

MONA OFFSHORE WIND PROJECT

Preliminary Environmental Information Report

Volume 5, annex 5.2: Transboundary impacts screening



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Image of an offshore wind farm

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Glossary

Term	Meaning
Cetacean	The order Cetacea includes whales, dolphins and porpoises, collectively known as cetaceans.
Crown Dependency	Self-governing possessions of the British Crown.
European Sites	What were previously known as 'Natura' sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
The Planning Inspectorate	An executive agency of the UK Government with responsibility for making decisions and providing recommendations and advice on a range of land use planning-related issues.
Transboundary impacts	Impacts that may arise from an activity within one state that affect the environment or other interests of another state.

Acronyms

Acronym	Description
EEA	European Environment Agency
EEZ	UK Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMF	Electromagnetic field
EnBW	Energie Baden-Württemberg
EU	European Union
DCO	Development Consent Order
GHG	Green House Gas
HRA	Habitats Regulations Assessment
ISAA	Information to Support the Appropriate Assessment
LSE	Likely Significant Effect
MMO	Marine Management Organisation
MU	Management Unit
NSIP	Nationally Significant Infrastructure Project
OSP	Offshore Substation Platform
PEIR	Preliminary Environmental Impact Report
PSR	Primary Surveillance Radar
SAC	Special Area of Conservation
SAR	Search and Rescue
SCOS	Special Committee on Seals
SPA	Special Protection Area
SSC	Suspended Sediment Concentrations

Acronym	Description
UNECE	The United Nations Economic Commission for Europe
UXO	Unexploded Ordnance

Units

Unit	Description
km	Kilometres
km ²	Kilometres squared

1 TRANSBOUNDARY IMPACTS SCREENING

1.1 Introduction

1.1.1.1 A joint venture of bp Alternative Energy Investments Ltd (hereafter referred to as bp) and Energie Baden-Württemberg AG (hereafter referred to as EnBW) on behalf of the Mona Offshore Wind Project Limited (hereafter referred to as the Applicant), is developing the Mona Offshore Wind Project.

1.1.1.2 Transboundary impacts relate to those impacts that may arise from an activity within one state that affect the environment or other interests of another state. This report provides the screening assessment of the potential for transboundary impacts to occur on the environment or interests of other states as a result of the Mona Offshore Wind Project. The screening assessment is based on what is currently known of the likely spatial scale of impacts arising from the Mona Offshore Wind Project and the economic interests of other states in the vicinity.

1.1.1.3 This report is intended to provide information to The Planning Inspectorate such that the Secretary of State can evaluate the likelihood of such significant impacts occurring and the need, if any, for transboundary consultation with other states (i.e. transboundary consultees) during the pre-application period. The screening of transboundary impacts will be revisited during the Mona Offshore Wind Project pre-application period during the Environmental Impact Assessment (EIA) process to ensure that any significant transboundary impacts are fully considered within the Environmental Statement submitted alongside the application for Development Consent.

1.1.1.4 It should be noted that the Isle of Man is a Crown Dependency of the UK and is therefore, not considered to be a transboundary consultee for the Mona Offshore Wind Project. As such, potential impacts upon environmental receptors within the Isle of Man are not considered to be transboundary and are fully considered in the Preliminary Environmental Information Report (PEIR) (see volume 2, chapters 6 to 15; volume 3, chapters 16 to 24; and volume 4, chapters 25 to 28).

1.2 Legislative context

1.2.1.1 The need to consider transboundary impacts has been embodied by The United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context, adopted in 1991 in the Finnish city of Espoo and is commonly referred to as the 'Espoo Convention'. The Convention requires that assessments are extended across borders between Parties to the Convention when a planned activity may cause significant adverse transboundary impacts. The Convention is aimed at preventing, mitigating and monitoring environmental damage by ensuring that explicit consideration is given to transboundary environmental factors before a final decision is made as to whether to approve a project. The Espoo Convention requires that the Party of origin notifies affected Parties about activities listed in Appendix I of the Convention (which includes 'major installations for the harnessing of wind power for energy production (wind farms)') and likely to cause a significant adverse transboundary impact.

1.2.1.2 Regulation 32 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) for (the 2017 EIA Regulations) and regulations 18 to

20 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (the 2007 EIA Regulations) set out a prescribed process of consultation and notification where the Secretary of State is of the view that a development is likely to have a significant transboundary effects.

1.3 Guidance

1.3.1.1 The Planning Inspectorate's Advice Note Twelve (The Planning Inspectorate, 2020) sets out the procedures for consultation in association with an application for a Development Consent Order (DCO), where such development may have significant transboundary impacts. The note sets out the roles of The Planning Inspectorate, other states and developers.

1.3.1.2 Applicants have no formal role under the Regulation 32 process, as the duties prescribed by Regulation 32 in notifying and consulting with other states on potential transboundary impacts are the responsibility of the Secretary of State. However, applicants are advised to:

- Consider, when preparing documents for consultation and application, that The Planning Inspectorate may notify the relevant state of their particular project
- Carry out preparatory work to complete a transboundary screening matrix to assist the Secretary of State in determining the potential for likely significant impacts on the environment in other states
- Submit the transboundary screening matrix along with the scoping request, if a Scoping Opinion is sought by the developer (a transboundary impacts screening matrix was submitted with the Mona Offshore Wind Project Scoping report).

