

Netherton Hub 400 kV OHL Connection to New Deer and Peterhead: Tie-In

Environmental Appraisal Report Volume 1 Chapter 8: Ornithology

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8 ORNITHOLOGY

8.1 Introduction

- 8.1.1 This ornithology appraisal identifies and evaluates the ornithology baseline of the Site and wider Ecological Zone of Influence (EZoI). The EZoI is the range over which a direct or indirect effect could occur depending on factors such as hydrological connectivity, territorial and foraging ranges of species. The different EZoIs for the relevant receptors are defined in **Section 8.4** Baseline. The effects on Special Protection Area (SPA) qualifying ornithology features were assessed and are discussed further within **Appendix 8.1 – Habitats Regulation Assessment (Volume 3)** of this Environmental Appraisal Report (EAR).

8.2 Legislation and Policy

- 8.2.1 UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021;
European Commission Directive on the Conservation of Wild Birds (2009/147/EC) (the 'Birds Directive');
- Environmental Impact Assessment Directive 2011/92/EU (as amended);
 - European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the 'Habitats Directive');
 - The Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations');
 - Wildlife and Countryside Act 1981 (as amended);
 - Nature Conservation (Scotland) Act 2004 (as amended); and
 - The Wildlife and Natural Environment (Scotland) Act 2011 (as amended).
- 8.2.2 EU Biodiversity Strategy for 2030¹ ;
- Scottish National Planning Framework 4 (NPF4)² , specifically: Policy 3: Biodiversity; and Policy 4: Natural places;
 - Scottish Biodiversity Strategy (SBS) to 2045³ which sets out an ambition for Scotland to be Nature Positive by 2030 and to have restored and regenerated biodiversity by 2045. This builds upon Scotland's Biodiversity: it's in your hands⁴ – a strategy for conserving biodiversity in Scotland up to 2030; and the 2020 Challenge for Scotland's biodiversity⁵ – a plan for how to achieve the outcomes of the European Biodiversity Strategy 2020 and UN Aichi targets. With reference to Scottish biodiversity strategy post-2020: statement of intent⁶. The SBS is implemented locally through Local Biodiversity Action Plans; and
 - Scottish Biodiversity List (SBL)⁷ of flora, fauna and habitats considered of principal importance for the conservation of biodiversity.

¹ European Commission, Directorate-General for Environment (2021). EU Biodiversity Strategy for 2030: bringing nature back into our lives. Publications Office of the European Union. Online at: <https://data.europa.eu/doi/10.2779/677548> .

² Scottish Government (2023). National Planning Framework 4. Published by the Scottish Government, Edinburgh. Online at: <https://www.gov.scot/publications/national-planning-framework-4/documents/> .

³ Scottish Government (2024). Scottish Biodiversity Strategy to 2045. Online at: <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2024/11/scottish-biodiversity-strategy-2045/documents/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/govscot%3Adocument/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland.pdf>

⁴ Scottish Executive (2004). Scotland's Biodiversity: It's In Your Hands. Edinburgh. Online at: <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy>

⁵ Scottish Government (2013). 2020 Challenge for Scotland's Biodiversity. Edinburgh. Online at: <https://www.gov.scot/publications/2020-challenge-scotlands-biodiversity-strategy-conservation-enhancement-biodiversity-scotland/documents/>

⁶ Scottish Government (2020). Scottish biodiversity strategy post-2020: statement of intent. Online at: <https://www.gov.scot/publications/scottish-biodiversity-strategy-post-2020-statement-intent/>

⁷ Scottish Biodiversity Forum (2025). Scottish Biodiversity List. Online at: [https://www.gov.scot/publications/scottish-biodiversity-list/](https://www.gov.scot/publications/scottish-biodiversity-list/https://www.gov.scot/publications/scottish-biodiversity-list/)

8.3 Information Sources

- 8.3.1 The following sources of information have been reviewed:
- SSEN Transmission (2023) Netherton Hub Ornithology Technical Report.
- 8.3.2 Additional guidance on survey methodologies and mitigation is referenced throughout this appraisal.

