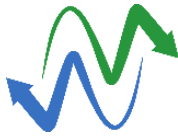



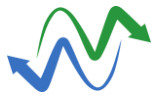
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NorthConnect HVDC Cable Infrastructure Habitats Regulations Appraisal: Pre-Screening Report

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NORTHCONNECT HVDC CABLE INFRASTRUCTURE HABITATS REGULATIONS APPRAISAL: PRE-SCREENING REPORT

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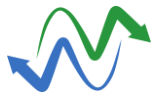
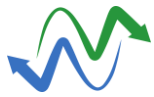


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1. INTRODUCTION

1.1 LEGISLATIVE BASIS

A Habitats Regulations Appraisal (HRA) is required for this development due to its proximity to multiple Natura 2000 sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The legislative context for this requirement is based on Article 6(3) of the Habitats Directive (92/43/EEC), Article 4(4) of the Birds Directive (2009/147/EC) (European Commission, 2010), The Conservation (Natural Habitats, &c.) Regulations 1994 (the Habitats Regulations) (UK Government, 1994), and The Conservation of Offshore Marine Habitats and Species Regulations 2017 (UK Government 2017).

In Scotland, the Scottish Planning Policy document ensures that Ramsar sites, which are normally included in an HRA assessment, overlap with Natura sites and are therefore protected under the same legislation (Scottish Ministers, 2014). Therefore, Ramsar sites do not need to be considered separately as part of this HRA Screening report and will be considered within the SPA assessment.

If a likely significant effect (LSE) is predicted on a Natura Site at the first stage of the HRA, an Appropriate Assessment (AA) must then be carried out. The AA must demonstrate that the proposal will not adversely affect the integrity of the site (SNH, 2017a).

It is the responsibility of the competent authority to carry out the HRA, based on robust, scientific information provided by the project developer about the proposed project. It is not the role of the developer to make an assessment of whether or not the proposal will have an adverse effect on any associated Natura sites.

1.2 OBJECTIVES

The objectives of this HRA Pre-Screening report is to summarise:

- The proposed development details;
- The Natura 2000 sites being considered with reference to the NorthConnect HVDC Development proposal, along with these sites' qualifying interests and conservation objectives; and
- Details on the qualifying interests for each of the scoped-in Natura sites.

This information will aid the competent authority in carrying out an HRA. This HRA Pre-Screening report provides a reference point as to where the useful information is within the EIAR which will help complete the HRA and, as such, should be taken in conjunction with the EIAR and not as a stand-alone document. An indication of whether or not LSE are expected or not is given for each designated site, but it is ultimately up to the competent authority carrying out the LSE assessment to ascertain whether LSE are present and therefore whether an AA is needed for each designated site.

1.3 TERMINOLOGY

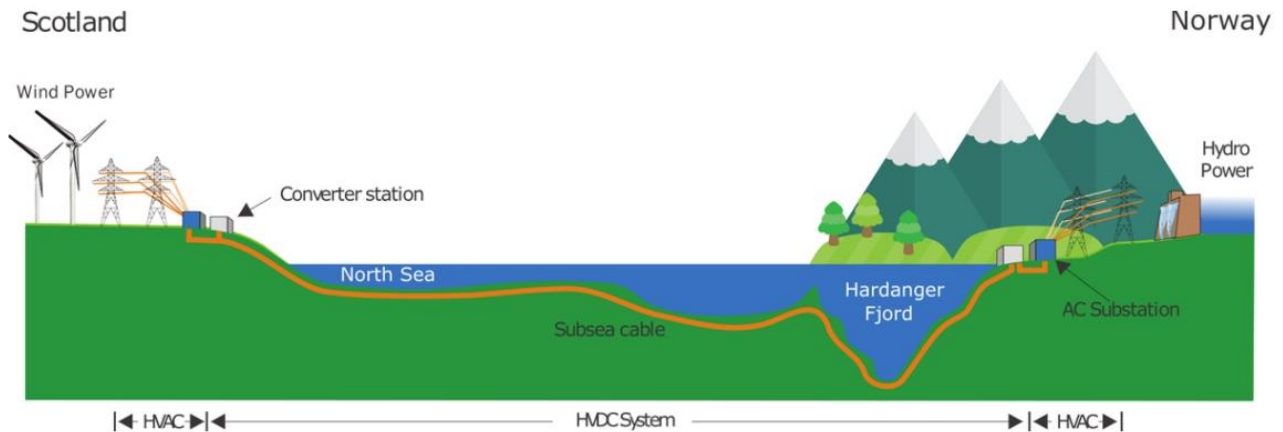
The terminology employed as part of the HRA process relates to likely significant effects. Assessment of LSE takes a precautionary approach and asks whether a project may have an effect, or have the possibility of having an effect, on a Natura site (SNH, 2017b). A project component is said to have an LSE on a designated site if "*it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site*" (European Court of Justice C-127/02, 2004). The conservation objectives of the site provide the framework for considering likely significant effects.

It should be noted that the terminology used as part of the ecological impact assessments in the EIAR chapters refers to significance based on a matrix system. It is important when using these documents in conjunction with one another to be aware that the term 'significance' has different meaning in these two different contexts.

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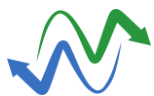
2. PROJECT SUMMARY

NorthConnect is a project set up to develop, consent, build, and operate an HVDC electrical interconnector between Peterhead in Scotland and Simadalen in Norway. The 665km long, 1400MW interconnector will provide an electricity transmission link allowing the two nations to exchange power and increase use of renewable energy. The intention is for the HVDC interconnector to be operational by 2023. The cabling involves two HVDC cables and one fibre optic cable bundled with one of the HVDC cables.



The Construction Methods Statement, along with EIAR Chapter 2: Project Description, provides greater detail as to the project and the installation, and operational details about the project. In summary, the following activities need to take place:

- Construction of a new junction at the A90;
- Construction of an Access road for the works south of the A90;
- Joint Pit Construction for joining lengths of HVDC cables;
- Horizontal Directional Drilling (HDD) site set ups and drilling activities at two locations: a) Landfall HDD and b) Road HDD;
- Onshore HVDC cabling;
- Cable pull from the HDD marine exit point to the onshore HDD entrance point;
- Marine Route Surveys;
- Route Clearance and pre-rock placement at crossings;
- Marine cable installation;
- Post trenching survey;
- Further cable protection;
- As-built survey; and
- The operation of the cable for an anticipated lifespan of 40 years.

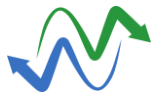


3. DESIGNATED SITES

The designated sites, which have designated features relevant to the NorthConnect HVDC development, are shown in Table 1. The sites, or species within the sites, are scoped in or out depending on the level of ecological connectivity to the development. A reduced list of designated sites and features is then taken forward for further assessment. Explanations for why certain sites or qualifying features are excluded is laid out in Section 3.1.

