



BERWICK BANK WIND FARM OFFSHORE ENVIRONMENTAL IMPACT ASSESSMENT

APPENDIX 6.6: TRANSBOUNDARY IMPACTS SCREENING



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Prepared by: **RPS**
 Prepared for: **SSE Renewables**

Checked by: **Andrew Logie**
 Accepted by: **Anja Schoene**
 Approved by: **Ross Hodson**

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1. INTRODUCTION

1. This technical appendix identifies the potential significant transboundary impacts that may arise as a result of the Proposed Development, and assesses potential impacts associated with construction, operation and maintenance, and decommissioning phases of the Proposed Development.

1.1. BACKGROUND

2. The potential for transboundary effects to arise is a result of an impact from the Proposed Development which has the potential to significantly affect the environment of a European Economic Area (EEA) state(s). Figure 1.1 illustrates the proximity of the Proposed Development to these EEA states and England.

3. Berwick Bank Wind Farm Limited (BBFWL) is a wholly owned subsidiary of SSE Renewables Limited and will hereafter be referred to as ‘the Applicant’. The Applicant has completed a transboundary screening impact assessment for potential transboundary effects arising from the construction, operation and maintenance, and decommissioning of the Proposed Development. This transboundary screening impact assessment was completed as part of the Berwick Bank Offshore EIA Scoping Report (SSER, 2021a).

4. The assessment within this appendix has taken into account the likely spatial extent of potential impacts. The outcome of this transboundary screening assessment is set out in section 3. Where no potential transboundary impacts have been identified as part of the transboundary screening process, this is also set out in section 3 and stated in Table 3.2 and Table 3.3. Marine Scotland Consenting and Licensing Guidance for Offshore Wind, Wave and Tidal Energy Applications (Scottish Government, 2018) advises that transboundary impacts in relation to offshore renewable energy projects in Scotland are likely to relate primarily to:

- projects that may have an impact on mobile species; and
- where projects are close to national boundaries or areas administered by other relevant authorities.

5. Volume 1, chapter 3 contains the project description for the Proposed Development. A brief summary is also included here:

- the Proposed Development array area will be located approximately 47.6 km offshore of the East Lothian and 37.8 km from the Scottish Borders coastline and covers an area of 1,010.2 km²;
- up to 307 wind turbines and up to ten Offshore Substation Platforms (OSPs)/Offshore converter station platforms will be used; and
- the earliest construction phase will commence in 2025 with wind turbine commissioning completion due at the start of 2033.

6. This appendix intends to provide the information required to Scottish Ministers to inform their evaluation of the likelihood of transboundary effects occurring, and therefore the potential need for transboundary consultation with EEA states.

1.1.2. LEGISLATIVE CONTEXT

7. The United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment (EIA) in a Transboundary Context (the Espoo Convention) (as amended) provides guidance on assessment of transboundary effects with the aim of promoting “environmentally sound and sustainable development, while enhancing international co-operation in assessing environmental impacts of a proposed project”.