8.4 Methodology

Breeding Bird Surveys

- 8.4.1 Breeding bird surveys were undertaken within the Netherton Hub Site Boundary plus an additional 100 m (the 'Breeding Bird Survey Area') shown in **Figure 8.1 (Volume 2)**. The survey was undertaken over four survey visits (at least two weeks apart) encompassing the period early April 2023 to early July 2023 (inclusive) and is within the age validity parameters in relevant NatureScot guidance⁸ (Five years for ornithology data or three years if populations are known to be changing rapidly).
- 8.4.2 The survey methodology followed an adapted version of the British Trust for Ornithology (BTO) Common Bird Census (CBC)⁹ and NatureScot guidance⁸ whereby the number of visits was reduced from ten to four.
- 8.4.3 During the survey, the surveyor walked the Breeding Bird Survey Area so that all areas of habitat, particularly field boundaries, were approached within 50 m. Observations of birds were recorded on survey maps using BTO species and behavioural codes.

Scarce Breeding Bird Surveys

- 8.4.4 The Netherton Hub scarce breeding bird surveys were undertaken extending up to 2 km from the Netherton Hub Site Boundary (the 'Scarce Breeding Bird Survey Area') shown in **Figure 8.1 (Volume 2)**. Surveys comprised watches of suitable habitat ad hoc vantage points (VPs) and walkover searches of areas of suitable habitat as appropriate, following the methodology outlined in Gilbert et al (1998)¹⁰ and Hardey et al (2009)¹¹.
- 8.4.5 The scarce breeding bird surveys were undertaken concurrently with the breeding bird survey described above and focused on potentially suitable nesting habitat for scarce breeding birds potentially present in the Scarce Breeding Bird Survey Area, particularly red kite *Milvus milvus*, common crane *Grus grus*, barn owl *Tyto alba* and breeding waders.

Flight Activity Surveys

- 8.4.6 Flight activity surveys following industry standard guidance⁸ were undertaken from April 2023 to March 2024 from a single VP location (Grid Ref: NK 06445 45456) for a previous iteration of the Proposed Development at the south east corner of the Netherton Hub Site Boundary and east of the tie-in alignment routes. Flight activity survey data informs assessment of potential collision risk to qualifying populations of geese during commuting flights across the operational Proposed Development. The area of coverage for the flight activity surveys remains relevant to the updated Proposed Development design.

Goose Field Use Surveys

- 8.4.7 Goose field use surveys for the overlapping Spittal to Peterhead (S2P) and Eastern Green Link 3 (EGL3) projects conducted in the 2023-24 non-breeding season (October 2023 to February 2024

⁸ SNH (2017). Recommended bird survey methods to inform impact assessment of onshore windfarms. SNH Guidance. SNH, Battleby. (Updated by NatureScot in 2025 after completion of surveys).

⁹ Marchant, J.H (1983). Common Birds Census Instructions. BTO, Tring.

¹⁰ Gilbert, G., Gibbons, D, W and Evans, J (1998). Bird Monitoring Methods.

¹¹ Hardey, J., Crick, H., Wernham, C., Riley, H. & Thompson, D (2009). Raptors: a field guide to survey and monitoring. 2nd Edition.

inclusive) using an adapted methodology from Littlewood & Sideris (2016)¹² who surveyed the feeding distribution of geese around the Loch of Strathbeg Special Protection Area (SPA) and Ramsar in 2016. The surveys involved ad hoc roadside VPs overlooking suitable goose foraging habitat considered to be functionally linked to the SPA within the site boundaries of the two projects and an additional 500 m survey buffer (“the Goose Field Use Survey Area”) shown in **Figure 8.2 (Volume 2)**. Surveys targeted SPA qualifying species of geese and swans as well as recording secondary wildfowl and wader species. The survey areas for these two projects had extensive overlap with the relevant survey area for the Proposed Development and are within the age validity parameters in relevant guidance⁸.

8.5 Baseline Environment

Breeding Bird Surveys and Scarce Breeding Bird Surveys

- 8.5.1 During the breeding bird surveys, six species were recorded within the Breeding Bird Survey Area including corn bunting *Emberiza calandra*, yellowhammer *Emberiza citrinella* and grey partridge *Perdix perdix*. Three other species were only recorded in flight within/ near the Netherton Hub Site Boundary: curlew *Numenius arquata* (flock of 26 birds), oystercatcher *Haematopus ostralegus* (one individual), and buzzard *Buteo buteo* (three individuals). One oystercatcher was also observed to the north west of the site within the Scarce Breeding Bird Survey Area, but no territory was confirmed. The results of the breeding bird surveys for are shown in **Figure 8.1 (Volume 2)** and a summary of the results for each target species is provided below in **Table 8.1**.

