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Volume 5 Proposed Development (Onshore)

Chapter 3 Terrestrial Ecology and Biodiversity

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OCEAN WINDS

Volume 5 Chapter 3 Terrestrial Ecology and Biodiversity

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Acronyms and Abbreviations

AWI	Ancient Woodland Inventory
BAP	Biodiversity Action Plan
BCT	Bat Conservation Trust
BNG	Biodiversity Net Gain
BoCC5	Birds of Conservation Concern, 5th edition
BTO	British Trust for Ornithology
CIEEM	Chartered Institute of Ecology and Environmental Management
CIA	Cumulative Impact Assessment
CIRIA	Construction Industry Research and Information Association
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DE	Design Envelope
DEFRA	Department for Environment, Food and Rural Affairs
DSFB	District Salmon Fishery Board
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPS	European Protected Species
FRA	Flood Risk Assessment
FWPM	Freshwater Pearl Mussel
GCN	Great Crested Newt

GWDTE	Groundwater-Dependent Terrestrial Ecosystems
ha	Hectare
HDD	Horizontal Directional Drilling
IAQM	Institute of Air Quality Management
INNS	Invasive Non-Native Species
JNCC	Joint Nature Conservation Committee
km	Kilometre
kV	Kilovolt
LNCS	Local Nature Conservation Sites
LNR	Local Nature Reserve
LSE	Likely Significant Effect
m	Metre
m^2	Square metre
MLWS	Mean Low-Water Springs
MMP	Materials Management Plan
MPA	Marine Protected Area
MW	Megawatt
NBN	National Biodiversity Network
NESBReC	North East Scotland Biological Records Centre
NERC Act	Natural Environment and Rural Communities Act (2006)
NPF4	National Planning Framework 4
NVC	National Vegetation Classification
OCT	Open Cut Trench
ONEC	Onshore Export Cable Corridor

OnTI	Onshore Transmission Infrastructure
OWF	Offshore Wind Farm
PPP	Planning Permission in Principle
RLB	Red Line Boundary
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SBL	Scottish Biodiversity List
SEPA	Scottish Environmental Protection Agency
SPA	Special Protection Area
SPR	Source-Pathway-Receptor
SQE	Suitably Qualified Ecologist
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
TJB	Transition Joint Bay
UK	United Kingdom
UKHab	United Kingdom Habitat
WeBS	Wetland Bird Survey
WCA	Wildlife and Countryside Act 1981 (as amended)
WFD	Water Framework Directive
ZoI	Zone of Influence

Executive Summary

This chapter of the Environmental Impact Assessment Report (EIAR) identifies the potential effects on terrestrial ecology and biodiversity associated with the construction, operation and decommissioning of the Proposed Development (Onshore). This includes the direct, indirect, cumulative and in-combination effects.

Ecological features considered in this chapter are designated sites, notable habitats including ancient woodland, invasive non-native species, amphibians, aquatic and terrestrial invertebrates, badger, breeding birds, fish, freshwater pearl mussel, otter, pine marten, red squirrel, reptiles, water vole, wildcat and wintering birds.

For the construction phase of the Proposed Development (Onshore) potential impacts include disturbance and displacement of protected or notable species, increase in species mortality, and temporary or permanent habitat loss, degradation and fragmentation.

For the operational phase of the Proposed Development (Onshore), potential impacts include disturbance and displacement of protected or notable species and permanent habitat loss, degradation and fragmentation. These impacts are primarily constrained to the Onshore Substation Site. The impacts associated with decommissioning of the Proposed Development (Onshore) are assumed to be equal to or lesser than those identified for the construction stage.

The assessment has considered embedded mitigation measures for the assessment of potential effects. This includes a Construction Environmental Management Plan (CEMP) and related pollution avoidance measures, a Construction Traffic Management Plan (CTMP), avoidance of notable habitats through micro-siting and use of Horizontal Direction Drilling (HDD) technology. This embedded mitigation in most cases will avoid permanent or temporary habitat loss, fragmentation or degradation to ecological receptors.

Following the implementation of embedded mitigation measures, secondary mitigation measures were proposed to avoid likely significant effects on several ecology features. This includes, but is not limited to the appointment of an Ecological Clerk of Works (ECoW), a detailed Lighting Management Plan (LMP) and further consultation with the relevant District Salmon Fisheries Boards regarding mitigation for fish species.

Following the implementation of embedded and secondary measures, only minor residual effects remain for fish species. Following consultation, confirmation of the HDD design and implementation of methods provided in the detailed CEMP, noise and vibration impacts during the construction phase for fish are expected to be not significant in EIA terms.

The chapter also outlines potential, Proposed Development (Onshore) ecological enhancements which could include landscape planting to connect ecological corridors and to provide additional foraging and commuting resources in and adjacent to the Onshore Substation Site. It is also recommended that additional enhancements are explored such as the provision of bird and bat boxes, daylighting of culverts and removal of barriers to fish passage.

3 Terrestrial Ecology and Biodiversity

3.1 Introduction

3.1.1.1 This chapter of the EIAR identifies the potential effects on Terrestrial Ecology and Biodiversity associated with the construction, operation and decommissioning of the Proposed Development (Onshore).

3.1.1.2 Specifically, this chapter considers the potential impacts landward of Mean Low-Water Springs (MLWS) of the Onshore Transmission Infrastructure (OnTI) Red Line Boundary (RLB) and assesses the potential for likely significant effects (LSE) on ecological features.

3.1.1.3 This chapter is supported by the following Technical Appendices:

- Volume 7E, Appendix 3-1: Biodiversity Enhancement Report;
- Volume 7E, Appendix 3-2: Badger Survey Report and Impact Assessment (confidential);
- Volume 7E, Appendix 3-4: Breeding Bird Survey Report;
- Volume 7E, Appendix 3-5: Fish and Fresh Water Pearl Mussel Survey Report;
- Volume 7E, Appendix 3-6: Otter and Water Vole Survey Report;
- Volume 7E, Appendix 3-7: Wintering Bird Survey Report; and
- Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment.

3.1.1.4 Due to survey timings, Volume 7E, Appendix 3-3: Bats Survey Report and Impact Assessment will be submitted as supplementary information. The technical data and impact assessment for bats is not covered in this chapter.

3.1.1.5 The following supporting studies relate to, and should be read in conjunction with, this chapter:

- Impacts related to landscape and visibility, including landscape planting in Volume 5, Chapter 4: Landscape and Visual.
- Impacts related to hydrology and hydrogeology have been considered in Volume 5, Chapter 6: Hydrology and Hydrogeology.
- Impacts related to the loss of peatland and peaty soils has been considered in Volume 5, Chapter 7: Geology, Soils and Contaminated Land.
- Impacts related to noise and vibration has been considered in Volume 5, Chapter 8: Airborne Noise and Vibration.
- Impacts related to traffic and transportation has been considered in Volume 5, Chapter 9: Traffic and Transport.

- Impacts related to climate change has been considered in Volume 6, Chapter 3: Climate Change Resilience and Volume 6, Chapter 4: Greenhouse Gases.

3.2 Legislation, Policy and Guidance

3.2.1.1 Volume 1, Chapter 2: Legislation and Policy, of this EIAR sets out the policy and legislation associated with the Proposed Development (Onshore).

3.2.1.2 Each of the technical appendices listed in Section 3.1.1.5 contains legislation, policy and guidance relevant to their specific ecological feature.

3.3 Stakeholder Engagement

3.3.1 Overview

3.3.1.1 The Scoping Report was submitted to Aberdeenshire Council in December 2022, who then circulated the report to relevant consultees. A Scoping Opinion was received from Aberdeenshire Council on 1 February 2023. Relevant comments from the Scoping Opinion specific to terrestrial ecology and biodiversity are provided in Table 3-1.

3.3.1.2 A copy of the Scoping Report and Scoping Opinion received can be found in Volume 7, Appendix 1 and 4.

3.3.1.3 Further consultation has been undertaken throughout the pre-application stage. Table 3-2 summarises the consultation activities carried out relevant to terrestrial ecology and biodiversity.

Air Quality

3.3.1.4 Consultation was undertaken with Aberdeenshire Council and their Environmental Health Officer regarding the scope of the air quality assessment. It was outlined that the Institute of Air Quality Management (IAQM) guidance (Holman et al., 2014[1]) states that a dust risk assessment is required when there is a human receptor within 350 metres (m), or an ecological receptor within 50m of the boundary of construction activities. Due to the scale and type of construction activities, as well as the distance from residential properties and designated ecological features the potential for impacts was deemed to be negligible. It was therefore agreed that further assessment of air quality impacts on ecological and human receptors was not required and would not be included within the EIAR. Further detail in regards this can be found in Volume 1, Chapter 7: EIA Methodology.

Table 3-1: Scoping Opinion Response.

Consultee	Comment	Response
Aberdeenshire Council	Detailed survey work would be required to inform the EIAR. Following analysis of the aspects of the environment which would be likely to be significantly affected, a detailed assessment of the effects themselves would be required along with mitigation measures proposed.	Detailed survey work has been undertaken for the following habitats and protected species: ▪ Phase 1 Habitat Surveys (Section 3.4); ▪ National Vegetation Classification (NVC) (Section 3.4); ▪ Biodiversity Enhancement Report (Volume 7E, Appendix 3-1); ▪ Badger Survey Report and Impact Assessment (Volume 7E, Appendix 3-2); ▪ Breeding Birds Survey Report (Volume 7E, Appendix 3-4); ▪ Fish and Fresh Water Pearl Mussel Survey Report (Volume 7E, Appendix 3-5); ▪ Otter and Water Vole Survey Report (Volume 7E, Appendix 3-6); and ▪ Wintering Birds Survey Report (Volume 7E, Appendix 3-7). The results of this detailed survey work have informed the assessment of potential significant effects (Section 3.7) as well as mitigation and monitoring measures proposed (Section 3.10). Volume 7E, Appendix 3-3: Bats Survey Report and Impact Assessment will be provided as supplementary information and any impacts related to bats are not included in this EIAR.
Aberdeenshire Council	Examples of the types of issues that should be addressed include: ▪ Climate Change; ▪ Local Economic Effect; ▪ Landscape Resource; ▪ Soils and Geology;	Ecology, nature conservation and European Protected Species (EPS) have been addressed in this chapter of the EIAR and supporting technical appendices. The baseline terrestrial ecology environment is discussed in Section 3.4. Potential impacts are outlined in Section 3.7 with mitigation measures and monitoring discussed in Section 3.10. A summary of effects after the application of mitigation is presented in Table 3-26.

Consultee	Comment	Response
	▪ Visual Amenity; ▪ Ecology; ▪ Nature Conservation; ▪ EPS; ▪ Hydrology and Water Supplies; ▪ Forestry and Tree Felling; ▪ Transport and Traffic, including road safety issues and impact on the local road network during and after construction work; ▪ Noise; ▪ Cultural Heritage and Archaeology; ▪ Land Use; ▪ Land Ownership; ▪ Tourism and Recreation, including Footpaths; and ▪ Proposed Mitigation Measures.	Nature conservation is discussed both within the sections outlined above and within Application Document 11, Proposed Development (Onshore) Report to Inform Appropriate Assessment. EPS are discussed within the sections outlined above and within Volume 7E, Appendix 3-2 to Volume 7E, Appendix 3-7.
NatureScot	We recommend that the EIAR uses consistent terminology and presentation in respect of protected areas in all relevant chapters. For example, the Scoping Report refers to sites designated nationally and internationally for natural heritage interests as "designated sites" in chapter 7, "protected sites" in chapter 10 and "geologically designated sites" in chapter 11.	Noted, all protected areas have henceforth been referred to as "designated sites" within this chapter and all other chapters within Volume 5 of this EIAR.

Consultee	Comment	Response
NatureScot	A table showing the protected areas and their interests relevant to the chapter should be included in the EIAR – the Scoping Report has this for chapter 7 (table 7.1) but not chapters 10 or 11.	A table outlining the protected areas and their qualifying interests relevant to this chapter of the EIAR is presented in Table 3-3 and Table 3-4.
NatureScot	In respect of ornithology, NatureScot note that wintering bird surveys should include intertidal bird surveys.	Intertidal bird surveys have been included within the wintering bird methodology. The wintering bird and breeding bird methodologies were confirmed with NatureScot as part of pre-application consultation. Results of wintering bird surveys, including intertidal bird surveys, and stakeholder consultation are presented in Volume 7E, Appendix 3-7: Wintering Birds Survey Report and its annexes. Results of breeding bird surveys and stake holder consultation are presenting in Volume 7E, Appendix 3-4: Breeding Bird Survey Report and its annexes.
NatureScot	For table 7.2: The interests listed for Cullen to Stake Ness Coast Site of Special Scientific Interest (SSSI) are incorrect and should be: ▪ Dalradian Supergroup metamorphic rocks; ▪ Lowland dry heath; ▪ Quaternary of Scotland; ▪ Saltmarsh; ▪ Shingle; and	Noted, the interests for Cullen to Stake Ness Coast SSSI are presented in Table 3-4 and have been amended to reflect this comment.

Consultee	Comment	Response
	▪ Springs (including flushes).	
NatureScot	For table 7.2: Turclossie Moss SSSI should be added (noting that this is listed in table 7.1 as Special Area of Concern (SAC))	Noted, Turclossie Moss SSSI has been included within Table 3-4.
NatureScot	During the course of developing the EIAR it may that positive actions are identified which could help tackle the two crises of climate change and biodiversity loss, over and above those required for mitigation or compensation. We encourage the applicant and Aberdeenshire Council to explore such opportunities.	Pre-application engagement with Aberdeenshire Council and NatureScot have explored opportunities for biodiversity enhancement as part of the Proposed Development (Onshore). A Biodiversity Enhancement Report, based on the outcomes of these discussions, is presented in Volume 7E, Appendix 3-1: Biodiversity Enhancement Report. The potential for the Proposed Development (Onshore) to generate significant effects on climate (including greenhouse gas emissions and climate change risk) and how these are proposed to be mitigated and/or enhanced where practicable are presented in Volume 6, Chapter 3: Climate Change Resilience and Volume 6, Chapter 4: Greenhouse Gases.

Table 3-2: Stakeholder Engagement Activities.

Date	Consultee and Type of Consultation	Summary
April 25 2023	NatureScot, Teams Meeting	Introduction to the Proposed Development (Onshore) and project team. Discussion on methodology and any potential deviations from NatureScot's Standing Advice. Scope and survey methodology discussed for bats, great-crested newt (GCN) (*Triturus cristatus*), badger (*Meles meles*), Freshwater Pearl Mussel (FWPM) (*Margaritifera margaritifera*) and red squirrel (*Sciurus vulgaris*). NatureScot agreed to a post submission supplementary information report regarding bats, including data and analysis. NatureScot were not aware of any known GCN records in the area. Discussions were held on bat survey methodology and specifically undertaking surveys on residential properties. It was agreed, that where necessary, the bat survey approach would involve survey of residential properties where it was deemed to be required. NatureScot indicated that at the stage of the Proposed Development (Onshore) (when the consultation was held) it is too early to confirm whether badger bait marking would be required and therefore it is too early to scope out. It was agreed that presence of pine marten (*Martes martes*) and red squirrel could be assumed in suitable habitat areas and appropriate mitigation would be applied.
17 May 2023	Aberdeenshire Council, Teams Meeting	Discussion on ecological survey methodology, scope and scale of ecological surveys. Discussion on known ecological records in the area, specifically reptiles, wildcat (*Felis silvestris*), GCN and FWPM. Aberdeenshire Council were not aware of any known populations of GCN, wildcat or FWPM in the study area. No recent Environmental Impact Assessment's (EIA) have identified any reptile species in the area.

Date	Consultee and Type of Consultation	Summary
		Noted that for red squirrel and pine marten, it will be assumed that these species are present within suitable habitat.
24 May 2023	River Deveron District Salmon Fisheries Board (DSFB) and Deveron, Bogie and Isla Charitable Trust	River Deveron DSFB noted that the tributaries to the east of the River Deveron hold strong populations of trout and that the Burn of Boyne holds populations of migratory fish and should be considered within the EIAR. The project team outlined that there are no known records of FWPM in the OnTI RLB. The River Deveron DSFB noted that in response to FWPM, research has been published (by the University of Aberdeen) that has identified FWPM as functionally extinct within the River Deveron. However, this does not mean that there could be isolated populations within the River Deveron (The Deveron, Bogie and Isla Rivers Charitable Trust, 2020[2]).

3.4 Baseline Characterisation

3.4.1 Study Area

3.4.1.1 The study area was defined in accordance with Chartered Institute of Ecology and Environmental Management's (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM, 2022[3]). In accordance with this guidance, the study area comprises the OnTI RLB in its entirety and extends beyond the OnTI RLB where necessary to encompass all areas potentially within the Zone of Influence (ZoI) for relevant ecological features.

3.4.1.2 The Terrestrial Ecology and Biodiversity Chapter of the Onshore Scoping Report (Caledonia Offshore Wind Farm Ltd, 2022[4]) considered a larger 'Onshore Scoping Area'. Since that report, the OnTI RLB has gone through several design iterations which occurred throughout the survey seasons. Where necessary, the ZoI and resulting survey areas were adjusted as design iterations were produced.

3.4.1.3 The ZoIs are specific to the ecological features under consideration and differ for each ecological feature as follows:

- European designated sites such as SAC and Special Protection Area (SPA) were considered using the Source-Pathway-Receptor (SPR) model. The assessment of these sites can be found in Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment.
- Within 10 kilometres (km) of the OnTI RLB for nationally designated sites such as SSSI and Marine Protected Areas (MPA);
- Within 2km of the OnTI RLB for local non-statutory designated sites such as Local Nature Conservation Sites (LNCS) and Local Nature Reserves (LNR);
- Within 500m of the OnTI RLB for Ancient Woodland (see Section 3.4.3.10 for discussion on study area), fish and FWPM, otter (*Lutra lutra*) and water vole (*Arvicola amphibius*) and wildcat;
- Within 100m of the OnTI RLB for watercourses, habitats, badger and aquatic and terrestrial invertebrates;
- Within a 30m radius of the OnTI RLB for red squirrel and pine marten; and
- Within the OnTI RLB for breeding birds, wintering birds and reptiles.

3.4.2 Data Sources

3.4.2.1 The baseline characterisation describes the existing conditions relating to terrestrial ecology features within the study areas, as detailed in Section 3.4.3.

Desk Study

3.4.2.2 A desk study assessment was carried out to identify designated sites, notable habitats and protected and notable species within the study areas using the following sources of information:

- National Biodiversity Network (NBN) Atlas[5];
- NatureScot Sitelink[6];
- Biological Records from North East Scotland Biological Records Centre (NESBReC);
- Wetland Bird Survey (WeBS) Data from the British Trust for Ornithology (BTO);
- Moray Offshore Wind farm West Scoping Report (Moray West, 2016[7]);
- Moray Offshore Wind farm West EIAR (Moray West, 2018a[8]) and technical appendices (Moray West, 2018b[9]); and
- Moray Offshore Wind farm East EIAR (Moray East, 2014[10]).

Site Specific Surveys

3.4.2.3 Site walkover surveys to identify and assess ecological features relevant to this assessment, as well as protected species surveys, within the OnTI RLB and the appropriate study area (where access permitted) were undertaken between October 2022 and August 2024.

3.4.2.4 These surveys focussed on supplementing the desk study data already gathered with detailed site-specific information relating to the likely presence or absence of protected or notable plant and animal species.

3.4.2.5 The methodology (including the timing and extent of each survey) was specific to the ecological feature being considered. These methodologies and any limitations to these surveys are provided in detail within the technical appendices to this chapter, listed in Section 3.1.1.3.

3.4.3 Baseline Description

Designated Sites

3.4.3.1 This section of the chapter should be read in conjunction with Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment.

3.4.3.2 As noted in Section 3.4.1.3, Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment has applied the SPR model to identify the designated sites within the ZoI for that assessment.

3.4.3.3 The desk study undertaken for this chapter identified four European designated sites to be taken into consideration. These are detailed in Table 3-3.

3.4.3.4 There are no European designated sites located within the OnTI RLB.

Table 3-3: European Designated Sites considered within the ZoI.

Site Name	Designation	Approximate Distance from OnTI RLB	Designating Features
Moray Firth[11]	SPA	Adjacent to the northern edge of the OnTI RLB.	The Moray Firth SPA qualifies under Article 4.1 by regularly supporting a non-breeding population of European importance of the following Annex 1 species: ▪ Great northern diver (*Gavia immer)*; ▪ Red-throated diver (*Gavia stellata)*; and ▪ Slavonian grebe (*Podiceps auratus)*. The SPA further qualifies under Article 4.2 for regularly populations of European importance of the following migratory species (non-breeding): ▪ Greater scaup (*Aythya marila*); ▪ Common eider (Somateria mollissima); ▪ Long-tailed duck (*Clangula hyemalis*); ▪ Common scoter (*Melanitta nigra*); ▪ Velvet scoter (*Melanitta fusca*); ▪ Common goldeneye (*Bucephala clangula*); ▪ Red-breasted merganser (*Mergus serrator*); and ▪ European shag (Phalacrocorax aristotelis).
Reidside Moss[12]	SAC	4.5km west of the OnTI RLB	Reidside Moss SAC is designated for the priority habitat 'Active raised bog' and the habitat 'Degraded raised bog'. Both these habitats are currently assessed as being in an 'Unfavourable recovering' condition.

Site Name	Designation	Approximate Distance from OnTI RLB	Designating Features
Turclossie Moss[13]	SAC	12.5km east of the OnTI RLB	Active raised bogs (priority habitat); and Degraded raised bogs still capable of natural regeneration.
Troup, Pennan and Lion's Heads[14]	SPA	13.8km east of the OnTI RLB	The Troup, Pennan and Lion's Heads SPA qualifies under Article 4.2 by regularly supporting over 20,000 individual breeding seabirds. The SPA further qualifies under Article 4.2 by regularly supporting internationally important breeding populations of the migratory species black-legged kittiwake (*Rissa tridactyla*) and common guillemot (*Uria aalge*). In addition to the species mentioned above, the assemblage of breeding seabirds includes the regularly occurring migratory species Northern fulmar *Fulmarus glacialis*, herring gull (*Larus argentatus*) and razorbill (*Alca torda*).

3.4.3.5 The assessment of potential effects to European designated sites has been undertaken in Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment and is not discussed further in this chapter.

3.4.3.6 The desk study identified eight nationally designated sites within 10km of the OnTI RLB, one of which is within the OnTI RLB. These designated sites and their qualifying features are outlined in Table 3-4 and illustrated in Figure 3-1. Those sites designated for their geological features are not considered further in this chapter.

Table 3-4: Nationally Designated Sites within 10km of the OnTI RLB.

Site Name	Designation	Approximate Distance from OnTI RLB	Designating Features (Biological)
Cullen to Stake Ness Coast[15]	SSSI	Within the OnTI RLB along the northern coastal boundary.	Designated for the following habitats: ▪ Dalradian Supergroup metamorphic rocks; ▪ Lowland dry heath; ▪ Quaternary of Scotland; ▪ Saltmarsh; ▪ Shingle; and ▪ Springs (including flushes).
Whitehills to Melrose Coast[16]	SSSI	250m to the east of the OnTI RLB.	Designated for geological features.
Southern Trench[17]	MPA	300m north of the OnTI RLB	Designated for the following biological features: ▪ Burrowed mud; ▪ Fronts; ▪ Shelf deeps; and ▪ Minke whale (Balaenoptera acutorostrata).
Reidside Moss[18]	SSSI	4.5km west of the OnTI RLB	Designated for the habitat 'Raised bog'.
Windy Hills[19]	SSSI	4.7km south of the OnTI RLB	Designated for geological features.
Gight Woods[20]	SSSI	5km south of the OnTI RLB	Designated for the following habitats: ▪ Upland mixed ash woodland; and ▪ Upland oak woodland.
Tore of Troup[21]	SSSI	8.7km east of the OnTI RLB.	Designated for the following habitats: Woodland: ▪ Upland mixed ash woodland; and ▪ Upland birch woodland. Upland: ▪ Upland assemblage.
Gamrie and Pennan Coast[22]	SSSI	9.8km east of the OnTI RLB	Designated for the following features: ▪ Coastlands;

Site Name	Designation	Approximate Distance from OnTI RLB	Designating Features (Biological)
			▪ Maritime Cliff; ▪ Seabird colony (breeding); ▪ Kittiwake (breeding); ▪ Guillemot *Uria aalge* (breeding); ▪ Razorbill *Alca torda* (breeding); ▪ Fulmar *Fulmarus glacialis* (breeding); ▪ Gannet *Morus bassanus* (breeding); and ▪ Puffin *Fratercula arctica* (breeding).

3.4.3.7 There are no local non-statutory designated sites within 2km of the OnTI RLB.

3.4.3.8 Therefore, local non-statutory designated sites are scoped out of further consideration in this chapter.

0 2 4 6 8 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
03	30/08/2024	Approved	CW	NM	GS
02	25/07/2024	For Review	CW	NM	GS
01	17/05/2024	For Review	CW	NM	GS

CALEDONIA Offshore Wind Farm

ARUP

CONTRACTOR DRAWING NO: UKCAL1_ARP_WNF_ENV_MAP_00457

CONTRACTOR REV: 03

GEODETIC PARAMETERS: OSGB36 / British National Grid (EPSG:27700)

DRAWING TITLE

Figure 3-1: Sites of Special Scientific Interest (SSSI) within 10km

STATUS: Approved

SCALE: 1:250,000

DRAWING NUMBER: N/A

SHEET NO: 01 of 01

REV: N/A

Ancient Woodland Inventory

3.4.3.9 There are no woodlands classified under the Ancient Woodland Inventory (AWI) within the OnTI RLB.

3.4.3.10 Air quality was considered to the key potential impact to AWI classified woodlands, however, as outlined in Section 3.3.1.4, air quality impacts were scoped out of consideration.

3.4.3.11 The study area for AWI has therefore been reduced to 500m from the OnTI RLB to account for the potential impacts from construction related pollution.

3.4.3.12 There are nine AWI classified woodland blocks within 500m of the OnTI RLB. The AWI categorises woodland blocks into three types: Ancient (of semi-natural origin); Long-established (of plantation origin); and Other (on Roy maps). The majority of the woodlands within the 500m ZoI are Long-established (of plantation origin).

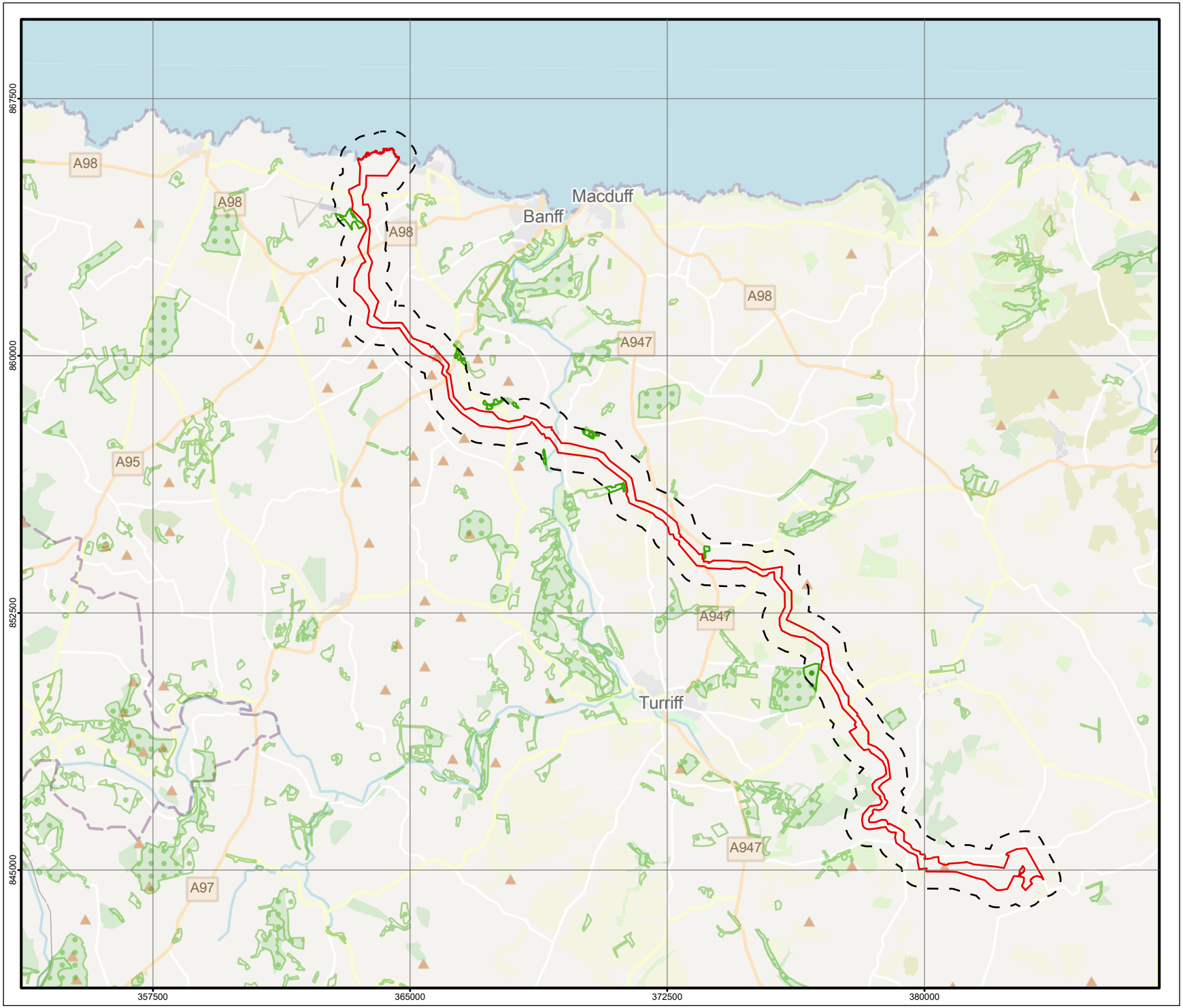
3.4.3.13 AWI classified woodlands within 500m of the OnTI RLB are detailed in Table 3-5 and illustrated in Figure 3-2.

