

MONA OFFSHORE WIND PROJECT

Environmental Statement

Volume 1, Chapter 1: Example RPS report template and
overarching glossary
(F02)

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Image of an offshore wind farm

MONA OFFSHORE WIND PROJECT

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Prepared by:

RPS

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Mona Offshore Wind Ltd.

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Deadline 7 Changes

This document has been updated at Deadline 7 of the Mona Offshore Wind Project examination in order to reflect the change to the Order Limits, forming the Change Request, which was accepted by the Examining Authority on 19 December 2024.

The following figures have been updated to reflect the updated onshore red line boundary change:

- Figure 1.1: Location of the Mona Offshore Wind Project.

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Glossary

Term	Meaning
Applicant	Mona Offshore Wind Limited.
Bodelwyddan National Grid Substation	This is the Point of Interconnection (POI) selected by the National Grid for the Mona Offshore Wind Project.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Environmental Statement	The document presenting the results of the Environmental Impact Assessment (EIA) process for the Mona Offshore Wind Project.
Evidence Plan Process	The Evidence Plan process is a mechanism to agree upfront what information the Applicant needs to supply to the Planning Inspectorate as part of the Development Consent Order (DCO) applications for the Mona Offshore Wind Project.
Expert Working Group (EWG)	Expert working groups set up with relevant stakeholders as part of the Evidence Plan process.
Inter-array cables	Cables which connect the wind turbines to each other and to the offshore substation platforms. Inter-array cables will carry the electrical current produced by the wind turbines to the offshore substation platforms.
Interconnector cables	Cables that may be required to interconnect the Offshore Substation Platforms in order to provide redundancy in the case of cable failure elsewhere.
Intertidal access areas	The area from Mean High Water Springs (MHWS) to Mean Low Water Springs (MLWS) which will be used for access to the beach and construction related activities.
Intertidal area	The area between MHWS and MLWS.
Landfall	The area in which the offshore export cables make contact with land and the transitional area where the offshore cabling connects to the onshore cabling.
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils.
Local Highway Authority	A body responsible for the public highways in a particular area of England and Wales, as defined in the Highways Act 1980.
Marine licence	The Marine and Coastal Access Act 2009 requires a marine licence to be obtained for licensable marine activities. Section 149A of the Planning Act 2008 allows an applicant for a DCO to apply for a 'deemed' marine licence as part of the DCO process. In addition, licensable activities within 12nm of the Welsh coast require a separate marine licence from Natural Resource Wales (NRW).
Maximum Design Scenario (MDS)	The scenario within the design envelope with the potential to result in the greatest impact on a particular topic receptor, and therefore the one that should be assessed for that topic receptor.
Mona 400kV Grid Connection Cable Corridor	The corridor from the Mona onshore substation to the National Grid substation at Bodelwyddan.
Mona Array Area	The area within which the wind turbines, foundations, inter-array cables, interconnector cables, offshore export cables and offshore

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Term	Meaning
	substation platforms (OSPs) forming part of the Mona Offshore Wind Project will be located.
Mona Array Scoping Boundary	The Preferred Bidding Area that the Applicant was awarded by The Crown Estate as part of Offshore Wind Leasing Round 4.
Mona Offshore Cable Corridor	The corridor located between the Mona Array Area and the landfall up to MHWS, in which the offshore export cables will be located.
Mona Offshore Cable Corridor and Access Areas	The corridor located between the Mona Array Area and the landfall up to MHWS, in which the offshore export cables will be located and in which the intertidal access areas are located.
Mona Offshore Transmission Infrastructure Scoping Search Area	The area that was presented in the Mona Scoping Report as the area encompassing and located between the Mona Potential Array Area and the landfall up to MHWS, in which the offshore export cables will be located.
Mona Offshore Wind Project	The Mona Offshore Wind Project is comprised of both the generation assets, offshore and onshore transmission assets, and associated activities.
Mona Offshore Wind Project Boundary	The area containing all aspects of the Mona Offshore Wind Project, both offshore and onshore.
Mona Offshore Wind Project PEIR	The Mona Offshore Wind Project Preliminary Environmental Information Report (PEIR) that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) and NRW for the Mona Offshore Wind Project.
Mona Offshore Wind Project Scoping Report	The Mona Scoping Report that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) and NRW for the Mona Offshore Wind Project.
Mona Onshore Cable Corridor	The corridor between MHWS at the landfall and the Mona onshore substation, in which the onshore export cables will be located.
Mona Onshore Development Area	The area in which the landfall, onshore cable corridor, onshore substation, mitigation areas, temporary construction facilities (such as access roads and construction compounds), and the connection to National Grid substation will be located
Mona Onshore Transmission Infrastructure Scoping Search Area	The area that was presented in the Mona Scoping Report as the area located between MHWS at the landfall and the onshore National Grid substation, in which the onshore export cables, onshore substation and other associated onshore transmission infrastructure will be located.
Mona PEIR Offshore Cable Corridor	The corridor presented at PEIR that was consulted on during statutory consultation and has subsequently been refined for the application for Development Consent. It is located between the Mona Array Area and the landfall up to MHWS, in which the offshore export cables and the offshore booster substation will be located.
Mona PEIR Offshore Wind Project Boundary	The area presented at PEIR containing all aspects of the Mona Offshore Wind Project, both offshore and onshore. This area was the boundary consulted on during statutory consultation and subsequently refined for the application for Development Consent.
Mona Potential Array Area	The area that was presented in the Mona Scoping Report and in the PEIR as the area within which the wind turbines, foundations, meteorological mast, inter-array cables, interconnector cables, offshore export cables and OSFs forming part of the Mona Offshore Wind Project were likely to be located. This area was the boundary consulted

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Term	Meaning
	on during statutory consultation and subsequently refined for the application for Development Consent.
Mona Proposed Onshore Development Area	The area presented at PEIR in which the landfall, onshore cable corridor, onshore substation, mitigation areas, temporary construction facilities (such as access roads and construction compounds), and the connection to National Grid infrastructure will be located. This area was the boundary consulted on during statutory consultation and subsequently refined for the application for Development Consent.
Mona Scoping Report	The Mona Scoping Report that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) and NRW for the Mona Offshore Wind Project.
National Policy Statement (NPS)	The current national policy statements published by the Department for Energy Security & Net Zero in 2024.
Non-statutory consultee	Organisations that an applicant may choose to consult in relation to a project who are not designated in law but are likely to have an interest in the project.
Offshore Substation Platform (OSP)	The offshore substation platforms located within the Mona Array Area will transform the electricity generated by the wind turbines to a higher voltage allowing the power to be efficiently transmitted to shore.
Offshore Wind Leasing Round 4	The Crown Estate auction process which allocated developers preferred bidder status on areas of the seabed within Welsh and English waters and ends when the Agreements for Lease (AfLs) are signed.
Pre-construction site investigation surveys	Pre-construction geophysical and/or geotechnical surveys undertaken offshore and, or onshore to inform, amongst other things, the final design of the Mona Offshore Wind Project.
Point of Interconnection	The point of connection at which a project is connected to the grid. For the Mona Offshore Wind Project, this is the Bodelwyddan National Grid Substation.
Relevant Local Planning Authority	The Relevant Local Planning Authority is the Local Authority in respect of an area within which a project is situated, as set out in Section 173 of the Planning Act 2008. Relevant Local Planning Authorities may have responsibility for discharging requirements and some functions pursuant to the DCO, once made.
the Secretary of State for Business, Energy and Industrial Strategy	The decision maker with regards to the application for development consent for the Mona Offshore Wind Project.
Statutory consultee	Organisations that are required to be consulted by an applicant pursuant to the Planning Act 2008 in relation to an application for development consent. Not all consultees will be statutory consultees (see non-statutory consultee definition).
Wind turbines	The wind turbine generators, including the tower, nacelle and rotor.
The Planning Inspectorate	The agency responsible for operating the planning process for NSIPs.

