

MONA OFFSHORE WIND PROJECT

Environmental Statement

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 Economic Area
EEZ	UK Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMF	Electromagnetic field
EnBW	Energie Baden-Württemberg
DCO	Development Consent Order
GHG	Greenhouse Gas
HRA	Habitats Regulations Assessment
ISAA	Information to Support the Appropriate Assessment
LSE	Likely Significant Effect
MHWS	Mean High Water Springs
MMEA	Manx Marine Environmental Assessment
MU	Management Unit
OSP	Offshore Substation Platform
PEIR	Preliminary Environmental Information 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
UNECE	The United Nations Economic Commission for Europe
UXO	Unexploded Ordnance

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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 Mona Offshore Wind Limited (hereafter referred to as the Applicant), is developing the Mona Offshore Wind Project. The Location of the proposed Mona Offshore Wind Project and relevant jurisdictional boundaries are shown in Figure 1.1.
- 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 annex 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 the current knowledge of the likely impacts arising from the Mona Offshore Wind Project and the economic interests of other states in the vicinity.
- 1.1.1.3 This annex is intended to provide information to The Planning Inspectorate such that they can undertake a screening for potentially significant transboundary effects under Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). In addition, this annex provides the information for the transboundary assessment to be undertaken under the Marine Works (Environmental Impact Assessment) Regulations 2007 (the 2007 EIA Regulations) for the Welsh marine licence. This document provides an update to the transboundary screening report that was published within the Preliminary Environmental Information Report (PEIR).
- 1.1.1.4 It should be noted that the Isle of Man is a Crown Dependency of the UK and not a European Economic Area (EEA) State. Therefore, Regulation 32 of the EIA Regulations does not apply to the Isle of Man. For this reason, it is 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. Nonetheless, potential impacts upon environmental receptors within the Isle of Man are fully considered in the Environmental Statement (see Volume 2, Chapters 1 to 10; Volume 3, Chapters 1 to 10; and Volume 4, Chapters 1 to 4 of the Environmental Statement).

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.

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1.2.1.2 Regulation 32 of the EIA Regulations and Regulations 18 to 20 of the 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 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, in The Planning Inspectorate's Advice Note Twelve, 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 is 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.

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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 (Mona Offshore Wind Ltd, 2022). In addition, the Applicant included a transboundary impacts screening report as part of the PEIR for the Mona Offshore Wind Project. Consultation on the EIA Scoping Report and PEIR was undertaken in accordance with the Planning Act 2008 plus associated guidance and regulations, which includes the EIA Regulations. As part of this consultation, relevant transboundary consultees have been contacted (see Table 1.1).

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

^a Management unit (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.

Date	Consultee and type of response	Topics	Response to issue raised and/or where considered in this annex
June 2022	Natural England – Scoping Opinion	Marine mammal management units should be used to screen in transboundary sites.	Marine mammal management units have been considered within section 1.6.1 and Volume 2, Chapter 4: Marine mammals of the Environmental Statement.
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 4: Marine mammals of the Environmental Statement.
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.	The 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"> – Onshore and intertidal ornithology (section 1.7.1).
June 2022	The Planning Inspectorate – Scoping Opinion	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	Potential transboundary impacts on other sea users have been included within section 1.6.1. Potential transboundary impacts on onshore and intertidal ornithology have been included in section 1.7.1.