Table 3-5: AWI Classified Woodlands within 500m of the OnTI RLB.

Woodland Name Grid Reference Location	AWI Woodland Classification	Distance from OnTI RLB (at nearest point)	Scoped in for Further Consideration
Whyntie Wood/ Grencothill - NJ630640	Long-Established (of plantation origin)	18m west	No - woodland has recently been cleared.
Eood of Ferneystrype - NJ736543	Long-Established (of plantation origin)	35m north	Yes - connected to woodland habitats directly adjacent to the OnTI RLB.
Toms Hill - NJ706560	Long-Established (of plantation origin)	60m west	Yes – separated from the OnTI RLB by arable fields but scoped in due to proximity to OnTI RLB.
Wood of Delgaty	Long-Established (of plantation origin)	60m west	Yes – separated from the OnTI RLB by arable fields but scoped in due to proximity to OnTI RLB.
Site ID 28 - NJ677587	Ancient (of semi-natural origin)	70m north	Yes – primarily separated from the OnTI RLB by arable field but ecological corridors (hedgerows) are present.

Woodland Name Grid Reference Location	AWI Woodland Classification	Distance from OnTI RLB (at nearest point)	Scoped in for Further Consideration
Site ID 21- NJ668595	Long-Established (of plantation origin)	250m east	No - woodland is not connected either hydrologically or through ecological corridors to the OnTI RLB.
Holm Wood	Long-Established (of plantation origin)	300m north	Yes - connected to habitats within the OnTI RLB through woodland habitats.
Wood of Shaws - NJ701577	Ancient (of semi-natural origin)	320m south	Yes – connected to habitats within the OnTI RLB through the River Deveron and adjacent woodland habitats.
Site ID 53 - NJ727560	Long-Established (of plantation origin)	488m north	No - woodland is not connected either hydrologically or through ecological corridors to the OnTI RLB.

3.4.3.14 In accordance with Section 3.5.4.15 to 3.5.4.23, AWI woodlands are considered to be of high importance and due to connectivity to the OnTI RLB, six are therefore scoped in for further consideration.



Onshore Transmission Infrastructure Red Line Boundary

500m Buffer of Onshore Transmission Infrastructure Red Line Boundary

Ancient Woodland [11 Sites]

0 1 2 3 4 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
03	30/08/2024	Approved	CW	NM	GS
02	25/07/2024	For Review	CW	NM	GS
01	17/05/2024	For Review	CW	NM	GS

CALEDONIA Offshore Wind Farm

ARUP

CONTRACTOR DRAWING NO: UKCAL1_ARP_WNF_ENV_MAP_00458

CONTRACTOR REV: 03

GEODETIC PARAMETERS: OSGB36 / British National Grid (EPSG:27700)

DRAWING TITLE

Figure 3-2: Ancient Woodlands within 500m

STATUS: Approved

SCALE: 1:150,000

DRAWING NUMBER: N/A

SHEET NO: 01 of 01

REV: N/A

Habitats

Overview

3.4.3.15 This Section should be read in conjunction with Volume 7E, Appendix 3-1: Biodiversity Enhancement Report.

3.4.3.16 At the time of the Extended Phase 1 Habitat surveys (May to September 2023) the RLB of the Proposed Development (Onshore) was at an early design iteration (Volume 7E, Appendix 3-1, Annex 1 Supporting Figures, Figure 3-1.1). The surveys covered this RLB plus a 100m buffer where access allowed.

3.4.3.17 Habitat types were identified and mapped in accordance with Phase 1 Habitat survey guidance provided by the Joint Nature Conservation Committee (JNCC) (JNCC, 2016[23]). Mapping, and details of the habitats identified, including photographs and species compositions, were recorded using ESRI ArcGIS Field Maps.

3.4.3.18 To facilitate the Biodiversity Net Gain (BNG) calculations, the Phase 1 Habitat data was translated into metric compatible habitat classification using the Statutory Metric 'Phase 1 Translation Tool' accessible within the Statutory Biodiversity Metric Calculator. Habitats within this assessment are reported in United Kingdom (UK) Habitat (collectively referred to as 'UKHab') Classification to align with Volume 7E, Appendix 3-1: Biodiversity Enhancement Report. For further information on UKHab, the habitat types and conversion, please refer to the Volume 7E, Appendix 3-1: Biodiversity Enhancement Report.

3.4.3.19 Surveys were carried out during the optimal time of year for botanical surveys, in accordance with the JNCC Phase 1 habitat methodology[23].

3.4.3.20 The desk study data provided by NESBReC returned no records of notable plant species within 500m of the early design iteration of the OnTI RLB within the last 10 years.

3.4.3.21 The OnTI RLB is dominated by arable crops making up approximately 70% (620.31 hectares (ha)) of the overall area-based habitats. This habitat provides limited ecological value. The remaining approximate 30% (255.46ha) of area-based habitat consists of grasslands, woodlands, scrub and urban areas. Some of these habitat areas provided greater ecological value and are discussed within this section of the assessment.

3.4.3.22 There are small areas of woodland within the OnTI RLB however these parcels tended to be fragmented and isolated from one another. Larger forested areas of plantation woodland are present adjacent to the OnTI RLB but were avoided through realignment of the OnTI RLB during the optioneering stages.

3.4.3.23 The River Deveron and associated tributaries is the largest watercourse that is crossed by the OnTI RLB. The River Deveron is bordered by

broadleaved and mixed plantation woodland that separate the River Deveron from the surrounding arable fields at the OnTI RLB crossing point.

3.4.3.24 In the southern section of the OnTI RLB, there is an area of habitat classed under the Carbon and Peatland 2016 map (Scotland's Soils, 2023[24]) as Class 1 and Class 5 peat. Following peat probing and NVC surveys, the habitats were found to be heavily modified from ongoing agricultural practices including grazing, drainage, ploughing and re-seeding. These areas are not considered to align with NatureScot's 'Priority Peatland habitat' (NatureScot, 2023[25]). This is discussed further in Section 3.4.3.41 to 3.4.3.50.

3.4.3.25 Linear habitats include a range of hedgerow types, although these are largely species poor. Many of the hedges span the entire width of the OnTI RLB. Several ditches and watercourses also cross through the OnTI RLB.

3.4.3.26 Many of these habitats hold ecological value for their ability to support protected or notable species, and this value is discussed within those relevant species sections of this assessment (Section 3.4.3.64 to Section 3.4.3.151).

3.4.3.27 A summary of area-based habitats within the OnTI RLB and their composition is provided in Table 3-6. A summary of linear Phase 1 habitats is provided in Table 3-7.

Table 3-6: Summary of area-based habitats Recorded within the OnTI RLB and 100m Buffer.

Area- Based Habitat	Habitat Area (Hectares)	Habitat Description
Lowland mixed deciduous woodland	0.20	The majority of the areas of Lowland mixed deciduous woodland are outside of the OnTI RLB. Small areas of this woodland type are present within the OnTI RLB to the north of the A97 and further south near Plaidy. These woodlands are small and/ or fragmented and surrounded by arable or grassland fields. These woodlands are a mixture of several species including ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), sycamore (*Acer pseudoplatanus*), rowan (Sorbus aucuparia), aspen (*Populus tremula*), poplar (*Populus sp.*), silver birch (*Betula pendula*), willow (*Salix* sp.) broom (*Cytisus scoparius*) and gorse (*Ulex europaeus*).
Other woodland; broadleaved	3.78	The largest proportion of this woodland type within the OnTI RLB is present along the River Deveron. The remaining areas are small and fragmented, primarily present near Plaidy with small pockets just north and south of the B9170. The woodland near the River Deveron is the most diverse consisting of sessile oak (*Quercus petraea*), beech, ash, hawthorn (*Crataegus monogyna*), silver birch, rowan, willow species, Scot's pine (*Pinus sylvestris*) and wild cherry (*Prunus avium*), with an understory consisting of species such as bramble (*Rubus fruticosus* agg.), foxglove (*Digitalis purpurea*), hedge woundwort (*Stachys sylvatica*), cleavers (*Galium aparine*), common nettle (*Urtica dioica*), male-fern (*Dryopteris filix-mas*), and several grass species. Many of the other woodlands consist of far fewer tree species with minimal understories.
Other coniferous woodland	2.37	These woodlands are scattered throughout the OnTI RLB but are primarily found south of the River Deveron. Where present, they are dominated by sitka spruce (*Picea sitchensis*).
Other woodland; mixed	1.56	The majority of this woodland type was found south of the River Deveron with the largest block within the OnTI RLB located directly south of the River Deveron. These woodlands contain species such as sitka spruce, European larch (*Larix decidua*), Scot's pine, birch, sycamore, alder, ash, and oak.

Area- Based Habitat	Habitat Area (Hectares)	Habitat Description
Other Scot's pine woodland	0.06	The other Scot's pine woodland present within the OnTI RLB is dominated by Scot's pine.
Gorse scrub	3.48	The scrub present within the OnTI RLB is dominated by stands of gorse.
Mixed scrub	2.21	The scrub present within the OnTI RLB is dominated by stands of gorse and broom.
Line of trees	0.56	This habitat type was utilised to describe areas with a single tree or line of trees, in most cases of one species, that were not substantial enough to classify as a woodland. The Line of trees consisted of areas with sycamore, ash, beech, alder, white poplar (*Populas alba*), horse chestnut (*Aesculus hippocastanum*), and sitka spruce.
Other neutral grassland	70.09	Other neutral grassland was present throughout the OnTI RLB but predominately south of the River Deveron. An area of other neutral grassland is present along the coast and within the boundary of the Moray Firth SSSI. The grasslands were largely either arable field margins, left unmanaged or had minor sheep grazing. This habitat included a range of species but the majority of fields contained the following species: Cowbane (*Cicuta virosa*), broad-leaved dock (*Rumex obtusifolius*), meadow grass (*Poa* sp.), cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), cow parsley (*Anthriscus sylvestris*), red campion (*Silene dioica*), white clover (*Trifolium repens*) and common vetch (*Vicia sativa*).
Other lowland acid grassland	4.87	Other lowland acid grassland was present in the southern extent of the OnTI RLB. This habitat was species poor and dominated by Yorkshire fog. A more detailed description is provided in Table 3-9 regarding the NVC classification of this habitat.
Modified grassland	211.65	Modified grassland was present throughout the OnTI RLB. The largest area within the OnTI RLB was located near the Onshore Substations. This habitat was typically used for sheep grazing and was dominated by perennial rye grass (*Lolium perenne*) cock's-foot, Yorkshire-fog and white clover. Many of the habitats also contained cow parsley, ribwort plantain (*Plantago lanceolata*), daisy (*Bellis perennis*), common chickweed (*Stellaria media*),

Area- Based Habitat	Habitat Area (Hectares)	Habitat Description
		dandelion (*Taraxacum officinale* agg.), buttercup (*Ranunculus acris*), broad-leaved dock, and common nettle.
Ruderal/ Ephemeral	0.79	There were small areas of marshy grassland within the OnTI RLB. Where present, this habitat was dominated by soft-rush (*Juncus effusus*) and Yorkshire-fog.
Ponds (non-priority habitat	0.99	There are very few areas of standing water within the OnTI RLB. The majority of this habitat was recorded in the wider survey area
High energy littoral rock	9.26	This habitat was present along the coastline where the OnTI RLB begins. This habitat contained sea plantain (*Plantago maritima*), thrift (*Armeria maritima*), white clover, sea arrowgrass (*Triglochin maritima*), red fescue (*Festuca rubra*) and saltmarsh rush (*Juncus gerardii*).
Cereal crops	507.34	The OnTI RLB and adjacent habitats were dominated by arable fields, consisting of both cereal and-non cereal crops. Cereal crops were dominated by spring barley.
Non-cereal crops	113.90	The OnTI RLB and adjacent habitats were dominated by arable fields, consisting of both cereal and-non cereal crops. Non-cereal crops consisted of oilseed rape and potatoes.
Developed land; sealed surface	7.09	This habitat type was used to describe areas of mixed age houses, farm outbuildings, and hardstanding located throughout the OnTI RLB.
Bare ground	2.96	This habitat type was found along roadsides, gravel roads, compacted bare ground soils, and areas of current works.

Table 3-7: Summary of Linear Phase 1 Habitats Recorded within the OnTI RLB and 100m Buffer.

Linear Habitat Type	Habitat Area (Metres)	Habitat Description
Priority habitat (rivers)	1.97	This habitat includes watercourses that qualify as Priority habitat. This is discussed further in Section 3.4.3.56. Further information on these watercourses can be found within Volume 5, Chapter 6: Hydrology and Hydrogeology and Volume 7E, Appendix 3-5: Fish and Fresh Water Pearl Mussel.
Other rivers and streams	2.64	This habitat included wet ditches and a single section of watercourse. Further information on these watercourses can be found within Volume 5, Chapter 6: Hydrology and Hydrogeology and Volume 7E, Appendix3-5: Fish and Fresh Water Pearl Mussel.
Ditches	6.48	This habitat includes wet and dry ditches.
Species-rich native hedgerow - associated with bank or ditch	0.94	There were few hedges that qualified under this habitat type but were scattered along the entire length of the OnTI. This habitat contained at least five woody species and contained species such as hawthorn, hazel (*Corylus avellana*), dog rose (*Rosa canina*), gorse, broom, bramble, holly (*Ilex aquifolium*), blackthorn (*Prunus spinosa*), elm, ash, birch and rowan.
Species-rich native hedgerow	0.29	There were few hedges that qualified under this habitat type located in two areas along the OnTI RLB. This habitat contained at least five woody species and contained species such as hawthorn, dog rose, holly, blackthorn (*Prunus spinosa*), beech, hazel, field rose (*Rosa arvensis*) and elder.
Native hedgerow	5.09	These hedges were present throughout the OnTI RLB and contained species very similar to the species-rich native hedge but at much less diversity with typically only two to three species present.

Linear Habitat Type	Habitat Area (Metres)	Habitat Description
Native hedgerow - associated with bank or ditch	1.33	These hedges were primarily recorded in the north of the OnTI RLB and consisted typically of only two to three of the following species: hawthorn, beech, hazel, blackthorn, dogwood and willow.
Species- rich native hedgerow with trees	0.27	There are only three examples of this habitat type within the OnTI RLB. These hedges consisted of similar species to the species-rich native hedgerow but with more mature trees present along its length. Additional species recorded in these hedges include sycamore, raspberry (*Rubus idaeus*) and sitka spruce.
Native hedgerow with trees	0.77	These hedges were present throughout the OnTI RLB and contained species very similar to the species-rich native hedgerow with trees but at much less diversity with typically only two to three species present. The dominant species in these hedgerows were beech and hawthorn.

3.4.3.28 High energy littoral rock (9.26ha) and an area of other neutral grassland (11.38ha) are the largest areas of habitat with notable ecological value. These two areas are limited to the coastline but form part of the Cullen to Stake Ness Coast SSSI. The remainder of the other neutral grassland-semi-improved present within the OnTI RLB is not considered to be ecologically notable as no protected or notable floral species were recorded.

3.4.3.29 Woodland habitats are scattered throughout the OnTI RLB and comprise a mix of semi-natural and plantation woodland.

3.4.3.30 Lowland mixed deciduous woodland (0.20ha) is the only other habitat of notable ecological interest and is limited in distribution within the OnTI RLB. Parcels of lowland mixed deciduous woodland were small in size, fragmented and located primarily along the edge of the OnTI RLB.

3.4.3.31 In accordance with Section 3.5.4.15 to 3.5.4.23, the following importance levels for notable habitats are:

- High energy littoral rock is considered to be of low importance;
- Neutral grassland area is considered to be of low importance; and
- Lowland mixed deciduous woodland is considered to be of high importance.

3.4.3.32 The notable habitats identified are considered further in Section 3.7 of this assessment.

3.4.3.33 There are four sections of species rich native hedgerow – associated with bank or ditch, two sections of species-rich native hedgerow and three species – rich native hedgerow with trees within the OnTI RLB. Descriptions of these hedgerows are outlined in Table 3-8.

Table 3-8: Ecologically Notable Hedgerows within the OnTI RLB.

Hedgerow Type (Reference Number)	Hedgerow Description
Species-rich native hedgerow – associated with bank or ditch (H01)	Hedge is located to the north of the A97 at approximate grid reference NJ 66036 59721. Hedge spans the entire width of the OnTI RLB.
Species-rich native hedgerow with trees (H02)	Hedge is to the south of the Burn of Brydock at approximate grid reference NJ 66448 58576. Hedge is very small at 7m and is at the tail end of a hedge that runs outside the OnTI RLB.
Species-rich native hedgerow with trees (H03)	Hedge runs parallel to the B9121at at approximate grid reference NJ 67837 58063. Hedge is small at only 43m and thus only spans a small portion of the OnTI RLB.

Hedgerow Type (Reference Number)	Hedgerow Description
Species-rich native hedgerow – associated with bank or ditch (H04)	Hedge is located south of the River Deveron at approximate grid reference NJ 70402 57122. Hedge spans the entire width of the OnTI RLB.
Species-rich native hedgerow with trees (H05)	Hedge is located to the east of the A947 at approximate grid reference NJ 74402 53918. Hedge spans the entire width of the OnTI RLB.
Species-rich native hedge (H06)	Hedge is located south of the Burn of Brackans at approximate grid reference NJ 76091 52627. Hedge spans the entire width of the OnTI RLB.
Species-rich native hedge (H07)	Hedge is located south of B9170 at approximate grid reference NJ 77964 49387. Hedge spans half of the width of the OnTI RLB.
Species-rich native hedgerow – associated with bank or ditch (H08)	Hedge in the southern portion of the OnTI RLB near Keithen at approximate grid reference NJ 79323 45912. Hedge spans the entire width of the OnTI RLB and is on the north side of the same road as H09.
Species-rich native hedgerow – associated with bank or ditch (H09)	Hedge in the southern portion of the OnTI RLB near Keithen at approximate grid reference NJ 79323 45912. Hedge spans the entire width of the OnTI RLB and is on the south side of the same road as H08.

3.4.3.34 Species-rich native hedge (0.29m), species-rich native hedgerow with trees (0.27m) and species-rich native hedgerow – associated with bank or ditch (0.94m) are the three notable hedgerow types of ecological value due to their species diversity and are considered further in this chapter within Section 3.7.

3.4.3.35 In accordance with Section 3.5.4.15 to 3.5.4.23, notable hedgerow habitats are considered to be of moderate importance.

National Vegetation Classification

3.4.3.36 Where the potential for notably unique or diverse habitats was identified, NVC surveys were undertaken. The NVC system is more detailed and precise than the Phase 1 habitat method and is necessary for identifying habitats/plant communities of relevance to modern legislation such as Annex I of the Habitats Directive (European Union, 2013[26]), or Groundwater Dependent Terrestrial Ecosystem (GWDTE) of the Water Framework Directive (WFD) (European Union, 2006[27]).

3.4.3.37 Vegetation is identified, mapped and described according to the five volumes of British Plant Communities (Rodwell, 1991-2000[28]) in

accordance with the standard NVC method (as outlined in the NVC Users Handbook (Rodwell, 2006[29])).

3.4.3.38 NVC surveys were conducted in May, July and August 2023 as well as July 2024. The areas selected for NVC surveys were chosen following a review of desk study data where potential records of Class 1 and Class 2 peat were identified on the Carbon and Peatland 2016 map[24] near the Onshore Substation Site. The surveys in July 2024 focused on an area of Class 3 peat.

3.4.3.39 The NVC habitats within the section surveyed in 2023 in the OnTI RLB are outlined in Table 3-9 The NVC habitats surveyed in July 2024 are outlined in Table 3-10.

Table 3-9: NVC Habitats and Descriptions from 2023 Surveys.

NVC Habitat	Habitat Description
MG7a *Lolium perenne* leys and related grasslands, *Lolium perenne-Trifolium repens* leys	MG7a is arable habitat associated with rye-grass and clover ley. As an arable habitat, this NVC community is not considered to be notable.
MG9 *Holcus lanatus-Deschampsia cespitosa* grassland	The two areas of MG9 are waterlogged and dominated by Yorkshire fog with frequent watercress and broad-leaved dock.
M23b *Juncus effusus/acutiflorus-Galium palustre* rush-pasture, Juncus effusus sub-community	M23b consists of waterlogged depressions and vegetative communities consistent with typical marshy grassland habitats. The species present include *Calliergonella cuspidata*, marsh bedstraw (*Galium palustre*), marsh thistle (*Cirsium palustre*), marsh willowherb (*Epilobium palustre*), valerian (*Valeriana officinalis*) and water horsetail (*Equisetum fluviatile*) and soft-rush.
U4b *Festuca ovina-Agrostis capillaris-Galium saxatile* grassland, *Holcus lanatus-Trifolium repens* sub-community	The area of U4b is dominated by Yorkshire fog with frequent to occasional areas of common bent (*Agrostis capillaris*), common mouse-ear chickweed (*Cerastium fontanum*), creeping buttercup (*Ranunculus repens*), creeping thistle (*Cirsium arvense*), common groundsel (*Senecio vulgaris*), meadow foxtail (*Alopecurus pratensis*) and spear thistle. Overall, the habitat was recorded to be species-poor, uneven and indistinctive.
MG6a *Lolium perenne-Cynosurus cristatus* grassland, typical sub-community	The MG6a is a moderately extensive, pastoral grassland located on well-drained slopes. Common bent, crested dog's-tail (*Cynosurus cristatus*) and perennial rye-grass are abundant with frequent white clover and occasional broad-leaved dock, common mouse-ear, creeping buttercup, spear thistle and Yorkshire fog. Overall, the habitat is species-poor, moderately even and indistinctive sward. The habitat is dominated by pastoral grasses that have been promoted through improvement (ploughing, re-seeding and fertiliser applications). Some areas have been mown and all areas have been grazed to varying levels.

Table 3-10: NVC Habitats and Descriptions from 2024 Survey.

NVC Habitat	Habitat Description
MG1c *Arrhenatherum elatius* grassland, *Filipendula ulmaria* sub-community	The habitat was dominated by false oat-grass, with frequent to occasional cleavers, marsh woundwort, nettles, tufted hair-grass and valerian. There was rare amounts of creeping buttercup, creeping thistle and foxglove.
MG9a *Holcus lanatus-Deschampsia cespitosa* grassland, *Poa trivialis* sub-community	Tufted hair-grass dominated this habitat, exclusively so in some places. There were occasional occurrences of broad buckler-fern (*Dryopteris dilatata*), broad-leaved willowherb (*Epilobium montanum*), marsh thistle, soft-rush, valerian and Yorkshire fog.
MG10a *Holcus lanatus-Juncus effusus* rush-pasture, typicall sub-community	This habitat was dominated by soft-rush and Yorkshire Fog with occasional to rare occurrences of broad-leaved dock, couch grass (*Elymus repens*) and creeping buttercup.
S22a *Glyceria fluitans* water-margin vegetation, *Glyceria fluitans* sub-community	The floating raft of S22a was dominated by floating sweet grass.
U4b *Festuca ovina-Agrostis capillaris-Galium saxatile* grassland, *Holcus lanatus-Trifolium repens* sub-community	The area of U4b is dominated by Yorkshire fog with frequent to occasional areas of broadleaved dock, common bent, creeping buttercup, creeping thistle and Timothy.

3.4.3.40 None of these habitats were considered to be ecologically notable due to their lack of species diversity and notable plant communities. These habitats are considered to be widespread and common and are therefore not considered further within the ecological assessment.

Habitats over Peat Soils

3.4.3.41 There are four areas within the OnTI RLB that were classed under the Carbon and Peatland 2016 map[24] as ranging from Class 1 to Class 5 peat. Land parcel numbers are illustrated in Volume 7E, Appendix 3-1: Biodiversity Enhancement Report, Figure 3-1.1. These are:

- An area south of Greenness Woodland within land parcel 437 and 1192, that is Class 3 and Class 4 Peat;
- Two areas of Class 4 peat, one crossing land parcel 213 and 1102, and a second larger area covering portions of land parcel 1102, 1426, 100 and 109; and
- An area of Class 1 and Class 5 in the southern section of the OnTI RLB within land parcel 1, near the Onshore Substation Site.

3.4.3.42 The definitions[24] of these carbon and peatland classes that are found within the OnTI RLB are provided in Table 3-11.

Table 3-11: Carbon and Peatland Class Descriptions.

Carbon and Peatland Class	Description
Class 1	Defined as nationally important carbon-rich soils, deep peat and priority peatland habitat. These areas are likely to be of high conservation value.
Class 3	Defined as an area where the dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic habitats. Occasional peatland habitats can be found. Most soils are carbon-rich soils, with some areas of deep peat.
Class 4	Defined as an area unlikely to be associated with peatland or wet and acidic type habitats. Area is unlikely to include carbon-rich soils.
Class 5	Defined as an area where soil composition takes precedence over vegetation data. No peatland habitat is recorded in this area and may include areas of bare soil. Soils are carbon-rich and contain deep peat.

3.4.3.43 Peat probing and NVC surveys were undertaken in the area of Class 1 and 5 peat near the Onshore Substation. Additional peat probing was undertaken in the area south of Greenness Woodland in Class 3 peat.

3.4.3.44 Further information on the results of the peat probing is provided in Volume 7E, Appendix 7-2: Peat Survey Reports. The location of the peat probing can be seen in Application Document 7: Outline Peat Management Plan Figure 1-2.

3.4.3.45 The surveys near the Onshore Substation found areas of deep, carbon-rich peat soils but no peatland habitats, which aligns with the definition of Class 5 peat.

3.4.3.46 The peat probing south of Greenness Woodland found no peat soils. These surveys found that the habitats consisted of other neutral grassland, modified grassland and arable fields with no vegetation communities consistent with peatland habitat.

3.4.3.47 Furthermore, as outlined by NatureScot's 'Priority Peatland habitat'[25] guidance, priority peatland contains the NVC habitat communities M1, M17, M19, M20 or M15, none of which were recorded within the OnTI RLB (Table 3-9).

3.4.3.48 The other areas of Class 4 peat consisted of modified grassland and arable fields.

3.4.3.49 In summary, no peatland habitats were recorded within the OnTI RLB. Those areas identified were found to consist of modified, generally species-poor communities. However, as no peatland habitats were identified, these habitats are scoped out of further consideration within this assessment.

3.4.3.50 However, it should be noted that although these areas do not consist of peatland habitats, carbon-rich soils and areas of deep peat are present in land parcel 1. These are assessed further in Volume 6, Chapter 4: Greenhouse Gases and Volume 5, Chapter 7: Geology, Soils and Contaminated Land.

Watercourses

3.4.3.51 This section should be read in conjunction with Volume 5, Chapter 6: Hydrology and Hydrogeology. Information on watercourses subject to fish habitat assessments can also be found in Volume 7E, Appendix 3-5: Fish and Fresh Water Pearl Mussel.

3.4.3.52 Several watercourses and their tributaries are located within the OnTI RLB. The largest of these is the River Deveron.

3.4.3.53 Several watercourses were provided a code (WCXX) within the technical appendices listed in section 3.1.1.3. Several watercourses were not scoped in for additional ecological surveys (e.g. otter or water vole) and thus do not have a code. Where a watercourse was provided a code in one of the technical appendices, this has been included in Table 3-12 for ease of reference in this chapter and cross referencing to the technical appendices. Some watercourses have been provided multiple codes due to their tributaries.

3.4.3.54 Consideration of loss of these watercourses in terms of biodiversity has been covered in Volume 7E, Appendix 3-1: Biodiversity Enhancement Report.

3.4.3.55 There are eight watercourses within the OnTI RLB and within a 100m buffer that have been assigned a WFD classification, along with their tributaries. These watercourses are detailed in Table 3-11. There are 26 named watercourses (which includes those with WFD classification) located within the OnTI RLB and within a 100m buffer. These watercourses are detailed in Table 3-13.

3.4.3.56 The watercourses in Table 3-11 and Table 3-12 have all been assessed against the JNCC UK Biodiversity Action Plan (BAP) Priority Habitat criteria[51] for priority rivers. If watercourses achieve a 'high' WFD classification they can be considered as a priority river. Where this status is not achieved, the watercourse has been assessed against seven other criteria, most notably with regards to this assessment, is the watercourse's ability to support six or more qualifying species.

Table 3-12: WFD Classified Watercourses within the OnTI RLB and a 100m Buffer.

Ecology Watercourse Code	WFD Waterbody Name (Code)	Location	2020 Overall WFD Status	Priority Status Watercourse
WC02	Boyndie Burn (UKSC023055)	Located in the north of the OnTI RLB, east of Boyndie, and flows northward.	Moderate ecological potential (heavily modified waterbody)	No
WC03	Burn of Brydock (UKSC023156)	Located in the north of the OnTI RLB. Flows east to the north of Fattahead.	Good	No
WC04	River Deveron – Turriff to tidal limit (UKSC023155)	Located in the northern central area of the OnTI RLB, from Turriff to Banff. Flows north.	Good	Yes – potential presence of 6 or more qualifying species
-	Burn of King Edward (UKSC023160)	Located in the north-east of the OnTI RLB and flows west. It is made up of a number of tributaries.	Moderate ecological potential (heavily modified waterbody)	No
WC08/ WC10/ WC12	Idoch Water (UKSC023161)	Located in the south of the OnTI RLB. Idoch Water has a number of tributaries that flow west through New Byth, Crossfields, and Hatton Castle.	Moderate ecological potential (heavily modified waterbody)	No
-	River Ythan – Upper catchment above Fyvie (UKSC023233)	Located in south-west of the OnTI RLB. River Ythan has a number of tributaries that flow through Kirktown of Auchterless, Inverythan, and Tifty.	Moderate ecological potential (heavily modified waterbody)	No
-	Burn of Stonehouse (UKSC023236)	Located in the south of the OnTI RLB and flows south through Millbrex and Gight.	Good ecological potential (heavily modified waterbody)	No

Ecology Watercourse Code	WFD Waterbody Name (Code)	Location	2020 Overall WFD Status	Priority Status Watercourse
-	Little Water / Black Burn (UKSC023237)	Located in the east of the south of the OnTI RLB and flows south through Balthangie to Ardo.	Moderate ecological potential (heavily modified waterbody)	No

Table 3-13: Named Watercourses.