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Acronyms

Acronym	Description
AfL	Agreement for Lease
BEIS	Department for Business, Energy and Industrial Strategy
DCO	Development Consent Order
EIA	Environmental Impact Assessment
EnBW	Energie Baden-Württemberg AG
HVAC	High Voltage Alternating Current
IEMA	Institute for Environmental Management and Assessment
ISAA	Information to support the Appropriate Assessment
MDS	Maximum Design Scenario
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
NRW	Natural Resources Wales
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
OSP	Offshore Substation Platform
PDE	Project Design Envelope
PEI	Preliminary Environmental Information
PEIR	Preliminary Environmental Information Report
POI	Point of Interconnection
SoCC	Statement of Community Consultation
TCE	The Crown Estate

Units

Unit	Description
GW	Gigawatt
km	Kilometres
km ²	Kilometres squared
kV	Kilovolt
MW	Megawatt
nm	Nautical miles

1 Introduction and overarching glossary

1.1 Introduction to the Mona Offshore Wind Project

- 1.1.1.1 Mona Offshore Wind Limited (the Applicant), a joint venture of bp Alternative Energy Investments (hereafter referred to as bp) and Energie Baden-Württemberg AG (hereafter referred to as EnBW) is developing the Mona Offshore Wind Project (Figure 1.1). The Mona Offshore Wind Project is a proposed offshore wind farm located in the east Irish Sea.
- 1.1.1.2 The UK's ambition is to lead the world in combatting climate change, reducing reliance on fossil fuels and embracing a future where renewable energy powers homes and businesses. At the centre of this drive is a commitment to reducing UK greenhouse gas emissions and reaching net zero by 2050. The UK government has an ambition to generate 50 GW of clean, renewable energy from offshore wind by 2030. Figures released by the Department for Business and Trade in 2023 show that the UK currently has 13.9 GW of installed offshore wind capacity (Department for Business and Trade, 2023). The Mona Offshore Wind Project therefore, has a critical role to play – both in helping the UK to achieve its net zero ambitions and, specifically, in reaching offshore wind generation goals. Further detail on this is provided in Volume 1, Chapter 2: Policy and legislative context of the Environmental Statement.
- 1.1.1.3 As the Mona Offshore Wind Project is an offshore generating station with a capacity of greater than 350 MW located in Welsh waters, it is a Nationally Significant Infrastructure Project (NSIP) as defined by Section 15(3) of the Planning Act 2008 (as amended) (the 2008 Act). As such, there is a requirement to submit an application for a Development Consent Order (DCO) to the Planning Inspectorate to be decided by the Secretary of State for the Department for Energy Security and Net Zero.
- 1.1.1.4 A marine licence is required before carrying out any licensable marine activity under the Marine and Coastal Access Act 2009. Marine licences can be deemed under the DCO for licensable activities in Welsh offshore waters. As agreed with Natural Resources Wales (NRW), the marine licence for all licensable activities related to the offshore wind farm generation infrastructure (wind turbines, Offshore Substation Platforms (OSPs), inter-array cables and interconnector cables) located within the Mona Array Area will be deemed under the DCO. However, licensable activities within 12 nm of the Welsh coast require a separate marine licence. A separate application will therefore be made to NRW for a marine licence for the offshore export cables, OSPs, interconnector cables and related works located within the Mona Array Area and the Mona Offshore Cable Corridor and Access Areas. The OSPs and interconnector cables are included in both marine licences as it has not yet been determined whether they would be generation or transmission infrastructure.
- 1.1.1.5 The Environmental Statement has been submitted with the application for a DCO under Section 37(3) of the 2008 Act, and presents the findings of the Environmental Impact Assessment (EIA) process. The Environmental Statement has been prepared in accordance with The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 2017 EIA Regulations) and The Marine Works (Environmental Impact Assessment Regulations) 2007 (as amended) (the 2007 EIA Regulations).

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1.2 Purpose of the Environmental Statement

- 1.2.1.1 The purpose of the Environmental Statement is to provide the environmental information which has been gathered in order to carry out an assessment of the likely environmental effects of the Mona Offshore Wind Project.
- 1.2.1.2 It is intended that the Environmental Statement is read alongside the Non-Technical Summary (NTS), which provides a brief nontechnical overview of the information presented in the Environmental Statement.

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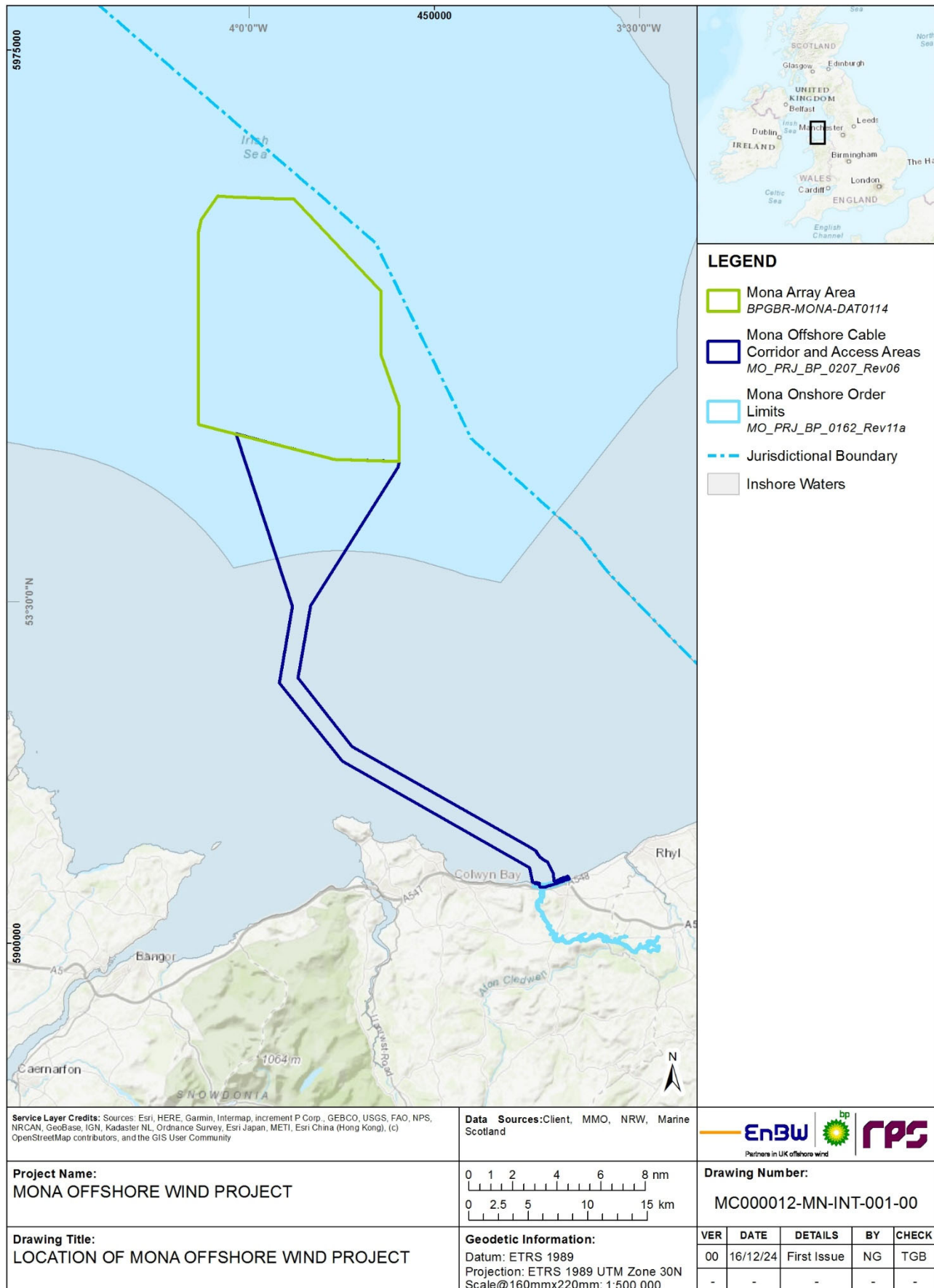


Figure 1.1: Location of the Mona Offshore Wind Project.