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Date	Consultee and type of response	Topics	Response to issue raised and/or where considered in this annex
		<p>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). 	
June 2023	Isle of Man Government (response to PEIR)	The transboundary assessment should consider and reference the Manx Marine Environmental Assessment (MMEA).	<p>The MMEA has been considered and referenced in the following chapters and annexes:</p> <ul style="list-style-type: none"> • Volume 2, Chapter 3: Fish and shellfish ecology of the Environmental Statement. • Volume 6, Annex 3.1: Fish and shellfish ecology technical report of the Environmental Statement. • Volume 6, Annex 2.1: Benthic subtidal and intertidal ecology technical report of the Environmental Statement. • Volume 6, Annex 4.1: Marine mammals technical report of the Environmental Statement.
June 2023	Isle of Man Government (response to PEIR)	<p>The Isle of Man agrees the following topics can be scoped out of the transboundary assessment:</p> <ul style="list-style-type: none"> • Physical processes • Subtidal and intertidal ecology • Commercial fisheries • Climate change. 	Noted, no change needed.
June 2023	Isle of Man Government (response to PEIR)	The offshore ornithology assessment should not limit potential impacts to Special Protected Areas (SPAs) and should include a European level assessment of Isle of Man sites equivalent to SPAs (i.e. potential Bern Convention Emerald Sites, Marine Nature Reserve and National Nature Reserves).	Volume 2, Chapter 5: Offshore ornithology of the Environmental Statement has included Isle of Man designated sites.

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Date	Consultee and type of response	Topics	Response to issue raised and/or where considered in this annex
June 2023	Isle of Man Government (response to PEIR)	The marine mammals and fish and shellfish ecology assessments should not limit potential impacts to European sites and should include Isle of Man European equivalent sites such as Marine Nature Reserves.	Isle of Man Marine Nature Reserves are considered within the EIA of the following chapters: <ul style="list-style-type: none"> Volume 2, Chapter 3: Fish and shellfish ecology of the Environmental Statement. Volume 2, Chapter 4: Marine mammals of the Environmental Statement.
June 2023	Isle of Man Government (response to PEIR)	The transboundary assessment for commercial fisheries should include the Isle of Man.	Impacts on both UK and non-UK commercial fishing fleets have been considered as part of the impact assessment.
June 2023	Natural Resources Wales (response to PEIR)	Natural Resource Wales disagrees with the transboundary effects statement that not all animals found within ranges of disturbance from vessel and other activities would be disturbed.	Clarification on the differentiation between minor and major disturbance for continuous noise and reference to the National Marine Fisheries Service thresholds is given in Volume 2, Chapter 4: Marine mammals of the Environmental Statement.

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 the 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 Environmental Statement and follow the suggested format set out in Annex 1 to The Planning Inspectorate's Advice Note 12 (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, operations 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 Environmental Statement.
- 1.5.1.3 Potential impacts upon European Sites within other EEA states (as well as those in the UK) are considered separately within the HRA Stage 1 screening report (Document Reference: E1.4) 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.

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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 and Access Areas to nearest state border (km)
Ireland	129	132
France	450	412
Belgium	515	485

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 Environmental Statement topic chapter.

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 Environmental Statement.</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 96 wind turbines and four OSPs). The Mona Offshore Cable Corridor and Access Areas extend from the Mona Array Area to Mean High Water Springs (MHWS).</p>				
Location of development (including existing use) and geographical area	<p>The Mona Array Area is 300 km² and is located in the east Irish Sea, 28.8 km from the north coast of Wales, 46.9 km from the northwest coast of England, 46.6 km from the Isle of Man and 80.4 km from the Irish Exclusive Economic Zone (EEZ) (i.e. the median line between UK and Irish waters).</p> <p>The maximum length for the Mona offshore export cables is 360 km.</p>				
Environmental importance	<p>No significant transboundary impacts are predicted (see Volume 2, Chapter 1: Physical processes of the Environmental Statement).</p>	<p>No significant transboundary impacts are predicted (see Volume 2, Chapter 2: Benthic subtidal and intertidal ecology of the</p>	<p>Potential transboundary impact (see Volume 2, Chapter 3: Fish and shellfish ecology of the Environmental Statement).</p>	<p>Potential transboundary impact (see Volume 2, Chapter 4 Marine mammals of the Environmental Statement).</p>	<p>Potential transboundary impact (see Volume 2, Chapter 5 Offshore ornithology of the Environmental Statement).</p>
Potential impacts and carrier					
Extent					
Magnitude					

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Screening criteria	Physical processes	Benthic subtidal and intertidal ecology	Fish and shellfish ecology	Marine mammals	Offshore ornithology
Probability		Environmental Statement).			
Duration					
Frequency					
Reversibility					
Cumulative impacts					