Ecology Watercourse Code	Watercourse Name	Location	Priority Status Watercourse
WC13/ WC14	Burn of Asleid	Located in the south of the OnTI RLB, adjacent to the Onshore Substations. Flows north-west to south-east.	No
	Burn of Auchenbadie	Located in the north / central OnTI RLB, north-east of King Edward. Flows east to west into the River Deveron.	No
	Burn of Bachlaw	Located in the north-east of the OnTI RLB, between Mid Culbeuchly and Alvah. Flows north-east to south-east.	No
WC012	Burn of Balquholly	Located in the south of the OnTI RLB, south-east of Howe of Teuchar. Flows northward until it joins the Burn of Turriff.	Yes – potential presence of 6 or more qualifying species
WC02	Burn of Boyndie	Located in the north / central OnTI RLB, east of Boyndie, and flows northwards.	No
WC03	Burn of Brydock	Located in north in the central OnTI RLB of Fattahead.	No
WC16	Burn of Burnside	Located in the south / central OnTI RLB, northeast of Turriff. Flows north to south.	No
	Burn of Greens	Located in the south of the OnTI RLB, west of New Deer. Flows north to south.	No

Ecology Watercourse Code	Watercourse Name	Location	Priority Status Watercourse
	Burn of Kiminity	Located in the south / central OnTI RLB, north-east of Turriff. Flows north to south.	No
WC07	Burn of Kinbate	Located in the centre of the OnTI RLB, north of Turriff. Flows east to west.	Yes – potential presence of 6 or more qualifying species
	Burn of King Edward	Located in the north / central OnTI RLB. Flows from east to west, falling into the River Deveron about 4 miles from Banff.	No
WC08	Burn of Kinminty	Located in the north central OnTI RLB. Flows south until it enters the Mill Dam of Burnside, after which it assumes the name of Burn of Burnside.	No
WC010	Burn of Monquhitter	Located in the south of the OnTI RLB, east of Turriff. Flows northeast to south-west.	Yes – potential presence of 6 or more qualifying species
WC09	Burn of Muiryfold	Located in the centre of the OnTI RLB, slightly north-east of Turriff. Flows in a south-westerly direction.	Yes – potential presence of 6 or more qualifying species
	Burn of Stonehouse	Located in south of the OnTI RLB and flows south through Millbrex and Gight.	No
WC15	Craigston Burn	Located in the north / central OnTI RLB, south of Banff. Flows north-west to south-east.	No
	Crossfields Stripe	Located in the centre of the OnTI RLB, north of Turriff. Flows east to west into the Burn of King Edward.	No
WC11	Glen Burn	Located in the centre of the OnTI RLB, adjacent to the A947, north of Turriff. Flows in a westerly direction until it joins the Burn of Kinbate.	No
	Idoch Water	Located in the south / central OnTI RLB, south-east of Turriff. Flows in a	No

Ecology Watercourse Code	Watercourse Name	Location	Priority Status Watercourse
		north westerly direction into the Idoch Water.	
WC05	Lenshie Burn	Located in the south / central OnTI RLB, east to south-east of Turriff. Flows in a westerly direction.	No
	Little Water	Located in the centre of the OnTI RLB, south of Banff. Flows in a south westerly direction.	No
WC04	River Deveron	Located in east of the OnTI RLB and flows south from Balthangie to Ardo in the south of the study area.	Yes – potential presence of 6 or more qualifying species
	Theif's Pot	Located in the northern central area of the OnTI RLB from Turriff to Banff and flows north.	No
	Tifty Burn	Located in the centre of the OnTI RLB, south of Banff. Flows in a southerly direction.	No
	Whitehill Pot	Located in the south of the OnTI RLB, south-east of Turriff. Flows in a westerly direction, falling into the River Ythan about half a mile north of Fyvie Castle.	No

3.4.3.57 The watercourses that qualify as priority habitats and are therefore ecologically notable (WC04, WC07, WC09, WC10 and WC12) are considered further within Section 3.7 of this chapter.

3.4.3.58 The other watercourses are assessed within relevant protected species sections of this assessment and/or within Volume 5, Chapter 6: Hydrology and Hydrogeology.

Protected and Notable Species

Invasive Non-native Species

3.4.3.59 Desk study data from NeSBReC returned no records of invasive non-native species (INNS) within 500m of the OnTI RLB within the last 10 years.

3.4.3.60 Giant hogweed (*Heracleum mantegazzianum*), Himalayan balsam (*Impatiens glandulifera*), Montbretia (*Crocosmia* x *crocosmiiflora*) and Japanese rose (*Rosa rugosa*) were all recorded within the OnTI RLB during the Phase 1 habitat surveys (Table 3-14).

3.4.3.61 These species are all listed under Schedule 9 of the Wildlife and Countryside Act (WCA) (UK Parliament, 1981[30]) Giant hogweed and Himalayan balsam are both considered to be in the top four most damaging non-native plant species in Scotland (NatureScot, 2024[31]).

Table 3-14: Invasive Non-native Species within the OnTI RLB.

Species	Location	Description
Giant Hogweed	Land Parcel 1219 / NJ 69220 57735	Multiple locations along the western bank of the River Deveron.
	Land parcel 1132 / NJ 69150 57559, NJ 69184 57560	Adjacent to the south boundary of the OnTI RLB in this land parcel, near the River Deveron.
	Land parcel 1007 / NJ 69220 57221	Eastern bank of the River Deveron on the edge of the OnTI RLB.
	Land parcel 1197 / NJ 77875 49612	Along the southern bank of the Burn of Monquhitter.
	Land parcel 14 / NJ 83038 45501 and NJ 82423 45506	Both were single young species on the edge of the OnTI RLB.
Himalayan balsam	Land parcel 1132 / NJ 69150 57559	Species present in multiple locations adjacent to the south boundary of the OnTI RLB in this land parcel, near the River Deveron.
	Land parcel 1392 / NJ 69184 57560	Along the western bank of the River Deveron.
	Land parcel 1007 / NJ 69220 57221, NJ 69276 57279	Eastern bank of the River Deveron on the edge of the OnTI RLB.
	Land parcel 1197 / NJ 77875 49612	Along the southern bank of the Burn of Monquhitter.
Montbretia	Land parcel 1402/ NJ 63743 63786	Located where the OnTI RLB crosses this land parcel.
Japanese Rose	Land parcel 1402 / NJ 63743 63786	Located where the OnTI RLB crosses this land parcel.
	Land parcel 213 / NJ 79143 45931	Adjacent to OnTI RLB near farmyard.

3.4.3.62 As INNS are considered notable due to their status as Schedule 9 species, they are scoped in for further ecological assessment.

3.4.3.63 In accordance with Section 3.5.4.15 to 3.5.4.23, the INNS assemblage is considered to be of high importance however they are not considered to be a valued ecological receptor. They are however scoped in for further consideration due to the potential for the Proposed Development (Onshore) construction to cause the spread of these species.

Amphibians

3.4.3.64 GCN are provided legal protection as an EPS, GCN, common toad (*Bufo bufo*) and natterjack toad (*Epidalea calamita*) are listed on the Scottish Biodiversity List (SBL).

3.4.3.65 As outlined in Section 3.3 and Table 3-2: , consultation with stakeholders identified no known populations of GCN within the OnTI RLB and wider Onshore Scoping Area considered at the scoping stage.

3.4.3.66 Desk study data from NeSBReC returned no records of GCN, common toad or natterjack toad within 500m of the OnTI RLB within the last 10 years.

3.4.3.67 Following completion of the Phase 1 habitat surveys, only one area of standing water was recorded within the OnTI RLB. This pond, located at the most northerly part of the OnTI RLB, near the coast, is man-made and lacked any aquatic vegetation and had a high level of bird disturbance. It was therefore unlikely to be able to support GCN. It was noted that the pond may have the ability to support a small number of common toad however none were recorded during the Phase 1 habitat survey.

3.4.3.68 The distribution of natterjack toads in Scotland is known to be limited to isolated sites on the Solway Coast in Dumfries and Galloway (NatureScot, 2024[32]).

3.4.3.69 GCN, common toad and natterjack toad were therefore considered to be absent from the ZoI and are scoped out of further ecological assessment.

Aquatic Invertebrates

3.4.3.70 The desk study data provided by NESBReC returned no records of aquatic invertebrates within 100m of the OnTI RLB within the last 10 years.

3.4.3.71 Habitat suitable for aquatic invertebrates was limited to watercourses located within the OnTI RLB.

3.4.3.72 Aquatic invertebrates were therefore scoped out of further assessment at this stage.

Terrestrial Invertebrates

3.4.3.73 The desk study data provided by NESBReC returned no records of terrestrial invertebrates within 100m of the OnTI RLB within the last 10 years.

3.4.3.74 As outlined within the Habitats Sections 3.4.3.15 to 3.4.3.50, the habitats within the OnTi RLB are dominated by arable fields, with limited areas of notable, species diverse habitats capable of supporting a diverse assemblage of terrestrial invertebrate species.

3.4.3.75 Terrestrial invertebrates were therefore scoped out of further ecological assessment at this stage.

Badger

3.4.3.76 Due to the confidential nature of badgers and their sett locations, the assessment of potential effects on badger has been undertaken in Volume 7E, Appendix 3-2: Badger Survey Report and Impact Assessment.

3.4.3.77 The badger assemblage within the ZoI is considered to be of high importance and is therefore scoped in for further assessment.

Breeding Birds

3.4.3.78 This section of the chapter should be read in conjunction with Volume 7E, Appendix 3-4: Breeding Birds Survey Report.

3.4.3.79 The breeding surveys were designed to identify notable breeding bird assemblages present within the OnTI RLB and directly adjacent fields as well as establish if any habitats within the survey area could be considered to be functionally linked land to the Moray Firth SPA due to the presence of Qualifying Interests (QIs) of the SPA. Abundance and peak counts were recorded for target species. Bird species were considered to be target species if they met at least one of the following criteria:

- Moray Firth SPA citation species;
- Species listed on Schedule 1 of the Wildlife and Countryside Act;
- Birds of Conservation Concern, 5th edition (BoCC5) Red and Amber species; or
- SBL species.

3.4.3.80 The desk study data provided by NESBReC returned 34 records of birds within the past ten years within 500m of the OnTI RLB, comprising 12 different species. All of which are target species, although no records of Moray Firth SPA qualifying species were returned within 500m of the OnTI RLB.

3.4.3.81 Additional desk study data was sought from the BTO WeBS data. The WeBS data returned comprised of 35 different species, of which 33 were target species.

3.4.3.82 The breeding bird surveys recorded no Moray Firth SPA qualifying species within the OnTI RLB.

3.4.3.83 The breeding bird assemblage recorded within the OnTI RLB was largely typical of species associated with agricultural areas. The presence of agricultural features such as large open arable fields, wet grassland, hedgerows and improved grassland has resulted in the recording of notable numbers of yellowhammer (*Emberiza citrinella*), skylark (*Alauda arvensis*), corn bunting (*Emberiza calandra*) and wren (*Troglodytes troglodytes*).

3.4.3.84 Generally, higher numbers and diversity of birds were noted in areas of scrub, woodland and hedges with some species (e.g. skylark,

yellowhammer and corn bunting) also associated with the open agricultural and grassland areas and others with nearby buildings (e.g. barn owl (*Tyto alba*), swallow (*Hirundo rustica*)).

3.4.3.85 A total of 74 species were recorded within or flying over the nine transect areas during the BBS. Of these 74 species, a total of 41 species were identified as actively breeding or exhibiting behaviour suggestive of breeding within the survey area as a whole, during the survey period. A total of 21 target species (as defined in section 3.4.3.79) were identified as being 'confirmed' or 'probable' breeders within the OnTI RLB during the 2024 survey period.

3.4.3.86 In accordance with Section 3.5.4.15 to 3.5.4.23 the population of breeding birds within the ZoI is considered to be of moderate importance and is therefore scoped in for further assessment.

Fish

3.4.3.87 This section of the chapter should be read in conjunction with Volume 7E, Appendix 3-5: Fish and Fresh Water Pearl Mussel Survey Report.

3.4.3.88 This chapter considers:

- Atlantic salmon (*Salmo salar*);
- Brown trout (*Salmo trutta*) (including sea trout);
- River lamprey (*Lampetra fluviatilis*);
- Sea lamprey (*Petromyzon marinus*);
- Brook lamprey (*Lampetra planeri*); and
- European eel.

3.4.3.89 In accordance with Section 3.4.1.3 the ZoI for fish and FWPM is 500m from the OnTI RLB.

3.4.3.90 The desk study data provided by NESBReC returned no records of these species within 500m of the OnTI RLB.

3.4.3.91 A review of the salmonoid distribution database (Marine Scotland Science, 2021[33]) and the most recent National Electrofishing Programme for Scotland (Maring Scotland Science, 2021[34]) indicate that Atlantic salmon have been recorded within the River Deveron and River Ythan and tributaries of these rivers within the OnTI RLB. Brown trout (including sea trout), river lamprey, sea lamprey, brook lamprey and European eel have been recorded within watercourses within a 10km radius of the OnTI RLB.

3.4.3.92 The River Deveron is the largest channel within the OnTI RLB and is the primary migratory route for many migratory salmonids and other diadromous species that use this catchment to spawn.

3.4.3.93 Eight watercourses within the OnTI RLB are likely to host Atlantic salmon, sea/resident brown trout, European eel and sea, river and brook lamprey due to the presence of suitable salmonid spawning habitat, juvenile lamprey habitat and lack of barriers to their migration. European eel are also ubiquitous in distribution.

3.4.3.94 A summary table of the suitability of watercourses to support fish species is provided in Table 3-15.

Table 3-15: Summary of Survey Results for Suitability of Watercourses to Support Fish.

Watercourse Code	Watercourse Name	Survey Results
WC02	Burn of Boyndie	Juvenile lamprey habitat present. Salmonid spawning habitat located in upper extent.
WC03	Burn of Brydock	Small area of Salmonid spawning habitat. Impassable barriers downstream of the survey extent which means it is likely that only brown trout and brook lamprey will be present.
WC04	River Deveron	Good areas of salmonid spawning habitat. Desk study data indicates that salmon are present in the River Deveron many tributaries of the River Deveron.
WC05	Lenshie Burn	No spawning habitat was recorded.
WC07	Burn of Kinbate	At the downstream end of the survey extent there is one salmonid spawning habitat point.
WC08	Burn of Kinminty /Burn of Brackans	Substantial culverts recorded on watercourse making it uncertain if diadromous fish can access this channel. No spawning habitat was recorded.
WC09	Burn of Muiryfold	Substantial culverts recorded on watercourse making it uncertain if diadromous fish can access this channel. Juvenile lamprey habitat is present throughout the survey extent. One small area of salmonid spawning habitat point upstream of a potentially impassible culvert.
WC10	Burn of Monquhitter	There is an abundance of substrates, such as gravel/pebble and cobble, that supports salmonid spawning habitat throughout the survey extent with 15 salmonid spawning points recorded. Good juvenile lamprey habitat is also present.
WC11	Glen Burn	Little fish habitat present with a culvert downstream of the survey extent that is likely

Watercourse Code	Watercourse Name	Survey Results
		impassible for fish. No spawning habitat was recorded.
WC12	Burn of Balquholly	Substrates are primarily gravel/pebble and cobble creating good salmonid spawning habitat as 20 points are present throughout the survey extent. Juvenile lamprey habitat present.
WC13	Burn of Asleid	The channel is primarily a long run with isolated pockets of salmonid spawning and juvenile lamprey habitat present. Four salmonid spawning habitat points and several juvenile lamprey habitat points are present throughout the survey extent.
WC14	Unnamed Tributary of Burn of Asleid 1	Juvenile lamprey habitat present. There are a few small, isolated pockets of juvenile lamprey and one salmonid spawning habitat downstream of culvert.

3.4.3.95 In accordance with Section 3.5.4.15 to 3.5.4.23 the population of fish within the ZoI is considered to be of high importance and is therefore scoped in for further assessment.

Freshwater Pearl Mussel

3.4.3.96 This section of the chapter should be read in conjunction with Volume 7E, Appendix 3-5: Fish and Fresh Water Pearl Mussel.

3.4.3.97 Many of the watercourses within the OnTI RLB and 500m buffer were not suitable to support FWPM due to watercourse form.

3.4.3.98 Two watercourses were deemed to be potentially suitable (the Burn of Boyne and the River Deveron). However, the Burn of Boyne, was subsequently excluded from the revised OnTI RLB and 500m buffer and thus removed from further assessment.

3.4.3.99 The River Deveron, based on stakeholder consultation (Table 3-2:) and desk study records, has no known presence of FWPM.

3.4.3.100 FWPM are therefore considered to be absent from the ZoI and are scoped out of further ecological assessment.

Otter

3.4.3.101 This section of the chapter should be read in conjunction with Volume 7E, Appendix 3-6: Otter and Water Vole Survey Report.

3.4.3.102 In accordance with Section 3.4.1.3 the ZoI for otter is 500m from the OnTI RLB. The desk study data provided by NESBReC returned no records of this species within 500m of the OnTI RLB in the last 10 years.

3.4.3.103 The surveys confirmed that otter are only present within the larger, faster-flowing watercourses, including the River Deveron. Table 3-16 details the watercourses along which otter field signs were recorded during the 2023 and 2024 surveys. Watercourses that were surveyed but presented no field signs from otter are not included in Table 3-16. Volume 7E, Appendix 3-6, Annex 1 Otter and water vole field signs outlines the results obtained from each otter survey and Figure 3.6.2 within Volume 7E, Appendix 3-6, Annex 2 Supporting Figures shows these field signs.

Table 3-16: Otter Field Signs on Watercourses within the OnTI RLB.

Watercourse Number/Name	Otter Field Signs	
	Spraints, Prints, Anal Jelly and Bedding	Resting Sites, Holts and Sightings
WC03 - Burn of Brydock (UKSC023156)	5 x spraint	-
Ditch 05 – Unnamed tributary of Burn of Brydock	1 x spraint	-
WC04 – River Deveron (UKSC023155)	20 x spraints 5 x footprints 1 x slide 1 x anal jelly 1 x path	1 x resting site 2 x couch
WC15 – Craigston Burn	4 x spraint 4 x footprints 3 x slide 1 x path	1 x sighting 1 x couch
WC16 – Burn of Burnside	1 x spraint	-
WC10 - Burn of Monquhitter	1 x spraint	-

3.4.3.104 The signs and direct sighting of otter were predominantly localised to larger watercourses with flowing water, which are likely to contain a greater amount of prey. Field signs were also associated with larger watercourses which contained riparian vegetation or woodlands, and this is likely preferred by the species as it will provide shelter and safe sites for successful breeding.

3.4.3.105 Where evidence of otter has not been recorded, it is considered likely that otter will pass through those sections of watercourses which are linked to others where evidence of otter has been recorded.

3.4.3.106 In accordance with Section 3.5.4.15 to 3.5.4.23 the population of otter within the ZoI is considered to be of high importance and is therefore scoped in for further assessment.

Pine Marten

3.4.3.107 As outlined in Table 3-2: , it was agreed with NatureScot that dedicated pine marten surveys would not be undertaken and that, at this stage, presence would be assumed in suitable habitat.

3.4.3.108 In accordance with Section 3.4.1.3 the ZoI for pine marten is 30m from the OnTI RLB.

3.4.3.109 The study data from NESBReC returned no records of pine marten within 30m of the OnTI RLB. The most recent record returned was from 2021, approximately 100m from the OnTI RLB. Connectivity between the habitats where the desk study record was and the OnTI RLB is limited as grasslands separate the OnTI RLB from suitable woodlands, with no trees or hedgerows providing connectivity to the OnTI RLB.

3.4.3.110 Two additional records from 2020 were present approximately 300m from the OnTI RLB. Habitat connectivity is present between these records and the OnTI RLB through suitable woodlands and hedgerows.

3.4.3.111 A review of records from the NBN atlas identified several records of pine marten in proximity to the OnTI RLB. Due to commercial sensitivity, the details of these records cannot be provided but were used to inform the likelihood of potential presence of the species.

3.4.3.112 Pine martens are not confined to woodland habitats but are noted as requiring between 86ha to 166ha of woodland within their territory (NatureScot, 2020[35]). The only habitat of this approximate size in proximity to the OnTI RLB is Wood of Delgaty and Greeness Woodland which is connected to Delgaty Forest. Greeness Woodland has a small portion within the OnTI RLB (approximately 100 metres squared (m^2)) and no portion of Wood of Delgaty is within the OnTI RLB.

3.4.3.113 A review of woodland management plans for Wood of Delgaty did not suggest any known pine marten populations within this woodland (Forestry Scotland, 2021[36]).

3.4.3.114 Following the results of the desk study and Phase 1 habitat surveys, potentially suitable pine marten habitat has been identified. These areas are detailed in Table 3-17.

3.4.3.115 Grid references provided are where the discussion of suitability meets the OnTI RLB and are not the location of species records.

Table 3-17: Suitability of Habitats to Support Pine Marten.

Location/ Approximate Grid Reference	Discussion of Suitability	Assessed Further
Boyndie/ NJ 63754 63792	No historic records of pine marten in this area. Trees within 30m of the OnTI RLB are too immature and connectivity to habitats has been lost since woodland has been felled.	No
Burn of Auchenbadie, east of B9121/ NJ 68394 58222	Pine marten have been recorded in this woodland however no connecting habitats are present between the OnTI RLB and this suitable habitat.	No
River Deveron/ NJ 69231 57450	No historic records of pine marten in this woodland. Mature woodland is present on both banks of the River Deveron and connection to broadleaved woodland is present to the north and south on both banks of the river. Woodland could be mature enough to support denning. Although considered unlikely, has been included on a precautionary basis.	Yes
Wood of Delgaty/ NJ 77102 51037	No records of pine marten presence in the area, however woodland is mature and large enough to support pine marten.	Yes
Howe of Teuchar, Greeness Woodland/ OnTI RLB from NJ 78454 47374 to NJ 78436 46879	No historic records within woodland however access was not granted into this woodland and thus suitability could not be fully assessed. Greeness Woodland is also connected to Delgaty Forest. Species assumed present in this woodland.	Yes
Keithen/ NJ 79752 45407 and NJ 80048 45340	Historic records of pine marten to the north of the OnTI RLB.A single record occurs in this location within the OnTI and additional records, whilst over 30m from the OnTI RLB have habitat connectivity through woodlands and hedgerows to the OnTI RLB.	Yes

3.4.3.116 In accordance with Section 3.5.4.15 to 3.5.4.23, the population of pine marten within the ZoI is considered to be of high importance and is therefore scoped in for further assessment.

Red Squirrel

3.4.3.117 As outlined in Table 3-2: , it was agreed with NatureScot that dedicated red squirrel surveys would not be undertaken and that, at this stage, presence would be assumed in suitable habitat.

3.4.3.118 In accordance with Section 3.4.1.3 the ZoI for red squirrel is 30m from the OnTI RLB. Desk study data from NESBReC returned one record of red squirrel from 2020 within the OnTI RLB, however, based on the comments provided with the NESBREC data about each record, it is likely this record occurs just outwith the OnTI RLB near residential properties and alongside other red squirrel records also from 2020. This record is connected to the OnTI RLB through woodland and hedgerows with trees.

3.4.3.119 The other red squirrel records returned in 2020 are approximately 300m from the OnTI RLB in the same habitat area as the 2020 records of pine marten. Habitat connectivity is present between these records and the OnTI RLB through woodlands and hedgerows.

3.4.3.120 A review of records from the NBN atlas identified several records of red squirrel in proximity to the OnTI RLB. Due to commercial sensitivity, the details of these records cannot be provided but were used to inform the potential presence of the species.

3.4.3.121 Red squirrel populations are generally believed to require a minimum of 200ha of optimal habitat to be viable (Pepper and Patterson, 1998[37]). The only habitat of this approximate size in proximity to the OnTI RLB is Wood of Delgaty and Greeness Woodland which is connected to Delgaty Forest. Greeness Woodland has a small portion within the OnTI RLB (approximately 100m^2). No portion of Wood of Delgaty is within the OnTI RLB.

3.4.3.122 A review of woodland management plans for Wood of Delgaty did not suggest any known red squirrel populations within this woodland (Forestry Scotland, 2021[36]).

3.4.3.123 Very few areas of woodland or mature, intact hedgerows exist within the OnTI RLB that could act as ecological corridors for red squirrel. Where mature hedges exist and cross the OnTI RLB, they do not link larger areas of suitable habitat on either side of the OnTI RLB.

3.4.3.124 Following the results of the desk study and Phase 1 habitat surveys, potentially suitable red squirrel habitat has been identified. These areas are detailed in Table 3-18.

3.4.3.125 Grid references provided are where the discussion of suitability meets the OnTI RLB and are not the location of species records.

Table 3-18: Suitability of Habitats to Support Red Squirrel.

Location/ Approximate Grid Reference	Discussion of Suitability	Assessed Further
Boyndie/ NJ 63754 63792	Historic record from 2007 of red squirrel, however the woodland has since been felled. Trees within 30m of the OnTI RLB are too immature and connectivity to habitats has been lost since woodland has been felled.	No
Burn of Auchenbadie, east of B9121/ NJ 68394 58222	Red squirrel have been recorded in this woodland however no connecting habitats are present between the OnTI RLB and this suitable habitat.	No
River Deveron/ NJ 69231 57450	Historic record of red squirrel in woodland to the south of the River Deveron. Mature woodland is present on both banks of the River Deveron and connection to broadleaved woodland is present to the north and south on both banks of the river. Woodland is mature enough to support dreys.	Yes
Wood of Delgaty/ NJ 77102 51037	Historic records of red squirrel in Wood of Delgaty however woodland is over 30m from the OnTI RLB.	No
Howe of Teuchar, Greeness Woodland/ OnTI RLB from NJ 78454 47374 to NJ 78436 46879	No historic records of species within woodland however, access was not granted into this woodland and thus suitability could not be fully assessed. Greeness Woodland is also connected to Delgaty Forest. Red squirrel will be assumed present in this woodland.	Yes
Keithen/ NJ 79752 45407 and NJ 80048 45340	Historic records of red squirrel to the north of the OnTI RLB. A single record occurs in this location within the OnTI and additional records, whilst over 30m from the OnTI RLB have habitat connectivity through woodlands and hedgerows to the OnTI RLB.	Yes

3.4.3.126 In accordance with Section 3.5.4.15 to 3.5.4.23, the population of red squirrel within the ZoI is considered to be of high importance and is therefore scoped in for further assessment.

Reptiles

3.4.3.127 In accordance with Section 3.4.1.3 the ZoI for reptiles is within the OnTI RLB.

3.4.3.128 Desk study data provided by NESBReC returned no records of reptiles within the OnTI RLB. The search was extended to 500m of the OnTI RLB but no additional records were provided.

3.4.3.129 A search of the NBN atlas returned no records of reptiles within the OnTI RLB within the last 10 years.

3.4.3.130 Consultation with Aberdeenshire Council indicated that no recent EIAs within the OnTI RLB and surrounding area identified notable reptile populations.

3.4.3.131 Reptiles are therefore considered to be absent from the ZoI and scoped out of further ecological assessment.

Water Vole

3.4.3.132 This section of the chapter should be read in conjunction with Volume 7E, Appendix 3-6: Otter and Water Vole Survey Report.

3.4.3.133 In accordance with Section 3.4.1.3 the ZoI for water vole is 500m from the OnTI RLB.

3.4.3.134 Desk study data provided by NESBReC returned three records of water vole within the 500m OnTI RLB buffer in the last 10 years.

3.4.3.135 The surveys confirmed water vole potentially present across an array of watercourses which were predominately slower flowing, as well as within ditches with grassy banks.

3.4.3.136 Table 3-19 details the watercourses along which water vole field signs were recorded during the 2023 and 2024 surveys. Watercourses that were surveyed but presented no field signs of water vole are not included in Table 3-19. Volume 7E, Appendix 3-6, Annex 1 Otter and water vole field signs outlines the results obtained from each water vole survey and Figure 3.6.3 within Volume 7E, Appendix 3-6, Annex 2 Supporting Figures shows these field signs.

Table 3-19: Water Vole Field Signs on Watercourses within the OnTI RLB.

Watercourse Number/Name	Water Vole Field Signs		
	Burrows	Droppings	Feeding Stations
Ditch 05 – Unnamed tributary of the Burn of Brydock	1	2	1
WC15 – Craigston Burn	7	-	-
Ditch 06	2	6	1

Watercourse Number/Name	Water Vole Field Signs		
	Burrows	Droppings	Feeding Stations
WC16 – Burn of Burnside	4	5	1
WC09 - Burn of Muiryfold	6	1	4
WC12 - Burn of Balquholly	4	-	-

3.4.3.137 Water vole field signs indicated that they were likely present along a variety of smaller watercourses, including ditches and smaller streams that contained taller grasses upon steep sediment banks. Such areas were often found to be away or guarded from agricultural practices or grazing pressure and, as a result, likely allow water vole to have access to safe foraging, shelter and breeding areas.

3.4.3.138 In accordance with Section 3.5.4.15 to 3.5.4.23, the population of water vole within the ZoI is considered to be of high importance and is therefore scoped in for further assessment.