1.3 About the Applicant

- 1.3.1.1 As stated in section 1.1, the Applicant is a joint venture between two leading energy companies (bp and EnBW). These two companies are working together as partners to deliver offshore wind projects in both Offshore Wind Leasing Round 4 and ScotWind Leasing.
- 1.3.1.2 EnBW is one of the largest energy supply companies in Germany and supplies electricity, gas, water and energy solutions and energy industry services to around 5.5 million customers with a workforce of more than 27,000 employees. EnBW aims to strengthen its position as a sustainable and innovative infrastructure partner for customers, citizens and local authorities to an even greater extent. The repositioning of EnBW with a focus on renewable energies and smart infrastructure solutions is a key component of its strategy. With a focus on renewable energy and smart infrastructure solutions, EnBW's objective is for half of the electricity it supplies to be from renewable sources by the end of 2025. This is already having a noticeable effect on the reduction of CO₂ emissions, which EnBW aims to halve by 2030 and to be climate neutral by 2035. EnBW has been involved in the operation of hydro power plants in the Black Forest for more than 100 years, and has a large and continuously growing number of onshore wind farms and solar photovoltaics in Germany, France and Sweden. In addition, EnBW developed, constructed and operates four offshore wind farms in Germany (EnBW Baltic 1, Baltic 2, Hohe See and Albatros) with a total installed capacity of 945 MW, commissioned between 2011 and 2020. A further 900 MW offshore wind farm, He Dreiht, is currently under development in Germany.
- 1.3.1.3 bp has set out an ambition to be a net-zero company by 2050 or sooner, and to help the world get to net zero. bp has set out a strategy for delivering this ambition. bp is focused on delivering its transformation into an integrated energy company, helping to provide the energy the world needs today, and investing in the energy transition.
- 1.3.1.4 bp entered the offshore wind sector in 2020 via a partnership with Equinor to develop offshore wind projects in the US, including the Empire Wind and Beacon Wind projects off the East Coast that have a planned potential of 4.4 GW generating capacity. In the UK, bp and partner EnBW are leading the development of the Morgan and Mona offshore wind projects in the Irish Sea and the Morven offshore wind project in the North Sea. These projects have a combined potential generating capacity of 5.9 GW, sufficient to power the equivalent of around 6 million UK households. In early 2023, bp was successful in its bid to develop its first floating offshore wind demonstration project offshore Aberdeenshire.
- 1.3.1.5 In July 2023, bp was successful in its bids for two sites offshore in Germany with a potential generating capacity of 4 GW. bp has formed a strategic partnership with Japanese conglomerate Marubeni to explore offshore wind opportunities in Japan. bp has also formed a JV with Norway's Deep Wind Offshore, a part of which saw bp acquire a 55% stake in the company's early-stage offshore wind portfolio, which includes four projects across the Korean peninsula with a potential generating capacity of up to 6 GW.
- 1.3.1.6 bp already has a significant onshore wind business in the US with a gross generating capacity of 1,700 MW, operating nine wind assets across the country. In the UK, bp have a 50% share in Lightsource bp which aims to develop 10 GW of solar projects by 2023.
- 1.3.1.7 In accordance with Regulation 14(4) of the 2017 EIA Regulations and Regulation 12(2) of the 2007 EIA Regulations, the Environmental Statement has been prepared by competent experts. RPS has been commissioned by the Applicant to lead the EIA for

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the Mona Offshore Wind Project. The EIA team is comprised of a number of RPS in-house and subcontracted topic specialists, as set out in Table 1.1 below with a statement of expertise provided in Appendix A. RPS is a member and partner of the Institute for Environmental Management and Assessment (IEMA) and is accredited to the IEMA Quality Mark scheme. The regular auditing under the Quality Mark scheme demonstrates RPS' commitment to ensuring that their EIA work is undertaken to a high quality and in accordance with best practice.

1.4 Mona Offshore Wind Project overview

- 1.4.1.1 Offshore Wind Leasing Round 4 was instigated by The Crown Estate (TCE) in September 2019, and four Bidding Areas were identified for the development of offshore wind. As part of a competitive tender, EnBW and bp were awarded Preferred Bidder status for two 60-year leases within the Northern Wales and Irish Sea Bidding Area. The Bidding Areas are areas of the seabed, identified by TCE, that offer the least constrained (most technically favourable) areas for offshore wind development. The Applicant entered into Agreement for Lease for the Mona Offshore Wind Project in early 2023.
- 1.4.1.2 Although the TCE lease for the Mona Offshore Wind Project is 60 years, the design life of the Mona Offshore Wind Project is likely to be 35 years. During this time, there may be a requirement for reasonable improvement. If there are changes in technology, it may be desirable to 'repower' the Mona Offshore Wind Project at or near the end of the design life (i.e. reconstruct and replace wind turbines and/or foundations with those of a different specification or design). If the specifications and designs of the new wind turbines and/or foundations fall outside of the maximum design scenario or the impacts of construction, operations and maintenance, and decommissioning were to fall outside those considered by this EIA, repowering would require further consent (and EIA) and is therefore outside of the scope of the Environmental Statement.
- 1.4.1.3 The Mona Array Area (i.e. the area within which the offshore wind turbines (up to 96) will be located) is 300 km² in area and is located 28.8 km (15.6 nm) from the north coast of Wales, 46.9 km (25.3 nm) from the northwest coast of England and 46.6 km (25.2 nm) from the Isle of Man (when measured from Mean High Water Springs (MHWS)). The Mona Array Area is located in Welsh offshore waters (beyond 12 nm from the Welsh coast) (Figure 1.1).
- 1.4.1.4 The offshore export cables and related works located within and between the Mona Array Area and the landfall will be routed through the Mona Offshore Cable Corridor and Access Areas, which overlaps with both Welsh offshore and Welsh inshore waters. Landfall will be made at Llanddulas, and the Mona Onshore Cable Corridor will head south, before turning east at Moelfre.
- 1.4.1.5 The Mona Offshore Wind Project will connect to the national grid at the Bodelwyddan National Grid Substation, located south of Rhyl, North Wales. The Onshore Substation is located immediately south of the Bodelwyddan National Grid Substation and the Bodelwyddan to Pentir 400 kV overhead lines. The site selection methodology for the Onshore Substation is described in Volume 1, Chapter 4: Site selection and consideration of alternatives of the Environmental Statement. The onshore order limits are shown on Figure 1.1. The onshore order limits includes the operational only use of the access to the National Grid Substation from the Mona substation access from Glascoed Road. This operational only access is within the Order Limits and is included in the Onshore Works Plans. It has been assessed in the relevant chapters in this Environmental Statement but part of it is not currently shown on the other relevant onshore Figures. The Applicant intends to update these figures with the full operational

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only access post-acceptance and prior to the examination of the DCO application for the Mona Offshore Wind Project.

1.4.1.6 The key components of the Mona Offshore Wind Project include:

- Offshore wind turbines
- Foundations (for wind turbines and OSPs)
- Scour protection
- Inter-array cables linking the individual wind turbines to the OSPs
- Temporary construction compounds, including storage areas
- Permanent and temporary access roads
- High Voltage Alternating Current (HVAC) transmission system including:
 - OSPs
 - Offshore interconnector cable(s)
 - Offshore export cable(s)
 - Mona 400 kV Grid Connection Cable
 - Onshore export cable(s)
 - Connection works to the Bodelwyddan National Grid Substation
 - Onshore Substation.

1.4.1.7 The site selection process for the Mona Offshore Wind Project is presented in Volume 1, Chapter 4: Site selection and consideration of alternatives of the Environmental Statement and a more detailed description of the Mona Offshore Wind Project is presented in Volume 1, Chapter 3: Project description of the Environmental Statement.

1.4.1.8 The Mona Offshore Wind Project has adopted the Project Design Envelope (PDE) approach, also known as the Rochdale Envelope approach. The PDE sets out the design assumptions and parameters from which the realistic Maximum Design Scenarios (MDSs) are drawn for the Mona Offshore Wind Project EIA. The 'envelope' has been designed to include flexibility to accommodate further project refinement during detailed design, post consent.

1.5 Structure of the consultation process

1.5.1 Overview

1.5.1.1 This section is a summary of the key points of the consultation undertaken for the Mona Offshore Wind Project. Full details of the consultation can be found in the Consultation Report (Document Reference E3).

1.5.2 Mona Scoping Report

1.5.2.1 The Mona Scoping Report was submitted to the Secretary of State for Department for Business, Energy and Industrial Strategy (BEIS) in May 2022. The Applicant received the Scoping Opinion (Document Reference J8) in June 2022 (Planning Inspectorate, 2022) and in Quarter 3 of 2022 the Applicant met with stakeholders informally to discuss their feedback in more detail and to make any necessary amendments to the proposal ahead of formal consultation on the Preliminary Environmental Information Report (PEIR).

