

# MONA OFFSHORE WIND PROJECT

## Response to Ørsted IPs ExQ2 Submission

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Image of an offshore wind farm



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### Glossary

Term	Meaning
Applicant	Mona Offshore Wind Limited.
Appropriate Assessment	A step-wise procedure undertaken in accordance with Article 6(3) of the Habitats Directive, to determine the implications of a plan or project on a European site in view of the site's conservation objectives, where the plan or project is not directly connected with or necessary to the management of a European site but likely to have a significant effect thereon, either individually or in-combination with other plans or projects.
Bodelwyddan National Grid Substation	This is the Point of Interconnection (POI) selected by the National Grid for the Mona Offshore Wind Project.
Competent Authority	Regulation 6(1) defines competent authorities as "any Minister, government department, public or statutory undertaker, public body of any description or person holding a public office".
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,

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Term	Meaning
	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 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.

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Term	Meaning
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 OSPs forming part of the Mona Offshore Wind Project were likely to be located. This area was the boundary consulted 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).



## MONA OFFSHORE WIND PROJECT

Term	Meaning
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.

## Acronyms

Acronym	Description
AfL	Agreement for Lease
BEIS	Department for Business, Energy and Industrial Strategy
BNG	Biodiversity net gain
DCO	Development Consent Order
EIA	Environmental Impact Assessment
EnBW	Energie Baden-Württemberg AG
EWG	Expert Working Group
HVAC	High Voltage Alternating Current
IEF	Important Ecological Feature
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
NBB	Net Benefits for Biodiversity
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
SAC	Special Area of Conservation
SoCC	Statement of Community Consultation
SPA	Special Protection Area
TCE	The Crown Estate
WTW	Wildlife Trust Wales
TWT	The Wildlife Trusts

## MONA OFFSHORE WIND PROJECT

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### Units

Unit	Description
GW	Gigawatt
km	Kilometres
km <sup>2</sup>	Kilometres squared
kV	Kilovolt
MW	Megawatt
nm	Nautical miles