Table 1. Designated Sites Relevant to the Proposed HVDC Development.

Site	Direction and Straight-Line Distance	Qualifying Feature(s)	Feature's Latest Assessed Condition	Scoped In or Out
Buchan Ness to Collieston SAC	Crossed by HVDC corridor.	Vegetated sea cliffs	Favourable Declining	IN
Buchan Ness to Collieston Coast SPA	Crossed by HVDC corridor	Northern fulmar (<i>Fulmarus glacialis</i>), breeding Common guillemot (<i>Uria aalge</i>), breeding Herring gull (<i>Larus argentatus</i>), breeding Kittiwake (<i>Rissa tridactyla</i>), breeding Eurasian shag (<i>Phalacrocorax aristotelis</i>), breeding Seabird assemblage, breeding	Unfavourable Declining Favourable Maintained Unfavourable, No change Unfavourable, No change Unfavourable, No change Favourable Recovered	IN
River Dee SAC	40km SW of UK landfall.	Otter (<i>Lutra lutra</i>) Atlantic Salmon (<i>Salmo salar</i>) Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)	Favourable Declining Favourable Maintained Unfavourable, No change	IN
Scanner Pockmark SAC	450 m south of the consenting corridor.	Submarine structures made by leaking gases	At Consultation Stage	IN
River South Esk SAC	95km to the south west of the project	Atlantic Salmon (<i>Salmo salar</i>) Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)	Favourable Unfavourable, No change	IN
River Tay SAC	125km to the south west of the project	Atlantic Salmon (<i>Salmo salar</i>) Sea Lamprey (<i>Petromyzon marinus</i>) River Lamprey (<i>Lampetra fluviatilis</i>) Brook Lamprey (<i>Lampetra planeri</i>)	Favourable Maintained Favourable Maintained Favourable Maintained Favourable Maintained	IN
River Teith SAC	225km to the south west of the project	Atlantic Salmon (<i>Salmo salar</i>) Sea Lamprey (<i>Petromyzon marinus</i>) River Lamprey (<i>Lampetra fluviatilis</i>) Brook Lamprey (<i>Lampetra planeri</i>)	Unfavourable Recovering Unfavourable Declining Favourable Maintained Favourable Maintained	IN
River Tweed SAC	200km to the south of the project	Atlantic Salmon (<i>Salmo salar</i>) Sea Lamprey (<i>Petromyzon marinus</i>) River Lamprey (<i>Lampetra fluviatilis</i>) Brook Lamprey (<i>Lampetra planeri</i>)	Favourable Maintained Unfavourable, No change Favourable Recovered Favourable Recovered	IN
Moray Firth SAC	105km North West	Bottlenose Dolphin (<i>Tursiops truncatus</i>)	Favourable Recovered	IN

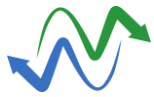


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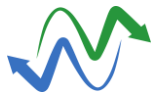
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Site	Direction and Straight-Line Distance	Qualifying Feature(s)	Feature's Latest Assessed Condition	Scoped In or Out
Firth of Tay & Eden Estuary SAC	120km South West	Common Seal (<i>Phoca vitulina</i>)	Unfavourable Declining	OUT
Dornoch Firth & Morrich More SAC	140km North West	Atlantic salt meadows Coastal dune heathland Dune grassland Dunes with juniper thickets Estuaries Glasswort and other annuals colonising mud and sand Common seal (<i>Phoca vitulina</i>) Humid dune slacks Intertidal mudflats and sandflats Lime-deficient dune heathland with crowberry Otter (<i>Lutra lutra</i>) Reefs Shifting dunes Shifting dunes with marram Subtidal sandbanks	Unfavourable Declining	OUT
Troup, Pennan and Lion's Heads SPA	60km north-west of UK landfall	Northern fulmar (<i>Fulmarus glacialis</i>), breeding Common guillemot (<i>Uria aalge</i>), breeding Herring gull (<i>Larus argentatus</i>), breeding Kittiwake (<i>Rissa tridactyla</i>), breeding Seabird assemblage, breeding	Unfavourable, No change Unfavourable Declining Unfavourable Declining Unfavourable, No change Unfavourable Declining	IN
Ythan Estuary, Sands of Forvie and Meikle Loch SPA	20km south of HVDC cable landfall	Common tern (<i>Sterna hirundo</i>), breeding Little tern (<i>Sternula albifrons</i>), breeding Sandwich tern (<i>Sterna sandvicensis</i>), breeding Pink-footed goose (<i>Anser brachyrhynchus</i>), non-breeding Waterfowl assemblage (eider, lapwing, redshank, pink-footed goose), non-breeding	Unfavourable, No change Favourable Maintained Favourable Maintained Unfavourable, No change Favourable Maintained	OUT, except Pink-footed Geese
Fowlsheugh SPA	75km south of UK landfall	Common guillemot (<i>Uria aalge</i>), breeding Kittiwake (<i>Rissa tridactyla</i>), breeding Seabird assemblage, breeding	Favourable Maintained Favourable Maintained Favourable Maintained	IN



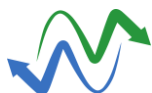
NORTHCONNECT HVDC CABLE INFRASTRUCTURE HABITATS REGULATIONS APPRAISAL: PRE-SCREENING REPORT

Site	Direction and Straight-Line Distance	Qualifying Feature(s)	Feature's Latest Assessed Condition	Scoped In or Out
Moray Firth pSPA	145km north-west of UK landfall	<p>European shag (<i>Phalacrocorax aristotelis</i>), breeding</p> <p>Common eider (<i>Somateria mollissima</i>), non-breeding</p> <p>Common goldeneye (<i>Bucephala clangula</i>), non-breeding</p> <p>Common scoter (<i>Melanitta nigra</i>), non-breeding</p> <p>Great northern diver (<i>Gavia immer</i>), non-breeding</p> <p>Greater scaup (<i>Aythya marila</i>), non-breeding</p> <p>Long-tailed duck (<i>Clangula hyemalis</i>), non-breeding</p> <p>Red-breasted merganser (<i>Mergus serrator</i>), non-breeding</p> <p>Red-throated diver (<i>Gavia stellata</i>), non-breeding</p> <p>Slavonian grebe (<i>Podiceps auritus</i>), non-breeding</p> <p>Velvet scoter (<i>Melanitta fusca</i>), non-breeding</p>	Under consultation	OUT