Wildcat

3.4.3.139 In accordance with Section 3.4.1.3 the ZoI for wildcat is 500m from the OnTI RLB.

3.4.3.140 Desk study data provided by NESBReC returned no records of wildcat within the OnTI RLB and 500m of the OnTI RLB.

3.4.3.141 A review of NBN atlas data found several records of wildcat hybrids within 500m from the OnTI RLB.

3.4.3.142 Consultation with Aberdeenshire Council (Table 3-2) noted no known records of wildcat in the OnTI RLB and area surrounding the OnTI RLB.

3.4.3.143 Wildcats are typically found on woodland edges, in the margins of mountains and moorlands, with rough grazing. They tend to avoid exposed coasts and intensely farmed lowlands (NatureScot, 2024[38]). The OnTI RLB is dominated by large areas of arable fields with limited woodland habitat, thus lacking in suitable habitat for wildcat.

3.4.3.144 Wildcat were therefore considered to be absent from the ZoI and are therefore scoped out of further ecological assessment.

Wintering Birds

3.4.3.145 This section of the chapter should be read in conjunction with Volume 7E, Appendix 3-7: Wintering Bird Survey Report.

3.4.3.146 Desk study data provided by NESBReC returned records of bird species throughout the OnTI RLB that are protected by numerous pieces of legislation. These include Annex 1 (e.g. Arctic tern *Sterna paradisaea*, short-eared owl *Asio flammeus*, and whooper swan *Cygnus cygnus*),

Natural Environment and Rural Communities (NERC) S41(e.g., bullfinch *Pyrrhula pyrrhula*, and curlew *Numenius arquata*), and SBL species (e.g., Dunlin *Calidris alpina*, green sandpiper *Tringa ochropus*, and kestrel *Falco tinnunculus*)

3.4.3.147 Desk study data, specifically WeBS data, was also provided by the BTO for five areas surrounding the OnTI RLB. A summary of this data is provided in Volume 7E, Appendix 3-7: Wintering Bird Survey Report.

3.4.3.148 Wintering bird surveys found that no counts of wintering bird species recorded across the OnTI RLB approached the 1% level of the national wintering population estimates as detailed by the Royal Society for the Protection of Birds (RSPB) (RSPB, 2018[39]) and BTO (British Trust for Ornithology, 2022[40]). The peak count for pink-footed goose (3,180) is noted as being the highest peak count from across the surveys. However, this does not meet the 1% level of the national population of pink-footed goose (UK Wintering population estimated to be 510,000).

3.4.3.149 The wintering bird assemblage recorded across OnTI RLB was largely typical of species associated with agricultural areas. The presence of agricultural features such as large open arable fields, wet grassland, hedgerows and improved grassland resulted in the recording of notable numbers of wintering wildfowl and gulls.

3.4.3.150 Moray Firth SPA qualifying species were recorded in areas along the northern extent of the OnTI RLB. SPA qualifying species were not recorded within any of the other survey areas, indicating that these habitats are likely not used as functionally linked land to the SPA.

3.4.3.151 In accordance with Section 3.5.4.15 to 3.5.4.23, the population of wintering birds within the ZoI is considered to be of moderate importance and are therefore scoped in for further assessment.

3.4.4 Summary

3.4.4.1 Table 3-20 provides a summary of the baseline ecological features, their importance and whether they have been scoped in or out for further assessment. It is noted that for designated sites, habitats and protected and notable species, only ecologically relevant sites have been included in Table 3-20.

Table 3-20: Summary of Importance and Assessment Scoping for Baseline Ecological Features.

Ecological Feature	Importance of Ecological Feature	Scoped In/Out for Assessment?
Designated Sites		
Cullen to State Ness Coast SSSI	High	In

Ecological Feature	Importance of Ecological Feature	Scoped In/Out for Assessment?
Whitehills to Melrose Coast SSSI	High	In
Southern Trench MPA	High	In
Reidside Moss SSSI	High	In
Gight Woods SSSI	High	In
Tore of Troup SSSI	High	In
Gamrie and Pennan Coast SSSI	High	In
AWI Classified Woodlands		
Whyntie Wood/ Grencothill - NJ630640	Woodland has been recently cleared	Out
Eood of Ferneystrype - NJ736543	High	In
Toms Hill - NJ706560	High	In
Wood of Delgaty	High	In
Site ID 28 - NJ677587	High	In
Site ID 21- NJ668595	Woodland is not connected either hydrologically or through ecological corridors to the OnTI RLB	Out
Holm Wood	High	In
Wood of Shaws - NJ701577	High	In
Site ID 53 - NJ727560	Woodland is not connected either hydrologically or through ecological corridors to the OnTI RLB	Out
Habitats		
High energy littoral rock	Low	In
Neutral grassland	Low	In
Lowland mixed deciduous woodland	Low	In

Ecological Feature	Importance of Ecological Feature	Scoped In/Out for Assessment?
Priority habitat watercourses (WC04, WC07, WC09, WC10, WC12) and other rivers and streams	Low to High	In
Species-rich native hedgerow	Moderate	In
Species-rich native hedgerow with trees	Moderate	In
Species-rich native hedgerow – associated with bank or ditch	Moderate	In
Peatland Habitats	Absent N/A*	Out
Protected and notable species		
INNS	High (despite not being a valued ecological receptor)	In
Amphibians	Absent N/A	Out
Aquatic invertebrates	Absent N/A	Out
Terrestrial invertebrates	Absent N/A	Out
Badger	High	In
Breeding birds	Moderate	In
Fish	High	In
FWPM	Absent N/A	Out
Otter	High	In
Pine marten	High	In
Red squirrel	High	In
Reptiles	Absent N/A	Out
Water vole	High	In
Wildcat	Absent N/A	Out
Wintering birds	Moderate	In

* As discussed in section 3.4.3.41 to 3.4.3.50

3.4.5 Future Baseline

3.4.5.1 It is possible that the baseline description outlined in Section 3.4.3 may be subject to modification in the future as a result of any upcoming developments and/or ongoing agricultural work within or proximate to the OnTI RLB.

3.4.5.2 Volume 7A, Appendix 7-1: Cumulative Impact Assessment Methodology provides details of the reasonably foreseeable projects or developments that are assumed to be fully built and in use by the time the Proposed Development (Onshore) construction starts from Q3 2027.

3.4.5.3 Table 3-21 provides details of the reasonably foreseeable projects or developments which comprise the future baseline of relevance for terrestrial ecology and biodiversity during construction and operation of the Proposed Development (Onshore).

Table 3-21: Developments Assumed to Make Up the Future Baseline.

Planning reference	Description	Part of construction future baseline?	Part of operation future baseline?
APP/2023/2040	Denhead Solar Farm. Formation of 25 megawatt (MW) Solar Farm, Siting of Substation, CCTV, Erection of Security Fencing, Formation of Access and Associated Infrastructure	Yes	Yes
APP/2023/1454	Green Volt Offshore Wind farm, laying of underground cables and erection of substation	No	Yes
APP/2019/0017	Erection of two Wind Turbines (Hub Height 78m, Total Height 119m) and Associated Ancillary Infrastructure; Formation of Borrow Pit	Yes	Yes
APP/2021/1662 and other condition applications	Variation Request to Application for Consent Under Section 36 Electricity Act 1989 (As Amended) And Marine Licence Under Part 4 of the Marine (Scotland) Act 2010 and Marine Coastal Access Act 2009 to Construct and Operate Moray West Offshore Wind Farm	Yes	Yes
APP/2021/2116	Installation of Underground Electricity Cables and Associated Development	Yes	Yes
APP/2023/0130	Battery Storage Facility (49.9MW)	Yes	Yes

Planning reference	Description	Part of construction future baseline?	Part of operation future baseline?
APP/2023/2024	Erection of Poultry Shed, 2 Muck Outbuildings and Feed Silos	Yes	Yes

3.4.5.4 All applications apart from APP/2023/1454 will be complete and operational in advance of the Proposed Development (Onshore) and therefore this reasonably foreseeable project or development has been included as part of the future baseline and considered within this topic assessment.

3.4.5.5 Application APP/2023/1454 is considered within the Cumulative Assessment within Section 3.8.

3.4.5.6 Implementation of the projects and developments detailed in Table 3-21 may result in additional pressures to habitats and protected species during construction and reduce their ability to absorb/tolerate any change, as the potential impacts identified in Section 3.7 are multiplied within the area.

3.4.5.7 During operation all applications are not expected to influence the future baseline in a significant way. There will be an increase of hardstanding areas associated with the foreseeable projects and developments however their embedded mitigation will comply with best practice standards to manage potential impacts to habitats and protected species including disturbance, habitat fragmentation/degradation and pollution.

3.4.5.8 Climate change may also cause changes to the existing baseline, as described in Volume 6 Chapter 4: Climate Change Resilience. Given the potential for changes in precipitation patterns, seasonality, temperature, sea level and extreme weather events, there may be a variety of impacts on the terrestrial ecology and biodiversity features within the area.

3.4.5.9 Direct impacts include habitat loss, fragmentation or degradation, as well as changes to the migration and hibernation patterns, and reproductive success of species. Indirect effects include disruption of predator-prey, competitor and mutualistic relationships both within and between communities.

3.4.5.10 Climate change also poses a threat to areas of peatland within the study area, detailed in Volume 5, Chapter 7: Geology, Soils and Contaminated Land.

3.4.5.11 The WFD Regulations have an objective of achieving 'good' WFD status by 2027 for all WFD waterbodies with a classification. It is assumed that this objective will be achieved, which would increase the water quality for some watercourses within the study area.

3.4.5.12 It is important to note that the do-nothing baseline is a projection with a range of possible conditions, and therefore is subject to uncertainty associated with the available projections. Across the lifetime of the Proposed Development (Onshore), it is considered likely that the future baseline, including habitat context and management of the land within the OnTI RLB and adjacent land, will be broadly comparable to the existing baseline described in Section 3.4.3.

3.4.6 Data Gaps and Limitations

Habitats and Protected Species

3.4.6.1 Limitations relevant to the survey of each ecological feature are detailed in within their respective technical appendices:

- Volume 7E, Appendix 3-1: Biodiversity Enhancement Report;
- Volume 7E, Appendix 3-2: Badger Survey Report and Impact Assessment;
- Volume 7E, Appendix 3-4: Breeding Birds Survey Report;
- Volume 7E, Appendix 3-5: Fish and Fresh Water Pearl Mussel Survey Report;
- Volume 7E, Appendix 3-6: Otter and Water Vole Survey Report;
- Volume 7E, Appendix 3-7: Wintering Bird Survey Report; and
- Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment.

3.4.6.2 Habitat surveys undertaken early in the Proposed Development (Onshore) design process were limited by land access restrictions, however, by the end of the survey period of the 134 land parcels considered during the early iterations of the OnTI RLB, access was granted to 107. Of the final OnTI RLB area 92% of the land was accessible. Where access was not possible, surveyors undertook surveys from public roads, footpaths and adjacent properties. See Volume 7E, Appendix 3-1 Annex 1 Supporting Figures, Figure 3-1.1 for land access restrictions.

3.4.6.3 A lack of desk study data does not necessarily imply an absence of a specific species from the search area. Desk study data is known to be lacking or contain gaps in certain areas of Scotland or during specific years such as over the Covid pandemic. In some cases, due to commercial sensitivity or confidentiality, records are not submitted to local records centres. For example, badger are known to be widely present within Aberdeenshire, however very few records of their presence are returned. This may be due to a lack of surveys or confidentiality regarding the location of badger setts.

3.4.6.4 Hedgerows within the OnTI RLB were not formally assessed for their importance following the criteria outlined under UK BAP priority habitats

(JNCC, 2016[41]) or the utilising the Hedgerow survey handbook (Department for Environment, Food and Rural Affairs (Defra), 2007[42]). However, professional judgement was used when assessing the hedgerows. This included assessing hedgerow length, width, number of gaps and species diversity, which are all assessment criteria used under the UK BAP and hedgerow survey assessments.

3.4.6.5 Ecological surveys can be limited by factors which affect the presence of plants and animals, such as the time of year, migration patterns and behaviour. The absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

3.4.6.6 Any grid references provided within this chapter are approximate and are to be used as a guide only.

3.5 EIA Approach and Methodology

3.5.1 Overview

3.5.1.1 This section outlines the methodology for assessing the LSE on terrestrial ecology and biodiversity from the construction, operation and decommissioning of the Proposed Development (Onshore).

3.5.1.2 In accordance with the CIEEM Ecological Impact Assessment (EcIA) guidelines (CIEEM, 2022[3]), an EcIA need only assess in detail impacts on important ecological features, i.e. those that are considered important and potentially affected. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable. Where ecological features are not considered important enough to warrant further consideration, or where they will not be significantly affected, these are scoped out of the assessment, with justification for exclusion provided.

3.5.2 Impacts Scoped into the Assessment

3.5.2.1 The Onshore Scoping Report was submitted to Aberdeenshire Council in December 2022. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposed Development (Onshore) over the course of the assessment.

3.5.2.2 The proposed scope of the assessment is set out in Table 3-22.

Table 3-22: Terrestrial Ecology and Biodiversity Scope of Assessment.

Potential Impact	Phase	Nature of Impact
Negative impacts on the qualifying features of statutory and non-statutory designated sites. The potential impacts on European designated sites is assessed within Volume 7E, Appendix 5: Proposed Development (Onshore) Report to Inform Appropriate Assessment.	Construction	Direct/In-Direct
Effects on otherwise scarce, notable or irreplaceable habitats such as, but not limited to, ancient and native woodland, SBL species, peatland and wetland habitats.	Construction	Direct/In-Direct
Fragmentation of habitat corridors which would otherwise facilitate the safe dispersal of species across the landscape impacted by the Proposed Development (Onshore)	Construction	Direct/In-Direct
Loss of, obstruction, displacement or disturbance to habitat used for breeding, foraging and other life cycle stages by notable and protected species including, but not limited to those listed in Section 3.4.3.	Construction Operation at the Onshore Substations Decommissioning	Direct/In-Direct
Disturbance to protected and notable species through lighting, noise, vibration, pollution or vehicle movements.	Construction Operation at the Onshore Substations Decommissioning	Direct/In-Direct
Increased pollution or siltation of watercourses, impacting aquatic ecology including fish and invertebrates.	Construction Decommissioning	Direct
Increased mortality of faunal species via vegetation clearance or road traffic collisions from temporary construction traffic.	Construction Operation at the Onshore Substations Decommissioning	Direct
Spread of INNS into the wild.	Construction Operation at the Onshore Substations	Direct

Potential Impact	Phase	Nature of Impact
	Decommissioning	
Positive impacts through the incorporation of mitigation and habitat enhancements. This may include the creation of new habitats, removal of INNS or the enhancement of existing habitats to provide additional benefits to protected and notable species.	Construction	Direct/In-Direct

3.5.3 Impacts Scoped out of the Assessment

3.5.3.1 During EIA Scoping, there were no impacts scoped out of assessment. As identified in Table 3-1, some impacts are only relevant to certain stages of the Proposed Development (Onshore). Where impacts have been scoped out at this stage of the Proposed Development (Onshore), this has been detailed in Section 3.4.

3.5.3.2 In the absence of detailed information regarding decommissioning works, and unless otherwise stated, the impacts during the decommissioning of the Proposed Development (Onshore) are considered comparable with, or likely less than, those of the construction stage.

3.5.4 Assessment Methodology

3.5.4.1 The project-wide generic approach to assessment is set out in Volume 1, Chapter 7: EIA Methodology. The assessment methodology for Terrestrial Ecology and Biodiversity for the EIAR is consistent with that provided in the Scoping Report.

3.5.4.2 The assessment evaluates how the implementation of the Proposed Development (Onshore) will alter the current baseline conditions. The extent of these changes is analysed for each ecological feature, taking into account the impacts on each feature and the feature's sensitivity to those impacts.

3.5.4.3 An EcIA involves identifying, quantifying, and evaluating the potential effects of development-related or other proposed activities on relevant species, habitats and ecosystems (referred to as relevant ecological features). This EcIA has been undertaken in accordance with best practice guidance issues by CIEEM (2022)[3].

3.5.4.4 The objectives of this EcIA are to:

- Identify relevant ecological features (such as designated sites, habitats, species, or ecosystems) that may be impacted;

- Provide a scientifically robust and transparent evaluation of the likely ecological impacts and resulting effects[43] of the Proposed Development (Onshore), which may either be beneficial (i.e., positive) or adverse (i.e. negative);
- Enable a scientifically robust and transparent evaluation of the Proposed Development's (Onshore) consequences in relation to national, regional, and local policies on nature conservation and biodiversity, ensuring the level of detail is proportionate to the development's scale and the complexity of its potential impacts; and
- Detail the steps that will be undertaken to comply with legal requirements concerning the relevant ecological features.

3.5.4.5 The main steps in the CIEEM assessment methodology are summarised as follows:

- Identification of ecological features that might be affected by the Proposed Development (Onshore) through a combination of targeted desk-based studies and field surveys to establish the relevant baseline conditions.
- Evaluation of the significance of the identified ecological features to determine their relative biodiversity and conservation value within a geographic context, which helps define the relevant ecological features that need to be further considered in the EcIA process.
- Identification of the predicted changes or perturbations (i.e., potential impacts) resulting from the Proposed Development (Onshore) and the nature in which they could affect the relevant ecological features. Consideration is also given to the established best-practice, legislative requirements or other design measures incorporated into the Proposed Development (Onshore) to avoid or minimize impacts.
- Evaluation of the likely (beneficial or adverse) effects on the relevant ecological features is undertaken and, where possible, the effects are quantified.
- Development of measures to avoid or reduce any predicted significant effects in conjunction with other design elements (including mitigation for other environmental disciplines). If required, measures to compensate for impacts on features of nature conservation importance are also included.
- Any residual effects of the Proposed Development (Onshore) are detailed.
- Consideration of the scope for ecological enhancements within the OnTI RLB.

3.5.4.6 It is known that the actual loss of habitat within the OnTI RLB will be less than what is currently presented within this assessment and within Volume7E, Appendix 3-1: Biodiversity Enhancement Report. At detailed design the Onshore Export Cable Route will be refined, meaning the actual loss of habitats will be greatly reduced. As it is unknown where the

Onshore Export Cable Route will be located at this time, this assessment considers that any of the habitats within the OnTI RLB could be lost at this design stage of the Proposed Development (Onshore) using the available OnTI RLB. At detailed design, it will be possible to calculate the loss of area-based habitats more accurately on confirmation of the ONEC and refined RLB.

3.5.4.7 The assessment is based on a Design Envelope (DE) approach which is considered most appropriate for a Planning Permission in Principle (PPP) application. This approach gives a range of design parameters for each Proposed Development (Onshore) attribute, allowing the worst-case parameter to be established on a case-by-case basis. The worst-case parameter used for the assessment is dependent on the feature and impact being considered. As a result, the DE covers the range of Proposed Development (Onshore) design possibilities in the context of the relevant environmental parameters to establish the likely environmental impacts that could arise.

3.5.4.8 Due to Caledonia Offshore Wind Farm Limited (the Applicant) submitting a PPP application, it is accepted that the design of the Proposed Development (Onshore) will be progressed through to the post-consent stage, taking consideration of the results of the EIA and matters specified in the PPP if granted. Therefore, the assessment reflects the level of detailed design information available at the time of writing, and where assumptions have been made or there are gaps in information, this is highlighted.

3.5.4.9 Further details on the EIA methodology are presented in Volume 1, Chapter 7: EIA Methodology.

Identification of Features

3.5.4.10 Various ecological features have been identified through data collated from consultation with stakeholders, desk studies and field surveys. However, not all of them need further consideration within this assessment. These are detailed in Section 3.4 and summarised in Section 3.4.4.

3.5.4.11 A primary challenge in EcIA is determining which ecological features are important and warrant detailed assessment. Within the CIEEM guidance it is stated that it is only required to "*undertake a systematic assessment of relevant ecological features that could be significantly affected (including adverse and beneficial effects)*". This aligns with EIA Regulations, which mandate that only LSE are investigated.

3.5.4.12 It is unnecessary to "carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable", however, this does not imply that efforts should be disregarded in safeguarding broader biodiversity (CIEEM, 2022[3]), as national policy documents underscore the importance of reducing impacts on biodiversity and achieving net gains.

3.5.4.13 Based off these criteria and the baseline conditions outlined in Section 3.4, the ecological features carried forward for assessment are:

- Habitats;
- Badger;
- Bats;
- Breeding birds;
- Fish, specifically those listed in Section 3.4.3.87;
- Otter;
- Pine marten;
- Red squirrel;
- Water vole; and
- Wintering birds.

3.5.4.14 Impacts to bats will be assessed in a post-submission supplementary document.

Assessment of Importance

3.5.4.15 To facilitate a focussed assessment, it is essential to assess the importance of the ecological features identified through desk studies and field surveys conducted for the Proposed Development (Onshore). The method used to assess the importance of these ecological features must be rigorous as it forms the basis for identifying and further evaluating relevant ecological features.

3.5.4.16 Ecological features can hold value for various reasons, and it is important to articulate the rationale behind their selection to demonstrate a robust decision-making process. Factors contributing to their importance may include the quality or extent of designated sites or habitats, the rarity of habitat/species, their level of threat across their range, or their rate of decline. Several considerations should be utilised when assessing the relative importance of an ecological feature.

3.5.4.17 Importance can be determined by the quality or extent of designated sites or habitats, their rarity within a specific geographic area, and their local or national decline rates. The CIEEM guidelines (CIEEM, 2022[3]) identify several characteristics that can indicate the biodiversity importance of ecological features, including:

- Naturalness;
- Animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
- Endemic species or locally distinct sub-populations of a species;
- Habitat diversity, connectivity and/ or synergistic associations;

- Habitats that are rare or uncommon, as well as those that are effectively irreplaceable;
- Species-rich assemblages of animals and plants;
- Habitats and species in decline;
- Size of habitat and species in decline;
- Notably large populations of animals or concentrations of animals considered uncommon or threatened in a wider context;
- Plant communities (and their associated animals) that are considered to be typical of valued natural/ semi-natural vegetation types; and
- Plant communities (and their associated animals) that are considered to be typical of valued natural/ semi-natural vegetation types.

3.5.4.18 Where available, relevant guidance is consulted to assess the importance of ecological features. Resources pertinent to the OnTI RLB comprise local guidance for identifying valuable ecological features in Aberdeenshire such as the Local Biodiversity Action Plan (Aberdeen City Council, 2020[44]; Aberdeenshire Council, 2023[45]).

3.5.4.19 The conservation status of habitats and species that are rare or threatened is documented nationally in Section 41 of the NERC Act list of habitats and SBL species in Scotland, as well as in in several Red Data Books and Lists. National criteria exist for assessing the rarity and threat levels of populations across various species groups, alongside guidelines such as the Ratcliffe Criteria (Ratcliffe, 1977[46]) for evaluating relative value.

3.5.4.20 Some species may be abundant or widespread in a national context, but rare within a specific county or district. Conversely, a species could be common within a county or district but classified as rare on a national scale.

3.5.4.21 Additionally, legally protected species such as reptiles, badgers and bats receive statutory protection from harm or disturbance. However, this legal status does not always correlate directly with their biodiversity value. For instance, a fleeting occurrence of a single individual of a protected bat species would not carry the same ecological value as a stable and regularly occurring large population of bats.

3.5.4.22 Expert judgment has been applied as required when assigning value, especially in cases where species or habitats are poorly understood, or when specific guidance is unavailable. Ecological features not included in notable habitat and species lists may still be considered important based on expert judgment. For example, this could be due to their local rarity or their role in facilitating the conservation of other significant features (CIEEM, 2022[3]).

3.5.4.23 The importance of each ecological feature has also been determined based on its geographical context. The assessment, guided by CIEEM guidelines, uses the following criteria:

- **International:** Typically, within a European context, due to the availability of comprehensive data for cross-comparison;
- **National:** Great Britain, while considering that some ecological features may be more notable (of higher value) within Scotland specifically compared to Great Britain as a whole;
- **Regional:** Grampian / North-east of Scotland;
- **County:** Aberdeenshire;
- **District:** Banff and Buchan, and Formatine;
- **Local:** Features that do not meet criteria for valuation at the District level or higher but have sufficient value at the site level to warrant retention or mitigation; and
- **Negligible:** Common and widespread features with very low value at the site level, which do not require retention or mitigation to maintain a favorable nature conservation status or to achieve wider biodiversity objectives.

Characterising ecological impacts

3.5.4.24 The following definitions will be used when characterising the ecological impacts during all stages of the Proposed Development (Onshore):

- Positive or Negative: Positive is a change that improves the quality of the environment, whereas negative reduces the quality of the environment;
- Extent: The spatial or geographical area over which the positive or negative impact/effect occurs such as local, regional, national etc;
- Magnitude: The intensity, size and/or volume of the impact/effect that may occur. This may include a discussion on the amount of habitat lost or the decline in a species population;
- Duration: This would be defined as the length of time over which the impact/effect may occur, such as the lifecycle of a species or for the duration of the construction period;
- Frequency and timing: The number of times an activity may occur and how this will influence the impact/effect. The timing of the activity and how this may result in an impact such as during the breeding bird season or nighttime working; and
- Reversibility: This may include irreversible effects where recovery of a habitat or a population is not possible (such as loss of ancient woodland), or where recovery may be counteracted by mitigation.

Significance of effect

3.5.4.25 For each ecological feature, only the characteristics essential for interpreting the ecological consequences (effects) of the impact and its

relative significance are described. This is based on the project description and the assumption that standard industry best practices will be applied.

3.5.4.26 Potential impacts on relevant ecological features are evaluated, and a decision is made on whether the resultant effect on conservation status or structure and function is likely to be significant. This evaluation considers the characteristics of the impact, the sensitivity of the ecological feature, and the geographic scale at which the feature is deemed important.

3.5.4.27 The CIEEM guidance (CIEEM, 2022[3]) states that: "For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general […] In broad terms, significant effects encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).

3.5.4.28 For nature conservation designations, other defined habitats, and ecosystems, the assessment evaluates the potential effects that impacts might have on conservation objectives, interests or qualifying features. For ecosystems, it considers whether changes in structure or function might significantly alter their ecological integrity.

3.5.4.29 For habitats and species, the assessment evaluates the potential impacts on their 'conservation status' and determines whether these effects are likely to significantly alter the ecological integrity of the habitat or species population being considered. Further guidance on assessing conservation status is provided in the CIEEM guidance (CIEEM, 2022[3]) as follows:

- Habitats: "*conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area*"; and
- Species: "*conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area*."

3.5.4.30 In considering effects on the conservation status, structure and function of the ecological feature, relevant guidance (where available) on the current status of the feature in question is referred to. Effects will be either:

- Significant (an ecologically meaningful effect); or
- Not significant (no ecologically meaningful effect).

3.5.4.31 Such assessments will primarily rely on quantitative evidence whenever feasible. However, where required, they will also incorporate the professional judgment of an experienced ecologist.

3.5.4.32 Volume 1, Chapter 7: EIA Methodology provides a significance of effect table in which the impact magnitude and sensitivity of a receptor are considered to determine the significance of effect. This table has been used

when determining the significance of effect to ecological features, but the interpretation of the sensitivity of a receptor has been considered using the assessment of importance (Section 3.5.4.15 to 3.5.4.23) and the characterisation of ecological impact (Section 3.5.4.24) as outlined in this report.

3.5.4.33 For effects deemed significant, they will be appropriately characterised (e.g., adverse or beneficial) and contextualized with respect to the geographic scale at which they hold significance (for example an adverse effect significant at a local level)."

3.5.4.34 The significance of an effect may not align with the geographic context in which a feature is considered important. For instance, an impact on a species listed nationally as being of principal importance for nature conservation may not necessarily significantly affect its national status.

3.5.5 Approach to Cumulative Effects

3.5.5.1 The Cumulative Impact Assessment (CIA) assesses the impact associated with the Proposed Development (Onshore) together with other relevant plans, projects and activities. Cumulative effects are therefore the combined effect of the Proposed Development (Onshore) in combination with the effects from a number of different projects, on the same feature.

3.5.5.2 The approach to the CIA for terrestrial ecology and biodiversity follows the process outlined in Volume 1, Chapter 7: EIA Methodology.

3.5.5.3 The list of relevant developments for inclusion within the CIA is outlined in Volume 7A, Appendix 7-1: Cumulative Impact Assessment Methodology.

3.5.5.4 Developments which are either operational or in the decommissioning stage are considered to be part of the baseline and are not considered within the assessment.

3.5.6 Embedded Mitigation

3.5.6.1 Where possible, mitigation measures will be embedded into the design of the Proposed Development (Onshore).

3.5.6.2 Table 3-23: Embedded Mitigation. describes embedded mitigation measures which have been incorporated into the design of the Proposed Development (Onshore) with specific regard to terrestrial ecology and biodiversity. The impact assessment presented in Sections 3.7 takes into account these embedded mitigation measures. Embedded mitigation measures related to bats will be provided in a post-submission supplementary chapter.

Table 3-23: Embedded Mitigation.

