



# **Awel y Môr Offshore Wind Farm**

## **Applicant's Response to Marine Licence Application Consultation Comments**

### **Marine Licence Submission 1**

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# 1 Introduction

## 1.1 Background

- 1 Awel y Môr Offshore Wind Farm Limited ('the Applicant') submitted an application for a Marine Licence to the Natural Resources Wales Marine Licensing Team (NRW-MLT) (reference ORML2233) pursuant to Part 4 of the Marine and Coastal Access Act 2009 (MCAA). The application was confirmed as duly made on 20 June 2022.
- 2 NRW-MLT subsequently initiated a 42-day consultation with technical consultees which closed on 3 August 2022 (note: the Maritime and Coastguard Agency (MCA) were granted an extension until 10 August 2022), as well as a public consultation which ran from 6 July 2022 until 17 August 2022. Comments received on the Marine Licence application were subsequently provided to the Applicant for consideration, in addition to a series of questions and clarifications requested from NRW-MLT.
- 3 As agreed with NRW-MLT, the Applicant has provided a response to its request for further information on the agreed date of 25 November 2022. Details of the Applicant's responses to the comments received are set out in the subsequent sections of this document.

## 1.2 Relationship with the Development Consent Order (DCO) Examination

- 4 Since Awel Môr Offshore Wind Farm (AyM) is classified as a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008, the Applicant was also required to submit an application for a DCO which was accepted for Examination by the Planning Inspectorate (PINS) on 18 May 2022.
- 5 The processes to determine both the DCO and the Marine Licence are anticipated to run in parallel. Although there are areas of overlap, the two processes are separate and achieve distinct statutory purposes.

- 6 To distinguish documents and comments that relate to the Marine Licence application process from the DCO Examination, the prefix 'ML-' is used, whereas documents related to the DCO Examination process follow the Examination Library referencing system created by PINS.

### 1.3 Cross-referencing

- 7 For ease of referencing and to facilitate future cross-referencing, the Applicant has included references for each of the individual comments received under the consultation on this Marine Licence application:
- ▲ Where comments were broken down into numbered paragraphs or sections by the stakeholder, the Applicant has retained the existing references (e.g. paragraph 1 from the NRW Advisory Team (NRW(A)) becomes 'ML-NRW(A)- 1'); and
  - ▲ Where these are not available, the Applicant has created a reference for each response by itemising the responses into paragraphs and giving these unique identifiers (e.g. the first comment in the response received from the Isle of Man Government is referenced as 'ML-IoM-1').

### 1.4 Responses to the Marine Licence consultation

- 8 NRW-MLT received a total of 17 responses from the technical consultees, including one late response accepted at the discretion of NRW:
- ▲ The Crown Estate (TCE);
  - ▲ NRW Advisory (NRW(A));
  - ▲ The Ministry of Defence (MoD);
  - ▲ Isle of Anglesey County Council (IoACC);
  - ▲ The Royal Society for the Protection of Birds (RSPB);
  - ▲ Cadw;
  - ▲ Clwyd-Powys Archaeological Trust (CPAT);
  - ▲ Royal Commission on Ancient and Historic Monument of Wales (RCAHMW);
  - ▲ UK Chamber of Shipping (CoS);
  - ▲ National Air Traffic Services (NATS);
  - ▲ The National Federation of Fishermen's Organisations (NFFO);
  - ▲ Centre for Environment, Fisheries and Aquaculture Science (Cefas);

- ▲ Joint Nature Conservation Committee (JNCC);
  - ▲ The Department for Business, Energy and Industrial Strategy (BEIS);
  - ▲ The Isle of Man Government (IoM); and
  - ▲ The Maritime and Coastguard Agency (MCA).
- 9 NRW-MLT received a total of two responses to the public consultation:
- ▲ Janet Finch-Saunders; and
  - ▲ The Angel Bay Seal Volunteer group.
- 10 The Applicant has provided responses to, and comments on, the technical and public consultation responses received by NRW-MLT in Section 2 below.
- 11 Following collation of consultation responses from NRW-MLT, as well as the consideration of the NRW Permitting Services Team (NRW-PS), NRW-MLT issued a request for further information, which the Applicant has responded to in Document ML-1.1 of the Marine Licence 1 submission.

# 2 Applicant's Response to Marine Licence Consultation Comments

## 2.1 The Crown Estate (TCE)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-TCE-1	The Crown Estate is affected by the proposed works and landowner's consent is required. The Crown Estate has already granted the applicant landowner's consent for the proposed activity and has no objection to this Marine Licence application.	This is noted by the Applicant.



## 2.2 Natural Resources Wales (Advisory) (NRW(A))

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NRW(A)-0.1	Thank you for your letter dated 22 June 2022 consulting Natural Resources Wales' (NRW) Marine Area Advice and Management Team (NRW Advisory) on the information submitted for the above application. This letter comprises NRW Advisory's (NRW (A)) response to NRW's Permitting Service (NRW PS) on the Awel-y-Môr Marine Licence (ML) application information documents.	This is noted by the Applicant.
ML-NRW(A)-0.2	Generally, our comments are made without prejudice to any further comments we may wish to make in relation to this application, the Planning Act 2008 Development Consent Order application, the Environmental Statement (ES), Report to Inform Appropriate Assessment (RIAA), or other further evidence and documents provided by the Applicant, NRW PS or other interested parties. Our comments are based solely on the information provided within the application documents to date. At the time of any further consultation there may be new information available which we will need to consider in making a formal response to NRW PS.	This is noted by the Applicant.
ML-NRW(A)-0.3	NRW (A) has reviewed the ML submission and, notwithstanding our key concerns and other issues raised in this consultation response, considers the submission, on balance, to be comprehensive, thorough and of a good quality. NRW (A) is pleased to note that many of our previous concerns as raised during the pre-application process, have been appropriately addressed.	This is noted by the Applicant, who welcomes the recognition of the quality of the application.
ML-NRW(A)-0.4	In our following comments, we identify further information that we consider should be provided and / or matters that should be addressed prior to the determination of the ML application. We also identify conditions that, if applied to any ML consent, would mitigate the effect in question. However, we will set out all recommended conditions in our final response on the ML application when subsequently consulted on any additional information / assessments required.	This is noted by the Applicant.
ML-NRW(A)-0.5	Our key concerns relate to the potential impacts of the project on designated landscapes and to marine mammals. Our key concerns and our detailed comments are provided in Annex 1 of this letter. Where topic matters are of a key concern we have marked them as such in the relevant sections of the Annex. The following Table of Contents identifies the topics and locations of our detailed comments within Annex 1.	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NRW(A)-0.6	<p>"Please note that NRW (A) provided a Relevant Representation to the Planning Inspectorate on 06 July 2022, as a Statutory Party under the Planning Act 2008 and Infrastructure Planning (Interested Parties) Regulations 2015 and as an 'interested party' under s102(1) of the Planning Act 2008. NRW (A) will continue to provide advice to the Applicant on all required matters, through correspondence and meetings, with the aim of reaching as many positions of agreement and common ground as possible prior to the examination of the proposals under the Planning Act 2008. We are engaging in discussions with the applicant regarding some aspects of this and hence some of the detailed comments provided below have already been shared with them directly to allow them to progress preparing further information to address our concerns. Please consider the advice below, which explains the matters that need to be addressed.</p> <p>If you have any queries on this letter and detailed comments, please do not hesitate to contact [redacted], Marine Area Advice and Management Team: [redacted]."</p>	<p>This is noted by the Applicant. The Applicant is continuing to actively engage with NRW(A) via the DCO Examination. The Applicant has provided responses to the NRW Relevant Representation (available from the project page of the National Infrastructure Planning website under PINS reference REP1-001) and the more recent NRW Written Representation (which has been provided to NRW-MLT in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The Applicant is also progressing three Statements of Common Ground (SoCGs) with NRW(A) and has provided the most recent versions to NRW-MLT in this submission at Documents ML-1.27, ML-1.28 and ML-1.29 of the Applicant's Marine Licence Submission 1.</p>
ML-NRW(A)-1.1	<p>NRW (A) agrees that the baseline description of physical processes through the desktop review of existing literature, project specific surveys and existing data sources are sufficient to appropriately characterise the study area (Array and Export Cable Corridor and landfall).</p>	<p>This is noted and welcomed by the Applicant.</p>
ML-NRW(A)-1.2	<p>NRW (A) agrees with the Numerical modelling approach and scenarios conducted in relation to hydrodynamics, waves and sediment transport to inform the potential changes to Constable Bank/Rhyl Flats, designated sites and the adjacent coast arising from the construction, operation and decommissioning of Awel-y-Môr.</p>	<p>This is noted and welcomed by the Applicant.</p>
ML-NRW(A)-1.3	<p>We agree with the assessment methodology and the assessment conclusions of the potential impacts on physical processes as outlined in the Environmental Statement (ES).</p>	<p>This is noted and welcomed by the Applicant.</p>
ML-NRW(A)-1.4	<p>NRW (A) notes (Volume 4: Annex 2.3: (6.4.2.3), Pg30: Marine Geology, Oceanography and Physical Processes Technical Assessment) that the local dimensions of secondary scour are highly dependent upon the specific shape, design and placement of the scour protection. These parameters are highly variable and so there is no clear quantitative method or evidence base for</p>	<p>The Applicant anticipates that monitoring of secondary scour would be conducted as part of asset-protection surveys undertaken post-construction. The Applicant agrees that a monitoring plan would be conditioned within any Marine Licence granted by NRW as described</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	accurately predicting the dimensions of secondary scour. Given the uncertainty regarding secondary scour, we therefore advise that post-construction monitoring should be considered, in order to ascertain the spatial extent and volume of secondary scour produced from current action and potentially waves if shallow enough. Clarity is required on the most appropriate regulatory mechanism needed to secure the monitoring, but we suggest that a condition of the ML would be appropriate.	within Condition 34 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1).
ML-NRW(A)-1.5	We acknowledge however that the assessment of primary scour has been undertaken using recognised empirical equations supported by the knowledge of the foundation design and dimensions, and we agree with the assessment as presented for primary scour.	This is noted and welcomed by the Applicant.
ML-NRW(A)-1.6	ES Volume 2: Chapter 2: (6.2.2): Marine Geology, Oceanography and Physical Processes states in Table 8 that "The project array area and offshore ECC will be licenced as disposal sites for the deposition of dredgings and drill arisings". It is not clear from the information provided whether the Export Cable Corridor (ECC) is to be licensed as a disposal site in this licence application, or in a separate licence application associated with the ECC, or both. Clarity is sought on this matter. We note that only the Array area is considered in the current licence application and has been characterised as a potential disposal site (please see document 8.9: Awel-y-Môr Disposal Site Characterisation Report). The disposal site report details at paragraph 122 that "...as a worst case, the total volume of natural material that may require disposal would be up to 12,920,356 m <sup>3</sup> ". We understand that this volume relates only to the volume of dredge material associated with the construction activities of the array site. Clarity is therefore sought with respect to where the dredge arisings from the cable laying activities along the ECC (amounting to a volume of 6,281,000m <sup>3</sup> (Volume 2: Chapter 1: (6.2.1) Offshore Project Description, Table 22: Design Envelope for Export Cables)) will be disposed of.	The Applicant has sought to licence disposal of dredged material and drill arisings in the array within its Marine Licence application. With regard to the offshore ECC and GyM interlink areas, the Applicant has assessed the disposal of dredged material and drill arisings within the ES as a worst-case in line with the Rochdale Envelope approach. However, the Applicant has not sought to licence the disposal activity at this stage as there remains uncertainty as to whether this activity will be required or not, and if so what methods would be used. If it should be determined (post-consent, following final scheme design) that disposal within the offshore ECC and GyM interlink area is required, the Applicant will apply for a further disposal licence(s) at that time. The Applicant has adopted a similar approach to the consideration of clearance of Unexploded Ordnance (UXO), where the activity has been assessed for the purposes of the EIA as a worst-case but is not sought to be licensed until further detail is known in the detailed design phase post-consent.
ML-NRW(A)-1.7	We acknowledge the intention that all dredged material from the seabed will be disposed of within these sites in order to ensure that the material is retained within the local sediment transport system, and, we recommend that retention of material in the local sediment transport system is secured as a condition of the disposal site licence if granted.	

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NRW(A)-1.8	NRW (A) agrees with the conclusions of the Report to Inform Appropriate Assessment (RIAA) (5.2).	This is noted and welcomed by the Applicant.
ML-NRW(A)-2.9	NRW (A) agrees that there is no impact on Bathing Waters from elevated suspended sediment, during the construction phase.	This is noted and welcomed by the Applicant.
ML-NRW(A)-2.10	We do not agree with the conclusions made in relation to sediment bound contaminants (Volume 2: Chapter 3: (6.2.3), section 3.7.1, pg 73-79), as further information is required to support the conclusion. Where data are available, the Applicant should report all data in the context of Centre for the Environment, Fisheries and Aquaculture Sciences (CEFAS) Action Levels (ALs). In addition, there is a CEFAS AL relating to polycyclic aromatic hydrocarbon (please see the MMO website for all ALs) which, although has not been officially accepted, is utilised in the UK as an indicator of an issue and we recommend that this is considered. Once the above information has been provided and updated, we advise that it should be fed through to the RIAA.	Since the submission of NRW's consultation response, NRW and the Applicant have further discussed the concerns pertaining to sediment bound contaminants. This has resulted in additional information being provided to NRW(A) in the form of a clarification note (Document ML-1.7 of the Applicant's Marine Licence Submission 1), which contained further detail regarding contaminated sediment. NRW advised that the Applicant should report all data in the context of Centre for the Environment, Fisheries and Aquaculture Sciences (CEFAS) Action Levels (ALs). Polycyclic aromatic hydrocarbons have been presented against CEFAS ALs and where other data are not shown against CEFAS ALs (i.e., PCBs, Organotins, DDT and dieldrin), reasoning has been given as to why. This information (provided in the Clarification Note (Document ML-1.7 of the Applicant's Marine Licence Submission 1)), has been reviewed by NRW alongside the ES as submitted. NRW now agrees that there is no risk from contaminated sediment (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-2.11	We do not agree with the approach to assessing impacts to phytoplankton, as the assessment is focussed on nutrients rather than light limitation caused by elevated suspended sediments in the water column. We therefore disagree with the conclusion presented (Volume 2: Chapter 3: (6.2.3), paragraph 112, pg 109). Light limitation, which is impacted by turbidity, can reduce phytoplankton growth. As such, the impact of construction on phytoplankton due to elevated suspended solids, rather than nutrients, will need to be considered and this is what the assessment should focus on. However, we agree there are unlikely to be any inputs of nutrients.	This issue has been discussed further with NRW and additional information has been provided to NRW within the Marine Water and Sediment Quality Clarification Note (Document ML-1.7 of the Applicant's Marine Licence Submission 1). A discussion around the interactions between DO and suspended sediment, and phytoplankton and suspended sediment has been provided, indicating there is no risk to these receptors. NRW now agree there is no risk to DO and phytoplankton from the proposed development (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-2.12	We do not agree with the approach to assessing Dissolved Oxygen (DO) (Volume 2: Chapter 3: (6.2.3), paragraph 112, pg 109), as the assessment is focussed on nutrients rather than suspended sediments. DO can be impacted by the remobilisation of anoxic sediments or sediments with organic content and associated bacteria. We therefore disagree with the conclusion presented,	The Applicant notes and welcomes these agreements since the provision of further information in the Marine Water and Sediment Quality Clarification Note (Document ML-1.7 of the Applicant's Marine Licence Submission 1).

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	and advise that the impact of the construction phase on DO due to elevated suspended solids, rather than nutrients, will need to be considered.	
ML-NRW(A)-2.13	We disagree with the Applicant's conclusion that potential spills will only cause temporary issues (Volume 2: Chapter 3: (6.2.3), para 190, pg 129) as these chemicals can persist in the environment for long periods. Therefore, we disagree with the conclusion of the risk of spills being 'negligible adverse' as the ability to meet Environmental Quality Standards (EQS) could be compromised (Table 6, pg 59); instead, the risk of spills should in our view be 'medium adverse'. However, we note the mitigation commitments presented to produce a Project Environment Management Plan (PEMP) and Marine Pollution Contingency Plan (MPCP) as part of a ML condition. Providing these conditions are secured and delivered, we can agree that the risk is mitigated to an acceptable level.	<p>The Applicant has provided a Clarification Note (Document ML-1.7 of the Applicant's Marine Licence Submission 1), alongside further consideration of the assessment and mitigation measures outlined within the ES, NRW now agree (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1) that this impact can be considered negligible adverse provided that the mitigation commitments outlined in the ES (Chapter 3: Section 3.9, Table 16 (Document reference 6.2.3) and the Marine Water and Sediment Quality Clarification Note (Document ML-1.7 of the Applicant's Marine Licence Submission 1), are incorporated into a Project Environmental Management Plan (PEMP) and Marine Pollution Contingency Plan (MPCP), and appropriately secured and delivered post-consent. NRW suggested a condition of the ML may be the appropriate regulatory mechanism to secure this.</p> <p>The Applicant notes and welcomes this point of agreement. With regard to the PEMP and MPCP, the Applicant notes that these have been included within Condition 12 of the Marine Licence Principles submitted at Submission 1 (Document ML-1.14 of the Applicant's Marine Licence Submission 1) and are therefore expected to be secured as conditions of any Marine Licence granted by NRW.</p>
ML-NRW(A)-2.14	A number of potential inter-relationships between MW&SQ and other receptors have been overlooked, including but not limited to elevated bacterial counts and their ability to impact human health, which would be of relevance under the Bathing Waters Directive. For completeness, we recommend the ES is updated to ensure these inter-relationships are accounted for.	<p>NRW considered that links between marine water quality and onshore works are made appropriately in Volume 3: Chapter 7 (Document reference 6.3.7) and therefore agreed with the conclusions and mitigation proposed. Whilst NRW consider that some inter-relationship links have been missed, NRW agreed that this does not alter the conclusions of the ES. NRW do not consider that there is a risk from these inter-relationships not being listed and have informed the Applicant of this accordingly. With reference to the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1), NRW are satisfied that they do not affect the overall conclusion with respect to MW&amp;SQ.</p> <p>Agreement that the overall conclusions remain valid is noted and welcomed by the Applicant.</p>
ML-NRW(A)-2.15	We consider that the relationships between marine water quality and the onshore works have been considered appropriately and we therefore agree with the conclusions and mitigation suggested.	
ML-NRW(A)-2.16	NRW (A) agrees that there will be no transboundary impacts from MW&SQ.	



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NRW(A)-2.17	We agree with the conclusions in the ES with respect to suspended sediment in Water Framework Directive (WFD) water bodies (Volume 2: Chapter 3: (6.2.3), paragraphs 129 & 132). However, for the purposes of the WFD Compliance Assessment (CA), please see comment 80 below.	This is noted and welcomed by the Applicant.
ML-NRW(A)-3.18	NRW (A) agrees that the data collected through the site-specific surveys, through the desktop review of existing literature, and data sources are sufficient to appropriately characterise the benthic ecology throughout the array and ECC. We also agree with the assessment methodology and the assessment conclusions with respect to the potential impacts of the project on benthic receptors, as outlined in the ES.	This is noted and welcomed by the Applicant.
ML-NRW(A)-3.19	From the evidence presented (Volume 2: Chapter 5: (6.2.5) Section 5.7.4, paragraph 95), the areas of low resemblance stony reef do not meet the strong justification criteria in terms of biological communities, that NRW (A) would expect within an Annex I feature. NRW therefore agrees with the conclusion presented by the Applicant that the discrete patches of stony habitats reported in the ECC do not qualify as Annex I stony reef.	This is noted and welcomed by the Applicant.
ML-NRW(A)-3.20	NRW (A) considers that the magnitude of impact from the potential introduction of marine invasive non-native species (mINNS) should be presented as 'Low' and not 'negligible' (Volume 2: Chapter 5: (6.2.5) Section 5.11.4, paragraph 191) as there is a continuous risk of mINNS being introduced. Notwithstanding this, we consider that the significance of the impact would still be minor and therefore not significant in EIA terms.	This is noted and welcomed by the Applicant.
ML-NRW(A)-3.21	NRW (A) acknowledges the commitment of the Applicant to produce a biosecurity risk assessment to be conditioned within the ML, as outlined in the Schedule of Mitigation (8.11) and the Marine Licence Principles document (5.4.1). We recommend that the marine biosecurity plan is a free-standing document kept separate to the terrestrial plan as outlined in Volume 3: Chapter 5 (6.3.5). NRW (A) should be consulted on the suitability of a marine biosecurity risk assessment and plan ahead of commencement of activities. Clarity is required on the most appropriate regulatory mechanism needed to secure it.	This is noted by the Applicant. The Applicant has proposed that a marine Biosecurity Plan be secured as a condition of any Marine Licence granted by NRW as part of the PEMP (Condition 16 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-3.22	Should the Port of Holyhead be used for the berthing of vessels during construction, operation and/or decommissioning, then we advise that specific management measures may be required on top of standard biosecurity risk	This is proposed to be freestanding and separate to the onshore Invasive Non-native Species (INNS) Management Plan (an outline of which can be found under PINS reference REP2-047 on the project page of the National Infrastructure Planning website) which is secured under Requirement 10(2)(k) of the draft DCO, separate to the Marine Licensing process (the latest revision of which can be found under PINS reference

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	assessment protocols. This is due to the presence of the highly invasive carpet seasquirt <i>Didemnum vexillum</i> .	REP3-006 on the project page of the National Infrastructure Planning website).
ML-NRW(A)-3.23	The sensitivity of subtidal receptors to long-term habitat loss/change from the presence of foundations, scour protection and cable protection is considered medium in the cumulative assessment and high in the assessment of impacts alone (Volume 2: Chapter 5: (6.2.5) Section 5.14.3, paragraph 273). Whilst the resultant residual effect would still be minor and therefore not significant (with which we agree) in EIA terms, we advise consistency is kept between these sections.	This is noted by the Applicant and agreement with the overarching conclusion of minor adverse is welcomed.
ML-NRW(A)-3.24	An appropriate assessment is required as there is the potential for the project to have an impact on the Dee Estuary Special Area of Conservation (SAC) and the Menai Strait and Conwy Bay SAC. The applicant has carried out a RIAA (5.2).	This is noted and welcomed by the Applicant.
ML-NRW(A)-3.25	We agree with the conclusions of the RIAA that, provided the mitigation measures outlined are adhered to, the project will not have an adverse effect on site integrity (AEOSI) and therefore will not undermine the conservation objectives of the benthic designated features of the Dee Estuary SAC and the Menai Strait and Conwy Bay SAC.	
ML-NRW(A)-3.26	We note under section 10.1.1, paragraph 130 that the Applicant discusses the introduction, in 2006, and subsequent eradication of slipper limpet to the mussel lays in the Menai Strait. Please be aware that slipper limpet has recently been found in the Menai Strait and Conwy Bay SAC (please refer to the NBN Atlas to view records). Notwithstanding, we agree with the conclusion of the RIAA that provided the mitigation measures are adhered to (production of a biosecurity risk assessment and management plan), there will be no AEOSI to the conservation objectives of the Menai Strait and Conwy Bay SAC.	This is noted and welcomed by the Applicant
ML-NRW(A)-3.27	We note that the following Section 7 habitats (as identified under the Environment (Wales) Act 2016) have been reported within the development: <i>Sabellaria alveolata</i> and peat and clay exposures. Both the small patches of <i>Sabellaria alveolata</i> and the piddocks in clay are found in existing pipelines, or, in small patches on the boundary of the cable route and as noted by the applicant, will remain in place and undisturbed. Therefore, we are content that	This is noted and welcomed by the Applicant.

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	there will be no potential impact to these Section 7 habitats from the development.	
ML-NRW(A)-3.28	We agree there is no significant risk to the Skomer Marine Conservation Zone (MCZ) from a benthic perspective.	This is noted and welcomed by the Applicant.
ML-NRW(A)-4.29	We note that the onshore cable will intersect Atlantic salt meadow at the Clwyd Estuary. Whilst the Clwyd Estuary is not a SAC or Site of Special Scientific Interest (SSSI), saltmarsh is a section 7 habitat under the Environment (Wales) Act 2016. We note that there is a commitment for the use of trenchless techniques (for example, Horizontal Directional Drilling (HDD)) underneath the Clwyd Estuary. Given the Clwyd is a tidal river, we advise that the regulator will need to determine whether the detailed construction methods are to be agreed in the ML or the Development Consent Order (DCO) or both. Confirmation with respect to how the cable will cross the river if it is undergrounded, the techniques to be employed (being deep enough to avoid the saltmarsh and minimise cable exposure), and identification of appropriate entry and exit sites (pits) is recommended.	<p>The Applicant confirms that trenchless crossing techniques (such as HDD), will be used for the installation of cables beneath the Clwyd Estuary with above ground construction works located to the east and west of the existing flood defence embankments (and therefore outside the area identified as saltmarsh within the Habitat and Hedgerow Survey Report (PINS reference APP-125)). Although construction works within the saltmarsh area would be underground, there could be a requirement for personnel to access the saltmarsh area on foot in order to monitor and guide the HDD (or other underground equipment).</p> <p>The Applicant has provided the necessary information to NRW in response as described in the format of an updated Marine Licence Application Form (Document ML-1.13 of the Applicant's Marine Licence submission 1). The Applicant has also provided a revised version of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1) that includes this additional marine licensable area.</p>
ML-NRW(A)-5.30	NRW (A) considers that a robust assessment has been carried out to support the overall conclusions of no significant impacts on fish and shellfish receptors.	This is noted and welcomed by the Applicant.
ML-NRW(A)-5.31	NRW (A) agrees that the data collected through the site-specific surveys, through the desktop review of existing literature, and data sources are sufficient to appropriately characterise the fish and shellfish ecology throughout the array and export cable corridor.	This is noted and welcomed by the Applicant.
ML-NRW(A)-5.32	NRW (A) agrees with the conclusion of the RIAA that the project will not undermine the conservation objectives of the designated migratory fish features of the River Dee and Bala Lake SAC and Dee Estuary SAC.	This is noted and welcomed by the Applicant.
ML-NRW(A)-5.33	The assessment asserts that Atlantic Salmon do not pass through the array area and are therefore unlikely to be exposed to potential impacts from noise. However, we note that evidence supporting the assertion that Atlantic Salmon	This is noted and welcomed by the Applicant.