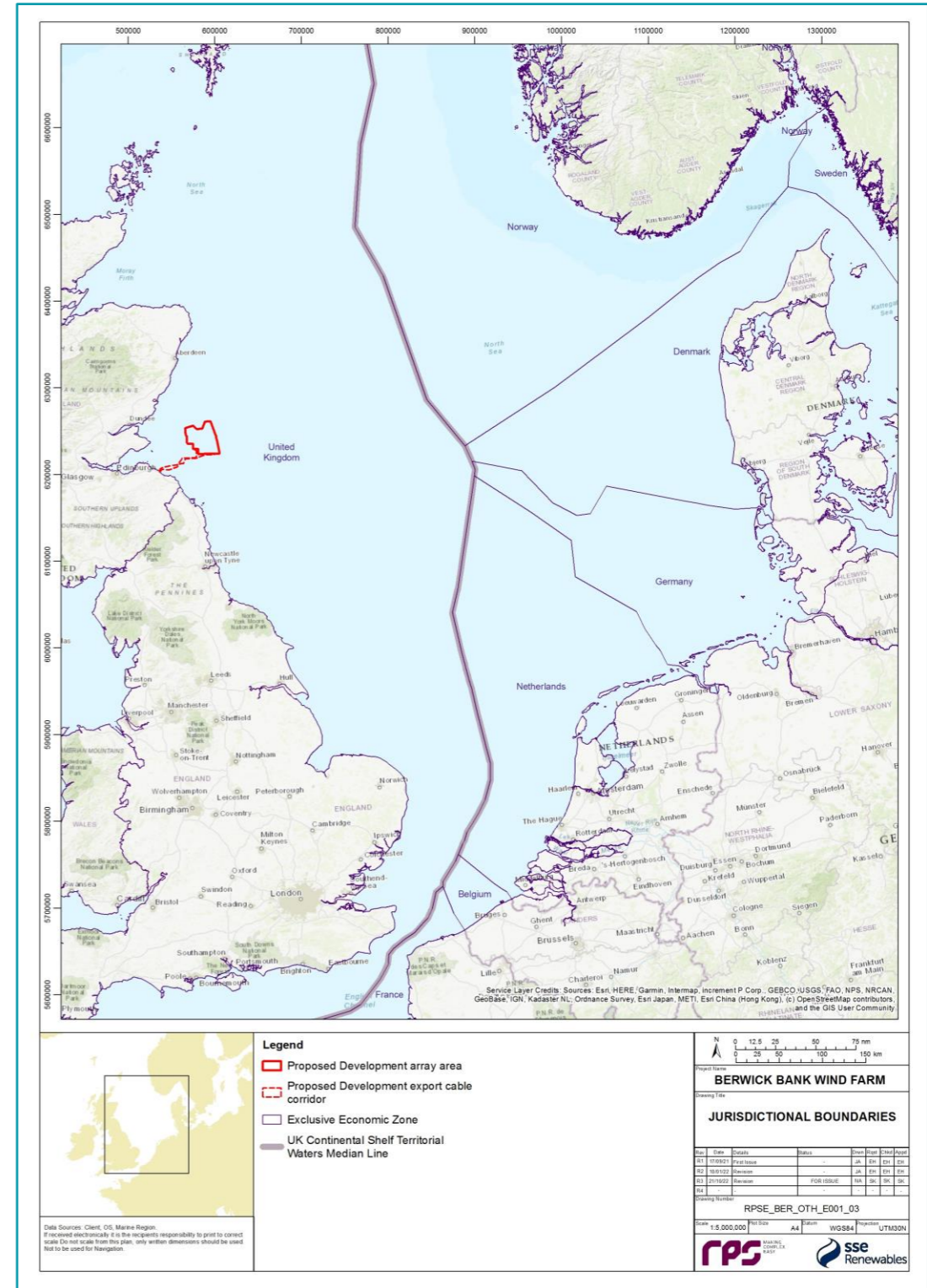


Figure 1.1: Location of the Proposed Development in Relation to EEA States

8. The Espoo Convention (named after the Finish city of Espoo where the Convention was adopted) requires that EIAs consider potential impacts across national borders where there is the potential for an activity occurring in one country to have the potential for significant effect in another country. The Espoo Convention requires that the “Party of origin” notifies EEA states about any activities listed in Appendix I of the Convention (which includes ‘major installations for the harnessing of wind power for energy production (wind farms)’) that are likely to result in a significant adverse transboundary impact.
9. Article 7 of the amended EIA Directive provides the basis for consultation between Member States in relation to the Likely Significant Effect of proposed development in one state on the environment in another Member State. The principal obligation is in respect of information and consultation and is imposed by Article 7(4) of the amended Directive: *“The Member States concerned shall enter into consultations regarding, inter alia, the potential transboundary effects of the project and the measures envisaged to reduce or eliminate such effects and shall agree on a reasonable timeframe for the duration of the consultation period. Such consultations may be conducted through an appropriate joint body.”*
10. The United Kingdom (UK) is also a signatory to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the ‘Aarhus Convention’) and its Protocol which provide people with the rights to easily access information, participate effectively in decision-making in environmental matters and to seek justice if their rights are violated (The Planning Inspectorate, 2018).
11. European Union (EU) Directive 85/337/EEC (as amended) (the EIA Directive) implements both the Espoo and Aarhus Conventions in EU States.
12. Following the UK’s departure from the EU on 31 December 2020 (EU Exit), the UK is no longer an EU Member State. However, the EU Exit Regulations (HM Government, 2019) establish that the regimes that inform planning decisions will remain as set out in the founding legislation. Thus, the EIA Directive is transposed into UK law through the EIA Regulations.
13. The UK Planning Inspectorate (PINS) Advice Note 12: Transboundary Impacts (PINS, 2015) sets out procedures for consultation where a development may have significant transboundary impacts. Whilst the Advice Note has been prepared by PINS and is therefore not applicable under the Scottish planning regime, it has been used to inform this transboundary appendix. Based on Advice Note 12, developers are advised to:
 - when preparing documents for consultation and application, the Applicant should consider that the competent authority may notify the relevant state of their particular project;
 - carry out preparatory work to complete a transboundary screening matrix to assist the competent authority in determining the potential for likely significant effects on the environment in other states; and
 - submit the transboundary screening matrix at the EIA scoping stage.