Code	Mitigation Measure	Securing Mechanism
M-39	An Outline CEMP has been produced and included alongside the EIAR to support the PPP (Volume 7, Appendix 10: Outline Construction Environmental Management Plan). The Outline CEMP includes measures on pollution prevention, noise control, biosecurity, and waste management. The Outline CEMP will then be developed further through the final design process and this will result in a detailed CEMP being submitted for discharge. The CEMP will be implemented to avoid, minimise or mitigate effects on the environment during the construction and decommissioning phases of the Proposed Development (Onshore).	Detailed CEMP secured through a condition attached to the PPP.
M-40	Following construction, agricultural land not required through the operational phase will be reinstated to ensure it can return to existing agricultural use. Once land is no longer required for installation of the Onshore Export Cable Circuits the land will be reinstated to its original use for the remainder of the construction stage (where applicable) and for the operation and maintenance stage. Temporary access infrastructure could be permanently retained where sought by the landowner but would be subject to the required consents being obtained prior to reinstatement activities occurring. Topsoil and sub-soil will be treated and stored appropriately to minimise risk of erosion and/or soil degradation indirectly affecting soil quality.	Design Principles through Construction Method Statement secured through a condition attached to the PPP. Materials Management Plan (MMP) as part of the detailed CEMP secured through a condition attached to the PPP.
M-47	Design of culverts will adhere to guidance outlined in the Scottish Environmental Protection Agency (SEPA) position statement on culverting of watercourses (WAT-PS-06-02).	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-50	Works will be carried out in accordance with permitting requirements, including the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)	Outlined within the Outline CEMP and secured by condition attached to the PPP.

Code	Mitigation Measure	Securing Mechanism
M-52	Trenchless techniques, such as HDD[i], will be the preferential crossing methodology for all WFD watercourses and salmonid watercourses.	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-53	The existing watercourse crossing for the Onshore Substations used by the residential receptor to the west of the Onshore Substation will be retained and reused, and if upgraded will not increase or reduce the size of the culvert. If changes to the culvert size are required, a Flood Risk Assessment (FRA) will be completed on the proposed design.	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-55	The selection of the Onshore Substation Site was influenced by prioritising avoidance of potential peatland, wells, watercourses and potential GWDTE.	The OnTI RLB within the PPP and accordance with mitigation measures identified within the EIAR submitted with the PPP.
M-56	The Onshore Substations are set back at least 10m from the Burn of Asleid to minimise any impact on the watercourse.	The OnTI RLB within the PPP and accordance with mitigation measures identified within the EIAR submitted with the PPP.
M-63	A Materials Management Plan (MMP) will be required to be prepared where soils are required for re-use within the Proposed Development (Onshore).	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-64	Production of the Outline Construction Traffic Management Plan (CTMP), as presented in Volume 7E, Appendix 9-2: Outline Construction Traffic Management Plan. The Outline CTMP will then be developed further with submission of a detailed planning application and supporting CTMP at a later date. The Outline CTMP sets out a basic framework and series of vehicle management actions or principles that will help facilitate the safe operation of construction vehicles to, from, and within the limits of the construction boundary. This Outline CTMP is based upon the	The CTMP will be secured through a condition attached to the PPP.

[i] Trenchless crossing techniques hereafter referred to as 'HDD' in this chapter of the EIAR.

Code	Mitigation Measure	Securing Mechanism
	information available at the time of writing, including but not limited to, an estimation on the location and number of construction compounds (derived from a provisional construction programme). The contents of the Outline CTMP are based upon a 'worst case' scenario whereby the greatest volume of construction traffic has been identified and then routed through the surrounding local road network.	
M-65	Avoidance of high value agricultural and forestry land. The ONEC avoids areas of high value agricultural and forestry value as far as practicable. Agricultural land and other sensitivities were carefully considered as part of the site selection and alternatives process and feedback gathered from public consultation was used to amend the ONEC.	Design Principles through Construction Method Statement (CMS) secured through a condition attached to the PPP.
M-67	Temporary land take required for construction will be minimised with the land-take for the OnTI RLB kept to the minimum necessary for safe construction. The OnTI RLB has been established based on identifying the shortest and most economical route from landfall to Grid Connection Point avoiding sensitive environmental constraints.	Design Principles through a CMS secured through a condition attached to the PPP.
M-68	Field drains will be protected as far as practicable and impacts to field drains as a result of construction activities will be remedied at source.	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-70	Prevention of soil borne pests and diseases through adoption of precautions as recommended by Scotland's Environment and Rural Services and specified within the MMP as part of the detailed CEMP.	Outlined within the Outline CEMP and secured by condition attached to the PPP.

Code	Mitigation Measure	Securing Mechanism
M-76	Use of trenchless crossing techniques at key crossing areas including: ▪ Class A roads; ▪ Protected woodlands; ▪ Drains adjacent to A roads; ▪ Major watercourses; ▪ WFD Waterbodies; ▪ Salmon Watercourses; and ▪ Drainage features (ditches / drains) or minor watercourses adjacent to major watercourses. The micro-routing of ONEC to avoid loss of hedgerows and trees where practical.	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-78	Compensatory planting of removed trees and ecologically notable hedgerows within the ONEC is to be implemented during or at end of construction period.	Outlined within the Outline CEMP and secured by condition attached to the PPP.
M-79	Implementation of mitigation planting around the Onshore Substations including native hedgerows, and native deciduous and mixed native woodland planting for screening. Some planting to be implemented in advance of the start of construction activity and some at the end of construction of Phases 1 and 2.	Route design / Design Principles and planting undertaken in accordance with landscape mitigation proposals outlined within the EIAR, secured via PPP condition which requires a Landscape Management Plan to be provided at Approval of Matters Specified in Condition stage.
M-86	HDD will be utilised for the Landfall Site at the coastline to ensure avoidance of coastal cliffs and all habitats associated with the Cullen to Stake Ness Coast SSSI.	Condition attached to the PPP.
M-87	The detailed design of the OnTI will be refined after targeted ecological surveys to relocate (micro-site) those works away from the more important or legally protected habitat and species features such badger setts, otter holts, pine marten dens and red squirrel	Condition attached to the PPP.

Code	Mitigation Measure	Securing Mechanism
	drey, water vole burrow. These ecological surveys will be undertaken during the appropriate season.	
M-88	No aboveground works will occur within the Cullen to Stake Ness Coast SSSI. The construction compounds will be set back from the SSSI with suitable buffers in place to ensure no workers or plant enter the SSSI.	Condition attached to the PPP.
M-89	Where works will occur within 30m of an otter holt or shelter or will require the removal of these features, a licence from NatureScot will be applied for. As an EPS, a licence for development works that affect otter are required to demonstrate that three tests are met. A detailed otter protection plan will be produced and provided to NatureScot. The species protection plan will include mitigation that is approved by NatureScot prior to works commencing.	Condition attached to the PPP.
M-90	A licence from NatureScot will be applied for where water vole burrows will be damaged or removed as part of construction of the Proposed Development (Onshore). A detailed water vole protection plan will be produced and provided to NatureScot. The species protection plan will include mitigation that is approved by NatureScot prior to works commencing. Further, where works must occur where water vole burrows occur, a Suitably Qualified Ecologist (SQE) will undertake trapping and translocation of any water vole within the area being cleared based on advice from research findings (NatureScot, 2024b; Gelling et al., 2018). This too, will require a licence. Prior to any licence being obtained, a plan will be produced by a SQE detailing the provenance of water voles to be released, as well as the carrying capacity of the receptor site.	Condition attached to the PPP.
M-92	Works around Hill of Scattery woodland strip will adhere to the following principles:	Design Principles through a CMS secured through a condition attached to the PPP.

Code	Mitigation Measure	Securing Mechanism
	▪ Establish root and tree canopy protection zones for all trees not being removed to minimize soil compaction and impact on trees remaining in situ. ▪ Reduction in corridor width. The working corridor width will be reduced to 50m.	
M-93	Targeted ecological surveys will be undertaken at the preconstruction stage and during the appropriate season (as determined by an ECoW) with sufficient time in advance of construction to ensure any required licencing can be put in place in time to avoid construction delays.	Outlined within the Outline CEMP and secured by condition attached to the PPP.

Embedded Mitigation Measures – Lighting

3.5.6.3 Within the CEMP, embedded mitigation measure M-39 will include a detailed lighting plan for the construction compounds, including when/if night-time working is required.

3.5.6.4 Lighting at construction compounds and working areas will be avoided and works scheduled to daytime hours whenever possible.

3.5.6.5 Lighting will be designed to be ecologically sensitive and follow the most up to date bat lighting guidance by the BCT.

3.5.6.6 Lighting will be directed away from sensitive habitats and light spill will be minimised on habitats such as woodlands, individual trees, watercourses, linear features (tree lines, hedgerows) and structures (buildings, farms, residential properties).

Embedded Mitigation Measures- Landscaping

3.5.6.7 As detailed in the embedded mitigation measures M-78 and M-79, landscape mitigation planting will be done in line with Volume 7E, Appendix 3-1: Biodiversity Enhancement Report and Volume 5, Chapter 4: Landscape and Visual. This includes the implementation of mitigation planting around the Onshore Substation Site including native hedgerows, and native deciduous and mixed native woodland planting for screening.

3.5.6.8 The landscape planting has been proposed to account for landscape visual impacts however adjustments have been made to ensure the proposed planting maximises outcomes for biodiversity, and accounts for the types of habitats lost from the Proposed Development (Onshore).

3.5.6.9 The habitat mitigation and enhancement principles are summarised as follows:

- They will result in on-ground habitat creation for biodiversity;
- They will do no harm to biodiversity and will not inadvertently change or destroy existing habitats of value;
- Any habitats created will be appropriate to the habitats that have been lost;
- The habitat interventions will be realistic and deliverable;
- They will be, wherever possible, within the locality of the Proposed Development (Onshore); and
- Habitats created and accounted for in the biodiversity enhancement calculations include a clear and achievable procedure to ensure they will be monitored and maintained for at least 20 years.

3.5.6.10 The habitats proposed within the landscaping plans are:

- Other woodland; broadleaved;

- Other woodland; mixed;
- Mixed scrub;
- Modified grassland;
- Other neutral grassland;
- Reedbeds;
- Ruderal/ ephemeral;
- Sustainable drainage systems; and
- Native hedgerow.

3.5.6.11 Planting will be phased with some implemented in advance of the start of construction activity and the remainder at the end of construction of phase 1 and 2 separately.

Embedded Mitigation Measures- Ecological Surveys

3.5.6.12 As part of the embedded mitigation measures (M-87, M-93) dedicated ecological surveys will be undertaken at detailed design and at the pre-construction stage. These surveys will be undertaken by suitably qualified ecologists during the appropriate seasons with sufficient time to inform detailed design and construction.

Embedded Mitigation - Otter

3.5.6.13 As outlined in M-87, dedicated ecological surveys will be completed prior to construction, this will include the identification of otter holts and shelters which are protected under legislation (UK Parliament, 1994[47]).

3.5.6.14 The buffer in which disturbance to otter may occur is dependent on the otter feature identified, and its use (e.g. breeding). A SQE will be consulted regarding any features used by otter and the appropriate exclusion zone that needs to be in place. The general rule is that any works occurring in proximity to a feature used for otter breeding will require an exclusion zone of at least 200m. This exclusion zone may be reduced to 100m should the works and topography allow it. For holts and shelters where otters are not breeding, the exclusion zone will be 30m.

3.5.6.15 As included within embedded mitigation measures (M-89), where works will occur within the established exclusion zone for a breeding holt, or 30m of a non-breeding otter holt or shelter or will require the removal of these features, a licence from NatureScot will be applied for. As an EPS, a licence for development works that affect otter are required to demonstrate that three tests are met. A detailed otter protection plan will be produced and provided to NatureScot. The species protection plan will include mitigation that is approved by NatureScot prior to works commencing.

Embedded Mitigation -Water Vole

3.5.6.16 As included within the embedded mitigation measures (M-90), a licence from NatureScot will be applied for where water vole burrows will be damaged or removed as part of construction of the Proposed Development (Onshore). A detailed water vole protection plan will be produced and provided to NatureScot. The species protection plan will include mitigation that is approved by NatureScot prior to works commencing. Further, where works must occur where water vole burrows occur, a SQE will undertake trapping and translocation of any water vole within the area being cleared based on advice from research findings (NatureScot 2024b[48]; Gelling et al., 2018[49]). This too, will require a licence. Prior to any licence being obtained, a plan will be produced by a SQE detailing the provenance of water voles to be released, as well as the carrying capacity of the receptor site.

3.6 Key Parameters for Assessment

3.6.1.1 Volume 1, Chapter 4: Proposed Development (Onshore) Description details the parameters of the Proposed Development (Onshore) using the Rochdale Envelope approach. This section identifies those parameters during construction, operation and decommissioning relevant to potential impacts on terrestrial ecology and biodiversity.

3.6.2 Proposed Development (Onshore) Phasing

3.6.2.1 As described in Volume 1, Chapter 5: Proposed Development Phasing, three possible construction programme scenarios have been identified for the Proposed Development (Onshore).

3.6.2.2 The assessment of impacts presented in this chapter considers the sequential construction scenario. This scenario represents the worst case for terrestrial ecology and biodiversity and the features identified within this chapter, as it will require a longer construction window and two distinct construction periods (taking up to approximately three and a half years each), with up to five years between them.

3.6.2.3 While overall construction durations are very similar for sequential and enabling scenarios, the sequential scenario would require all construction processes to be undertaken again in the second phase of works. For example, cable trenching activities would occur during both the first phase and the second phase.

3.6.2.4 This has the potential to cumulatively increase the magnitude of potential impacts as the receiving environment will be disturbed, begin to recover, and then experience another disturbance event. Two construction periods also increase the risk of accidental pollution incidents as there will be longer combined length of construction.

3.6.2.5 The key assessment parameters representing the worst-case scenario with regard to the construction of the Proposed Development (Onshore) and against which the assessment of terrestrial ecology and biodiversity has been made are summarised in Table 3-24.

Table 3-24: Worst Case Assessment Scenario Considered for Each Impact as part of the Assessment of Likely Significant Effects

Potential Impact	Assessment Parameter	Explanation
Construction		
Temporary habitat loss, degradation and fragmentation	**Landfall Site and ONEC** 4 x HDD works located within an area of the following indicative dimensions of 464m (L) x 17.2m (D) (as a maximum) at the Landfall Site for the Onshore Export Cable Circuits. HDD works carried out over two construction periods (i.e., 2 x HDD ducts installed in phase 1 followed by a subsequent 2 x HDD ducts installed in phase 2). 1 x temporary Landfall Site construction compound approximately 20,000m^2 required for either construction phases.	The number and location of the construction compounds is not yet available. However, temporary habitat loss, degradation and fragmentation due to their establishment is expected over two construction periods.
Increased pollution entering the watercourses from mobilised suspended solids and spillage of fuels or other harmful substances that may migrate to surface water and groundwater receptors.		Potential increased sediment supply due to construction earthworks, excavations and storage of topsoil and materials. Aligns with the sequential construction scenario.
Disturbance / displacement of protected or notable species	4 x Transition Joint Bays (TJBs) installed two at a time over two construction phases. 4 x Onshore Export Cable Circuits installed predominantly using Open Cut Trench (OCT) apart from at sensitive crossings where HDD will be used. Installed two at a time over two construction phases. Total ONEC of approximately 37km and an Onshore Export Cable Route (i.e., the working corridor) of up to 100m wide.	Increase in noise, light or vibration could result from the movement of machinery, vehicles or construction activities during installation of the cable circuits, compounds and the Onshore Substations in or near to habitats supporting protected or notable species. Protected or notable species could be displaced due to habitat loss, degradation or fragmentation in relation to construction activities associated with the cable circuits, compounds and Onshore Substations.

Potential Impact	Assessment Parameter	Explanation
	4 x construction compounds (maximum 3750m^2 per primary compound) and 1 x haul road for each construction phase. Up to 2 X Onshore Grid Connection Cable Circuits to connect the Onshore Substations to the Grid Connection Point at the existing New Deer Substation (for Phase 1), located within an Onshore Grid Connection Cable Route (i.e., the working corridor) of up to 100m wide.	Injuries to or fatalities of protected or notable species could occur due to an increase in vehicle movements in relation to construction activities associated with the cable circuits, compounds and Onshore Substations.
Increase in species mortality	**Onshore Substations** 2 x construction and electrical commissioning of Onshore Substations over two construction periods. 2 x construction compounds over two construction periods (One for each phase).	Increase in mortality of protected or notable species via traffic collisions due to increases in vehicular movement. Potential for injury or mortality at construction compounds with open excavations, construction materials.
Permanent habitat loss, degradation and fragmentation	2 x construction and electrical commissioning of Onshore Substations over two construction periods (maximum dimensions 250m x 120m 30,000m^2).	Construction of the Onshore Substations will result in permanent habitat loss, degradation and fragmentation.
Impacts to the ecological quality of watercourses associated with works within or in close proximity to watercourses, including physical change to the watercourses and longer-term changes associated with sediment deposition.	Open cut crossings to be used on all watercourses apart from WFD and Salmonid watercourses. Temporary crossing culverts to be used across the OnTI RLB.	The detailed design of watercourse crossings is not available, open cut crossings are assumed for the majority of watercourses. In the absence of detailed construction haul roads and temporary crossings, worst case has been assumed.

Potential Impact	Assessment Parameter	Explanation
Operation		
Permanent habitat loss, degradation and fragmentation	It is anticipated that the Onshore Substations will be unmanned and operate 24 hours a day, 7 days a week. Typical operational activities for the normally unmanned substation will include annual inspection and maintenance.	Operational activities may cause habitat loss, degradation and fragmentation of habitats.
Disturbance / displacement of protected or notable species	Permanent operational lighting will be limited to emergency lighting above doors and perimeter lighting that will face inwards and only be operational during maintenance visits. The only lighting that will be 24 hours, seven days a week will be the emergency lighting above the doors. Permanent access to the Onshore Substation Site will likely be from the south, sharing an access from the main road with the existing New Deer substation. Operational lifespan of the Onshore Substations is 35 years It is anticipated that the Onshore Export Cable Circuits will be in continuous operation. TJBs at the landfall and Cable Joint Bays will be backfilled, and land reinstated to existing ground level with the only visible permanent works being the ground level access to link box and communications box pit. No permanent access roads for maintenance along the ONEC. No major refurbishment works at the Landfall Site and Onshore Export Cable Circuits are currently envisaged during the design life. If a cable failure occurs it may be necessary to replace the section of faulty cable.	Increase in noise, light or vibration due to operation of the Onshore Substations in or near to habitats supporting protected or notable species. Protected or notable species could be displaced due to habitat loss, degradation or fragmentation in relation to operational activities

Potential Impact	Assessment Parameter	Explanation
Decommissioning		
In the absence of detailed information regarding decommissioning works, it is assumed that all above ground infrastructure will be removed and all in ground infrastructure will be left in situ. Therefore, the impacts during the decommissioning of the OnTI RLB are considered comparable with, or likely less than, those of the construction stage.		

3.7 Potential Effects

3.7.1.1 The potential effects detailed within this section are those likely to occur once embedded mitigation, as described in Section 3.5.6, has been taken into account.

3.7.2 Construction

3.7.2.1 The majority of potential effects will arise during the construction phase. These are described in the following sections.

Designated Sites

Nationally Designated Sites

Cullen to Stake Ness Coast SSSI

3.7.2.2 Cullen to Stake Ness Coast SSSI is located within the OnTI RLB, and therefore could be subject to direct impacts resulting from construction activities.

3.7.2.3 Direct and indirect impacts which have the potential to occur during construction of the Proposed Development (Onshore) include permanent or temporary habitat loss and fragmentation or degradation (for example, as a result of light or noise pollution) to habitats within the SSSI.

3.7.2.4 The inclusion of embedded mitigation measures, specifically avoidance of direct works within the SSSI through the use of HDD and the implementation of a CEMP and related pollution avoidance measures, will enable these impacts to be avoided and thus the magnitude of impact is considered to be negligible.

3.7.2.5 Taking into consideration the high importance of the Cullen to Stake Ness Coast SSSI and negligible magnitude of impact, the overall significance of effects is negligible and not significant in EIA terms.

Gamrie and Pennan Coast SSSI

3.7.2.6 Gamrie and Pennan Coast SSSI is located 9.8km east of the OnTI RLB and could be subject to indirect impacts resulting from construction activities.

3.7.2.7 Indirect effects which have the potential to occur during construction of the Proposed Development (Onshore) include permanent or temporary habitat loss and fragmentation or degradation to habitats within the SSSI.

3.7.2.8 The main impact pathway is through hydrological connections from the Moray Firth, through either pollution at the coast or within the River Deveron, and travelling east to the Gamrie and Pennan Coast SSSI. However, it is anticipated that due to the high energy nature of the environment, any such pollutants would likely be readily dispersed and diluted to background levels over the distance between the event and the Gamrie and Pennan Coast SSSI.

3.7.2.9 Furthermore, the inclusion of embedded mitigation measures, specifically the implementation of a CEMP and related pollution avoidance measures, will result in potential disturbance, damage, or destruction of habitat avoidance and thus the magnitude of impact is negligible.

3.7.2.10 Taking into consideration the high importance of the Gamrie and Pennan Coast SSSI and negligible magnitude of impact, the overall significance of effects is negligible and not significant in EIA terms.

Southern Trench Marine Protected Area (MPA)

3.7.2.11 Potential effects to the Southern Trench MPA resulting from offshore impacts are assessed within Volumes 2, 3 and 4 of the EIAR. This section addresses potential effects on the Southern Trench MPA resulting from onshore activities above the MLWS.

3.7.2.12 The Southern Trench MPA is approximately 300m north of the OnTI RLB and could be subject to indirect effects resulting from onshore construction activities.

3.7.2.13 Indirect impacts which have the potential to occur during construction of the Proposed Development (Onshore) are:

- Degradation of habitats within the MPA; and
- Disturbance / displacement of minke whale.

3.7.2.14 The main pathway for effect is through hydrological connections from the Moray Firth through either pollution at the coast or within the River Deveron travelling north to the Southern Trench MPA.

3.7.2.15 It is anticipated that due to the high energy nature of the environment, any such pollutants would likely be readily dispersed and diluted to background levels over the distance between the event and the Southern Trench MPA. This, coupled with the application of the embedded mitigation measures described in Section 3.5.6, specifically the implementation of a CEMP and related pollution avoidance measures, will result in a non-significant effect on the Southern Trench MPA.

3.7.2.16 There is the potential for disturbance to minke whale at the Landfall Site from construction related airborne noise. The potential for construction related noise at the Landfall Site is assessed in Volume 5, Chapter 8: Airborne Noise and Vibration.

3.7.2.17 Research has found that in some instances, noises above 85 decibels are capable of interfering with the effective communication between minke whales (Helble et al., 2020[50]). Whilst their communication does not stop altogether, it has been shown that minke whales are unable to fully compensate for the increase in background noise levels above this threshold.

3.7.2.18 As detailed within Volume 5, Chapter 8: Airborne Noise and Vibration, background levels at the Landfall Site range between 39 and 44 decibels.

During HDD works at the Landfall Site, the unmitigated predicted noise levels 50m from the works is 56 decibels, decreasing with distance (Volume 7E, Appendix 8-5: Evaluation of construction phase noise levels). Although the location of the terrestrial HDD works are not yet known, the noise levels generated will be less than that known to affect minke whales. The terrestrial noise generated would also be dampened by water.

3.7.2.19 Additionally, mitigation measures have been proposed to limit the noise generated further.

3.7.2.20 These effects are therefore considered not significant following the implementation of embedded and secondary mitigation measures.

3.7.2.21 Taking into consideration the high importance of the Southern Trench MPA and negligible magnitude of impact, the overall significance of effects is negligible and not significant in EIA terms.

Gight Woods SSSI, Reidside Moss SSSI and Tore of Troup SSSI

3.7.2.22 Reidside Moss SSSI is located approximately 4.5km west of the OnTI RLB, Gight Woods SSSI is located approximately 5km south of the OnTI RLB and Tore of Troup SSSI is located approximately 8.7km east of the OnTI RLB.

3.7.2.23 No hydrological link exists between the Proposed Development (Onshore) and these three nationally designated sites. The potential pathway for aerial emissions can be ruled out due to the distance between the Proposed Development (Onshore) and the sites. Construction related impacts, such as light pollution, noise, aerial emissions and any accidental/unintentional release of pollutants, is anticipated to localised to the construction area and is unlikely to affect these SSSIs given the lack of pathways.

3.7.2.24 Embedded mitigation measures, specifically the implementation of a CEMP and related pollution avoidance measures will also avoid potential disturbance, damage, or destruction of habitat. The magnitude of impact is therefore considered to be negligible.

3.7.2.25 Taking into consideration the high importance of the Reidside Moss SSSI, Gight Woods SSSI and Tore of Trop SSSI and negligible magnitude of impact, the overall significance of effects is negligible and not significant in EIA terms.

Ancient Woodland Inventory

3.7.2.26 Six AWI classified woodlands have been scoped in for further assessment due to their proximity to the OnTI RLB and/or connection through ecological corridors.

3.7.2.27 AWI classified woodlands are considered to be of high importance.

3.7.2.28 Due to the distance of each AWI classified woodland block, the nearest being 120m from the OnTI RLB, no direct habitat loss from construction works is likely.

3.7.2.29 Construction has the potential to lead to changes to surface water runoff and/or water quality that enters these habitats. AWI classified woodlands could also be affected from construction related pollution incidents including dust or chemical spills that leave the OnTI RLB and enter adjacent habitats.

3.7.2.30 The inclusion of embedded mitigation measures, specifically the implementation of a CEMP, related surface water management and pollution avoidance measures, will avoid permanent or temporary habitat loss or degradation.

3.7.2.31 Additionally, embedded mitigation states that the design of the OnTI will be refined after targeted ecological surveys to micro-site works away from legally protected habitats, which will include areas of AWI classified woodlands that are in proximity to the OnTI RLB.

3.7.2.32 Taking into consideration the high importance of the AWI woodlands and negligible magnitude of impact, the overall significance of effects is considered as negligible and not significant in EIA terms.

Habitats

Habitats

High energy littoral rock

3.7.2.33 The high energy littoral rock habitat is present along the most northerly portion of the OnTI RLB where the offshore export cable makes landfall. This habitat is within the boundary of the Cullen to Stake Ness Coast SSSI.

3.7.2.34 The high energy littoral rock habitat is assessed as being of national value due to its presence within a SSSI. However, due to its lack of notable plant communities it is considered to be of low importance.

3.7.2.35 Due to the proximity of this habitat to the Proposed Development (Onshore), direct and indirect effects have the potential to occur during construction of the Proposed Development (Onshore) including permanent or temporary habitat loss and fragmentation or degradation.

3.7.2.36 This habitat also has the potential to be affected during construction through changes to surface water management or quality, and construction related pollution incidents including dust or chemical spills. Impacts may also occur through direct loss to the habitat or damage from plant movement or trampling by workers.

3.7.2.37 The inclusion of embedded mitigation measures, specifically the implementation of a CEMP and related pollution avoidance measures as well as avoidance of this habitat from all works through the use of HDD, will avoid permanent or temporary habitat loss, fragmentation or degradation.

3.7.2.38 As stated in the embedded mitigation, the Landfall Site and related construction compound will be set back from the coast with no works to occur within the SSSI boundary.

3.7.2.39 Taking into consideration the national value of the Cullen to Stake Ness Coast SSSI and thus the intertidal habitats that form part of the SSSI (i.e. the high energy littoral rock) and negligible magnitude of impact, the overall significance of effect is considered to be negligible and not significant in EIA terms.

Other neutral grassland

3.7.2.40 The single area of other neutral grassland included in this assessment is present along the most northernly portion of the OnTI RLB where the offshore export cable makes landfall and forms parts of the Cullen to Stake Ness Coast SSSI, running directly adjacent to the high energy littoral rock habitat.

3.7.2.41 This area of other neutral grassland habitat is assessed as being of national value due to its presence within a SSSI. However, due to its lack of notable plant communities, it is considered to be of low importance.

3.7.2.42 This habitat is considered to be subject to the same impacts and embedded mitigation as discussed for the high energy littoral rock habitat.

3.7.2.43 The overall significance effect on this habitat is considered to be negligible and not significant in EIA terms.

Lowland mixed deciduous woodland

3.7.2.44 The lowland mixed deciduous woodland habitats are assessed to be of County value due to their scarcity in the area. Due to their moderate condition level, diversity and ability to support several protected species this habitat is considered to be of moderate importance.

3.7.2.45 Direct and indirect effects have the potential to occur during construction of the Proposed Development (Onshore) through permanent or temporary habitat loss, fragmentation or degradation.

3.7.2.46 Whilst the entirety of these woodlands are highly unlikely to be removed during construction, vegetation clearance will be required to facilitate construction.

3.7.2.47 This habitat also has the potential to be affected by changes to surface water management or quality and construction related pollution incidents including dust or chemical spills. Impacts may also occur through direct loss to habitats or damage from plant movement or trampling by workers.

3.7.2.48 Embedded mitigation will include replacement planting of trees during or at the end of the construction period. However following phase 1, woodlands will not be able to achieve a similar condition and ecological function prior to phase 2 commencing. Embedded mitigation also includes for temporary land take required during construction to be minimised with the land-take

for the OnTI RLB kept to the minimum necessary for safe construction and operation for the works.

3.7.2.49 Additionally, embedded mitigation (M-92, Table 3-23) was put in place for the areas of lowland mixed deciduous woodland on the eastern side of the River Deveron near the Hill of Scattery. As the ONEC passes through these woodlands, works will adhere to the principles as detailed in M-92.

3.7.2.50 The inclusion of embedded mitigation measures, specifically the implementation of a CEMP and related pollution avoidance measures as well as avoidance of this habitat from all works through the use of HDD, will avoid permanent or temporary habitat loss, fragmentation or degradation.

3.7.2.51 Taking into consideration the moderate importance of lowland mixed deciduous woodland and the low magnitude of impact, the overall significance of effect after consideration of the embedded mitigation is minor and not significant in EIA terms.

Priority habitats (watercourse) and other rivers and streams

3.7.2.52 The priority watercourses and other rivers and streams watercourse types are subject to the same potential impacts during the construction of the Proposed Development (Onshore). The assessment of significance of effect has therefore been combined.

3.7.2.53 The watercourses within the OnTI RLB have mixed value, ranging from low importance agricultural drains and small tributaries to the River Deveron as a WFD and salmonoid river, with high importance.