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	remain in coastal areas, following the coastline is not available / provided. Nonetheless, NRW (A) agree that Atlantic salmon are not considered to be very sensitive to underwater noise impacts, and furthermore will only be transient in the array area. Therefore, NRW (A) agrees with the overall conclusion of no AEOSI on the River Dee and Bala Lake SAC.	
ML-NRW(A)-5.34	Overall, NRW (A) agrees with the assessment methodology and the assessment conclusions of the potential impacts fish species listed under Section 7 of the Environment (Wales) Act 2016. There are, however, some inaccuracies in the assessment, for example: there appears to be an error used in the calculation of affected spawning area for sandeel (Volume 2: Chapter 6: (6.2.6), Table 18), where the figure from Worst Case Scenario (WCS) monopile piling NW location scenario has been adopted, rather than temporal Maximum Design Scenario (MDS) for multi-leg foundation modelling at the NW location, this has resulted in a smaller impacted spawning area.	<p>The Applicant notes this, and in response the Applicant has reviewed the spawning calculations as presented within the Fish and Shellfish Ecology Chapter (Document reference 6.2.6) within the ES. A Clarification Note (Fish and Shellfish Clarification Note (Document ML-1.6 of the Applicant's Marine Licence Submission 1)) has been prepared to present the revised spawning calculations for Group 1 VERs (sole, sandeel, plaice, mackerel) and Group 3 VERs (cod, whiting). The Applicant confirms that this has not altered the outcomes of any of the assessments.</p> <p>NRW(A) have confirmed they have no further queries on this matter (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).</p>
ML-NRW(A)-5.35	Furthermore, NRW (A) does not consider that the assumptions used when modelling spawning fish as fleeing receptors are realistic, for example, we do not consider that a swim speed of 1.5m/s-1 is realistic for sole. Consequently, it is our view that the figures presented for the Valued Ecological Receptor (VER) affected spawning potential do not represent realistic scenarios for some fish receptors, including species which are listed under Section 7 (please also see comment 37 below).	<p>The Applicant notes that NRW do not consider the swim speed of 1.5 m/s appropriate for all receptors. The Applicant notes that spawning potentials for fleeing and stationary scenarios for all VERs have also been presented within the Fish and Shellfish Ecology Chapter (Document reference 6.2.6) and the Fish and Shellfish Clarification Note (Document ML-1.6 of the Applicant's Marine Licence Submission 1) to provide a range of potential impacts on the spawning potentials of key receptors.</p> <p>The Applicant notes that considering impact ranges for both fleeing and stationary scenarios for each VER, provides a conservative range within which impacts may occur depending on individual receptor fleeing speeds. The approach used is therefore considered very precautionary, providing a robust basis on which to draw a conclusion for the likely impact on VER spawning potentials and does not result in any changes to the outcome of the assessment.</p> <p>NRW(A) have confirmed they have no further queries on this matter (see the offshore SoCG (Document ML-1.28)).</p>

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ML-NRW(A)-5.36	Nonetheless, NRW (A) recognises that regardless of this, the resulting area impacted by noise from piling activities remains relatively minor, when compared to the widely available spawning habitat in the region. NRW (A) are therefore able to agree that the significance of effect on VERs remain 'minor adverse' and therefore not significant in EIA terms.	This is welcomed by the Applicant.
ML-NRW(A)-5.37	The Applicant has assessed the impacts from the project on a range of fish and shellfish Valued Ecological Receptors (VERs), some of which are listed under Section 7 of the 2016 Act. A range of impact pathways have been assessed, including detailed quantitative assessments of impact from underwater construction noise on spawning and nursery habitat for VER species with known spawning/nursery grounds within the project area. These species are: sandeel, sole, plaice, mackerel, cod and whiting.	This is noted by the Applicant.
ML-NRW(A)-5.38	The Applicant has modelled impacts from both mono-pile and pin-piled foundation types at two locations within the array and identified a worst-case scenario or MDS as pin-piling at the NW array location. The Applicant has submitted a Noise Modelling report (Volume 4: Annex 6.2: (6.4.6.2) which describes how underwater noise has been modelled for the projects, the assumptions used in the models and the thresholds for mortality, injury and disturbance used for various fish species, grouped by hearing capabilities.	This is noted by the Applicant.
ML-NRW(A)-5.39	NRW (A) are in broad agreement with the modelling approach and the guidelines used for setting the thresholds. However, NRW (A) does not consider that the assumptions used when modelling spawning fish as fleeing receptors are realistic. NRW (A) raised the issue of modelling fish as fleeing receptors in previous consultations and at Expert Topic Group meetings, and advised that the final ES should make clear where receptors are treated as stationary versus fleeing, particularly for some spawning receptors, as they are better treated as mostly static.	<p>The Applicant notes that NRW do not consider the swim speed of 1.5 m/s applicable for all receptors. The Applicant notes, that the underwater noise injury ranges for both stationary and fleeing scenarios for all VERs have been provided within the Underwater Noise Technical Report (Document reference 6.4.6.2) and summarised in Table 15 of Fish and Shellfish Ecology Chapter (Document reference 6.2.6) to provide a range of potential impacts on key receptors.</p> <p>The Applicant notes that the provision of impact ranges for both fleeing and stationary receptors, provides a conservative range within which impacts may occur depending on individual receptor fleeing speeds. The approach used is therefore considered very precautionary, providing a robust basis on which to draw a conclusion for the likely impacts from underwater noise on key receptors.</p> <p>Following previous consultations and discussions held at Expert Topic Group meetings, the Fish and Shellfish Ecology Chapter (Document</p>

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		reference 6.2.6) made clear where VERs were considered to exhibit stationary or fleeing responses to underwater noise, although to ensure a precautionary assessment the impact ranges for each receptor were presented for both fleeing and stationary scenarios.  NRW(A) have confirmed there are no further queries on this matter (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-5.40	<p>"Section 2.2.2 (pages 6-9) and section 4.3 (pages 19-22) of the Underwater Noise Technical Report (6.4.6.2) describes how fleeing receptors are modelled and the assumptions used. These include:</p> <ul style="list-style-type: none"> <li>➤ All fish will maintain a constant swimming speed of 1.5 m/sec-1</li> <li>➤ All fish will at first hammer strike initiate swimming directly away from the noise source,</li> <li>➤ Fish will sustain the swimming speed and direction for the duration of the piling operation of 272 minutes."</li> </ul>	This is noted by the Applicant.
ML-NRW(A)-5.41	<p>The noise report states that 'For those species that flee, the speed chosen for this study of 1.5 m/s is relatively slow in relation to data from Hirata (1999) and thus is considered somewhat conservative.' It has not been possible to consult the reference Hirata, K. (1999) (it would be beneficial to receive a copy of this paper), and no other references for swim speed has been provided. NRW (A) do not dispute that some of the VER fish species are capable of swimming speeds in excess of 1.5m/sec-1, but swimming speed varies considerably, for example, between fish species, fish size, with temperature, stimulus, as well as varying with the activity of the fish. In addition, the terminology and units used in scientific literature to describe fish swimming ability varies; some describe fish swimming speed in body length per second (bl/S-1), some in meters or centimetres/sec-1, or km/hour-1. Beamish (1978) grouped fish swimming performance into three main distinct categories: Sustained; which is speeds that can be maintained for &gt;200 minutes; Prolonged; speeds that fish can maintain for 20 seconds to 200 minutes and ends in fatigue, and; Burst; high speeds which can be deployed for a short time, typically &lt;15sec.</p>	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.42	<p>Fish fleeing from a perceived danger would be expected to move at a higher speed than when engaging in feeding or migratory behaviour, however this higher activity level would require more effort, and therefore a fleeing activity</p>	See response to ML-NRW(A)-5.39.

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	can only be sustained for a short amount of time i.e. not prolonged. For a fish to be modelled as “fleeing” it would therefore need to be able to sustain a swim speed of 1.5 m/sec-1 for the 272 minutes, as used in the modelling. This is not realistic.	
ML-NRW(A)-5.43	Winger et al (1999) reported trial of swimming abilities sustained for >200 minutes for Atlantic cod of 0.6 and 0.8m/s, and of 1.76 bl/S-1 (equivalent to 0.7 m/sec-1) for American plaice. The authors also cite research from other authors on critical swim speeds for other flatfish species (the maximum speed attained just prior to exhaustion in a controlled laboratory experiment) of 1.5 bl/S-1 for European flounder, 1.3 bl/S-1 for common dab, and 1.10 bl/S-1 for lemon sole.	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.44	Swim speeds calculated for adult plaice using selective tidal transport are reported in a paper by Buckley & Arnold (2001) as 0.6 bl/S-1 and latterly, He (2003) reported swimming behaviour for winter flounder ( <i>Pleuronectes americanus</i> ), captured from underwater video, where an average swimming speed of 0.95 bl/S-1 was recorded.	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.45	He and Wardle (1988) report maximum sustained swim speeds for mackerel, herring and two size classes of saithe. Herring was recorded at 4.06 bl/S-1 (1.03 m/sec-1), mackerel of 3.5 bl/S-1 (1.16 m/sec-1), and Saithe of 3.5 bl/S-1 (0.88 m/sec-1) for a 25cm fish, and 2.2 bl/S-1 bl/S-1 (1.1 m/sec-1) for fish of 50cm.	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.46	More recently Breen et al (2004) estimated maximum sustained swim speeds for two sizes of haddock as between 0.38 and 0.62 m/sec-1, while Winger et al. (2000) found that the maximum sustained swimming speed for cod was predicted to be 0.66 m/sec-1, and that the risk of exhaustion, was found to increase rapidly with increasing swimming speed.	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.47	Finally, high swimming speeds of 1.46 m/sec-1 have been reported in herring shoals by Nøttestad et al (1996). It should be noted however, that these speeds were calculated based on up to one hour of observations.	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.48	Given that swim ability is a function of body form, it is not surprising that fusiform fish, such as herring and mackerel, outpace demersal and flatfish. The Applicant, however, has applied a uniform rate of 1.5 m/sec-1 irrespective of the species being modelled, which is higher than any of the swim speeds cited from literature above. Even if fish are fleeing, and therefore would potentially move faster than their sustained swim speed, the assumption in the model is	See response to ML-NRW(A)-5.39.

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	that this speed is sustained for the duration of piling i.e., 272 minutes. For the reasons above NRW (A) does not consider this a plausible scenario.	
ML-NRW(A)-5.49	Another key assumption in the model is that fish swim directly away from the noise source. As for swimming ability, a range of behaviours have been observed in literature depending on species - from changes in shoaling behaviour, such as shoal dispersing or change of swimming depth (e.g., Hawkins et al, 2014) to startling or freezing behaviour.	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.50	The COWRIE technical report (Mueller-Benkler et al, 2010) carried out comprehensive experiments on reactions of cod and sole exposed to pile driving noise, and found that reactions varied between individuals but could broadly be categorised into three behaviours: (1) fish increased their overall swim speed in the 10 min sound exposure period; (2) fish slowed down at onset of playback, indicating a freezing response, and; (3) fish sped up after the playback was switched off which was sometimes combined with a freezing reaction during sound. The study also found evidence that a directional response to the sound was mostly observed when sound was presented for the first time. The COWRIE report also reviews other data and evidence for fish reactions to anthropogenic noise and notes that reactions vary significantly across species, and that fish behaviour is likely to vary according to the behaviour engaged in at the time. Skaret et al, (2005), showed that noise from a passing survey vessel did not elicit a fleeing reaction by herring engaged in spawning activity, whereas herring undertaking feeding or migration activity would react by fleeing; the authors concluded that the motivation to spawn overruled the fleeing instinct. However, herring is not amongst the species for which quantitative assessment has been carried out and it should not be assumed that impulsive noise will not disrupt other spawning species. Cod, for instance vocalise during spawning and are sensitive to masking from low frequency anthropogenic noise, such as piling (de Jong et al 2020).	See response to ML-NRW(A)-5.39.
ML-NRW(A)-5.51	In conclusion, NRW (A) advises that the assumptions used in the quantitative assessment of spawning area impacted by pile driving noise for sole, plaice, cod and whiting are not supported by evidence, and consequently we do not agree that the figures presented for area of affected spawning habitat presents worst case scenarios on which to base conclusions of significance of impacts.	See response to ML-NRW(A)-5.39.



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ML-NRW(A)-5.52	NRW (A) has however, carried out alternative worst case scenarios calculations using the Applicants figures for fish as stationary receptors. Based on these calculations, the otherwise conservative assumptions in the noise modelling, and the limited spatial and temporal extend of the impacts, NRW (A) agrees that impacts to Section 7 fish species is not likely to be significant in EIA terms.	This is welcomed by the Applicant.
ML-NRW(A)-5.53	NRW (A) notes the cumulative environmental assessment (CEA) undertaken for fish receptors, but requires further information on how the cumulative impacts to fish populations over multiple spawning seasons from underwater noise arising from consecutive construction activity from several offshore windfarm projects in Liverpool Bay has been considered.	<p>The Applicant notes that NRW have requested further information to inform the CEA for the Fish and Shellfish Ecology Chapter (Document reference 6.2.6). The Applicant notes that at the time of writing there was limited information on the proposed (Round 4) offshore windfarm projects within Liverpool Bay. In accordance with the CEA methodology detailed in Cumulative Effects Assessment Methodology (Document reference 6.1.3.1) the projects were assigned Tiers, based on project details published in the public domain. On the basis on the Tier allocation of the projects considered within the CEA and considering the lack of project information available at the time of writing, it was not possible to undertake a quantitative CEA on fish and shellfish receptors, and instead a qualitative assessment was provided.</p> <p>The Applicant notes, that the onus should therefore be on the forthcoming projects to appropriately consider the cumulative effects on fish and shellfish receptors in line with AyM.</p> <p>The Applicant has since provided a clarification note on this matter (Document ML-1.24 of the Applicant's Marine Licence Submission 1). With reference to the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1), this remains a point of ongoing discussion.</p>
ML-NRW(A)-5.54	In Section 6.13.2 (Volume 2: Chapter 6 (6.2.6) the Applicant has undertaken an assessment of the potential cumulative effects from construction noise and vibration on fish receptors. NRW (A) agrees with the projects identified in scope.	This is welcomed by the Applicant.
ML-NRW(A)-5.55	However, some of the reasoning provided to support the conclusion of minor adverse effect are speculative, e.g., paragraph 359 states: 'It is noted that there is a broadscale push from regulators and Statutory Nature Conservation Body's (SNCBs) within the UK towards the use of technologies to reduce the noise emitted during offshore wind construction works. The method used or the mechanism by which this may be enforced is yet to be determined however it	See response to ML-NRW(A)-5.53.

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	may comprise using non-piled structures (e.g., GBS or suction bucket structures) or at source noise mitigation (e.g., bubble curtains or the BLUE piling system). NRW do not consider it appropriate to rely on potential future regulations or mitigation in the cumulative assessment.	
ML-NRW(A)-5.56	Similarly, subsequent paragraph 360 states that 'Based on the noise modelling for AyM, the greatest impact range for TTS (186 dB SELcum) for fish is 36 km (assuming a stationary receptor, simultaneous piling of piles). As such, it is possible that, if AyM and the other projects were to pile simultaneously that there would be an overlap between TTS impacts for the projects. However, this would only occur for the most hearing sensitive fish species (e.g., herring), with other, non-hearing specialist fish species, considered to be less at risk. It should be noted that the assumptions herein that these projects are constructed simultaneously is unlikely due to the planning process timescales in the UK and the availability of construction vessels (often very limited, particularly considering the other offshore wind projects which have overlapping construction timescales (e.g., those planned in the UK North Sea and worldwide). NRW (A) does not agree that there is no potential for either simultaneous, partly overlapping, and sequential construction noise from planned Offshore windfarms projects to adversely affect consecutive spawning seasons of Section 7 fish species. Atlantic cod are amongst the most hearing sensitive fish, are sensitive to anthropogenic noise, masking or disrupting mating and spawning behaviour, and have high intensity spawning and nursery grounds throughout Liverpool Bay (Ellis et al 2012). Consequently, NRW (A) advises that further information is sought from the applicant on the potential for cumulative effects from construction noise on VERs with spawning grounds in Liverpool Bay.	See response to ML-NRW(A)-5.53.
ML-NRW(A)-5.57	NRW (A) agrees with the conclusions that the project will not impact Water Framework Directive (WFD) fish status in the affected Transitional waterbodies.	This is noted and welcomed by the Applicant.
ML-NRW(A)-6.58	NRW (A) advises that a detailed assessment of the potential impacts of the project on the breeding seabird features of Pen-y-Gogarth / Great Orme's Head Site of Special Scientific Interest (SSSI) is needed. These features are Common Guillemot, Razorbill and Black-legged Kittiwake. Currently this has not been carried out sufficiently to assess effects on these features. NRW (A) advises	The Applicant held a consultation meeting with NRW in relation to assessment of Pen-y-Gogarth / Great Orme's Head SSSI seabird features on 6 September 2022 to agree an approach to assessment. Following consultation, the Applicant has submitted an assessment clarification note (Document ML-1.4 of the Applicant's Marine Licence Submission 1)

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	that the effects of displacement on auks and collision risk mortality of kittiwakes should be further assessed. Displacement and collision risk will then need to be apportioned using the Nature Scot apportioning tool in order to understand the effects on the features of Pen-y-Gogarth / Great Orme's Head SSSI. If apportionment is greater than or equal to 1% then a Population Viability Analysis (PVA) will also be required.	detailing the predicted impacts apportioned to Pen-y-Gogarth / Great Orme's Head SSSI seabird features following the agreed approach to assessment. The conclusions of which confirmed that potential for significant adverse effect in relation to impacts from AyM to Pen-y-Gogarth / Great Orme's Head kittiwake, guillemot and razorbill features can be ruled out. The Applicant welcomes further discussion with NRW on this matter following submission of the clarification note and expects this to be confirmed in the SoCG (A current version of which is provided as Document ML-1.28 of the Applicant's Marine Licence Submission 1) between the Applicant and NRW.
ML-NRW(A)-6.59	From the evidence provided, it does appear that the extent of the supporting habitat for red-throated diver (RTD) within the Liverpool Bay Special Protection Area (SPA) will be maintained if the project is constructed and therefore there will be no adverse effect on the RTD feature of Liverpool Bay SPA from loss of habitat.	The Applicant welcomes NRW's agreement that an AEoI can be ruled out in relation to the extent of supporting habitat being maintained for red-throated diver, and that high displacement levels observed for other red-throated diver wintering areas within the UK and Europe are not applicable to the Liverpool Bay SPA.
ML-NRW(A)-6.60	However, we note that the displacement of RTD in this part of Liverpool Bay SPA is not consistent with what has been observed in other areas of Liverpool Bay SPA, as well as in other areas of the UK and Europe.	It is expected that the requirements for ornithological monitoring are secured as a condition of any Marine Licence granted (see Condition 34 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-6.61	Given this anomaly in observation, NRW (A) advises that comprehensive validation monitoring before, during, and after construction is needed to confirm that it is the case that supporting habitat (as identified in the sites conservation objectives) has not been lost.	
ML-NRW(A)-6.62	NRW (A) notes that the Furness et al (2015) stable age structure assessment method has been applied. Whilst NRW would have preferred that stable age structure is calculated from the local surveys, or, by adopting a precautionary approach by counting all birds as adults, we do not consider that this impacts the final assessments. Therefore, NRW (A) agrees with the conclusions presented.	The Applicant welcomes this agreement with NRW.
ML-NRW(A)-6.63	By looking at the range of figures presented for displacement and mortality, NRW (A) were able to make an assessment (on a precautionary level) at higher levels of displacement and mortality than were chosen by the Applicant. By looking at the full range of variability of displacement and mortality, we do not consider this to be an issue.	The Applicant welcomes NRW's agreement that a significant adverse effect can be ruled out in relation to red-throated diver displacement impacts.



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ML-NRW(A)-6.64	The RIAA (5.2) states on page 60 that: "There is currently no planned vessel routes, therefore a quantitative assessment cannot be undertaken alone or in-combination for this impact on any feature" and Section 10.3 states that: "Vessel movements during the operation of the wind farm for maintenance activities have the potential to disturb common scoter. However, within the confines of the wind farm site and the 4 km buffer, the magnitude of displacement due to the AyM wind farm itself (assessed as 100%) is such that there would be virtually no additional effect caused by vessel movements (as all individuals will already have been displaced). Therefore, no further assessment for operational vessel movements within the AyM wind farm site and 4 km buffer is required".	The Applicant welcomes NRW's offer to work together to produce an outline vessel traffic management plan and concluding that subject to a condition in the marine licence for a vessel traffic management plan, an AEoI could be ruled out in relation to the red-throated diver and common scoter features of Liverpool Bay SPA with respect to disturbance and displacement. The Applicant expects this plan to be secured via a condition in any Marine Licence granted by NRW (see Condition 34 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-6.65	NRW (A) advises that a vessel traffic management plan is needed. RTD and Common Scoter are features of Liverpool Bay SPA, and Common Scoter are included as a priority species in Section 7 of the Environment (Wales) Act 2016. Both species are sensitive to anthropogenic disturbance and displacement (Fluessbach 2019; Kaiser et al. 2002). We advise that the vessel traffic management plan is secured as a condition of the ML. We advise that the plan uses measures such as (but not limited to) restricting vessel movements to existing navigation routes. This is necessary in order to avoid or reduce disturbance, and therefore displacement. As requested by the Applicant, we will work with the Applicant to produce and implement the plan. Providing an appropriate vessel traffic management plan is agreed, in writing, with NRW (A) as a condition of the ML, we consider it to be unlikely that there will be an adverse effect on Liverpool Bay SPA.	
ML-NRW(A)-6.66	We agree there is no significant risk to the Skomer MCZ from an ornithological perspective, as this is covered by the assessment of Skomer, Skokholm & Seas off Pembrokeshire SPA.	The Applicant welcomes this agreement with NRW.
ML-NRW(A)-7.67	Except for the points made below (in particular comments 71-75), the Applicant has provided an otherwise comprehensive assessment of the impacts of the project on marine mammals.	This is welcomed by the Applicant.
ML-NRW(A)-7.68	The proposal has the potential to impact marine mammal Annex II, European Protected Species (EPS) and Section 7 Species.	This is noted by the Applicant.

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ML-NRW(A)-7.69	Section 7 cetacean species are also EPS and therefore strictly protected under the Habitats Regulations.	This is noted by the Applicant.
ML-NRW(A)-7.70	An EPS licence may be required for unmitigated auditory injury Permanent Threshold Shift (PTS) and disturbance. We anticipate that the activities will not compromise species Favourable Conservation Status (FCS).	This is noted by the Applicant.
ML-NRW(A)-7.71	NRW (A) considers that the assessment, in the ES and RIAA, of the impacts of underwater noise on marine mammals, such as auditory injury and associated disturbance, is insufficient and should be improved in order to enable the risks to be fully and adequately assessed, for the reasons noted in 71 a - d (inclusive) below.	See responses to specific comments in the rows below.
ML-NRW(A)-7.71.a	To allow a more comprehensive analysis of PTS and disturbance, NRW considers that additional modelling should be carried out and additional model details provided to inform assessments of underwater noise and PTS onset. This includes carrying out Interim Population Consequences of Disturbance (iPCoD) modelling for harbour porpoise disturbance and PTS injury, including detail of the modelling parameters used, which unlike for other species, was not included in the ES.	Population modelling for disturbance has already been included in the marine mammals ES chapter (Document reference 6.2.7) for all species where the proportion of the MU disturbed was >1%. For completeness, the Marine Mammal Clarification Note (Document ML-1.8 of the Applicant's Marine Licence Submission 1) presents the iPCoD modelling results using the highly precautionary SWF density estimate for harbour porpoise. This did not change the conclusion of the impact assessment for harbour porpoise (Document ML-1.8 of the Applicant's Marine Licence Submission 1) and therefore the assessment conclusion of AEoI in the RIAA (Document reference 5.2) remains valid. Following provision of the clarification note to NRW, the Applicant understands this matter to be agreed (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-7.71.a.1	NRW (A) have conducted some in-house iPCOD modelling for harbour porpoise (using the beta (unpublished) Cumulative Effects Framework project web-based portal [CEF (ceh.ac.uk)] – this is a web based interface that allows iPCOD v5.2 to be used in a more 'user friendly' way). The population input parameters used were those from Sinclair et al (2020) and Evans & Cordes (in prep) (the latter being Welsh / regionally relevant population demographics) and the development parameters as those presented in the Awel-y-Môr ES. A piling schedule was created by randomising 201 piling days through a single year. The worst-case P2TS SEL (83) and disturbance prediction (2112: Seawatch density scenario) (see Volume 2: Chapter 7 (6.2.7): Tables 20 and 28 (p131 and 137) of the ES) were modelled. The results indicate negligible effect from the combination of PTS and disturbance to the population and we concluded no AEOSI on any harbour porpoise SAC in the Celtic and Irish Seas (CIS) Marine Mammal Management Unit (MMMU). We advise that the Applicant provides their own full modelling to support the conclusion of minor / negligible effect and no AEOSI on North Anglesey Marine SAC; this is in view of Conservation	

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	Objective 1: Population viability conservation objective. Until this modelling is undertaken by the Applicant, the evidence submitted is insufficient to allow a conclusions of no AEOSI.	
ML-NRW(A)-7.71.a.2	Additionally for harbour porpoise, we recommend (as described below in section 71d), determining the maximum area ensonified out to a behavioural threshold (e.g. 143 dB or similar (see below)) (by modelling at the furthest corners/nodes of the array footprint) and express this maximal area as a proportion of the CIS MMMU area. This would provide an indication of the area of habitat within the MMMU that could be potentially disturbed / displaced. The area is implicitly functionally linked to the harbour porpoise features of the SACs in the MMMU and the impact pathway manifests as displacement (albeit temporary – 1 year) from functionally linked habitat. NRW (A) does not anticipate this resulting in AEOSI but cannot conclude no AEOSI in the absence of such information. Such information should be presented by the Applicant to NRW (PS) to demonstrate this.	The Marine Mammal Clarification Note (Document ML-1.8 of the Applicant's Marine Licence Submission 1) presents the 140 dB re 1 $\mu$ Pa <sup>2</sup> s SELss (ASCOBANS, 2014) and the 145 dB re 1 $\mu$ Pa <sup>2</sup> s SELss (Lucke et al 2009) thresholds for disturbance. As requested, for each of these, the % of the CIS MU has been presented (4.93 and 3.44% MU respectively). While the 143 dB re 1 $\mu$ Pa <sup>2</sup> s threshold has not been specifically modelled and presented, it lies between the 140 and the 145 thresholds. Therefore, the conclusion of no AEol presented in the RIAA (Document reference 5.2) remains valid. Following provision of the clarification note to NRW, the Applicant understands this matter to be agreed (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-7.71.b	There is insufficient justification for the absence of assessment of cumulative PTS in the Habitats Regulations Assessment (HRA); as such we consider the assessment incomplete.	The Applicant confirms that cumulative PTS will be mitigated in the final MMMP unless guidance and evidence at the time suggest that it is not appropriate to do so. Therefore, the magnitude of PTS impact is mitigated to negligible levels to all marine mammal species by the MMMP which is expected to be conditioned in any Marine Licence granted by NRW (Condition 35 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-7.71.b.1	Cumulative PTS (SELCUM) has been modelled in the ES but results not included in the HRA and is required in the HRA to support the Appropriate Assessment and conclusion of no AEOSI. Using the values in the ES (Volume 2: Chapter 7 (6.2.7): Table 20 (p127), 21 (p128), and 23 (p131) for harbour porpoise, bottlenose dolphin and grey seal respectively), NRW (A) modelled the effect of cumulative PTS on the relevant MMMU population for each Annex II species using iPCOD (via the CEF web-based portal: CEF (ceh.ac.uk)). Results suggested that PTS SEL on its own is highly unlikely to result in a significant effect on the population (of the MMMU) and therefore no AEOSI in view of Population viability conservation objectives of any of the relevant SACs. Nevertheless, we advise that the Applicant will need to present such information for NRW (PS) to be able to consider cumulative PTS in the HRA and rule out the likelihood of AEOSI.	Following provision of the clarification note to NRW, the Applicant understands this matter to be agreed (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).