Environmental Impact Assessment

14. Under the EIA Regulations (Part 9) – Projects with Significant Transboundary Effects”, Scottish Ministers are required to determine if a proposed development is likely to have significant effects on the receiving environment of an EEA State (i.e. a “transboundary impact”). Regulation 30 1(a) states that *“where it comes to the attention of the Scottish Ministers that works proposed to be carried out in Scotland are the subject of an EIA application and are likely to have significant effects on the environment in an EEA State other than the United Kingdom”* Scottish Ministers must:
 - send to the EEA State, as soon as possible and no later than their date of publication in The Edinburgh Gazette... the particulars mentioned in paragraph (3) (and paragraph 4 if required);

- publish the information in a notice placed in The Edinburgh Gazette, indicating the address where further information is available; and
 - give the EEA State a reasonable period of time in which to indicate whether it wishes to participate in the procedure for which these Regulations provide.
15. The information required to be shared with EEA States includes:
 - a description of the works, together with any available information on their possible significant effect on the environment in an EEA State; and
 - information on the nature of the decision which may be taken.

Habitats Regulations Appraisal

16. Similarly, following the EU Exit, the Habitats Regulations Appraisal (HRA) process implemented under the Habitats Regulations continues to apply, subject only to minor changes. However, these changes are considered to have no material implications on the requirement or process for an HRA for the Proposed Development. This report will hereafter refer to the ‘Habitats Regulations’ (as amended) with respect to the changes enacted by the EU Exit Regulations.
17. The Habitats Regulations (as amended) require that an HRA must be carried out on all plans and projects that have the potential to impact upon sites traditionally designated for supporting habitats or species of international importance (listed on the Annexes of the Habitats Directive and Birds Directive) and hereafter specified for protection within schedules to the Habitats Regulations (as amended).
18. Post EU Exit, these sites are known as Natura 2000 Sites where they are located within EU member states. In this report, and in accordance with EU Exit guidance issued by the Scottish Government, the term “European site” has been retained to refer to the above sites protected in European Member States, Scotland and the rest of the UK (Scottish Government, 2020). However, these sites in the UK are now part of the National Site Network.
19. Where Scottish Ministers are required to undertake an appropriate assessment of a project in relation to Natura interest associated with a proposed projects potential cumulative effect, including transboundary and cross border effects, it is required that the proposed projects’ HRA will provide the required information in relation to potential transboundary impacts. This includes consultation with the EEA states to discuss the potential transboundary impacts identified.

2. CONSULTATION

20. Once an EEA State has confirmed that they wish to participate in discussion on potential transboundary assessment of a project, that EEA State must be consulted. The Scottish Ministers must supply the required information as set out in section 1.1.2. It is proposed that the following EU states should be consulted on whether they intend to participate (recommended based on potential for impact on birds due to large mean maximum foraging range of some seabirds, potential for impact on migratory fish species, and potential for impact on shipping and navigation receptors, particularly in relation to transits to/from other countries including effects on shipping routes to/from EEA State ports):
 - Netherlands;
 - Denmark;
 - Germany; and
 - Norway.



21. In addition to this, cross border consideration will be given to English territorial waters out to the European Economic Zone (EEZ).
22. A summary of the key issues raised during consultation for the Proposed Development relating to transboundary matters (including those raised in the Scoping Opinion) and how these have been addressed in this Offshore EIA Report are included in Table 2.1. Further information on the consultation activities undertaken for the Proposed Development can be found in volume 1, chapter 5.

Table 2.1: Summary of Key Transboundary Issues Raised During the Proposed Development Consultation Undertaken During Scoping (MS-LOT, 2022)