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1.5.3 Non-statutory consultation

- 1.5.3.1 The Applicant carried out a phase of non-statutory public consultation between 7 June and 3 August 2022. Over this consultation period, a number of events took place. These included an online event (in the form of a webinar), public exhibitions and pop-up events which allowed those interested in, or affected by, the Mona Offshore Wind Project to view the information provided. A second non-statutory consultation phase was undertaken in Autumn 2022 on the potential substation locations.
- 1.5.3.2 At these events (whether online or in person), members of the public were able to view the latest information on the Mona Offshore Wind Project, including maps and diagrams illustrating the proposed infrastructure. They were able to speak directly with members of the Mona Offshore Wind Project team and ask any questions or raise any concerns they had. Participants had the opportunity to complete a feedback form.
- 1.5.3.3 At the end of the non-statutory consultations, feedback was collated and considered and informed future development of the consultation and EIA processes, where appropriate. For example, the onshore substation consultation resulted in the selection of two onshore substation locations that were the focus of the PEIR.
- 1.5.3.4 Details of these non-statutory consultation events and the feedback given are comprehensively presented within the Consultation Report (Document Reference E3).

1.5.4 Statement of Community Consultation

- 1.5.4.1 Under Section 47 of the 2008 Act, the Applicant has a duty to prepare a Statement of Community Consultation (SoCC), which sets out “how it plans to consult, about the proposed application, people living in the vicinity of the land”. The Applicant must conduct its consultation in line with the SoCC. The Applicant must then carry out its consultation in accordance with the proposals set out in the SoCC (Section 47(7)).
- 1.5.4.2 In preparing the SoCC, the Applicant must consult on its draft contents with each of the local authorities in whose area the Mona Offshore Wind Project is situated (as prescribed in Section 42(b) of the 2008 Act).
- 1.5.4.3 In Wales, community/town councils are also prescribed consultees and were notified and consulted by the Planning Inspectorate and the Applicant as part of the scoping and pre-application consultation.
- 1.5.4.4 Based on the location of the Mona Offshore Wind Project, the local authorities which the Applicant has a duty to consult with are (designations are given as per Section 43(1) of the 2008 Act):
- Conwy County Borough Council (B – Host)
 - Denbighshire County Council (B – Host)
 - Flintshire County Council (A – Adjacent)
 - Cyngor Gwynedd (Gwynedd Council) (A – Adjacent)
 - Powys County Council (A – Adjacent)
 - Wrexham County Borough Council (A – Adjacent).
- 1.5.4.5 Due to the Mona Offshore Wind Project’s potential to have a visual impact, the Applicant also consulted with:
- Isle of Anglesey County Council
 - Eryri National Park Authority.

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- 1.5.4.6 Consultation on the contents of the draft SoCC was undertaken in autumn 2022 in accordance with Section 47(2) and 47(3) of the 2008 Act. Due to some changes to the project's programme in spring 2023 – namely, altering the start and end dates for consultation – minor amendments were made to the draft SoCC. The Applicant therefore consulted on the revised draft SoCC for a further 28 days during March-April 2023.
- 1.5.4.7 In line with Section 47(5) the Applicant gave regard to the responses received from the local authorities in the finalisation of the SoCC. As required by S47(6) of the 2008 Act, the SoCC was then made available for inspection by the public (from 19 April to 4 June 2023) and newspaper notices were published stating where and when the SoCC could be inspected.
- 1.5.4.8 Further information on the consultation process can be found within the Consultation Report (Document Reference E3).

1.5.5 Statutory consultation

Overview

- 1.5.5.1 In accordance with S47 of the 2008 Act, the Applicant held a statutory consultation, which ran from 19 April 2023 to 4 June 2023. In parallel, consultation was also undertaken with S42 consultees on the contents of the PEIR and the assessments undertaken to date. This provided the opportunity to review and comment upon the proposed Mona Offshore Wind Project development (including the Mona Proposed Onshore Development Area and Onshore Substation options) and its potential impacts. The full PEIR was made available for review on the project's website, alongside an NTS, a Consultation Brochure and supplementary reports, plans and drawings. As part of this consultation, six consultation events were held at which members of the public and other consultees could attend to meet members of the project team, as well as three smaller 'pop-up' events and one virtual event delivered as an online webinar. All events gave consultees the opportunity to ask questions, raise concerns and provide feedback via a number of advertised routes including via feedback form, email, freepost or in person. Following the close of the consultation, all feedback was collated and reviewed by the project. All responses have been considered as required under S49 of the 2008 Act and an analysis has been comprehensively presented in the Consultation Report (Document Reference E3), which has been submitted as part of the application in accordance with the 2008 Act. The feedback received has been considered as part of the development of the Mona Offshore Wind Project, as set out in Volume 1, Chapter 4: Site selection and consideration of alternatives of the Environmental Statement.
- 1.5.5.2 Following the close of statutory consultation, the Mona Offshore Wind Project team reviewed the environmental, consenting, engineering feasibility, land and community responses. These responses were considered against the information included within the PEIR.
- 1.5.5.3 The Mona Offshore Wind Project subsequently selected a single onshore cable route and a single onshore substation location, and communicated these refinements to stakeholders in August 2023:
- A 'Community update' newsletter was sent to c. 10,000 local addresses within a refined mailing boundary based on the amended red line boundary
 - Letters (and a copy of the newsletter) were sent to 358 landowners

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- An email including a link to the newsletter was sent to the project's Section 42 and Section 47 contact lists
 - Advance individual contact was made with key elected members.
- 1.5.5.4 Following the public announcement, discussions with landowners were held with regard to the impact on their holdings, involvement going forward and voluntary agreements being arranged to include both permanent and temporary rights along the Mona Onshore Cable Corridor and in proximity to the Mona Onshore Substation.
- 1.5.5.5 In September 2023, an announcement was made regarding refinements to the offshore elements of the Mona Offshore Wind Project, including a reduction in the Mona Array Area from the boundary presented in the PEIR and an increase in the minimum spacing between the wind turbines.
- An electronic newsletter was distributed to the Mona Offshore Wind Project's prescribed consultees (Section 42) via email, signposting to the websites for further information
 - The information was sent to members of the project's Marine Navigation and Engagement Forum as well as specially selected key stakeholders a day in advance of the public announcement.
- 1.5.5.6 Details of these post consultation activities are comprehensively presented within the Consultation Report (Document Reference E3).

Preliminary Environmental Information Report

- 1.5.5.7 The 2017 EIA Regulations require Preliminary Environmental Information (PEI) to be provided for public consultation by those seeking a DCO for a NSIP. The PEIR constituted the PEI for the Mona Offshore Wind Project. The level of detail required in PEI is not defined by the 2017 EIA regulations; however, it must include the same categories of information that are being assessed by the Environmental Statement, which will accompany the application for a DCO. There is no formal requirement for consultation on PEI in relation to the separate marine licence application to NRW, however NRW (in their advisory capacity) was a key consultee for the PEIR as part of the deemed marine licence.
- 1.5.5.8 The PEIR was intended to allow those taking part in the consultation to understand the nature, scale, location and likely significant environmental effects of the Mona Offshore Wind Project, such that they could make an informed contribution to the process of pre-application consultation under the 2008 Act and to the EIA process.
- 1.5.5.9 The Applicant has refined the Mona Offshore Wind Project proposal, in terms of the final DCO application submitted, based upon the consultation responses received during this statutory consultation (e.g. in the reduction of the Mona Array Area from PEIR to application to reduce impacts to shipping and navigation). The refined parameters are presented in Volume 1, Chapter 3: Project description of the Environmental Statement. The final results of the EIA are presented in this Environmental Statement and a summary of all the consultation responses received are presented in the final Consultation Report (Document Reference E3) (in accordance with Section 37(3)(c) of the 2008 Act.), both of which accompany the DCO application.

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Document availability

- 1.5.5.10 The full Environmental Statement is available in English language in digital format on the Planning Inspectorate website. An NTS of the Environmental Statement, which is also presented in the Welsh language, provides an overview of all of the technical topic assessments, as well as the site-selection process that has led to the scheme design envelope.
- 1.5.5.11 Physical hard copies of the NTS are also available on request by contacting:
- By post to: Freepost MONA (please be advised it is not possible to send registered post to a freepost address)
 - By email to: info@monaoffshorewind.com.

