From:	Ben Smith
To:	Mona Offshore Wind Project
Subject:	Mona OWF interested party/ relevant representation
Date:	24 June 2024 14:32:01
Attachments:	WTW_PEIR_Response_Mona_OWF.pdf

To Whom it may Concern,

I would like the attached document to be included as written representation on behalf of the Wildlife Trust (Wales) and North Wales Wildlife Trust.

The document was submitted to the developer in June 2023 regarding the Trusts position and concerns regarding the project. Having engaged with the projects environmental working group since its inception, and contributed to the Mona OWF agreements log, I assumed that the Trust was recognised as an interested party and that this document would be included as written representation. This assumption has today been highlighted as not so.
I appreciate that this document was in response to the publication of the PEIR but the concerns remain extant particularly with regard to the impact of the export cable route and landfall.

I appreciate that the date for submission of such matters has passed, but hope that there is still an opportunity for these comments to be included for consideration. As I said I had made an assumption on inclusion based on previous experience responding to the Awel Y Mor OWF project.

I appreciate your time with this matter and look forward to hearing from you in due course.

Best Wishes,

Ben

Benjamin Smith
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BP Alternative Energy Investments Ltd & Energie Baden-Württemberg AG

Mona Offshore Wind Project

by email only

4th Jun 2023

By email only to:

info@monaoffshorewind.com

Dear Sir/ Madam,

Mona Offshore Wind Project: Wildlife Trust Wales response to the Preliminary Environmental Information Report

Please find below on behalf of the Wildlife Trust Wales (WTW), the WTW Marine Planning Officer (Wales) response to the Spring 2023 consultation to the Mona Offshore Wind Farm (OWF) Preliminary Environmental Information Report (PEIR).

We welcome this opportunity to consult on the proposal at this early stage of its development. These comments are intended to be constructive, and WTW welcomes further engagement as the consenting process progresses to ensure that the development takes place using the right technology, in the right place and making a positive contribution to natures recovery at sea[1].

The Royal Society of Wildlife Trusts (RSWT), which includes WTW, are a movement of 46 independent Wildlife Trusts covering the UK, 5 of which are located in Wales. RSWT is the largest UK voluntary organisation dedicated to conserving all the UK's habitats and species both in the terrestrial and marine space. Our seas need to be manged in order to enable them to recover from anthropogenic damage, and, create resilient ecosystems. This will ensure that the demands for resources and energy at the scale necessary to deliver the UK Governments ambitions can be met without deleterious environmental impact and disturbance to marine habitats and species.

The Mona OWF development is of interest to the WTW because it is predominantly located in waters that the sustainable use of which are governed by policy set out in the Welsh National Marine Plan[2].

There is an opportunity for well-planned offshore wind development to protect the environment through the sensitive location and design of infrastructure. Implementation of appropriate

[1] How we use our seas: Development at Sea
[2] Welsh National Marine Plan

mechanisms designed in collaboration with conservation organisations and statutory bodies responsible for the management of MPAs, to support and deliver enhancements for biodiversity and improvements in the management and condition of these important sites and the features for which they are designated.

WTW position on OWF developments

We act to empower both our members and the wider community to engage impactfully with the development of marine energy solutions to ensure they are not only sustainable but deliver biodiversity net gain by incorporating mitigation measures which go further than the precautionary principle requires and take a strategic approach to compensation.

Uncertainty surrounding potential OWF impacts means that even robust baseline environment information cannot comprehensively address all pre- construction, operation and decommissioning phase knowledge gaps. WTW endorse an entire life cycle Adaptive Management approach to OWF projects which, despite uncertainty, prevents unacceptable harm to the marine environment. This approach ensures that interactions with other users of the marine space are identified and managed for use-use conflicts and synergisms, ensuring the cumulative impact does not introduce a harm not scoped in when a use is viewed in isolation, and highlights opportunities for enhancement.

WTW supports the development of offshore wind and other marine renewable energy projects which will play a part in delivering a resilient and decarbonised energy supply to limit climate change, but, this industrialisation of the seascape will have environmental impact and this must be strategically prevented, mitigated, and as a last resort, compensated for in order to ensure the recovery of this already degraded environment.

The British Energy Security Strategy (BESS)[3] lays out a step change in the delivery of offshore wind through speeding up of consenting to the potentially weakening of the HRA process. Positives include establishing Environmental Standards for offshore wind, a marine recovery fund and commitments to an Offshore Wind Environment Improvement Package (OWEIP)[4].