Date	Consultee and Type of Response	Topic	Issues Raised	Response to Issue Raised and/or Where Considered in this Offshore EIA Report
February 2022	Marine Scotland Science (MSS)	Fish and Shellfish	MSS would note that because of long distance migrations any effects of construction, operation and maintenance, and decommissioning may be much wider than the footprint of the project and could involve effects on diadromous fish from other countries, notably England.	Has been considered in the Fish and Shellfish Ecology EIA chapter (volume 2, chapter 9).
February 2022	NatureScot	Ornithology	We are content with the approach as outlined in Appendix 3 (paragraphs 32 and 33, section 3.3.1.6) such that there will be no transboundary impacts on birds in the breeding season, but there are potential impacts in the non-breeding season on birds originating from non-UK colonies which will be assessed in the Offshore EIA Report.	Considered in the Offshore and Intertidal Ornithology EIA chapter (volume 2, chapter 11).
		Marine Mammals	This latter site (North Northumberland Coast Special Areas of Conservation (SAC)) crosses the border between Scotland and England and needs to be considered in the assessment.	Updated justification provided in the Berwick Bank Offshore EIA Report. Berwickshire and North Northumberland Coast SAC considered within the RIAA (SSER, 2022c).
February 2022	Scottish Fishermen Association	Commercial Fisheries	Given the huge amount of seabed in this region being allocated for development, transboundary impacts are almost inevitable so should be scoped in. The Scottish Fishermen's Federation (SFF) is not comfortable with the reliance on desk top studies and modelling. The developer should take the opportunity to add knowledge and data on these matters for the common good.	A screening of transboundary impacts has been carried out in the Commercial Fisheries EIA chapter (volume 2, chapter 12). No potential for significant transboundary effects upon the interests of EEA States was identified due to there being no activity by non UK vessels in the commercial fisheries study area. In addition to desktop studies and the available fisheries data and statistics, the baseline characterisation has been informed through consultation with fisheries stakeholders (see section volume 3, appendix 12.1).
February 2022	Marine Scotland - Licensing Operations Team (MS-LOT)	Physical Processes	MS-LOT agrees that the receptors and potential impacts on physical processes detailed and scoped in for assessment during the different phases of the Development within Table 5.1 of the Scoping Report. Further the Scottish Ministers agree that transboundary impacts can be scoped out of any further assessment within the Offshore EIA Report.	Noted and agreed. Physical processes are scoped out of the transboundary impact assessment

3. SCREENING OF TRANSBOUNDARY IMPACTS

- 23. The assessment of potential transboundary impacts is presented in section 3.1 (Physical and Biological Environment) and section 3.2 (Human Environment).
- 24. Table 3.1 illustrates the proximity of the Proposed Development to EEA states. The distance of the Proposed Development to EEA states with which there may be the potential for transboundary impacts has been considered within this assessment. The distance of the Proposed Development from the boundary of the EEZ or ‘median line’ (line connecting points which are located at equal distance from two coastal states) of EEA states considered is presented in Table 3.1 and shown on Figure 1.1.

Table 3.1: Summary of Approximate Distances to the Nearest EEA States (Median Line)

European Economic Zone	Distance from the Proposed Development to the Nearest Marine Border (km)	Distance from the Proposed Development to the Nearest Marine Border (nm)
Norway	243	131
Denmark	280	151
Germany	288	156
Netherlands	291	157
Republic of Ireland	484	261
Belgium	534	288
France	557	301

- 25. Furthermore, the potential for cross-border impacts with England has also been considered, as although Scotland and England have different regulatory systems, impacts on English receptors are considered cross-border rather than transboundary. It is worth noting that the south-eastern extent of the Proposed Development array area is in the proximity of the English marine border.

3.1. PHYSICAL AND BIOLOGICAL ENVIRONMENT

- 26. The Applicant has carried out a transboundary screening for all potential physical and biological receptors. The conclusion of the transboundary screening assessment undertaken for each physical and biological environment topic is presented in the following sections. Where impacts have proposed to be scoped out of the Offshore EIA Report, these have not been considered within this transboundary screening assessment (Scottish Ministers have agreed in the Berwick Bank Scoping Opinion 2022 (MS-LOT, 2022) that both airborne noise and air quality can be scoped out), on the basis that no significant effects are predicted and will therefore not result in a significant effect in an EEA state. Table 3.2 provides a transboundary matrix with a summary of those impacts screening in and/or out of the transboundary assessment.
- 27. The potential for the Proposed Development to impact benthic subtidal and intertidal, fish and shellfish, marine mammal or ornithology features of nature conservation designations outside of the UK EEZ will be considered within the HRA process which is documented within the Proposed Development RIAA (SSER, 2022c) and relevant EIA chapters.

3.1.2. SUBSEA NOISE

- 28. Injury and disturbance ranges for marine mammals from elevated underwater noise during geophysical and geotechnical site-investigation surveys, piling operations, Unexploded Ordnance (UXO) clearance and vessel are included within volume 2, chapter 10. The measure of impact depends on the number of animals within that range (and therefore potentially injured) and the application of additional mitigation (such as the deployment of Acoustic Deterrent Devices (ADDs) and soft start initiation of piling. For piling, the scale of effects (range and number of animals potentially injured) was found to be very small. It was concluded that the spatial extent of Permanent Threshold Shift (PTS) was found to be localised for all piling scenarios. In view of all potential impacts, no potential for significant transboundary effects was identified due to the relatively limited scale of effects (regional) and appropriately assessed mitigation which would prevent effects occurring in other countries.

