Appendix 6.1: Desk Study and Legal Context

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Muir Mhòr Offshore Wind Farm Limited

Muir Mhòr Offshore Wind Farm: Onshore Transmission Works

Technical Appendix 6.1: Desk Study and Legal Context

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Muir Mhòr Offshore Wind Farm Limited

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Chapter 1
Introduction

1.1 This appendix details the full methods and results of the desk study undertaken to inform the Ornithological Impact Assessment ('OIA') of the proposed Muir Mhòr Offshore Wind Farm Onshore Transmission Works (hereafter referred to as the 'Proposed Development'). The OIA is provided in **Chapter 6: Terrestrial Ornithology** of the Environmental Impact Assessment Report ('EIA Report').

1.2 This appendix also sets out the legal context that creates the mechanisms for designated sites and protected species, which subsequently form the basis of the OIA.

Supporting Documents

1.3 This appendix supports the EcIA in addition to the following appendices:

- **Appendix 6.2: Ornithology Survey Report**.

1.4 This appendix is supported by the following figures which can be found in **Volume 1** of the EIA report:

- **Figure 6.1: Ornithology Survey: 20km Study Area and Sites Designated for Ornithological Interest Area**.

Terminology and Survey Areas

1.5 The following terminology will be used throughout this appendix:

- **Site**
  - The area defined by the red line application boundary within which all infrastructure associated with the Proposed Development will be located, as shown in **Figure 6.1**.
- **Proposed Development**
  - Comprises the onshore components of the Muir Mhòr Offshore Wind Farm that are landward of the Mean Low Water Springs (MLWS) mark.
- **Development Zones**
  - **'Landfall Zone':** The area above MLWS where the offshore export cables will be brought onshore.

- **'Cable Corridor Zone A':** The area within which electrical cables (up to 275 kV) are proposed to be located, from the Landfall Zone to the Substation Zone.
- **'Cable Corridor Zone B':** The area within which electrical cables (up to 400 kV) are proposed to be located, from the Substation Zone to their anticipated grid connection point at the SSEN Netherton Hub substation.
- **The 'Substation Zone':** The area within which the Proposed Development substation is proposed to be located.

- **Study Area**
  - All land within which the desk study was undertaken (2 km, 5 km and 20 km of the Proposed Development, as shown in **Figure 6.1**).

Chapter 2
Legislative Context

2.1 The protections afforded to ornithological features in Scotland are enshrined in the following key legislation:

- The European Council Directive on the Conservation of Wild Birds 2009/147/EC (the Birds Directive);
- The Conservation (Natural Habitats, &c.) Regulations 1994 (The Habitats Regulations, as amended);
- The Convention on Wetlands of international importance especially as waterfowl habitat (Ramsar Convention);
- The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention); and
- The Wildlife and Countryside Act 1981 (as amended).

2.2 A summary of each legislative instrument is provided below, with specific reference to development planning.

2.3 National and local planning policy of relevance to ecology are not discussed in this appendix but are set out in **Chapter 2: Approach to EIA** of the EIA Report and compliance with these is set out in the Planning Statement which will accompany the application for Planning Permission in Principle (PPP).

The European Council Directive on the conservation of Wild Birds 2009/147/EC (Birds Directive)

2.4 The Birds Directive was originally adopted by the EC in 1979 in response to the Bern Convention. The European Union now meets its obligations for bird species under the Bern Convention and Bonn Convention and more generally by means of Directive 2009/147/EC (Birds Directive) on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended).

2.5 The birds Directive provides for the protection, management and control of all species of naturally occurring wild birds in the European territory of Member States. It requires Member States to identify areas to be given special protection for the rare or vulnerable species listed in Annex I (Article 4.1) and for regularly occurring migratory species (Article 4.2) and for the protection of wetlands, especially wetlands of international importance. These areas are known as Special Protection Areas (SPAs).

2.6 The Birds Directive is implemented in the UK through the Wildlife and Countryside Act 1981 (as amended) and The Habitats Regulations

The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)

2.7 In The Conservation (Natural Habitats, &c.) Regulations 1994 as amended apply to European Sites, where reserved matters (within the meaning of Schedule 5 of the Scotland Act 1998) are concerned, certain provisions of the Conservation of Habitats and Species Regulations 2010 as amended apply instead. Both sets of regulations require an equivalent process in relation to the assessment of plans and projects with the potential to affect European sites, including SPAs.