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Site	Direction and Straight-Line Distance	Qualifying Feature(s)	Feature's Latest Assessed Condition	Scoped In or Out
Outer Firth of Forth and St Andrews Bay pSPA	160km south-west of UK landfall	Arctic tern (<i>Sterna paradisaea</i>), breeding Atlantic puffin (<i>Fratercula arctica</i>), breeding Common guillemot (<i>Uria aalge</i>), breeding and non-breeding Common tern (<i>Sterna hirundo</i>), breeding European shag (<i>Phalacrocorax aristotelis</i>), breeding and non-breeding Herring gull (<i>Larus argentatus</i>), breeding and non-breeding Kittiwake (<i>Rissa tridactyla</i>), breeding and non-breeding Manx shearwater (<i>Puffinus puffinus</i>), breeding Northern gannet (<i>Morus bassanus</i>), breeding Black-headed gull (<i>Chroicocephalus ridibundus</i>), non-breeding Common eider (<i>Somateria mollissima</i>), non-breeding Common goldeneye (<i>Bucephala clangula</i>), non-breeding Common gull (<i>Larus canus</i>), non-breeding Common scoter (<i>Melanitta nigra</i>), non-breeding Little gull (<i>Hydrocoloeus minutus</i>), non-breeding Long-tailed duck (<i>Clangula hyemalis</i>), non-breeding Razorbill (<i>Alca torda</i>), non-breeding Red-breasted merganser (<i>Mergus serrator</i>), non-breeding Red-throated diver (<i>Gavia stellata</i>), non-breeding Slavonian grebe (<i>Podiceps auratus</i>), non-breeding Velvet scoter (<i>Melanitta fusca</i>), non-breeding	Under consultation	OUT



Site	Direction and Straight-Line Distance	Qualifying Feature(s)	Feature's Latest Assessed Condition	Scoped In or Out
Firth of Forth Islands SPA	185km south-west of UK landfall.	Arctic terns (<i>Sterna paradisaea</i>), breeding Common tern (<i>Sterna hirundo</i>), breeding Roseate tern (<i>Sterna dougallii</i>), breeding Sandwich tern (<i>Sterna sandvicensis</i>), breeding Gannet (<i>Morus bassanus</i>), breeding Lesser black-backed gull (<i>Larus fuscus</i>), breeding Puffin (<i>Fratercula arctica</i>), breeding European shag (<i>Phalacrocorax aristotelis</i>), breeding Seabird assemblage, breeding	Favourable Declining Favourable Maintained Unfavourable Declining Unfavourable Declining Favourable Maintained Favourable Maintained Favourable Maintained Unfavourable Recovering Unfavourable Declining	OUT

3.1 REASONS FOR DESIGNATED SITE OR SPECIES EXCLUSIONS

3.1.1 Firth of Tay & Eden Estuary SAC

The Consenting Corridor is located approximately 120km by sea NE of this site which is designated for common seals. The site is designated to fulfil the requirements of the European Habitats Directive. Common seals have relatively short ranges, generally less than 50km, hence seals from this site are unlikely to be present in the Consenting Corridor.

3.1.2 Dornoch Firth & Morrich More SAC

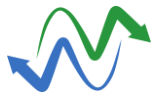
For the Dornoch Firth and Morrich More SAC, there is no connectivity between this site and the proposed development for any of the qualifying features. Whilst otters are a mobile species with extensive home ranges, in the coastal environment otter home ranges are between 2-10km (Chanin, 2012) and, as such, it is highly unlikely that an otter would travel from the Dornoch Firth to the proposed development, and they are therefore not considered further. The Dornoch Firth and Morrich More SAC site is naturally shielded by a land mass, resulting in no connectivity between the development area and benthic habitats and species within the Dornoch Firth. Thus, the qualifying features of the Dornoch Firth and Morrich More SAC related to marine mudflats and subtidal sandbanks are not considered further. While common seals are a mobile feature, the relatively short distances of common seal foraging trips, typically 50 km, means that it is considered unlikely that common seals from the Dornoch Firth and Morrich More SAC will be in the vicinity of the proposed development.

3.1.3 Ythan Estuary, Sands of Forvie and Meikle Loch SPA

The HVDC cable corridor and landfall sites are approximately 20km from the designated site. No tern species were recorded in any of the seabird surveys, so the proposed development area is not thought to be utilised by these species. They are, therefore, excluded from further assessment. No non-breeding lapwings were recorded during the migrant surveys and a maximum of two redshanks and 12 eiders were recorded. The designated waders and eiders are therefore excluded from further assessment based on small numbers. Pink-footed geese were recorded once during the surveys in a flock of 45 birds. This species will be taken forward for assessment.

3.1.4 Moray Firth pSPA

This is located 145km north-west of the landfall site and cable corridor. The breeding shag interest for this proposed SPA is the only relevant designated feature requiring evaluation. As the mean maximum breeding foraging range for shags is 14.5±3.5km this site can, therefore, be excluded from further assessment.



3.1.5 Outer Firth of Forth and St Andrews Bay pSPA and Firth of Forth Islands SPA

Though the distances between this pSPA and SPA and the Consenting Corridor are both within the foraging range of some of the designated seabird species, extensive work focused on the Buchan Ness to Collieston SPA adjacent to the Consenting Corridor found no long-term population-level detrimental effects on seabirds within this adjacent SPA. Therefore, these two designated sites further outwith the Consenting Corridor than any other designated site are not considered in detail within this document. Information on these sites are still provided within Chapter 17: Ornithology and associated Appendices.

3.2 DESIGNATED SITE INFORMATION

3.2.1 Buchan Ness to Collieston SAC

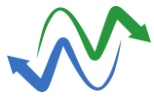
Table 2 sets out the conservation objectives for the Buchan Ness to Collieston SAC, which the HRA must be assessed against. Table 3 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 2. Buchan Ness to Collieston SAC Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the qualifying habitat (listed below) thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.</p>	Chapter 13: Terrestrial Ecology; Chapter 9: Air Quality
<p>Further Conservation objectives: To ensure for the qualifying habitat that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Extent of the habitat on site; • Distribution of the habitat within site; • Structure and function of the habitat; • Processes supporting the habitat; • Distribution of typical species of the habitat; • Viability of typical species as components of the habitat; and • No significant disturbance of typical species of the habitat. 	

Table 3. Buchan Ness to Collieston SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Vegetated sea cliffs	Ch 13, Sec 13.1.3, 13.4.3.2.6, 13.5.1.1. Ch 9, Sec 9.5.	Due to the use of Horizontal Directional Drilling, the HVDC cables will pass under the designated vegetated sea cliffs without resulting in any physical disturbance to the qualifying feature. An assessment of potential effects of dust on the qualifying features found a small section (approximately 40m long by 8m wide) of vegetation type MC9 (sub-dominant) to be within 50m of the HDD site. However, with stringent dust management plans in place, as laid out in the Schedule of Mitigation, no adverse effects are expected on any of the designated features of the cliffs.