3.1.3. PHYSICAL PROCESSES

- 29. Potential impacts on physical processes receptors will likely be localised and temporary in nature as any sediments suspended during activities associated with the construction, operation and maintenance, or decommissioning of the Proposed Development are likely to re-settle in close proximity to the Proposed Development, thus causing no transboundary/cross-border impacts.
- 30. Therefore, considering both the location of the Proposed Development and the identified physical processes receptors and initial assessment of the physical processes baseline characterisation, no potential transboundary impacts are predicted for physical processes. This position is supported by stakeholder feedback as part of the Berwick Bank Offshore EIA Scoping Opinion (MS-LOT, 2022).

3.1.4. BENTHIC SUBTIDAL AND INTERTIDAL ECOLOGY

- 31. Potential impacts on benthic subtidal and intertidal ecology receptors include:
 - temporary habitat loss/disturbance;
 - increased suspended sediment concentrations and associated deposition;
 - impacts to invertebrates due to electromagnetic fields (EMF);
 - long-term subtidal habitat loss;
 - colonisation of hard structures; and
 - changes in physical processes.
- 32. Potential impacts on benthic subtidal and internal ecology receptors will largely be focused within the footprint of the Proposed Development and therefore no potential for transboundary impacts are predicted. Potential impacts as a result of suspended sediment concentration (SSC) are likely to be restricted to one tidal excursion.
- 33. Therefore, considering both the location of the Proposed Development and an initial assessment of baseline characterisation, and as the predicted impacts on the benthic and epibenthic communities will largely be focused within the footprint of the Proposed Development no potential transboundary impacts are predicted for benthic subtidal and intertidal ecology. This position is supported by stakeholder feedback on the Berwick Bank Offshore EIA Scoping Report (MS-LOT, 2022).

3.1.5. FISH AND SHELLFISH ECOLOGY

- 34. Potential impacts on fish and shellfish ecology receptors include:
 - temporary habitat loss and disturbance;

- underwater noise;
- increased suspended sediment concentrations and associated sediment deposition;
- long-term habitat loss;
- colonisation of hard structures; and
- EMFs from subsea electrical cabling.

35. There is the potential for injury and/or disturbance to fish receptors as a result of increased noise during the construction phase of the Proposed Development. In particular, increased noise during construction has the potential to affect Annex II migratory fish species, or species that have commercial value. Direct impacts may occur as a result of, for example, piling during construction of foundations, and indirect impacts may occur as a result of, for example, changes in prey availability. There is therefore the potential for transboundary impacts on fish and shellfish ecology associated with the Proposed Development as a result of the construction of the Proposed Development. The transboundary assessment on fish and shellfish ecology is presented in volume 2, chapter 9.

3.1.6. MARINE MAMMALS

36. Potential impacts on marine mammal receptors include:

- injury and disturbance from piling;
- disturbance of marine mammals from vessel use and other construction activities;
- increased vessel may result in collision with marine mammals;
- changes in prey availability; and
- injury and disturbance from operation and maintenance activities.

37. The regional marine mammal study area extends beyond the limits of Scottish or UK territorial waters, and it is acknowledged that some marine mammals can travel large distances to forage, including between the waters of neighbouring EU countries. Direct impacts may occur as a result of, for example, piling during construction of foundations, and indirect impacts may occur as a result of, for example, changes in prey availability.

38. A screening of transboundary impacts has been carried out and has identified that there was no potential for significant transboundary effects with regard to marine mammals from the Proposed Development upon the interests of EEA States. This was due to the relatively limited scale of effects (regional) and appropriately assessed mitigation which would prevent effects occurring in other countries.

3.1.7. OFFSHORE AND INTERTIDAL ORNITHOLOGY

39. Potential impacts on offshore and intertidal ornithology receptors include:

- disturbance of birds from vessels and other construction activities;
- disturbance from operation and maintenance activities;
- barrier effects arising from presence of wind turbines;
- displacement (avoidance resulting from presence of turbines, loss of foraging habitat);
- collisions with wind turbines; and
- changes in prey availability.