Table 8.1: Breeding Bird Survey Results 2023 – Target Species

Species	Scientific Name	Count	Annex I	Schedule I	BoCC5 ¹³	SBL
Corn bunting	<i>Emberiza calandra</i>	2 T	-	-	Red	Yes
Curlew	<i>Numenius arquata</i>	26 F	-	-	Red	Yes
Grey partridge	<i>Perdix perdix</i>	1 I	-	-	Red	Yes
Yellowhammer	<i>Emberiza citrinella</i>	3 T	-	-	Red	Yes
Oystercatcher	<i>Haematopus ostralegus</i>	1 F	-	-	Amber	-
Buzzard	<i>Buteo buteo</i>	3 F	-	-	Green	-
Key to Count Codes. T: Number of estimated territories I: Number of individuals. F: Number of individuals seen in flight only						

- 8.5.2 Corn bunting and yellowhammer are species of elevated conservation concern (Red-listed BoCC5, SBL) and were found to be holding breeding territories within the Breeding Bird Survey Area. Grey partridge may have been breeding within the Breeding Bird Survey Area but was only observed on one visit and its breeding status was not confirmed.
- 8.5.3 During the scarce breeding bird surveys between April 2023 and July 2023, there were no observations of highly sensitive species such as Schedule 1 raptors or common crane in a survey area extending to 2 km from the Site. The only additional notable record beyond the Scarce

¹² Littlewood, N.A. & Sideris, K. (2016). A survey of the feeding distribution of geese around the Loch of Strathbeg. Scottish Natural Heritage Commissioned Report No. 937.

¹³ 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). Birds of Conservation Concern 5: 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.

Breeding Bird Survey Area, i.e., beyond 100 m from the Site, was a pair of oystercatcher seen on one date in May.

- 8.5.4 In addition, an incidental sighting was recorded for barn owl during 2023 ecology surveys. The roost site, located approximately 300m from the Proposed Development, was determined to be unsuitable for breeding barn owl, although buildings within the area of the Netherton Hub Site Boundary were potentially suitable for breeding barn owl.

Flight Activity Surveys

- 8.5.5 Surveys conducted from the VP location recorded five target species including two Schedule 1 species; peregrine *Falco peregrinus* (one individual), and whooper swan *Cygnus cygnus* (two birds). A single flock of golden plover *Pluvialis apricaria* was also recorded in flight during these surveys.
- 8.5.6 A total of eight pink-footed goose *Anser brachyrhynchus* flights involving 424 individuals were recorded. Of this total, five flights involving 287 individuals crossed the Proposed Development. Only one of the five flights, involving two individuals, was at Potential Collision Height (PCH) while the remaining four flights were above PCH (>50 m). A single flight of 4 greylag geese *Anser anser* was also recorded during flight activity surveys, which did not cross the Proposed Development. The results goose species recorded during the flight activity surveys are shown in **Figure 2** of the **Appendix 8.1: Habitats Regulations Appraisal (Volume 3)** and a summary of the results for each target species is provided below in **Table 8.2**.

Table 8.2: Vantage Point Survey Results 2023 – Target Species

Species	Scientific Name	Number of records	Peak number of birds	Total Flight Time (sec)	Total Time at PCH (sec)
Golden Plover	<i>Pluvialis apricaria</i>	1	4	39	39
Greylag goose	<i>Anser anser</i>	1	4	38	38
Peregrine	<i>Falco peregrinus</i>	1	1	60	0
Pink-footed goose	<i>Anser brachyrhynchus</i>	8	17	712	219
Whooper swan	<i>Cygnus cygnus</i>	1	2	88	88

- 8.5.7 Data for herring gull *Larus argentatus* recorded using secondary species methodology showed that this species occurred in 112 out of a possible maximum of 840 five-minute periods across 72 hours of survey coverage from the single VP used for a previous iteration of the Proposed Development (13% occurrence rate). A total of 1486 individuals were recorded, all in the non-breeding season (September - February inclusive). The peak count of 388 was recorded in September 2023 with three other three figure counts made on the same date in November. The rest of the counts involved double or single figures.