1.6 Environmental Statement

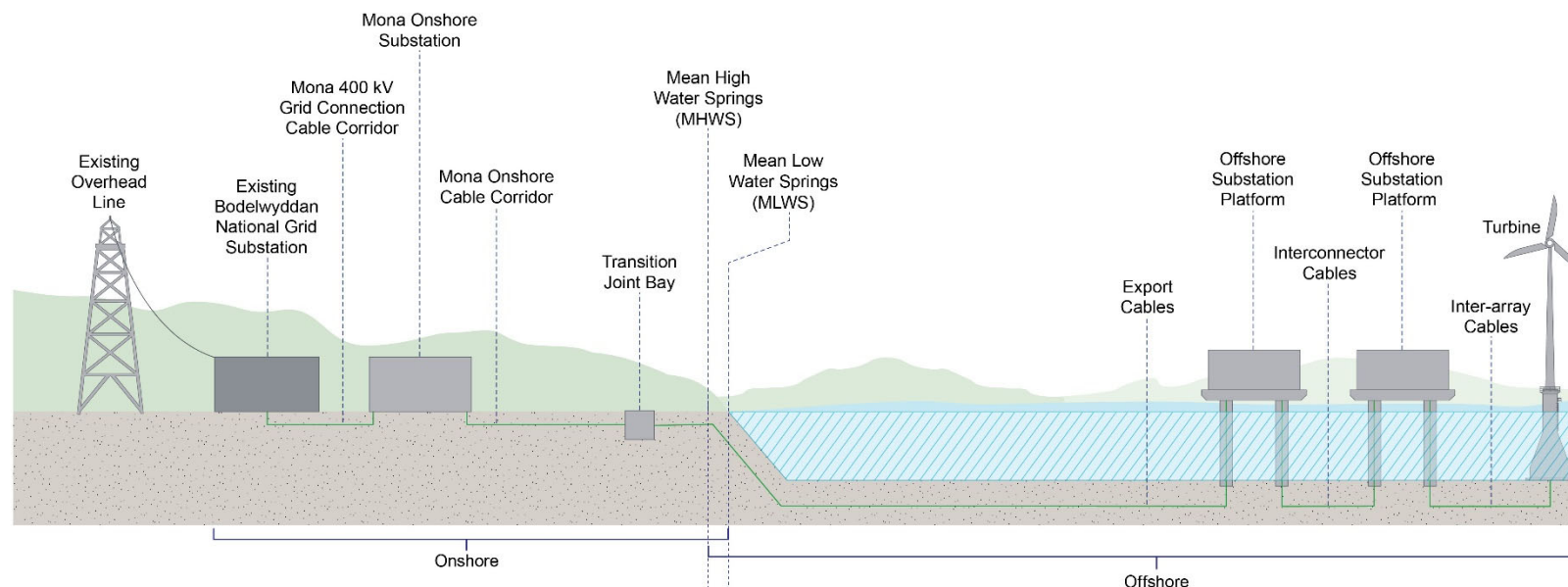
1.6.1 Overview

- 1.6.1.1 The Environmental Statement contains separate chapters for the offshore and onshore aspects of the EIA. For the purposes of the EIA 'offshore' generally refers to the receptors on the seaward side of MHWS and 'onshore' refers to the receptors on the landward side of MHWS however there are exceptions. There is an overlap of jurisdiction in the intertidal area between MHWS and Mean Low Water Springs (MLWS) of the marine and terrestrial consenting and regulatory regimes. The remit of each topic is shown in Figure 1.2.
- 1.6.1.2 The Environmental Statement is divided into eight volumes:
- Volume 1: Introduction
 - Volume 2: Offshore chapters
 - Volume 3: Onshore chapters
 - Volume 4: Onshore and offshore combined chapters
 - Volume 5: Introduction annexes
 - Volume 6: Offshore annexes
 - Volume 7: Onshore annexes
 - Volume 8: Offshore and onshore combined annexes.
- 1.6.1.3 Table 1.1 provides a breakdown of the contents of each of the documents and the organisations that have contributed to them.

1.6.2 Other supporting documentation

- 1.6.2.1 In addition to the Environmental Statement, a number of other supporting documents have also been included.

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Physical environment	Geology and ground conditions	Physical processes
	Hydrology and flood risk	
	Air quality	
	Noise and vibration	
Biological environment	Terrestrial ecology and intertidal birds	Climate change
		Benthic subtidal and intertidal ecology
		Fish and shellfish ecology
		Marine mammals
Human environment	Traffic and transport	Offshore ornithology
		Commercial fisheries
	Landscape and visual resources	Shipping and navigation
		Aviation and radar
	Historic environment	Seascape and visual resources
	Land use and recreation	Marine archaeology
		Other sea users
		Socio-economics and community
		Human health

Figure 1.2: Extent of the onshore and offshore technical study areas.

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Table 1.1: Environmental Statement structure and authors for the Mona Offshore Wind Project.

Volume	Chapter number	Chapter	Author
1 – Introduction	-	Non-technical summary	RPS
	1	Introduction and overarching glossary	RPS
	2	Policy and legislative context	RPS
	3	Project description	RPS
	4	Site selection and consideration of alternatives	bp and EnBW
	5	Environmental Impact Assessment methodology	RPS
2 – Offshore chapters	1	Physical processes	RPS
	2	Benthic subtidal and intertidal ecology	RPS
	3	Fish and shellfish ecology	RPS
	4	Marine mammals	RPS
	5	Offshore ornithology	RPS
	6	Commercial fisheries	MarineSpace
	7	Shipping and navigation	NASH
	8	Seascape and visual resources	RPS
	9	Marine archaeology	RPS
	10	Other sea users	RPS
	11	Inter-related effects - offshore	RPS
3 – Onshore chapters	1	Geology, hydrogeology and ground conditions	RPS
	2	Hydrology and flood risk	RPS
	3	Onshore ecology	RPS
	4	Onshore and intertidal ornithology	RPS
	5	Historic environment	RPS
	6	Landscape and visual resources	RPS
	7	Land use and recreation	RPS
	8	Traffic and transport	RPS
	9	Noise and vibration	RPS
	10	Air quality	RPS
	11	Inter-related effects - onshore	RPS
4 – Onshore and offshore combined chapters	1	Aviation and radar	Osprey
	2	Climate change	RPS
	3	Socio-economics	Hardisty-Jones
	4	Human health assessment	RPS
	3.1	Underwater sound technical report	Seiche
	3.2	Sulfur hexafluoride report	bp and EnBW

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Volume	Chapter number	Chapter	Author
5 – Introduction annexes	4.1	Site selection Area of Search identification	bp and EnBW
	4.2	Site selection BRAG report	bp and EnBW
	4.3	Onshore crossing schedule	bp and EnBW
	5.1	Cumulative effects screening matrix	RPS
	5.2	Transboundary impacts screening	RPS
6 – Offshore annexes	1.1	Physical processes technical report	RPS
	2.1	Benthic subtidal and intertidal ecology technical report	RPS
	2.2	Water Framework Directive coastal waters assessment	RPS
	3.1	Fish and shellfish ecology technical report	RPS
	4.1	Marine mammals technical report	RPS
	5.1	Offshore ornithology baseline characterisation	RPS
	5.2	Offshore ornithology displacement technical report	RPS
	5.3	Offshore ornithology collision risk modelling technical report	RPS
	5.4	Offshore ornithology migratory bird collision risk modelling technical report	RPS
	5.5	Offshore ornithology apportioning technical report	RPS
	5.6	Offshore ornithology population viability assessment technical report	RPS
	6.1	Commercial fisheries technical report	MarineSpace
	7.1	Navigational Risk Assessment	NASH
	8.1	Seascape and visual resources legislation and planning policy context	RPS
	8.2	Seascape and landscape character baseline technical report	RPS
	8.3	Visual baseline technical report – offshore development	RPS
	8.4	Seascape, landscape and visual resources impact assessment methodology	RPS
	8.5	International and nationally designated landscape study - offshore development	RPS
	8.6	Seascape visualisations	RPS
	9.1	Marine archaeology technical report	RPS
	10.1	Radar early warning technical report	RPS
7 – Onshore annexes	1.1	Aquifers, groundwater abstractions and ground conditions	RPS
	1.2	Groundwater sources of supply – hydrogeological risk assessment	RPS
	2.1	Flood consequences assessment	RPS