There will not be any deterioration of the qualifying habitat as the cabling will go underneath this habitat and no dust effects will be present. The distribution of the habitat within the site, the structure and function of the habitat and the processes supporting with habitat, will all remain unchanged as a result of the proposed development. No significant disturbance of typical species of the habitat will take place and the viability of the typical species as a component of the habitat will remain the same.

Though no LSE are expected, due to the proximity of the development to the qualifying features it is likely an AA will still need to take place for this site.

3.2.2 Buchan Ness to Collieston Coast SPA (with marine extension)

Table 4 sets out the conservation objectives for the Buchan Ness to Collieston Coast SPA, which the HRA must be assessed against. Extensive ornithological work has been carried out in order to assess the potential impacts on the qualifying seabird features at the Buchan Ness to Collieston Coast SPA. The reader should refer to the Chapter 17 and its associated Appendices for a full report. The Buchan Ness to Collieston Coast SPA species population totals were taken from the latest publicly available data from the Seabird Monitoring Database, which is from 2007.

Table 4. Buchan Ness to Collieston Coast SPA Coast Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained.</p>	Chapter 17: Ornithology and associated Appendices.
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species; • Structure, function and supporting processes of habitats supporting the species; and • No significant disturbance of the species. 	Chapter 17: Ornithology

The peak numbers recorded across the entire seabird survey area are shown in Table 5. However, during the EclA only those nests recorded within 100m or 200m were assessed as being potentially disturbed by any of the cable installation activities. The two key activities which could disturb the seabirds relate to:

- a) The HDD drilling process and cable pull site set up onshore; and
- b) The cable pull and cable laying activities.

The cable pull will take place 200m from the cliffs. The first activity (a) will be carried out between September and March. The second activity (b) will take place between April and September. The cable pulls are most likely to take place during April or August. The cable laying will take place between April and September. It is noted that onshore installation activities are not predicted to disturb breeding seabirds within the SPA, since the nest sites were recorded as more than 150m from the onshore works, which have been specifically designed to be far back from the cliffs.

The summary of these assessments in terms of proportion of the total SPA population of the qualifying feature recorded are shown in Chapter 17: Tables 17.13 and Chapter 17: Table 17.14.

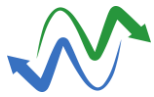
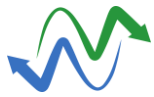


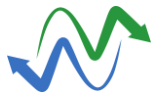
Table 5. Buchan Ness to Collieston Coast SPA Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment for Activities a) HDD and Cable Pull Set Up and b) Cable Pull and Cable Laying	Peak Number Recorded in Entire Survey Area	% of SPA Population Recorded During Site Surveys
Northern Fulmar	Ch 17, Sec 17.4, 17.5 and App H1 and H2	<p>a) Fulmars were recorded as being present along the cliffs throughout the year. Over the non-breeding period within 100m, a maximum of 0.22% of the SPA fulmar population was recorded.</p> <p>b) In April, one fulmar nest was recorded within 200m of the proposed cable pull works, which equates to 0.07% of the SPA fulmar population as a whole.</p> <p>Due to their foraging distances, it is likely the fulmars will come across the cable laying vessel as it moves from the UK landfall to the UK EEZ but, as they exhibit little responses to vessels whilst at sea, the cable laying is not expected to have any effect on them.</p> <p>Within the EIAR, no significant effects were identified for fulmars for any onshore or offshore activities.</p>	288	20.7
Common Guillemot	Ch 17, Sec 17.4, 17.5 and App H1 and H2	<p>a) Guillemot were not recorded present throughout the year within 100m of the HDD site. Within 200m of the site guillemots were recorded as present between January and July, with a non-breeding peak of 2.14% of the SPA population in February.</p> <p>b) Guillemot were recorded present but only from January to August within 200m of the proposed cable pull works, which represent a maximum of 2.72% of the SPA guillemot population in April.</p> <p>The foraging distances of guillemot make it likely they will encounter cable laying vessels. Guillemot display moderate avoidance at short range.</p> <p>The EIAR identified no significant effects on guillemots arising from the proposed development.</p>	6219	32.2



NORTHCONNECT HVDC CABLE INFRASTRUCTURE HABITATS REGULATIONS APPRAISAL: PRE-SCREENING REPORT

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment for Activities a) HDD and Cable Pull Set Up and b) Cable Pull and Cable Laying	Peak Number Recorded in Entire Survey Area	% of SPA Population Recorded During Site Surveys
Herring Gull	Ch 17, Sec 17.4, 17.5 and App H1 and H2	<p>a) Herring gulls were recorded present within 100m of the HDD site during March and July, with a maximum of 0.13% of the SPA herring gull population in March. Herring gulls were recorded present within 200m of the HDD site from February to August, with a non-breeding peak of 0.52% of the SPA population in February.</p> <p>b) Similarly, within 200m of the proposed cable pull works herring gulls were recorded from February to July with a maximum of 1.01% of the SPA herring gull population in March.</p> <p>Due to their breeding foraging ranges, it is likely herring gulls will come across vessels associated with cable installation, but herring gulls display only slight responses to vessels at sea. Therefore, the cable laying is not expected to have any adverse effect for this species.</p> <p>The EIAR identified no significant effects on herring gulls arising from the construction and operation of the HVDC cable.</p>	232	7.5
Black-legged Kittiwake	Ch 17, Sec 17.4, 17.5 and App H1 and H2	<p>a) Breeding kittiwake were not recorded present within 100m of the HDD site. They were recorded present within 200m of the site between March to August, with maximum of 1.48% of the SPA population in July.</p> <p>b) Within 200m of the cable pull site, kittiwake were recorded between March and August. July was identified to contain the highest proportion compared to the SPA kittiwake population with 0.73%.</p> <p>The foraging ranges for kittiwake makes it likely they will encounter cable laying vessel as they move from UK landfall to the UK EEZ, but kittiwake exhibit only slight responses to vessels whilst at sea. Therefore, disturbance through vessel presence not expected to have any effect on them.</p> <p>The EIAR identified no significant effect on kittiwakes arising from the proposed development.</p>	2179	17.4



Qualifying Feature	Relevant EIA Chapter Sections	Summary of Assessment for Activities a) HDD and Cable Pull Set Up and b) Cable Pull and Cable Laying	Peak Number Recorded in Entire Survey Area	% of SPA Population Recorded During Site Surveys
European Shag	Ch 17, Sec 17.4, 17.5 and App H1 and H2	<p>a) European Shag were not recorded within 100m of the HDD site. Within the 200m buffer zone, shag were recorded present from March to July, with a maximum in June of 5.74% of the SPA European shag population.</p> <p>b) Within 200m from the cable pull site, European shag were recorded between March and July. However, the cable pulls are likely to take place in April and August. No shags were observed in August, while in April only 3.02% of the SPA population were present. European shags foraging distance during breeding is relatively small, approximately 15km (maximum mean), making it likely they will encounter vessels associated with cable pull and installation. The species exhibits a moderate response to vessels with a flush and alert to vessels at 500m. The EIA identified no significant effects on European shag as a result of the NorthConnect development.</p>	80	24.2

As identified in Table 5, the proportions of seabirds from the Buchan Ness to Collieston SPA that have the potential to be disturbed are very low. There is not predicted to be any deterioration of the seabirds' habitat, either on land, or in the marine environment. The installation may cause disturbance over two or three breeding seasons, however, the integrity of each of the qualifying species' populations as a whole is not expected to be detrimentally affected in the short or long-term. There is not expected to be any significant disturbance to the species such that would cause an impact on the SPA as a whole. The distribution of each of the species was considered and the quieter section of cliffs, as identified in the initial survey, were an integral factor in siting the UK landfall location during the design process.