Goose Field Use Surveys

- 8.5.8 Goose field use surveys for the overlapping S2P and EGL3¹⁴ projects conducted in the 2023-24 non-breeding season provided one record of geese foraging within the EZoI of the Proposed Development (based on a suggested disturbance buffer for pink-footed geese of 1 km¹⁵). This consisted of one flock of 38 pink-footed geese recorded to the south of the Netherton Hub Site Boundary in November 2023 within fields overlapping with the tie-in Alignment Route (shown in **Figure 2** of the **Appendix 8.1: Habitats Regulations Appraisal (Volume 3)**).

¹⁴ Proposed underground cable (UGC) routes: Spittal to Peterhead HVDC UGC and Eastern Green Link 3 HVDC UGC.

¹⁵ 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.

8.6 Appraisal

Breeding Birds

- 8.6.1 The assemblage of breeding birds recorded within the Netherton Hub Site Boundary was typical of the agricultural habitat within the EZol and the densities of all species, including the two species of elevated concern (corn bunting and yellowhammer), was low.
- 8.6.2 Potential impacts on breeding birds from the Proposed Development include temporary loss and degradation of habitat and disturbance/displacement or mortality. Due to the temporary nature of works, and the relatively small area of habitat affected locally, effects from the Proposed Development on breeding birds are not considered to be significant.

Barn Owl

- 8.6.3 Due to the incidental sighting, barn owl is assumed to be using the buildings within the Netherton Hub site.
- 8.6.4 Displacement from foraging areas due to construction activities are unlikely because barn owl is mainly active at dusk and after dark; minimal overlap with construction work hours is predicted. Loss of foraging habitat will be minimal and limited to tower bases and temporary access tracks. Further, much of the Proposed Development footprint and surrounding area will be arable and grazing farmland of low suitability for foraging. Most barn owl foraging in this agricultural setting will be limited to hedge banks and field edges. Barn owl is anticipated to use an extensive linear network of such habitats for foraging, extending significant distances beyond the Proposed Development.
- 8.6.5 Collision risk during the operational phase for barn owl is considered unlikely because of barn owls hunting behaviour, mainly flying low to the ground.
- 8.6.6 Therefore, no significant effects from the Proposed Development on barn owl are predicted.

Whooper Swan and Pink-Footed Goose

- 8.6.7 Whooper swan and pink-footed goose are qualifying features of the Loch of Strathbeg SPA located approximately 12.6 km to the north east. The Proposed Development occupies a footprint dominated by arable farmland which is potentially suitable for foraging geese and is within the foraging range of geese forming the qualifying population of the designated site.
- 8.6.8 However, during surveys for associated projects with overlapping survey areas, only one observation of foraging geese was made within the Proposed Development's maximum EZol of 1 km: 38 pink-footed geese foraging in a field alongside the Proposed Development in November 2023. Favoured foraging areas identified for geese in the wider survey area for the associated projects during 2023-2024 were a significant distance from the Proposed Development (>9 km). This distribution aligns with the findings of studies on goose distribution relative to the SPA^{12,16}. Areas in closer proximity to the Loch of Strathbeg SPA and Ramsar are more important for qualifying goose and swan species while areas further to the south of the SPA and areas within 1 km of the Proposed Development had lower instances of geese being present and smaller flock sizes.
- 8.6.9 Considering the above baseline, any disturbance/displacement impacts during the construction phase are only likely to occur to a small number of geese and swans on a temporary basis, and not within areas identified as important for these species. No significant permanent loss of habitat will occur in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire, beyond the Proposed Development footprint.

Herring Gull

- 8.6.10 Herring gull is a qualifying feature of the Buchan Ness to Collieston Coast SPA located approximately 6.1 km to the south east. Arable farmland within the Proposed Development footprint and nearby provides suitable foraging habitat for this species.

¹⁶ Mitchell, C. (2012). Mapping the distribution of feeding Pink-footed and Iceland Grey Lag Geese in Scotland. Wildfowl & Wetlands Trust / SNH report, Slimbridge. 108pp.