The WTW advocates that projects such as Mona OWF deliver strategic compensation, and strategic marine environment monitoring throughout the life cycle of the OWF. Conform to at a minimum the OWF environmental standards/ nature-based design standards as proposed in BESS, and commit to deliver Biodiversity Net Gain (BNG). Comparative terrestrial projects are mandated by the Environment Act 2021 to deliver BNG. As OWF projects move progressively offshore and out of designated waters the developer should be required to demonstrate that the BNG measures undertaken have a positive impact on existing habitat and biodiversity, including no habitat loss and are location specific. It is important that intertidal, coastal and offshore measures are delivered where appropriate. Marine BNG should be proportional to the size and impact of the individual project, but ensure that the measures are mutually inclusive of other project BNG deliverables. This strategic approach will ensure a positive feedback loop to BNG.

The WTW supports the rapid increase in MRE production to meet net zero, it presents a multiplier solution to address climate challenges, foster socio-economic growth and enhances energy security,

[3] British Energy Security Strategy (BESS)
[4] Policy Statement OWEIP Measures

but this cannot be at the expense of the marine environment; the consequences of exceeding tipping points[5] in the marine system not yet understood.

The evolving nature of the OWF industry should be driven by the pursuit of improvement in technology and construction methodologies to deliver sustainable development not *a constant focus on cost reduction*[6].

To realise the potential contribution of OWF's to decarbonising the energy sector and helping to mitigate the worst impacts of climate change on society and nature, the OWF industry must also act to protect and support nature's recovery on land and at sea.

Mona Array Area

WTW understands that the benthic sub tidal ecology baseline and assessment of the maximum design scenario (MDS), which includes the Mona Array Area and the Mona Offshore Cable Corridor, as presented in the PIER is not all determined on site specific data collection.

Baseline characterisation is required in accordance with the Infrastructure Planning (EIA) Regulations 2017. However, the baseline characterization should only be considered a 'snapshot' of the present benthic ecosystem.

A draft Information to Support Appropriate Assessment (ISAA); more commonly known as a Report to Inform Appropriate Assessment (RiAA), is provided alongside the PIER but a project-level Habitats Regulation Assessment (HRA)[7] has not. It is accepted that a plan level HRA was conducted by The Crown Estate (TCE) for the Leasing Round 4 Plan, and that a Project Level HRA should be conducted by the developer.

WTW accepts that the project description is indicative and refinement is to be expected in line with the Development Consent Order (DCO) process, but, the WTW encourages pre-examination transparency with respect to receptor impacts identified under the MDS approach.

Geotechnical and geophysical survey information will be collected but at this time detailed knowledge of the pelagic and benthic environment is not known. Site investigation will reduce project risk by identifying opportunities and limitations in environmental constraints and impacts enabling a fit-for-purpose design which manages seabed and water column risk.

The Mona Array represents ~450km^2 area of potential benthic surface change. The introduction of OWF infrastructure; 68 to 107 monopiles, 4 offshore substations, inter-array cabling, cable protection and scour prevention methods, at this scale into a predominantly soft sediment benthic environment will see a hard substrate created as a consequence of the cumulative impact[8]. This will see a change in benthic community type from infauna to epifauna dominance, which will in-turn see a change in the dominant feeding type. This represents a bottom-up-pressure which will ultimately impact predator-prey relationships[9].

[5] Heinze et al (2021) The quiet crossing of ocean tipping points. PNAS. https://doi.org/10.1073/pnas.2008478118
[6] RPS (2023) Mona Offshore Wind Project, Preliminary Environmental Information Report, Non-Technical Summary. pg. 9: 1.4.1.2.
[7] TCE guide to HRA
[8] ECOWind: Benthic-offshore Wind Interactions (BOWIE)
[9] Offshore wind farm artificial reefs affect ecosystem structure and functioning

The potential influence on primary production due to the aggregation of plankton feeders in the vicinity of OWF's and hydrodynamic changes down river are ecological change drivers.

Research conducted on OWF's in the North Sea show that fish density is significantly increased within the wind farm of schooling and non-schooling species, which feed on plankton feeders[10]. The reduced trawling pressure may be partially responsible for this. But, its implications may result in increased collisions with marine mammals and larger predators attracted to fish aggregations, and a bottom up food chain pressure introduced. Research has shown that marine mammals will tolerate the construction and operational phases of OWF's should the motivation to remain in the area i.e. prey abundance, be sufficient[11]

This represents a shifting baseline, and the ecological implications of the cumulative effect that Mona and other OWF projects in this area exert needs to be thoroughly understood by undertaking an evidence-based assessment. It is far more difficult to enhance a degraded system than to take pro-active measures to develop sustainably.