3.7.2.54 Although the other rivers and streams are not considered to be priority habitat as described in Section 3.4.3.51, they still hold ecological value. These watercourses are assessed as being of Local value and, due to their smaller nature, habitat diversity and low species assemblages are considered to be of moderate importance.

3.7.2.55 Of the other watercourses within the OnTI RLB, five qualify as priority habitat under the UK BAP Priority Habitat criteria (JNCC, 2011[51]).

3.7.2.56 These watercourses are assessed as being of National value and, due to their naturalness and ability to support several protected and notable species, are considered to be of moderate importance.

3.7.2.57 The direct and indirect impacts on watercourses that have the potential to occur during construction of the Proposed Development (Onshore) are permanent or temporary habitat loss, fragmentation, degradation or alteration.

3.7.2.58 These watercourses also have the potential to be affected during construction through changes to surface water management or quality and construction related pollution incidents including dust or chemical spills.

This could occur during cable trenching, temporary crossings, permanent diversions and HDD activities.

3.7.2.59 Impacts may also occur through direct loss to habitats through redirection of flows to a different catchment which could reduce catchment areas and change the flow regime within receiving surface waters which could affect water quantity. Construction works may also require abstractions from watercourses to provide a source of water for processes such as dampening down/dust suppression or for the HDD process. The abstraction of water from watercourses also has the potential to cause an effect on the quantity of water within watercourses which could lead to habitat loss (drying) or degradation of the habitat.

3.7.2.60 Construction on watercourses such as cable trenching, temporary crossings, and permanent diversions, may result in the permanent loss of features which may have ecological value, and impact on water quality. Construction works may also result in the loss of geomorphological features and habitat niches within the affected channel and potentially downstream.

3.7.2.61 Embedded mitigation in the form of a CEMP will be employed which will detail appropriate construction drainage and pollution prevention controls. All construction will follow best practice guidance such as the SEPA Pollution Prevention Guidelines and Construction Industry Research and Information Association (CIRIA) guidance which are outlined in Volume 5, Chapter 6: Hydrology and Hydrogeology Section 7.2.2.

3.7.2.62 Watercourse crossings will be minimised within the detailed design, and construction compounds and all storage of materials will be placed outside of the floodplain. Drilling muds from HDD works will be appropriately treated before disposal or any release of water into the environment, they will not be directly discharged into the environment, as secured in the CEMP.

3.7.2.63 Embedded mitigation for WFD and salmonoid watercourses includes the use of HDD technology for the cable circuit crossings. This mitigation reduces the impact magnitude of changes to hydromorphology to negligible as there is no direct interaction with the watercourse. Non-WFD and non-salmonoid watercourses will experience temporary changes to hydromorphology during construction as a result of the OCT techniques likely to be used, with a low magnitude of impact.

3.7.2.64 Taking into consideration the low to high importance of the watercourses and negligible magnitude of impact for the high value watercourses and low magnitude of impact for low value watercourses, the overall significance of effect is considered to be negligible and not significant in EIA terms.

Species-rich native hedge

3.7.2.65 Species rich native hedge habitats are assessed as being of County value. Due to their rarity in the geographical area and species diversity they are considered to be of moderate importance.

3.7.2.66 Of the species-rich native hedge, one of the two sections span the entire width of the OnTI RLB, with the second section spanning approximately half the width of the OnTI RLB. It is therefore assumed that all species-rich native hedge will be severed as part of construction of the Proposed Development (Onshore). The direct impacts comprise temporary habitat loss, degradation and fragmentation.

3.7.2.67 Whilst the entirety of these hedges will not be removed during construction, vegetation clearance will be required at each phase of construction. Embedded mitigation includes for replacement planting of trees and notable hedgerows during or at the end of the construction period. However following phase 1, hedges will not necessarily be able to achieve a similar condition and ecological function prior to phase 2 commencing.

3.7.2.68 If hedges are not reinstated between the construction phases, the length of habitat loss will be longer and impact the ecological functioning of the hedge for longer.

3.7.2.69 Taking into consideration the moderate importance of intact hedge - native species-rich habitat and the moderate magnitude of impact, the overall significance of effect after consideration of embedded mitigation is adverse moderate significant in EIA terms.

Species rich native hedgerow with trees

3.7.2.70 Species-rich native hedgerow with trees are assessed as being of County value. Due to their rarity in the geographical area and species diversity they are considered to be of moderate importance.

3.7.2.71 One hedge with trees - native species rich (H08) spans the entire width of the OnTI RLB and will be severed as a result of the Proposed Development (Onshore) construction. Other sections of this habitat within the OnTI RLB are small and can potentially be avoided through detailed design, however the assessment precautionarily assumes that these hedges may also be affected by the Proposed Development (Onshore) construction either through removal or degradation of the habitat. The direct impacts comprise temporary habitat loss, degradation and fragmentation.

3.7.2.72 The assessment of significance of effect for this habitat is considered to be the same as species-rich native hedge.

3.7.2.73 Taking into consideration the moderate importance of species-rich native hedgerow with trees habitat and the moderate magnitude of impact, the overall significance of effect after consideration of embedded mitigation is adverse moderate significant in EIA terms.

Species-rich native hedgerow – associated with bank or ditch

3.7.2.74 Species-rich native hedgerow – associated with bank or ditch habitats are assessed as being of County value. Due to their rarity in the geographical area and species diversity they are considered to be of moderate importance.

3.7.2.75 All species-rich native hedgerow – associated with bank or ditch habitat span the entire width of the OnTI RLB and will be severed as a result of the Proposed Development (Onshore) construction. The impacts comprise temporary habitat loss, degradation and fragmentation.

3.7.2.76 The assessment of significance of effect for this habitat is considered to be the same as species-rich native hedge.

3.7.2.77 Taking into consideration the moderate importance of species-rich native hedgerow – associated with bank or ditch habitat and the moderate magnitude of impact, the overall significance of effect after consideration of embedded mitigation is adverse moderate significant in EIA terms.

Protected and Notable Species

Invasive Non-native Species

3.7.2.78 INNS are not considered a positive ecological feature. Due to their highly invasive and destructive nature they are considered to be of high importance.

3.7.2.79 The construction of the Proposed Development (Onshore) has the potential to cause the further spread of invasive species into adjacent habitats causing habitat degradation.

3.7.2.80 Embedded mitigation in the form of a CEMP will be employed which will detail appropriate construction methods and biosecurity requirements for all workers, vehicles, plant and materials entering and exiting the construction site. This will include appropriate buffers around any affected areas.

3.7.2.81 Embedded mitigation includes detailed ecological surveys within the final ONEC which will include identification of INNS which may have colonised or spread since previous surveys.

3.7.2.82 INNS are not a positive feature, and their high importance relates only to not facilitating their spread. Halting their spread is considered to be a positive impact of low magnitude, resulting in an overall negligible significance of effect that is not significant in EIA terms.

Badger

3.7.2.83 Due to the confidential nature of badgers and their sett locations, the assessment of potential effects on badger has been undertaken in Volume 7E, Appendix 3-2: Badger Survey Report and Impact Assessment.

Breeding Birds

3.7.2.84 The assemblage of breeding birds within the OnTI RLB was assessed as being of moderate importance due to the surveys identifying an assemblage largely typical of species associated with agricultural areas.

3.7.2.85 Five Schedule 1 species were identified during the BBS, however only barn owl was identified to be potentially breeding, although their potential breeding site was located approximately 140m north of the OnTI RLB and only their pellets were recorded within a barn along Transect 3.

3.7.2.86 The construction impacts of relevance to breeding birds are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/or permanent habitat loss, degradation or fragmentation

3.7.2.87 The construction of the Proposed Development (Onshore) has the potential to cause the temporary reduction of foraging, nesting and roosting habitats for breeding birds through the vegetation clearance, excavations, trenching, temporary roads, construction compounds, including lighting and fencing across the OnTI RLB.

3.7.2.88 These impacts could contribute to a localised displacement of relatively small numbers of notable breeding bird species. Notwithstanding, it is considered that the land take from the construction will not be substantial enough to notably reduce the nesting, foraging and roosting opportunities available to breeding birds given the abundance of suitable habitat that will be retained within the immediate locality.

3.7.2.89 Construction will not occur across the whole of the OnTI RLB at one time restricting use of the land by breeding birds in the entirety of the area at one time. Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the smallest area necessary for safe construction works.

3.7.2.90 Whilst a possible barn owl breeding site was recorded, it is located approximately 140m north of the OnTI RLB. It is highly likely that barn owl utilise the OnTI RLB habitats for foraging, however the loss of this habitat will be temporary and many other areas of suitable foraging habitat for barn owl is present within the wider landscape.

3.7.2.91 Permanent habitat loss will occur at the Onshore Substation Site. Transect 9 was noted as supporting the highest levels of species richness (47) and highest total abundance (409). The majority of the recordings were concentrated to the west and middle portions of the transect where areas of woodland and marshy grassland were present, respectively. In proximity to the substation, the largest concentrations of birds were recorded along the Burn of Asleid.

3.7.2.92 Three breeding territories were confirmed to be within the Onshore Substation Site where permanent habitat loss will occur. These species, yellowhammer and skylark, were recorded frequently across the OnTI RLB suggesting habitats present throughout the OnTI RLB and wider areas are also suitable for these species.

3.7.2.93 Taking into consideration the moderate importance of the breeding bird assemblage and the low magnitude of impact, the overall significance of effects is minor and not significant in EIA terms.

Disturbance

3.7.2.94 Construction works will occur in areas used by breeding birds for foraging nesting and roosting. As a highly mobile species, this will cause birds to flush and forage, roost and nest in different areas.

3.7.2.95 During construction the most likely activities to cause disturbance to breeding birds are construction noise and movement of plant and workers. Under the sequential construction scenario, breeding birds will be exposed to construction-related disturbances for a longer overall period which has the potential to lead to prolonged disturbance within the construction areas.

3.7.2.96 Due to the highly arable nature of the land within and adjacent to the OnTI RLB and ongoing farming practices, it is considered that the disturbance from construction noise and movement of plant is not substantially more that the current baseline. Construction will not occur along the entirety of the OnTI RLB at one time, and arable lands will be returned to landowners as soon as possible following construction. The land surrounding the OnTI RLB is also highly suitable for breeding birds and provides suitable areas for birds to forage, nest and roost.

3.7.2.97 Taking into consideration the moderate importance of the breeding bird assemblage and the low magnitude of impact, the overall significance of effects is minor and not significant in EIA terms.

Species Injury and/or Mortality

3.7.2.98 Vegetation clearance activities may result in the direct mortality of birds. In the absence of mitigation, vegetation clearance activities undertaken during the bird nesting season (March to August inclusive) may result in the direct destruction of active nests and risk mortality to unfledged birds.

3.7.2.99 Breeding birds are legally protected under the WCA which make it an offence to intentionally kill, injure or take any wild bird.

3.7.2.100 Taking into consideration the moderate importance of the wintering bird assemblage and the high magnitude of impact due to the potential for injury and/or mortality of breeding birds and legal implications, the overall significance of effects is moderate and significant in EIA terms.

Fish

3.7.2.101 The population of fish species within the OnTI RLB was assessed as being of high importance due to their legal protection and presence in several watercourses in the OnTI RLB.

3.7.2.102 The construction impacts of relevance to fish are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/or permanent habitat loss, degradation or fragmentation

3.7.2.103 The construction of the Proposed Development (Onshore) has the potential to cause the temporary loss of habitats suitable for fish through impact to watercourses and water quality, quantity and potential diversions. This temporary habitat loss would also temporarily remove the connectivity between retained areas of these watercourses.

3.7.2.104 Construction along watercourses such as cable trenching, temporary crossings, and permanent diversions, may result in the permanent loss of hydromorphological features that provide ecological value for fish. The loss of hydromorphological features is detailed more in Volume 5, Chapter 6: Hydrology and Hydrogeology.

3.7.2.105 The potential for habitat loss and degradation through construction related impacts such aerial emissions and the accidental/unintentional release of pollutants will be controlled through a CEMP which forms part of the embedded mitigation.

3.7.2.106 Permanent habitat loss will occur at the Onshore Substation Site however the Onshore Substation Site infrastructure is not within suitable aquatic habitat for fish. The watercourse crossing at the Onshore Substation Site will be maintained and is included within embedded mitigation measures. The Onshore Substation Site will be set back at least 10m from the Burn of Asleid (WC13) which will minimise impacts to this feature.

3.7.2.107 Working in, on or adjacent to watercourses and their floodplains may also affect surface water quality through the accidental discharge of fine sediments or chemicals, including hydrocarbons. Impacts to adjacent riparian vegetation can also impact water quality as this vegetation acts to buffer and the watercourse from any harmful pollutants through filtration mechanisms. Work to construct the Proposed Development (Onshore) infrastructure, will require cable trenches, open cut watercourse crossings and HDD crossings, which all could also create additional sources of sediment and pollutants, including HDD drilling mud flowing downstream.

3.7.2.108 Surface water quantity may also occur through changes in topography, or catchment flows leading to reduced water entering watercourses. Water

quantity may also be impacted should HDD activities require abstractions from watercourses.

3.7.2.109 Taking into consideration embedded mitigation, the high importance of fish and the moderate magnitude of impact, the overall significance of effect is adverse moderate significant in EIA terms.

Disturbance

3.7.2.110 Noise, vibration and lighting as a result of the construction of the Proposed Development (Onshore) may result in disturbance to fish.

3.7.2.111 Evidence has been shown that very intense sounds may result in changes to fish behaviour, including leaving their feeding or spawning habitats, or interfering with reproductive behaviours (Popper and Hawkins, 2019[52]). Largely, interference to fish is associated with prolonged, continuous exposure to disturbances which modify their environment to an uninhabitable level[52].

3.7.2.112 Light pollution has the potential to alter fish behaviour and alter timing of migration (Riley et al., 2013[53]). It is unknown if night-time working will be required in proximity to watercourses and during watercourse trenching works.

3.7.2.113 Under the sequential construction scenario fish will be exposed to construction-related disturbances for a longer overall period which has the potential to lead to prolonged stress on fish populated watercourses. Continuous or repeated disturbances could increase the risk of permanent fish migration away from such disturbed areas.

3.7.2.114 Embedded mitigation includes the development of a CEMP which will include measures to manage and reduce light pollution, noise and vibrations in order to minimise environmental impacts.

3.7.2.115 As detailed in Volume 5 Chapter 8: Airborne Noise and Vibration, vibration impacts from construction were scoped out of assessment for human receptors. Mitigation within Volume 5 Chapter 8: Airborne Noise and Vibration includes the use of temporary acoustic screening around noisy plant and activities. The implementation of noise mitigation may reduce the impacts to fish however localised impacts from vibration may still occur particularly during HDD works and if that work occurs during sensitive seasons such as spawning.

3.7.2.116 Taking into consideration the high importance of fish and the moderate magnitude of impact, the overall significance of effect is adverse moderate significant in EIA terms.

Injury and/or mortality

3.7.2.117 During the construction period, injury or mortality may occur to fish through modification of fish habitat, direct impact to fish through drilling or excavation works, as well as through construction related noise and

vibration. This is such that physical injury or in some cases, death, may result to fish from prolonged exposure to anthropogenic sounds[52].

3.7.2.118 Vibration can cause damage or mortality of eggs and embryos in spawning gravels, which could have an adverse effect on the populations of conservation species that are gravel spawners, notably brown trout, lamprey sp., and Atlantic salmon.

3.7.2.119 Embedded mitigation will include culverts which will mean that no watercourses will end abruptly with the chance of running dry, but rather be culverted to another area. HDD technology crossings will also occur at all WFD watercourses and salmonid watercourses which will ensure fish passage and breeding can continue to occur along these watercourses.

3.7.2.120 In the embedded mitigation, the implementation of the CEMP during construction will include best practice guidance to avoid, minimise and mitigate effects on the environment. This will include the principles for safe operation of construction equipment. This will reduce the risk of injury and/or mortality of fish during construction.

3.7.2.121 Taking into consideration the high importance of fish and the moderate magnitude of impact, the overall significance of effect is adverse moderate significant in EIA terms.

Otter

3.7.2.122 Due to their legal protection and presence on several watercourses in the OnTI RLB, the population of otter within the OnTI RLB are considered to be of high importance.

3.7.2.123 The impacts of construction of relevance to otter are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/or permanent habitat loss, degradation or fragmentation

3.7.2.124 Habitat suitable for breeding, foraging and commuting otters, largely associated with watercourses and adjacent grassland and woodlands, is present within the OnTI RLB.

3.7.2.125 The construction of the Proposed Development (Onshore) has the potential to cause the temporary loss of habitats suitable for otter including woodland, scrub and grasslands adjacent to watercourses. Habitat clearance would also temporarily reduce connectivity between retained areas of these habitats. It is however considered that the land take of habitats suitable for otter from the construction will be localised and insubstantial. In addition, construction will not occur across all suitable habitat areas at the same time.

3.7.2.126 Construction along watercourses such as cable trenching, temporary crossings, and permanent diversions, may result in the permanent loss of hydromorphological features that provide ecological resource for otter. These hydromorphological features are further detailed in Volume 5, Chapter 6: Hydrology and Hydrogeology.

3.7.2.127 The potential for habitat loss and degradation through construction related impacts such as light pollution and the accidental/unintentional release of pollutants will be controlled through a CEMP which forms part of the embedded mitigation.

3.7.2.128 Permanent habitat loss will occur at the Onshore Substation Site. Whilst suitable terrestrial habitats exist within the Onshore Substation Site (Burn of Asleid (WC13)), no signs of otter were recorded within this watercourse. It is considered unlikely that the Burn of Asleid (WC13) supports breeding otters, but due to the presence of prey (see Volume 7E, Appendix 3-5 otter foraging or commuting activities are likely.

3.7.2.129 Embedded mitigation includes ecological surveys to be completed prior to construction, this will include the identification of otter holts and shelters which are protected under legislation[47]. The buffer in which disturbance to otter may occur is dependent on the otter feature identified, and its use (e.g. breeding). A SQE will be consulted regarding any features used by otter and the appropriate exclusion zone that needs to be in place. The exclusion zone will be up to 200m depending on the ecological feature. For holts and shelters where otters are not breeding, the exclusion zone will be 30m (NatureScot, 2024[54]). A EPS licence will also be required and obtained where any destruction of otter holts or sheltering places will occur. This will mitigate the impacts of habitat loss for the species.

3.7.2.130 Working in, on or adjacent to watercourses and their floodplains may also affect surface water quality through the accidental discharge of fine sediments or chemicals, including hydrocarbons. Work to construct the OnTI will require cable trenches, open cut watercourse crossings and HDD, which could all create additional sources of sediment and pollutants, including HDD drilling mud flowing downstream.

3.7.2.131 One of the most sensitive areas for otter within the OnTI RLB is the River Deveron, the watercourse itself and adjacent woodland and grasslands. Embedded mitigation includes for HDD drilling in this area as this River is a WFD and a salmonid watercourse. This will reduce the significance of impact in this area as trenching techniques would have otherwise caused substantial habitat loss.

3.7.2.132 Another watercourse and adjacent terrestrial habitat where a high number of field signs of otter were recorded was the Craigston Burn (WC15). The Craigston Burn is not a salmonid watercourse, however the OnTI RLB does not cross this burn and as such no direct impacts are anticipated.

3.7.2.133 Taking into consideration the high importance of otter and the low magnitude of impact following the inclusion of embedded mitigation, the overall significance is minor and not significant in EIA terms.

Disturbance

3.7.2.134 During construction there is the potential for works to occur within proximity to sensitive otter habitats including holts and resting places which may cause disturbance to the occupation and breeding success of otters.

3.7.2.135 During construction the most likely activities to cause disturbance to otter are vibration, noise and lighting.

3.7.2.136 Under the sequential construction scenario otters will be exposed to construction-related disturbances for a longer overall period which has the potential to lead to prolonged stress on any identified otter holts. When phase 1 ends there is the potential of a period of no construction works before the commencement of phase 2, during this time there is the potential that otters recolonise previously impacted areas. Continuous or repeated disturbances may therefore result in permanent habitat abandonment.

3.7.2.137 Otters are known to occupy large home ranges of up to 30km of riverbank or up to 4km when closer to the coastline (NatureScot, 2024[55]). As such, it is unlikely that otters are restricted to the habitat specifically within the OnTI RLB.

3.7.2.138 Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the smallest area necessary for safe construction works. Additionally, the design of the OnTI will be refined after targeted ecological surveys to micro-site works away from legally protected habitats and species such as otter. Due to the potential for otters to occupy large home ranges, it is unlikely that substantial amounts of habitat will be disturbed by the Proposed Development (Onshore).

3.7.2.139 Embedded mitigation also identifies that an EPS licence to disturb or destroy an otter holt is legally required should these be impacted during construction works. Where works will occur within 30m of an otter holt or shelter or will require the removal of these features, a licence from NatureScot will be applied for. As EPS a licence for development works that affect otter are required to demonstrate that three tests are met (NatureScot, 2024[56]). These three tests are:

- There must be a licensable purpose for which licenses can be granted;
- There must be no satisfactory alternative; and
- The proposed action must not be detrimental to maintaining the species at 'favourable conservation status'.

3.7.2.140 A detailed otter species protection plan will be produced following detailed design and provided to NatureScot prior to the commencement of

construction. Thia species protection plan will include mitigation that is approved by NatureScot prior to works commencing.

3.7.2.141 Taking into consideration the high importance of otter and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Injury and/or mortality

3.7.2.142 One of the highest threats to otters in Scotland, among natural causes, is fatality as a result of vehicular movements. Increased traffic will occur during the construction of the Proposed Development (Onshore) and as a result, there is an associated increased risk of fatality to this species.

3.7.2.143 The implementation of the CEMP and CTMP, as stated in embedded mitigation, during construction will include best practice guidance to avoid, minimise and mitigate effects on the environment during construction and will provide principles for safe operation of construction vehicles. This will reduce the risk of injury and/or mortality of otter during construction.

3.7.2.144 Taking into consideration the high importance of otter and the negligible magnitude of impact, the overall significance of effect is neutral and not significant in EIA terms.

Pine Marten

3.7.2.145 The populations of pine marten are assessed as being of Regional value and as they are considered to be in decline with limited populations in this region, are considered to be of high importance.

3.7.2.146 The impacts of construction of relevance to pine marten are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/ or permanent habitat loss, degradation or fragmentation

3.7.2.147 The habitats suitable for pine marten are very limited within the OnTI RLB and where present, are primarily along the edge of the OnTI RLB, small, fragmented and not connected to large areas outside the OnTI RLB where notable populations may be present.

3.7.2.148 Where desk study data identified records of pine marten, they were in habitats outside the OnTI RLB, either within 30m or where connecting habitat has the potential to allow these species to be within 30m of the OnTI RLB.

3.7.2.149 The most notable habitats where pine marten may be present are Wood of Delgaty and Greeness Woodland.

3.7.2.150 The construction of the Proposed Development (Onshore) has the potential to cause the permanent or temporary loss of habitats suitable for pine marten foraging, den building and commuting through the removal of scrub, hedgerow, trees and woodland habitats.

3.7.2.151 Permanent habitat loss will occur at the Onshore Substation Site, however no suitable habitat for either species is located in this area.

3.7.2.152 These habitats have the potential to be degraded during construction through construction related noise and pollution incidents including dust or chemical spills. Impacts may also occur through temporary habitat loss or damage from plant movement causing canopy or root damage.

3.7.2.153 Fragmentation of commuting corridors may occur through the temporary loss of hedgerows and woodland strips that cross the OnTI RLB. Habitat fragmentation is likely to be temporary during construction, however, could be subject to secondary fragmentation during phase 2 works. Although habitats will be replaced following construction, the delay in their growth, especially for habitats such as woodlands and hedgerows, could cause a delay in recolonisation of once suitable areas. This risk is considered low due to very few habitats within the OnTI RLB existing that could act as commuting corridors between suitable habitats.

3.7.2.154 Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the smallest area necessary for safe construction works. Additionally, the design of the OnTI will be refined after targeted ecological surveys to micro-site works away from legally protected habitats and species such as pine marten dens.

3.7.2.155 Construction pollution will be controlled through the CEMP which forms part of the embedded mitigation measures for the Proposed Development (Onshore).

3.7.2.156 Taking into consideration the high importance of pine marten and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Disturbance

3.7.2.157 There is the potential during construction for works to occur in proximity to pine marten dens which could cause stress to pine marten leading to den abandonment, changes in foraging patters and reduction in breeding success.

3.7.2.158 During construction, the most likely activities to cause disturbance to pine marten are vibration, noise and lighting that occur next to woodland habitats.

3.7.2.159 Under the sequential scenario, pine marten have the potential to be exposed to construction related disturbances for a longer overall period

which could lead to additional stress if works occur adjacent to suitable drey and denning habitat.

3.7.2.160 Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the minimum area necessary for safe construction works. Additionally, the design of the OnTI will be refined after targeted ecological surveys to micro-site works away from ecologically protected habitats and species such as pine marten dens.

3.7.2.161 As detailed in Volume 5, Chapter 8: Airborne Noise and Vibration, vibration impacts from construction were scoped out of assessment on the basis that vibration can be limited to within appropriate threshold values at noise sensitive receptors by the implementation of appropriate mitigation. Mitigation within Volume 5, Chapter 8: Airborne Noise and Vibration includes the use of temporary acoustic screening around noisy plant and activities. The implementation of noise mitigation and micro-siting to distance works from sensitive ecological features will reduce the impacts to habitats and protected species.

3.7.2.162 One of the largest areas of woodland within the OnTI RLB that has the potential to support pine marten is along both banks of the River Deveron. Embedded mitigation identifies that HDD will be undertaken in this area as the River Deveron is a WFD and salmonid watercourse. This will reduce the significance of impact in this area as otherwise trenching techniques to cross the watercourse would have caused substantial habitat loss and disturbance.

3.7.2.163 As there are minimal areas of suitable habitat within or directly adjacent to the OnTI RLB suitable for pine marten, the potential for disturbance to occur following micro-siting to avoid sensitive habitats is considered to be low.

3.7.2.164 Taking into consideration the high importance of pine marten and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Species Injury and/or Mortality

3.7.2.165 During the construction phase, there is the potential for pine marten to fall into or become trapped in excavation or trenches. Untended construction materials and tools may also result in injury within the construction areas.

3.7.2.166 There is also the potential for death or injury to pine marten due to road traffic accidents resulting from moving plant within the OnTI RLB and on any existing or temporary roads.

3.7.2.167 The implementation of the CEMP and CTMP during construction, as identified within the embedded mitigation measures, will include best practice guidance to avoid, minimise and mitigate effects on the environment during construction and will include the principles for safe

operation of construction vehicles. This will reduce the risk of injury and/or mortality of pine marten during construction.

3.7.2.168 Taking into consideration the high importance of pine and the negligible magnitude of impact, the overall significance of effect is neutral and not significant in EIA terms.

Red Squirrel

3.7.2.169 The population of red squirrel is assessed as being of Regional value and, as they are considered to be in decline with limited populations in this region, are considered to be of high importance.

3.7.2.170 The impacts of construction of relevance to red squirrel are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/ or permanent habitat loss, degradation or fragmentation

3.7.2.171 The habitats suitable for red squirrel are very limited within the OnTI RLB and where present, are primarily along the edge of the OnTI RLB, small, fragmented and not connected to large areas outside the OnTI RLB where notable populations may be present.

3.7.2.172 Where desk study data identified records of red squirrel, they were in habitats outside the OnTI RLB, either within 30m or where connecting habitat has the potential to allow these species to be within 30m of the OnTI RLB.

3.7.2.173 The most notable habitats where pine marten or red squirrel may be present are Wood of Delgaty and Greeness Woodland.

3.7.2.174 The construction of the Proposed Development (Onshore) has the potential to cause the permanent or temporary loss of habitats suitable for red squirrel foraging, drey building and commuting through the removal of scrub, hedgerow, trees and woodland habitats.

3.7.2.175 Permanent habitat loss will occur at the Onshore Substation Site, however no suitable habitat for either species is located in this area.

3.7.2.176 These habitats have the potential to be degraded during construction through construction related noise and pollution incidents including dust or chemical spills. Impacts may also occur through temporary habitat loss or damage from plant movement causing canopy or root damage.

3.7.2.177 Fragmentation of commuting corridors may occur through the temporary loss of hedgerows and woodland strips that cross the OnTI RLB. Habitat fragmentation is likely to be temporary during construction, however, could be subject to secondary fragmentation during phase 2 works. Although habitats will be replaced following construction, the delay in their growth,

especially for habitats such as woodlands and hedgerows, could cause a delay in recolonisation of once suitable areas. This risk is considered low due to very few habitats within the OnTI RLB existing that could act as commuting corridors between suitable habitats.

3.7.2.178 Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the smallest area necessary for safe construction works. Additionally, the design of the OnTI will be refined after targeted ecological surveys to micro-site works away from legally protected habitats and species such as red squirrel dreys.

3.7.2.179 Construction pollution will be controlled through the CEMP which forms part of the embedded mitigation measures for the Proposed Development (Onshore).

3.7.2.180 Taking into consideration the high importance of red squirrel and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Disturbance

3.7.2.181 There is the potential during construction for works to occur in proximity to a red squirrel dreys which could cause stress to red squirrel leading to drey abandonment, changes in foraging patterns and reduction in breeding success.

3.7.2.182 During construction, the most likely activities to cause disturbance to red squirrel are vibration, noise and lighting that occur next to woodland habitats.

3.7.2.183 Under the sequential scenario, red squirrel have the potential to be exposed to construction related disturbances for a longer overall period which could lead to additional stress if works occur adjacent to suitable drey habitat.

3.7.2.184 Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the minimum area necessary for safe construction works. Additionally, the design of the OnTI will be refined after targeted ecological surveys to micro-site works away from ecologically protected habitats and species such as red squirrel dreys.