1            **Response Ørsted IPs ExQ2 Submission**

1.1         **Introduction**

1.1.1.1     The Applicant has responded to the Ørsted Ips ExQ2 submission below.

## 2 Response to Ørsted IPs ExQ2 Submission

Table 2.1: REP5-118 Ørsted IPs

Planning Inspectorate Ref. No.	Question to	ExQ2 Question	Ørsted IPs response	Applicant's response
REP5-118.1	Shepherd & Wedderburn on behalf of Burbo Extension Limited	<b>Q2.6.8 Land rights/property agreement</b> Do you agree with the Applicant's account of negotiations with you in its Land Rights Tracker [REP4- 091]. If not, please advise why not.	The interests identified in the Lands Rights Tracker, while formerly held by Burbo Extension Limited, have been transferred to the Offshore Transmission Owner ("OFTO"). We understand the Applicant is engaging with the OFTO in respect of these interests.	The Applicant notes the response and will continue to provide updates through the Land Rights Tracker where required.
REP5-118.2	The Ørsted IPs	<b>Q2.19.4 Wake effects: NPS EN-3 para 2.8.347</b> Para 2.21 of your [REP4-129] states "we consider there is potential that the level of effect predicted has the potential to impact long term decisions on the future viability of the Ørsted IPs' developments". <ul style="list-style-type: none"> <li>For the avoidance of doubt, is it your case that the Proposed Development is likely to affect the future viability of one or more of your existing projects?</li> <li>If so, provide further explanation as to how a reduction in annual energy production at the level predicted by your preliminary modelling is likely to adversely affect the future viability of the OWF(s).</li> </ul>	<p>The Ørsted IPs' do not consider that the Project will impact on the viability of their developments in the short term.</p> <p>However, medium to long term decisions regarding all of the developments must take into account a number of factors, including maintenance and other operational costs compared to energy yield and price.</p> <p>The Ørsted IPs' consider (based on preliminary modelling and other evidence regarding the potential for wake loss between windfarms at the distances at play) that the Proposed Development is likely to have a material impact on their existing projects.</p> <p>The Ørsted IPs consider that extending the lifetime of its existing projects would benefit the UK grid by providing additional green electricity. As no additional consent is required to extend the lifetimes, the decision will hinge on the financial viability of the projects beyond their expected earliest decommissioning date.</p> <p>A material increase of wake impacts as a result of the Applicant Proposed Development could be sufficient to make operations uneconomic post-subsidy for the most marginal assets, making a lifetime extension uneconomical. This would result in the decommissioning of the wind farms without maximising their potential technical life.</p>	<p>The Applicant notes that any possible impact from Mona on the management of the Ørsted IPs assets will not be realised in the near-term, and <u>may</u> only be relevant in long-term decision making where the individual Ørsted IPs projects are already operating in a marginal way. The Applicant notes this therefore may not be relevant at all in decision making for some of the Ørsted IPs assets, and it is the Applicant's understanding that in reality it may not be relevant for decision making regarding any of the IPs assets.</p> <p>As the Applicant has previously noted [S_D6_4], and as is made clear in the Ørsted IPs response to this question, there are a large number of factors that will influence the decision to continue to operate an asset at some time in the future. These include the operational condition of the assets, the operations and maintenance costs of the project at the time, the power price agreement the project holds, and other factors related to both the asset itself and the portfolio of assets it sits within. Mona would not affect any of these factors. Any potential in-direct affect from Mona for some of the most marginal of the Ørsted IPs assets would be at most of minor relevance to decision making in the long-term.</p>
REP5-118.3	The Ørsted IPs	<b>Q2.19.6 Wake effects: submission of modelling</b> Any modelling or analysis, as referred to in para 2.31 of your [REP4-129], should be submitted in full at D5 at the latest in order to enable exploration at ISH6, if necessary. Given the short timescales between D5 and ISH6, the Ørsted IPs are encouraged to consider providing early sight of this analysis to the Applicant with a view to achieving the most productive use of time at ISH6.	<p>The Ørsted IPs have submitted the finalised modelling undertaken for them by Wood Thilsted in their Deadline 5 submission. As the results of this modelling have only recently been finalised, the Ørsted IPs were not in a position to share this report with the Applicant ahead of DL5. The Ørsted IPs reiterate that they consider it is the Applicant's responsibility to undertake this analysis.</p> <p>This approach is consistent with a recent submission that was made by the Crown Estate in its response to the Examining Authority's Written Questions ExQ1 OG 1.2 in respect of the Outer Dowsing Offshore Wind Farm (Generating Station). The Crown Estate was asked about the 7.5km distance between Round 4 projects and the Frazer-Nash report. The Crown Estate has acknowledged that the inter-farm wake effects can extend beyond the buffer distances and that other factors beyond distance, including prevailing wind direction and wind farm layout, may also be relevant. The Crown Estate went on to state that the location of a wind farm within the leased area is a matter for the developers to decide and design for. In relation to the Frazer-Nash study, the Crown Estate stated that "The report summarises modelling applied to generic/hypothetical wind farms and does not replace the need for project-specific analysis." We annex a copy of the whole of the Crown Estates response as Appendix 1 to this document.</p> <p>This does not support the approach that the Applicant has taken to wake loss during this examination.</p>	<p>The Applicant has responded to the Ørsted IP's Deadline 5 Wood Thilsted report in [S_D6_53].</p> <p>The Applicant does not believe the Crown Estate's (TCE) response to the Outer Dowsing Offshore Wind Farm (Generating Station) ExQ1 OG 1.2 contradicts the approach taken by the Applicant. The Applicant has never claimed that wake effects can't extend beyond 7.5 km. TCE are clear that they took account of wake effects, amongst other matters, when setting the 7.5 km distance between Round 4 leasing areas and other OWFs (unless otherwise agreed to be less with the relevant OWF). This distance was set to both new and existing operational projects.</p> <p>The Applicant acknowledges that it is for the project developer to decide where within the agreement for lease area the project is located. The Applicant has taken this approach to development of the project, and as set out in Site Selection and Consideration of Alternatives (AS-016) has made amendments to the design of the project in response to potential significant effects identified through the EIA process against established guidance and policy in consultation with established regulators in the field.</p> <p>The Applicant would also reiterate, as noted in [S_D6_4] that TCE are not suggesting that there is a framework in which to undertake a project specific analysis in the context of EIA for a project to follow. TCE are merely stating it is not their role to undertake any project-specific analysis, beyond any analysis TCE undertook to inform their allowance for wake effects when setting the 7.5 km buffer (a 50 % increased buffer distance from previous leasing rounds).</p>