2.8 The requirements are summarised in Circular 6/1995 as amended June 2000 and include, at paragraph 12, *"The Regulations require that, where an authority concludes that a development proposal unconnected with the nature conservation management of a Natura 2000 site (which includes SPAs) is likely to have a significant effect on that site, it must undertake an appropriate assessment of the implications for the conservation interests for which the area has been designated."*

2.9 The need for appropriate assessment extends to plans or projects out with the boundary of the site to determine their implications for the interest protected within the site.

2.10 Under regulation 48 of the 1994 Habitats Regulations (or regulation 61 of the 2010 Regulations in respect of reserved matters), this means that the competent authority has a duty to:

- determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,
- determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then

2.11 make an appropriate assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

The Convention of Wetlands of International importance especially as waterfowl habitat (Ramsar Convention)

2.12 The Convention's Contracting Parties (including the UK) have assumed a wide range of related obligations covering all aspects of wetland conservation, the implementation of which is facilitated under three main branches of activity: the designation of wetlands of international importance as Ramsar sites; the promotion of the wise-use of all wetlands in the territory of each country; and international co-operation with other countries to further the wise-use of wetlands and their resources.

The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)

2.13 The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention) and concluding multilateral agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix 2 of the Convention).

The Wildlife and Countryside Act 1981 (as amended)

2.14 The Wildlife and Countryside Act 1981 (as amended) ('WCA') is domestic legislation that gives rise to designated sites, regulates the management of invasive species and provides protections for species of national conservation importance.

2.15 The Act provides enhanced statutory protection to rare breeding birds listed under Schedule 1. It is an offence to disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young. In addition, this Act also provides general protection to any wild bird and their nest and eggs. It should be noted that this may affect the timing of works that can be carried out on site. An additional order in 2013 also lists species (including red kite, hen harrier, golden eagle and white-tailed eagle) as being protected from harassment.

Chapter 3
Desk Study

Methodology

3.1 The purpose of desk study is to identify ornithologically important species and species' assemblages within defined buffers around the Proposed Development. Data collected via the desk study has been used to inform the scope of the OIA and to supplement and guide field surveys and assessments.

Guidance and Resources

3.2 In addition to national and local planning policy, the desk study has been carried out with reference to the following relevant guidance:

- Northeast Scotland Biodiversity Partnership's Local Biodiversity Action Plan[1].

3.3 In addition, the following resources have been used to aid in the identification of potentially sensitive ornithological features:

- British Trust for Ornithology - BTO publication, together with the associated publicly available dataset, showing 'sensitivity' of 1 km squares of wader habitat. Also, publicly available Wetland Bird Survey (WeBS) data.
- Publicly available records of Schedule 1/Annex 1 species, BoCC Red and Amber-list species and qualifying species of the relevant SPAs on National Biodiversity Network (NBN) Atlas[2].

3.4 The above guidance and resources have been incorporated into the desk study to ensure all ecological constraints have been considered as far as reasonably practicable.

Targeted Study Areas

3.5 **Table 3.1** summarises the features targeted in the desk study, and the resources used to identify them.

3.6 In order that the study was appropriately focused, buffers were applied, and these are also shown within the table.

[1] Northeast Scotland Local Biodiversity Partnership (2019). Available at https://www.nesbiodiversity.org.uk/biodiversity-information-for-developers/important-habitats-for-biodiversity-in-the-north-east-of-scotland/ [Accessed October 2024].

[2] NBN Atlas (2024). Publicly Available Records of protected bird species. Available at: https://nbnatlas.org/ [Accessed October 2024].

Table 3.1 Desk Study Targets

Ornithological Feature	Comment	Desk Study Resource	Buffer from Site Boundary
Statutory Designated Sites	To include: ■ Special Protection areas (SPAs) ■ Ramsar Sites ■ National Nature Reserves ('NNR') ■ SSSIs	NatureScot SiteLink Website[3]	20 km
Non-Statutory Designated Sites	To include: ■ Local Nature Conservation Sites ('LNCS') ■ RSPB and Scottish Wildlife Trust ('SWT') Reserves	Aberdeenshire Council's Local Nature Conservation Sites[4]	5 km
Schedule 1/Annex 1 species	To include: ■ Breeding and roosting Schedule 1/Annex 1 species	National Biodiversity Network (NBN) Atlas[5] RSPB Data request	5 km
Birds of Conservation concern (BoCC)[6]	To include: ■ Red-list species (Moderate NCI) ■ Amber-list	National Biodiversity Network (NBN) Atlas[7] RSPB Data request	2 km