Though no LSE are expected, due to the proximity of the development to the qualifying features it is likely an AA will still need to take place for this site.

3.2.3 River Dee SAC

Table 6 sets out the conservation objectives for the River Dee SAC, which the HRA must be assessed against. Table 7 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

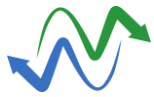


Table 6. River Dee SAC Conservation Objectives.

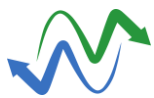
Conservation Objective of the Designated Site	Main EIAR chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (detailed in Table 7) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.</p>	Chapter 15: Fish and Shellfish
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species, including range of genetic types for salmon, as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species; • Structure, function and supporting processes of habitats supporting the species; • No significant disturbance of the species; • Distribution and viability of freshwater pearl mussel host species; and • Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species. 	Chapter 15: Fish and Shellfish

Table 7. River Dee SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of assessment
Atlantic salmon	Ch 15, Sec 15.4 and 15.5	The EIAR assessed potential impacts on migrating Atlantic salmon resulting from changes to water quality, underwater noise emissions, and Electro Magnetic Fields (EMF), associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of the salmon habitat will result in relation to the proposed development.
Freshwater pearl mussel	Ch 15, Sec 15.4 and 15.5	No change to the River Dee SAC habitat is expected and no disturbance of freshwater pearl mussels or their host species is likely due to an approximate distance of 40km from the proposed consenting cable corridor.
Otter	Ch 13, Sec 13.4 and 13.5	Whilst otters are a mobile species with extensive home ranges, in the coastal environment otter home ranges are between 2-10km (Chanin, 2012) and, as such, it is highly unlikely that an otter would travel 40km from the River Dee to the proposed development and are therefore not considered further.

There will not be any deterioration of the habitat of qualifying features of this site, due to the distance between the River Dee SAC and the consenting corridor. Indirect impacts and disturbance to the site’s qualifying species have been considered, and no significant disturbance of the features has been identified. As such, the integrity of the site will remain unchanged, and the proposed development will not affect the conservation status of the qualifying features. Hence the development does not compromise the conservation objectives of this site.

No LSEs are expected and, due to the distance of the development from the site, it is unlikely an AA will be required for this site.



3.2.4 Scanner Pockmark SAC

Table 8 sets out the conservation objectives for the Scanner Pockmark SAC, which the HRA must be assessed against. Table 9 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 8. Scanner Pockmark SAC Conservation Objectives.

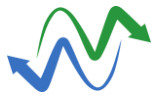
Conservation Objective of the Designated Site	Main EIAR chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: For the feature to be in favourable condition, thus ensuring site integrity in the long term and contribution to Favourable Conservation Status of Annex I Submarine structures made by leaking gases.</p>	Chapter 14: Benthic Ecology
<p>Further Conservation objectives: This contribution would be achieved by maintaining or restoring, subject to natural change:</p> <ul style="list-style-type: none"> • The extent and distribution of the qualifying habitat in the site; • The structure and function of the qualifying habitat in the site; and • The supporting processes on which the qualifying habitat relies. 	

Table 9. Scanner Pockmark SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Annex 1 Habitat: Submarine Structures Made by Leaking Gases	Ch 14, Sec 14.4 and 14.5	<p>The EIAR assessed potential impacts on benthic ecological features resulting from the installation and operation of the proposed NorthConnect HVDC cables. Potential impacts assessed included: habitat loss; habitat creation; physical disturbance; changes to water quality; EMF; and introduction of invasive non-native species (INNS).</p> <p>The SAC is located 450m south of the consenting corridor, hence, no direct effects (habitat loss, creation, disturbance, or EMF) will result on the site’s qualifying features. The distance from the site also means the indirect effects of changes to water quality are assessed as no-change, since any sediment plumes resulting from the works will have dispersed before reaching the SAC. Considering vessel compliance with the Ballast Water Management Convention, the risk of INNS introduction was assessed as being very low, hence, this impact is non-significant, especially in the context of existing vessel numbers operating in the area.</p>

There will not be any deterioration of the habitat of the qualifying features of Scanner Pockmark SAC, due to the static nature of these features, and the distance to the consenting corridor. Indirect impacts have been considered, and no potential for significant effects has been identified. As such, the integrity of the site will remain unchanged, and the proposed development will not affect the SAC’s contribution to Favourable Conservation Status of Annex I Submarine structures made by leaking gases. Hence, the development does not compromise the conservation objectives of this site.

Though no LSE are expected, due to the proximity of the development to the qualifying features, it is possible an AA may still need to take place for this site.



3.2.5 River South Esk SAC

Table 10 sets out the conservation objectives for the River South Esk SAC, which the HRA must be assessed against. Table 11 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 10. River South Esk SAC Conservation Objectives.

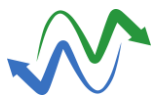
Conservation Objective of the Designated Site	Main EIAR chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.</p>	Chapter 15: Fish and Shellfish
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species, including range of genetic types for salmon, as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species; • Structure, function and supporting processes of habitats supporting the species; • No significant disturbance of the species; • Distribution and viability of freshwater pearl mussel host species; and • Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species. 	Chapter 15: Fish and Shellfish

Table 11. River South Esk SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR chapter sections	Summary of assessment
Atlantic salmon	Ch 15, Sec 15.4 and 15.5	The EIAR assessed potential impacts on migrating Atlantic salmon resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected, and no deterioration of the salmon habitat will result in relation to the proposed development.
Freshwater pearl mussel	Ch 15, Sec 15.4 and 15.5	No change to the River South Esk SAC habitat is expected and no disturbance of freshwater pearl mussels or their host species is likely, due to an approximate distance of 95km from the proposed consenting cable corridor.