Physical processes

- 1.6.1.2 The offshore components of the Mona Offshore Wind Project are located entirely within the UK 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. Transboundary impacts upon physical processes have been 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. Transboundary impacts on benthic subtidal and intertidal ecology have been 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, operations and maintenance and decommissioning phases of the Mona Offshore Wind Project.
- 1.6.1.7 These include direct impacts due to underwater sound 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

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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 3: Fish and shellfish ecology of the Environmental Statement and include a number of commercially important species as well as diadromous species likely to be found in the area. Volume 2, Chapter 3: Fish and shellfish ecology of the Environmental Statement also identifies the spawning and nursery grounds located within and around the Mona Array Area and the Mona Offshore Cable Corridor and Access Areas.

- 1.6.1.9 An assessment of the potential impacts related to construction, particularly as a result of underwater sound from piling, is presented in Volume 2, Chapter 3: Fish and shellfish ecology of the Environmental Statement (including both a Mona Offshore Wind Project alone 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 are considered less likely to result in significant impacts, due to potential impacts being spatially limited (i.e. within the boundaries of the Mona Offshore Wind Project).
- 1.6.1.10 Transboundary impacts on fish and shellfish ecology and their nature conservation interests have been screened into the EIA process. A transboundary assessment has been completed and is included in Volume 2, Chapter 3: Fish and shellfish ecology of the Environmental Statement. Potential impacts upon European Sites with fish as a qualifying feature are assessed within the Information to Support the Appropriate Assessment (ISAA) (Document Reference E1.1 to E1.3).

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 4: Marine mammals of the Environmental Statement. Key species include harbour porpoise *Phocoena phocoena*, bottlenose dolphin *Tursiops truncatus*, short-beaked common dolphin *Delphinus delphis*, Risso's dolphin *Grampus griseus*, minke whale *Balaenoptera acutorostrata*, harbour seal *Phoca vitulina* and grey seal *Halichoerus grypus*.
- 1.6.1.12 Direct impacts may occur due to underwater sound generated during construction and decommissioning, including sound associated with piling and vessel activity. Pile driving during the installation of foundations and pre-construction clearance of Unexploded Ordnance (UXO) are key activities linked to elevated underwater sound. Indirect impacts to marine mammal receptors from changes in prey availability could occur as a result of habitat loss, underwater sound, increased SSCs and associated sediment deposition as well as other impacts scoped in for fish and shellfish receptors. The operations and maintenance phase are considered less likely to result in significant impacts although the potential impacts associated with the operational sound 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 sound from piling, is presented in Volume 2, Chapter 4: Marine mammals of the Environmental Statement (including both a Mona Offshore Wind Project alone assessment and a cumulative assessment). The

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majority of impacts during construction are however considered likely to be short term and temporary.

- 1.6.1.14 Transboundary impacts upon marine mammals and their nature conservation interests have been screened into the EIA process. A transboundary assessment has been completed and is included in Volume 2, Chapter 4: Marine mammals of the Environmental Statement. Potential impacts upon European Sites with marine mammals as a qualifying feature have been assessed within the ISAA (Document Reference E1.1 to E1.3).

Offshore ornithology

- 1.6.1.15 There is potential for transboundary impacts upon offshore ornithological receptors due to the wide foraging and migratory ranges of bird species present 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 5: Offshore ornithology of the Environmental Statement 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, sea ducks and gulls) as well as non-seabird migrants (e.g. wildfowl, waders and passerines).
- 1.6.1.16 The key direct impacts for offshore ornithological receptors are likely to arise during the operations and maintenance phase as a result of collision risk with rotating wind turbine blades which may result in direct mortality of individuals, displacement from preferred foraging areas 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 offshore 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 operations and maintenance phase. Indirect impacts may cause disturbance to prey (fish and marine invertebrates) 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 offshore ornithological receptors occurring during the operations and maintenance phase, particularly as a result of displacement and collision risk. Unlike the majority of impacts during construction, which are considered likely to be short term and temporary, impacts during the operations 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 Transboundary impacts upon offshore ornithology and their nature conservation interests have been screened into the EIA process. A transboundary assessment has been completed and is included in Volume 2, Chapter 5: Offshore ornithology of the Environmental Statement. Potential impacts upon European Sites with birds as a qualifying feature have been assessed within the ISAA (Document Reference E1.1 to E1.3).