1.3.1.3 This transboundary screening report provides information about the Mona Offshore Wind Project which will be the subject of the DCO application. It sets out information relating to the potential impacts of the Mona Offshore Wind Project and the interests of the other states in the vicinity, in order to assist The Planning Inspectorate in forming a view on the likelihood of significant transboundary impacts arising from the Mona Offshore Wind Project. The information contained within the Annex to Advice Note Twelve (The Planning Inspectorate, 2020) (including the criteria and considerations that will be taken into account by The Planning Inspectorate during screening), have also been used in the preparation of this transboundary screening report.

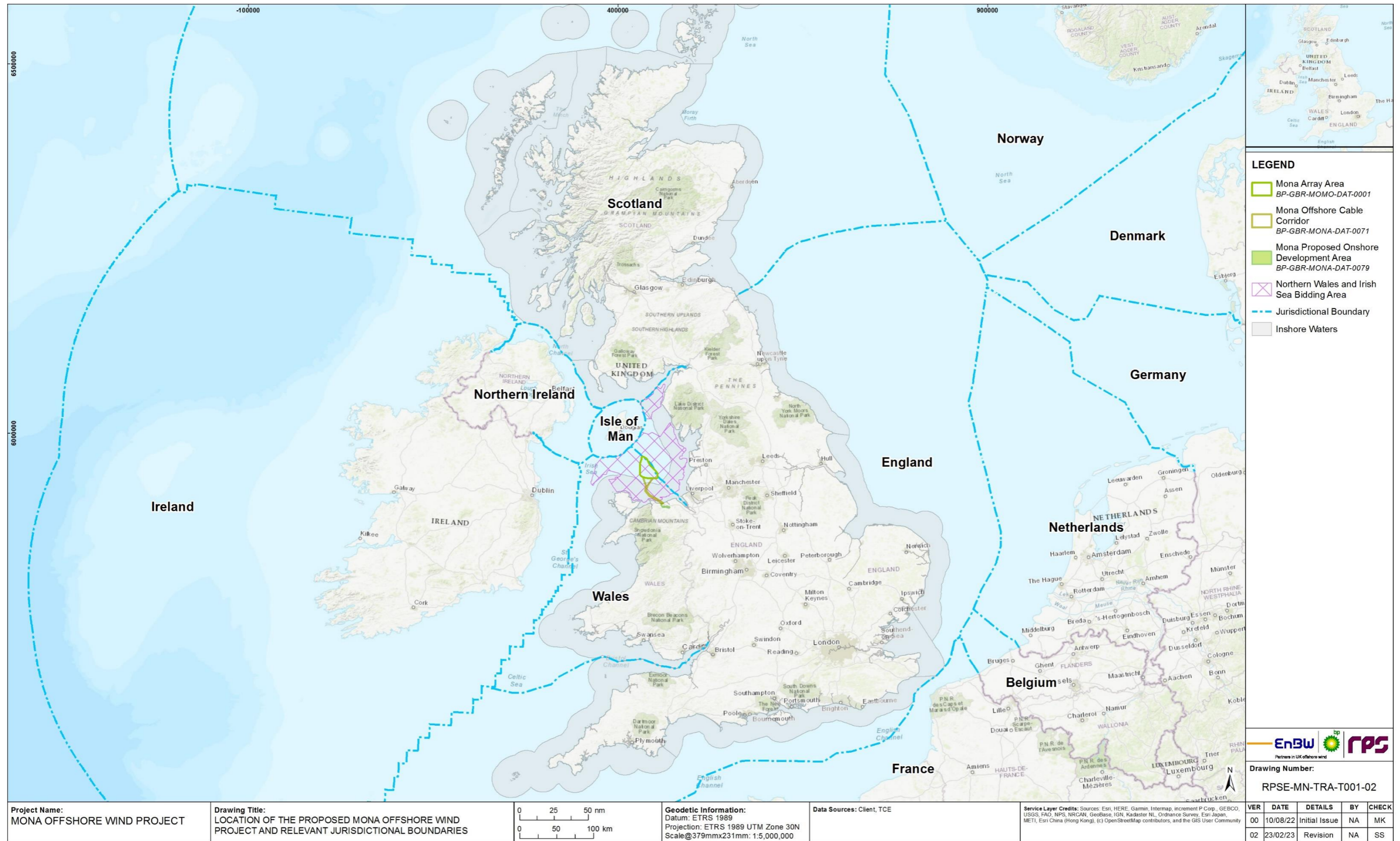


Figure 1.1: Location of the proposed Mona Offshore Wind Project and relevant jurisdictional boundaries.

1.4 Consultation

- 1.4.1.1 The Applicant produced an EIA Scoping Report for the Mona Offshore Wind Project, which was submitted to The Planning Inspectorate and consulted on in accordance with the Planning Act 2008 plus associated guidance and regulations, which includes the aforementioned EIA Regulations. As part of this consultation, relevant transboundary consultees have been contacted (see Table 1.1).
- 1.4.1.2 A summary of the key issues raised during consultation activities undertaken to date that are specific to this transboundary impacts screening report is presented in Table 1.1 below.

Table 1.1: Summary of key consultation topics raised during consultation activities undertaken for the Mona Offshore Wind Project relevant to transboundary impacts.