There will not be any deterioration of the habitat of qualifying features of this site, due to the distance between the River South Esk SAC and the consenting corridor. Indirect impacts and disturbance to the site’s qualifying species have been considered, and no significant disturbance of the features has been predicted. As such, the integrity of the site will remain unchanged and the proposed development will not affect the conservation status of the qualifying features. Hence, the development does not compromise the conservation objectives of this site.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.



3.2.6 River Tay SAC

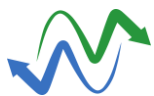
Table 12 sets out the conservation objectives for the River Tay SAC, which the HRA must be assessed against. Table 13 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 12. River Tay SAC Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the qualifying habitat (listed below) thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.</p>	Chapter 15: Fish and Shellfish and Chapter 13: Terrestrial Ecology
<p>Further Conservation objectives: To ensure for the qualifying habitat that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Extent of the habitat on site; • Distribution of the habitat within site; • Structure and function of the habitat; • Processes supporting the habitat; • Distribution of typical species of the habitat; • Viability of typical species as components of the habitat; and • No significant disturbance of typical species of the habitat. 	Chapter 15: Fish and Shellfish and Chapter 13: Terrestrial Ecology

Table 13. River Tay SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Atlantic salmon	Ch 15, Sec 15.4 and 15.5	The EIAR assessed potential impacts on migrating Atlantic salmon resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected, and no deterioration of the salmon habitat will result in relation to the proposed development.
Brook lamprey	Ch 15, Sec 15.4 and 15.5	Brook lampreys are non-migratory and, hence, are likely to remain within the SAC boundary and immediate vicinity. Since the SAC is located approximately 125km from the consenting corridor, there is no potential for this feature to be affected by the proposed development and, hence, is not assessed further.
River lamprey	Ch 15, Sec 15.4 and 15.5	River lamprey migration to freshwater from sea spawning grounds might see their migration route overlap with the consenting corridor. The EIAR assessed potential impacts on migrating river lamprey resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of their habitat will result in relation to the proposed development.
Sea lamprey	Ch 15, Sec 15.4 and 15.5	The migration route of sea lamprey may overlap with the consenting corridor. The EIAR assessed potential impacts on migrating sea lamprey resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of their habitat will result in relation to the proposed development.



Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Otter	Ch 13, Sec 13.4 and 13.5	Whilst otters are a mobile species with extensive home ranges, in the coastal environment otter home ranges are between 2-10km (Chanin, 2012) and, as such, it is highly unlikely that an otter would travel 125km from the River Dee to the proposed development and they are therefore not considered further.
Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels	N/A	This static feature is located inland and hence, there is no connectivity between the feature and the consenting corridor. No further consideration is made.

There will not be any deterioration of the habitat of qualifying features of this site, due to the distance between the River Tay SAC and the consenting corridor. Indirect impacts and disturbance to the site’s qualifying species have been considered, and no significant disturbance of the features has been predicted. As such, the integrity of the site will remain unchanged and the proposed development will not affect the conservation status of the qualifying features. Hence, the development does not compromise the conservation objectives of this site.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.

3.2.7 River Teith SAC

Table 14 sets out the conservation objectives for the River Teith SAC, which the HRA must be assessed against. Table 15 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 14. River Teith SAC Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.</p>	Chapter 15: Fish and Shellfish
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species, including range of genetic types for salmon, as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species; • Structure, function and supporting processes of habitats supporting the species; and • No significant disturbance of the species. 	Chapter 15: Fish and Shellfish

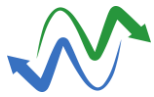


Table 15. River Teith SAC Qualifying Features Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Atlantic salmon	Ch 15, Sec 15.4 and 15.5	The EIAR assessed potential impacts on migrating Atlantic salmon resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of the salmon habitat will result in relation to the proposed development.
Brook lamprey	Ch 15, Sec 15.4 and 15.5	Brook lampreys are non-migratory and hence, are likely to remain within the SAC boundary and immediate vicinity. Since the SAC is located approximately 225km from the consenting corridor, there is no potential for this feature to be affected by the proposed development, hence is not assessed further.
River lamprey	Ch 15, Sec 15.4 and 15.5	River lamprey migration to freshwater from sea spawning grounds might see their migration route overlap with the consenting corridor. The EIAR assessed potential impacts on migrating river lamprey resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of their habitat will result in relation to the proposed development.
Sea lamprey	Ch 15, Sec 15.4 and 15.5	The migration route of sea lamprey may overlap with the consenting corridor. The EIAR assessed potential impacts on migrating sea lamprey resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of their habitat will result in relation to the proposed development.

There will not be any deterioration of the habitat of qualifying features of this site, due to the distance between the River Teith SAC and the consenting corridor. Indirect impacts and disturbance to the site’s qualifying species have been considered, and no significant disturbance of the features has been predicted. As such, the integrity of the site will remain unchanged, and the proposed development will not affect the conservation status of the qualifying features. Hence, the development does not compromise the conservation objectives of this site.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.

3.2.8 River Tweed SAC

Table 16 sets out the conservation objectives for the River Tweed SAC, which the HRA must be assessed against. Table 17 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

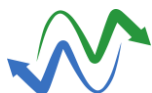
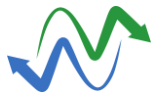


Table 16. River Tweed SAC Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the qualifying habitat (listed below) thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.</p>	Chapter 15: Fish and Shellfish and Chapter 13: Terrestrial Ecology
<p>Further Conservation objectives: To ensure for the qualifying habitat that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Extent of the habitat on site; • Distribution of the habitat within site; • Structure and function of the habitat; • Processes supporting the habitat; • Distribution of typical species of the habitat; • Viability of typical species as components of the habitat; and • No significant disturbance of typical species of the habitat. 	Chapter 15: Fish and Shellfish and Chapter 13: Terrestrial Ecology

Table 17 River Tweed SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of assessment
Atlantic salmon	Ch 15, Sec 15.4 and 15.5	The EIAR assessed potential impacts on migrating Atlantic salmon resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of the salmon habitat will result in relation to the proposed development.
Brook lamprey	Ch 15, Sec 15.4 and 15.5	Brook lampreys are non-migratory and hence, are likely to remain within the SAC boundary and immediate vicinity. Since the SAC is located approximately 200km from the consenting corridor, there is no potential for this feature to be affected by the proposed development and hence, is not assessed further.
River lamprey	Ch 15, Sec 15.4 and 15.5	River lamprey migration to freshwater from sea spawning grounds might see their migration route overlap with the consenting corridor. The EIAR assessed potential impacts on migrating river lamprey resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of their habitat will result in relation to the proposed development.
Sea lamprey	Ch 15, Sec 15.4 and 15.5	The migration route of sea lamprey may overlap with the consenting corridor. The EIAR assessed potential impacts on migrating sea lamprey resulting from changes to water quality, underwater noise emissions, and EMF associated with the proposed development. No significant effects were identified. As such, significant disturbance of this species is not expected and no deterioration of their habitat will result in relation to the proposed development.
Otter	Ch 13, Sec 13.4 and 13.5	Whilst otters are a mobile species with extensive home ranges, in the coastal environment otter home ranges are between 2-10km (Chanin, 2012) and, as such, it is highly unlikely that an otter would travel 200km from the River Dee to the proposed development and are therefore not considered further.