- 8.6.11 Considering the impacts of disturbance/displacement from foraging habitat and permanent habitat loss, the same rationale used in the appraisal of this impact on geese and swans can be applied. Disturbance will be temporary and no significant permanent loss of habitat will occur in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire, beyond the Proposed Development footprint. Further, disturbance/displacement impacts to herring gull will occur across a smaller area compared to geese and swans, considering herring gulls relative tolerance of human activity; this species follows ploughing operations, forages on refuse tips, and scavenges for food scraps in urban areas.
- 8.6.12 Considering collision risk to herring gull during the operational phase, there is potential for herring gull flights to cross the operational OHL as arable farmland within the Proposed Development footprint and nearby provides suitable foraging habitat.
- 8.6.13 Herring gull were recorded using secondary species methodology¹⁷ which does not include the recording of flight heights. However, the secondary species methodology allows a measure of abundance. Each three-hour flight activity survey watch is divided into five-minute periods, at the end of which the number and activity of all secondary species observed is recorded. A minimum number for each secondary species is recorded for the five-minute period along with the activity observed, bird in flight or perched.
- 8.6.14 1,486 individuals represent approximately 17% of the Buchan Ness to Collieston Coast SPA population (8,584 individuals) assuming all individuals involved were different individuals and if all individuals formed part of the qualifying breeding population of the SPA. Considering the peak numbers of herring gull recorded from the surveys were in the non-breeding season, it is unlikely that all individuals recorded involved the breeding population from the European site. In the non-breeding season, gulls can disperse over large distances¹⁸ and there are several non-SPA herring gull colonies in north east Scotland from where birds in the Proposed Development EZoI could be associated.
- 8.6.15 Despite this, it cannot be ruled out that a statistically significant proportion (>1%) of SPA individuals could be flying across the Proposed Development. Further, the secondary species methodology does not allow for detailed collision risk analysis e.g. what proportion of herring gull flights crossed the Proposed Development at PCH.
- 8.6.16 There is potential for significant effects to herring gull from collision risk during the operational phase.

8.7 Recommendations and Mitigation

- 8.7.1 **Table 8.3** presents mitigation measures and general best practice measures to help avoid or minimise the impacts associated with the Proposed Development to be implemented as part of the Construction Environmental Management Plan (CEMP).

Table 8.3: Summary of Recommended Mitigation

Reference	Title	Description
001	Pre-construction breeding bird surveys	If works are scheduled to take place during the breeding season (March to August) pre-construction breeding bird surveys would be undertaken in the 24 hours prior to works commencing, covering suitable nesting habitats in the Site and surrounding 200 m area by a suitably experienced ornithologist;

¹⁷ A requirement for gulls to be included as target species for flight activity surveys was part of updated guidance from NatureScot for informing impact assessment of onshore windfarms. Surveys to inform assessment of the Proposed Development were undertaken in 2023-2024 before publication of this updated guidance.

¹⁸ NatureScot Website. Assessing foraging movements and habitat use of herring gulls (*Larus argentatus*) in the Forth Islands SPA. Online at: <https://www.nature.scot/doc/assessing-foraging-movements-and-habitat-use-herring-gulls-larus-argentatus-forth-islands-spa#data-collected>

		If nests are identified within the footprint of the Proposed Development, a suitable disturbance buffer based on up-to-date guidance¹⁹ will be established to avoid disturbance and destruction of the nest; and A barn owl survey should be conducted prior to works commencing and, if a nest is recorded, a suitable disturbance buffer of 50-100 m should be established and works within this buffer should be avoided during the breeding season.
002	Installation of Bird Flight Diverters (BFDs)	Mitigation during the operational phase involving installation of Bird Flight Diverters (BFDs) on the OHL has been recommended due to the flight activity of the SPA qualifying features including herring gull and pink-footed goose within and surrounding the Proposed Development: • The Principal Contractor will install BFDs along the length of the tie-in; and • If the conductor configuration is not suitable for installation of BFDs, the BFDs will only be installed on the earth wire. The earth wire is less visible than the conductors and presents the highest potential collision risk.