Date	Consultee and type of response	Topics	Response to issue raised and/or where considered in this annex
June 2022	The Planning Inspectorate – Scoping Opinion	The Planning Inspectorate considers that all potential impacts identified to mobile species should also be addressed in the transboundary impacts assessment.	This transboundary impacts screening identifies potential transboundary impacts to mobile species in the following sections: <ul style="list-style-type: none"> • Offshore transboundary impacts (section 1.6.1) <ul style="list-style-type: none"> – Fish and shellfish ecology – Marine mammals – Offshore ornithology • Onshore transboundary impacts <ul style="list-style-type: none"> – Terrestrial ecology and intertidal birds (section 1.7.2).
June 2022	The Planning Inspectorate – Scoping Opinion	<p>The Planning Inspectorate agrees that significant transboundary impacts on physical processes, benthic subtidal and intertidal ecology, marine archaeology, geology and ground conditions, hydrology and flood risk, historic environment, land use and recreation, traffic and transport, noise and vibration, air quality, seascape, landscape and visual resources, socio-economics and community and aviation and radar are unlikely and can be scoped out of the Environmental Statement.</p> <p>The Planning Inspectorate does not agree the following topics can be scoped out:</p> <ul style="list-style-type: none"> • Other sea users: limited evidence and no quantified analysis has been provided to demonstrate that there would be ‘lower levels of offshore cruising and racing’ between the UK and Ireland; therefore this matter should be scoped in. • Terrestrial ecology and intertidal birds: The Planning Inspectorate considers that there is insufficient evidence to predict that significant transboundary impacts will not arise and does not agree that this matter can be scoped out of the assessment at this stage. Accordingly, the Environmental Statement should include an assessment of these matters or information demonstrating the absence of Likely Significant Effect (LSE). 	<p>Potential transboundary impacts on other sea users have been included within section 1.6.2.</p> <p>Potential transboundary impacts on terrestrial ecology and intertidal birds have been included in section 1.7.2.</p>
June 2022	Natural England – Scoping Opinion	Marine mammal management units ¹ should be used to screen in transboundary sites.	Marine mammal management units have been considered within section 1.6.1 and volume 2, chapter 9: Marine mammals of the PEIR.
June 2022	Natural Resources Wales – Scoping Opinion	The cumulative and in combination assessments should also consider transboundary impacts from other plans or projects within the relevant marine mammal management units.	This is considered within the cumulative assessment for marine mammals in volume 2, chapter 9: Marine mammals of the PEIR.

¹ Management units (MUs) for marine mammals in UK waters, which provide an indication of the spatial scales at which impacts of plans and projects alone, cumulatively and in combination, need to be assessed for the key cetacean species in UK waters, with consistency across the UK. For cetaceans, these management units are defined by the Inter-Agency Marine Mammal Working Group. For seal species (grey and harbour seals), the Special Committee on Seals (SCOS) provided advice on seal Mus.

1.5 Screening of transboundary impacts

- 1.5.1.1 A series of screening matrices for potential transboundary impacts associated with the Mona Offshore Wind Project are presented for the offshore physical and biological environment (Table 1.3), offshore human environment (Table 1.4), onshore environment (Table 1.5) and offshore and onshore combined topics (Table 1.6). These screening matrices have been based upon an initial understanding of the potential impacts arising from the Mona Offshore Wind Project (on the basis of the project description presented in volume 1, chapter 3: Project description of the PEIR and follow the suggested format set out by The Planning Inspectorate (2020).
- 1.5.1.2 The screening matrices consider all potential transboundary impacts that may occur from all phases of the Mona Offshore Wind Project (i.e. construction, operational and maintenance, and decommissioning). The matrices also address the predicted spatial and temporal scale of potential transboundary impacts for those interests that are assessed within this PEIR.
- 1.5.1.3 Potential impacts upon European Sites within other European Environment Agency (EEA) states (as well as those in the UK) are considered separately within the screening process for the Habitats Regulation Assessment (HRA).
- 1.5.1.4 The nearest applicable state to the Mona Offshore Wind Project is Ireland. The distances from the Mona Offshore Wind Project to the jurisdictional boundaries of applicable states are presented in Table 1.2 and shown on Figure 1.1.

Table 1.2: Summary of distances from the Mona Offshore Wind Project to the nearest applicable states.

State	Distance from the Mona Array Area to nearest state border (km)	Distance from the Mona Offshore Cable Corridor to nearest state border (km)
Ireland	80.2	71.6
France	447.8	412.9
Belgium	510.3	487.1

1.6 Offshore transboundary impacts

1.6.1 Physical and biological environment

1.6.1.1 A screening matrix has been completed for potential transboundary impacts for the offshore physical and biological environment and is presented in Table 1.3. The conclusions of the transboundary screening for each offshore physical and biological environment topic are presented in the following sections. Where transboundary impacts have been screened into the EIA process, the assessment is presented in the relevant PEIR topic chapter.

Physical processes

1.6.1.2 The offshore components of the Mona Offshore Wind Project are located entirely within the UK Exclusive Economic Zone (EEZ). Any potential impacts on physical processes are likely to be confined to within one tidal excursion of the Mona Offshore

Wind Project (i.e. potential changes to the wave regime, tidal regime and sediment transport due to the presence of infrastructure, and potential changes in Suspended Sediment Concentrations (SSC) due to construction and maintenance activities).

1.6.1.3 No transboundary impacts upon physical processes are anticipated. It is proposed that transboundary impacts upon physical processes are screened out of the EIA process.