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ML-NRW(A)-7.71.c	There are insufficient grounds to conclude that PTS-onset risk has a negligible impact on harbour porpoise because cumulative PTS-onset has been excluded from the Marine Mammal Mitigation Protocol (MMMP).	The Applicant has since held discussions with NRW on this matter and has provided the information requested in a clarification note (Document ML-1.8 of the Applicant's Marine Licence Submission 1).
ML-NRW(A)-7.71.c.1	The MMMP (Voume 4: Annex 7.2 (6.4.7.2) states: "The primary aim of this draft Outline MMMP is to set out the measures proposed to reduce the risk of Permanent Threshold Shift (PTS) auditory injury to any marine mammal species in close proximity to the pile driving for the installation of AyM foundation structures to negligible (as defined in Section 1.5 in Volume 2, Chapter 5: Marine Mammals)."	The Applicant is pleased to note that NRW is now satisfied that the information provided addresses their concerns and supports the conclusion of no AEOSI from this pathway and no further information is required in this regard. Please see the Marine Mammal Clarification Note (Document ML-1.8 of the Applicant's Marine Licence Submission 1). The Applicant confirms that cumulative PTS will be mitigated in the final MMMP unless guidance and evidence at the time suggest that it is not appropriate to do so. Therefore, the magnitude of PTS impact is negligible to all marine mammal species with provision of a MMMP which is secured under Condition 35 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1). Population modelling for disturbance has already been included in the marine mammals ES chapter (Document reference 6.2.7) for all species where the proportion of the MU disturbed was >1% and therefore the AEol conclusion remains valid. See also the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1).
ML-NRW(A)-7.71.c.2	While the industry standard protocol for minimising the risk of injury to marine mammals (Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise   JNCC Resource Hub) is proposed (with a slightly enhanced observation zone of 640m (cf the usual 500m)), this would not 'mitigate' against cumulative PTS for harbour porpoise when considering the proposed WCS (Multileg 2 at 1 location: NW [see Volume 2: Chapter 7 (6.2.7): Table 20 p127 of ES]), which suggests cumulative PTS will extend to 6.3km (and for the next Worst Case [monopiles at NW location] suggests cumulative PTS extends to 4.3km). Cumulative PTS for other Annex II species is predicted to extend to less than 100m and as such, standard mitigation is sufficient.	
ML-NRW(A)-7.71.c.3	However, our in-house modelling using iPCOD (on Annex II species only – see 71a above) suggests there would not be an AEOSI, or significant effect (in EIA terms) as a result of cumulative PTS (with or without the additional pathway of disturbance). Thus, the protocols for minimising injury (i.e., 'mitigation') would not be formally required for the purposes of removing AEOSI in HRA or significant effects in EIA. Instead, the 'mitigation' is generally included as industry best practise to reduce effects, especially in relation to EPS (deliberate injury). The industry standard mitigation would adequately mitigate against instantaneous PTS but not cumulative PTS in harbour porpoise. Therefore, although mitigation for cumulative PTS may not be a requirement for AA / EIA in this case (to be confirmed after additional modelling aforementioned is undertaken), the use of the mitigation protocols is generally required to minimise risk of injury in relation to EPS and the Applicant is encouraged to apply for an EPS licence for injury (to individuals) (see comment 70).	



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ML-NRW(A)-7.71.c.4	Modelling of cumulative PTS in iPCOD should be included in the MMMP to allow NRW PS to confirm no effect (or otherwise) and evaluate any mitigation requirements/ recommendations.	
ML-NRW(A)-7.71.c.5	It is NRW (A)'s understanding that the reason cumulative PTS was not included in the MMMP is that the Applicant argued that the assumptions that underpin the PTS SELcum metric (i.e. the equal energy hypothesis) lead to precautionary ranges, and that SELcum is therefore not valid (see ETG Clarification Note: Marine Mammal Cumulative PTS Onset 26 November 2021 Revision A: here). While there has been research to try to find an alternative to the equal energy hypothesis, the general consensus is that there isn't enough data yet to support a departure from this model. The Southall (2019) thresholds recommends the use of dual metric criteria (i.e. SPL and SEL) so even in its current form, SELcum gives precautionary results and is the best way we currently have of assessing multiple consecutive impulsive noise. We therefore advise that the Applicant continues to use the Southall 2019 thresholds and includes instantaneous PTS (SPL) and cumulative PTS (SEL) in the assessments (EIA, HRA) and the MMMP.	
ML-NRW(A)-7.71.d	NRW does not recommend the use of dose/response (D/R) curves to conduct an area-based assessment to estimate area of harbour porpoise habitat disturbed; D/R curves are used to estimate the number of animals affected, not the habitat/area affected. Given that disturbance for harbour porpoise SACs is defined through spatial and temporal thresholds of 20% daily and 10% seasonal disturbance, as set out in the supporting advice for the disturbance conservation objective (CO2) for porpoise sites, we advise that an area-based assessment should be carried out where the extent of habitat that is ensonified to a level that might produce significant disturbance is determined. Although there is a strong link between area lost and numbers disturbed, directly equating the probability of population response to loss of habitat / loss of habitat quality (i.e. using a D/R curve to calculate habitat loss) is currently not possible.	The Applicant notes and welcomes agreement on these points. Please see the Marine Mammal Clarification Note (Document ML-1.8 of the Applicant's Marine Licence Submission 1). Since there is no agreed threshold to assess disturbance impacts to SACs (other than the 26 km EDR approach outlined JNCC et al., 2020 - which NRW does not subscribe to), the Applicant has provided a selection of different disturbance criteria that could be applied to expand the assessment presented in the RIAA. The Applicant confirms that none of these result in effects of greater significance than assessed in the ES or RIAA and therefore the conclusions of those assessments remain valid. The Applicant acknowledges that there is no information on the behavioural response of bottlenose dolphins to pile driving. In the US, under the 1994 Amendments to the Marine Mammal Protection Act, Level B harassment is defined as any act of pursuit, torment or annoyance which has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioural patterns. The threshold for Level B harassment is 160 dB re 1µPa SPLrms from an impulsive sound source (NMFS 1995, 2005). This was derived from Malme et al (1983 and 1984) who showed that migrating gray whale female-calf pairs showed

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		<p>behavioral disturbance when exposed to impulsive sound levels above 160 dB re 1µParms. Richardson et al (1985, 1986 and 1990) showed similar responses in migrating bowhead whales. This threshold has subsequently been used by regulatory agencies for certain sound sources (e.g., seismic and high-resolution geophysical surveys, vibratory and impact pile driving, drilling) (Guan and Brookens 2021). This threshold is therefore not derived from, nor is it specific to dolphin species or pile driving. The Applicant is pleased to note that NRW agrees that using harbour seal D/R curves as a proxy for grey seal is appropriate in this case, since there is evidence that grey seal show similar reactions to harbour seals and are within the same hearing group. The Applicant confirms that for completeness, the Level B harassment threshold for bottlenose dolphin (160 dB re 1 µPa SPLrms) has been modelled in line with NRW advice to confirm the number of dolphins expected to be disturbed, and this has been provided to NRW(A). This document also forms part of this Marine Licence submission at Document ML-1.26 of the Applicant's Marine Licence Submission 1.</p>
ML-NRW(A)-7.71.d.1	<p>For harbour porpoise, NRW (A) recommends an unweighted noise threshold of 143 dB re 1µPa (un-weighted) single strike sound exposure level (Brandt et al 2018; Heinis et al 2019) is used as the extent of disturbance for impulsive noise sources. This threshold is the modelled average of six different studies of full-scale pile driving operations and thereby represents the largest amount of empirical data (Tougaard 2021). Other threshold values might be suitable (e.g. 140 dB re 1µPa single strike SEL – ASCOBANS, 2014; or 145 dB re 1µPa single strike SEL – Lucke et al 2009). The 143 dB re 1µPa noise contour / isopleth is overlayed onto a map of the area to determine the extent of overlap with NAM SAC, and the extent of the area of the SAC that is ensonified to a level that could be considered significant disturbance can then be determined. The extent of the overlap is then compared against the 20%/10% thresholds set out in the conservation objectives for the site (CO2: significant disturbance).</p>	<p>The Applicant has provided a selection of different disturbance criteria that could be applied to expand the assessment presented in the RIAA. Using the dose-response approach, 50.9% of porpoise are predicted to respond between 145&lt;150 dB SELss (Graham et al 2017). If 50% response is assumed to be considered as "significant disturbance" then 17.8 km² of the North Anglesey Marine SAC area (0.5%) is predicted to experience "significant disturbance" from pile driving (from a 5,000 kJ monopile at the NW location). This is significantly below the 20% area threshold for significant noise disturbance within an SAC. This is exactly the same threshold as presented in Lucke et al. (2009) for consistent aversive behavioural reactions and thus the resulting impact to the SAC is the same.</p> <p>If it is assumed that the 26 km EDR represents significant disturbance (as stated in the JNCC et al 2020 guidance), then only 0.2% of the North Anglesey Marine SAC area is predicted to be impacted. Again, this is significantly below the 20% area threshold for significant noise disturbance within an SAC.</p>

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		<p>There is no overlap between the 140 dB re 1 <math>\mu</math>Pa<sup>2</sup>s SEL<sub>cum</sub> TTS-onset threshold and the North Anglesey Marine SAC.</p> <p>Using the recommended 140 dB re 1 <math>\mu</math>Pa<sup>2</sup>s SEL<sub>ss</sub> (ASCOBANS, 2014), then disturbance is predicted to occur within 3.7% of the North Anglesey Marine SAC area. Again, this is significantly below the 20% area threshold for significant noise disturbance within an SAC.</p> <p>Given the minimal overlap between disturbance ranges and the SAC (no matter which approach to assessing disturbance is considered), there is no potential for an Aeol to the conservation objectives of the harbour porpoise feature. Therefore, subject to natural change, the harbour porpoise feature will be maintained in the long term.</p>
ML-NRW(A)-7.71.d.2	<p>The Applicant has used harbour porpoise D/R curve as a proxy for other species of cetacean. The indication from the literature suggests that bottlenose dolphin and minke whale are more tolerant to noise than harbour porpoise. Anecdotal / qualitative observations also suggest that these species behave very differently from harbour porpoise. Therefore, applying a D/R curve from a more sensitive species to a less sensitive species is likely to result in overestimates of disturbance, which might be considered an overly precautionary approach. Of course, consideration should be given that the sound energy of pile driving is highest in the low frequency range and overlaps more with the hearing range of a minke whale than that of a harbour porpoise – pile strikes of the same unweighted single-strike SEL (SELs) are louder for a minke whale than a harbour porpoise. For minke whale, though, evidence from studies with sonar seems to point out that they are less sensitive by ca 40-50 dB (Tougaard 2021). NRW (A) acknowledges that the Applicant has used a method known to be precautionary for other species and justified it in some detail. Although NRW (A) would not recommend this approach, given that other threshold options are available for other species (e.g. Level B harassment), we do not explicitly rule this method out and are satisfied that the method and assessment used is acceptable.</p>	<p>The Applicant has undertaken further modelling of the Level B harassment threshold and presented this in Document ML-1.26 of the Applicant's Marine Licence Submission 1 and notes that this confirms the number of disturbed animals to be below the worst-case assessed by the D/R approach.</p>
ML-NRW(A)-7.71.d.3	<p>NRW (A) suggests an analysis using a fixed threshold, such as 160 dB SPL<sub>rms</sub> (151 dB SS SEL Un-W) for impulsive noise for bottlenose dolphin (Level B harassment: NMFS 1995, 2016, 2018 and references therein), would be useful to compare against the results of a proxy D/R analyses. This is because D/R curves are developed from fine scale behaviour – therefore even if these species started</p>	

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	to respond at similar sound levels, there is no guarantee that the probability curve will have the same shape for different species.	
ML-NRW(A)-7.71.d.4	There currently isn't enough data to establish a D/R curve or a definite threshold for grey seal. NRW (A) agrees that using harbour seal D/R curves as a proxy for grey seal is appropriate, since there is evidence that grey seal show similar reactions to harbour seals and are within the same hearing group (Aarts et al 2017, Gotz and Janik 2010).	
ML-NRW(A)-7.72	There is insufficient justification to support a conclusion of no Likely Significant Effect (LSE) from vessel collision for bottlenose dolphin, grey seal or harbour porpoise features of relevant SACs. The submitted Report 5.2 RIAA (see Table 4 p105) lists only underwater noise as the pathway with LSE for all mammal species/SAC combinations. NRW (A) previously advised that an LSE for vessel collision should not be ruled out.	The Applicant provided additional text in the Marine Mammal Clarification Note (Document ML-1.8 of the Applicant's Marine Licence Submission 1) on the assessment of vessel collisions for the RIAA. NRW now agrees that the proposed management of vessel traffic is sufficient to rule out any AEOSI (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-7.73	Page 65; Table 1: Summary of consultation relating to the HRA process of the RIAA (5.2) states that "The Applicant acknowledges this feedback. The Project is making a commitment to minimise the risk of collisions. The adoption of best practice vessel handling protocols (e.g. following the Codes of Conduct provided by the WiSe Scheme, Scottish Marine Wildlife Watching Code or Guide to Best Practice for Watching Marine Wildlife) will minimise the potential for any impact. The final codes of conduct will be discussed and agreed with NRW and JNCC through the marine licence conditions."	NRW notes and welcomes agreement that provision and implementation of a Vessel Traffic Management Plan in consultation with NRW that considers both ornithological and marine mammal interests would sufficiently rule out LSE and AEol. The Applicant has provided a revision of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1) that includes this at Condition 34.
ML-NRW(A)-7.74	While NRW (A) acknowledges and encourages the intention to minimise the risk of collisions with vessels and to adopt best practise, as per our advice on the Preliminary Environmental Information Report (PEIR) and RIAA comments log, we consider that the potential for an LSE cannot be ruled out and should be taken forward to Appropriate Assessment to analyse the risk formally / appropriately. The information provided by the Applicant would likely be sufficient to inform an Appropriate Assessment; had vessel collision been included in the RIAA, NRW (A) would not anticipate an AEOSI from this pathway with the listed mitigation (including best practise and codes of conduct) in place.	



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ML-NRW(A)-7.75	We note the commitment by the Applicant to produce and implement a Vessel Traffic Management Plan in consultation with NRW (A). Whilst it appears that this relates solely to ornithological interests, we recommend that the Plan also appropriately considers marine mammal interests. We advise that such a plan is secured as a condition in the ML.	
ML-NRW(A)-7.76	A number of figures in the revised marine mammal Chapter 7 (6.2.7) appear to be incorrect. For example, Figure 21 is supplied in place of Figure 19, and Figure 21 does not contain all the necessary data layers either time it is presented. Corrected figures should be supplied alongside confirmation of the nature of any revisions from the original version – this will provide NRW (A) with confidence that the revisions and assessments have been applied correctly.	Corrected versions of these figures have been provided to NRW via the DCO examination in the Application Errata List (PINS reference REP1-004). These figures are also provided in Appendix A of this document for completeness.
ML-NRW(A)-7.77	We agree there is no significant risk to the Skomer MCZ from a marine mammal perspective. The analysis for seals in the ES and RIAA includes effects on seals – a feature of the MCZ – at the wider scale MMMU which encompasses Skomer MCZ. An assessment has also been made for Pembrokeshire Marine SAC and this also adequately covers the requirements of the MCZ assessment.	This is noted and welcomed by the Applicant.
ML-NRW(A)-8.78	NRW (A) agrees with the assessment of the potential impacts upon the hydromorphology resulting from the presence of physical structures as provided in Volume 2, Chapter 2: Marine Geology, Oceanography and Physical Processes (6.2.2). We can therefore agree with the conclusion of the WFD CA (Volume 4: Annex 3.1 (6.4.3.1) for the hydromorphology element – that the proposed activities will not result in deterioration of status of the water body or jeopardise the attainment of its objectives.	This is noted and welcomed by the Applicant.
ML-NRW(A)-8.79	NRW (A) agrees with the characterisation of the biology, assessment methodology and the assessment conclusions of the potential impacts on benthic receptors as outlined in Volume 2, Chapter 5: Benthic Subtidal and Intertidal Ecology (6.2.5). We therefore agree with the conclusions of the WFD CA for biology: habitats within the water body - that the biological elements associated with this would not be at risk of deterioration as a result of the Awel-y-Môr project.	This is noted and welcomed by the Applicant.
ML-NRW(A)-8.80	In relation to water quality, we note that the information presented in the MW&SQ chapter (6.2.3) has not been transposed into the WFD CA with respect to water clarity (suspended sediment) and contaminated sediment, and as	Following engagement with NRW and the provision of the Water and Sediment Quality Clarification note (Document ML-1.7 of the Applicant's Marine Licence Submission 1), it is now understood that this area is

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	such, we cannot agree with the conclusions of the CA with respect to those aspects of the assessment at present.	agreed and NRW have no further queries (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-8.81	In relation to water quality, we do not agree with the conclusions with respect to phytoplankton and dissolved oxygen (DO) as the assessment focusses on nutrients rather than water clarity (please see comments 11 and 12 above). Water clarity is the main impact pathway arising from the proposed works which could affect the phytoplankton and DO status of the North Wales water body and therefore the assessment should focus on this.	Following engagement with NRW and the provision of the Water and Sediment Quality Clarification note (Document ML-1.7 of the Applicant's Marine Licence Submission 1), it is now understood that this area is agreed and NRW have no further queries (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-8.82	Based on the statement made at para 128 and in Table 9 of Volume 4 - Annex 3.1 (6.4.3.1) that "there are no current intentions to install structures which may alter the hydromorphology of the Clwyd transitional waterbody", NRW (A) agrees with the conclusions of the WFD CA for the hydromorphology element within the Clwyd water body.	This is noted and welcomed by the Applicant.
ML-NRW(A)-8.83	NRW (A) agrees with the WFD CA conclusions for biology – habitats within the water body, that provided that no direct interaction with the biological habitats in the Clwyd transitional waterbody will occur due to the proposed trenchless techniques, the project will not cause deterioration to the biological elements within the water body, or jeopardise the attainment of Good Ecological Potential (GEP).	This is noted and welcomed by the Applicant.
ML-NRW(A)-8.84	NRW (A) agrees with the WFD CA conclusions for water quality within the water body, that due to the trenchless techniques proposed, the project will not cause deterioration to the water quality within the water body or jeopardise the attainment of Good Ecological Potential.	This is noted and welcomed by the Applicant.
ML-NRW(A)-8.85	We advise that if the proposal to employ trenchless techniques changes, then the WFD CA will need to be revisited and any impacts properly assessed.	This is noted by the Applicant.
ML-NRW(A)-8.86	NRW (A) agrees with the proposal to produce a biosecurity risk assessment and for it to be secured as a condition of the ML.	This is noted and welcomed by the Applicant. A biosecurity plan is included within the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1) at Condition 34.

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ML-NRW(A)-9.87	We acknowledge the commitment to produce a Decommissioning Plan as identified in the ES and in the Marine Licence Principles document (5.4.1).	This is noted and welcomed by the Applicant. A decommissioning programme is included within the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1) at Condition 40.
ML-NRW(A)-9.88	We note, from the ES, the intention to completely remove all infrastructure at the end of the operational lifetime of the project, unless, closer to the time of decommissioning it is decided that removal would lead to a greater environmental impact than leaving some components in situ.	This is noted by the Applicant.
ML-NRW(A)-9.89	NRW (A) considers that offshore renewable projects should produce decommissioning plans that retain all decommissioning options (maintain, full removal and partial removal); the options for which can be assessed and refined closer to the time of decommissioning itself in consultation with NRW (A). NRW (A) reserves its position until a draft plan is submitted at which point we will provide further advice.	A decommissioning programme is included within the Marine Licence Principles at Condition 40 (Document ML-1.14 of the Applicant's Marine Licence Submission 1). A decommissioning programme will be required to cover the decommissioning phase of the development as required under Part 2, Chapter 3 of the Energy Act 2004 to be agreed by NRW prior to commencement of offshore works and updated and agreed by NRW prior to commencement of any decommissioning works.
ML-NRW(A)-9.90	We advise that the Applicant follows the industry decommissioning guidance produced by BEIS.	
ML-NRW(A)-9.91	We note the requirement for the production of a Decommissioning Plan for the offshore works is referenced in the draft DCO for the project. We recognise that there are issues that substantively overlap between the determination of the DCO and ML, however, given that the respective consents are determined under separate and distinct legislative processes, we consider it would be prudent to understand how decommissioning plans (for both the offshore and onshore aspects of this project) will be dealt with. Clarity is required on what the appropriate regulatory mechanism would be to secure decommissioning plans, unless it is considered that the DCO needs to address both aspects because the consent is ultimately for the project which includes both offshore and onshore elements.	
ML-NRW(A)-10.92	NRW (A) advises that the offshore works are likely to have numerous and extensive significant adverse effects on seascape, landscape and visual receptors within the Isle of Anglesey Area of Outstanding Natural Beauty (AONB) and Snowdonia National Park (NP) and within their settings. Special Qualities set out in the respective management plans for the areas which support the designations, would be adversely affected. NRW considers that there would be non-significant, but adverse effects on the Clwydian Range and	The adverse effects on the Isle of Anglesey AONB and SNP occur only as a result of impacts occurring within their settings through changes in views and not through any direct changes occurring within these designated areas. Assessments of the effects on the Special Qualities of the Isle of Anglesey AONB, Clwydian Range and Dee Valley AONB and SNP as set out in the respective management plans are set out in Section 10.11 of the SLVIA (Document reference 6.2.10).