40. Based on the location of the Proposed Development and the likely key receptors, it is considered that there will be no significant transboundary effects on birds in the breeding season, on the basis that, (with the exception of fulmar *Fulmarus glacialis*) there are no non-UK seabird colonies within mean-maximum foraging range (+1SD) of the Proposed Development.

41. In the non-breeding season, it is possible that birds from non-UK seabird colonies may occur within the Proposed Development and therefore there is the potential for impacts on birds originating from non-UK colonies. These potential transboundary effects are addressed in the Offshore EIA Report. (volume 2, chapter 11).

3.1.8. CLIMATE

42. Emissions as a result of the construction, operation and maintenance of the Proposed Development would include greenhouse gases (GHG), which have the potential to contribute to climate change. Effects of the Project on climate through the release of GHG emissions have been assessed in Appendix 21. GHG emissions from the Proposed Development are in their very nature transboundary, but do not affect any one particular third party state, rather the entire climate system. As the climate is one global receptor and the climate change assessment undertaken considers the Proposed Development will have a beneficial effect on climate, this topic has been screened out from a requirement to consult on the possible transboundary effects.

Table 3.2: Transboundary Matrix for the Proposed Development – Physical and Biological Environment

Screening Criteria	Subsea Noise	Physical Processes	Benthic Subtidal and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology
Characteristics of the Proposed Development	For a detailed description of the characteristics of the Proposed Development, see volume 1, chapter 3.					
Location of the Proposed Development	The Proposed Development is an offshore wind farm comprising up to 307 wind turbines and up to ten OSPs/Offshore convertor station platforms. The maximum rotor blade diameter will be no greater than 310 m, with a maximum blade tip height of 355 m above Lowest Astronomical Tide (LAT) and a minimum blade tip height of 37 m above LAT. Foundation options under consideration comprise piled jacket and suction caisson jacket foundations. Scour protection may comprise concrete mattresses, rock and artificial fronds. Inter-array cables, interconnector cables and offshore export cables will be installed to connect the turbines to the OSPs/Offshore convertor station platforms, the OSPs/Offshore convertor station platforms to each other, and the OSPs/Offshore convertor station platforms to the landfall. Cable protection may also be installed.					
Potential Impacts and Pathways	Screened out: no significant transboundary effects are predicted.	Screened out: no significant transboundary effects are predicted.	Screened out: no significant transboundary effects are predicted.	Screened in: see volume 2, chapter 9.	Screened out: no significant transboundary effects are predicted.	Screened out for breeding season: no significant transboundary effects are predicted. Screened in for non-breeding season: it is possible that birds from non-UK seabird colonies may occur within the Proposed Development in the non-breeding season and therefore there is the potential for effects on birds originating from non-UK colonies, however these are considered unlikely to be significant. See volume 2, chapter 11.
Environmental Importance						
Extent						
Magnitude						
Probability						
Duration						
Frequency						
Reversibility						
Cumulative Impacts						

3.2. HUMAN ENVIRONMENT

43. The Applicant has carried out a transboundary screening for all potential human environment receptors. The conclusion of the transboundary screening assessment undertaken for each human environment topic is presented in the following sections. Where impacts have proposed to be scoped out of the Offshore EIA Report, these have not been considered within this transboundary screening assessment, on the basis that no significant effects are predicted and will therefore not result in a significant effect in an EEA state (see Table 3.3).

3.2.2. COMMERCIAL FISHERIES

44. As the Proposed Development array is located beyond the 12 nm limit, where EU member states currently have access to fishing, there is potential for transboundary impacts upon commercial fisheries due to the construction, operation and maintenance, and decommissioning phase of the Proposed Development. However, there is no potential for transboundary impacts upon aquaculture due to the distance to EEA states.

45. The transboundary impacts upon commercial fisheries identified include:

- loss or restricted access to fishing grounds;
- displacement of fishing activities into other areas;
- interference with fishing activity;
- increased steaming times;
- safety issues for fishing vessels; and
- potential impacts on commercially exploited species.

46. A screening of transboundary impacts has been carried out and has identified that there was no potential for significant transboundary effects with regard to commercial fisheries with the Proposed Development upon the interests of EEA States. This takes account of the negligible levels of activity by non-UK vessels in the area of the Proposed Development.

3.2.3. SHIPPING AND NAVIGATION

47. The key navigational features in proximity to the Proposed Development include a number of other planned offshore wind farms, Ministry of Defence (MoD) practice areas, ammunition dumping grounds, spoil grounds and anchorage areas (see volume 2, chapter 13). Numerous charted wrecks and aids to navigation are also present in proximity to the Proposed Development.