Benthic subtidal and intertidal ecology

1.6.1.4 It is considered that there is no pathway by which direct or indirect impacts arising from the Mona Offshore Wind Project could significantly affect the benthic subtidal or intertidal ecology of another state. The extent of any predicted impacts upon benthic subtidal and intertidal ecological receptors is likely to be limited to the footprint of the Mona Offshore Wind Project (for temporary and long-term habitat loss and colonisation or removal of hard substrates) and within one tidal excursion of the Mona Offshore Wind Project (for changes in SSCs and associated deposition and changes in physical processes).

1.6.1.5 No transboundary impacts upon benthic subtidal and intertidal ecology are anticipated. It is proposed that transboundary impacts on benthic subtidal and intertidal ecology are screened out of the EIA process.

Fish and shellfish ecology

1.6.1.6 There is potential for transboundary impacts upon fish and shellfish ecology due to construction, operational and maintenance and decommissioning phases of the Mona Offshore Wind Project.

1.6.1.7 These include direct impacts due to underwater noise from piling operations and indirect impacts caused by loss of fish and shellfish habitat or disturbance to habitat due to increased SSCs and associated sediment deposition from the installation and decommissioning of foundations and cables.

1.6.1.8 These activities have the potential to directly affect Annex II migratory fish species that are listed as features of European Sites in other states, or species that are of commercial importance for fishing fleets of other states. Indirect impacts may include loss of or disturbance to fish spawning and nursery habitats in the Irish Sea that are important for migratory fish species either designated as Annex II species or of commercial importance to other states. The fish and shellfish receptors likely to be present within the Mona fish and shellfish study area are outlined in full in volume 2, chapter 8: Fish and shellfish ecology of the PEIR and include a number of commercially important species as well as diadromous species likely to be found in the area. Volume 2, chapter 8: Fish and shellfish ecology of the PEIR also identifies the spawning and nursery grounds located within and around the Mona Array Area and the Mona Offshore Cable Corridor.

1.6.1.9 An assessment of the potential impacts related to construction, particularly as a result of underwater noise from piling, is presented in volume 2, chapter 8: Fish and shellfish ecology of the PEIR (including both a Mona assessment and a cumulative assessment). The majority of potential impacts related to construction are considered likely to be short term and temporary. The operations and maintenance phase is considered less likely to result in likely significant impacts, due to potential impacts being limited spatially (i.e. within the boundaries of the Mona Offshore Wind Project).

- Although the potential impacts associated with long term habitat loss are, by nature, longer term impacts which may be reversible depending on the decommissioning strategy.
- 1.6.1.10 It is proposed that potential transboundary impacts on fish and shellfish ecology and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 8: Fish and shellfish ecology of the PEIR. Potential impacts upon European Sites with fish as a qualifying feature are assessed within the Information to Support the Appropriate Assessment (ISAA).
- Marine mammals**
- 1.6.1.11 There is potential for transboundary impacts upon marine mammals due to the mobile nature of marine mammal species. The marine mammal species likely to be present in the Mona marine mammal study area are outlined in volume 2, chapter 9: Marine mammals of the PEIR. Key species include harbour porpoise, bottlenose dolphin, short-beaked common dolphin, Risso's dolphin, minke whale and grey seal.
- 1.6.1.12 Direct impacts may occur due to underwater noise generated during construction and decommissioning, including noise associated with construction and vessel activity. Pile driving during the installation of foundations and pre-construction clearance of Unexploded Ordnance (UXO) are key impacts linked to elevated underwater noise. Indirect impacts to marine mammal receptors from changes in prey availability could occur as a result of (e.g. habitat loss, underwater noise, increased SSCs and associated sediment deposition) and other impacts scoped in for fish and shellfish receptors. The operational and maintenance phase is considered less likely to result in significant impacts although the potential impacts associated with the operational noise of wind turbines and Electromagnetic Fields (EMF) are, by nature, longer term impacts which are reversible depending on the decommissioning strategy.
- 1.6.1.13 An assessment of the potential impacts to marine mammals occurring during construction, particularly as a result of underwater noise from piling, is presented in volume 2, chapter 9: Marine mammals of the PEIR (including both a Mona Offshore Wind Project assessment and a cumulative assessment). The majority of impacts during construction are however considered likely to be short term and temporary.
- 1.6.1.14 It is proposed that potential transboundary impacts upon marine mammals and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 9: Marine mammals of the PEIR. Potential impacts upon European Sites with marine mammals as a qualifying feature will be assessed within the draft HRA.
- Offshore ornithology**
- 1.6.1.15 There is potential for transboundary impacts upon ornithological receptors due to the wide foraging and migratory ranges of typical bird species in the Irish Sea. In addition, a number of bird species that have been recorded in the vicinity of the Mona Offshore Wind Project include those that are listed as qualifying features of European Sites in other states. The bird species likely to be present in the Mona Array Area and Mona Offshore Cable Corridor are outlined in volume 2, chapter 10: Offshore ornithology of the PEIR and include true pelagic seabirds (e.g. kittiwake, guillemot and gannet), other species that spend part of their annual life cycle at sea (e.g. divers and gulls) as well as non-seabird migrants (e.g. wildfowl, waders and passerines).
- 1.6.1.16 The key direct impacts for ornithological receptors are likely to arise during the operational and maintenance phase as a result of collision risk with rotating wind turbine blades which may result in direct mortality of individuals and barrier to movement caused by the physical presence of structures which may prevent clear transit of birds between foraging and breeding sites, or on migration. Direct impacts to ornithological receptors may, however, also occur due to temporary habitat loss/disturbance across all phases of the Mona Offshore Wind Project and permanent habitat loss during the operational and maintenance phase. Indirect impacts may cause disturbance to prey (fish) species from important bird feeding areas or changes to prey availability due to changes to physical processes and habitat as a result of the presence of operational infrastructure.
- 1.6.1.17 It is likely that there will be impacts to ornithological receptors occurring during the operational and maintenance phase, particularly as a result of disturbance and displacement and collision risk. Unlike the majority of impacts during construction, which are considered likely to be short term and temporary, impacts during the operational and maintenance phase are likely to be long term, continuous and of varying spatial extent depending on the species, although it is likely that they will be reversible following the decommissioning of the Mona Offshore Wind Project.
- 1.6.1.18 It is proposed that potential transboundary impacts upon offshore ornithology and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 10: Offshore ornithology of the PEIR. Potential impacts upon European Sites with birds as a qualifying feature have been assessed within the draft HRA.