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	Dee Valley AONB as well as other non-significant but adverse effects on the Isle of Anglesey AONB and Snowdonia NP. These concerns relate to all Maximum Design Scenarios (MDS) i.e. those relating to MDS of the smaller number of Wind Turbine Generators (WTGs) and the MDS relating to the larger number of WTGs as detailed in the offshore project descriptions (Volume 2: Chapter 1: (6.2.1))	As requested by stakeholders, the Applicant assessed two Maximum Design Scenarios (MDS) A and B within the SLVIA (Document reference 6.2.10). The first includes the smallest number of the largest WTGs proposed (MDS A) and the second includes the largest number of the smallest WTGs proposed (MDS B). It is noted that NRW's view is that the effects would be a concern even for MDS B, i.e. the largest number of the smaller WTGs of 282 m to blade tip. See also the Applicant's response to NRW's Written Representation (Document ML-1.25 of the Applicant's Marine Licence Submission 1) and the SLVIA SoCG (Document ML-1.27 of the Applicant's Marine Licence Submission 1).
ML-NRW(A)-10.93	The ES chapter Seascape, Landscape and Visual Impact Assessment (Volume 2: Chapter 10: (6.2.10)) acknowledges that the proposal will have significant adverse effects on views from the Isle of Anglesey AONB and Snowdonia NP, along sections of the Wales Coast Path within these designations, and on a number of landscape character areas (LCA) within these designations. In addition, the ES notes significant adverse effects on the community of Moelfre and Benllech and on several special qualities of the Isle of Anglesey AONB. The ES also acknowledges significant adverse effects on 7 Seascape Character Areas (SCA) (see comments 98-100 below) which form part of the setting of the two designated landscapes. The ES acknowledges adverse, but non-significant effects on the Clwydian Range and Dee Valley AONB.	This is noted by the Applicant.
ML-NRW(A)-10.94	NRW considers that there has been an under-estimation of some seascape, landscape, and visual effects on designated landscape receptors within the Seascape Landscape and Visual Impact Assessment (SLVIA).	<p>The Applicant notes that NRW has provided more detailed information on the aspects where there is disagreement in its Written Representation (PINS reference REP1-080), in particular within Annex B, (REP1-080-6.1.1 of Document ML-1.25 of the Applicant's Marine Licence Submission 1), to which the Applicant has responded.</p> <p>NRW states in REP1-080-3.1.5 that 'there is broad agreement on most of the findings in the SLVIA' and that NRW 'do not consider that the areas of disagreement affect our overall conclusion and that, solely based on the conclusions in the ES where there is agreement, we consider the proposal would conflict with the purpose of the Isle of Anglesey AONB and Snowdonia NP.'</p>

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ML-NRW(A)-10.95	The ES also notes that proposals are likely to have adverse night-time visual effects on the Isle of Anglesey AONB and Snowdonia NP. Dark skies are a noted feature of the Peace & Tranquillity Special Quality within the Anglesey AONB.	The Applicant notes NRW's agreement with the SLVIA (Document reference 6.2.10) assessment of non-significant, adverse night-time visual effects the Isle of Anglesey AONB and Snowdonia NP. The assessment notes that dark skies are a feature of the Peace & Tranquillity Special Quality within the Isle of Anglesey AONB. However, night-time effects on the Isle of Anglesey AONB are assessed as adverse and non-significant. See also the SLVIA SoCG (Document ML-1.27 of the Applicant's Marine Licence Submission 1).
ML-NRW(A)-10.96	NRW (A) are concerned that adverse incremental, combined cumulative seascape, landscape and visual effects may arise on the Isle of Anglesey AONB and Snowdonia NP because of plans and projects both offshore and onshore.	Refer to the Applicant's response to REP1-080-3.1.14 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. NRW advised in a post-application meeting that whilst it had raised the matter of the potential for future onshore and offshore wind farm development in its Relevant Representation (PINS reference RR-015) it did not consider further cumulative assessment should have been included in SLVIA (see the SLVIA SoCG (Document ML-1.27 of the Applicant's Marine Licence Submission 1)).
ML-NRW(A)-10.97	SCAF: is described in the ES as having an industrialised character, due to existing offshore wind farms, oil & gas platforms, dredging and shipping routes & lack of landscape designation. Sensitivity is described as medium-low, with the proposal reinforcing the industrialised character and effects as non-significant. The seascape area lies within the setting of the Great Orme Heritage Coast, and Anglesey AONB & we consider that part of this area is likely to be of medium sensitivity. We agree, however, that the overall effects are likely to be non-significant.	<p>The Applicant welcomes the agreement on the assessment conclusions. Refer to the Applicant's response to REP1-080-6.1.1 and 6.1.2 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The SLVIA (Document reference 6.2.10) assesses the baseline and sensitivity of SCA F from paragraph 148 and considers the degree to which it forms the setting of the Isle of Anglesey AONB and Great Orme Heritage Coast as well as many other factors that affect its sensitivity to the proposed development.</p> <p>The SLVIA (Document reference 6.2.10) assesses the baseline and sensitivity of SCA F from paragraph 148 and considers the degree to which it forms the setting of the Isle of Anglesey AONB and Great Orme Heritage Coast as well as many other factors that affect its sensitivity to the proposed development. The value of the SCA was increased in the ES from the PEIR stage SLVIA following comments made by stakeholders during the S42 Consultation. In the ES it is assessed as medium-low. The susceptibility to the proposed change is assessed in the ES as low-medium (or medium-low) due to a range of factors and this results in a medium-low sensitivity to the proposed development. Whilst the Isle of</p>



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		Anglesey AONB and the Great Orme Heritage Coast may be visible from parts of the SCA it is considered that even at the closer ranges of this visibility the relationship with the designations is not strong. For example, the coastal features that make these areas distinct such as the islands and the headland of the Great Orme are unlikely to be readily distinguishable against the backdrop of the landscape beyond. The Applicant notes that NRW agrees with the SLVIA assessment of effects on SCA F as being non-significant.
ML-NRW(A)-10.98	SCA 28: is described in the ES as having medium sensitivity. Given it forms part of the setting of Anglesey AONB and Snowdonia NP we consider parts of the area to be of high sensitivity (and not all medium) and agree that there are likely to be significant effects. The visual effects are likely to be far reaching as illustrated by the prominence of the turbines from Viewpoints 66 and 67.	Refer to the Applicant's response to REP1-080-6.1.3 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The SLVIA (Document reference 6.2.10) assesses the baseline and sensitivity of SCA 28 from paragraph 168 and considers the degree to which it forms the setting of the Isle of Anglesey AONB and Snowdonia NP as well as many other factors that affect its sensitivity to the proposed development. The value associated with the SCA is one component of sensitivity to the proposed development. Susceptibility to the proposed development must also be taken into account when assessing sensitivity. The value of the SCA was increased in the ES from the PEIR stage SLVIA following comments made by stakeholders during the S42 Consultation. In the ES it is assessed as Medium increasing to Medium-High closer to the coast. The susceptibility to the proposed change is assessed in the ES as medium due to a range of factors and this results in a sensitivity to the proposed development of 'Medium increasing to Medium-High closer to the coast.' The Applicant notes that NRW agrees with the SLVIA assessment of effects on SCA 28 that there are likely to be significant, adverse effects. The ES assesses that such effects would occur in the eastern part of the SCA in and around the AyM array area (within approximately 10 km radius and southwards towards the Great Orme and Puffin Island.
ML-NRW(A)-10.99	SCA 3-7: We agree that there are likely to be significant effects. The SLVIA considers the significant effects on SCA 5 would be limited to the north coastal part of the SCA5, however we consider significant effects are likely to occur across a substantial part of this SCA, as the majority of the SCA occurs across the north coast.	Refer to the Applicant's response to REP1-080-6.1.4 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The Applicant notes NRW's agreement of the assessed effects on SCA 3 Traeth Lafan, SCA 4 Menai Strait, SCA 5 Penmon, SCA 6 Red Wharf Bay to Moelfre, SCA7 Dulas Bay. The ES defines the geographical extent of SCA 5 (and the coincidental part of LCA) where it is assessed significant

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		effects are likely to occur from paragraphs 493 and 429 of the SLVIA (Document reference 6.2.10). This accords with the SLVIA Methodology (Document reference 6.4.10.1).
ML-NRW(A)-10.100	SCA 2: We agree that there are likely to be significant effects. The SLVIA considers the significant effects to be limited to the Great Orme, however we consider the significant effects are likely to extend over a greater area, given that the SCA forms part of the seascape setting of Anglesey AONB and Snowdonia NP and part of the coastal upland of the national park.	See the Applicant's response to REP1-080-6.1.5 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The SLVIA (Document reference 6.2.10) assesses the effect on SCA 2 - Conwy Bay from paragraph 755 based on professional judgement, in accordance with GLVIA 3 and the SLVIA Methodology set out in Document reference 6.4.10.1. Moderate (Significant), adverse effects are assessed for the areas on the upper and northerly slopes of the Great Orme. Moderate (Non-significant) adverse effects are assessed for the areas across the upland area between Foel Lus and Conwy Mountain, the lowlying coastal areas and rising land around Penmaenmawr and in the seascape to the north-west largely as a result of the existing coastal development influence. This coastal development influence includes overlooking of settlement and the A55 as well as other infrastructure at relatively close range from most locations along the elevated coastal edge within Snowdonia NP.
ML-NRW(A)-10.101	SCA C & D: We agree that effects on these areas are likely to be non-significant, although the effect would be nevertheless adverse and intensify the effect of wind farms through the increased scale and extent of the proposal and by filling a gap between existing arrays in some views from the coast.	This is noted by the Applicant.
ML-NRW(A)-10.102	LCA 6: We agree that effects on this area are likely to be non-significant.	This is noted by the Applicant.
ML-NRW(A)-10.103	LCA 8, 9, 10, 11: We agree that there are likely to be significant effects. Within LCAs 8, 9 & 10 significant effects are described as limited in extent to the coastline and immediate coastal hinterland and non-significant elsewhere. We consider that adverse effects are likely to extend further across these LCAs, as indicated by the Zone of Theoretical Visibility (ZTV). The coastline and immediate hinterland are of high sensitivity in our view, rather than medium-high and these areas are also the most sensitive parts of the LCAs.	<p>Following a review of the statutory consultation responses on the PEIR at Section 42, further assessment and detail regarding the inland extent of significant effects was added to these assessments in the final ES (Document reference 6.2.10).</p> <p>Refer to the Applicant's response to REP1-080-6.1.9 and 6.1.10 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The Applicant notes NRW's agreement that there are likely to be significant adverse effects within LCA 8 Dulas Bay Hinterland, LCA 9 Red Wharf Bay,</p>

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		<p>LCA 10 Penmon &amp; Puffin Island, LCA 11 Eastern Menai Strait. The ES does not say the effects on these LCAs are limited in extent although in some places it is noted that visibility is limited. The ES defines the geographical extent of the LCAs where it is assessed significant effects are likely to occur from paragraphs 411 (LCA 8), 427 (LCA 9) and 446 (LCA 10) of the SLVIA (6.2.10). This accords with the SLVIA Methodology (Document reference 6.4.10.1). NRW made a similar observation in its response to the s42 Consultation and the SLVIA authors reconsidered the assessments of sensitivity and magnitude of change within these LCAs and the geographical extent of the significant effects for the ES (Document reference 6.2.10). The assessment of effects on LCA 8 is set out from paragraph 398. The assessment of effects on LCA 9 is set out from paragraph 413. The assessment of effects on LCA 10 is set out from paragraph 429. Landscape character effects are not derived purely as a result of visibility of something that is apparent in views in a single direction from the LCA but are also, in the main, comprised of the pattern of the elements within them, which makes them distinct and recognisable (GLVIA 3, p157). Whilst it is agreed that existing housing, caravan parks, parking areas, quarries and telecoms masts are of a different scale and form to the proposed development they do also indicate a human influence over this landscape. These elements also often have a more definitive influence on the landscape character than the proposed development which would occur well beyond the LCA boundary, because they are in the LCAs and therefore form a key component of its consistent pattern of elements.</p>
ML-NRW(A)-10.104	<p>Viewpoints (VP) 1-3 &amp; 41: The SLVIA describes the effects as non-significant. We are concerned that the effects have been under-estimated and that effects may be Significant, not non-significant as described in the ES for the following reasons. Susceptibility is described as medium-high due to the distance from the receptor, however distance is an aspect of magnitude of change, as described in Guidance for Landscape and Visual Impact Assessment 3rd Edition (2013) (GLVIA3), not of susceptibility or sensitivity of the receptor. Although large-scale sea views, the scale and nature of the development makes it very noticeable and will focus attention on it. Sea views are the key focus in the predominantly coastal AONB and are currently empty and untrammelled by development,</p>	<p>Refer to the Applicant's response to REP1-080-6.1.11, 6.1.12 and 6.1.13 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The assessments of Viewpoints 1-3 are set out in Table 6 of the SLVIA (Document reference 6.2.10). The SLVIA assesses the effects on these viewpoints as Moderate-Minor (Non-significant) for the reasons set out therein. NRW made a similar observation in its response to the S42 Consultation and the SLVIA authors reconsidered the assessments of sensitivity and magnitude of change for these viewpoints for the ES (Document reference 6.2.10), adding further relevant information. It is</p>



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	apart from the occasional transient ship. The existing wind farms to the east are difficult to discern from these viewpoints, even in fine weather.	agreed by the Applicant that effects at Viewpoint 41 on the Wales Coast Path are likely to be significant adverse.
ML-NRW(A)-10.105	VPs 4-8 & 14, 16, & 28: We agree that the effects at these viewpoints are likely to be Significant.	This is noted by the Applicant.
ML-NRW(A)-10.106	VPs 42-43: We agree that the effects at these viewpoints are likely to be non-significant, however the effects are likely to be adverse.	This is noted by the Applicant.
ML-NRW(A)-10.107	The village of Moelfre lies within the AONB and we agree that there would be some significant adverse effects on this community.	This is noted by the Applicant.
ML-NRW(A)-10.108	The village of Benllech lies within the AONB and we agree that there would be some significant adverse effects on this community.	This is noted by the Applicant.
ML-NRW(A)-10.109	We agree that there would be some adverse effects on the villages of Amlwch, Llandona and Beaumaris but these are likely to be non-significant.	This is noted by the Applicant.
ML-NRW(A)-10.110	Wales Coast Path (WCP) Sections A, B & G & NCR 5: We agree that effects along these sections are likely to be non-significant.	This is noted by the Applicant.
ML-NRW(A)-10.111	WCP Sections C, D, E & F: We agree that effects along these sections are likely to be Significant. Reduced susceptibility is described due to the transient nature of the viewers; however, these are slow-moving receptors and likely to stop and rest to appreciate scenic views. The scenic views of the sea and coast are likely to be the focus of walkers on a national coastal trail. We consider these receptors within an AONB to be of high susceptibility and sensitivity.	Refer to the Applicant's response to REP1-080-6.1.21 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The Applicant notes NRW's agreement that there are likely to be significant adverse effects on views from WCP Sections C, D, E & F. NRW made a similar observation in its response to the S42 Consultation and the SLVIA authors reconsidered the assessments of susceptibility and sensitivity in the ES from paragraph 291 onwards (Document reference 6.2.10). The level of susceptibility takes into account the slow-moving nature of the receptors and their focus on appreciation of the environment with the

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		susceptibility in two out of three instances having been assessed in the ES as high. Sensitivity is assessed in all instances as high.
ML-NRW(A)-10.112	LCA 01 Northern Uplands: The SLVIA describes the effects as moderate but non-significant. We are concerned that the effects have been underestimated and that the effects may be significant. Viewpoints 12, 36, 38 and 40 are within this LCA and effects at all these viewpoints would be significant in our opinion. The scale of the turbines in views and the likely extent of effects over the upland area, as indicated by the ZTV, suggest likely significant adverse effects over a large part of this LCA.	Refer to the Applicant's response to REP1-080-6.1.23 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The SLVIA (Document reference 6.2.10) assesses the effects on LCA 01 Northern Uplands from paragraph 687. The effects are assessed as Moderate (Non-significant) based on professional judgement (as set out below), in accordance with GLVIA 3 and the SLVIA Methodology set out in APP-112. NRW (and LUC) made a similar observation in its response to the S42 Consultation and the SLVIA authors reconsidered the assessments of sensitivity and magnitude of change in the ES (Document reference 6.2.10) providing further assessment and information as necessary. The area shown to have any theoretical AyM WTG visibility equates to 42% of the LCA at ranges of 16.5 to 33 km. The assessments for Viewpoints 12, 36 and 40 have assessed the magnitude of change in views as Medium or Medium-low. The lower levels of development characteristics and higher relative wildness/ tranquillity at found at Viewpoint 38 are considerations. The greater distance of 28.4 km is however, also a factor. The northerly areas of the LCA are those that are at closest proximity to the AyM array area and the higher levels of magnitude of change in views as a result. Viewpoints 12, 36, 39, 40 and 60 demonstrate this. These areas generally coincide with areas where there is the strongest existing human influence on character through visibility of existing development which is detrimental to the qualities of tranquillity, remoteness and wildness. The further impact on the characteristics of these areas through the introduction of AyM as part of their setting would not result in a marked change to their character. Landscape character effects are not derived purely as a result of visibility of something that is apparent in views in a single direction from the LCA but are also, in the main, comprised of the pattern of the elements within them, which makes them distinct and recognisable (GLVIA 3, p157). Views across the remotest parts of Snowdonia NP would not be affected by the proposed development as they are found to the north of LCA 01. Whilst it is agreed that existing coastal development is of a different scale and form to the proposed

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		development it does indicate a human influence over the wider landscape of the intervening coastline. In addition, the existing offshore wind farm (OWF) are visible from much of the LCA that would also gain visibility of AyM so that changes in the contextual character in this part of the contextual views are incremental.
ML-NRW(A)-10.113	LCA 02: We agree that effects on this area are likely to be non-significant.	This is noted by the Applicant.
ML-NRW(A)-10.114	VPs 10, 12, 38 & 40: We agree that effects at these viewpoints are likely to be significant.	This is noted by the Applicant. Refer to the Applicant's response to REP1-080-6.1.9 and 6.1.10 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1.
ML-NRW(A)-10.115	VP 34 Snowdon Summit: We agree that effects at this viewpoint are likely to be non-significant. However, we consider that sensitivity to be very high at this important viewpoint, not medium-high as described in the ES & that visibility extends over a wider area than the summit, including Crib y Ddysgul.	This is noted by the Applicant. Refer to the Applicant's response to REP1-080-6.1.26 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The Applicant notes NRW's agreement that there is likely to be nonsignificant adverse effects on Viewpoint 34 Snowdon Summit. The SLVIA notes in the assessment included in Table 9 (Document reference 6.2.10) that there would be visibility from other approaches including the summit of Garnedd Ugain and the ridge to the east of Garnedd Ugain where there is a section of mountaineering route. At Crib Goch itself there is shown to be parts of up to 7 WTG visible.
ML-NRW(A)-10.116	VP36 Tal y Fan: We consider that the effects at this viewpoint have been underestimated and are significant. Sensitivity at this summit is likely to be high, with viewers focussed on the landscape and sea views. The wind farm would be prominent, and the scale would interfere with the appreciation of the views of the Great Orme landform and the relationship between the seas, Conwy Bay & headland.	Refer to the Applicant's response to REP1-080-6.1.27 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The effects are assessed as Moderate (Non-significant) based on professional judgement, in accordance with GLVIA 3 and the SLVIA Methodology set out in Document 6.4.10.1. NRW (and LUC) made a similar observation in its response to the S42 Consultation and the SLVIA authors reconsidered the assessments of sensitivity and magnitude of change in the ES (Document reference 6.2.10) providing further assessment and information as necessary to support this finding. On the SLVIA author's visit to the viewpoint the operational OWFs as well as other development features were more apparent than the photography suggests. The ES does not state that the existing baseline is considered already

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		significantly modified. The Applicant considers that the view is modified to some degree by existing human influences.
ML-NRW(A)-10.117	WCP Section 1: We agree that effects along parts of this section are likely to be Significant.	This is noted by the Applicant.
ML-NRW(A)-10.118	Landscape Character Type (LCT) 2 & 5: We agree that effects at these viewpoints are likely to be non-significant.	This is noted by the Applicant.
ML-NRW(A)-10.119	VP24 Graig Fawr & VP26 & 54: We agree that effects at these viewpoints are likely to be non-significant. However, we consider that there would be adverse effects on views, through an intensification of wind farm development in the views.	This is noted by the Applicant.
ML-NRW(A)-10.120	Offa's Dyke National Trail Long Distance Path: We agree that effects along the path within the AONB are likely to be non-significant.	This is noted by the Applicant.
ML-NRW(A)-10.121	The proposal would have likely adverse night-time visual effects on the Isle of Anglesey AONB, including from viewpoints at Moelfre (4), Point Lynas (2), Red Wharf Bay (5), Benllech Bay (16), Penmon Point (7), Trwyn y Penrhyn (28) and Beaumaris (8), and from beaches at Traeth Lligwy, Traeth Bychan, Penrhyn. Dark skies are a noted feature of the Peace & Tranquillity Special Quality within the AONB.	Refer to the Applicant's response to REP1-080-6.1.33 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. Night time effects are included in Section 10.12 of the SLVIA (Document reference 6.2.10). The Applicant notes that NRW agrees with the ES that the proposals are likely to have adverse, though non-significant night-time visual effects on the Isle of Anglesey AONB, including from viewpoints at Moelfre (4), Point Lynas (2), Red Wharf Bay (5), Benllech Bay (16), Penmon Point (7), Trwyn y Penrhyn (28) and Beaumaris (8), and from beaches at Traeth Lligwy, Traeth Bychan, Penrhyn. Dark skies are noted in the SLVIA as being a feature of the Peace & Tranquillity Special Quality within the AONB. Non-significant, adverse visual night time effects have been assessed for the Isle of Anglesey. Lighting mitigation measures have also been included following Section 42 consultation. Further measures that could further reduce the adverse night-time effects in the Isle of Anglesey AONB are set out in Table 16 of the SLVIA (Document reference 6.2.10).

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ML-NRW(A)-10.122	The proposal would have likely adverse night-time visual effects on some views within the National Park, through intensification of light pollution e.g., from viewpoint 60, where red lights would be visible in an otherwise dark sea beyond the Great Orme. There would be no adverse effect on the Core Areas of the Dark Sky Reserve, however.	Refer to the Applicant's response to REP1-080-6.1.34 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. The Applicant notes that NRW agrees with the ES that the proposals are likely to have adverse, though non-significant night-time visual effects on some views within the Snowdonia NP and that there would be no adverse effect on the core areas of the Dark Sky Reserve.
ML-NRW(A)-10.123	NRW (A) are concerned that adverse incremental, combined cumulative seascape, landscape and visual effects may arise on the Isle of Anglesey AONB and Snowdonia NP because of plans and projects both offshore and onshore.	Refer to the Applicant's response to REP1-080-3.1.14 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1.
ML-NRW(A)-10.124	The proposal would substantially increase the baseline of offshore wind farms affecting designated landscapes along the North Wales coast, such that significant adverse effects would be widespread across this area.	Refer to the Applicant's response to REP1-080-3.1.15 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. OWFs are an acknowledged feature of the seascape character off the North Wales coast. This has been the case since North Hoyle OWF became operational in 2003 i.e. for almost 20 years. SLVIA Figure 25 (Document reference 6.6.10.4.38) illustrates that there are few areas within SNP and the Clwydian Range and Dee Valley AONB where AyM would be theoretically visible where existing OWFs are not already theoretically visible. This suggests that the change would be incremental rather than a complete change, although it is acknowledged that the scale of the proposed WTGs proposals is larger than those of the existing OWFs and the overall spread of OWFs would be increased. The visibility of the operational OWFs from the Isle of Anglesey is less evident and it is therefore acknowledged that AyM would result in OWF visibility becoming more widespread within the study area, largely through increased visibility within the coastal areas of the AONB.
ML-NRW(A)-10.125	Further offshore leasing areas are planned (Round 4) to the north of the proposal which could add to adverse effects.	Refer to the Applicant's response to REP1-080-3.1.16 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. This is noted by the Applicant. Round 4 Bidding Areas and the subsequent projects that came out of this process are considered from paragraph 1479 of the SLVIA (Document reference 6.2.10) and shown on SLVIA Figure 1 (Document reference 6.6.10.4.1).



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ML-NRW(A)-10.126	The Morlais tidal energy scheme is approved, and it has been acknowledged that this would have a significant adverse effect on another part of the Isle of Anglesey AONB.	Refer to the Applicant's response to REP1-080-3.1.17 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. This is noted by the Applicant. Such effects considered from paragraph 1502 of the SLVIA (Document reference 6.2.10).
ML-NRW(A)-10.127	As well as two pre-assessed areas for wind energy developments (onshore) are identified in Future Wales: 2040 (Policy 17: Renewable and Low carbon Energy and Associated Infrastructure: Pre-assessed Areas for Wind Energy) to the east of Snowdonia NP, there is a further area (3) to the south east of the NP. Developments in area 3 have the potential for significant adverse effects on another part of the NP.	Refer to the Applicant's response to REP1-080-3.1.18 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. Such effects are considered from paragraph 1495 of the SLVIA (Document reference 6.2.10). Pre-assessed Areas for Wind Energy - Area 3 lies beyond the boundary of the SLVIA study area.
ML-NRW(A)-10.128	The increasing scale of both offshore and onshore wind energy developments, as illustrated by this proposal, means that adverse visual effects are increasingly likely when they are located in areas that were planned when turbine heights were considerably smaller.	Refer to the Applicant's response to REP1-080-3.1.19 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. Significant effects as a result of onshore and offshore wind farms are an inevitable consequence of the need for an increase in renewable energy production to meet the Welsh Government's 2050 net zero target.
ML-NRW(A)-10.129	NRW (A) are concerned that the proposal will result in unacceptable adverse effects on the Isle of Anglesey AONB and Snowdonia NP designated landscapes through conflict with the purpose of conservation and enhancement of natural beauty, which is enshrined in the purposes of these designated landscapes. The proposal is contrary to Planning Policy Wales (Edition 11, paragraphs 6.3.5 – 6.3.9) and the vision and strategy set out in the Isle of Anglesey AONB Management Plan 2015-2020 and Cynllun Eryri Snowdonia National Park Partnership Plan 2020.	Refer to the Applicant's response to REP1-080-6.1.35 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. For the reasons outlined in that response, the Applicant considers that AyM does not affect the overall integrity of the AONB or NP or their inherent natural beauty. Therefore AyM is consistent with the purposes of the Isle of Anglesey AONB and the SNP designations, and compliant with paragraphs 6.3.5 to 6.3.9 of the Wales PPW (Edition 11).
ML-NRW(A)-10.130	NRW (A) considers that the number of likely significant adverse effects and the widespread nature of these effects, extending along the coast from Bull Bay in northeast Anglesey to Conway Mountain in Snowdonia National Park, inland to the norther uplands of the Carneddau and within the seascape setting of two designated landscapes would result in an unacceptable level of harm to these nationally designated landscapes. In addition, NRW considers that there would be non-significant, but adverse effects on the Clwydian Range and Dee Valley AONB as well as other non-significant but adverse effects on the Isle of Anglesey AONB and Snowdonia NP.	Refer to the Applicant's response to REP1-080-3.1.36 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1.  The unacceptability, or otherwise, of AyM OWF is a matter for the planning balance through the DCO decision making process. Adverse effects on seascape or visual amenity must be considered alongside the benefits of the proposed scheme (EN-3 paragraph 2.6.208) such as the urgent need for new renewable energy and the benefits of climate change mitigation. Further information and assessment of this matter is included in the Planning Statement (PINS reference APP-298). The