48. Potential impacts on shipping and navigation receptors include:

- vessel displacement;
- increased vessel to vessel collision risk between a third-party vessel and a project vessel;
- increased vessel to vessel collision risk between third party vessels;
- vessel to structure allision risk;
- reduced access to local ports;
- commercial traffic displacement;
- fishing vessel and recreational vessel displacement;
- increased vessel to vessel collision risk between a third-party vessel and a project vessel;
- increased vessel to vessel collision risk involving fishing vessels and/or recreational vessels;
- Increased vessel to vessel collision risk involving fishing vessels and/or recreational vessels;
- vessel to structure allision risk for commercial vessels;

- vessel to structure allision risk for fishing vessels in transit;
- vessel to structure allision risk for recreational vessels;
- reduced access to local ports;
- reduction of under keel clearance;
- anchor interaction with subsea cables;
- interference with marine navigation, communications and position fixing equipment; and
- reduction of emergency response capability due to increased incident rates and reduced access for subject access request responders.

49. It is considered that there is the potential for transboundary impacts, particularly in relation to transits to/from other countries including effects on shipping routes to/from EEA State ports. Particularly in relation to transits to/from other countries including effects on shipping routes to/from transboundary ports may lead to impacts. The transboundary assessment on shipping and navigation is presented in volume 2, chapter 13.

3.2.4. AVIATION, MILITARY AND COMMUNICATIONS

50. Potential impacts associated with the Proposed Development identified for aviation, military and communication receptors include:

- potential impacts on low flying operation during all phases; and
- potential impacts on NATS En Route (NERL) Air Traffic Control (ATC) radar, Military ATC radar and military Air Defence (AD) radars during the operation and maintenance phase.

51. As there are no oil and gas installations in the area, there is no potential for low flying operations (where oil and gas platforms are serviced from non-EEA States) associated with EEA States to be affected. Radars identified are all UK based, therefore considering the location of the Proposed Development and the identified receptors above, no transboundary impacts associated with aviation, military and communications are predicted to arise.

3.2.5. SEASCAPE, LANDSCAPE AND VISUAL RESOURCES

52. Potential impacts associated with the Proposed Development identified for seascape, landscape and visual receptors include:

- potential impacts of the construction and decommissioning of the offshore elements of the Proposed Development on seascape character, landscape character and visual amenity (views).
- potential impacts of the operation and maintenance of the offshore elements of the Proposed Development on seascape character, landscape character and visual amenity (views).
- transboundary effects may arise when impacts from a development within one EEA state affects the environment of an EEA state(s).

53. The Proposed Development array area is located approximately 336 km from the coastline of the nearest EU member state (Republic of Ireland) and is located 484 km from Norway across the North Sea. There are no areas of land within EEA states located within the Seascape, Landscape and Visual Impact Assessment (SLVIA) study area. The Zone of Theoretical Visibility (ZTV) shows that there is no theoretical visibility of the Proposed Development beyond approximately 75 km due to the effects of earth curvature, which would effectively 'hide' the wind turbines behind the horizon at this distance.

54. Due to the concentrated nature of any potential impacts on the seascape, landscape and visual resource to the UK coastline within the SLVIA study area, it is concluded that there is no potential for significant transboundary impacts on seascape, landscape or visual receptors and therefore the SLVIA scopes this

matter out of further assessment on the grounds that there are unlikely to be any transboundary effects because of the distance between the Proposed Development and the boundaries of EEA States.

3.2.6. CULTURAL HERITAGE

55. This screening exercise identified that there is no potential for transboundary impacts upon cultural heritage setting receptors due to construction, operational and maintenance, and decommissioning impacts of the Proposed Development. Due to the concentrated nature of any potential impacts on the cultural heritage setting within the Cultural Heritage setting study area, transboundary impacts are unlikely to occur on cultural heritage setting receptors and therefore transboundary impacts are scoped out from further consideration within the Offshore EIA Report.

3.2.7. INFRASTRUCTURE AND OTHER USERS

56. Potential impacts associated with the Proposed Development identified for infrastructure and other users receptors include:
- displacement of recreational sailing and motor cruising, recreational fishing and other recreational activities during all phases; and
 - displacement of recreational fishing and other recreational activities along the nearshore and intertidal section of the Proposed Development export cable corridor during all phases.
57. As no potential infrastructure and other users receptors associated with EEA states have been identified it is considered that there are no potential transboundary impacts upon infrastructure and other users due to construction, operation and maintenance, and decommissioning associated with the Proposed Development.