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Table 1.3: Offshore transboundary screening matrix for the Mona Offshore Wind Project – offshore physical and biological environment.

Screening criteria	Physical processes	Benthic subtidal and intertidal ecology	Fish and shellfish ecology	Marine mammals	Offshore ornithology
Characteristics of the development	<p>For a detailed description, see volume 1, chapter 3: Project description of the PEIR.</p> <p>Key offshore components of the Mona Offshore Wind Project include: wind turbines, foundations, scour protection, inter-array cables, interconnector cables, offshore substation platforms (OSPs) and offshore export cables.</p> <p>The Mona Offshore Wind Project will include all associated offshore infrastructure (including up to 107 wind turbines and four OSPs). The Mona Offshore Cable Corridor extends from the Mona Array Area to the selected landfall at Llandulas on the north coast of Wales.</p>				
Location of development (including existing use) and geographical area	<p>The Mona Array Area is 449.97km² and is located in the east Irish Sea, 28.2km from the north coast of Wales, 39.9km from the northwest coast of England, 42.6km from the Isle of Man and 80.2km from the Irish EEZ (i.e. the median line between UK and Irish waters).</p> <p>The maximum length for the Mona offshore export cables is 360km.</p>				
Environmental importance	<p>No significant transboundary impacts are predicted (see volume 2, chapter 6: Physical processes of the PEIR).</p>	<p>No significant transboundary impacts are predicted (see volume 2, chapter 7: Benthic subtidal and intertidal ecology of the PEIR). Screened out.</p>	<p>Potential transboundary impact (see volume 2, chapter 8: Fish and shellfish ecology of the PEIR).</p>	<p>Potential transboundary impact (see volume 2, chapter 9 Marine mammals of the PEIR).</p>	<p>Potential transboundary impact (see volume 2, chapter 10 Offshore ornithology of the PEIR).</p>
Potential impacts and carrier					
Extent					
Magnitude					
Probability					
Duration					
Frequency					
Reversibility					
Cumulative impacts					

1.6.2 Human environment

1.6.2.1 A transboundary screening matrix has been completed for potential offshore transboundary impacts for the offshore human environment and is presented in Table 1.4. The conclusions of the transboundary screening for each offshore human environment topic are presented in the following sections.

Commercial fisheries

1.6.2.2 The commercial fisheries likely to be operating in the Mona commercial fisheries study areas are outlined in volume 2, chapter 11: Commercial fisheries of the PEIR and include fleets from other states, including Ireland and Belgium. Due to the highly mobile nature of both commercial fish species and fishing fleets, there is the potential for transboundary impacts upon commercial fisheries to arise from two sources:

- Potential impacts on commercial fishing fleets as a result of loss or restricted access to fishing grounds from the Mona Offshore Wind Project on commercially important fish and shellfish resources
- Potential impacts on commercial fishing fleets as a result of constraints on commercial fishing activities operating in the vicinity of the Mona Offshore Wind Project. These impacts may include loss or restricted access to fishing grounds and potential displacement of fishing activity into other areas.

1.6.2.3 An assessment of the potential impacts related to the operational and maintenance is presented in volume 2, chapter 11: Commercial fisheries of the PEIR (including both a Mona Offshore Wind Project assessment and a cumulative assessment). It is likely that any impacts from the final installed design would be reversible after decommissioning, as it is anticipated that all structures above the seabed will be completely removed and fishing activity would be able to resume once decommissioning is completed. The construction phase is considered less likely to result in likely significant effects although any impacts associated with the interference caused by the presence of infrastructure will progressively increase as the development is progressed.

1.6.2.4 It is proposed that transboundary impacts to commercial fisheries are screened into the EIA process.

Shipping and navigation

1.6.2.5 The Mona Offshore Wind Project is situated in the east Irish Sea where a number of shipping routes presently operate. The shipping and navigation baseline for the Mona Array Area and the Mona Offshore Cable Corridor is outlined in volume 2, chapter 12: Shipping and navigation of the PEIR.