8.7.3 Technical information on BFDs can be found in Prinsen et al., (2012)²⁰. The following summary of key considerations for installation of BFDs is provided:

- BFDs should be installed as close together as possible (at least every 5-10m on power lines) and should be designed for maximum visibility in different weather and light conditions, within the limits of a design approved for use on the network.
- All BFDs shall be maintained in line with operations standards to minimise the potential risk to birds. This includes replacing BFDs that have fallen off, been damaged or are otherwise not functioning for the purpose they were intended to. As per operation processes, all defects on BFDs shall be raised through a defect reporting system and operations shall address defects within a defect programme of works in line with planned outages. Defects shall be addressed within two operational expenditure (OPEX) budget periods i.e., 5-10 years, to enable operations to make appropriate access and safety arrangements and secure required budget.
- Post installation, monitoring will be undertaken. OHL inspections are carried out by the OHL maintenance team and include inspections of all BFDs. OHL Inspections are carried out every six years and, during these inspections, operational engineers would check for bird strike mortalities beneath the OHL.
- Reactive monitoring may be undertaken on a more frequent basis where a specific higher risk has been identified e.g. increased line strikes, reporting of bird carcass in the areas.

¹⁹ 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. Online at: [NatureScot Research Report 1283 - Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species | NatureScot](#)

²⁰ Prinsen, H.A.M., Smallie, J.J., Boere, G.C. & Pires, N. (Compilers). (2012). Guidelines on How to Avoid or Mitigate Impact of Electricity Power Grids on Migratory Birds in the African-Eurasian Region. AEWA Conservation Guidelines No. 14, CMS Technical Series No. 29, AEWA Technical Series No. 50, CMS Raptors MOU Technical Series No. 3, Bonn, Germany.

8.8 Cumulative Effects

8.8.1 Plans and projects with the potential to act in-combination with the Proposed Development were identified following a review of known existing proposals. These are shown in **Table 8.3** below.

Table 8.3: Cumulative Developments

Long List ID Number	Planning Reference and Name	Approximate Distance and Orientation from Site	Description of Cumulative Development	Cumulative Effects Assessment
01	APP/2025/1262	4.5 km southeast	Consultation under Section 36 of the Electricity Act 1989 for the Installation of Battery Energy Storage System (BESS) with a Generating Capacity of up to 500 MW and Associated Infrastructure	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. Further, considering the potential barn owl territory within the EZoI of the Proposed Development, the cumulative development is beyond the predicted maximum foraging range for this species of 4 km²¹. No cumulative effects.
03	APP/2025/1617	1.8 km east at closest point	Onshore Transmission Infrastructure for Buchan Offshore Wind including Landfall Point, Cable Route Corridor, Cable Circuits, Erection of Substation, Control Building and Associated Works to connect to the Transmission Grid	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
05	APP/2024/1714 Netherton Hub	Overlaps site boundary	National for Erection of a Strategic Electricity Transmission Hub Including 400 kV	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds

²¹ Barn Owl Trust Website <https://www.barnowltrust.org.uk/barn-owl-facts/barn-owl-home-range/>

Long List ID Number	Planning Reference and Name	Approximate Distance and Orientation from Site	Description of Cumulative Development	Cumulative Effects Assessment
			AC Substation, 132 kV AC Substation, 2 HVDC Converter Stations, Transmission Hall, Spares Warehouse, Operations Base and Associated Works	making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
07	APP/2025/1213	2 km north	Consultation under Section 36 of the Electricity Act 1989 for the Installation of Battery Energy Storage System (BESS) with an Installed Capacity of up to 400 MW and Associated Infrastructure	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
08	APP/2025/1383 Spittal to Peterhead HVDC Link	Adjacent	Construction of Underground Cable	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. The cumulative development could potentially cause disturbance/displacement effects to foraging geese associated with Loch of Strathbeg SPA/Ramsar. However, any impacts would occur in the section of the cumulative development that overlaps with favoured foraging areas for geese. This area is approximately 12.6 km to the north-east of the Proposed Development and baseline information indicates that the Proposed Development is not within the EZoI of important foraging areas for geese. For barn owl and herring gull, no significant cumulative effects