There will not be any deterioration of the habitat of qualifying features of this site, due to the distance between the River Tay SAC and the consenting corridor. Indirect impacts and disturbance to the site’s qualifying species have been considered, and no significant disturbance of the features has been predicted. As such the integrity of the site will remain unchanged, and the proposed development will not affect the conservation status of the qualifying features. Hence, the development does not compromise the conservation objectives of this site.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.

3.2.9 Moray Firth SAC

Table 18 sets out the conservation objectives for the Moray Firth SAC, which the HRA must be assessed against. Table 19 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 18 Moray Firth SAC Conservation Objective.

Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained, and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features</p>	Chapter 16: Marine Mammals Chapter 23: Noise (Underwater).
<p>Further Conservation objectives: To ensure for the qualifying habitat that the following are maintained in the long term:</p> <ul style="list-style-type: none">• Extent of the habitat on site;• Distribution of the habitat within site;• Structure and function of the habitat;• Processes supporting the habitat;• Distribution of typical species of the habitat;• Viability of typical species as components of the habitat; and• No significant disturbance of typical species of the habitat.	

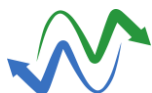


Table 19. Moray Firth SAC Qualifying Feature Assessment.

Qualifying Feature	Relevant EIA Chapter Sections	Summary of Assessment	Estimated Population in SAC
Bottlenose dolphins	Ch 16, Sec 16.4, 16.5, and 16.6.	Bottlenose dolphins migrate south from the Moray Firth SAC to the Firths of Tay and Forth and, as such, may be present in the consenting corridor. The EIA assessed potential impacts on bottlenose dolphins resulting from changes to water quality, underwater noise emissions, physical injury, change in distribution of prey species, and EMF associated with the proposed development. In the absence of mitigation, only underwater noise emissions from the use of Sub-Bottom Profilers (SBP) during survey operations has the potential to result in a moderate effect on bottlenose dolphins. With marine mammal mitigation procedures put in place these effects become minor, and this species is only likely to be present in the nearshore reaches of the consenting corridor, so noise exposure will be limited. Therefore, no population level effects on the Moray Firth bottlenose dolphin population are expected.	Number of individuals utilising the Moray Firth SAC is estimated at 103 (Cheney et al., 2018).
Sandbanks which are slightly covered by sea water all the time	N/A	This static feature is located over 105km from the consenting corridor. As such, no impacts are expected, and no further consideration will be given to this feature.	N/A

The use of SBP during marine survey operations associated with the installation and operation of the NorthConnect interconnector was assessed as having the potential to result moderate level effects on bottlenose dolphins from the Moray Firth SAC, which may be present within the nearshore reaches of the consenting corridor. Appropriate mitigation measures were identified, reducing this effect level to minor and, therefore, significant disturbance to the bottlenose dolphins will be avoided. As such, the integrity of the site will remain unchanged, and the proposed development will not affect the conservation status of the qualifying features. Hence, the development does not compromise the conservation objectives of this site.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.

3.2.10 Troup, Pennan and Lion’s Heads SPA

No effects of the onshore activities are predicted for the Troup, Pennan and Lion’s Heads SPA due to the distance involved and the localised nature of the onshore works. Similarly, no effects of the cable pull activity will be relevant to assess for this SPA as the activity takes place 200m from the cliffs off Long Haven, within the Buchan Ness to Collieston SPA. Therefore, the only assessment which needs to take place for this SPA is for the cable laying operations.

Table 20 sets out the conservation objectives for the Troup, Pennan and Lion’s Heads SPA, which the HRA must be assessed against. Table 21 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

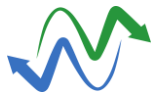
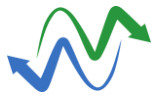


Table 20. Troup, Pennan and Lion’s Heads SPA Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained.</p>	Chapter 17: Ornithology
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species; • Structure, function and supporting processes of habitats supporting the species; and • No significant disturbance of the species. 	Chapter 17: Ornithology

Table 21. Troup, Pennan and Lion’s Heads SPA Qualifying Features Assessment. Where * indicates an assemblage qualifier only.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Fulmar*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	The SPA lies approximately 60km north-west of the UK landfall site. This distance means the cable laying operation will have no impact on the integrity of the site. Fulmars’ large foraging distance (400km mean maximum breeding and 1,016km max non-breeding) could see fulmars encountering cable laying vessels at the landfall site and along the consenting corridor. However, fulmars show little response to vessels at sea and the EIAR identified no significant impacts on the fulmars of the SPA with effects associated with installation vessels, especially in the context of existing North Sea vessel activity.
Guillemot	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Breeding guillemots at this SPA are within the breeding foraging range of the consenting corridor and hence, may interact with the cable installation spread. Guillemot express moderate avoidance of vessels at short range, however, as detailed in the EIAR no significant impacts on the guillemots, especially in the context of existing North Sea vessel activity.
Herring gull*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Herring gulls could potentially be present within the consenting corridor, considering their breeding foraging range and as such, may encounter the cable laying spread. A slight avoidance is displayed by herring gulls at short range. However, the EIAR identified no significant effects on herring gulls of the SPA, especially in the context of existing North Sea vessel activity.
Kittiwake*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Kittiwake breeding foraging distance of 60km (mean maximum) means they may be present within the consenting corridor and encounter the cable installation spread. However, kittiwake only shows a slight avoidance to vessels at short range. No significant effects on the SPA or the qualifying feature kittiwake were identified by the EIAR, especially in the context of existing North Sea vessel activity.
Razorbill*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Breeding razorbills foraging range (48.5km mean maximum) does not overlap with the cable corridor, which is approximately 60km from the SPA. As such, this species is unlikely to encounter the cable installation spread, and hence no impacts on this feature are anticipated.



Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Seabird assemblage*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	No significant effects on any of the qualifying features are expected as a result of vessel disturbance effects during the cable installation operations. In the context of existing North Sea vessel activity, the additional vessels required for the cable installation do not constitute a significant deviation from baseline conditions. Other impacts including underwater noise, and changes to water quality are considered to be extremely localised, with little potential impact the SPA or its qualifying features.

There is not predicted to be any deterioration of the seabirds’ habitat, either on land or in the marine environment. The installation may cause disturbance over two or three breeding seasons, however, the integrity of each of the qualifying species’ populations as a whole is not expected to be detrimentally affected in the short or long-term. There is not expected to be any significant disturbance to the species such that would cause an impact on the SPA as a whole.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.