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		Applicant notes that in NRW's more recent Written Representation REP1-080 the term 'unacceptable' is not used but instead substituted with 'substantial'.
ML-NRW(A)-10.131	Overall, adverse effects would be experienced along a substantive part of the North Wales coastline from Anglesey in the west to the Clwydian Range and Dee Valley AONB in the east and including the Great Orme Heritage Coast.	This is noted by the Applicant. However, not all of these effects have been assessed as being significant in the SLVIA (Document reference 6.2.10) or by NRW in its consultation response.  Refer to the Applicant's response to REP1-080-3.1.37 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1.
ML-NRW(A)-10.132	Much of the eastern coastline of Anglesey and northern uplands of Snowdonia include areas assessed by LANDMAP to be of 'Outstanding' and 'High' value for their visual and sensory aspects. The entire area is popular with visitors for coastal recreation, both water and land based. The area includes the Isle of Anglesey Coastal Path (Wales Coast Path), the North Wales Path, other public rights of way, open access land, beaches, headlands, islands, and coastal upland. The juxtaposition of the coastal and mountain scenery with open sea views combine to make the area of exceptional scenic quality. The seascape setting forms a crucial part of how the public experience the character and special qualities of the area.	Refer to the Applicant's response to REP1-080-3.1.38 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. SLVIA Figure 9 (Document reference 6.6.10.4.12) illustrates the LANDMAP assessment areas that are 'Outstanding' and 'High' value for their visual and sensory aspects. In addition to the seascape setting the eastern coastline of Anglesey and the northern uplands of Snowdonia have many other attributes that are important to how the public experience the character and special qualities of the area. There are numerous Special Qualities that would not be affected by views of AyM.
ML-NRW(A)-10.133	The Special Qualities of the Isle of Anglesey AONB considered in the ES are: Expansive views, Peace & Tranquillity, Islands around Anglesey. We agree that there would be significant adverse effects on these Special Qualities.	This is noted by the Applicant.
ML-NRW(A)-10.134	The Special Qualities of Snowdonia National Park considered in the ES are Diverse Landscapes and Tranquillity & Solitude – Peaceful Areas. We agree that the effects on these Special Qualities are non-significant. Nevertheless, the effects are adverse and would detract from these qualities and on scenic views in the northern part of the park. Scenic views are a characteristic of Snowdonia's landscapes, as noted in the SNP Partnership Plan 2020.	This is noted by the Applicant.
ML-NRW(A)-10.135	The Special Qualities of the Clwydian Range & Dee Valley AONB considered in the ES are: Landscape Character and Quality – Tranquillity and Landscape Character and Quality – Remoteness & Wildness. We agree that the likely effects on these special qualities would be non-significant. However, we consider that there would be adverse effects, through an intensification of wind	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	farm development within views from the AONB and erosion of the special qualities.	
ML-NRW(A)-10.136	The ES considers that the acknowledged harmful effects would not affect the overall integrity of the Isle of Anglesey AONB or Snowdonia National Park or their inherent natural beauty. NRW (A) does not agree and considers that the degree of harm to nationally designated landscapes is substantial and unacceptable and is contrary to the purpose of conservation and enhancement of natural beauty.	Refer to the Applicant's response to REP1-080-3.1.36 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. For the reasons outlined in that response, it is accepted by the Applicant that there would be some significant adverse impact on the views towards the seascape from the SNP and that development of AyM would therefore not be consistent with objectives that seek to enhance the natural beauty or quality of the National Park. However, it is the case that almost no large-scale development would be able to comply with the principle of enhancement and therefore it must be anticipated that any major development would give rise to some degree of friction with such an aim.
ML-NRW(A)-10.137	Whilst we acknowledge the embedded mitigation of the reduced western extent of the array, and that a reduction in the number of WTGs has been applied, we do not consider it sufficient to reduce the likely significant effects at the numerous viewpoints within Isle of Anglesey AONB and Snowdonia NP. The visual impacts will lead to significant adverse effects on landscape character within these Nationally Designated Landscapes and within their seascape settings. The ES acknowledges that the likely significant effects on these landscapes has not diminished because of the reduction in the extent and number of turbines.	This is noted by the Applicant. As per the response in relation to LCA 01 (10.112) in SNP the Applicant does not consider there to be a significant effect on landscape character in SNP.
ML-NRW(A)-10.138	The Welsh National Marine Plan SOC_6: Designated Landscapes and SOC_07: Seascapes notes that significant adverse impacts should be: (a) avoided; (b) minimised, and: (c) where they cannot be minimised, mitigated.	Refer to the Applicant's response to REP1-080-3.1.21 and 3.1.22 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1. For the reasons outlined in that response, reductions in the array area and/or in the scale/number of turbines would not be considered an 'alternative layout within the identified site' but would result in a new scheme within a different defined site. Furthermore, the Applicant considers AyM i to be consistent with the aims of the Welsh National Marine Plan and Policy SOC_6: Designated Landscapes.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NRW(A)-10.139	In terms of mitigation, a further substantial reduction in array area and/or scale or number of turbines would be required to minimise adverse effects on the Isle of Anglesey AONB and Snowdonia NP. Further consideration of NRW's evidence base "Seascape & visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance" and references therein, would assist in informing an appropriate reduction.	Refer to the Applicant's response to REP1-080-3.1.2 as set out in Document ML-1.25 of the Applicant's Marine Licence Submission 1 and to the Document ML-1.10 of the Applicant's Marine Licence Submission 1.
ML-NRW(A)-10.140	NRW (A) advises that opportunities for enhancement of the designated landscapes should be considered in accordance with Welsh National Marine Plan Policy SOC_06: Designated Landscapes. NRW (A) considers enhancements represent compensation and/or offsetting and not mitigation for adverse effects, as any enhancements would not be directly related to the impacts.	This is noted by the Applicant. The Applicant is engaging with NRW(A) as well as other key stakeholders to discuss opportunities for enhancement of the designated landscapes as compensation/ or offsetting with NRW.
ML-NRW(A)-11.141	NRW (A) notes that no assessment of any air quality impacts arising from marine vessel emissions has been undertaken. It is unclear whether marine vessels will operate within proximity to sensitive coastal onshore habitat (that may support features of SSSIs/SACs/Ramsar). We advise that the Applicant provides additional information to demonstrate that there will not be significant impacts from marine vessel emissions.	A Clarification Note has been submitted to NRW on 14 October 2022, however, NRW has not been able to review it as of yet. With reference to the onshore SoCG (Document ML-1.29 of the Applicant's Marine Licence Submission 1), NRW is now in agreement that emissions from marine vessels are not likely to have significant effects on onshore coastal habitats.
ML-NRW(A)-12.142	Having reviewed the submitted documentation, we are of the view that flood risk issues for the project are all covered by the DCO process and all associated with the onshore works.	This is noted and welcomed by the Applicant.
ML-NRW(A)-13.143	There are a number of inconsistencies between the Schedule of Mitigation (8.11) and the Marine Licence Principles document (5.4.1) that require clarification. For example (but not limited to), the Schedule of Mitigation refers to a Cable Specification and Installation Plan to be secured as part of the ML, but which is not recognised in the Marine Licence Principles document as a specific document (albeit cable management plans are noted). This potentially results in confusion as to the exact measures that are to be secured as part of the project mitigation.	The Applicant has submitted revised versions of the Schedule of Mitigation (now incorporating the Schedule of Monitoring) (Document reference ML-1.16 of the Applicant's Marine Licence Submission 1) and Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1) via the DCO examination. The most recent versions are also included in this Marine Licence submission.
ML-NRW(A)-14.0	NRW (A) provided a list of references in support of the consultation response which is not repeated here.	This is noted by the Applicant.

2.3 The Ministry of Defence (MoD)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-DIO-1	<p>Thank you for consulting the Ministry of Defence (MOD) on Part 4 -Marine Licence for Awel y Môr offshore wind farm. The Marine Licence application is required to construct and operate the proposed Awel y Môr Offshore Wind Farm located 10.5 km off the north east coast of Wales. The Windfarm comprises of up to 50 wind turbine generators and associated infrastructure.</p> <p>After reviewing the documents provided above, I can confirm that the MOD has no safeguarding objections to the Marine Licence for the locations specified, licence start date October 2023 - expiry date December 2025.</p>	<p>This is noted and welcomed by the Applicant.</p>



## 2.4 Isle of Anglesey County Council (IoACC)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-IoACC-0	Further to your invitation to comment on the Marine Licence Application submitted by Awel y Mor Offshore Wind Farm Limited to undertake the above stated works, the Isle of Anglesey County Council (hereafter referred to as 'IACC') has now had the opportunity to review the Application and has the following comments.	This is noted by the Applicant.
ML-IoACC-1.1	"Interface between Marine License and Development Consent Order  The IACC confirms that it has registered as an Interested Party for the application for Development Consent Order (DCO) that has been made under section 37 of the Planning Act 2008 (hereafter referred to as 'the Order') for the Awel y Mor Offshore Wind Farm Project to the Planning Inspectorate and will participate fully within that examination process."	
ML-IoACC-1.2	From our experience and involvement in other NSIP proposals, the interface between the Welsh Ministers and NRW in terms of, determining responsibilities and accountabilities during the construction/operational period and decommissioning for the DCO and Marine Licence and effective collaboration arrangements will be of critical importance from a regulatory perspective.	
ML-IoACC-1.3	A number of proposed works have both terrestrial and marine elements. Therefore having consistency and clarity across the marine elements which forms part of any DCO and Marine Licence consents will be critical to ensure effective discharge, monitoring, and enforcement arrangements.	
ML-IoACC-2.1.1	"Effects on shipping, navigational and recreational interests  The IACC has an interest in maritime harbours and navigation around Anglesey from three standpoints:  The Council is a statutory harbour authority for the ports of Amlwch, Beaumaris and Menai Bridge and also manages approximately 450 moorings alongside the south east and eastern coastline."	This is noted by the Applicant.
ML-IoACC-2.1.2	In terms of its responsibilities regarding the economic wellbeing of the Isle of Anglesey, the Council has an indirect interest in the continued success of the Port of Holyhead (owned and operated by Stena Line Ports Ltd); and	The Applicant welcomes ongoing engagement with relevant organisations, on Anglesey and elsewhere, regarding port opportunities for both construction and operation, and can confirm that since the

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		DCO application was submitted, and on an ongoing basis, discussions are continuing, the details of which are commercial in nature.
ML-IoACC-2.1.3	In relation to its interests in promoting local tourism, the Council has an interest in recreational navigation using inshore waters and harbours of the Isle of Anglesey.	This is noted by the Applicant.
ML-IoACC-2.2	Having reviewed Chapter 9: Shipping and Navigation of the ES, the Council notes that RWE has engaged at pre-application stage with a range of National and Local Stakeholders with an interest in Shipping and Navigation. The Council wishes for this engagement to continue to ensure that any potential impacts identified are appropriately reduced and/or managed.	The Applicant can confirm that engagement with stakeholders regarding Shipping and Navigation is continuing and the status of any agreements or disagreements with these stakeholders is to be reported in Statements of Common Ground (SoCG) throughout the DCO examination. The SoCGs that are specific to Shipping and Navigation agreements are the SoCG with the MCA (Document ML-1.33 of the Applicant's Marine Licence Submission 1), Trinity House (Document ML-1.31 of the Applicant's Marine Licence Submission 1) and Chamber of Shipping (SoCG in progress).
ML-IoACC-2.3	IACC considered that the main effect of the construction phase will be an increase of commercial traffic, made up mainly of work boats and crew transfer vessels that support the offshore installation vessels with only a slight increase in traffic when the site is operational.	
ML-IoACC-2.4	IACC considers it is imperative that navigational safety in this busy section of sea is to be maintained during all phases of the project. The Council is satisfied that the main points of relevance regarding commercial shipping and recreational navigation that will have a bearing on the eastern approaches of the Menai Straits is satisfactorily covered within the ES, chapter 9 in particular.	This is noted and welcomed by the Applicant.
ML-IoACC-2.5	IACC notes the detail of the outline mitigation measures confirmed in the Navigational Risk Assessment (Volume 4, Annex 9) and summarised in paragraph 9.9 of Chapter 9. The IACC is satisfied that the detail of the mitigation measures which would be employed would form consultation with the Maritime and Coastguard Agency (MCA) navigation safety branch and other relevant statutory stakeholders, dependent on the final design. Although full consideration needs to be given at the final design to all users to ensure minimal impact, IACC are satisfied with the temporary deviation measures being proposed within the ES.	This is noted and welcomed by the Applicant.
ML-IoACC-2.6	IACC strongly encourages this engagement to continue throughout all phases of the development in order to ensure that all key stakeholders are kept up-to-date about the project and that they are able to influence and advise as appropriate to ensure that their interests are protected and maintained. This	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	engagement needs to include consideration for all marine craft including Ferry vessels and cruise ships, workboats and fishing vessels and recreational craft.	
ML-IoACC-2.7	With nearly 500,000 vehicles and 2 million foot passenger going through the Port each year, Holyhead Port is the second busiest ferry port in the UK. It handles over 70% of all road traffic moving between Ireland and Wales and is supported by the E22 arterial route between mainland Europe and Dublin. Stenaline Ports Ltd own and operate the port of Holyhead. Holyhead port is a non tidally restricted and is operational 24hrs / 365 days per year.	This is noted by the Applicant.
ML-IoACC-2.8	The port has a wealth of experience in specialist handling of large project related cargoes. It has a deep-water berth as well as smaller berths and standage areas. The Port's experience includes serving windfarm vessels, jack-up rigs and support vessels, including handling abnormal Indivisible Loads. Recently, Stena Line Ports Ltd constructed a Manufacturing and Assembly Hall for the green energy supplier, Minesto Ltd, to enable construction of their offshore power generation equipment.	The Applicant can confirm that any upgrades needed to port infrastructure would be delivered through separate consents and led by that respective port (and not the offshore wind farm developer) as is standard practice within this sector.  The Applicant welcomes ongoing engagement with relevant organisations, on Anglesey and elsewhere, regarding port opportunities for both construction and operation, and can confirm that since the DCO application was submitted, and on an ongoing basis, discussions are continuing. The details of which are commercial in nature.
ML-IoACC-2.9	Stena Line Ports Ltd have recently applied for a Harbour Revision Order (HRO) for the expansion of the Port. The expansion principally comprises of the reclamation of land to provide new berths for vessels and associated landside areas for Port related uses. Two areas of land would be reclaimed; the Salt Island Expansion to serve as a new multi-purpose area for freight traffic, heavy and abnormal loads and cruise ships; and the Pelham Patch	
ML-IoACC-2.10	Development to serve as a smaller new multi-purpose berth. The additional facility will guarantee a further 23 acres of available space, including a 370m long deep-water quay capable of accommodating cruise ships and other large vessels. With the current timeline, assuming funding was available, the port expansion project would be completed by June 2023.	
ML-IoACC-2.11	The IACC through its direct engagement with the applicant is seeking a commitment to maximise the use of Holyhead Port during construction, operation and maintenance phases of the development in order to maximise the social-economic benefits of the project to Anglesey.	

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-IoACC-3.1	"Seascape, Landscape and Visual Impact Assessment The IACC have assessed the Environmental Statement Report Volume 2, Landscape and Visual Impact Assessment which presents the Landscape and Visual Impact Assessment (LVIA) for the onshore elements of the proposed development."	The Applicant assumes that the IoACC is referring to the seascape, landscape and visual impact assessment (SLVIA) and not the onshore LVIA as the onshore works will not be visible from the Isle of Anglesey.
ML-IoACC-3.2	It is considered that the development will have a significant adverse impacts on views of the seascape from the Ynys Môn Area of Outstanding Natural Beauty (AONB) and a harmful effect on a number of AONB special qualities. It is not considered that the development would be consistent with the conservation and enhancement of natural beauty. Adverse effects on the designated landscape and seascape as a setting and feature of the Ynys Môn AONB, relate to the likely visibility of the proposed Offshore Wind Farm (OWF) alone and cumulatively with other OWFs.	The SLVIA Chapter (Document reference 6.2.10) considers 'that there would be some perceived diminishment of (harmful effects on) three of the special qualities and the natural beauty of the AONB associated with these'. It also assesses significant adverse effects on parts of seascape character areas around the Isle of Anglesey AONB.
ML-IoACC-3.3	The introduction following pre-application consultation of design mitigation to reduce the extent of the horizontal and vertical field of view and number of turbines has reduced the area and number of receptors from which significant adverse effects would be experienced; however, significant effects are predicted for a substantial portion of the east coast, recreational routes within such as the Wales Coast Path and properties within coastal communities.	<p>It is noted that IACC agrees that the area and number of receptors where significant effects may be experienced is reduced as a result of this mitigation.</p> <p>Following comments received during the DCO Section 42 consultation, the proposed development was reviewed and revised through a 11% reduction in the array area (26% reduction from scoping stage offshore site area) and the maximum number of turbines proposed (91 at PEIR reduced to 50). The west to east extent of the Agreement for Lease/ scoping array boundary has reduced from 25.8 km to 16.4 km (a reduction of 36% from scoping).</p> <p>As a result, the distance from the Isle of Anglesey coast and AONB to the west was increased. At Viewpoint 2: Point Lynas on the north-east coast of Anglesey the Agreement for Lease/ scoping boundary was 20.2 km distant. The array area assessed in the ES has moved 8.5 km further away at 28.7 km. Increased distance reduces the scale of wind turbines in views from the Isle of Anglesey AONB with the most marked difference occurring in the north.</p> <p>The White Report "Seascape &amp; visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance" has been considered by the Applicant alongside other technical and environmental factors (See also Volume 1, Chapter 4 Site Selection and Alternatives and the Applicant's</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		<p>detailed response in relation to the White Report (Document ML-1.10 of the Applicant's Marine Licence Submission 1)).</p> <p>In particular, the embedded mitigation removes the array area from the area shown in the Guidance as Zone No 3: North Wales and North Anglesey Inshore, which is identified as having a high sensitivity. The array area is now proposed entirely within the zones, which are defined in the NRW evidence base report as being of medium and medium/low sensitivity. The Applicant has provided further information in relation to the White Consultants Report in Document ML-1.10 of the Applicant's Marine Licence Submission 1.</p>
ML-IoACC-3.4	The situation results in the requirement for consideration of compensation measures, including enhancement of features to balance the effects of adverse impacts. These should be focused upon the north-east part of the Island, especially the coast, where the significant effects will be concentrated.	The Applicant is engaging with relevant interested parties, including North Wales LPAs, to understand the basis for and structure of a possible landscape enhancement scheme.
ML-IoACC-3.5	IACC has a vision to obtain Dark Sky Community Status via the International Dark-Sky Association (IDA). In view of achieving and protecting such potential future status, it is important that any lighting associated with the project be kept to the minimal level required to maintain navigational safety within the zone.	Night time effects are assessed in Section 10.12 of the SLVIA (Document reference 6.2.10) starting at paragraph 420. Lighting mitigation measures have been included in the proposals following the statutory consultation. The draft DCO contains a Requirement to operate aviation lights at the lowest possible intensity (Requirement 3(2)).
ML-IoACC-3.6	It is noted that a specific condition is imposed on the draft Order that requires the approval an Environmental Light Management Plan prior to the commencement of the offshore Works. Given that navigational safety and lighting is also matter for the marine licence the Council requests that consideration is given to adopting a single Environmental Light Management Plan under both regimes to ensure consistency.	The Applicant has proposed the inclusion of a Lighting and Marking Plan to be included in any Marine Licence granted, which would include details ensuring that lighting is in accordance with the relevant industry guidance and as advised by stakeholders including the MCA and CAA (see Condition 46 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).
ML-IoACC-4.0	We thank you for consulting with the Council. Please do not hesitate to contact us should you wish to discuss our comments further or wish any clarification on any of the comments made.	This is noted by the Applicant.



## 2.5 The Royal Society for the Protection of Birds (RSPB)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-RSPB-0.1	<p>Thank you for consulting the RSPB over the proposal.</p> <p>The RSPB has engaged in pre-application dialogue with Awel y Môr Offshore Wind Farm Limited (the Applicant) with regard to the Awel y Môr offshore wind farm Development Consent Order (DCO) application with a focus on ornithological-related matters. This response to the Marine Licence (ML) application follows our recent Relevant Representation (RR) submission to register our interest in the DCO Examination. The RR identifies our principal areas of concern regarding the potential effects of the DCO application on important wildlife features which are mirrored, and in part amplified, in this response. The RSPB will continue to work with the Applicant to discuss these concerns further and explore ways to resolve them during the DCO Examination and determination of the ML.</p>	<p>This is noted by the Applicant. The Applicant is continuing to engage with RSPB via the DCO Examination, including developing a SoCG.</p>
ML-RSPB-0.2	<p>The RSPB supports the deployment of renewable energy projects, providing that they are sited in appropriate places and designed to avoid potential adverse impacts on wildlife. We are grateful for the constructive pre-application discussions that have taken place with the Applicant in respect of this proposal, particularly through the Evidence Plan process.</p>	<p>This is noted by the Applicant.</p>
ML-RSPB-0.3	<p>While methodological concerns remain, progress towards resolving a number of issues was made during the pre-application discussions for this project. We continue to have significant concerns relating to the project's in-combination and cumulative collision risk and displacement impacts including their assessment.</p>	<p>This is noted by the Applicant.</p>
ML-RSPB-1.1	<p>"OFFSHORE ORNITHOLOGY IMPACTS - SUMMARY OF RSPB POSITION</p> <p>We have significant concerns regarding the findings of some of the impact assessments. As a result of the methodological concerns, set out below, the RSPB considers that the impacts have not been adequately assessed and, as such consider that an adverse effect on the integrity (AEOI) on the following qualifying feature of the Liverpool Bay Special Protection Area (SPA) cannot be ruled out:</p> <p>Project alone – RSPB AEOI conclusions</p> <p>Impact on the following feature of the Liverpool Bay SPA:</p>	<p>The Applicant has provided responses to the concerns raised below.</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	<p>⬆ The impact of displacement on the red throated diver population</p> <p>⬆ The impact of displacement on the red throated diver population</p> <p>We also have methodological concerns and consider that it is not currently possible to rule out adverse impacts upon other SPA species occurring within the study area, in particular:</p> <p>⬆ Manx shearwater</p> <p>⬆ Gannet"</p>	
ML-RSPB-1.2	<p>"RED THROATED DIVER DISPLACEMENT</p> <p>The conservation objectives for the Liverpool Bay SPA are1:</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <p>⬆ The extent and distribution of the habitats of the qualifying features</p> <p>⬆ The structure and function of the habitats of the qualifying features</p> <p>⬆ The supporting processes on which the habitats of the qualifying features rely</p> <p>⬆ The population of each of the qualifying features, and,</p> <p>⬆ The distribution of the qualifying features within the site."</p>	<p>The Applicant, NRW (ML-NRW (A)-6.59,6.63 &amp; 6.65) and JNCC (ML-JNCC-3) are in agreement that an AEol on the red-throated diver qualifying feature of the Liverpool Bay SPA can be ruled out. NRW were able to come to this conclusion based on a precautionary assessment of the information provided by the Applicant and contained within the RIAA (Document reference 5.2). Furthermore, NRW agreed with the Applicant (Document ML-1.25 of the Applicant's Marine Licence Submission 1) that the behaviour exhibited by red-throated divers from the Liverpool SPA in response to the presence of OWFs is inconsistent with other areas of sea (in particular those areas studied in the Southern North Sea) based on the post-consent monitoring surveys for Gwynt y Môr Offshore Wind Farm (GyM) and site-specific baseline data collected for AyM presented within the Offshore Ornithology chapter of the ES (Document reference 6.2.4).</p>
ML-RSPB-1.3	<p>There is clear evidence of the displacement of red-throated diver from offshore wind farms (e.g. Furness et al. 20132, Mendel et al., 20193) with a significant effect detectable 10-15km from the wind farm (Heinänen et al. 20204). The Awel y Môr proposed development directly abuts the Liverpool Bay SPA. The numbers of red throated diver, their distribution within the SPA and their ability to use all suitable habitat contained in the SPA are relevant to the SPA conservation objectives but are not considered by the Applicant. If red throated diver are displaced from part of the SPA which would otherwise be suitable for them the effect is to reduce the functional size of the SPA, contravening the conservation objectives. The RSPB therefore cannot rule out the impact of displacement on the integrity of the Liverpool Bay SPA, arising through the project alone and in combination.</p>	
ML-RSPB-1.4	<p>"OTHER SPA SPECIES OF CONCERN PRESENT ON SITE</p> <p>Manx shearwater are BoCC5 Amber listed (Stanbury et al., 20215) and are a Birds Directive Migratory Species. Awel y Môr is within the mean-max foraging range 1,347 km, (Woodward et al., 20196) of six SPAs of which they are a</p>	<p>This is noted by the Applicant.</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	qualifying feature (Copeland Islands, Irish Sea Front, Rum, St KildaGlannau Aberdaron ac Ynys Enlli/Aberdaron Coast and Bardsey Island, and Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro)."	
ML-RSPB-1.5	Gannet is Amber listed in BoCC5 (Stanbury et al., 2021). Gannet is a qualifying feature of Grassholm SPA and also known to breed in Ireland's Eye SPA and Lambay Island SPA, all of which are within mean-max foraging range of Awel y Môr (Woodward et al., 2019).	This is noted by the Applicant.
ML-RSPB-2.1	"IMPACT ASSESSMENT – METHODOLOGICAL CONCERNS  The RSPB's key concerns are with the baseline survey methodology, the scoping out of collision impacts for Manx shearwater, the use of avoidance rates in gannet collision risk modelling, lack of consideration of impacts compounded by Highly Pathogenic Avian Influenza (HPAI)."	The Applicant has provided responses to the concerns raised below.
ML-RSPB-2.2	"Baseline surveys  The RSPB are content that digital aerial surveys can provide useful data in order to provide baseline characterisation of an offshore wind farm footprint. However full methodological detail needs to be provided alongside the outputs and the details the Applicant has provided are scant. In particular, but not exclusively there is  <ul style="list-style-type: none"> <li>insufficient consideration of potential biases in the survey and analysis methods</li> <li>there is no consideration of potential response of birds to disturbance arising from the survey e.g. from aircraft shadow</li> <li>there is no detail provided as to how autocorrelation has been evaluated and if necessary accounted for</li> <li>there is no rationale provided as to why a grid rather than transect survey design has been used</li> <li>there is no detail given of any independent validation of identification and detection rates"</li> </ul>	The level of methodological detail the Applicant has provided within Volume 4, Annex 4.1 of the ES (Offshore Ornithology Baseline Characterisation Report (Document reference 6.4.4.1)), matches that provided by other recently consented projects such as East Anglia One North and East Anglia Two (both SPR, 2019) and Norfolk Boreas (Vattenfall, 2019).  The most appropriate and robust survey method for offshore ornithological baseline survey data collection was consulted on and agreed upon during the early stages of the evidence plan process (see the Evidence Plan Report and its supporting appendices (Document references 8.2, 8.3.1 and 8.2.2). The Applicant and survey provider (APEM Ltd) also consulted with stakeholders, including NRW, ahead of the first surveys being undertaken for AyM in order to gain agreement on the design of the surveys ahead of any data collection taking place. The Applicant will endeavor to clarify and close out the concerns raised by the RSPB via the SoCG between the Applicant and RSPB.
ML-RSPB-2.3	"Manx shearwater  The Applicant has scoped out Manx Shearwater as being a receptor at risk of collision impacts. We disagree with this approach and consider there to be risk of collision. Fundamental to the consideration of collision risk for this species is	The assessment of Manx Shearwater was discussed and agreed upon during the evidence plan process, which concluded that, on a precautionary basis, Manx Shearwater would be assessed for displacement effects only. Manx Shearwater was scoped out for