[3] NatureScot (n.d.). NatureScot SiteLink. Available at: https://sitelink.nature.scot/home [Accessed October 2024].
[4] Aberdeenshire Council (2023). Local Development Plan. Appendix 12 : Local Nature Conservation Sites. Available at: https://online.aberdeenshire.gov.uk/ldpmedia/LDP2021/Appendix12LocalNatureConservationSites.pdf [Accessed October 2024]
[5] NBN Atlas (2024). Publicly Available Records of Schedule 1 species. Available at: https://nbnatlas.org/ [Accessed October 2024].
[6] Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747. Available online at https://britishbirds. co.uk/content/status-our-bird-populations
[7] NBN Atlas (2024). Publicly Available Records of Red-list BoCC. Available at: https://nbnatlas.org/ [Accessed October 2024].

Results

Designated Sites

Statutory and non-statutory designated sites within 20 km and 5 km of the Site are listed in **Table 3.2** in line with the Scoping Report[8]. The locations of these sites, within the buffers described in **Table 3.1**, are presented in **Figure 6.1**.

3.7 Any sites designated solely for their ecological value are discussed in **Chapter 5: Terrestrial Ecology** of the EIA Report.

Table 3.2 Designated Sites

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
Statutory Sites within 20 km			
Buchan Ness to Collieston Coast	SPA	7.8 km south-east	**Article 4.2** ■ Black-legged kittiwake *Rissa tridactyla* (30,452 pairs, 6.2% of the GB population) ■ Common guillemot *Uria aalge* (8,640 pairs, 1.2% of GB population) ■ Herring gull *Larus argentatus* (4,292 pairs, 2.7% of the GB population) ■ European shag *Phalacrocorax aristotelis* (1,045 pairs, 2.7% of the GB population) ■ Northern fulmar *Fulmarus glacialis* (1,765 pairs, 0.3% of the GB population).
Bullers of Buchan Coast	SSSI	7.8 km south	■ Breeding seabird assemblage of national importance for kittiwake and guillemot
Loch of Strathbeg	SPA	9 km north	**Article 4.1** *Breeding birds* ■ Sandwich tern *Thalasseus sandvicensis* (280 pairs, 2% of the GB population) *Wintering birds* ■ Whooper swan *Cygnus cygnus* (245 individuals, 4% of the GB population) ■ Svalbard barnacle goose *Branta leucopsis* (520 individuals, 1.6% of the GB population). **Article 4.2** *Migratory birds* ■ Greylag geese *Anser answer (*5,565 individuals, 6% of the Iceland/UK/Ireland biogeographic population)

[8] LUC (2023). Muir Mhòr Offshore Wind Farm: Onshore EIA Scoping Report.

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
			■ Pink-footed geese *Anser brachyrhynchus* (27,500 individuals, 25% of the Eastern Greenland/Iceland/UK biogeographic population) *Wintering wildfowl assemblage* ■ Teal *Anas crecca* (1,270 individuals, 1% of the GB population). ■ Greylag goose (5,565 individuals, 6% of the GB population). ■ Pink-footed goose (27,500 individuals, 25% of the GB population); whooper swan (245 individuals) ■ Goldeneye *Bucephala clangula* (150 individuals, 1% of the GB population) ■ Svalbard barnacle goose (520 individuals, 1.6% of the GB population).
	Ramsar		**RAMSAR criterion 2** ■ Sandwich tern *Sterna sandvicensis* (280 pairs, 2% of the GB population) **RAMSAR criterion 4** ■ Teal *Anas crecca* (1,270 individuals, 1% of the GB population), ■ Goldeneye (150 individuals, 1% of the GB population) **RAMSAR criterion 6** ■ Pink-footed goose (27,500 individuals, 25% of the Eastern Greenland/Iceland/UK biogeographic population) ■ Greylag goose (5,565 individuals, 6% of the Iceland/UK/Ireland biogeographic population) ■ Whooper swan (245 individuals, 1.5% of the Iceland/UK & Ireland biogeographic population) ■ Svalbard barnacle goose (520 individuals, 1.6% of the Svalbard/SW Scotland biogeographic population)
	SSSI		**International importance** ■ Whooper swan, pink-footed geese & greylag geese **National importance** ■ Goldeneye **Breeding birds** ■ Mute swan *Cygnus olor*, shelduck *Tadorna tadorna,* redshank *Tringa totanus*, teal, tufted duck *Aytha fuligula*, water rail *Rallus aquaticus*, common tern *Sterna hirundo*, marsh harrier *Circus aeruginosus*, sedge warbler *Acrocephalus schoenobaenus*