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Volume	Chapter number	Chapter	Author
	2.2	Surface watercourses and NRW flood zones	RPS
	2.3	Surface water abstraction licences, discharge consents and pollution incidents	RPS
	2.4	Water Framework Directive surface water and groundwater assessment	RPS
	3.1	Onshore ecology desk study	RPS
	3.2	Extended phase 1 habitat survey technical report	RPS
	3.3	Great Crested Newt survey	RPS
	3.4	Hedgerow survey	RPS
	3.5	Terrestrial invertebrates survey	RPS
	3.6	Aquatic invertebrates (including White Clawed Crayfish) survey	RPS
	3.7	Reptile survey	RPS
	3.8	Water Vole survey	RPS
	3.9	Bat roost survey	RPS
	3.10	Bat activity survey	RPS
	3.11	Otter survey	RPS
	3.12	Badger survey	RPS
	3.13	Hazel Dormouse survey	RPS
	3.14	National Vegetation Classification and Invasive Non-Native Species survey technical report	RPS
	3.15	Fish and eel survey	RPS
	4.1	Onshore ornithology – wintering and migratory birds	RPS
	4.2	Intertidal ornithology – wintering and migratory birds	RPS
	4.3	Onshore ornithology – breeding birds	RPS
	5.1	Desk based assessment	RPS
	5.2	Historic Environment policy and guidance	RPS
	5.3	Onshore geophysical survey report (interim report)	RPS
	5.4	Intertidal survey report	RPS
	5.5	Trial trenching report	RPS
	5.6	Setting assessment (onshore infrastructure)	RPS
	5.7	Setting assessment (offshore infrastructure)	RPS
	6.1	Landscape and visual resources planning policy context	RPS
	6.2	Landscape and seascape character baseline technical report	RPS
	6.3	Visual baseline technical report – onshore development	RPS

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Volume	Chapter number	Chapter	Author
	6.4	Landscape, seascape and visual resources impact assessment methodology	RPS
	6.5	Landscape visualisations	RPS
	6.6	Tree survey and arboriculture impact assessment	RPS
	7.1	Published soil and agricultural land classification data	RPS
	7.2	Soil survey data	RPS
	7.3	Published recreational resources plan	RPS
	8.1	Description of network links and sensitivity	RPS
	8.2	Base traffic flows	RPS
	8.3	Personnel injury accident locations	RPS
	8.4	Public transport networks	RPS
	8.5	Construction vehicle trip generation assumptions	RPS
	8.6	Traffic flows with construction traffic	RPS
	8.7	Traffic and transport figures	RPS
	9.1	Baseline noise survey	RPS
	9.2	Construction noise model output	RPS
	9.3	Operation noise assessment	RPS
8 – Offshore and onshore combined annexes	1.1	Aviation and radar technical report	Osprey
	2.1	Technical greenhouse gas assessment	RPS
	2.2	Climate change risk assessment	RPS
	3.1	Socio-economics technical impact report	Hardisty-Jones

1.7 References

Department for Business and Trade (2023) Offshore wind. Available: <https://www.great.gov.uk/international/content/investment/sectors/offshore-wind/>. Accessed October 2023.

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 2023.

Appendix A: Statement of expertise

A.1 Introduction

A.1.1 Overview

A.1.1.1.1 In accordance with Regulation 14(4) of the 2017 EIA Regulations and Regulation 12(2) of the 2007 EIA Regulations, the Environmental Statement has been prepared by competent experts. RPS has been commissioned by the Applicant to lead the EIA for the Mona Offshore Wind Project. This Appendix forms the statement of expertise of the Environmental Statement prepared for the Mona Offshore Wind Project.

A.1.2 EIA management

A.1.2.1.1 The team responsible for the production of the Environmental Statement has been led by the Applicants, supported by lead EIA and HRA consultant RPS. RPS is a registrant of the Institute of Environmental Management and Assessment (IEMA) Quality Mark. This means that RPS adheres to the following quality mark commitments:

- EIA Management – A commitment to using effective project control and management processes to deliver quality in the EIAs co-ordinated and the Environmental Statements produced
- EIA Team Capabilities – A commitment to ensuring that all EIA staff have the opportunity to undertake relevant continuing professional development
- EIA Regulatory Compliance – A commitment to delivering Environmental Statements that meet the requirements established within the appropriate UK EIA Regulations
- EIA Context and Influence – A commitment to ensuring that all EIAs co-ordinated are effectively scoped and with transparent indication of how the EIA process, and any consultation undertaken, influenced the development proposed and any alternatives considered
- EIA Content – A commitment to undertaking assessments that include: a robust analysis of the relevant baseline; assessment and transparent evaluation of impact significance; and an effective description of measures designed to monitor and manage significant effects
- EIA Presentation – A commitment to deliver Environmental Statements that set out environmental information in a transparent and understandable manner
- Improving EIA Practice – A commitment to enhance the profile of good quality EIA by working with IEMA to deliver a mutually agreed set of activities, on an annual basis, and by making appropriate examples of or work available to the wider EIA community.

A.1.2.1.2 The Environmental Statement has been prepared by a number of RPS in-house and subcontracted topic specialists.

A.1.3 Topic authors

A.1.3.1 Volume 2 – Effects on the offshore environment

Physical process

A.1.3.1.1 The physical processes EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Engineer for the Water Environment and Flood Risk Management at RPS. They have a Bachelor of Engineering in Civil Engineering, a Masters of Sciences (MSc) in Engineering Computation and a Doctorate in Computational Fluid Dynamics from Queen's University, Belfast. They have over 22 years' post-doctoral experience in coastal modelling and have been involved in offshore wind projects for more than 12 years. They have acted as an expert witness on flooding risks associated with a proposed road realignment during An Bord Pleanna (planning board) and also sat on the scientific committee for the Marine Waste-Water Discharges specialist group.

Benthic subtidal and intertidal ecology

A.1.3.1.2 The benthic subtidal and intertidal ecology EIA has been undertaken by a technical lead and competent team at RPS. The technical lead has a Bachelor of Arts in Biological Sciences from the University of Oxford and an MSc in Marine Environmental Protection from the University of Bangor. They are a member of the Institute of Marine Engineering, Science and Technology and a Chartered Marine Scientist. They have 12 years' of experience working in the offshore wind sector. They have specialised in providing technical inputs to the EIA process, including benthic ecology and marine mammal assessments. They have gained experience in working for a range of clients including the offshore renewables industry, oil and gas sector and port developments. They have experience of EIA in support of DCO and Marine Licence applications including design and agreement of appropriate mitigation measures to reduce impacts on sensitive species and habitats.

Fish and shellfish ecology

A.1.3.1.3 The fish and shellfish ecology EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is an Associate Director at RPS and has a Bachelor of Sciences (BSc) (Hons) in Marine Biology and Oceanography. They are a member of the Society for Underwater Technology and is the Secretary of Marine Environmental Science Special Interest Group. They are also a member of the East of England Marine Science and Technology Sector Council. They have over 12 years' global marine survey and consulting experience.

Marine mammals

A.1.3.1.4 The marine mammal EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Advisor at RPS. They have a BSc (Hons) in Applied Marine Biology from the Heriot-Watt University of Edinburgh, and an MRes in Marine and Coastal Ecology and Environmental Management from the University of York and a PhD in Designing Marine Protected Areas from the University of Cambridge. They have over 19 years' of experience in marine mammal assessments for the offshore renewable industry as well as providing ecological advice to inform policy and legislation and technical advice to industry in EIA and HRA.

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Offshore ornithology

- A.1.3.1.5 The offshore ornithology EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Ornithologist at RPS. They have over 20 years' experience in undertaking ornithological studies, including the production of technical reports to support planning application of several offshore wind farms. Their work also includes peer-reviewed scientific literature on the impact of human activities on waterbirds. They have operated as a consultant providing advice on habitat restoration/enhancement in estuaries and on the impact of offshore wind farms on birds.

Commercial fisheries

- A.1.3.1.6 The commercial fisheries EIA has been undertaken by a technical lead and competent team at MarineSpace. The technical lead is a Director at MarineSpace, with a BSc (Hons) in Marine Biology and an MSc in Applied Hydrobiology, both from the University of Wales. They have over 17 years' professional experience as a marine environmental consultant, specialising in EIA and consenting for offshore sectors including marine aggregates, ports and harbours, oil and gas and offshore renewables. They have provided support to numerous Round 1, 2 and 3 offshore wind farm projects in UK waters, as well as advising a number of clients in the wave and tidal sector. They have also currently undertaken the joint Secretariat role of the Offshore Renewables Joint Industry Partnership Ocean Energy, which MarineSpace jointly performs with Aquatera Ltd.

Shipping and navigation

- A.1.3.1.7 The shipping and navigation EIA has been undertaken by a technical lead and competent team at NASH Maritime Ltd. The technical lead is a Project Director at NASH Maritime with over 30 years' experience in marine engineering and environmental projects throughout the marine energy and water industries. They lead the technology arm at NASH Maritime providing support to clients on implementing safety and vessel traffic management systems for ports and offshore developments.