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	the extent to which nocturnally active seabirds, such as Manx shearwaters, may be attracted to the illuminations required for turbines, support vessels and the construction or expansion of ports. Such attraction will cause behaviour change, which could in turn increase collision risk, for example if birds fly higher when attracted to lights."	assessment of collision risk as agreed with NRW (see the Evidence Plan Report and its supporting appendices (Document reference 8.2, 8.3.1 and 8.2.2, respectively).  The assessment conclusions for Manx shearwater for Awel y MAyM) follow the best available evidence and guidance. Whilst the Applicant acknowledges the RSPB's concerns, no new guidance has been published regarding collision risk assessment for nocturnally active species and the Applicant considers the assessment undertaken for AyM follows the current best practice.
ML-RSPB-2.4	There is also abundant evidence of light-induced disorientation of Manx shearwaters. This evidence includes the grounding of fledglings in lit areas (Miles et al., 20107) and collision with lighthouses and other illuminated structures (Guilford et al., 20198, Archer et al., 20159). If light-induced disorientation leads to individual birds circling the navigation lights on the nacelle or tower of turbines for protracted periods (as has been reported for birds disorientated by lighthouses or gas flares) the probability of collision with turbine blades or other surfaces is vastly increased.	The Applicant would also like to refer the RSPB to the extensive flight height data published in Cook et al. (2012), Johnston et al. (2014) and Johnston et al. (2016), which remain the most in-depth analysis of Manx shearwater flight heights. All three of these publications, that form the basis of current guidance on collision risk for seabirds in UK waters from UK Statutory Nature Conservation Bodies (SNCBs), demonstrate a very low proportion of Manx shearwater fly at potential collision height. To date (November 2022), no other relevant analyses of Manx shearwater flight heights have been published.
ML-RSPB-2.5	Such light induced behavioural change invalidates the simplistic assumptions of bird behaviour in the vicinity of turbines of the Band CRM. For example, the model assumes that birds will fly at a fixed height and speed once through the rotor swept area, in a direction perpendicular to the turbine blades. Light-induced changes in flight height, disorientation and circling flight behaviour mean that this assumption would not be met.	The Applicant also notes that of the numerous other consented offshore wind farms (OWFs) in Irish Sea, including Gwynt y Môr, Rhyl Flats, North Hoyle, Burbo Bank and Burbo Bank Extension, none identified any impacts from collision risk on Manx shearwater during their environmental impact assessments (EIAs). Furthermore, none of these consented and now operational OWF's were required to undertake monitoring programmes to detect collision risk to Manx shearwater, as the potential for this impact on this species was determined to be and agreed as highly unlikely to occur.
ML-RSPB-2.6	Manx shearwater can be active throughout the day and night and with different levels of activity at different times. For example for birds tracked from Skomer, diving occurred during the day and peaked in the evening (Shoji et al., 201610), while nocturnal foraging was observed from tracking of birds from High Island, Ireland (Kane et al., 202011). These diel variations in activity mean that the somewhat limited amount of time aerial surveys were carried out, restricted to the hours of full light are unlikely to properly characterise the activity of Manx shearwater at the Application site. these have generally taken place between mid-morning and mid-afternoon. For these reasons the RSPB does not have confidence in the baseline densities of Manx shearwater presented, and therefore it is impossible to make any conclusions as to the significance of impacts.	In addition to the AyM site-specific aerial digital survey data (agreed with NRW to be appropriate), Global Positioning System (GPS) tracking studies of Manx shearwater by Guilford et al. (2008) and Padgett et al. (2019) from multiple Irish Sea colonies demonstrate very little or no diurnal (daytime), nocturnal (night-time) or crepuscular (dawn and dusk) usage of the Liverpool Bay and/ or AyM array area by Manx shearwater. The species' preferred foraging areas appear to be further offshore in the central Irish Sea with a very limited number of tracks into the Liverpool



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		<p>Bay area. Therefore, the Applicant is confident that the low abundances of Manx shearwater recorded in the site-specific aerial digital surveys are representative of nocturnal and crepuscular abundances and reflect the site's unimportance as a foraging or commuting region for Manx shearwater.</p> <p>Therefore, the Applicant remains confident in the conclusions, as agreed with NRW, that the collision risk to Manx shearwater as a result of AyM is very low and there is no potential for an adverse effect on the integrity of the Manx shearwater feature of any designated site.</p>
ML-RSPB-2.7	<p>"Gannet</p> <p>Avoidance Rates:</p> <p>For collision risk modelling, the Applicant has presented Avoidance Rates as recommended by the SNCBs (JNCC et al, 201412) Whilst the RSPB agrees with almost all of the SNCB's recommended rates, we differ with regard to gannet. We are content that 98.9% is suitable for non-breeding birds, but do not agree that this figure should be applied to the breeding season due to the lack of available evidence relating to breeding birds. Furthermore, GPS tracking of gannets breeding on the Bass Rock has shown variation in the two-dimensional foraging behaviour of birds across the breeding season (prior to chick-rearing, and during chick-rearing), between sexes, and between years (Cleasby et al. 2015a13, Lane et al. 202014, Lane and Hamer 202115). Three-dimensional tracking of gannets during chick-rearing has revealed that flight height and flight speed both vary according to behaviour, sex and wind conditions (Cleasby et al. 2015b16, Lane et al. 201917, Lane et al. 2020,) and similar patterns have been recorded in other seabirds (Masden et al. 202118). As the misspecification of these parameters contributes to the model error component of avoidance rate (Johnston et al., 202119) such variability should result in differential avoidance rates. As such we recommend the use of the default seabird avoidance rate of 98% for gannet during the breeding season."</p>	<p>Input parameters for assessing collision risk of gannets were consulted upon and agreed through the Evidence Plan process. It was concluded that in relation to avoidance rates, the Applicant should follow Joint SNCB (2014) guidance, which is to assess gannet using an avoidance rate of 98.9% for all seasons.</p>
ML-RSPB-2.8	<p>"The Applicant has also, in Appendix 4 of Volume 4, Annex 4.3: Offshore Ornithology Collision Risk Modelling reduced the density of birds inputted into collision risk modelling by 70% to take into account macro avoidance. This approach follows suggestions in Cook (202120), the recommendations from which have not yet been adopted by the SNCBs. Cook (2021) is currently being</p>	<p>In relation to macro avoidance, the Applicant was aware during the preparation of the ES that guidance documents were being drafted in relation to updated guidance on the inclusion of macro avoidance within collision risk assessments for gannet. The Applicant, therefore, consulted with SNCBs during the evidence plan process to agree on a</p>



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	reviewed and revised by two projects, one funded by JNCC and one by Natural England. Until these projects have reported, the RSPB do not accept this approach."	suitable approach for the inclusion of macro avoidance in order to future proof assessments ahead of the guidance being issued and in the event such guidance may be published ahead of the AyM ES submission. The conclusion of this was to present an assessment of gannet based on reduced monthly seabird densities to account for macro avoidance as presented within Appendix 4 of Volume 4, Annex 4.3: Offshore Ornithology Collision Risk Modelling of the ES (Document reference 6.4.4.3). This interim guidance is being routinely provided to other UK OWF assessments of collision risk for gannets, however final guidance is still pending.
ML-RSPB-2.9	"A new virulent form of bird flu, Highly Pathogenic Avian Influenza (HPAI), that originated in poultry in east Asia has now killed tens of thousands of wild birds in the UK and around the world. First confirmed in Britain during winter 2021/22, it has had major impacts on populations of seabirds across Scotland, and there have been an increasing number of confirmed cases appearing across England, including east coast seabird colonies. At the Farne Islands in Northumberland, thousands of seabirds have died. Confirmed cases have also been recorded in Wales. At Grassholm SPA gannetry it has now been confirmed in a number of specimens from dead gannets and birds are continuing to die."	With respect to Highly Pathogenic Avian Influenza (HPAI), it should be noted that the site-specific aerial digital surveys used to characterise the baseline for AyM were collected prior to the first confirmed cases in Britain during winter 2021/22. As detailed within Section 4.5.2 of the Offshore Ornithology chapter of the ES (Document reference 6.2.4) with regards to the future baseline for AyM, there is potential for the numbers of marine birds occurring within the study area over the operational period of the project to change in accordance with any changes to the wider BDMPs population, due to external factors such as HPAI or climate change. Where such changes may occur, this would not affect the conclusions of the EIA and HRA assessments, as any change in the wider BDMPs population would also result in the same degree of change to the baseline for AyM. This aligns with the recent guidance note on HPAI published by Natural England (Natural England, 2022).
ML-RSPB-2.10	It is currently unclear what the population scale impacts of the outbreak will be, but it is likely that they will be severe. This year's outbreak at the Bass Rock gannetry has coincided with, and is the likely cause of, greater than 90% nest failure. This scale of impact means that seabird populations will be much less robust to any additional mortality arising from offshore wind farm developments. It also means that there may need to be a reassessment of whether SPA populations are in Favourable Conservation Status. With such uncertainty as to the future of these populations, there is the need for a high level of precaution to be included in examination of impacts arising from the proposed development.	
ML-RSPB-2.11	"Population Viability Analysis  The Applicant did not carry out Population Viability Analysis for gannet. The RSPB would prefer that this was now carried out, to take into account the likely mortality arising from the outbreak of Highly Pathogenic Avian Influenza on the local and regional populations."	The Applicant did not undertake PVA for assessment of the gannet feature of Grassholm SPA, Ailsa Craig SPA and Saltee Islands SPA due to the predicted level of impact from AyM in-combination with other consented projects resulting in an increase in the baseline mortality rate of each colony being less than a 1% increase per annum. It is common practice for impact assessments to only undertake population modelling

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		through the use of PVA when an impact level reaches a 1% increase relative to the baseline mortality rate. Therefore, as the level of impact from AyM alone and in-combination is well under 1% it can be considered indistinguishable from natural fluctuations in the population and therefore an AEoI could be confidently ruled out without the need for PVA to be undertaken.
ML-RSPB-2.12	"Finally, the RSPB reserves the right to add to and/or amend its position in light of changes to or any new information submitted by the Applicant.  We hope that these comments are helpful. Please do not hesitate to get in touch should you wish to discuss any of the points raised in this letter in further detail."	This is noted by the Applicant. The Applicant will continue to engage with RSPB throughout the Examination process via the SoCG between the Applicant and RSPB.
ML-RSPB-2.13	RSPB also provided a list of references in support of their consultation response, which are not repeated here.	This is noted by the Applicant.

## 2.6 Cadw

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-Cadw-1	The only designated historic asset within 3km of the marine licensable area is the Historic Wreck DW5 Resurgam, which will not be affected by the proposed works. There are a number of undesignated historic assets inside and in the vicinity of the proposed works which could be affected by them. It is recommended that the Marine Investigator at the Royal Commission on the Ancient and Historic Monuments in Wales should be contacted for advice on the impact of the proposed works on them.	This is noted by the Applicant. The Applicant also notes that Cadw are continuing to be engaged via the DCO Examination. Regarding the Royal Commission on the Ancient and Historic Monuments in Wales, the Applicant has provided comments on their response in Section 2.8 of this document.
ML-Cadw-2	The scheduled monument and listed buildings identified attached are located inside 3km of the landfall of the proposed connection for the windfarm: However, any impact on their settings will only occur during the construction phase of the development and this will not be significant.	This is noted by the Applicant.
ML-Cadw-3	Cadw also supplied a list of scheduled monuments and listed buildings in support of their consultation response, which are not repeated here.	The Applicant notes that there are no scheduled monuments or listed buildings within the offshore environment on this project.

2.7 Clwyd-Powys Archaeological Trust (CPAT)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-CPAT-1	We are only commenting on the onshore implications via the DCO process and these comments have already been made. A robust scheme of archaeological works and a protocol for discoveries has been included in the ES for the DCO and a WSI from the archaeological contractor has been approved.	This is noted by the Applicant.

## 2.8 Royal Commission on Ancient and Historic Monument of Wales (RCAHMW)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-RCAHMW-1.1	<p>"We have recently reviewed the marine license application for ORML2233 Awel y More Offshore Windfarm from the perspective of its potential impact on marine archaeology and underwater cultural heritage.</p> <p>In general, we are in agreement with the main findings of the Environmental Statement (ES) and related Annexes concerning the offshore element of the project. We are also broadly supportive of the draft Offshore WSI and would also like to note that including this document at this stage of the process is very helpful. We have some comments and requirements in relation to the Offshore Draft WSI that are set out below."</p>	This is noted by the Applicant.
ML-RCAHMW-1.2	<p>We would also like to note (to NRW) that the application overall highlights the ongoing problem caused by placing the inter-tidal zone within the terrestrial elements of the project, rather than the offshore. The Welsh National Marine Plan takes effect from the Mean High Water mark, and so the inter-tidal zone is part of the marine planning process. As such, it should be covered within the maritime/marine EIA elements and associated WSI, rather than being segmented into the terrestrial part.</p>	There will be separate schemes prepared for the marine and terrestrial area to discharge the marine licence condition(s) and DCO requirement. The outline offshore written scheme of investigation (document reference 8.3) explains at paragraph 2.2.1 that it covers the offshore elements of the project to mean low water springs and that the intertidal area is included within the onshore WSI (Document reference 6.5.8.5). As is standard practice it is, however expected that Denbighshire County Council as the local planning authority will consult with NRW on the approval of schemes within the intertidal area. This will be enshrined within the approved method statement to be created under the auspices of the final scheme written scheme of investigation (WSI) post-consent where the scope of work relates to activities of relevance to both teams. Provision of both an onshore and offshore WSI, with the intertidal zone a consideration of each, will in practice ensure that there are no gaps. The onshore WSI is secured as a Requirement of the DCO, whilst the Offshore WSI is proposed to be secured as a condition of any Marine Licence granted (see Condition 27 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).
ML-RCAHMW-1.3	<p>"Despite this, we are in agreement with the main findings of the onshore ES which relates to the inter-tidal zone, and with the overall direction of the inter-tidal elements of the draft onshore WSI. Further comments are provided below.</p> <p>As the maritime archaeologist with the RCAHMW I can act as the contact for any queries arising and I would be happy to liaise with the applicant and yourselves as required."</p>	
ML-RCAHMW-2.1	<p>"Section 10 Post-Construction Monitoring</p> <p>The provision of post-construction monitoring, specific to archaeological assessment is welcomed. We look forward to further proposals regarding the frequency of such monitoring as part of the finalised WSI."</p>	This is noted by the Applicant.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-RCAHMW-2.2	<p>"Section 11.1.2</p> <p>This states that "all archaeological finds from marine contexts will be retained, although those from features of modern date (19th century or later), may be recorded on site and not retained, depending on the research objectives of the project". The implication of this is that material from the 19th century may be discarded, regardless of their importance to research, knowledge and understanding outside of the AyM project. This is not acceptable given the potential of artefactual material from this period, and indeed the first half of the 20th century to offer insight and knowledge of maritime affairs, as well as enjoyment to the general public."</p>	<p>The outline offshore WSI (document reference 8.3) is provided to ensure there is a common understanding of the archaeological mitigation used to inform the EIA. The final scheme WSI will be finalised post consent and will take into account stakeholder comments and any subsequent conditions imposed by the licensing authority (NRW). The Applicant is in agreement with this point made by RCAHMW and is content for this to be taken into account in the final scheme WSI.</p>
ML-RCAHMW-2.3	<p>We therefore require that Section 11.1.2 is amended to state so that all archaeological finds pre-dating the end of the Second World War will be retained. This should be a condition of approval of the WSI.</p>	
ML-RCAHMW-2.4	<p>"Section 12.2.3</p> <p>We can confirm that the RCAHMW will receive copies of all archaeological reports generated during the project. We would emphasise that we assume that this will include reports relating to post construction monitoring of AEZs and A2 geophysical anomalies."</p>	
ML-RCAHMW-2.5	<p>We can confirm that the RCAHMW will also receive surveyed spatial data, as outlined in 12.2.3. In particular archaeological monitoring data relating to the identified AEZs and A2 geophysical anomalies offers a clear opportunity for the ongoing enhancement of historic assets, as per Policy_Soc05 of the Welsh National Marine Plan (WNMP). In this regard we very much support the statements made subsequently in Section 12.2.4 about making information publicly available. Deposition of all survey data related to historic assets with the RCAHMW is the best way to achieve this in the longer-term.</p>	<p>See the Applicant's response above. The appropriate imagery would be included in any monitoring reports created under the auspices of the final scheme WSI and these would be provided to the Curator. The final scheme WSI would be amended to reflect this requirement in the post-consent phase.</p>
ML-RCAHMW-3.1	<p>"Onshore Element. Draft WSI Specific Comments:</p> <p>We welcome the inclusion of a proposal for a geoarchaeological borehole survey of the inter-tidal zone of the scheme area. This is critical for understanding the formation of the submerged forest in this area and will greatly enhance our knowledge of this group of historic assets (WNMP Policy_Soc05). By preference, we would prefer ambitions for palaeoenvironmental sampling and radiocarbon dating to be included within</p>	<p>This is noted by the Applicant. The Applicant considers that mitigation through preservation by record is full mitigation, however, paragraph 142 (PINS reference APP-069) recognises that archaeological remains are an irreplaceable resource, and that the asset will still have been lost or damaged but with an appropriate level of record provided to offset that. It is acknowledged that preservation by record is not a substitute for preservation in situ. However, this is a standard technique that is used</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	the initial survey where possible, rather than as additional 'recommended work'."	elsewhere where impacts are unavoidable and/or the significance of the historic assets is low. The mitigation proposed does include specific investigation (in the form of a borehole survey proposed in the onshore WSI (PINS reference APP-147)) to provide a geoarchaeological record, with the potential that additional work may be undertaken subsequently, depending on the results of that survey. The results of the borehole survey will also inform detailed scheme design and be considered when determining the location for the trenchless crossing exit pit and the placing of anchors (noting that seeking to avoid known assets on the foreshore is noted in the ES Chapter (PINS reference APP-069)). The scope for an appropriate programme of archaeological work, leading to 'preservation by record' will be agreed with Denbighshire County Council (DCC), in consultation with the relevant advisory organisations via a WSI and carried out in advance of construction.
ML-RCAHMW-3.2	We can confirm that the RCAHMW can receive copies of all archaeological and related geotechnical reports generated during this phase of the project.	
ML-RCAHMW-3.3	The various chapters covering the inter-tidal zone make clear the richness of archaeological material identified during the walkover survey of December 2021. As part of the final WSI we would welcome proposals for a programme of more detailed recording of these historic assets, including sampling of all such features as are still visible, as a means to identify aspects such as tree species and date. Detailed 3D recording of sampled features via methods such as photogrammetry would also make a welcome enhancement to these historic assets (WNMP Policy_Soc05) and allow for better future monitoring.	
ML-RCAHMW-3.4	We can confirm that the RCAHMW will receive any resulting spatial datasets, such as GPS locations, photographs, point clouds, etc.	

## 2.9 UK Chamber of Shipping (CoS)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-CoS-1.1	<p>"The UK Chamber of Shipping welcomes the opportunity to respond to the Awel y Mor marine licence application consultation.</p> <p>The Chamber is the trade association for the UK shipping industry, representing some 200 members, operating 900 vessels equalling 18 million GT in capacity, trading around the UK and globally. The Chamber represents the full breadth of the industry, including dry and wet trades, passenger transport (cruise &amp; ferry) including lifeline services, offshore supply and construction, towage and specialist, as well as professional service providers with shipping interests."</p>	This is noted by the Applicant.
ML-CoS-1.2	<p>The Chamber fully supports the Government's obligations to achieve Net Zero Carbon by 2050 and welcomes the development of offshore renewable energy to succeed. The ports and shipping industries play an essential in enabling those targets to be achieved by providing bases and vessels for construction, operation &amp; maintenance, and decommissioning. The Chamber also asserts that the planning and consultation system must support both the UK's offshore renewable goals and the wider shipping industry to ensure that navigational safety is not compromised nor economic contribution from the shipping industry jeopardised, as stated within Paragraph 2.6.162 of NPS EN-3.</p>	This is noted by the Applicant.
ML-CoS-1.3	<p>"As such, the Chamber therefore raises concern that within document 6.2.1 when detailing the legislation and policy context, that Paragraph 2.6.162 is failed to be included whilst 2.6.161 is, given the importance of 2.6.162 to maintaining safety of navigation and commercial shipping.</p> <p>The Chamber has reviewed 6.2.1, along with 6.2.9 and 6.4.9.1 and makes the follow comments for consideration. "</p>	<p>The policy references highlighted refer to site selection and consideration of commercial impacts. Whilst not listed specifically within the chapter these policy reference have been considered prior to site award and continues to be considered within the assessment process. The Navigation Risk Assessment and subsequently the chapter have been prepared with extensive consultation, consideration of routeing and access to ports with impacts noted within acceptable levels.</p>
ML-CoS-2.1	<p>"Met Mast location</p> <p>As raised at PEIR, the Chamber does not support the installation of an isolated Met Mast structure inside the Other Infrastructure Zone as indicated as possible in paragraph 104 of document 6.2.1, due to isolated structures posing an elevated risk to navigational safety. "</p>	<p>Following formal consultation on the PEIR under Section 42 of the Planning Act 2008, extensive assessment and consultation was undertaken with regard to the 'Other Infrastructure Zone' where a Met Mast could be sited. The Navigation Risk Assessment (Document reference 6.4.9.1) has subsequently confirmed that the risk posed by</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-CoS-2.2	Whilst the Chamber welcomes that following PEIR where concerns were raised by Trinity House and the Chamber, the Other Infrastructure Zone has been shifted to be more considerate the commercial navigation, the Chamber is not aware of strong reason why there needs to be an isolated structure at all, and the Met Mast cannot be within the array area and aligned to WTGs.	the Met Mast is tolerable with mitigation through modifications to the Other Infrastructure Zone and consultation with Trinity House port consent to agree its location, lighting and marking. It is noted that both Rhyl Flats and North Hoyle Offshore Wind Farms have Met Masts located externally to the array.
ML-CoS-2.3	The Chamber notes that the final layout and positioning of the array and Met Mast are to be agreed with Trinity House and MCA as part of a marine licence condition but issues its view here.	As set out in paragraph 1.8.8 of the Offshore Project Description (Document reference 6.2.1), meteorological information will to be collected in order to refine the detailed design of the array and/or optimise performance during the operational phase of AyM. This data collection may be achieved using either a meteorological mast or a floating LiDAR buoy, both of which are included in the project's design envelope. The met mast (or FLiDAR) may be located outside the array area in the Other Infrastructure Zone (as shown in Figure 1 of the Offshore Project Description chapter of the ES (Document reference 6.2.1)) in order to be on the windward side of the array, to allow measurements to be taken from the prevailing wind direction without being affected by the array itself. Meteorological measurements taken from a device located within the array would be affected by wake effects from the turbines and therefore would not be a true reflection of the ambient conditions at site.
ML-CoS-3.1	"Impact of allision  The Chamber disagrees with the statement in paragraph 85 of 6.2.9 that, "Should a powered allision incident occur, it is anticipated that the impact energy would largely be absorbed by the structure rather than the vessel, noting the high level of construction standards for commercial vessels operating at sea, and the low likelihood of a vessel alliding at high speed."	The Applicant notes that vessel construction standards within the maritime world are carefully controlled by the Safety of Life at Sea Convention and managed state-to-state by the relevant authority i.e., the Maritime and Coastguard Agency.  Of the limited incidents to date within the offshore wind industry, evidence suggests that the wind turbine generators (and foundations)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-CoS-3.2	The Chamber finds no evidence for the assertion that the impact energy would largely be absorbed by the structure rather than the vessel, and requests the statement be critically examined. The Chamber would also state that whilst it is correct to state that commercial vessels are of high construction standard, they are also of wide range of ages up to 40 years old and such standard is strongly influenced by maintenance and upkeep over the vessel's life. Hence it is incorrect to assume that all vessels transiting the area will be of such high construction standard.	will absorb the majority of the impact energy noting that paragraph 85 of Document reference 6.2.9 is specifically addressing the impacts on commercial vessels which in the majority (not exclusively) will be of a higher construction standard, steel hulls etc. It is important to note that this text is considering the majority of cases (most likely worst case) and not all cases of collision.
ML-CoS-3.3	Such an assertion about the high level of construction standards for commercial vessels is used repeatedly in 6.2.9 and the Chamber asks where the evidence for such is sourced.	As per ML-CoS-3.2 above, the Applicant references Safety of Life at Sea (SOLAS) construction standard and flag state/port state controls within the Irish Sea area and whilst the Applicant is not asserting that all vessels are of the highest construction standard within this area the majority will be (noting the standards and inspection regimes in place to ensure this)
ML-CoS-4.1	"Loss of power and drift The Chamber raises concern to the statement in paragraph 158 in 6.2.9 that a vessel drifting perhaps unpowered can drop anchor or use its thrusters. The Chamber raised the concern as vessels are known to black out (lose power) and drift whilst restarting engines, and there has been a serious near miss in the North Sea whereby a vessel lost power and began to drift, was unable to correctly drop anchor due to extensive cabling and needed emergency towage assistance at significant financial cost to keep itself from colliding with a turbine. To suggest that a ship which has lost power can use thrusters as a mitigation is to misunderstand that it does not have power. "	Paragraph 158 of Document reference 6.2.9 states 'In the event that a vessel starts to drift towards the array, the vessel will first initiate its own procedures for such an event, which may involve dropping anchor or the use of thrusters (depending on availability and power supply)' and therefore already recognises that power may not be available. It is also recognised that the vessel may be drifting due to a fouled propeller and not necessarily have had a vessel-wide blackout.
ML-CoS-4.2	Furthermore, the statement that CTVs or other small wind farm service craft, which are not designed for towing or pushing, are going to be able to lend meaningful assistance to a larger vessel which is drifting is inaccurate and presents a false degree of safety cushion.	Paragraph 158 of Document reference 6.2.9 states: 'Further, any project vessels on site may be able to provide assistance in liaison with MCA and as required under SOLAS obligations (IMO, 1974)' this paragraph is talking in general terms and states 'may' help. The ability to help would of course depend on the types of project vessel available.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-CoS-5	<p>"Decommissioning</p> <p>The Chamber supports paragraph 158 of 6.2.1 where it is assumed that all infrastructure will be complete removed. The Chamber supports this as leaving infrastructure in situ as this can present a navigational safety hazard as well as prevent future use of the seabed or sea area."</p>	This is noted by the Applicant.
ML-CoS-6	<p>"Layout</p> <p>The Chamber acknowledges that final layout will be agreed between the developer, MCA and Trinity House post consent, but reasserts its strong recommendation for at least two lines of orientation."</p>	This is noted by the Applicant.
ML-CoS-7	<p>The Chamber hopes that these comments are of value and use and is happy to provide further detail to them.</p>	This is noted by the Applicant.

## 2.10 National Air Traffic Services (NATS)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NATS-1	The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.	This is noted and welcomed by the Applicant.
ML-NATS-2	However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.	This is noted by the Applicant who will continue to engage with NATS throughout the examination process, as necessary. A draft Radar Mitigation Contract (addressing the mitigation of the Great Dun Fell and St Anne's Primary Surveillance Radars and including proposed wording for an aviation requirement for the dDCO) has been through two rounds of review by the Applicant and NATS. A meeting was held on 12 October 2022 to discuss the outstanding issues. The Applicant expects all matters to be resolved and the contract to be signed in good time during the examination.
ML-NATS-3	If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.	

