riabhach Wind Farm, located 28 km north-west of the Proposed Development. The extension comprises three turbines, the installation of a BESS and related infrastructure. The EIA Report identified potentially significant effects on Caithness and Sutherland Peatlands SPA / Ramsar site for the qualifying breeding species; golden plover, dunlin, greenshank, red-throated diver, black-throated diver, golden eagle, hen harrier and merlin, together with Foinaven SPA for breeding populations of; golden eagle, and Lairg and Strath Brora Lochs SPA / Ramsar site for breeding black-throated diver. Additionally, greylag goose, pink-footed goose, barnacle goose, whooper swan, black grouse, Arctic skua, wood sandpiper, barn owl, peregrine, cuckoo, fieldfare, and snow bunting were assessed as species of high / medium nature conservation importance, and these species were also therefore taken forward for assessment. With the implementation of embedded mitigation measures, the EIA Report predicted that impacts on all ornithological receptors would be not significant, and through additional mitigation provided by the proposed biodiversity enhancement restoration plan (BERP), minor-medium positive effects were predicted for black grouse, golden plover, dunlin, greenshank, golden eagle, hen harrier, barn owl and peregrine. In theory cumulative effect could occur with the Proposed Development on features of the Caithness and Sutherland Peatlands SPA / Ramsar site. However, with the embedded and additional mitigation measures in place for the Proposed Development, cumulative disturbance and displacement or collision impacts are not predicted. Although the Proposed Development will overlap supporting habitat within the SPA / Ramsar site, as the area of habitat that will be lost is negligible, cumulative impacts are not predicted. Consequently, the cumulative impacts on birds associated with the Proposed Development are assessed as not significant.

Projects at Early-Stage Development

Projects within the cumulative assessment ZoI that are currently in early development or at the screening letter stage include:

- Banniskirk – Sinclair's Bay HVDC UGC;
- Banniskirk – Spittal 275 kV UGC Connection;
- Carnaig – Loch Buidhe 275 kV UGC Connection;
- Western Isles HVDC Link;
- Abhainn Dubh 132 kV OHL Wind Farm Connection;
- Carn Fearna 132kV OHL Wind Farm Connection; and
- Thurso BESS.

9.10.36 These projects have the potential to result in cumulative impacts with the Proposed Development. However, due to the current lack of sufficient information, a cumulative assessment cannot be undertaken at this time. It is anticipated that the EIA Report for these developments will assess cumulative impacts with the Proposed Development.

Overall Cumulative Assessment

9.10.37 There is the potential for cumulative impacts to occur between all of the projects identified within the cumulative assessment ZoI and the Proposed Development. However, with (i) the embedded and additional mitigation measures identified for the Proposed Development in place; and, where applicable (ii) the embedded and additional mitigation measures reported in respect of projects assessed in the intra and inter cumulative assessment, cumulative impacts will be **not significant**.

9.11 Summary

9.11.1 This chapter assesses the potential effects of the Proposed Development on ornithology. It sets out the baseline environment in terms of bird species and populations present, together with the method used to determine those species considered to be important ornithological features. The ways in which birds could be affected (directly or indirectly) by the construction and operation of the Proposed Development are assessed.

9.11.2 An assessment is made with regards to the significance of these effects for each Section of the Proposed Development and the Proposed Development as a whole. The assessment is structured around the consideration of potential effects that could result from the construction and operation of the Proposed Development upon those ornithological receptors identified during survey work and desk-based study. The likely effects of the Proposed Development were evaluated in line with the methods set out in **Section 9.3** of this chapter.

9.11.3 Additional measures have been identified to mitigate potentially significant impacts on a number of important ornithological features. Line marking parts of the new OHL in Sections A, B, D and E will significantly reduce the potential for collision effects. The likely effects of construction and operation for each of the individual Sections, and for the Proposed Development as a whole, on all bird species are not significant in the context of the EIA Regulations.