1.6.2.6 There is potential for transboundary impacts upon shipping routes which transit to/from other states, including Ireland. An assessment of the potential impacts occurring during the operational and maintenance phase, particularly as a result of the presence of the offshore infrastructure associated with the Mona Offshore Wind Project, is presented in volume 2, chapter 12: Shipping and navigation of the PEIR (including both a Mona Offshore Wind Project assessment and a cumulative assessment). Although such potential impacts are anticipated to be long term, it is likely that they would be reversible after decommissioning, as it is anticipated that all structures above the seabed will be completely removed. The construction phase is

considered less likely to result in likely significant effects although the impacts associated with the interference caused by the presence of infrastructure on shipping and navigation will progressively increase as the Mona Offshore Wind Project is progressed.

1.6.2.7 It is proposed that potential transboundary impacts upon shipping and navigation are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 12: Shipping and navigation of the PEIR.

Marine archaeology

1.6.2.8 The marine archaeology baseline for the Mona Array Area and the Mona Offshore Cable Corridor are outlined in volume 2, chapter 13: Marine archaeology of the PEIR.

1.6.2.9 The extent of any predicted impacts upon marine archaeology receptors are likely to be limited to the Mona Offshore Wind Project Boundary. As the Mona marine archaeology study area is located entirely within UK territorial waters, it is considered that there is no pathway for transboundary impacts.

1.6.2.10 No transboundary impacts upon marine archaeology are anticipated. It is proposed that transboundary impacts upon marine archaeology are screened out of the EIA process.

Other sea users

1.6.2.11 The baseline for other sea users for the Mona Array Area and Mona Offshore Cable Corridor is outlined in volume 2, chapter 14: Other sea users of the PEIR.

1.6.2.12 Potential transboundary impacts associated with the Mona Offshore Wind Project identified for other sea users receptors include displacement of recreational sailing and motor cruising activities between the UK and Ireland and potential impacts to existing cables between the UK, Ireland (ESAT2, Havingsten 1.1 and Rockabill cables) and the United States (Hibernia Atlantic Seg. A cable). The extent of any potential impacts on recreational activities is likely to be localised and short term, as individual vessels may be displaced along their routes due to construction, maintenance or decommissioning activities occurring at any one location. Potential impacts on recreational activities are likely to be infrequent, however there is a potential impact on offshore cruising and racing between the UK and Ireland.

1.6.2.13 The extent of any potential impacts on existing cables is likely to be localised, short term and infrequent, associated with any construction, maintenance or decommissioning activities which may overlap or cross the existing cables; any such activities would be subject to standard cable crossing agreements as described in volume 2, chapter 14: Other sea users of the PEIR.

1.6.2.14 An assessment of the impacts occurring during operation is presented in volume 2, chapter 14: Other sea users of the PEIR (including both a Mona Offshore Wind Project assessment and a cumulative assessment).

1.6.2.15 It is proposed that transboundary impacts upon other sea users are screened into the EIA process.

Table 1.4: Offshore transboundary screening matrix for the Mona Offshore Wind Project – offshore human environment.

Screening criteria	Commercial fisheries	Shipping and navigation	Marine archaeology	Other sea users
Characteristics of the development	<p>For a detailed description, see volume 1, chapter 3: Project description of the PEIR.</p> <p>Key offshore components of the Mona Offshore Wind Project include: wind turbines, foundations, scour protection, inter-array cables, interconnector cables, OSPs and offshore export cables.</p> <p>The Mona Offshore Wind Project will include all associated offshore infrastructure (including up to 107 wind turbines and four OSPs). The Mona Offshore Cable Corridor extends from the Mona Array Area to the selected landfall at Llandulas on the north coast of Wales.</p>			
Location of development (including existing use) and geographical area	<p>The Mona Array Area is 449.97km² and is located in the east Irish Sea, 28.2km from the north coast of Wales, 39.9km from the northwest coast of England, 42.6km from the Isle of Man and 80.2km from the Irish EEZ (i.e. the median line between UK and Irish waters).</p> <p>The maximum length for the Mona offshore export cables is 360km.</p>			
Environmental importance	<p>Potential transboundary impact (see volume 2, chapter 11: Commercial fisheries of the PEIR).</p>	<p>Potential transboundary impact (see volume 2, chapter 12: Shipping and navigation of the PEIR).</p>	<p>No significant transboundary impacts are predicted (see volume 2, chapter 13: Marine archaeology of the PEIR). Screened out.</p>	<p>Potential transboundary impact (see volume 2, chapter 14: Other sea users of the PEIR).</p>
Potential impacts and carrier				
Extent				
Magnitude				
Probability				
Duration				
Frequency				
Reversibility				
Cumulative impacts				

1.7 Onshore transboundary impacts

1.7.1.1 A transboundary screening matrix has been completed for onshore transboundary impacts and is presented in Table 1.5. The conclusions of the transboundary screening for each onshore topic are presented, in the following sections.

1.7.2 Terrestrial ecology and intertidal birds

1.7.2.1 There is potential for transboundary impacts upon terrestrial ecological receptors due to the wide foraging and migratory ranges of bird species that use intertidal sites for foraging.

1.7.2.2 The key direct impacts for ornithological receptors are likely to arise during the construction phase through direct disturbance to, or temporary loss of, intertidal and terrestrial habitat which may result in disturbance or displacement of birds in transit between foraging and breeding sites, or on migration. These impacts are considered likely to be short term and temporary as habitat will recover after the construction phase is complete.