Export Cable Corridor and Cabling

WTW advocates for a risk aware, as opposed to risk averse, approach to Export Cable Corridor (ECC) route planning, with the needs of the project shouldering the greater apportion of risk. It is accepted that a cost-benefit analysis approach to this may be the preferred strategy of the developer. However, this approach may not support the global intent of a paradigm shift in energy generation and supply that the Marine Renewable Energy (MRE) industry presents to meet climate change and energy security objectives, and take steps to enhance the marine environment.

WTW accepts that the use of the Douglas to Point y Ayr pipeline route for the ECC presents challenges to the developer. The planned cable corridor[12] greatly exaggerates the spatial needs of the export cable, which as portrayed in the PEIR could be up to 1.5km in width running for 90km, and possibly wider at the entrance to the Array Area; the area of concern and planning dispute for the WTW is the landfall approach and as such this required increase in the approach to the Array is of a lesser concern at this time.

TCE evidence-based study[13] suggest that 275kv export cable requires a separation distance of 25-50m between cables to accommodate installation machinery. At MDS, and including a dredging restriction zone, a more realistic export corridor of ~650m, which meets the requirements of Security and Quality of Supply Standard (SQSS), should be planned for and ECC routes considered accordingly.

The Douglas to Point y Ayr pipeline route passes between Gwynt y Mor OWF East and West. The distance between the East and West sites is ≥ 1km, and < 1.5km[14]. The diameter of the gas pipe is ~0.5m. The WTW, therefore, disputes the assessment by the developer that the pipeline is taking up all available space, and strongly recommends that this route justifies further consideration.

[10] Aggregation, production and spillover: the cumulative effect of man-made offshore structures on fish
[11] Acoustic risk balancing by marine mammals: anthropogenic noise can influence the foraging decisions of seals
[12] Mona Offshore Wind Project Location Plan
[13] TCE Guideline for leasing of export cable routes
[14] 4C Offshore Global Offshore Wind Map

WTW accepts that cable spacing forms part of the broader cable protection strategy but in this instance advocates that the developer considers ECC routes which do not encourage OWF development sprawl. Incorporating advances in cable installation and maintenance, such as remote and autonomous underwater vehicles and integrity monitoring systems, into planning can enable this. The opportunity to adopt innovative solutions in ECC route selection as opposed to *routes of least resistance* when embraced by the developer will demonstrate a commitment to sustainability over CAPEX considerations.

Exploitation of areas of the seabed which have been industrialised should be prioritized. This area of the Liverpool Bay and North East Irish Sea could be considered for Strategic Resource Area (SRA) designation[15]. This may provide greater freedom of movement within the SRA to developers whilst ensuring neighbouring designated sites remain protected.

The proposed ECC makes landfall in the vicinity of the Traeth Pensarn Site of Special Scientific Interest (SSSI). WTW understands that this concern has been raised by Natural Resources Wales (NRW) and the developer has amended the MDS accordingly. However, WTW is still concerned that the proposed route to the West of the SSSI will impact sensitive reef and soft sediment features recorded in this area, including honeycomb worm reef; *Sabellaria alveolate*[16], and vegetated shingle[17]. These features are susceptible to sediment resuspension, trenching, and drilling activity. The *Sabellaria alveolate* reef at Llanddulas acting as the larvae source site for recruitment at other sub-populations in the North East Irish Sea, and the vegetated shingle site identified as one of 13 judged to be of significant importance in Wales.

The ECC will pass though the Liverpool Bay SPA; specific concerns arsing from which the WTW will defer to responses made by the Royal Society for the Protection of Birds (RSPB), and the Menai Strait and Conway Bay SAC, as well as the aforementioned SSSI. These designated sites reflect the biodiversity importance of the area's intertidal sands, reefs and sandbanks. The proposed ECC encroaches on the sandbank feature known as Constable Bank which the developer acknowledges. The soft sediments of this area are breeding and spawning sites for several commercial fish species, including Atlantic Herring *Clupea harengus,* and other identified species of principle importance. The decline of fish recruitment and collapse of stocks in the Irish Sea is contributed to by the increasing pressure which is being applied to nursery grounds of which Constable Bank is an example. Further industrialisation of this area may breach a threshold beyond which the disturbance cannot be accommodated by the environment.