Seascape and visual resources

- A.1.3.1.8 The seascape and visual resources EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is one of RPS' leading landscape and seascape consultants with over 35 years' experience in landscape architecture and landscape planning. During their career they have gained considerable experience in the preparation of Seascape and Visual Impact Assessments for Environmental Statements. They have also undertaken impact assessments for seascapes and historic landscapes for Nationally Significant Infrastructure Projects. These include more than 25 years' experience on energy projects, in addition to other work on schemes for leisure, residential, commercial, NHS and mineral extraction projects.

Marine archaeology

- A.1.3.1.9 The marine archaeology EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Senior Marine Consultant at RPS who has a Masters of Arts (MA) (Hons) from the University of Glasgow and an MA from the University of Southern Denmark. They have over six years' experience supporting the renewable energy sector specialising in marine archaeology and have experience as

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a technical specialist in offshore renewable energy as a marine archaeologist and marine archaeology consultant.

Other sea users

- A.1.3.1.10 The other sea users EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Consultant at RPS who has a BSc in Ocean Sciences and Underwater Studies from the University of Plymouth and an MSc in Integrated Environment Studies from the University of Southampton. They are a chartered Environmentalist, a Science Council Chartered Scientist, an Energy Institute Scientist and an IEMA Affiliate member. They have over 18 years' experience in the energy sector specialising in Environment and Social Impact Assessments, Health, Safety and Environmental Management Systems.

A.1.3.2 Volume 3 – Effects on the onshore environment

Geology, hydrogeology and ground conditions

- A.1.3.2.1 The geology, hydrogeology and ground conditions EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Hydrogeologist at RPS responsible for the management and delivery of projects by the Water Sciences Team based in Bristol. They have more than 16 years' consultancy experience following completion of an MSc and Doctor of Philosophy (PhD) in Hydrogeology and previous roles in the Environment Agency. They provide the technical lead for complex projects, in challenging hydrogeological settings, that relate to the water environment. Through the delivery of robust assessments and high-quality reporting, they facilitate positive regulatory outcomes in the shortest time-scales possible. They have expertise in the areas of groundwater, land contamination and controlled water risk. They routinely produce complex Hydrogeological Risk Assessments and Detailed Quantitative Risk Assessments to facilitate development in the UK, Republic of Ireland and overseas. These projects are typically driven by planning, permitting and consenting requirements of major infrastructure projects that include numerous important linear projects in the UK. They currently provide hydrogeological consultancy services to the UK Environment Agency in the southwest of England. They also provide support for clean groundwater developments including risk assessment, borehole design, monitoring plans, pumping tests and borehole decommissioning.

Hydrology and flood risk

- A.1.3.2.2 The hydrology and flood risk EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Technical Director at RPS who holds a degree in Environmental Management and has over 18 years' experience undertaking environmental reporting, hydrological assessments, Environmental Statements and geo-environmental investigations. They provide expert hydrological and flood risk technical support and advice for a wide range of development applications including; masterplans, energy projects, residential, commercial and industrial. These include Town and Country Planning Act applications, as well as Nationally Significant Infrastructure Projects. During the course of supporting planning applications and associated EIAs, they have both produced and technically reviewed numerous flood risk assessments and hydrological models, which have been utilised to refine flood zones for development applications and support constraints mapping. Their role includes project director and project liaison with various stakeholders to

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address concerns pertaining hydrological and drainage aspects of project development, as well as inputting into protective provisions of the DCO.

Onshore ecology

- A.1.3.2.3 The onshore ecology EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Technical Director at RPS with more than 20 years' of ecological and environmental management experience and has experience acting as an expert witness for DCO and Hybrid Bill applications. They are a Chartered Environmentalist and a member of the Chartered Institute of Ecology and Environmental Management. They have a strong understanding of the requirements within an EIA and ecological mitigation for linear infrastructure across a range of sectors including roads, rail, and energy. Their extensive highways and infrastructure experience includes route selection, ecological inputs into design, mitigation and leading in stakeholder engagement including both statutory and non-statutory. They have extensive experience within the field of ecology, including ecological assessment and design, bat offshore assessments, terrestrial ecology, protected species mitigation strategies and specialist surveys for protected species (badgers, bats, great crested newts, reptiles, water voles, otters and dormice). This also includes working as the lead technical author for offshore bats on Hornsea 2 and spending 13 years on HS2, where they were responsible for the design, co-ordination and implementation of a multi-species bat licence to gain pre-construction data to inform the Hybrid Bill and Greatmoor Sidings TWAO and for obtaining the consents from Natural England.

Onshore and intertidal ornithology

- A.1.3.2.4 The onshore and intertidal ornithology EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Ornithologist at RPS. They have over 20 years' experience in undertaking ornithological studies, including the production of technical reports to support planning application of several offshore wind farms. Their work also includes peer-reviewed scientific literature on the impact of human activities on waterbirds. They have operated as a consultant providing advice on habitat restoration/enhancement in estuaries and on the impact of offshore wind farms on birds.

Historic environment

- A.1.3.2.5 The historic environment EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Director at RPS, a member of the Chartered Institute for Archaeologists and a Fellow of the Society of Antiquaries with more than 35 years of professional experience within the historic environment sector in the UK and overseas. This time has provided them with an excellent and wide-ranging understanding of the policy and guidance regarding historic environment across all parts of the UK. They have been employed by contracting and consulting organisations that provide archaeological and historic environment services to a wide range of clients. These include transport and infrastructure providers as well as public agencies and private sector developers. They have undertaken EIAs for complex projects across several sectors of development. These include onshore cable connections for offshore wind farms such as Atlantic Array (Devon), Hornsea Project One (Lincolnshire) and Burbo Bank Extension and Mona (both North Wales), as well as interconnectors such as FABLink (Devon and Alderney).

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Land use and recreation

- A.1.3.2.6 The land use and recreation EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Senior Director at RPS and has over 30 years of experience in land use, recreation and environmental assessment. They are also a member of the British Society of Soil Science. During their career, they have specialised in the preparation of soils, agricultural and recreation assessments for Environmental Statements together with the development and implementation of soil and public rights of way management plans. They also have experience of overall project management of large-scale infrastructure projects. Their specialist experience includes road and aviation projects, mineral extraction and renewable energy schemes as well as a number of large scale residential schemes. They have presented expert evidence on soils, agricultural land quality, land restoration, recreation and common land at public inquiry and DCO hearings.

Traffic and transport

- A.1.3.2.7 The traffic and transport EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Director at RPS and a member of the Chartered Institution of Highways and Transportation with over 20 years' experience of transport planning, highway engineering and EIAs. They have a particular expertise in preparing the transport related documents associated with obtaining DCOs for nationally significant infrastructure projects, particularly for power, energy and infrastructure projects. They are experienced in preparing submission documents and participating during the examination process, including appearing and contributing to Issue Specific Hearings and other transport related hearings. They have provided transport advice and led the transport aspects associated with over 100 energy-related development proposals.

Noise and vibration

- A.1.3.2.8 The noise and vibration EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is Technical Director of the RPS Acoustics Team with more than 23 years of experience in acoustics. They are a member of the Institute of Acoustics, Acoustical Society of America, Danish Acoustic Society and the Audio Engineering Society. They are a specialist acoustic consultant and engineer with a wide range of experience gained in the UK, Denmark and worldwide. They have worked with electroacoustics, psychoacoustics, architectural acoustics, vibrations and environmental acoustics. They have gained particular experience in the fields of architectural acoustics (building and room) working with the construction industry on a variety of projects, including residential, commercial, education, health and entertainment. They are an expert on the subject of room acoustics and room acoustic computer simulations, as well as a leading expert on the emerging field of archaeoacoustics. They have published several papers on the above subjects and on acoustics of offices. In relation to environmental acoustics, they have provided a wide variety of noise impact assessments for residential, commercial and industrial developments. However, they have specialised in noise impact assessments in relation to energy developments, both traditional and renewable energy.

Air Quality

- A.1.3.2.9 The air quality EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Consultant for Air Quality and is a member of

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the Institute of Acoustics. They hold a PhD in acoustics with a research focus on outdoor sound propagation. They have been the project manager and technical lead for the acoustic elements on a wide range of renewable energy schemes to support Environmental Impact Assessments. They are highly experienced in the measurement of noise and vibration and the development of complex data acquisition systems, as well as 3D acoustic modelling and impact assessments. They remain active in their research and have developed numerical methods for the prediction of long-range sound propagation from noise sources offshore, and construction noise and vibration assessments in GIS.