## 2.11 The National Federation of Fishermen's Organisations (NFFO)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NFFO-0	Thank you for the opportunity to contribute to the above consultation. The National Federation of Fishermen's Organisations is a trade association representing commercial fishing vessels in England and Wales. Numerous NFFO members work in the area that will be affected by the construction and operation of the proposed offshore wind farm. We note that our colleagues in the WFA-CPC (an affiliate association of the NFFO) have already made detailed representations relating to this project. We offer the following general observations.	This is noted by the Applicant.
ML-NFFO-1	<p>"Offshore wind farms are clearly an integral part of the UK's energy strategy. While no-one could seriously contest the UK's need for a secure supply of affordable energy, we note also that coastal communities need a secure supply of employment and the whole nation needs a secure supply of affordable and healthy food. Statutory and policy documents, such as the Fisheries Act 2021 and the Joint Fisheries Statement provide for the management and sustainable exploitation of fish stocks to that end:</p> <p>"Marine fisheries are of great importance to the United Kingdom – our seafood sectors generate food, jobs, culture, and a strong sense of identity and pride for their communities."</p> <p>"All along the coast, from the largest port to the smallest quayside, fishers and fishing communities take pride in delivering high-quality, sustainably caught produce, which contributes to food security."</p> <p>- Joint Fisheries Statement 2022</p> <p>We submit that this should also be considered part of the policy and legislative context in which this application is viewed."</p>	The relevance of the Fisheries Act 2021 and draft Joint Fisheries Statement (expected to be finalised in December 2022) is noted in terms of outlining joint plans from the UK's fisheries administrations to pursue sustainable fisheries policies. The Act and Statement are not explicitly referred to in Volume 2, Chapter 8 (Document reference 6.2.8) since they are not directly relevant to offshore energy development or commercial fisheries impact assessment, but it is acknowledged that they can be expected to influence commercial fisheries activity.
ML-NFFO-2.1	<p>"Safety</p> <p>Fishing vessels operating ground-contacting gear, whether mobile or static, are at risk from entanglement with seabed obstructions. A mobile vessel coming fast on such an obstruction is at risk of capsizing, with the potential for loss of life as well as significant damage to property. Static fishing gear, once deployed, routinely moves with the waves and tide and displacement of 1 km or more is not uncommon. Should this movement cause static fishing gear to become entangled with a seabed obstacle, it would not be apparent until its owner</p>	Volume 2, Chapter 8 (Document reference 6.2.8) confirms that the minimum wind turbine spacing in AyM will be 830 m. The impact assessment presented in Chapter 8 assumes that some fishing will be possible within the AyM array area where turbine spacing and turbine layout allow productive grounds to be targeted. The individual decisions made by the skippers of fishing vessels with their own perception of risk will determine the likelihood of whether their fishing will resume within the AyM array area. Inclement weather will be a significant contributor to

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	attempted to haul the gear and discovered that their vessel was made fast, again resulting in significant risk."	<p>this risk perception. The type and dimension of fishing gear also influences the potential opportunities within the array area. For example, trawl gears typically require a greater distance for safe operation and these gears are unlikely to target grounds in the vicinity of infrastructure, whilst it is expected that potting activity will resume within the operational AyM array area. These assumptions were supported by the outcomes of informal fisheries consultation, as summarised in Table 2-3 of Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1), where it was noted that potting can continue within a wind farm array if the skipper is comfortable.</p> <p>Volume 2, Chapter 8 (Document reference 6.2.8) Sections 8.11.7 and 8.12.8 assess the potential impact of the physical presence of any AyM infrastructure leading to gear snagging; see response to ML-NFFO-2.1 below.</p>
ML-NFFO-2.2	Exposed seabed cables represent a snagging hazard for fishing gear and can pose a significant risk of severe harm. Anyone working at sea should exercise a duty of care to other marine users, by ensuring that they do not create new hazards in this already extremely hazardous environment. In this case, risk mitigation can be achieved by ensuring that cables are buried, to a sufficient depth to ensure that they will not subsequently be exposed by metocean processes.	<p>Volume 2, Chapter 8 (Document reference 6.2.8) Sections 8.11.7 and 8.12.8 assess the potential impact of the physical presence of any AyM infrastructure leading to gear snagging.</p> <p>The Applicant is committed to cable burial as the preferred option for cable protection, appropriate marking and charting of infrastructure, to the development of and adherence to, a Cable Specification and Installation Plan (CSIP) post-consent, and to adherence to FLOWW guidelines in response to any snagging event.</p> <p>Based on the measures that will be implemented as part of the project and the commitment to follow standard protocols should snagging occur, the impact is not considered to be significant in EIA terms.</p>
ML-NFFO-2.3	Where ground conditions preclude adequate burial, cable protection measures can be applied, although care must be taken in their design to ensure that these in turn do not create a new snagging hazard. A cable burial risk assessment should be conducted and the fishing industry should be consulted on this.	The Cable Specification and Installation Plan (CSIP) referred to in Volume 2, Chapter 8 (Document reference 6.2.8) Table 10 will include and be informed by a cable burial risk assessment. It is anticipated that the CSIP will be a conditioned requirement of the Marine Licence (see Condition 20 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1)).

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NFFO-3.1	<p>"Fisheries Impacts</p> <p>Good communication with fishermen operating in and around the wind farm and cable route during their construction and operation is essential. We note the existence of the Fisheries Cooperation Strategy and applaud the commitment to mitigate financial losses occasioned to fishing businesses by the AyM project. The intention to adhere to the FLOWW Guidelines is particularly welcome."</p>	This is noted by the Applicant.
ML-NFFO-3.2	<p>"There is more to a fisheries liaison and coexistence plan than financial compensation, however. We believe that such a document should be agreed with local industry representatives at the earliest possible opportunity and should be seen as essential mitigation of fisheries business impacts. It should include inter alia:</p> <ul style="list-style-type: none"> <li>➤ Retention of a project Fisheries Liaison Officer, to oversee communications between the project and local fishermen</li> <li>➤ Timely communication of construction and post-installation survey and remedial works, via detailed notice to mariners, issued not less than 10 days before works commence;</li> <li>➤ Procedures for reporting cable exposures;</li> <li>➤ Communication of hazard information to the Kingfisher information service;</li> <li>➤ Use of locally knowledgeable guard vessels as part of the response to any cable exposures, until remedial works can be completed;</li> <li>➤ A process for handling compensation claims, in the event that fishing gear is accidentally damaged by construction or maintenance vessels." </li></ul>	<p>Volume 2, Chapter 8 (Document reference 6.2.8) Table 10 confirms that the Applicant is committed to ongoing liaison with fishermen throughout all stages of the project, based upon FLOWW guidance. This is further confirmed in the Fisheries Liaison Plan, which has been developed following consultation with the fishing industry and will be finalised post-consent. The Fisheries Liaison Plan sets out the planned approach to ongoing fisheries liaison and co-existence.</p> <p>The Applicant has also developed a Fisheries Cooperation Strategy as part of the Fisheries Liaison and Co-Existence Plan (FLCEP) (Document ML-1.21 of the Applicant's Marine Licence Submission 1), which sets out a process by which cooperation payments will be made to mitigate demonstrable financial losses by affected fishermen during the construction phase. The FLCEP is secured under Condition 29 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1).</p>
ML-NFFO-4.1	<p>"Environmental Impacts</p> <p>Assessment of the environmental impacts of any offshore construction relies on a strong pre-construction environmental baseline and detailed post-construction environmental monitoring. A pre-construction baseline has been devised here but lacks detail. There is a strong reliance on the desk-based analysis of older, regional-scale data and surveys conducted for projects. Most of the latter did not gather data from the development area and those that did are largely one-off snapshots of particular spot, taken up to 30 years ago. There does not appear to be the sort of robust and detailed baseline of information on species diversity and abundance that would support the future monitoring of environmental impacts."</p>	<p>The Applicant considers that the data available from existing literature and relevant surveys provide an appropriate evidence base for fish and shellfish populations within the study area, sufficient for the purposes of EIA. These were utilised to characterise the fish and shellfish receptors in the vicinity of the project array area and offshore cable corridor and NRW is in agreement with this approach (see the NRW Offshore SocG, Document ML-1.28 of the Applicant's Marine Licence Submission 1). It is considered that there is very limited value in undertaking additional surveys for the purposes of informing the baseline or the subsequent assessment as such surveys provide solely a snapshot of species, limited to those species that have been successfully sampled by the trawl at a</p>



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-NFFO-4.2	<p>There is a severe lack of data on the real-world effects of offshore wind farm construction. The statement that the developer believes that “no fish and shellfish monitoring for the construction, operation or decommissioning phases of AyM is considered necessary” (Environmental Statement Volume 2, Chapter 6: Fish and Shellfish Ecology, p21) is as depressing as it is inevitable. If all developers (rather than very few, as at present) would commit to detailed pre- and post- construction ecological monitoring, the UK would soon have a body of evidence that might allay the reasonable concerns that many have about the effects of these large-scale industrial developments, or at least accurately identify any undesirable unintended consequences, so that they could be mitigated. Future wind farms could then be designed and planning decisions taken, in full possession of the facts about what is proposed.</p>	<p>distinct point in time; the utility of such data principally being to confirm that the survey data aligns with the wider regional data drawn from the existing datasets (as detailed within the Fish and Shellfish Technical Report, document reference 6.4.6.1). It is also worth highlighting that should species not be recorded in a site specific survey, the outcome is not then to exclude consideration of these species from the characterisation of assessment process – rather, the baseline description and EIA draws upon (or defaults to) the wider literature, as this provides a more thorough, robust, and longer time series evidence base, which therefore ensures a more comprehensive and indeed precautionary baseline to be derived for the purposes of EIA. The species list derived from such data provides a broader list of receptors for assessment with greater certainty that all species present have been captured compared with a series of snapshot surveys. Additionally, it is also notable that site-specific survey would be highly unlikely to identify any additional receptor species that are not already recorded in the extensive (both spatially and temporally) data that is available and which will be used for the EIA.</p>

## 2.12 Centre for Environment, Fisheries and Aquaculture Science (Cefas)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-Cefas-1	With reference to the above application for Awel y Môr Offshore Wind Farm by Awel y Môr Offshore Wind Farm Limited (AyMOWFL) (the Applicant) and your request for comments on the disposal of dredged material dated 28th June 2022, please find my comments below.	This is noted by the Applicant.
ML-Cefas-2	This minute is provided in response to your advisory request in relation to the above proposal in my capacity as scientific and technical advisor for sediment quality in relation to, and regulatory requirements for dredge and disposal operations. The response pertains to those areas of the application request that are of relevance to this field. This minute does not provide specialist advice regarding benthic ecology, marine processes, fish and fisheries, shellfisheries, or underwater noise as, whilst these are within Cefas' remit, they are outside my area of specialism.	
ML-Cefas-3	In providing this advice I have spent 3 hours of the allocated 7.5 hours by Natural Resources Wales (NRW). I have booked my time to ORML2233 (C8391ORML2233).	
ML-Cefas-4	"Documents reviewed  The following documents were provided by email from NRW (Peter Morrison) to Cefas (Jemma Lonsdale) dated 28th June 2022 and formed part of this review: a) Marine Licence application form ("Application Form") b) Characterisation Report ("Characterisation Report") c) Environmental Statement Non Technical Summary ("NTS") d) Environmental Statement – Volume 2 chapter 1 offshore Project Design ("ES1") e) Environmental Statement Volume 2 chapter 3 Marine Water and Sediment Quality ("ES2")."	
ML-Cefas-5.1	"Cefas provides comments based on the below category system:  Category 1: Major Comment (Action)- It is Cefas' advice that the application should not be granted a licence until this is resolved. There is high uncertainty or	

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	a large risk to the environment. MMO are strongly advised to request this further information then re-consult Cefas."	
ML-Cefas-5.2	Category 2: Minor Comment (Action)- There is data/ information/ evidence missing that could affect our assessment. Provision of the data/information would allow for due diligence to ensure we have confidence in the applicant's and our own assessment but would not necessarily preclude the granting of a licence. MMO advised to request further information from applicant and then to re-consult Cefas, however MMO may be able to grant licence if this information is not submitted, provided MMO have clear rationale for their decision.	
ML-Cefas-5.3	Category 3: Minor Comment (No Action)- These highlight those things that should be included as best practice but would not affect our overall decision/ conclusions. Should be taken forward by the developer for any future applications/ post consent requirements, or presentation issues. MMO case team could pass this on to applicant however this information is not required for consultation with Cefas.	
ML-Cefas-5.4	Category 4: Observation- Statements regarding what is stated in the application, or areas of good practice are highlighted. No action for MMO case team but this could be passed on to applicant if MMO wish, to pass on areas of good practice.	
ML-Cefas-6	<p>"Description of the proposed works</p> <p>The applicant is applying to NRW for the construction of Awel y Môr Offshore Wind Farm, a sister project to Gwynt y Môr Offshore Wind Farm, approximately 10.5km off the North Wales coast at Llandudno. This request is not to consider the construction or operation of the wind farm, but rather to review the Characterisation Report to provide advice in relation to the whether it is an appropriate approach to designate a disposal site for the entirety of the array area and cable corridor. And if so, to provide advice whether sufficient information has been provided for the designation of the disposal site and whether sufficient sampling has taken place."</p>	
ML-Cefas-7	Awel y Môr Offshore Wind Farm will comprise an array of offshore Wind Turbine Generators (WTGs) with an overall capacity greater than 350 Megawatts (MW), for the purpose of generating renewable energy. There will be up to 50 WTGs	

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	and all associated infrastructure required to transmit the electricity generated to shore, where it will then be transmitted to the existing National Grid Bodelwyddan substation.	
ML-Cefas-8	The remit of this advice is to cover the assessment associated with designating a disposal site. A disposal site is required for dredge, the removal of material from the seabed required for the construction of the Licensed Activities and the disposal of inert material of natural origin and/or dredged material as a result of construction drilling and seabed preparation for the installation of the foundations of the offshore structures or during seabed preparation for cable laying.	
ML-Cefas-9	"Comments. All responses are observations unless otherwise stated. Figure 1 in the Disposal Site Characterisation Report (document referenced in paragraph 5b) shows that both the array and export cable corridor are considered for disposal site designation."	
ML-Cefas-10	Table 2 of the Disposal Site Characterisation Report (document referenced in paragraph 5b) provides a summary of the spoil volumes associated with seabed preparation and associated activities for the maximum design scenario. The table is replicated below for ease of referencing. [N.B. Cefas replicated the table in their response letter but it is not repeated here].	This is noted by the Applicant. The Applicant has assessed a worst-case scenario of requiring the disposal of dredged material within the array, offshore ECC and GyM interlink area. However, the Applicant has only sought to licence disposal of dredged material within the array at this stage. Post-consent, when construction methods are finalised following pre-construction surveys in the detailed design phase, the Applicant will apply for a separate Marine Licence to dispose of dredged material within the offshore ECC and/or the GyM interlink area should this be required.
ML-Cefas-11	Section 3 of the Disposal Site Characterisation Report (document referenced in paragraph 5b) provides an overview of the assessment of alternatives including both the Waste Hierarchy Framework and also other disposal site options. I agree with the conclusions within section 3 of the report but defer to NRW regarding the adequacy of this assessment.	
ML-Cefas-12	Paragraph 57 of the Disposal Site Characterisation Report (document referenced in paragraph 5b) states that the array and wider Liverpool Bay largely consists of either sandy gravel or gravely sand. The report states that 62 benthic samples were taken (map of sampling stations is shown in Figure 3) however, given these are benthic samples, I am unable to comment on these samples or the methods.	

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-Cefas-13	Minor Comment (No Action): Given my area of remit I have not reviewed Section 4.2 (Biological Characteristics) of the Disposal Site Characterisation Report (document referenced in paragraph 5b) and defer to NRW Advisory.	This is noted by the Applicant.
ML-Cefas-14	Section 5.1 (paragraph 99) of the Disposal Site Characterisation Report (document referenced in paragraph 5b) states that dredging can be expected to result in localised lowering of the seabed by up to ~5 m in some places, however the more typical dredge depths will be between 1-3m.	
ML-Cefas-15	Paragraph 100 of the Disposal Site Characterisation Report (document referenced in paragraph 5b) states that the array area is predominantly gravelling sand and (paragraph 101) the offshore export cable area sediments become finer with varying contributions of mud-sized material towards the east of the area.	
ML-Cefas-16	From Volume 2, Chapter 3 (document referenced in paragraph 5e) it states that 10 surface samples were taken from the array area, although due to project refinement, three samples now sit outside the array area. These samples were analysed for polycyclic aromatic hydrocarbons (PAHs) and trace metals. Eight surface samples were taken from the export cable corridor although due to project refinement, two samples now sit outside the corridor area. These samples were analysed for polycyclic aromatic hydrocarbons (PAHs) and trace metals.	
ML-Cefas-17	For 12,919,770m <sup>3</sup> of material OSPAR Guidelines recommends a larger number of samples however, given the area to be dredged is considered to be predominantly coarse (see comments 18 and 19) and the material to be dredged will be disposed of within the vicinity and thus the material is likely to be similar, I consider that the material has been spatially represented from the sampling stations.	This is noted and welcomed by the Applicant.
ML-Cefas-18	Minor Comment (No action): No particle size distribution data have been provided. I appreciate that the benthic samples were classified to their EUNIS habitat types but preferably, the samples should be analysed for particle size distribution by a laboratory that has experience in analysing marine sediments. Additionally, as there is no particle size distribution data, I do not know the sediment type. This is not classed as a minor comment as per comment 25, the material to be disposed is likely to be similar to the existing material due to close	The Applicant has provided particle size distribution data in the NRW Permitting Services template in Document ML-1.12 of the Applicant's Marine Licence Submission 1.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	proximity of source and disposal areas, although there is a requirement to report the percentage sand, gravel and silt as part of annual reports to OSPAR and London Protocol Secretariats.	
ML-Cefas-19	Minor Comment (Action): As per comment 14, it is likely that dredging may be required down to typically 1-3m, and exceptionally down to 5m. However, no evidence has been provided regarding the potential contamination down to 5m. For the array area and offshore export cable corridor, this is likely to be low risk as the material is generally considered coarse in nature and is unlikely to be contaminated to an extent to be a cause for concern. However, for the inshore export cable corridor, the material will likely become finer and may be subject to more contamination e.g., from vessels or run off, and as such has the potential to be a source of contamination. Can the applicant provide assurances that the inshore area will only be subject to trenching? If dredging to any depth may be required, additional samples may be recommended.	At this stage, the Applicant has sought a Marine Licence for the disposal of dredged material in the array area only but assessed disposal of dredged material in the offshore ECC in the ES as a worst-case scenario following the design envelope approach. Should it be determined in the detailed design phase post-consent that disposal of dredged material is required in those areas, these would be supported by a separate Marine Licence application at that time, together with any further sampling which may be necessary at the time as directed by NRW.
ML-Cefas-20	Minor Comment (Action): The results from sediment contaminant analysis were only provided in pdf form as part of Volume 2, Chapter 3 (document referenced in paragraph 5e). The full results should be provided in the NRW template as this will be required for the annual reporting disposal site returns to OSPAR and London Protocol.	The Applicant has completed the NRW Permitting Services template in in Document ML-1.12 of the Applicant's Marine Licence Submission 1.
ML-Cefas-21	Minor Comment (Action): The laboratory that analysed the trace metals and their methods should be stated to ensure that methods and results submitted can be compared with the Cefas Action Levels.	Trace metals analysis of sediment samples was carried out by Fugro. Sediment samples were dried at 40°C and then sieved to the required size fraction (2000 µm). Samples were subjected to an aqua regia microwave digestion. This acid mixture allows a partial dissolution of metals, predominately releasing those associated with the sediment fines. The resulting digests were then analysed by inductively coupled plasma–mass spectrometry (ICP-MS) for arsenic, cadmium, chromium, copper, lead, mercury, nickel, tin and zinc; and inductively coupled plasma–optical emission spectrometry (ICP-OES) for aluminium and barium.  The compiled laboratory method statements are provided in Document ML-1.11 of the Applicant's Marine Licence Submission 1.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-Cefas-22	Table 12 shows that the trace metal results for all samples are below Cefas Action Level 1, provided the methods used allow for the results to be compared to the Cefas Action Levels (see comment 21).	The Applicant has provided the results against the Cefas Action Levels in the Water and Sediment Quality Clarification Note (Document ML-1.7 of the Applicant's Marine Licence Submission 1).
ML-Cefas-23	Minor Comment (Action): Table 12 includes the limits of detection for cadmium and mercury to two decimal places, however Table 10 does not: the results for cadmium and mercury state "<0.0", the results should be to 2 decimal places. This is for accuracy of reporting.	Concentrations of cadmium in sediment samples were consistently <0.08 µg/g, while concentrations of mercury in sediment samples were consistently <0.04 µg/g.
ML-Cefas-24	Minor Comment (No action): The full suite of PAHs have not been analysed. In the absence of agreed Cefas Action Level 2 for PAHs, Cefas utilise the Gorham-Test approach (1999; also in Long et al. 1995 and Long et al. 1998), which calculates the sum total of low- (LMW) and high- (HMW) molecular weight PAHs and compares these to observed effect-ranges. Total values of the LMW PAHS and total values of the HMW PAHS are calculated and then compared to threshold values. If a total value (for either LMW or HMW selection of PAHs) does not exceed the effects-range low (ERL), the indication is that the sediment in the sample can be considered low risk. If a total value exceeds the effects-range median (ERM) for either the LMW or the HMW total values, it can be considered higher risk, with more likelihood of harm occurring. I have calculated the LMW and HMWs. For the LWM analyses results for Naphthalene are missing, however the highest values for LWM is 128 (ERL 552; ERM 3160) and HMW is 461 (ERL 1700; ERM 9600). With the Naphthalene it is unlikely the level would exceed the ERL or ERM and therefore the risk can be considered low. For best practice, if available the Naphthalene data should be provided.	This is noted by the Applicant. The sampling regime, including the spread of contaminants requiring analysis were agreed with NRW via the Evidence Plan process and did not include Napthalene.
ML-Cefas-25	Paragraph 110 of the Disposal Site Characterisation Report (document referenced in paragraph 5b) states that "Although the actual process of disposal may result in a slight change to the existing particle size composition of seabed sediments, the material disposed in situ via seabed preparation and cable trenching would be similar to the existing material as the spoil disposal will occur close to the site of production". I agree with this assertion.	This is noted and welcomed by the Applicant.
ML-Cefas-26	I note in Section 7 (Monitoring) of the Disposal Site Characterisation Report (document referenced in paragraph 5b) no monitoring is recommended. I agree that no additional monitoring is required.	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-Cefas-27	"Summary Overall, I consider the risk of the disposal operations to be low however, some minor clarifications are required to increase confidence in the assessment. Should NRW be minded to grant a licence, Cefas would require written confirmation to designate a disposal site, including the coordinates and after which we will provide a disposal site code."	This is noted by the Applicant.
ML-Cefas-28	Cefas also provided a list of references in support of their response, which are not repeated here.	This is noted by the Applicant.