Long List ID Number	Planning Reference and Name	Approximate Distance and Orientation from Site	Description of Cumulative Development	Cumulative Effects Assessment
				in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire. No cumulative effects.
09	APP/2023/1454	3.5 km west at closest point	National for Formation of Onshore Landfall Point, Laying of Underground Cable and Erection of Substation	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
17	ENQ/2025/0688	Adjacent	Installation of Onshore Infrastructure forming part of Marram Wind Offshore Windfarm	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
19	ENQ/2025/0102	2.4 km southeast	Extension to Quarry	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for

Long List ID Number	Planning Reference and Name	Approximate Distance and Orientation from Site	Description of Cumulative Development	Cumulative Effects Assessment
				geese, swans, herring gull and barn owl. No cumulative effects.
20	ECU00006168 Aberdeenshire Council Ref: ENQ/2025/0715	Adjacent	Netherton Hub 400 kV OHL Connection to New Deer and Peterhead: Rebuild	Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. The cumulative development comprises an OHL. A potential significant effect from collision risk to herring gull was identified for the Proposed Development. The cumulative development comprises a structure that presents collision risk. Potential cumulative effects (collision risk).
21	ECU00006204	3 km southeast	Peterhead Flexpower 500 MW BESS	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
22	ECU00006137 Aberdeenshire Council Ref: APP/2025/1555	Adjacent	Construction and operation of a Battery Energy Storage System (BESS) along with associated infrastructure and ancillary works, access, drainage, landscape and biodiversity enhancement.	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land

Long List ID Number	Planning Reference and Name	Approximate Distance and Orientation from Site	Description of Cumulative Development	Cumulative Effects Assessment
				throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.
23	ECU00005165 Aberdeenshire Council Ref: APP/2025/1723	Overlaps site boundary	Application for consent under Section 37 of the Electricity Act 1989 to install, operate and keep installed approximately 186 km of new 400 kilovolt (kV) double circuit steel structure overhead transmission line (OHL).	Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. The cumulative development comprises an OHL. A potential significant effect from collision risk to herring gull was identified for the Proposed Development. The cumulative development comprises a structure that presents collision risk. Potential cumulative effects (collision risk).
24	Not yet available	Adjacent	15.5 km of underground HVDC cable from landfall at North of St Fergus to a new HVDC Converter Station at Netherton Hub	The cumulative development does not comprise construction of an OHL. Therefore, the structure does not present a collision risk for birds making commuting flights to and from foraging habitat. Considering disturbance/displacement from, and permanent loss of habitat, the cumulative development will cause impacts in a localised area in the context of the very extensive availability of agricultural land throughout rural Aberdeenshire for geese, swans, herring gull and barn owl. No cumulative effects.

8.8.2 From those listed in **Table 8.3** the following plans and projects were considered relevant based on their potential for the same significant effect to herring gull comprising collision mortality:

- ECU00006168. Netherton Hub 400 kV OHL Connection to New Deer and Peterhead Rebuild adjacent to the Proposed Development; and
- ECU00005165. The Beauly-Peterhead 400 kV OHL adjacent to the Proposed Development.

8.8.3 For the associated projects, the same mitigation as for the Proposed Development is recommended; where the associated projects are within 500 m of the Proposed Development, BFDs will be installed. The process is expected to be efficient and coordinated considering the same developer is responsible for the Proposed Development and the associated projects.

- 8.8.4 Residual effects from cumulative developments on SPA qualifying features and breeding and over-wintering bird species would be negligible or sufficiently low and the identified mitigation measures outlined in **Section 8.7** will be implemented to minimise impacts.

8.9 Conclusions

- 8.9.1 In conclusion, the agricultural habitats within the EZoI are determined to support farmland breeding bird assemblages and provide foraging habitat for overwintering geese. However, such habitat is very extensive beyond the EZoI of the Proposed Development throughout rural Aberdeenshire. Barn owl has been recorded within this habitat with potential for roosting, nesting, and hunting, as well as herring gull flights.
- 8.9.2 Residual effects on protected areas designated for ornithology receptors and breeding and over-wintering bird species would be negligible or sufficiently low and measures have been identified to minimise impacts. Mitigation measures will minimise the impact upon ornithological qualifying features of the nearby SPAs including ECoW presence and surveys, timing of works, buffer zones, and BFDs.