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Planning Inspectorate Ref. No.	Question to	ExQ2 Question	Ørsted IPs response	Applicant's response
REP5-118.4	The Ørsted IPs	<p><b>Q2.19.7 Wake effects: way forward</b></p> <p>What outcome do you seek from this Examination in relation to wake effects? Could there be any role for Protective Provisions or a commercial side agreement to protect your interests?</p>	<p>The Ørsted IPs consider that a commercial side agreement would assist in ensuring their interest are adequately protected. However, such an agreement would require meaningful engagement from the Applicant, which has not been forthcoming to date.</p> <p>The Ørsted IPs consider that any parameters in terms of distance and other design requirements would be more appropriately placed as DCO requirements. However, the Ørsted IPs reiterate their position set out in their submission [REP4-129], that in order for the Secretary of State to be in a position to make its decision on the application in accordance with the NPS-EN3, an assessment of wake effects and how those have been addressed must be provided by the Applicant before the application is granted.</p>	<p>The Applicant's position remains, as set out in the Hearing Summary ISH6 [S_D6_4] that a commercial agreement is only relevant where there are identified residual effects (either by the Applicant or as proposed by a regulator/SNCB) under the EIA process, undertaken against guidance established by regulators in the relevant field, and where supported by policy, which is not the case for the Ørsted IPs issue of wake effects. The Applicant does not believe there is therefore a case for meaningful engagement on a commercial side agreement on that basis.</p> <p>The Applicant does not believe that a DCO requirement is either justified or workable. As the Applicant has set out through its representations it does not consider an assessment needs to be conducted, given the lack of policy and guidance to undertake one. That lack of policy and guidance is also of relevance to the drafting and benefit of a DCO Requirement which might seek to control design parameters (similar to that included in the Awel y Môr DCO) in order to address the Ørsted IP's issue. The Applicant is unclear how any Requirement would work in the absence of guidance that sets out what constitutes a significant effect, or what change against a baseline (leaving aside the Applicant's position that this cannot be established) mitigation might need to deliver against the impact any mitigation would have on the new generation delivered by the Mona Offshore wind farm.</p>
REP5-118.5	The Applicant The Ørsted IPs	<p><b>Q2.19.8 Statement of Common Ground</b></p> <p>Produce a Statement of Common Ground on all issues of relevance to the Ørsted IPs. For submission at Deadline 5, with final version at Deadline 7. Add the Ørsted IPs to the Statement of Commonality.</p>	<p>Mona and representatives of the Ørsted IPs will work towards a SoCG being submitted into the Mona examination at Deadline 6 (20 December). Given the amount of time between the ExAs question and Deadline 5 it has not been possible to progress a SoCG to a suitable level for submission.</p> <p>The parties have agreed that the SoCG will include the following scope:</p> <ul style="list-style-type: none"> <li>• Proximity</li> <li>• Ornithology</li> <li>• Wake effects</li> <li>• Aviation and radar</li> <li>• Shipping and Navigation</li> </ul>	<p>The Applicant and the Ørsted IPs have submitted a SoCG at Deadline 6 [S_D6_48].</p>

## Appendix 1 - EN010130-001231 - The Crown Estate - Responses to ExQ1

Please see below The Crown Estate's response to Outer Dowsing Offshore Wind (Generating Station) Examination - Question ExQ1 OG 1.2 of the Examining Authority's written questions and requests for information, issued on 6th November 2024.

1. Can the Crown Estate clarify if the minimum 7.5km distance requirement between Leasing Round 4 projects takes the potential for wake effects into account?

- The buffer/stand-off between wind farms (unless developers consent to closer proximity) is a separation distance to enable developers to develop, operate and maintain wind farms by allowing for a range of factors including amongst other matters, wake effects, navigation, and safety.
- The 2019 Information Memorandum ahead of Offshore Wind Leasing Round 4 set out the requirement that “Projects may not be located within 7.5 km of an existing offshore wind farm (meaning a wind farm at any stage of development which has been awarded an agreement for lease or lease from The Crown Estate) unless the owner of the existing offshore wind farm has given its written consent”.
- This 7.5km was used for the purpose of processing project proposals in the tender only, being higher than the 5km buffers that are specified within the seabed lease agreements (introduced in Round 3); this was for the purpose of de-risking the Round 4 tender by providing additional mitigation and assurance to participants through limiting proximity.
- The Crown Estate acknowledges that inter-farm wake effects can extend beyond these buffer distances. TCE also notes that the spatial and temporal variability of wind speed means that it is complex to accurately predict the wake impact on nearby wind farms, which may depend upon factors beyond distance – e.g. prevailing wind direction and wind farm layout.
- The location of a wind farm within an area of seabed leased from The Crown Estate is for developers to decide and design for, subject to obtaining the necessary consents and The Crown Estate’s approval.

2. The Crown Estate is invited to comment on the purpose of the Offshore Wind Leasing Programme Array Layout Yield Study and any implications for the project.

- As outlined in the Introduction section of the Offshore Wind Leasing Programme Array Layout Yield Study by Frazer-Nash published on the Marine Data Exchange in November 2023: “The objective of this present study is to provide generic evidence to support TCE’s design of future offshore wind leasing programmes from an aerodynamic loss perspective. Specifically, the influence of key PDA (project development area) design parameters on wind farm production are assessed using an updated engineering wake model with more realistic accounting of farm-to-farm wake and farm blockage effects”
- The report summarises modelling applied to generic/hypothetical wind farms and does not replace the need for project-specific analysis.
- The published report included findings on inter-farm wake effects for generic scenarios. As with any technical evidence, this can be beneficial to the sector to inform decision-making and analysis; appropriate selection and application of this or other studies and evidence to specific projects is for developers to determine.
- As this report was completed during 2023 it has no direct link to the buffer zones set out in the 2019 Information Memorandum for Offshore Wind Leasing Round 4.