3.2.11 Fowlsheugh SPA

No effects of the onshore activities are predicted for the Fowlsheugh SPA due to the distance involved and the localised nature of the onshore works. Similarly, no effects of the cable pull activity will be relevant to assess for this SPA as the activity takes place 200m from the cliffs off Long Haven, within the Buchan Ness to Collieston SPA. Therefore, the only assessment which needs to take place for this SPA is for the cable laying activity.

Table 22 sets out the conservation objectives for the Fowlsheugh SPA, which the HRA must be assessed against. Table 23 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 22. Fowlsheugh SPA Conservation Objectives.

Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained.</p>	Chapter 17: Ornithology
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species; • Structure, function and supporting processes of habitats supporting the species; and • No significant disturbance of the species. 	Chapter 17: Ornithology

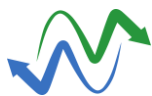


Table 21. Fowlsheugh SPA Qualifying Features Assessment. Where * indicates an assemblage qualifier only.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Fulmar*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	The SPA lies approximately 75km south of the UK landfall site. This distance means the cable laying operation will have no impact on the integrity of the site. Fulmar's large foraging distance (400km mean maximum breeding and 1,016km max non-breeding) could see fulmars encountering cable laying vessels at the landfall site and along the consenting corridor. However, fulmars show little response to vessels at sea and the EIAR identified no significant impacts on the fulmars of the SPA with effects associated with installation vessels, especially in the context of existing North Sea vessel activity.
Guillemot	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Breeding guillemots at this SPA are within the breeding foraging range of the consenting corridor and hence, may interact with the cable installation spread. Guillemot express moderate avoidance of vessels at short range, however, as detailed in the EIAR no significant impacts on the guillemots, especially in the context of existing North Sea vessel activity.
Herring gull*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Herring gulls could potentially be present within the consenting corridor, considering their breeding foraging range and as such may encounter the cable laying spread. A slight avoidance is displayed by herring gulls at short range. However, the EIAR identified no significant effects on herring gulls of the SPA, especially in the context of existing North Sea vessel activity.
Kittiwake	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Breeding Kittiwake foraging range (60km mean maximum) does not overlap with the cable corridor, which is approximately 75km from the SPA. As such, this species is unlikely to encounter the cable installation spread, and hence no impacts on this feature are anticipated.
Razorbill*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	Breeding razorbills foraging range (48.5km mean maximum) does not overlap with the cable corridor, which is approximately 75km from the SPA. As such, this species is unlikely to encounter the cable installation spread and hence, no impacts on this feature are anticipated.
Seabird assemblage*	Ch 17, Sec 17.4, 17.5 and App H1 and H2	No significant effects on any of the qualifying features are expected as a result of vessel disturbance effects during the cable installation operations. In the context of existing North Sea vessel activity, the additional vessels required for the cable installation do not constitute a significant deviation from baseline conditions. Other impacts including underwater noise, and changes to water quality are considered to be extremely localised, with little potential impact the SPA or its qualifying features.

There is not predicted to be any deterioration of the seabirds' habitat, either on land or in the marine environment. The installation may cause disturbance over two or three breeding seasons, however, the integrity of each of the qualifying species' populations as a whole is not expected to be detrimentally affected in the short or long-term. There is not expected to be any significant disturbance to the species such that would cause an impact on the SPA as a whole.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.

3.2.12 Ythan Estuary, Sands of Forvie and Meikle Loch SPA

Table 24 sets out the conservation objectives for the Ythan Estuary, Sands of Forvie and Meikle Loch SPA, which the HRA must be assessed against. Table 25 outlines the qualifying features of the site and provides a summary of the relevant assessments conducted during the EIA process.

Table 24. Ythan Estuary, Sands of Forvie and Meikle Loch SPA Conservation Objectives.

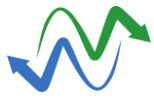
Conservation Objective of the Designated Site	Main EIAR Chapter(s) to Inform Assessment
<p>Overarching Conservation Objective: To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained.</p>	Chapter 17: Ornithology
<p>Further Conservation objectives: To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> • Population of the species as a viable component of the site; • Distribution of the species within site; • Distribution and extent of habitats supporting the species • Structure, function and supporting processes of habitats supporting the species; and • No significant disturbance of the species. 	Chapter 17: Ornithology

Table 25. Ythan Estuary, Sands of Forvie and Meikle Loch SPA Qualifying Features Assessment.

Qualifying Feature	Relevant EIAR Chapter Sections	Summary of Assessment
Pink-Footed Goose (Wintering)	Ch 17, Sec 17.4, 17.5 and App H1 and H2	During the surveys, only one flock of pink-footed geese (approximately 45 birds) were recorded. During installation of the onshore HVDC cables, the pink-footed goose maybe be temporarily displaced from landing in fields or other habitat in close proximity to the consenting corridor. However, in the context of availability of the alternative fields and habitat in the vicinity of the consenting corridor, this localised displacement will not have a detrimental impact at a population level.

There is not predicted to be any deterioration in habitat quality for the avian features of this site, either on land or in the marine environment. The installation may cause temporary and localised displacement of pink-footed geese over two or three winters, however, this is unlikely to result in adverse population level effects due to the extensive availability of alternative habitat in the vicinity of the consenting corridor. There is not expected to be any significant effect to the species such that would reduce the conservation status of any of the site’s qualifying features and hence, the integrity of the SPA and its conservation objectives will be maintained.

No LSEs are expected and, due to the distance of the development to the site, it is unlikely an AA will be required for this site.



4. CUMULATIVE AND IN-COMBINATION EFFECTS

Cumulative and in-combination effects of both the onshore and marine elements NorthConnect Interconnector were assessed as part of the EIA process, as detailed in Chapter 6 of the EIAR: Cumulative Impacts.

Specifically, with regard to the HRA process, cumulative and in-combination effects were assessed for the following receptors:

- Seabed Quality: Chapter 7;
- Terrestrial Ecology: Chapter 13;
- Benthic Ecology: Chapter 14;
- Fish and Shellfish Ecology: Chapter 15;
- Marine Mammal Ecology: Chapter 16; and
- Ornithology: Chapter 17.

No cumulative or in-combination effects were identified for any receptors relevant to the HRA process.

5. CONCLUSIONS

The EIAR did not predict any residual adverse impacts on any of the qualifying features of the designated sites assessed as part of this HRA Pre-Screening Report, and no cumulative or in-combination effects are anticipated. Information from this report can be used in conjunction with the relevant EIAR Chapters and Sections, as laid out in this report, for the competent authority to carry out the HRA and AA. It will be up to the competent authority to ascertain whether the proposal will adversely affect the integrity of the designated sites to be considered.

6. REFERENCES

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