3.7.2.185 As detailed in Volume 5, Chapter 8: Airborne Noise and Vibration, vibration impacts from construction were scoped out of assessment on the basis that vibration can be limited to within appropriate threshold values at noise sensitive receptors by the implementation of appropriate mitigation. Mitigation within Volume 5, Chapter 8: Airborne Noise and Vibration includes the use of temporary acoustic screening around noisy plant and activities. The implementation of noise mitigation and micro-siting to distance works from sensitive ecological features will reduce the impacts to habitats and protected species.

3.7.2.186 One of the largest areas of woodland within the OnTI RLB that has the potential to support red squirrel is along both banks of the River Deveron. Embedded mitigation identifies that the River Deveron will be crossed using HDD technology as the River Deveron is a WFD and salmonid watercourse. This will reduce the significance of impact in this area as otherwise trenching techniques to cross the watercourse would have caused substantial habitat loss and disturbance.

3.7.2.187 As there are minimal areas of suitable habitat within or directly adjacent to the OnTI RLB suitable for red squirrel, the potential for disturbance to occur following micro-siting to avoid sensitive habitats is considered to be low.

3.7.2.188 Taking into consideration the high importance of red squirrel and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Species Injury and/or Mortality

3.7.2.189 During the construction phase, there is the potential for red squirrel to fall into or become trapped in excavation or trenches. Untended construction materials and tools may also result in injury within the construction areas.

3.7.2.190 There is also the potential for death or injury to red squirrel due to road traffic accidents resulting from moving plant within the OnTI RLB and on any existing or temporary roads.

3.7.2.191 The implementation of the CEMP and CTMP during construction, as identified within the embedded mitigation measures, will include best practice guidance to avoid, minimise and mitigate effects on the environment during construction and will include the principles for safe operation of construction vehicles. This will reduce the risk of injury and/or mortality of red squirrel during construction.

3.7.2.192 Taking into consideration the high importance of red squirrel and the negligible magnitude of impact, the overall significance of effect is neutral and not significant in EIA terms.

Water Vole

3.7.2.193 The population of water vole within the OnTI RLB was assessed as being of high importance and, due to their partial legal protection (limited to their places of shelter and protection), declining populations, and sensitivity of their habitat requirements are considered to be of high importance.

3.7.2.194 The impacts of construction of relevance to water vole are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/or permanent habitat loss, degradation or fragmentation

3.7.2.195 Habitat suitable for breeding, foraging and commuting water vole, largely associated with watercourses and adjacent grassy riparian banks, is present within the OnTI RLB.

3.7.2.196 The construction of the Proposed Development (Onshore) has the potential to cause the temporary loss of suitable for water vole grasslands including watercourses and adjacent grassy riparian banks. Habitat clearance would also temporarily reduce connectivity between retained areas of these habitats. It is however considered that the land take from the construction will not be substantial enough or located in the only suitable habitat to notably reduce water vole sheltering, foraging and commuting opportunities. Construction will also not occur across all suitable habitat areas, at the one time.

3.7.2.197 Construction along watercourses such as cable trenching, temporary crossings, and permanent diversions, may result in the permanent loss of bank and hydromorphological features that provide essential habitat value for water vole burrows, where they shelter. Micro-siting prior to any construction occurring will result in any sensitive habitat areas, or populations being identified and avoided where possible.

3.7.2.198 The potential for habitat loss and degradation through construction related impacts such as light pollution, sound, aerial emissions and the accidental/unintentional release of pollutants will be controlled through a CEMP which forms part of the proposed embedded mitigation measures.

3.7.2.199 Permanent habitat loss will occur at the Onshore Substation Site. Whilst potential suitable habitats exist within the Onshore Substation Site (tributary of the Burn of Asleid (WC13)) no signs of water vole have been recorded along this watercourse.

3.7.2.200 Embedded mitigation includes for a protected species licence to be obtained for any works that will remove water vole burrows (sheltering places). Trapping and translocation will also be required in areas where impacts are unavoidable. A plan noting the translocations would be produced by a SQE where any impacts could not be avoided. These measures will manage potential impacts to water vole habitat.

3.7.2.201 Working in, on or adjacent to watercourses and their floodplains may also affect surface water quality through the accidental discharge of fine sediments or chemicals, including hydrocarbons. Work to construct the OnTI will require cable trenches, open cut watercourse crossings and HDD, which all could also create additional sources of sediment and pollutants, including HDD drilling of mud flowing downstream.

3.7.2.202 Taking into consideration the high importance of water vole and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Disturbance

3.7.2.203 There is the potential during construction for works to occur within areas used by water vole for shelter, which may cause disturbance to the occupation and breeding success of water vole in such areas that will be impacted.

3.7.2.204 Water vole are known to occupy very small home ranges of 60-300m of slow flowing rivers and ditches (People's Trust for Endangered Species, 2024[57]).

3.7.2.205 During construction the most likely activities to cause disturbance to water vole are vibration, noise and lighting.

3.7.2.206 Under the sequential construction scenario water vole will be exposed to construction-related disturbances for a longer overall period which has the potential to lead to prolonged stress on any identified water vole populations. When phase 1 ends there is the potential a period of no construction works before the commencement of phase 2. There is therefore the potential that water vole may recolonise previously impacted areas. Continuous or repeated disturbances may also result in permanent habitat abandonment.

3.7.2.207 Embedded mitigation includes that a protected species licence will be obtained for any works that are going to disturb water vole burrows (sheltering places). Trapping and translocation will occur in areas where impacts are unavoidable. A plan noting the translocations would be produced by a SQE where any impacts could not be avoided. These measures will manage potential impacts to water vole habitat.

3.7.2.208 As detailed in Volume 5, Chapter 8: Airborne Noise and Vibration, vibration impacts from construction were scoped out of assessment on the basis that vibration can be limited to within appropriate threshold values at noise sensitive receptors by the implementation of appropriate mitigation. Mitigation within Volume 5, Chapter 8: Airborne Noise and Vibration includes the use of temporary acoustic screening around noisy plant and activities. The implementation of noise mitigation and micro-siting to distance works from sensitive ecological features will reduce the impacts to habitats and protected species.

3.7.2.209 Taking into consideration the high importance of water vole and the low magnitude of impact, the overall significance of effect is minor and not significant in EIA terms.

Species Injury and/ or Mortality

3.7.2.210 Mortality and injury of water vole could occur during vegetation clearance and construction of the Proposed Development (Onshore).

3.7.2.211 Construction on watercourses such as cable trenching, temporary crossings, and permanent diversions, may result in the permanent loss of bank and hydromorphological features that provide essential habitat value

for water vole burrows, where they shelter. Water vole burrows are legally protected. Micro-siting prior to any construction occurring will result in any sensitive habitat areas, or populations being identified and avoided.

3.7.2.212 Taking into consideration the high importance of water vole and the negligible magnitude of impact, the overall significance of effect is neutral and not significant in EIA terms.

Wintering Birds

3.7.2.213 The potential for effects related to wintering bird species associated with the Moray Firth SPA is assessed within Volume 7E, Appendix 5: Proposed Development (Onshore) Report to Inform Appropriate Assessment.

3.7.2.214 Due to the diversity of the wintering bird assemblage the wintering bird assemblage is assessed as being of County value and is considered to be of moderate importance.

3.7.2.215 The impacts of construction of relevance to wintering birds are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

Temporary and/or permanent habitat loss, degradation or fragmentation

3.7.2.216 The construction of the Proposed Development (Onshore) has the potential to cause the temporary reduction of foraging and roosting habitats for wintering birds through the vegetation clearance, excavations, trenching, temporary roads, construction compounds, including lighting and fencing across the OnTI RLB. These impacts could contribute to a localised displacement of relatively small numbers of notable wintering bird species. Notwithstanding, it is considered that the land take from the construction will not be substantial enough to notably reduce the foraging and roosting opportunities available to wintering birds given the abundance of suitable habitat that will be retained within the immediate locality. Furthermore, construction will not occur across the whole of the OnTI RLB at one time restricting use of the land by wintering birds in the entirety of the area at one time. Embedded mitigation includes that the temporary land take required for construction will be minimised and kept to the smallest area necessary for safe construction works.

3.7.2.217 Permanent habitat loss will occur at the Onshore Substation Site. Whilst suitable habitats exist within the Onshore Substation Site, these fields were not recorded to have an important assemblage of wintering birds.

3.7.2.218 The potential for habitat loss and degradation through construction related impacts such as sound, aerial emissions and the accidental/unintentional release of pollutants will be controlled through a CEMP which forms part of the proposed embedded mitigation measures.

3.7.2.219 One of the most sensitive areas for wintering birds is along the coastline at the Landfall Site. Assessment of effects and subsequent mitigation of this area for wintering birds is covered in the Application Document 11: Proposed Development (Onshore) Report to Inform Appropriate Assessment.

3.7.2.220 Taking into consideration the moderate importance of the wintering bird assemblage and the low magnitude of impact, the overall significance of effects is minor and not significant in EIA terms.

Disturbance

3.7.2.221 Construction works will occur in areas used by wintering birds for foraging and roosting. As a highly mobile species, this will cause birds to flush and forage and roost in different areas.

3.7.2.222 During construction the most likely activities to cause disturbance to wintering birds are construction noise and movement of plant and workers. Under the sequential construction scenario, wintering birds will be exposed to construction-related disturbances for a longer overall period which has the potential to lead to prolonged disturbance within the construction areas.

3.7.2.223 Due to the highly arable nature of the land within and adjacent to the OnTI RLB and ongoing farming practices, it is considered that the disturbance from construction noise and movement of plant is not substantially more that the current baseline. Construction will not occur along the entirety of the OnTI RLB at one time, and arable lands will be returned to landowners as soon as possible following construction. The land surrounding the OnTI RLB is also highly suitable for wintering birds and provides suitable areas for birds to forage and roost.

3.7.2.224 Taking into consideration the moderate importance of the wintering bird assemblage and the low magnitude of impact, the overall significance of effects is minor and not significant in EIA terms.

Species Injury and/ or Mortality

3.7.2.225 The potential for mortality and injury of wintering birds is considered to be low. As a highly mobile species, wintering birds will be able to avoid construction compounds and moving vehicles.

3.7.2.226 The implementation of the CEMP and CTMP as identified within the proposed embedded mitigation measures, will include best practice guidance to avoid, minimise and mitigate effects on the environment during construction, such as the safe storage of waste and chemicals. The CTMP will also include principles for safe operation of construction vehicles. This will reduce the risk of injury and/or mortality to bird species during construction.

3.7.2.227 Taking into consideration the moderate importance of the wintering bird assemblage and the negligible magnitude of impact, the overall significance of effects is negligible and not significant in EIA terms.

3.7.3 Operation

Designated Sites

Nationally Designated Sites

3.7.3.1 This section covers the following nationally designated sites as the operational impacts and significance of effects are the same for all:

- Cullen to Stake Ness Coast SSSI;
- Whitehills to Melrose Coast SSSI;
- Gamrie and Pennan Coast SSSI;
- Southern Trench MPA;
- Windy Hills SSSI;
- Gight Woods SSSI;
- Reidside Moss SSSI; and
- Tore of Troup SSSI.

3.7.3.2 During the operational phase of the Proposed Development (Onshore), operational activities will be minimal and isolated to the Onshore Substations and localised areas along the route. It is anticipated that the Onshore Substations will be unmanned and operate 24 hours a day, seven days a week. No permanent surface structures are required to facilitate the Landfall Site or Onshore Export Cable Route. Monitoring and maintenance will be minimal and create a low number of vehicle trips.

3.7.3.3 The surface water from the Onshore Substations and associated infrastructure will be managed by the implementation of a surface water drainage system. This will consist of various sustainable drainage systems (SuDS) methods to safeguard the surrounding water environment. The installed drainage will direct the water to the SuDS Pond for final treatment and storage before the water is then discharged at a rate that will mimic the existing greenfield runoff rate (Volume 5, Chapter 6: Hydrology and Hydrogeology).

3.7.3.4 As a result, no pathways for effect have been established between the nationally designated sites and the Proposed Development (Onshore). It is therefore anticipated that no direct or indirect impacts upon the nationally designated sites shall occur as a result of the operation of the Proposed Development (Onshore).

3.7.3.5 Taking into consideration the high importance of the nationally designated sites and negligible magnitude of impact during operation, the overall significance of effect is negligible and not significant in EIA terms.

Ancient Woodland Inventory

3.7.3.6 No impacts are anticipated to AWI classified woodlands during the operational phase.

3.7.3.7 During the operational phase, activities will be minimal and isolated to the Onshore Substations and localised areas along the route. There are no areas of AWI classified woodlands within locations where operational works will occur or within 500m of the Onshore Substations.

3.7.3.8 Monitoring and maintenance will be minimal and create a low number of vehicle trips. As outlined in Section 3.3.1.4, air quality impacts were scoped out of assessment at the EIA scoping stage. It is therefore considered that there will be no air quality impacts from vehicles during the operational phase.

3.7.3.9 Taking into consideration the high importance of AWI classified woodlands and negligible magnitude of impact during operation, the overall significance of effect is negligible and not significant in EIA terms.

Protected Habitats and Species

Habitats

3.7.3.10 No impacts are anticipated to high energy littoral rock, other neutral grassland, lowland mixed deciduous woodland, species-rich native hedgerow, species-rich native hedgerow with trees and species-rich native hedgerow – associated with bank or ditch within the OnTI RLB during the operational phase.

3.7.3.11 During the operational phase of the Proposed Development (Onshore), operational activities will be minimal and isolated to the Onshore Substations and localised areas along the route. It is anticipated that the Onshore Substations will be unmanned and operate 24 hours a day, seven days a week. No permanent surface structures are required to facilitate the Landfall Site or Onshore Export Cable Route. Monitoring and maintenance will be minimal and create a low number of vehicle trips.

3.7.3.12 Taking into consideration the high to low importance of these six habitats and negligible magnitude of impact during operation, the overall significance of effect is negligible and not significant in EIA terms.

Priority habitats (watercourse) and other rivers and streams

3.7.3.13 No impacts are anticipated to watercourses within the OnTI RLB during the operational phase. During the operational phase of the Proposed Development (Onshore), operational activities will be minimal and isolated to the Onshore Substations and localised areas along the route.

3.7.3.14 The surface water from the Onshore Substations and associated infrastructure will be managed by the implementation of a surface water drainage system. This will consist of various SuDS methods to safeguard the surrounding water environment.

3.7.3.15 The current crossing of the Burn of Asleid (WC13) will be maintained.

3.7.3.16 Taking into consideration the low to high importance of these habitats and negligible magnitude of impact during operation, the overall significance of effect is negligible and not significant in EIA terms.

Invasive Non-native Species

3.7.3.17 It is not anticipated that operational activities will cause the spread of INNS. Should any INNS be present or found to be present within the Onshore Substation Site during the operational lifespan of the Onshore Substations, it will be a requirement for the landowner to control and manage the INNS to prevent spreading.

3.7.3.18 Any control and removal of INNS would be a positive impact to the environment.

3.7.3.19 Taking into consideration the high importance of INNS and positive impact of INNS control during operation, the overall significance of effect is positive minor and not significant in EIA terms.

Badger

3.7.3.1 Due to the confidential nature of badgers and their sett locations, the assessment of potential effects on badger during operation has been undertaken in Volume 7E, Appendix 3-2: Badger Survey Report and Impact Assessment.

Breeding Birds

3.7.3.2 No impacts to breeding bird are anticipated during the operation of the Proposed Development (Onshore).

3.7.3.3 During the operational phase of the Proposed Development (Onshore), operational activities will be minimal and isolated to the Onshore Substations and localised areas along the route. It is anticipated that the Onshore Substations will be unmanned and operate 24 hours a day, seven days a week. No permanent surface structures are required to facilitate the Landfall Site or Onshore Export Cable Route. Monitoring and maintenance will be minimal and create a low number of vehicle trips.

3.7.3.4 Taking into consideration the moderate importance of breeding birds and negligible magnitude of impact, the overall significance of effect is negligible and not significant in EIA terms.

Fish

3.7.3.5 The impact during operation of relevance to fish is disturbance.

3.7.3.6 No direct impacts are anticipated to watercourse habitats within the OnTI RLB during the operational phase. During the operational phase of the Proposed Development (Onshore), operational activities will be minimal and isolated to the Onshore Substations and localised areas along the route.

3.7.3.7 Permanent operational lighting at the Onshore Substations will be limited to emergency lighting above doors, which will operate 24 hours a day, seven days a week, and perimeter lighting that faces inwards and may only be used during maintenance visits. Monitoring and maintenance trips will be minimal.

3.7.3.8 As stated in the embedded mitigation, the Onshore Substation site boundary is set back 10m from the Burn of Asleid (WC13), and the current design of the Onshore Substation Sites has the buildings even further set back.

3.7.3.9 Although light pollution has the potential to alter fish behaviour and alter timing of migration, it is believed that the operational lighting will be minimal, and the emergency lighting will be set back enough to minimise light spill from reaching the Burn of Asleid (WC13).

3.7.3.10 The surface water runoff from the Onshore Substations and associated infrastructure will be managed by the implementation of a surface water drainage system. This will consist of various SuDS methods to safeguard the surrounding water environment.

3.7.3.11 The current crossing of the Burn of Asleid (WC13) will be maintained and no other impacts to watercourses during operation are anticipated.

3.7.3.12 Taking into consideration the high importance of fish species and negligible magnitude of impact, the overall significance of effect is negligible and not significant in EIA terms.

Otter

3.7.3.13 The impact during operation of relevance to otter is disturbance.

3.7.3.14 The assessment of operational impacts assumes the Onshore Substations will not be lit at all times. The perimeter lighting will face inwards, away from the Burn of Asleid (WC13) and will only be turned on during maintenance trips.

3.7.3.15 It is likely that the proposed landscaping around the Onshore Substation Site may provide some buffer to light spill.

3.7.3.16 No signs of otter were present along the Burn of Asleid (WC13). The watercourse does contain suitable prey habitat and therefore it is considered that otter may utilise the watercourse for foraging and commuting in small numbers.

3.7.3.17 The disturbance to the habitat surrounding the Onshore Substations is unlikely to have an adverse impact on the otter population of the area. Otters have a large home range, and the suitable habitats in proximity to the Onshore Substations are unlikely to be integral for the species. However, due to this large home range, it cannot be discounted that otters may forage or commute within the Burn of Asleid (WC13) in proximity to the Onshore Substations. No suitable holting habitat was identified along the watercourse in proximity to the location on the Onshore Substation Site.

3.7.3.18 Embedded mitigation includes for the Onshore Substations to be set back 10m from the Burn of Asleid (WC13).

3.7.3.19 Taking into consideration the high importance of otter and negligible magnitude of impact, the overall significance of effects is negligible and not significant in EIA terms.

Pine Marten

3.7.3.20 There are no suitable habitats for pine marten in proximity to the Onshore Substation Site. Any suitable habitat in proximity to the OnTI RLB is situated away from operational activities.

3.7.3.21 Taking into consideration the high importance of pine marten and negligible magnitude of impact during operation, the overall significance of effect is negligible and not significant in EIA terms.

Red Squirrel

3.7.3.22 There are no suitable habitats for red squirrel in proximity to the Onshore Substation Site. Any suitable habitat in proximity to the OnTI RLB is situated away from operational activities.

3.7.3.23 Taking into consideration the high importance of red squirrel and negligible magnitude of impact during operation, the overall significance of effect is negligible and not significant in EIA terms.

Water Vole

3.7.3.24 The impact during operation of relevance to water vole is disturbance.

3.7.3.25 The assessment of operational impacts assumes the Onshore Substations will not be lit at all times. The perimeter lighting will face inwards, away from the Burn of Asleid (WC13) and will only be turned on during maintenance trips.

3.7.3.26 It is likely that the proposed landscaping around the Onshore Substation Site may provide some buffer to light spill.

3.7.3.27 There are no signs of water vole at the Burn of Asleid (WC13). However, this watercourse is slow flowing, and contains grassy riparian banks and therefore it is regarded as suitable habitat for this species.

3.7.3.28 The disturbance to the habitat surrounding the Onshore Substation Site is unlikely to have an adverse impact on the water vole population in the wider OnTI RLB. As the Burn of Asleid (WC13) contains suitable habitat, water vole may colonise the watercourse should it continue to have suitable habitat however water vole are slow to colonise new habitats if they are not already present in the immediate area.

3.7.3.29 Taking into consideration the high importance of water vole and negligible magnitude of impact, the overall significance of effect is negligible and not significant in EIA terms.

Wintering Birds

3.7.3.30 No impacts to wintering bird are anticipated during the operation of the Proposed Development (Onshore).

3.7.3.31 During the operational phase of the Proposed Development (Onshore), operational activities will be minimal and isolated to the Onshore Substations and localised areas along the route. It is anticipated that the Onshore Substations will be unmanned and operate 24 hours a day, seven days a week. No permanent surface structures are required to facilitate the Landfall Site or Onshore Export Cable Route. Monitoring and maintenance will be minimal and create a low number of vehicle trips.

3.7.3.32 Taking into consideration the moderate importance of wintering birds and negligible magnitude of impact, the overall significance of effect is negligible and not significant in EIA terms.

3.7.4 Decommissioning

3.7.4.1 In the absence of detailed information regarding decommissioning works, it is assumed that all above ground infrastructure will be removed and all in ground infrastructure will be left in situ. Therefore, the impacts during the decommissioning of the OnTI are considered comparable with, or likely less than, those of the construction stage. The assessment of effects presented in Section 3.7.1.1 is assumed to be applicable to the effects caused by decommissioning activities.

3.7.4.2 The most appropriate method of decommissioning and the handling and disposal of materials will be undertaken in agreement with the relevant authorities at the time. Any applicable new legislation or guidelines published prior to decommissioning will be taken into account in relation to any design of mitigation prior to decommissioning occurring.

3.8 Cumulative Effects

3.8.1 Overview

3.8.1.1 The list of developments identified for inclusion in the cumulative effects assessment is presented in Volume 7A Appendix 7-1: Cumulative Impact Assessment Methodology.

3.8.1.2 In Table 3-25 the potential for cumulative effects with each of these developments is examined, and an assessment of the cumulative effects presented where appropriate.

Table 3-25: Terrestrial Ecology and Biodiversity Cumulative Effects.

Development	Potential for Significant Cumulative Effects	Comments
Green Volt Offshore Wind farm, laying of underground cables and erection of substation APP/2023/1454 (the Green Volt Application)	Yes	The proposed cable corridor of application APP/2023/1454 is adjacent to the OnTI RLB and overlaps with an area of the Onshore Substation Site. Construction and installation of APP/2023/1454 has the potential to result in cumulative permanent and/or temporary loss of arable and grassland habitats. Loss of forestry and woodland is anticipated to be minor with the use of trenchless crossings to mitigate and prevent / reduce the loss of woodland. As a result, potential cumulative impacts on forestry and woodland due to temporary loss have not been considered. Due to the Green Volt Application substation site being within approximately 1km of the OnTI RLB, there is the potential for cumulative impacts from light pollution from night-time security lighting.
Greens Substation / located at Site 13 Greens (Scottish and Southern Electricity Network) Pre-application stage (the Greens Application)	Yes	The Greens Application entails the construction of a new substation within proximity to New Deer, approximately 1.1km from the OnTI RLB. This application is at pre-application stage with limited information available. It is anticipated that the application will result in additional temporary habitat loss, fragmentation or degradation of similar habitat types.

Development	Potential for Significant Cumulative Effects	Comments
		As the Greens Application substation is 1.1km from the OnTI RLB, cumulative impacts from permanent habitat loss or light pollution are possible.
Stromar Offshore Wind Farm (OWF) Onshore Infrastructure Stromar Offshore Wind Farm Limited Pre-application stage (the Stromar Application)	Yes	The onshore scoping area for the proposed Stromar Offshore Wind Farm overlaps with the OnTI RLB. The final landfall, cable corridor and substation locations are not yet known, however the onshore scoping area is located east of the Landfall Site, and majority of the ONEC will not interact with the Stromar OWF proposed development. The substation for Stromar is anticipated to be located at Greens, north-east of the Onshore Substation Site. As the proposed scheme is at scoping stage and the boundaries for the development have not been identified it is not possible to undertake a cumulative impact assessment. This scheme has therefore not been considered further.
Beauly to Blackhillock to New Deer to Peterhead 400 kilovolts (kV Connection) Pre-application stage (the Beauly Application)	Yes	The Beauly Application overlaps with the OnTI RLB. This application is at pre-application stage with limited information available. As the proposed scheme is at scoping stage and the boundaries for the development have not been identified it is not possible to undertake a cumulative impact assessment. This scheme has therefore not been considered further.

3.8.1.3 The consented Green Volt Application is planned to still be under construction during the start of construction of the Onshore Substations but will become operational by the end of 2027. It is assumed that the majority of the Green Volt Application substation construction works will be complete by the time the Proposed Development (Onshore) Onshore Substation construction works begin in earnest.

3.8.1.4 In the case of the pre-application stage Greens Application, the Applicants have shared information such as the proposed location and maximum height of the developments proposed. This is to inform the respective cumulative assessments since it is likely that the applications will be considered over a similar timescale. According to information received, it is assumed that construction of the Greens Application substation will start in mid-2026 and that it would be operational in early 2029.

3.8.1.5 Whilst the certainty of the Greens Application is not known, the information available means that a cumulative assessment that includes this project can be undertaken.

3.8.1.6 In the case of the scoping stage Stromar Application, there is a high degree of uncertainty about the location of the Stromar substation and its construction programme. Currently, only a search area for the substation and cable corridor is within the public domain and no dates are available as to when its construction would begin or when it be in operation.

3.8.1.7 In the case of the scoping stage Beauly Application, a proposed route has been made public and a four-year construction window between 2026 and 2030 has been defined. Limited information regarding the precise locations and specifications of the proposed structures is available at the time of writing.

3.8.1.8 The Stromar and Beauly applications are therefore not considered further at this stage. Once further information is available for these developments, an assessment of the potential for cumulative effects should be undertaken.

3.8.2 Construction

3.8.2.1 There is the potential for significant cumulative impacts to ecological features during construction.

3.8.2.2 The impacts of these are:

- Temporary and/or permanent habitat loss, degradation or fragmentation;
- Disturbance; and
- Species injury and/or mortality.

3.8.2.3 All applications are in proximity and/or hydrologically connected to the habitats within the OnTI RLB, particularly around the Onshore Substation Site, that support ecological features as detailed within this chapter (Section 3.4.3).

3.8.2.4 At this time, the construction periods of all developments are not known but it is assumed that the Green Volt substation site will be constructed prior to the construction works commencing on the Proposed Development (Onshore). Should the other developments all begin construction at the same time as the Proposed Development (Onshore) this may cause prolonged habitat loss, degradation and fragmentation.

3.8.2.5 In this chapter, species such as badger and wintering birds are considered to have a wide range of suitable habitats in which they are able to disperse should habitats within the OnTI RLB become unavailable. Should any or all of these planning applications be constructed at the same time, this is likely to reduce the available habitats to which these species can disperse which would limit suitable nesting, sett building, foraging and commuting habitat.

3.8.2.6 A review of the Green Volt Application Schedule of Mitigation (Green Volt, 2023[58]), shows commitments within the outline CEMP to produce dedicated species protection plans and light pollution prevention plan among other mitigation measures. Embedded and secondary mitigation also includes protection of badger and their habitats, and, on a wider basis, micro-siting of sensitive habitats and species informed by a suitably qualified ECoW.

3.8.2.7 It is therefore considered that due to the distance of the Greens Application and mitigation measures committed too by the Green Volt Application that there is no potential for likely significant cumulative effects during construction.

3.8.3 Operation

3.8.3.1 There is the potential for cumulative impacts when considering the operation of the Green Volt Application and the Proposed Development (Onshore) should operational lighting occur at these developments at the same time.

3.8.3.2 There is the potential for the Proposed Development (Onshore) and the Green Volt Application substation to be present along the Burn of Asleid (WC13), tributaries of the Burn of Asleid (WC13) or other watercourses where species such as otter, water vole or notable fish species are present.

3.8.3.3 Although the Greens substation is 1.1km north there is the potential for it to also interact with watercourses.

3.8.3.4 This could lead to cumulative disturbance to the Burn of Asleid (WC13) which could lead to a reduction in population through changes in behaviour (e.g. changes to migration) and breeding/ spawning success.

It is therefore considered that during operation there is the potential for moderate significant cumulative effects.

3.8.4 Decommissioning

3.8.4.1 Whilst unlikely, the worst-case scenario would be that decommissioning of any or all planning applications and the Proposed Development (Onshore) occur at the same time. The assessment of cumulative effects at the decommissioning stage is considered to be similar to that at the construction stage as outlined in Section 3.8.2.

3.8.4.2 It is therefore considered that during decommissioning there is the no likely significant cumulative effects.

3.8.5 Mitigation

3.8.5.1 Mitigation will be applied to minimise the cumulative effects that may arise during operation should any or all of the planning applications have the potential to impact the Burn of Asleid (WC13) from operation lighting.

3.8.5.2 Operational lighting procedures will be put in place to ensure cumulative lighting impacts do not occur to sensitive habitats and species. Lighting will be designed to be ecologically sensitive through consultation with a SQE and follow the most up to date bat lighting guidance by the Bat Conservation Trust (BCT).

3.8.5.3 Following the implementation of this mitigation the significance of effects are considered to be minor and not significant at the operational phase.

3.9 In-combination Effects

3.9.1.1 This section outlines the chapters that should be read in conjunction with this assessment to understand the full scale of potential impacts on terrestrial ecology and biodiversity features.

3.9.1.2 There is also the potential for in-combination impacts resulting from onshore and offshore works. These are identified within Volume 6. Chapter 5, Intertidal Assessment and are therefore not repeated here.