3.2.8. OFFSHORE SOCIO-ECONOMICS AND TOURISM

58. Potential impacts associated with the Proposed Development identified for offshore socio-economics and tourism receptors include:
- impact on employment in the supply chain;
 - impact on the amount of Gross Value Added (GVA) supported;
 - impact on access to related employment amongst local residents;
 - impact on the demand for housing, accommodation and local services; and
 - impact on tourism and recreation activity and associated economic value.
59. Potential transboundary socio-economics and tourism impacts upon EEA states may arise through the purchase of project components, equipment and the sourcing of labour from companies based outside the UK. The sourcing of materials and labour from EEA states is assumed to provide beneficial effects to the economies of EEA states and so the consideration of measures envisaged to reduce or eliminate such effects is not relevant in the context of transboundary impacts. It is not possible to specify the location of the supply chain resourcing at this time – only to determine what supply chain resourcing will be located at the local, Scotland or UK levels. Therefore, it is not possible to estimate the level of significance of socio-economic effects on specific EEA states. It is therefore proposed that transboundary impacts on offshore socio-economic and tourism receptors are screened out.

Table 3.3: Transboundary Matrix for the Proposed Development – Human Environment

Screening Criteria	Commercial Fisheries	Shipping and Navigation	Aviation, Military and Communications	Seascape, Landscape and Visual Resources	Cultural Heritage Setting	Infrastructure and Other Users	Offshore Socio-economic and Tourism
Characteristics of the Proposed Development	See Table 3.2.						
Location of the Proposed Development	See Table 3.2.						
Potential Impacts and Pathways	Screened out: no significant transboundary effects are predicted.	Screened in: see volume 2, chapter 13.	Screened out: no significant transboundary effects are predicted.	Screened out: no significant transboundary effects are predicted.	Screened out: no significant transboundary effects are predicted.	Screened out: no significant transboundary effects are predicted.	Screened out: no significant transboundary effects are predicted.
Environmental Importance							
Extent							
Magnitude							
Probability							
Duration							
Frequency							
Reversibility							
Cumulative Impacts							

4. CONCLUSIONS

60. This transboundary screening has been carried out considering the location of the Proposed Development and the current project description (volume 1, chapter 3). There is the potential for transboundary impacts associated with the Proposed Development for the following topics:
- fish and shellfish ecology;
 - offshore and intertidal ornithology; and
 - shipping and navigation.
61. It is proposed that the following EU states should be consulted on whether they intend to participate (recommended based on potential for impact on birds due to large mean maximum foraging range of some seabirds, potential for impact on migratory fish species, and potential for impact on shipping and navigation receptors, particularly in relation to transits to/from other countries including effects on shipping routes to/from EEA State ports):
- Netherlands;
 - Denmark;
 - Germany; and
 - Norway.

5. REFERENCES

HM Government (2019). *The Environment (EU Exit) (Scotland) (Amendment etc.) Regulations 2019*. Available at: [The Environment \(EU Exit\) \(Scotland\) \(Amendment etc.\) Regulations 2019 \(legislation.gov.uk\)](https://www.legislation.gov.uk). Accessed on 20 September 2021.

MS-LOT (2022). *Scoping Opinion for Berwick Bank Wind Farm*. Available at: [scoping_opinion_8.pdf \(marine.gov.scot\)](https://www.marine.gov.scot).

Planning Inspectorate (PINS) (2015). *Advice Note Twelve: Transboundary Impacts and Process*. Available at: [Advice Note Twelve: Transboundary Impacts and Process | National Infrastructure Planning \(planninginspectorate.gov.uk\)](https://www.planninginspectorate.gov.uk). Accessed on 20 September 2021.

Scottish Government (2018). *Offshore Wind, Wave and Tidal Energy Applications: Consenting and Licensing Manual*.

Scottish Government (2020). *EU Exit: habitats regulations in Scotland*. Available at: [EU Exit: habitats regulations in Scotland - gov.scot \(www.gov.scot\)](https://www.gov.scot). Accessed on 20 September 2021.

SSER (2020). *2020 Berwick Bank Wind Farm: Offshore Scoping Report*. Available at: <https://www.sserenewables.com/media/0t5n05b4/berwick-bank-wind-farm-offshore-scoping-report.pdf>. Accessed on: 15 September 2021.

SSER (2021a). *Berwick Bank Wind Farm Offshore Scoping Report*. Available at: <https://berwickbank-eia.com/offshore-scoping/>. Accessed on 25 October 2021.

SSER (2022c). *Berwick Bank Wind Farm Offshore Report to Inform Appropriate Assessment*.