1.7.2.3 It is proposed that transboundary impacts upon birds and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 18: Terrestrial ecology and intertidal birds of the PEIR. Potential impacts upon European Sites with birds as a qualifying feature have been assessed within the draft HRA.

1.7.3 Other onshore receptors

1.7.3.1 Impacts on other onshore receptors arising from the construction, operations and maintenance and decommissioning of the Mona Offshore Wind Project will be confined to a localised area within, or in close proximity, to the footprint of the Mona Onshore Cable Corridor Search Area, the Mona Onshore Infrastructure Search Area and a localised area of the road network. There is no pathway by which direct or indirect impacts arising from the Mona Offshore Wind Project could significantly affect onshore receptors of another state. This applies to the following onshore PEIR topic chapters which have been screened out of the assessment:

- Geology, hydrogeology and ground conditions
- Hydrology and flood risk
- Historic environment
- Land use and recreation
- Traffic and transport
- Noise and vibration
- Air quality.

1.7.3.2 Other onshore receptors are considered in the offshore and onshore combined topics (section 1.8)

Table 1.5: Onshore environment transboundary screening matrix for the Mona Offshore Wind Project.

Screening criteria	Geology, hydrogeology and ground conditions	Hydrology and flood risk	Terrestrial ecology and intertidal birds	Historic environment	Land use and recreation	Traffic and transport	Noise and vibration	Air quality
Characteristics of the development	<p>For a detailed description, see volume 1, chapter 3: Project description of the PEIR.</p> <p>Key components of the Mona Offshore Wind Project onshore infrastructure include: onshore export cables and the onshore substation.</p> <p>The Mona Offshore Wind Project will include all associated onshore infrastructure. The selected landfall is at Llandulas on the north coast of Wales. Within the Mona Onshore Cable Corridor Search Area, the onshore transmission infrastructure will connect the offshore wind farm to the Mona onshore substation and then to the existing National Grid substation at Bodelwyddan.</p>							
Location of development (including existing use) and geographical area	<p>The onshore elements of the Mona Offshore Wind Project are located in north Wales within the administrative areas of Conwy County Borough Council and Denbighshire County Council. The Mona Onshore Cable Corridor Search Area is up to 15km long and extends from the Mona landfall to the Mona Onshore Substation. The Mona 400kV Grid Connection Cable Search Area is up to 2km in length and connects the Mona Onshore Substation to the existing National Grid substation at Bodelwyddan. Land uses within the area are primarily rural-based with nearby settlements including Llandulas, Aberglee, Bodelwyddan and St Asaph.</p>							
Environmental importance	<p>No significant transboundary impacts are predicted (see volume 3, chapter 16: Geology, hydrogeology and ground conditions of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 3, chapter 17: Hydrology and flood risk of the PEIR). Screened out.</p>	<p>Potential transboundary impact (see volume 2, chapter 18: Terrestrial ecology and intertidal birds of the PEIR).</p>	<p>No significant transboundary impacts are predicted (see volume 3, chapter 19: Historic environment of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 3, chapter 20: Land use and recreation of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 3, chapter 21: Traffic and transport of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 3, chapter 22: Noise and vibration of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 3, chapter 23: Air quality of the PEIR). Screened out.</p>
Potential impacts and carrier								
Extent								
Magnitude								
Probability								
Duration								
Frequency								
Reversibility								
Cumulative impacts								

1.8 Offshore and onshore combined topics transboundary impacts

1.8.1.1 A transboundary screening matrix has been completed for those topics falling under the offshore and onshore combined topics and this is presented in Table 1.6. The conclusions of the transboundary screening for each combined topic are presented in the following sections.

1.8.2 Seascape, landscape and visual resources

1.8.2.1 The seascape, landscape and visual resources baseline for the Mona seascape, landscape and visual resources study area is outlined in volume 4, chapter 25: Seascape, landscape and visual resources of the PEIR.

1.8.2.2 The extent of potential impacts to seascape, landscape and visual resources receptors arising from the Mona Offshore Wind Project is considered to be focused on receptors based in the UK and the Isle of Man, with any potential impacts at the UK/Ireland boundary considered to be transient and negligible.

1.8.2.3 Any impacts on landscape and visual resources arising from the construction, operations and maintenance and decommissioning of the Mona Offshore Wind Project onshore transmission assets will be confined to a localised area in the vicinity of the Mona Onshore Transmission Infrastructure Search Area. There is no pathway by which direct or indirect impacts arising from the Mona Offshore Wind Project onshore transmission assets could significantly affect the landscape and visual resources of another state.

1.8.2.4 Transboundary impacts upon seascape, landscape and visual resources are not anticipated and it is proposed that they are screened out of the EIA process.

1.8.3 Socio-economics and community

1.8.3.1 The socio-economics baseline for the Mona Offshore Wind Project is outlined in volume 4, chapter 28: Socio-economics and community of the PEIR.

1.8.3.2 It is considered that potential transboundary impacts upon socio-economics and community receptors due to the construction, operations and maintenance and decommissioning of the Mona Offshore Wind Project are not likely. The initial list of ports (identified in volume 4, chapter 25: Socio-economics and community of the PEIR) to support the construction, operations and maintenance and decommissioning of the Mona Offshore Wind Project are located within the UK. The Mona Offshore Wind Project will also promote opportunities for local procurement and local skills and recruitment through the preparation and implementation of mitigation measures.