3.9.1.3 Hydrology and hydrogeology has been considered in Volume 5, Chapter 6: Hydrology and Hydrogeology. This chapter considered the impacts to the water environment which directly relates to the ecological assessment of watercourse habitats and the protected and notable species considered in this chapter.

3.9.1.4 The features in this assessment that should be considered when assessing the impacts outlined in the Volume 5, Chapter 6: Hydrology and Hydrogeology chapter are:

- Priority habitat (watercourses);
- Other rivers and streams;
- Fish;
  - Atlantic salmon;
  - Brown trout (including sea trout);
  - River lamprey;
  - Sea lamprey;
  - Brook lamprey; and
  - European eel.
- Otter; and
- Water vole.

3.9.1.5 Watercourses also support the foraging and commuting of bat species. Impacts to bats will be detailed in a post-submission supplementary chapter.

3.9.1.6 As there are no significant effects on the water environment identified within the Volume 5, Chapter 6: Hydrology and Hydrogeology, it is considered that any in-combination effects on the features identified from other environmental topics within the EIAR would not result in a different or greater environmental effect than has already been identified.

3.10 Secondary Mitigation Measures and Monitoring

3.10.1.1 The mitigation measures in this section are those that are required above and beyond the embedded mitigation measures as detailed in Section 3.5.6.

3.10.1.2 Where secondary mitigation measures have been identified, these will be included in the CEMP.

3.10.2 General Mitigation Measures

Construction

3.10.2.1 A suitably qualified ECoW will be appointed prior to commencement of works and employed when/where appropriate during the construction phase. The duties of these will be to monitor the efficacy of mitigation measures implemented by the contractors and to report on the application and success of these measures. Best practice mitigation measures will be applied to avoid or minimise potential impacts upon key ecological features and will include:

- Tool-box talks will be prepared and delivered by the ECoW as necessary to advise all visitors and workers on site of the presence of ecological features and the mitigation measures required. This will include information on recognizing certain field signs such as badger setts, red squirrel dreys etc. to ensure all contractors can identify signs and notify an ECoW.
- Construction activities will be limited to clearly defined working areas and vegetation clearance will be kept to a minimum. Where important habitat loss is unavoidable, habitat removal will be timed and phased to minimise potential effects, and compensatory habitat created, or existing habitat enhanced in advance of the works.
- Habitat connectivity will be retained wherever possible by maintaining links within and to green corridors such as tree lines, scrub and watercourses. Where effects on connectivity are unavoidable, it may be artificially supplemented (e.g. by the creation of temporary brash hedges).

Operation

Lighting

3.10.2.2 A detailed Lighting Management Plan (LMP) will be produced for the operation of the Onshore Substations. This will include plans to outline how operational security lighting, will not be active 24 hours a day, seven days a week, beyond the emergency lighting that is required above doors.

3.10.2.3 The lighting plan will be designed in coordination with a SQE.

3.10.3 Ecological Receptor Specific Mitigation

Construction

Protected Habitats and Species

Species -rich native hedgerow, Species-rich native hedgerow with trees, and Species-rich native hedgerow – associated with bank or ditch

3.10.3.1 Secondary mitigation is required to reduce the effects of fragmentation of hedgerows present within the OnTI RLB. This comprises:

- When fragmenting hedgerows, the construction working width will be minimised as much as possible;
- Root and canopy protection zones will be established to ensure vegetation not being removed is safe guarded;
- Movement of construction plant will be minimised to avoid soil compaction; and
- Where hedges are not reinstated following phase 1 to avoid a further removal at phase 2, these gaps will be filled using the foliage and branches of the hedge and trees after felling, also referred to as brash, and placing this vegetation in the break of the hedge to allow for continuity of the linear feature and ecological corridor.

Badger

3.10.3.2 Mitigation specific to badger is provided in Volume 7E, Appendix 3-2: Badger Survey Report and Impact Assessment.

Breeding Birds

3.10.3.3 In order to avoid disturbance of breeding birds, their nests, eggs and/or their unfledged young, where possible all works involving suitable nesting habitats will be undertaken outside of the nesting season (01 March to 31 August inclusive).

3.10.3.4 Where this seasonal restriction cannot be observed then a pre-construction check will be undertaken, prior to works commencing by a SQE. This check will confirm whether birds are nesting within suitable habitat affected by or immediately adjacent to the works. If no breeding birds are found nesting this vegetation must be removed within 48 hours or repeat surveys will be necessary. Should nesting birds be present during surveys, the removal of habitats may be required to be delayed until after young have fledged the nest.

Fish

3.10.3.5 Works that have the potential to give rise to excessive vibration, such as HDD, will be consulted on with the River Deveron DSFB and the Ythan DSFB when more information on the design of the trenchless crossing is confirmed. Suitable mitigation measures will be agreed prior to works being undertaken.

3.10.3.6 For any works which will isolate fish from the main channel, or which require a dry working area, a fish rescue will be undertaken. If these isolated areas are inundated, then the ECoW should undertake a review and call another rescue if needed. These rescues should adhere to specific methodologies for each species that will be produced and approved by a SQE prior to works commencing.

3.10.3.7 For eel, the most sensitive stage is juvenile upstream migration, occurring during spring and early summer when "trains" of these small fish can be seen moving upstream. If works are to be carried out during these periods, then a suitably qualified ECoW should be present to support mitigation. Measures can range from suspending works, simple rescue using hand nets or more complex operations such as electrofishing.

3.10.3.8 Prior to construction, a detailed monitoring plan will be produced to monitor impacts to fish species throughout the construction works.

Otter

3.10.3.9 As outlined in Section 3.10.23.10.2, dedicated ecological surveys will be completed prior to construction, this will include the identification of otter holts and shelters which are protected under legislation[47].

3.10.3.10 The buffer in which disturbance to otter may occur is dependent on the otter feature identified, and its use (e.g. breeding). A SQE will be consulted regarding any features used by otter and the appropriate exclusion zone that needs to be in place. The general rule is that any works occurring in proximity to a feature used for otter breeding will require an exclusion zone of at least 200m. This exclusion zone may be reduced to 100m should the works and topography allow it. For holts and shelters where otters are not breeding, the exclusion zone will be 30m.

3.10.3.11 As included within embedded mitigation measures but provided again for clarity, where works will occur within 30m of an otter holt or shelter or will require the removal of these features, a licence from NatureScot will be applied for. As EPS a licence for development works that affect otter are required to demonstrate that three tests are met. A detailed otter protection plan will be produced and provided to NatureScot. The species protection plan will include mitigation that is approved by NatureScot prior to works commencing.

Water Vole

3.10.3.12 As included within the embedded mitigation measures but provided again for clarity, a licence from NatureScot will be applied for where water vole burrows will be damaged or removed as part of construction of the Proposed Development (Onshore). A detailed water vole protection plan will be produced and provided to NatureScot. The species protection plan will include mitigation that is approved by NatureScot prior to works commencing. Further, where works must occur where water vole burrows occur, a SQE will undertake trapping and translocation of any water vole

within the area being cleared based on advice from research findings (NatureScot 2024b[48]; Gelling et al., 2018[49]). This too, will require a licence. Prior to any licence being obtained, a plan will be produced by a SQE detailing the provenance of water voles to be released, as well as the carrying capacity of the receptor site.

3.11 Residual Effects

3.11.1.1 Where effects were assessed as significant, taking into account secondary mitigation to reduce the magnitude of impacts, the residual effects have been assessed below.

3.11.2 Construction Effects

Habitats

Intact hedge – native species-rich and Hedge with trees – native species-rich

3.11.2.1 Temporary loss, fragmentation and degradation of hedges along the length of the OnTI RLB during construction cannot be avoided.

3.11.2.2 As outlined in embedded mitigation (Section 3.5.6) and secondary mitigation (Section 3.10) construction working practices have been implemented to minimise this impact.

3.11.2.3 It is therefore considered that following the implementation of mitigation measures, no significant residual effects remain on the habitats intact hedge – native species-rich and Hedge with trees – native species-rich.

Badger

3.11.2.4 Mitigation measures outlined in the CEMP and Section 3.10 will be implemented and inspected by a SQE to avoid, minimise and mitigate impacts to badger.

3.11.2.5 Micro-siting of the Proposed Development (Onshore) following detailed ecological surveys surrounding the final ONEC and related works (e.g. construction compound, haul roads) will where possible avoid direct impacts to badger setts.

3.11.2.6 Where badger setts are within 30m of construction, the measures as outline in Section 3.10 will minimise and mitigate any further impacts.

3.11.2.7 It is therefore considered that following the implementation of embedded and secondary mitigation measures, no significant residual effects during construction remain for badger.

Fish

3.11.2.8 Mitigation measures outlined in the CEMP and the secondary mitigation including minimising night-time working and fish rescues (if required) will be implemented. These mitigation measures, alongside those implemented in Volume 5, Chapter 6: Hydrology and Hydrogeology for watercourses will

minimise further impacts. However, consultation will be required at detailed design to determine what mitigation measures are required during HDD works to ensure impacts to fish species are fully mitigated.

3.11.2.9 Based off the current design information at this PPP stage, there is the potential for minor residual effects during construction for fish. Following consultation with the DSFB, confirmation of the HDD design and implementation of methods provided in the detailed CEMP, noise and vibration impacts during the construction phase for fish are expected to be not significant in EIA terms.

3.11.3 Operation Effects

Badger

3.11.3.1 Following the implementation of a lighting plan that is sensitive to ecological features, it is considered that there will be no significant residual effects to badger.

3.11.4 Decommissioning Effects

3.11.4.1 The residual effects of decommissioning are considered to be the same, if not less than those at the construction stage. Refer to Section 3.11.2.

3.11.5 Cumulative Effects

3.11.5.1 Following the implementation of the mitigation measures as outlined in Section 3.8.5, there will be no significant residual cumulative effects.

3.12 Summary of Effects

3.12.1.1 Table 3-26 presents a summary of the significant effects assessed within this chapter, any mitigation required, and the residual effects are provided.

Table 3-26: Summary of Effects.

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
Cullen to Stake Ness Coast SSSI	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Gamrie and Pennan Coast SSSI	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Southern Trench MPA	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Gight Woods SSSI Reidside Moss SSSI Tore of Trop SSSI	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
AWI	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
High energy littoral rock	Negligible	Low	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Other neutral grassland	Negligible	Low	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
Lowland mixed deciduous woodland	Negligible	Moderate	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Priority habitats (watercourse) and other rivers and streams	Negligible	Low to High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Species -rich native hedgerow, Species-rich native hedgerow with trees, and Species-rich native hedgerow – associated with bank or ditch - Temporary habitat loss, fragmentation or degradation	Moderate	Moderate	Moderate	Secondary mitigation measures of construction working width to be minimised as much as possible where fragmentation occurs. Root and canopy protection zones to protect vegetation. Movement of construction plant minimised to avoid soil compaction. Brash filled gaps to between phases to ensure ecological corridor maintenance.	Negligible
INNS	Positive impact of low magnitude	High (from their potential to spread)	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
	from removal				
Badger – habitat loss, fragmentation, degradation	Moderate	High	Moderate	Embedded mitigation measures Detailed ecology surveys prior to construction to identify setts. Micro-siting of construction compounds 30m from badger setts. Artificial sett to be built to replace any impacted setts which will be closed. This will occur for all but subsidiary and outlier sets, which will just be closed with no replacement.	Negligible
Badger – disturbance (setts)	Moderate	High	Moderate	Detailed ecology surveys prior to construction to identify setts. Micro-siting of construction compounds 30m from badger setts. Artificial sett to be built to replace any impacted setts which will be closed. This will occur for all but subsidiary and outlier sets, which will just be closed with no replacement.	Negligible
Breeding birds – temporary and/or permanent habitat	Low	Moderate	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
loss, degradation or fragmentation					
Breeding birds - disturbance	Low	Moderate	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Breeding birds - injury and/or mortality	High	Moderate	Moderate	Works involving suitably nesting habitats to be undertaken outside of nesting season (01 March to 31 August). Where not possible, pre-construction checks to be undertaken by a SQE. If no birds are found, vegetation will be removed within 48 hours. Where birds are present, construction may be delayed until young have fledged.	Negligible
Fish – habitat loss, fragmentation, degradation	Moderate	High	Moderate	Fish rescue to occur in any works that will isolate fish from main channels. The suitably qualified ECoW will monitor rescue need, and all rescues carried out in accordance with species specific requirements. A suitably qualified ECoW present during works that occur during sensitive juvenile eel seasons.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
				Consultation with River Deveron DSFB and Ythan DSFB is required at detailed design to determine suitable mitigation for fish species. Detailed fish monitoring plan to be produced.	
Fish – disturbance	Moderate	High	Moderate	Fish rescue to occur in any works that will isolate fish from main channels. A suitably qualified ECoW will monitor rescue need, and all rescues carried out in accordance with species specific requirements. Any works occurring in eel juvenile upstream migration (spring and early summer), a suitably qualified ECoW will be present as support. Support can include suspending works, hand nets, or electrofishing. Detailed fish monitoring plan to be produced. Based off the current design information available, HDD works have the potential	Minor

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
				to give rise to vibration, and there is the potential for minor residual effects during construction for fish. Following consultation with the River Deveron and River Ythan DSFB, completion of the detailed HDD design which considers vibration impacts and implementation of methods provided in the detailed CEMP, noise and vibration impacts during the construction phase are expected to be not significant in EIA terms and well below an alternative open trenched solution.	
Otter - temporary and/or permanent habitat loss, degradation or fragmentation	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Otter - disturbance	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Otter – injury and/or mortality	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
Pine marten - temporary and/or permanent habitat loss, degradation or fragmentation	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Pine marten – disturbance	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Pine marten – injury and/or mortality	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Red squirrel – disturbance	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Red squirrel – injury and/or mortality	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Water vole – temporary and/or permanent habitat loss, degradation or fragmentation	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
Water vole - disturbance	Low	High	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Water vole - injury and/or mortality	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Wintering birds – temporary and/or permanent habitat loss, degradation or fragmentation	Low	Moderate	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Wintering birds - disturbance	Low	Moderate	Minor	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Wintering birds - injury and/or mortality	Negligible	Moderate	Negligible	None required above embedded mitigation as detailed in Table 3-23.	Negligible
Cumulative effects to all ecological features	High	Low to High	Moderate	None required above embedded mitigation as detailed in Table 3-23 and the embedded and secondary mitigation measures detailed by the Green Volt Application.	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
Operation					
Nationally Designated Sites	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
AWI	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Habitats: high energy littoral rock, other neutral grassland, lowland mixed deciduous woodland, species-rich native hedgerow, species-rich native hedgerow with trees and species-rich native hedgerow – associated with bank or ditch	Negligible	Low to High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Priority habitats (watercourse) and	Negligible	Low to High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
other rivers and streams					
INNS	Positive	High	Positive minor	None required above embedded mitigation as detailed in Table 3-23	Negligible
Badger	Moderate	High	Moderate	A detailed lighting plan will be produced for the operation of the Onshore Substations and will outline how operational security lighting will not be active 24/7, 7 days a week. The detailed lighting plan will consider the ecological features and will be overseen by a SQE.	Negligible
Breeding birds	Negligible	Moderate	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Fish	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Otter - disturbance	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Pine marten	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible

Impact	Magnitude	Importance of Feature	Significance	Mitigation Measures	Residual Effect
Red squirrel	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Water vole - disturbance	Negligible	High	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Wintering birds	Negligible	Moderate	Negligible	None required above embedded mitigation as detailed in Table 3-23	Negligible
Cumulative effects to all ecological features	High	Low to High	Moderate	Operational lighting procedures. Lighting will be designed to be ecologically sensitive through consultation with a SQE and follow the most up to date bat lighting guidance by BCT.	Negligible
Decommissioning – Considered comparable with or likely less than those of the construction stage.					

3.13 Enhancements

3.13.1.1 The ONEC has been designed, where possible, to mitigate or off-set negative ecological effects and, where possible, to deliver ecological enhancements. This will be achieved through a range of embedded mitigation (Section 3.5.6) and secondary mitigation (Section 3.10).

3.13.1.2 Additional biodiversity enhancements have been recommended to outline potential enhancements that could be implemented to comply with the National Planning Framework 4 (NPF4) Policy 3b on biodiversity, which states that "*Development proposals for national or major development, or for development that requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention. This will include future management.*"

3.13.1.3 These enhancements have been developed in consideration of the existing habitats and protected species within the OnTI RLB, wider ecological networks and achievability following the return of the majority of land within the OnTI RLB to landowners. These enhancements will be explored, refined and confirmed at detailed design.

3.13.1.4 This section should be read alongside Volume 7E, Appendix 3-1: Biodiversity Enhancement Report, which includes biodiversity enhancement measures in relation to habitats, Biodiversity Net Gain and landscape planting within the Onshore Substation.

3.13.1.5 As the Proposed Development (Onshore) is at PPP stage, the landscaping proposals will be refined further and may change at detailed design, however the landscape planting was created in consultation with ecologists to ensure the proposals provided ecological benefits wherever possible. The ecological benefits are described further in the following paragraphs.

3.13.1.6 Within the Onshore Substation Site, modified and neutral grassland habitats have been proposed to the north and south of the Onshore Substations. These habitats were considered for not only for mitigation for loss of grassland habitats, but to ensure habitat was created that would benefit invertebrates, foraging and nesting birds and foraging bats.

3.13.1.7 Wherever possible, existing hedges will be maintained with landscape planting designed to connect these hedges to newly created hedges and habitats to enhance ecological corridors.

3.13.1.8 Improvement of the existing hedgerow habitats will enhance habitats for protected species to forage and commute within in the short to longer term and for nesting, roosting in the longer term when the trees, hedge features develop into maturing trees.

3.13.1.9 Newly created hedges as well as mixed, coniferous and deciduous woodland also link to the Burn of Asleid (WC13) to allow movement to the west of the Onshore Substation Site. These habitats connect to exiting hedges in the north outwith the OnTI RLB and the SuDS pond and Moray East Substation Planting in the south.

3.13.1.10 The SuDS pond has also been enhanced with the inclusion of riparian planting, ruderal/ ephemeral grasslands and scrub planting. This will provide foraging opportunities for bats and as the marginal vegetation matures, will also provide nesting opportunities for bats.

3.13.1.11 At detailed design stage, the landscape planting schedule will be created in consultation with a SQE to ensure plant species with known wildlife value are chosen.

3.13.1.12 It is also recommended that additional enhancements in the form of bird and bat boxes are considered within the Onshore Substation Site. These would provide additional nesting and roosting habitat until landscape planting can mature enough to provide this resource.

3.13.1.13 Daylighting of culverted watercourses should be explored throughout the OnTI RLB. The opening of culverts can allow watercourses to return to a more natural state. This can allow riparian vegetation to establish providing a multitude of benefits to species including invertebrates salmonids, eels and bats.

3.13.1.14 Where barriers to fish movement were identified along watercourses within the OnTI RLB, removal of these barriers should be explored. This could held expand spawning habitats of salmonid species.

3.13.1.15 Following the implementation of enhancements such as those detailed in this section, and those in the Volume 7E, Appendix 3-1: Biodiversity Enhancement Report, the Proposed Development (Onshore) is considered to comply with the NPF4 Policy 3b to demonstrate how biodiversity, including nature networks is enhanced and left in a demonstrably better state than without intervention.

3.14 References

[1] Holman et al. (2014) 'IAQM Guidance on the assessment of dust from demolition and construction – Version 1.1'. Available at: http://www.iaqm.co.uk/text/guidance/construction-dust-2014.pdf (Accessed 02/10/2024).

[2] The Deveron, Bogie and Isla Rivers Charitable Trust (2020) 'River Deveron Fisheries District Management Plan 2020-2023'. Available at: https://deveron.org/site/wp-content/uploads/Deveron-FMP-2020-23-1.pdf (Accessed 28/06/2024).

[3] CIEEM (2022) 'Guidelines for Ecological Imapct Assessment (EcIA)'. Available at: https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/ (Accessed 02/10/2024).

[4] Caledonia Offshore Wind Farm Ltd (2022) 'Onshore Scoping Report Chapter 7 Terrestrial Ecology and Biodiversity'.

[5] National Biodiversity Network Atlas (2024) 'National Biodiversity Network Atlas'. Available at: https://nbnatlas.org/ (Accessed 27/06/2024).

[6] NatureScot (2024) 'NatureScot Sitelink'. Available at: https://sitelink.nature.scot/home (Accessed 27/06/2024).

[7] Moray Offshore Renewables Ltd (2016) 'Moray West Wind farm Scoping Report'. Available at: https://marine.gov.scot/data/moray-west-offshore-wind farm-scoping-report (Accessed 02/10/2024).

[8] Moray Offshore Renewables Ltd (2018a) 'Moray West Offshore Wind Farm: Document library'. Available at: https://www.moraywest.com/document-library/navigate/358/302 (Accessed 02/10/2024).

[9] Moray Offshore Renewables Ltd (2018b) 'Moray West Offshore Wind Farm Technical Appendices: Document library'. Available at: https://www.moraywest.com/document-library/navigate/358/304 (Accessed 02/10/2024).

[10] Moray Offshore Renewables Ltd (2014) 'Moray East Offshore Wind Farm: Document Library'. Available at: https://www.morayeast.com/document-library/navigate/229/270 (Accessed 02/10/2024).

[11] NatureScot (2024) 'Southern Trench MPA'. Available at: https://sitelink.nature.scot/site/10477 (Accessed 28/06/2024).

[12] NatureScot (2024) 'Reidside Moss SAC'. Available at: https://sitelink.nature.scot/site/8351 (Accessed 28/06/2024).

[13] NatureScot (2024) 'Turclossie Moss SAC'. Available at https://sitelink.nature.scot/site/8402 (Accessed 28/08/2024).

[14] NatureScot (2024) 'Troup, Pennan and Lion's Heads SPA'. Available at: https://sitelink.nature.scot/site/8587 (Accessed 28/06/2024).

[15] NatureScot (2024) 'Cullen to Stake Ness Coast SSSI'. Available at: https://sitelink.nature.scot/site/480 (Accessed 27/06/2024).

[16] NatureScot (2024) 'Whitehills to Melrose Coast SSSI'. Available at: https://sitelink.nature.scot/site/1631 (Accessed 27/06/2024).

[17] NatureScot (2024) 'Southern Trench MPA'. Available at: https://sitelink.nature.scot/site/10477 (Accessed 27/06/2024).

[18] NatureScot (2024) 'Reidside Moss SSSI'. Available at: https://sitelink.nature.scot/site/1343 (Accessed 27/06/2024).

[19] NatureScot (2024) 'Windy Hills SSSI'. Available at: https://sitelink.nature.scot/site/1642 (Accessed 27/06/2024).

[20] NatureScot (2024) 'Gight Woods SSSI'. Available at: https://sitelink.nature.scot/site/687 (Accessed 27/06/2024).

[21] NatureScot (2024) 'Tore of Troup SSSI'. Available at: https://sitelink.nature.scot/site/1547 (Accessed 27/06/2024).

[22] NatureScot (2024) 'Gamrie and Pennan Coast SSSI'. Available at: https://sitelink.nature.scot/site/666 (Accessed 27/06/2024).

[23] Joint Nature Conservation Committee (2016) 'Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit: Revised Re-Print'

[24] Scotland's Soils (Linked with Nature Scot) (2023) 'Carbon and Peatland 2016 map'. Available online at https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ (Accessed 02/10/2024).

[25] NatureScot (2023) 'Advising on peatland, carbon-rich soils and priority peatland habitats in development management'. Available at https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management#Defining+Carbon-Rich+Soil+and+Priority+Peatland+Habitat (Accessed 02/10/2024).

[26] European Union (2013) 'Habitats Directive - Council Directive 92/43/EEC'. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01992L0043-20130701 (Accessed 02/10/2024).

[27] European Union (2006) 'Groundwater Directive (2006/118/EC)'. Available online at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32006L0118 (Accessed 02/10/2024).

[28] Rodwell, J.S. (1991-2000) 'British plant communities'. 5 Volumes. Cambridge University Press.

[29] Rodwell, J.S. (2006) 'NVC Users' Handbook'. Available online at http://jncc.defra.gov.uk/page-3724 (Accessed02/10/2024)

[30] UK Parliament (1981) 'Wildlife and Countryside Act 1981'. Available at: https://www.legislation.gov.uk/ukpga/1981/69 (Accessed 02/10/2024).

[31] NatureScot (2024) 'Invasive non-native plants'. Available online at https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/invasive-non-native-species/invasive-non-native-plants (Accessed 02/10/2024)

[32] NatureScot (May 2024) 'Scotland's Native Reptiles and Amphibians'. Available online at https://www.nature.scot/plants-animals-and-fungi/amphibians-and-reptiles/scotlands-native-reptiles-and-amphibians (Accessed 31/08/2024).

[33] Marine Scotland Science. (2021b) 'National Electrofishing Programme for Scotland data app'. Available online at: https://scotland.shinyapps.io/sg-national-electrofishing-programme-scotland/ (Accessed 22/02/24).

[34] Marine Scotland Science. (2021b) 'National Electrofishing Programme for Scotland data app'. Available online at: https://scotland.shinyapps.io/sg-national-electrofishing-programme-scotland/ (Accessed 22/02/24).

[35] NatureScot (2020) 'Pine Marten'. Available at: https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/pine-marten (Accessed 02/10/2024).

[36] Forestry and Land Scotland (2021) 'Buchan Woods Land Management Plan'. Available at: https://forestryandland.gov.scot/what-we-do/planning/active/buchan-woods-land-management-plan (Accessed 02/10/2024).

[37] Pepper, H. and Patterson, G. (1998) 'Red Squirrel Conservation'. Forestry Commission, Edinburgh.

[38] NatureScot (2024) 'Wild Cats'. Available online at https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/wildcats (Accessed 02/10/2024).

[39] The Royal society for the Protection of Birds (2024) 'Birds A-Z'. Available online at https://www.rspb.org.uk/birds-and-wildlife/a-z (Accessed 02/10/2024).

[40] British Trust for Ornithology (2024) 'BirdFacts'. Available online at https://www.bto.org/understanding-birds/welcome-birdfacts (Accessed 02/10/2024).

[41] JNCC (2016) 'UK Biodiversity Action Plan Priority Habitat Descriptions: Hedgerows'. Available online at https://hub.jncc.gov.uk/assets/ca179c55-3e9d-4e95-abd9-4edb2347c3b6#UKBAP-BAPHabitats-17-Hedgerows.pdf (Accessed 02/10/2024).

[42] Defra (2007) 'Hedgerow Survey Handbook. A standard procedure for local surveys in the UK'. Defra, London. Second edition.

[43] The CIEEM guidance defines an impact as an action that results in a change to an ecological feature, and it defines an effect as an outcome resulting from an impact acting on the conservation status or the function or structure of an ecological feature.

[44] Aberdeenshire Council (2023) 'Aberdeenshire Local Development Plan 2023'. Available at: https://www.aberdeenshire.gov.uk/planning/plans-and-policies/ldp-2023/ (Accessed 27/06/2024).

[45] Aberdeenshire Council (2023) 'Planning advice: meeting LDP requirements'. Available at: https://www.aberdeenshire.gov.uk/planning/plans-and-policies/planning-advice/ (Accessed 27/06/2024).

[46] Ratcliffe, D.A. (1977) 'A nature conservation review'. Cambridge University Press, Cambridge.

[47] UK Parliament (1994) 'Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)'. Available at: https://www.legislation.gov.uk/uksi/1994/2716/contents/made (Accessed 27/06/2024).

[48] NatureScot (2024b) 'Water vole'. Available online at: https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/water-voles-and-licensing (Accessed 02/10/2024).

[49] Gelling M., Harrington A.L., Dean M., Haddy E.C., Marshall C.E. & Macdonald D.W. (2018) 'The effect of using 'displacement' to encourage the movement of water voles Arvicola amphibius in lowland England'. Conservation Evidence, 15, 20-25.

[50] Helble, T.A., Guazzo, R.A., Martin., C.R., Durbach, I.N., Alongi, G.C., Martin, S.W., Boyle, J.K. & Henderson, E.E. (2020) 'Lombard effect: Minke whale boing call source levels vary with natural variations in ocean noise'. Journal of the Acoustical Society of America. Vol 147, pp. 698-712. https://doi.org/10.1121/10.0000596

[51] JNCC (2011) 'UK Biodiversity Action Plan: Priority Habitat Descriptions'. Available at: https://hub.jncc.gov.uk/assets/2728792c-c8c6-4b8c-9ccd-a908cb0f1432 (Accessed 02/10/2024).

[52] Popper, A. N. & Hawkins, A. D. (2019) 'An overview of fish bioacoustics and the impacts of anthropogenic sounds on fishes'. Fish Biology, 94 (5), 692-713. https://doi.org/10.1111/jfb.13948

[53]W.D. Riley et al. (2012) 'Street lighting delays and disrupts the dispersal of Atlantic salmon (Salmo salar) fry'. Biological Conservation, 158, 140-146.

[54] NatureScot (2024) 'Standing advice for planning consultations- Otters'. Available at: https://www.nature.scot/doc/standing-advice-planning-consultations-otter (Accessed 02/10/2024).

[55] NatureScot (2024) 'Otter'. Available at: https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/otter (Accessed 2/10/2024).

[56] NatureScot (2024) 'European protected species licensing'. Available online at https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/european-protected-species-licensing (Accessed 02/10/2024).

[57] People's Trust for Endangered Species (2024) 'Water Vole'. Available online at: https://ptes.org/get-informed/facts-figures/water-vole/#:~:text=Water%20voles%20live%20in%20colonies%20but%20string%20themselves,of%2060-300m%20that%20overlap%20those%20of%20several%20females (Accessed 02/10/2024).

[58] Green Volt (03/08/2023) Onshore EIA Report Volume 1 Chapter 17: Schedule of Mitigation

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