1.6.1 Human environment

- 1.6.1.1 A transboundary screening matrix has been completed for potential offshore transboundary impacts for the offshore human environment and is presented in Table

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1.4. The conclusions of the transboundary screening for each offshore human environment topic are presented in the following sections.

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	Seascape and Visual Resources
Characteristics of the development	<p>For a detailed description, see Volume 1, Chapter 3: Project description of the Environmental Statement.</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 96 wind turbines and four OSPs). The Mona Offshore Cable Corridor and Access Areas extend 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 300 km² and is located in the east Irish Sea, 28.8 km from the north coast of Wales, 46.9 km from the northwest coast of England, 46.6 km from the Isle of Man and 80.4 km 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 360 km.</p>				
Environmental importance	<p>Potential transboundary impact (see Volume 2, Chapter 6: Commercial fisheries of the Environmental Statement).</p>	<p>Potential transboundary impact (see Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement).</p>	<p>No significant transboundary impacts are predicted (see Volume 2, Chapter 9: Marine archaeology of the Environmental Statement).</p>	<p>Potential transboundary impact (see Volume 2, Chapter 10: Other sea users of the Environmental Statement).</p>	<p>No significant transboundary impacts are predicted (see Volume 2, Chapter 8: Seascape and visual resources of the Environmental Statement).</p>
Potential impacts and carrier					
Extent					
Magnitude					
Probability					
Duration					
Frequency					
Reversibility					
Cumulative impacts					

Commercial fisheries

1.6.1.2

The commercial fisheries likely to be operating in the Mona commercial fisheries study areas are outlined in Volume 2, Chapter 6: Commercial fisheries of the Environmental Statement 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

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- 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 impacts on commercially important fish and shellfish resources and potential displacement of fishing activity into other areas.

1.6.1.3 An assessment of the potential impacts related to the operational and maintenance is presented in Volume 2, Chapter 6: Commercial fisheries of the Environmental Statement (including both a Mona Offshore Wind Project alone 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 significant effects although any impacts associated with the interference caused by the presence of infrastructure will progressively increase as the development is progressed.

1.6.1.4 Transboundary impacts to commercial fisheries have been screened into the EIA process. A transboundary assessment has been completed and is included in Volume 2, Chapter 6: Commercial fisheries of the Environmental Statement.

Shipping and navigation

1.6.1.5 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 and Access Areas is outlined in Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement.

1.6.1.6 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 operations 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 7: Shipping and navigation of the Environmental Statement (including both a Mona Offshore Wind Project alone 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.

1.6.1.7 Transboundary impacts upon shipping and navigation have been screened into the EIA process. A transboundary assessment has been completed and is included in Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement.

Marine archaeology

1.6.1.8 The marine archaeology baseline for the Mona Array Area and the Mona Offshore Cable Corridor and Access Areas are outlined in Volume 2, Chapter 9: Marine archaeology of the Environmental Statement.

1.6.1.9 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, there is no pathway for transboundary impacts.

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- 1.6.1.10 No transboundary impacts upon marine archaeology are anticipated. Transboundary impacts upon marine archaeology have been screened out of the EIA process.

Other sea users

- 1.6.1.11 The baseline for other sea users for the Mona Array Area and Mona Offshore Cable Corridor and Access Areas is outlined in Volume 2, Chapter 10: Other sea users of the Environmental Statement.
- 1.6.1.12 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.
- 1.6.1.13 The extent of any potential impacts on existing cables is likely to be localised, short term and infrequent. The potential impacts would be 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 10: Other sea users of the Environmental Statement.
- 1.6.1.14 Transboundary impacts upon other sea users have been screened into the EIA process. An assessment of the impacts occurring during operation is presented in Volume 2, Chapter 10: Other sea users of the Environmental Statement (including both a Mona Offshore Wind Project alone assessment and a cumulative assessment).