The developer acknowledges that the project may potentially lead to physical impacts including changes to the tidal, wave, and sediment transport and associated sediment transport pathways. However, the developer proposes that the impacts on receptors, including designated sites, to not be significant.

However, it has been observed that suspended particulate matter in the wake of OWF infrastructure to be higher than in surrounding waters suggesting increased turbulent mixing and upwelling as a consequence[18]. The impact of which may cause changes in the distribution of heat and salinity, and resuspension of heavily polluted sediments. The WTW acknowledges that the Liverpool Bay area and the North East Irish Sea is subject to significant tidal range, wave environments and the periodic increases in suspended sediment concentration that the benthic ecology is adapted to. However, the

[15] Development of SRA's

[16] Reproduction and connectivity of *Sabellaria alveolata* reefs within Wales

[17] Advice on sustainable management of coastal shingle resources

[18] The effect of monopile induced turbulence on local suspended sediment pattern around UK wind farms

increasing anthropogenic disturbance to this benthic ecology is not yet fully understood and the impact should be avoided or mitigated at all costs.

WTW advocates that the developer commits to developing a Cable Specification and Installation Plan (CSIP) which will contain a Cable Burial Risk Assessment (CBRE).

As the UK moves from a centralised to a decentralised energy supply, and the demand increases the need to strategically plan cable network design is paramount. The needs of the Mona OWF are less significant than the delivery of a future proofed network. It is important that we deliver on climate change mitigation measures but not in a manner which only serves short sighted ambitions.

As previously stated, it is more difficult to enhance a degraded environment than it is to adopt, from the outset, an agile project management approach that minimizes the invasive nature of the project at all costs. This practice would be a clear demonstration by Mona OWF to be embracing the paradigm shift offered by MRE generation; placing the needs of the environment before the needs of the project.

The assessed impact of the inter array cables has been previously discussed in the Mona Array Area section of this response. An evidence-based assessment of benthic change impact which includes the developer response to resurfacing, and BNG measures to be undertaken, is advocated by the WTW.

Underwater noise

It is understood by WTW, following a meeting with the development team in May 2023, that the Mona OWF piling strategy will take a concurrent approach. WTW will be advocating that sequential piling strategy is adopted with a further commitment to adopt soft start protocols.

Marine impact piling is a significant low-frequency high amplitude impulsive sound that can travel considerable distance in the water column. The attenuation of which is governed by the inverse square law with respect to energy intensity and distance from source. The impact on valued ecological receptors (VERs) is an ongoing area of research.

Temporary and Permanent Threshold Shifts (TTS and PTS respectively) need to be considered relative to specific species present in the zone of influence of the project which is home to several identified species of principle importance. Soft start, and a sequential strategy present mitigation measures which limit the dose of underwater noise to receptors. Determination of minimum distance between sound exposure and pressure level should be made relative to the most acoustically sensitive species identified within the zone of influence of the project.

Mitigation measures are in place in the draft Marine Mammal Mitigation Protocol (MMMP) and will be subject to statutory oversight. The MMMP is secured by conditions of the Marine License Principles and will be agreed with NRW prior to the commencement of construction.

The WTW notes that the Mona OWF intends to use active deterrent measures to mitigate the collision risk introduced by the OWF infrastructure and increased shipping. Before implementation of these measures baseline assessment of underwater noise must be undertaken to appreciate the impact of the acoustic deterrence on the ambient noise.

WTW advocates the precautionary approach with respect to underwater noise. The developer must mitigate for the encroachment and activity which will take place in the Menai Strait and Conway Bay

SAC in line with noise thresholds and disturbance impacts on the designated species. This precautionary approach should be factored into all aspects of the project prior to the introduction of noise levels in UK waters; comparative to the noise mitigation regulations in the German Exclusive Economic Zone[19,20], being standardised as part of the measures included in BESS. The WTW advocates for a noise limit which is applied in all UK waters and to all receptors removing any ambiguity with respect to individual project noise and cumulative effects.

WTW hope's these comments are helpful and would welcome further engagement and discussion with Mona Offshore Wind Farm as the consenting processes.

Yours faithfully

Benjamin Smith

Benjamin Smith

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[19] BSH: Underwater sound
[20] German requirements for pile driving