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
			grasshopper warblers *Locustella naevia* and reed bunting *Emberiza schoeniclus*
Ythan Estuary, Sands of Forvie, and Meikle Loch	SPA	10.5 km south-east	**Article 4.1** *Breeding birds* ■ Sandwich tern (1125 pairs, up to 7% of the GB population) ■ Common tern (265 pairs, up to 2% of the GB population) ■ Little tern *Sterna albifrons* (41 pairs, up to 2% of the GB population) **Article 4.2** *Migratory species* ■ Pink-footed geese (17,213 individuals, 9% of the Eastern Greenland/Iceland/UK biogeographic population) ■ >20,000 waterfowl
Non-statutory Sites within 5 km			
None with ornithological features present			

3.8 There are no NNRs or LNRs within 10 km of the Site, and no RSPB/SWT Reserves within 5 km of the Site.

3.9 Goose distribution and foraging away from Loch of Strathbeg was studied in March/April 2016[9]. Goose distribution was most notable close to Loch of Strathbeg with notable flocks to the north of St Fergus gas terminal as well as in fields near St. Fergus links to the south. Small flocks of pink-footed geese were recorded using the fields within Cable Corridor A on 2 of the 8 surveys: the cable corridor not providing important feeding grounds for the species. This reiterates data from Mitchell in 2012[10] that shows some limited use of the cable corridors for foraging of Loch of Strathbeg pink-footed geese, only.

Schedule 1/Annex 1 species

3.10 The RSPB data request returned the following Schedule 1/Annex 1 species as present within the study area (to 5km of the Site):

- Greenshank *Tringa nebularis* – 1 record only of an individual inland c. 2.5 km north of the proposed cable route on 4 August 2017; and
- Goshawk *Accipiter gentilis* – an immature female recorded on 20 September 2017 c. 2.5km north of the proposed cable route.

3.11 The NBN data search produced the following records within the study area:

- Kingfisher *Alcedo atthis* – a single record on 2 June 2018 in 1km square NK1048 within 500 m of Cable corridor Zone A (likely at River Ugie);
- Short-eared owl *Asio flammeus* – a single record 16 October 2019 in 10km square NK15A; and
- Red-throated diver *Gavia stellata* - >20 records offshore latest 2022.

[9] 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.*

[10] 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.

Birds of Conservation Concern (BoCC)

3.12 A data search of relevant BoCC Red-list species records (post-2014) was carried out to 2 km of the Proposed development RLB. Details are listed below in **Table 3.3**.

Table 3.3 NBN Atlas BoCC Red-list bird Records (Post-2014) within 2 km of the Proposed Development

Species	Scientific Name	Number of Records	Most Recent Record
Shag	*Gulosus aristotelis*	8	2023
Ringed plover	*Charadrius hiaticula*	5	2023
Curlew	*Numenius arquata*	11	2023
Redshank	*Tringa tetanus*	10	2023
Lapwing	*Vanellus vanellus*	5	2023
Herring gull	*Larus argentatus*	35	2023
Skylark	*Alauda arvensis*	24	2022
Grasshopper warbler	*Locustella naevia*	2	2019
House martin	*Delichon urbicum*	15	2022
Starling	*Sturnus vulgaris*	28	2022
Mistle thrush	*Turdus viscivorus*	2	2022
House sparrow	*Passer domesticus*	6	2022
Tree sparrow	*Passer montanus*	11	2022
Greenfinch	*Chloris chloris*	2	2022
Linnet	*Linaria cannabina*	21	2023
Redpoll	*Acanthis cabaret*	1	2023
Corn bunting	*Emberiza calandra*	9	2020
Yellowhammer	*Emberiza citrinella*	18	2022

3.13 BoCC species corn bunting is a target species in the North-east of Scotland with agri-environmental scheme measures tailored to the species with NatureScot and RSPB monitoring and research. This led to the development of the Scottish Rural Development Programme (SRDP) from 2007 onwards. Monitoring of SRDP uptake and corn bunting distribution in the north-east at least 35–40% of the mainland Scotland corn bunting population was covered by agri-environment schemes with one or more options from the corn bunting package[11].

[11] Perkins, A.J., Maggs, H., Stephan, Y., Corrigan, A. & Wilson, J.D. 2017. Effectiveness of SRDP in corn bunting conservation: assessing the impact of six years of targeted agri-environmental schemes. *Scottish Natural Heritage Commissioned Report No. 941.*