A.1.3.3 Volume 4 – Effects on the onshore and offshore environment

Landscape and visual resource

A.1.3.3.1 The landscape and visual resources EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is a chartered landscape architect with over 34 years of experience in advising on landscape and visual assessment matters for a diverse range of projects in transport, waste, power, mining and minerals and mixed use development sectors. They have recently been involved in the landscape and visual impact assessment of the Morgan Offshore Wind Project: Generation Assets as part of the PEIR process and the DCO application. They have also provided advice in relation to the design of public parks including a future park on a former landfill site. They are highly experienced in all stages of the landscape and visual impact assessment process through to oral hearing. They have provided advice on projects at both the options appraisal stage and also the detailed design stage for a wide range of transport schemes and other development types. Their recent experience includes delivery of Stage (II) Option selection, design and LVIA for two road schemes in Ireland. They have worked for two years on the North West Coast Connections powerline project in Cumbria for National Grid UK for which they provided design and LVIA services as part of the DCO.

Aviation and radar

A.1.3.3.2 The aviation and radar EIA has been undertaken by a technical lead and competent team at Osprey Consulting Services. The technical lead is a Principal Consultant at Osprey Consulting Services. They joined Osprey in 2012, following a seven year tenure at the Civil Aviation Authority. They have over 34 years' aviation experience at every level from operational aircrew, operational airspace manager, national policy maker and regulator with the Civil Aviation Authority and international Technical Advisor to the Single European Skies Air Traffic Management Research Programme. They have an aeronautical engineering degree, which has been the foundation of their technical, as well as operational credibility, on some of the issues facing civil and military Air Navigation Service Providers.

Climate change

A.1.3.3.3 The climate change EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is an Associate Director at RPS. They are also a member of the IEMA Working Group and co-author of the updated Greenhouse Gases in EIA Guidance document. They have comprehensive experience and technical knowledge in the principles of sustainability including corporate responsibility, Building Research Establishment Environmental Assessment Method, and climate change. They provide advice and technical expertise across all work stages supporting development projects

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and organisations through key milestones. They are experienced in the assessment of impacts of climate change and carbon footprint analysis.

Socio-economics

- A.1.3.3.4 The socio-economics EIA has been undertaken by a technical lead and competent team at Hardisty Jones Associates. The technical lead is a Director of Hardisty Jones Associates with 23 years' experience of all aspects of economic development consulting. They are an experienced project manager and leader with strengths in EIA, economic impact forecasting and modelling, stakeholder consultation, understanding the implications of economic analysis, survey development/management, and strategy and policy development. They have worked for a wide range of public and private sector clients across the UK. Prior to founding HJA in 2011, they enjoyed an 11 year career at DTZ (now Cushman & Wakefield), latterly heading its economic development team across Wales and South West England. They have served as a Director of the Institute of Economic Development (the professional body for those working in economic development) since 2015.

Human health

- A.1.3.3.5 The human health EIA has been undertaken by a technical lead and competent team at RPS. The technical lead is the Director of Health and Social Impact at RPS. They are the first author of the IEMA health in EIA guidance 2022 and the Institute of Public Health Impact Assessment guidance 2021. They are also first author of the World Health Organisation 2021 review of international practice on health in EIA and Strategic Environmental Assessment. They are a registered public health practitioner with the Faculty of Public Health, as well as an Honorary Research Fellow and Member of the World Health Organisation Collaborating Centre on Health in Impact Assessments at the University of Liverpool. They have over 18 years' experience as a professional consultant, with a public health, environmental science and legal practice background. They are chair of the health section of the International Association for Impact Assessment. They are experienced with renewable and linear projects, as well as many other sectors. As an expert witness they have demonstrated robust health assessment at Public Inquiry.

A.1.3.4 Technical annexes

Underwater sound

- A.1.3.4.1 The underwater sound assessment has been undertaken by a technical lead and competent team at Seiche. The technical lead is an Associate Director at Seiche and is a leading underwater acoustic expert with over 25 years' experience. They are experienced in assessing the impacts of underwater sound from offshore and coastal projects on marine life. They have been underwater sound technical lead on numerous offshore wind projects (as well as wave and tidal development) and are considered a leading expert in undertaking EIA noise studies for complex offshore wind farm developments. They worked as a senior member of the team advising the UK government to review and make recommendations to improve marine mammal mitigation protocols and to assess the efficacy of acoustic deterrent devices and recently undertook a research project for National Resources Wales on sound modelling in Welsh waters. They have authored a number of technical papers on underwater acoustics and presented at a number of conferences. They are a Chartered Engineer, hold a bachelor's degree in physics, are a member of the Institute

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of Acoustics and Associate of the Acoustical Society of America. They are an active member of the UK Underwater Sound Forum, UK Oil and Gas underwater noise modelling group, BSI committee EH/1/7 on underwater acoustics and ISO/TC 43/SC 3/WG 5 "Measurement and modelling of underwater ambient sound".

Coastal Water Framework Directive

- A.1.3.4.2 The coastal water framework directive assessment has been undertaken by a technical lead and competent team at RPS. The technical lead is a Principal Marine Consultant at RPS. They have a BSc in Geology and an Advanced Postgraduate Certificate (Distinction) in Spatial Information Science and a certificate in Ecology and Conservation. They are a practitioner member of the Institute of IEMA.

Onshore Water Framework Directive

- A.1.3.4.3 The onshore water framework directive assessment has been undertaken by a technical lead and competent team at RPS. The technical lead is a chartered scientist and environmentalist with 23 years' experience in catchment management and river basin planning, environmental assessment, environmental appraisal of infrastructure projects, hydrology, hydraulic modelling and water quality assessment. They also have specific technical expertise in Water Framework Directive compliance assessments for large infrastructure projects in UK and Ireland. They have project managed a number of large multi-disciplinary and smaller scale projects, developed and project managed numerous impact assessments, planning applications, post consent plans, freshwater environmental surveys, technical reports, and mitigation and monitoring plans. They are currently working with the Department of Housing, Planning and Local Government in Ireland developing River Basin Management Plans and Water Framework Directive Assessment Guidelines for Planning Authorities in Ireland. They are also the Conservation Management Plan lead for seven water dependent Special Areas of Conservation being prepared for the Department of Agriculture, Environment and Rural Affairs in Northern Ireland.

Helicopter Access Report

- A.1.3.4.4 The helicopter access report has been undertaken by a technical lead and competent team at Anatec. The technical lead has over 30 years of experience working in risk assessment in the offshore renewable, oil and gas and marine sectors. They have been project director and project manager on a large number of offshore wind farm projects from Round 1 through to Round 3. They have also provided expert witness advice at a number of public enquiries for offshore wind farm projects. They were Project manager on the identification of Marine Environment High Risk Areas (MEHRAs) for the DfT as well as on the Risk Assessment of UK Search & Rescue Helicopters for the MoD and MCA. They have also worked on a Risk Assessment of Chemical Tankers in UK Waters and also assisted the MCA on their Emergency Towing Vessels project. They have also project managed marine risk assessments for a large number of both onshore and offshore facilities including; LNG Terminals, Nuclear intakes/outfalls, Marinas, oil and gas pipelines, gas storage facilities, cable routes, Floating Production Facilities, drilling rigs, Satellite Platforms and Ports.

Radar Early Warning technical report

- A.1.3.4.5 The radar early warning technical report has been undertaken by a technical lead and competent team at Radar Research at the University of Manchester. The technical

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lead is an award-winning engineering and research scientist specialising in radar and propagation modelling. Their research covers antennas and propagation as applied to radar, wireless communications and radio astronomy instrumentation. Their work on the propagation and multiple reflections of radar waves within complex environments such as wind farms has been internationally recognised within research communities as well as various industrial partners.

A.1.3.5 Habitats Regulations Assessment

- A.1.3.5.1 The Habitats Regulation Assessment (HRA) has been undertaken by a technical lead and competent team at RPS with support from the relevant topic technical leads. The HRA lead is an Associate Director at RPS with a Bachelor of Arts in Biological Sciences from the University of Oxford and an MSc in Marine Environmental Protection from the University of Bangor. They are a member of the Institute of Marine Engineering, Science and Technology and a Chartered Marine Scientist. They have 12 years of experience working in the offshore wind sector. They have been HRA lead for a number of Scottish and Round 4 offshore wind projects as well as leading on the Appropriate Assessment Screening and Natura Impact Statement (NIS) for a number of Investigative Foreshore Licence Applications around the coast of Ireland.