Seascape and visual resources

- 1.6.1.15 The baseline for the Mona seascape, and visual resources study area is outlined in Volume 2, Chapter 8: Seascape and visual resources of the Environmental Statement.
- 1.6.1.16 The extent of potential impacts to seascape 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.
- 1.6.1.17 Transboundary impacts upon seascape and visual resources are not anticipated and has been screened out of the EIA process.

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.

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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	Onshore ecology	Historic environment	Land use and recreation	Traffic and transport	Noise and vibration	Air quality	Onshore and intertidal ornithology	Landscape and visual resources
Characteristics of the development	<p>For a detailed description, see Volume 1, Chapter 3: Project description of the Environmental Statement.</p> <p>Key components of the Mona Offshore Wind Project onshore infrastructure include: landfall, 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 Llanddulas on the north coast of Wales. The Mona Onshore Cable Corridor will connect the offshore wind farm to the Mona Onshore Substation; the 400kV Grid Connection Cable Corridor will connect the Mona Onshore Substation 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 is up to 15 km long and extends from the Mona landfall to the Mona Onshore Substation. The Mona 400kV Grid Connection Cable Corridor is up to 1 km 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 Llanddulas, Aberglee, Bodelwyddan and St Asaph.</p>									
Environmental importance	<p>No significant transboundary impacts are predicted for these topics, see:</p> <ul style="list-style-type: none"> • Volume 3, Chapter 1: Geology, hydrogeology and ground conditions of the Environmental Statement • Volume 3, Chapter 2: Hydrology and flood risk of the Environmental Statement • Volume 3, Chapter 3: Onshore ecology of the Environmental Statement • Volume 3, Chapter 5: Historic environment of the Environmental Statement • Volume 3, Chapter 6: Landscape and visual resources: of the Environmental Statement • Volume 3, Chapter 7: Land use and recreation of the Environmental Statement • Volume 3, Chapter 8: Traffic and transport of the Environmental Statement • Volume 3, Chapter 9: Noise and vibration of the Environmental Statement • Volume 2, Chapter 10: Air quality of the Environmental Statement. 									
Potential impacts and carrier										
Extent										
Magnitude										
Probability										
Duration										
Frequency										
Reversibility										

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Screening criteria	Geology, hydrogeology and ground conditions	Hydrology and flood risk	Onshore ecology	Historic environment	Land use and recreation	Traffic and transport	Noise and vibration	Air quality	Onshore and intertidal ornithology	Landscape and visual resources
Cumulative impacts										

1.7.1 Onshore and intertidal ornithology

1.7.1.1 There is potential for transboundary impacts upon onshore and intertidal ornithology receptors due to the wide migratory ranges of bird species (waders) that use intertidal habitats for foraging and roosting.

1.7.1.2 The key direct impacts for onshore and intertidal 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 displacement of migratory and overwintering birds from their preferred foraging and roosting sites. These impacts are considered likely to be short term and temporary as habitat will recover after the construction phase is complete.

1.7.1.3 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 3, Chapter 10: Onshore and intertidal ornithology of the Environmental Statement. Potential impacts upon European Sites with birds as a qualifying feature have been assessed within the HRA Stage 2 ISAA (Document Reference E1.1 to E1.3).

1.7.1 Other onshore receptors

1.7.1.1 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 infrastructure. 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 Environmental Statement topic chapters which have been screened out of the assessment:

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

1.7.1.2 Other onshore receptors are considered in the offshore and onshore combined topics (section 1.7.1.2)

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.