1.8.3.3 Transboundary impacts upon socio economics and community are not anticipated and it is proposed that they are screened out of the EIA process.

1.8.4 Aviation and Radar

1.8.4.1 The aviation and radar baseline for the Mona Array Area and the Mona Offshore Cable Corridor is outlined in volume 4, chapter 26: Aviation and radar of the PEIR.

1.8.4.2 Potential impacts upon aviation and radar include interference with Primary Surveillance Radar (PSR), creation of physical obstacles to low flying aircraft, obstruction and potential for disruption to helicopter access/egress to/from oil and gas

platforms, and obstruction to Search and Rescue (SAR) operations. All potential receptors identified are located in the UK and the Isle of Man and therefore no transboundary impacts are predicted.

1.8.4.3 Transboundary impacts upon aviation and radar are not anticipated and it is proposed that they are screened out of the EIA process.

1.8.5 Climate change

1.8.5.1 The climate change baseline for the Mona Offshore Wind Project is outlined in volume 4, chapter 27: Climate change.

1.8.5.2 Potential transboundary impacts associated with the Mona Offshore Wind Project have been identified in volume 4, chapter 27: Climate change of the PEIR, noting that over the lifetime of the Mona Offshore Wind Project, potential transboundary impacts will be beneficial. All development processes which emit Green House Gases (GHGs) have the potential to impact the atmospheric mass of GHGs as a receptor, and so may have a transboundary impact on climate change. Transboundary impacts due to other specific international development projects will be taken into account when evaluating the impact of the Mona Offshore Wind Project by defining the atmospheric mass of GHGs as a high sensitivity receptor.

1.8.5.3 It is proposed that transboundary impacts on climate change are screened into the EIA process.

1.9 Conclusions

1.9.1.1 On the basis of the current information available presented within the PEIR it is not possible to conclude there will be no likely significant effects on the following topics, which have therefore been screened into the EIA process:

- Fish and shellfish ecology
- Marine mammals
- Offshore ornithology
- Commercial fisheries
- Shipping and navigation
- Other sea users
- Terrestrial ecology and intertidal birds
- Climate change.

Table 1.6: Offshore and onshore combined topics transboundary screening matrix for the Mona Offshore Wind Project.

Screening criteria	Seascape, landscape and visual resources	Socio-economics and community	Aviation and radar	Climate change
Characteristics of the development	<p>For a detailed description, see volume 1, chapter 3: Project description of the PEIR.</p> <p>Key components of the Mona Offshore Wind Project include: wind turbines, foundations, scour protection, inter-array cables, interconnector cables, OSPs, offshore export cables, onshore export cables and onshore substation.</p> <p>The Mona Offshore Wind Project will include all associated offshore infrastructure (including up to 107 wind turbines and four OSPs) and onshore infrastructure. The Mona Offshore Cable Corridor extends from the Mona Array Area to the selected landfall at Llandulas on the north coast of Wales. Within the Mona Onshore Cable Corridor Search Area, the onshore transmission infrastructure will connect the offshore wind farm to the Mona onshore substation and then to the existing National Grid substation at Bodelwyddan.</p>			
Location of development (including existing use) and geographical area	<p>The Mona Array Area is 449.97km² and is located in the east Irish Sea, 28.2km from the north coast of Wales, 39.9km from the northwest coast of England, 42.6km from the Isle of Man and 80.2km from the Irish EEZ (i.e. the median line between UK and Irish waters).</p> <p>The maximum length for the Mona offshore export cables is 360km.</p> <p>The Mona Onshore Cable Corridor Search Area is up to 15km long and extends from the Mona landfall to the Mona Onshore Substation. The Mona 400kV Cable Corridor Search Area is up to 2km in length and connects the Mona Onshore Substation to the existing National Grid substation at Bodelwyddan. Land uses within the area are primarily rural-based with nearby settlements including Llandulas, Aberglee, Bodelwyddan and St Asaph.</p>			
Environmental importance	<p>No significant transboundary impacts are predicted (see volume 4, chapter 25, Seascape, landscape and visual resources of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 4, chapter 26, Socio-economics and community of the PEIR). Screened out.</p>	<p>No significant transboundary impacts are predicted (see volume 4, chapter 27, Aviation and radar of the PEIR). Screened out.</p>	<p>Potential transboundary impact (see volume 4, chapter 28, Climate change of the PEIR). Screened out.</p>
Potential impacts and carrier				
Extent				
Magnitude				
Probability				
Duration				
Frequency				
Reversibility				
Cumulative impacts				

1.10 References

The Planning Inspectorate (2015) Advice Note Twelve: Transboundary Impacts. Available: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/04/Advice-note-12v2.pdf>. Accessed September 2022.

The Planning Inspectorate (2016) Advice Note Ten: Habitats Regulations Assessment Relevant to Nationally Significant Infrastructure Projects. Available: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/06/Advice-note-10v4.pdf>. Accessed September 2022.

The Planning Inspectorate (2022) Scoping Opinion: Proposed Mona Offshore Wind Project. Available: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010137/EN010137-000010-EN010137%20Mona%20Offshore%20Windfarm%20-%20Scoping%20Opinion.pdf>. Accessed September 2022.

RPS Energy (2022) Mona Offshore Wind Project EIA Scoping Report. Available: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010137/EN010137-000011-EN010137%20-%20Scoping%20Report.pdf>. Accessed September 2022.