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

Screening criteria	Aviation and radar	Climate change	Socio-economics	Human Health Assessment
Characteristics of the development	<p>For a detailed description, see Volume 1, Chapter 3: Project description of the Environmental Statement.</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. For a detailed description, see Volume 1, Chapter 3: Project description of the Environmental Statement.</p> <p>The Mona Offshore Wind Project will include all associated offshore infrastructure (including up to 96 wind turbines and four OSPs) and onshore infrastructure. The Mona Offshore Cable Corridor and Access Areas extend from the Mona Array Area to MHWS. The Mona Onshore Cable Corridor will connect the offshore wind farm to the Mona Onshore Substation; the 400kV Grid Connection Cable Corridor will connect the Mona Onshore Substation to the existing National Grid substation at Bodelwyddan.</p>			
Location of development (including existing use) and geographical area	<p>The Mona Array Area is 300 km² and is located in the east Irish Sea, 28.8 km from the north coast of Wales, 46.9 km from the northwest coast of England, 46.6 km from the Isle of Man and 80.4 km 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 360 km.</p> <p>The Mona Onshore Cable Corridor is up to 15 km long and extends from the Mona landfall to the Mona Onshore Substation. The Mona 400kV Cable Corridor Search Area is up to 1 km 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 Llanddulas, Aberglee, Bodelwyddan and St Asaph.</p>			
Environmental importance	<p>No significant transboundary impacts are predicted (see Volume 4, Chapter 1, Aviation and radar of the Environmental Statement).</p>	<p>Potential transboundary impact (see Volume 4, Chapter 2, Climate change of the Environmental Statement).</p>	<p>No significant transboundary impacts are predicted (see Volume 4, Chapter 3, Socio-economics of the Environmental Statement).</p>	<p>No significant transboundary impacts are predicted (see Volume 4, Chapter 4, Human health assessment of the Environmental Statement).</p>
Potential impacts and carrier				
Extent				
Magnitude				
Probability				
Duration				
Frequency				
Reversibility				
Cumulative impacts				

1.8.1 Aviation and radar

1.8.1.1 The aviation and radar baseline for the Mona Array Area and the Mona Offshore Cable Corridor and Access Areas is outlined in Volume 4, Chapter 1: Aviation and radar of the Environmental Statement.

1.8.1.2 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

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receptors identified are located in the UK and the Isle of Man and therefore no transboundary impacts are predicted.

- 1.8.1.3 Transboundary impacts upon aviation and radar are not anticipated and have been screened out of the EIA process.

1.8.1 Climate change

- 1.8.1.1 The climate change baseline for the Mona Offshore Wind Project is outlined in Volume 4, Chapter 2: Climate change of the Environmental Statement.

- 1.8.1.2 Potential transboundary impacts associated with the Mona Offshore Wind Project have been identified in Volume 4, Chapter 2: Climate change of the Environmental Statement, noting that over the lifetime of the Mona Offshore Wind Project, potential transboundary impacts will be beneficial. All development processes which emit Greenhouse 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 have been 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.

- 1.8.1.3 Transboundary impacts on climate change have been screened into the EIA process.

1.8.1 Socio-economics and community

- 1.8.1.1 The socio-economics baseline for the Mona Offshore Wind Project is outlined in Volume 4, Chapter 3: Socio-economics of the Environmental Statement.

- 1.8.1.2 It is considered that potential transboundary impacts upon socio-economics 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 3: Socio-economics of the Environmental Statement) 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.

- 1.8.1.3 Transboundary impacts upon socio-economics are not anticipated and they have screened out of the EIA process.

1.8.1 Human Health Assessment

- 1.8.1.1 The human health baseline for the Mona Offshore Wind Project is outlined in Volume 4, Chapter 4: Human health assessment of the Environmental Statement.

- 1.8.1.2 It is considered that potential transboundary impacts upon human health due to the construction, operations and maintenance and decommissioning of the Mona Offshore Wind Project are not likely. The potential effects on human health from construction, operations and maintenance and decommissioning of the Mona Offshore Wind Project are likely to only extend within the UK.

- 1.8.1.3 Transboundary impacts upon human health are not anticipated and they have screened out of the EIA process.

1.9 Conclusions

1.9.1.1 On the basis of the information presented within the Environmental Statement 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
- Onshore and intertidal birds
- Climate change.

1.10 References

The Planning Inspectorate (2020) Advice Note Twelve: Transboundary Impacts. Available: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-twelve-transboundary-impacts-and-process>. Accessed September 2023.

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