## 2.13 Joint Nature Conservation Committee (JNCC)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-JNCC-1	<p>"Thank you for consulting JNCC on the RWE Renewables UK Marine Licence application, which we received on 22 June 2022.</p> <p>The advice contained within this minute is provided by JNCC as part of our statutory advisory role to the UK Government and devolved administrations on issues relating to nature conservation in UK offshore waters (beyond the territorial limit). We have subsequently concentrated our comments on aspects of the documents that we believe relate to offshore waters.</p> <p>The advice below relates to:</p> <ul style="list-style-type: none"> <li>➤ Marine Ornithology</li> <li>➤ Marine Mammals"</li> </ul>	This is noted by the Applicant.
ML-JNCC-2	<p>"Marine Ornithology Comments</p> <p>6.2.4. Environmental Statement Volume 2, Chapter 4: Offshore Ornithology</p> <p>Paragraph 166 states that a 100% displacement rate will be used to assess the displacement of common scoter from construction vessels, and gives an impact area of 25.13km<sup>2</sup>. Paragraph 167 gives a density of common scoter of between 99.2 and 138.2 individuals/km<sup>2</sup>. Therefore the total number of displaced birds should equal between 2492.9 and 3473.0 birds. Paragraph 167 reports between 1246.4 and 1736.5 individuals displaced, which appears to be the number displaced if a 50% displacement rate was used. Despite this error, the number of mortalities reported in paragraph 169 appear to have correctly used a 100% displacement rate, therefore the number of mortalities reported are correct."</p>	The Applicant can confirm that the cable route abundance in paragraph 167 should be between 2492.9 and 3473.0 common scoter as correctly identified by JNCC. However, as stated by JNCC, the predicted mortalities concluded in paragraph 169 are calculated using the correct abundance for common scoter.
ML-JNCC-3	<p>4.12.1 Paragraph 276 We agree with the negligible impact of disturbance due to the presence of Awel Y Mor during the construction and operational phases. However, we note that the evidence of displacement of red-throated diver from Gwynt Y Mor in this part of Liverpool Bay SPA is not consistent with what has been observed in other areas of Liverpool Bay SPA, as well as in other areas of the UK and Europe. Given this anomaly in observation, JNCC advises that comprehensive validation monitoring before, during, and after construction is needed to confirm that it is the case that supporting habitat (as identified in the sites conservation objectives) has not been lost.</p>	<p>The Applicant welcomes JNCC's agreement on negligible impact in relation to disturbance and displacement for construction and operational phases for red-throated diver.</p> <p>As stated in the Applicant's response to NRW (ML-NRW(A) – 6.59 - 6.61), the Applicant intends to seek further consultation on the requirements of any potential post-consent monitoring and/ or methods as outlined in Condition 34 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1).</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-JNCC-4	4.12.2 Paragraph 306 It is unclear how 1232 vessels over 25 years equates to one vessel every 4 days. This paragraph states that 1232 vessel movements are predicted over the 25-year life of the wind farm. However Volume 2, Chapter 1 table 29 and Volume 2 Chapter 4 table 8 indicates that there will be 1208 vessels. It is unclear which is the predicted number of vessels. It is also unclear where 6 vessels and 22 vessels per day has come from, and if this is based on 1232 vessel movements or 1208 vessel movements. We disagree that the addition of up to 6 (or up to 22) additional vessels through the Liverpool Bay SPA on top of an existing 58 vessel transits (an addition of 10% or 40% of existing levels) will have a negligible effect on the levels of shipping disturbance.	As stated in the Applicant's response to ML-NRW(A)-6.64, the Applicant will develop the vessel management plan in consultation with NRW post-consent in order to mitigate potential impacts from AyM on the designated features of the Liverpool Bay SPA as outlined in Condition 34 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1).
ML-JNCC-5	4.12.2 Paragraph 307 In light of the predicted additional vessel movements we advise that a vessel management plan should be put in place to mitigate vessel disturbance. We agree with the suggested mitigation measures and would welcome further consultation with the SNCBs on the contents of a vessel management plan.	
ML-JNCC-6	4.14 Table 63 As previously stated, we advise that a vessel management plan should be put in place as a mitigation measure with regard to vessel disturbance during the construction, operation, and decommissioning phases.	
ML-JNCC-7	"6.4.4.2. Volume 4, Annex 4.2: Offshore ornithology displacement 3.6 The annual displacement matrices for Manx shearwater for both the array area and the array areas plus 2km buffer have not been included. Please provide these tables."	The Applicant has provided these matrices in Document ML-1.3 of the Applicant's Marine Licence Submission 1. For reference, the Applicant has presented an annual displacement matrix for Manx shearwater for the array area plus 2 km buffer within Table 40 of the Environmental Statement Volume 2, Chapter 4: Offshore Ornithology (Document reference 6.2.4).
ML-JNCC-8	"6.4.4.6. Volume 4, Annex 4.6: Offshore ornithology population viability analysis 2.3 It is not clear how the impact values assessed have been translated into a relative harvest for use within the PVA tool. Please provide calculations as to how these relative harvest values have been calculated."	The Applicant has provided this information in Document ML-1.3 of the Applicant's Marine Licence Submission 1.
ML-JNCC-9	4. We would find it useful to include graphs of population size over the years of impact, counterfactual of growth rate and counterfactual of population size, including confidence intervals.	The Applicant has provided this information in Document ML-1.3 of the Applicant's Marine Licence Submission 1.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-JNCC-10	<p>"5.2 Report to Inform Appropriate Assessment</p> <p>10.3.1 Paragraph 342 We do not agree with the approach taken to use Furness et al (2015) age structure to calculate numbers of adult birds. This should either be done using local survey results, such as has been done for gannet, or if information from local surveys is not available then by assuming all birds are adults. However, recalculation of all impacts assuming all birds are adults indicates that there is no difference to the conclusions of this assessment."</p>	The Applicant recognises that a different approach is possible but welcomes the JNCC's agreement that the recalculation of all impacts assuming all birds are adults indicated no difference to the conclusions of this assessment.
ML-JNCC-11	<p>10.3.2 Paragraph 431 It is unclear how 1232 vessels over 25 years equates to one vessel every 4 days. This paragraph states that 1232 vessel movements are predicted over the 25-year life of the wind farm. However Volume 2, Chapter 1 table 29 and Volume 2 Chapter 4 table 8 indicates that there will be 1208 vessels. It is unclear which is the predicted number of vessels. It is also unclear where 6 vessels and 22 vessels per day has come from, and if this is based on 1232 vessel movements or 1208 vessel movements. We disagree that the addition of up to 6 (or up to 22) additional vessels through the Liverpool Bay SPA on top of an existing 58 vessel transits (an addition of 10% or 40% of existing levels) will have a negligible effect on the levels of shipping disturbance.</p>	As stated in the Applicant's response to ML-NRW(A)-6.64, the Applicant intends to develop a vessel management plan in consultation with NRW in order to mitigate potential impacts from AyM on the designated features of the Liverpool Bay SPA as outlined in Condition 34 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence Submission 1).
ML-JNCC-12	<p>10.3.2 Paragraph 432 In light of the predicted additional vessel movements we advise that a vessel management plan should be put in place to mitigate vessel disturbance. We agree with the suggested mitigation measures and would welcome further consultation with the SNCBs on the contents of a vessel management plan.</p>	
ML-JNCC-13	<p>"5.2.5. Report to Inform Appropriate Assessment, Annex 5: Ornithology Apportioning Note</p> <p>Full apportioning calculations for all SPAs and designated features should be presented in this annex. Please provide these calculations."</p>	The Applicant has provided this information in Document ML-1.3 of the Applicant's Marine Licence Submission 1.
ML-JNCC-14	<p>"Marine Mammal Comments</p> <p>6.2.7. Environmental Statement Volume 2, Chapter 7: Marine mammals</p> <p>Note: where this chapter summarises information provided in an annex or report, comments for that topic are included under the respective annex/report's comments below."</p>	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-JNCC-15	<p>"Sensitivity of cetaceans to PTS</p> <p>We previously questioned why cetaceans were considered a low sensitivity to PTS and recommended this be increased to medium. We thank the applicant for considering this and note this has now been changed for dolphins and PTS."</p>	The Applicant welcomes this feedback.
ML-JNCC-16	<p>"Existing environment</p> <p>We previously questioned the exclusion of common dolphins from the impact assessment. We thank the applicant for considering this and note they are now included in the assessment."</p>	The Applicant welcomes this feedback.
ML-JNCC-17	<p>"PTS assessment</p> <p>We agree with the methodology applied and that potential injury ranges using both the SPLpeak (referred to as instantaneous PTS) and SELcum (referred to as cumulative PTS) metrics be calculated (described in detail in Annex 6.2). We appreciate the uncertainty inherent when estimating both metrics may result in precautionary injury ranges however, they represent current industry best practice, and no suitable alternatives are provided. Further comment is provided below on mitigating the distances predicted."</p>	This is noted by the Applicant. Please see responses to specific comments below.
ML-JNCC-18	<p>"Disturbance assessment for piling</p> <p>JNCC commends the applicant on considering multiple methods for assessing marine mammal disturbance as it is a complex matter; this approach provides a thorough and robust assessment."</p>	The Applicant welcomes this feedback.
ML-JNCC-19	<p>While JNCC advocate the use of fixed EDRs which are based on available empirical evidence, we appreciate the dose response curve published by Graham et al (2019) is based on observations of harbour porpoise to impact piling, a key concern for marine mammals. We note the dose response curve has been applied for all other cetacean species. We agree that of all the cetacean species that may be present near the proposed development, harbour porpoises are likely the most sensitive to disturbance. However, how animals react to anthropogenic activity is very context specific, making it very difficult to predict how animals may respond, particularly animals with different hearing sensitivities. We are content for this approach to be used in this instance however highlight the need for more research in this field so we can better</p>	The Applicant welcomes this feedback and fully agrees that further research is required from the scientific community to obtain dose-response curves for additional species.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	understand how different species may react to different situations, and what other factors may influence their behaviour.	
ML-JNCC-20	We note the Graham et al research also reported potential habituation across the piling period, and we agree with approach taken in this assessment, i.e. applied the probabilities observed at the start of the construction period, as there is no evidence to support a theory that this habituation would occur elsewhere or to the same degree.	The Applicant welcomes this feedback.
ML-JNCC-21	It is also worth noting the operations on which this curve is based involved smaller piles than those proposed for this project (2.2m diameter compared to 3.5m for jacket piles and 13-15m for monopiles), using different hammer energies and pile durations.	This is noted by the Applicant.
ML-JNCC-22	"Disturbance assessment for UXO clearance  We are content with the approaches taken and agree that using the piling dose response curve would have been inappropriate when considering disturbance. We note this part of the assessment is provided for completeness, and that should UXOs requiring clearing, this will be covered under a separate license. We highlight this assessment should be reviewed before submission and updated with as much information on the UXOs as possible to enable a more robust assessment and review."	This is noted by the Applicant.
ML-JNCC-23	"Requirement for EPS licence  Given the predicted ranges at which PTS could occur during piling, a commitment to develop and comply with a MMMP may not be sufficient to rule out the need for an EPS licence (for both injury and disturbance). This can be reviewed when the MMMP is finalised."	This is noted by the Applicant.
ML-JNCC-24	"6.4.7.1. Volume 4, Annex 7.1 Marine mammal baseline characterisation  We highlight the Joint Cetacean Data Programme (JCDP) has replaced the JCP. Its vision is to promote and facilitate cetacean data standardisation and maximise value through collation and enabling of universal access. The project is funded by Defra and managed by JNCC (2019 – 2022) with the JCDP database and portal held within the ICES datacentre. The JCDP collates at-sea effort-related data collection via ship or aerial methods with a current focus on	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	the NE Atlantic area. We request the applicant consider submitting their baseline data to this project."	
ML-JNCC-25	<p>"6.4.7.3. Volume 4, Annex 7.3 Marine mammal quantitative assessment assumptions</p> <p>Onset of PTS: We appreciate the information provided regarding precaution built into noise assessments using the cumulative SEL metric, however our stance remains unchanged. We are aware the uncertainty inherent when estimating both metrics may result in precautionary injury ranges however, they represent current industry best practice, and no suitable alternative is provided. We appreciate the final MMMP will be agreed post-consent so will review this opinion at the time, considering any new evidence that may be available."</p>	<p>The Applicant welcomes the agreement that the final MMMP will be agreed post-consent and that JNCC will review this opinion at the time, considering any new evidence that may be available (see the SoCG with JNCC at Document ML-1.32 of the Applicant's Marine Licence Submission 1).</p> <p>The Applicant has produced a clarification note in direct response to similar points raised by NRW in its RR comments. This can be found as Document ML-1.8 of the Applicant's Marine Licence Submission 1.</p> <p>In summary:</p> <p>The Applicant will maintain awareness of current research and maintain ongoing dialogue with NRW post-consent to ensure that the final MMMP presents an updated assessment of cumulative PTS impact ranges and mitigation measures reflecting the state of knowledge and best modelling practice available at the time. Thus, the Applicant can confirm that cumulative PTS will be mitigated in the final MMMP if guidance and evidence at the time suggest that it is appropriate to do so.</p>
ML-JNCC-26	<p>Impulsiveness of sound: We agree that noise produced from repeated pile strikes will lose its impulsiveness with distance however we question the assumption this applies to noise produced during UXO clearance, where each device will produce a single spike of noise. We agree further research is needed to understand at what distance piling noise loses its impulsive characteristics, and how to incorporate this into noise assessments, and until then this will introduce an element of precaution into noise assessments for this activity.</p>	<p>The Applicant welcomes this agreement.</p>
ML-JNCC-27	<p>"6.4.6.2. Volume 4, Annex 6.2 Underwater noise technical report</p> <p>We have no additional comments on this report."</p>	<p>This is noted by the Applicant.</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-JNCC-28	<p>"6.4.7.2. Volume 4, Annex 7.2 Draft Marine Mammal Mitigation Plan (MMMP)</p> <p>As communicated previously (letter dated 10 February 2022), JNCC are content with the proposed mitigation when using the PTS onset peak SPL metric to define potential injury ranges, however, we do not agree to ruling out use of the SEL cumulative metric at this stage. JNCC consider this document to be an appropriate start for discussing mitigation options; we will consider any new evidence when the project has finalised their design envelope and is able to finalise the MMMP. We expect the final MMMP will reflect resultant discussions. We are particularly concerned about the distances predicted for minke whale, which range between 2.6 and 10km, as low frequency noise produced during piling has the potential to propagate further through the water column."</p>	<p>The Applicant has produced a clarification note in direct response to similar points raised by NRW in its RR comments. This can be found as Document ML-1.8 of the Applicant's Marine Licence Submission 1.</p> <p>In summary:</p> <p>The Applicant will maintain awareness of current research and maintain ongoing dialogue with NRW post-consent to ensure that the final MMMP presents an updated assessment of cumulative PTS impact ranges and mitigation measures reflecting the state of knowledge and best modelling practice available at the time. Thus, the Applicant can confirm that cumulative PTS will be mitigated in the final MMMP if guidance and evidence at the time suggest that it is appropriate to do so.</p>
ML-JNCC-29	<p>"Other comments:</p> <p>ADD choice</p> <p>We agree that the final decision on whether to deploy an ADD and the choice of device be identified in the final MMMP, once the final impact assessment has been submitted as this will determine the required mitigation zone."</p>	The Applicant welcomes this agreement.
ML-JNCC-30	<p>"Duration of ADD deployment</p> <p>We agree with the swim speeds proposed. While there is some evidence of faster swim speeds, using these more precautionary speeds will allow for variation in individual response behaviour which may result in them taking longer to leave the mitigation zone."</p>	The Applicant welcomes this agreement.
ML-JNCC-31	<p>"Noise abatement</p> <p>We agree with the rationale for not using noise abatement for injury ranges predicted using the PTS onset peak SPL metric however this will need to be reviewed should mitigation zones be identified using the PTS cumulative SEL metric (see previous comment re distances predicted for minke whale)."</p>	The Applicant welcomes this agreement.
ML-JNCC-32	JNCC highlight that mitigation guidelines for piling are due to be updated in the coming year and the update will be available on the JNCC webpage.	This is noted by the Applicant.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-JNCC-33	<p>"Report 5.2 Report to Inform Appropriate Assessment</p> <p>In line with JNCCs remit we have only considered marine mammal SACs with an offshore component, subsequently we focussed our review on those designated for harbour porpoise. There are several SACs designated for harbour porpoise in Welsh waters however the North Anglesey Marine SAC is closest to the proposed development. Comments are provided in relation to this site with the assumption any potential impacts will be less in sites further away."</p>	This is noted by the Applicant.
ML-JNCC-34	<p>We defer to NRW regarding adverse effects to SACs designated for seals and bottlenose dolphins as these are solely within territorial waters.</p>	This is noted by the Applicant.
ML-JNCC-35	<p>"Section 10.2 Assessment of adverse effects alone for marine mammals Injury (PTS) to harbour porpoise</p> <p>JNCC agree an adverse effect on the integrity of the North Anglesey Marine SAC from piling is unlikely, noting our previous comments on the draft MMMP. We note the mitigation plan will be finalised post-consent."</p>	The Applicant welcomes this agreement.
ML-JNCC-36	<p>We note paragraph 214 highlights where PTS onset from UXO clearance is assessed in the ES however the surrounding text only refers to piling. This inclusion raises doubt as to which activity is being assessed, which is important as the assumption that mitigation will reduce the risks of injury from piling cannot be assumed as easily for UXO clearance. As a result, we have restricted our advice to potential injury from piling only, as the information provided seems most appropriate for that activity.</p>	This is noted by the Applicant.
ML-JNCC-37	<p>"Disturbance to harbour porpoise</p> <p>While JNCC currently advocate the use of EDRs when assessing disturbance to harbour porpoise, we appreciate the different assessment options provided by the applicant as we agree it is a complex situation. It is reassuring to note that none of the assessments for piling resulted in the 20/10% spatial thresholds being breached when considering the project alone."</p>	The Applicant welcomes this comment.
ML-JNCC-38	<p>We again note UXO clearance is referred to in this section although it is clearer whether piling or UXO clearance is being discussed. We agree applying the Graham et al (2017) dose response curve is not appropriate for assessing disturbance from UXO clearance. Again, the spatial thresholds were not</p>	<p>The Applicant confirms that the requirement for a UXO MMMP will be discussed fully in the post-consent phase, should this activity be required. The Applicant has assessed the detonation of UXO in the ES as a worst case, however has not sought to license this activity at this stage. If it is</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	breached in this assessment however we provide no comment on whether disturbance from this activity could have an adverse effect on the North Anglesey Marine SAC as no MMMP for this UXO clearance is provided. We assume this will be discussed fully at the application stage, should this activity be required.	determined post-consent that detonation of UXO is required, this will be the subject of a further marine licence application.
ML-JNCC-39	<p>"Section 11.2 Assessment of adverse effects in-combination for marine mammals</p> <p>Injury (PTS) to harbour porpoise</p> <p>We agree that all projects identified for this assessment will be subject to EPS legislation and a requirement to mitigate any potential injury to cetaceans throughout their natural range. We agree an adverse effect on the North Anglesey Marine SAC with respect injury is unlikely."</p>	The Applicant welcomes this agreement.
ML-JNCC-40	<p>"Disturbance to harbour porpoise</p> <p>We have no comments regarding the information provided apart from highlighting these conclusions will need to be reviewed should a license for UXO clearance be needed."</p>	This is noted by the Applicant.

2.14 The Department for Business, Energy and Industrial Strategy (BEIS)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-BEIS-1	Thank you very much for your detailed e-mail. Regarding Decommissioning, could Natural Resources Wales remind Awel y Mor of their obligations under Section 105 of the Energy Act (2004) to have a BEIS-approved decommissioning programme and for BEIS to hold a Financial Security Sum from them to avoid taxpayer-funded decommissioning.	This is noted by the Applicant. Requirement 21 of the Draft DCO states that no offshore works may commence until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2) (requirement to prepare decommissioning programmes) of the Energy Act 2004 has been submitted to the Secretary of State for approval.

## 2.15 The Isle of Man Government (IoM)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-IoM-1	Thank you for your email dated 22nd June 2022 in relation to the above, and the associated documents in respect of the requirements under Part 4 of the Marine and Coastal Access Act 2009. This letter is a response from the Territorial Seas Committee (TSC) made up of representatives of a number of Departments and Statutory Boards of the Isle of Man Government. As such, and acknowledging that we are unaware of the full circulation list for this consultation, I would take this opportunity to request that future correspondence on this proposal is sent directly to me, as Chair of the TSC, emily.curphey@gov.im, rather than to individual Government officer contacts. The use of a more central contact ensures timely distribution of the request, and sufficient time to coordinate a comprehensive response. With thanks in advance.	This is noted by the Applicant.
ML-IoM-2	The TSC found it a useful and interesting series of documents and await the associated outcomes as the application progresses through the next stages. The TSC is pleased that the Isle of Man has been identified as one of the consultees as part of this application given the potential for transboundary impacts of the development on Manx territorial waters. Thank you for affording us with the opportunity to consider, and provide comments on the above as a consultee.	This is noted by the Applicant.
ML-IoM-3	The TSC has previously engaged with the Planning Inspectorate on a number of occasions in respect of the overall proposed offshore windfarm development and provided comments at each opportunity. The TSC is satisfied from the documents prepared on behalf of the applicant that all international environmental standards and best practice will be adhered to when undertaking this project. For your information and reference, I attach the previous responses submitted to PINS in respect of their application for the Development Consent Order and that, as noted in the documentation for the Marine Licence, there are significant areas of overlap in both issues and the Isle of Man Government's response. As such, many of the comments below in respect of the various themes have also previously been submitted to PINS as part of their consideration of the DCO application, however, it is felt pertinent to restate them for the separate purpose of a Marine Licence application and the subsequent consideration by yourself and your team.	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-loM-4	Whilst the Isle of Man is not a member of the EU and is therefore not directly covered by most European directives, the Isle of Man still follows relevant European environmental safeguards and similarly expects best practice to be followed.	This is noted by the Applicant.
ML-loM-5	This response therefore represents the input from various officers from the Isle of Man Government, specifically colleagues in the Department of Environment, Food and Agriculture who represent the interests most likely to be impacted upon as a result of this application for marine licence. This Committee recognises the scale and complexity of this work and is confident in the assessment processes being undertaken. As such, this committee wishes to reiterate its primary objective, which is to ensure that Isle of Man interests have been considered appropriately at each stage of the process. In this respect it is notable that the Isle of Man is omitted from the mapping included in the document ML-2.13 Awe/ y Mor Marine Licence Plan Areas Map. Given the Island's relative proximity, and acknowledgement of transboundary effects, the Committee would be grateful if the Isle of Man could be included here as a mechanism to ensure due consideration throughout the Marine Licence process. It is noted that cumulative effects in respect of environmental issues will be thoroughly investigated, but this should encompass more than wind farm developments.	This is noted by the Applicant.
ML-loM-6	It should also be noted that there is concern with regards the cumulative impact of all the proposed offshore windfarms within the Irish Sea area and the impact they could have on shipping and navigation. Noting that for the Isle of Man, as an Island nation, any significant risk of interference with marine navigation is of concern to the TSC since a good safety record is essential with regard to transport to and from the Island, as well as the shipping lanes in our Territorial waters which are used to connect the UK and Ireland.	<p>Details of the Applicant's cumulative effects assessment methodology and long list are described in the Cumulative Effects Assessment Methodology (Document reference 6.1.3.1). Details of cumulative assessment applied for shipping and navigation users is provided in the Navigation Risk Assessment (Document reference 6.4.9.1) and the screened in developments are given in Table 10 of the Shipping and Navigation Chapter of the ES (Document reference 6.2.9).</p> <p>It is also noted by the Applicant that since the loM Government submitted this ML response, a SoCG has been developed between the two parties and the loM has considered it not necessary to include agreement on Shipping and Navigation as it is considered adequately addressed.</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-loM-7	<p>"Marine Conservation and Fisheries</p> <p>In respect of the above, and of particular importance and concern would be the potential impacts on marine habitats and migratory species found within Isle of Man waters, especially those protected under Manx law<sup>1</sup> or identified as threatened or declining by the OSPAR Convention, and which may be affected by the proposed development."</p>	This is noted by the Applicant.
ML-loM-8	<p>Comments previously submitted to PINS by the TSC requested the inclusion of Island-based conservation organisations which may also have relevant information and data of interest to the project, in particular those related to ornithology, cetaceans and other regionally-important migratory species. Should it be necessary to provide Cyfoeth Naturiol Cymru with a list of specialist stakeholders, please advise and the request will be dealt with as soon as possible.</p>	The Applicant can confirm that is has consulted with various Manx-based conservation organisations.
ML-loM-9	<p>Any marine developments within or adjacent to the Isle of Man territorial waters could potentially impact commercial fisheries in Manx waters, or the interests of its fleet; so it would be appreciated if the issues were also fully considered from that perspective, and that relevant fishing organisations on the Island are included as consultees, via the appointed Fisheries Liaison Officer, and within the Fisheries Liaison and Coexistence Plan.</p>	<p>Engagement with Isle of Man fishing interests has been pursued by AyM. The Applicant held meetings with the Isle of Man Government on 16 December 2020 and 8 December 2021. In both meetings commercial fisheries impact assessment and stakeholder engagement were discussed. Comprehensive engagement in the form of fisheries group meetings and individual interviews (see Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1)) with fishermen has been undertaken to understand fishing activity within the AyM study area. The Manx Fish Producers' Organisation is included on the AyM fisheries stakeholder distribution list, with contact details confirmed as correct by the loM Government and has been invited to attend both group meetings and individual interviews.</p>
ML-loM-10	<p>Of particular importance, therefore, is appropriate consideration of the trans-boundary impacts on Manx marine conservation and commercial interests, and this Committee would particularly like to ensure that the impact on wildlife, habitats and fisheries in Manx waters are fully considered within the scope of this Marine Licence application and its assessment.</p>	<p>This is noted by the Applicant. The Applicant is in ongoing discussions with loM Government via the DCO Examination, including the development of a SoCG on matters related to fisheries, marine mammals and ornithology. With regard to ornithological considerations, the Applicant has provided loM Government with an assessment of Manx sites and features in Document ML-1.5 of the Applicant's Marine Licence Submission 1.</p>
ML-loM-11	<p>As such, and with reference to the Preliminary Environmental Information Report Volume 1, Annex 3.2: Transboundary Screening report, the Committee agree with the conclusion that Transboundary effects relevant to the Isle of Man are</p>	



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	included in several of the receptor areas, including; physical processes, fish and shellfish, commercial fisheries. However, in relation to marine mammals and ornithology the Committee does not agree with the conclusion that consideration of marine mammals should be limited to European Sites/SACs within the EEZ of the Republic of Ireland, or that ornithological considerations should be limited to Republic of Ireland and European sites located within the Irish Sea. These conclusions do not appear to take full account of the mobile nature of the species, or the constitutional status of the Isle of Man, which has always been outside the EU and its environmental jurisdiction and classifications.	
ML-IoM-12	More specific comments on these aspects, related to individual sections of the PEIR are noted below, and the original response of this Committee (15th July 2020) is also included for your further reference.	The Applicant notes that these comments are duplicated from the formal consultation on the PEIR under Section 42 of the Planning Act 2008 from 31 August – 10 October 2021, which are addressed in the consultation sections of the relevant ES chapters and has therefore not commented here.
ML-IoM-13	Where indicated below, and with reference to the original response, this committee would seek confirmation that the relevant consideration of the Marine Licence, whether via NRW or informed by consultant reports, have appropriately considered the relevant trans-boundary, migratory/mobile species and fisheries aspects as they relate to Isle of Man interests.	
ML-IoM-14	"Marine Navigation  As an Island nation, any significant risk of interference with marine navigation is of concern to the TSC. The TSC has been advised that the Isle of Man Steam Packet Company is content with the current project coordinates and, as such, provided there are no changes made to the proposed site location, the Isle of Man Steam Packet Company no longer needs to be involved. Please advise the TSC should any of this change."	
ML-IoM-15	"Aviation  Noting that the only apparent reference to the Isle of Man in the consultation documents provided relates to the airport ( Category 6: Environmental Statement, Non-Technical Summary, April 2022 Revision: B Application Reference: 6.7.1: 6.12 Aviation and radar), clarification has been sought from Ronaldsway Airport in respect of consideration of the impact of the proposed windfarm on aviation, particularly the airport radar. It has been confirmed that the Airport is satisfied that the proposed location of the wind farm will not pose any operational issues for the Airport at this stage. The Airport has requested	

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	<p>that it be kept informed should any amendments to the proposed location be considered by the developer. Further, it is requesting that the organisation involved in its construction keep</p> <p>Ronaldsway Airport informed of progress so that it can monitor activity to ensure that the impact remains as predicted."</p>	
ML-loM-16	<p>"The Isle of Man Government, via the TSC would welcome the opportunity for continued involvement in this process as and when appropriate. The TSC is happy to continue receiving correspondence in respect of this proposed development, and noting the central email address provided above.</p> <p>Should you require any further information or clarification on any of the contents of this response, then please do not hesitate to contact myself, and I can raise any items with the members of the TSC."</p>	
ML-loM-17	<p>"Specific Comments on ORML2233 Awel y Mor Marine Licence Application Consultation</p> <p>This submission has been provided based on the following considerations:</p> <p>Noting the relative distance of the proposed development to the Isle of Man and its territorial waters, but acknowledging the potential for transboundary effects across a range of considerations.</p> <p>Noting the similarities between the PEIR process as part of the Development Consent Order application and the Marine Licence application, the most relevant issues have been highlighted for Marine Licence consideration.</p> <p>In respect of the Marine Licence Application, the most relevant aspects of the proposal relate to the following topics; Offshore Ornithology, Marine Mammals, Fish &amp; Shellfish Ecology, and Commercial Fisheries."</p>	This is noted by the Applicant, see responses to specific comments below.
ML-loM-18	<p>"Offshore Ornithology</p> <p>Given the proposed constructions, expected heights and operational duration outlined in the Marine Licence application summary, the TSC believes that wide-ranging seabirds, with links to the Isle of Man are a relevant consideration."</p>	All seabirds were considered and where appropriate assessed following guidance for EIA and HRA assessment. Details of where loM ornithological features have been considered within assessments of AyM is provided within a clarification note issued to loM (Document ML-1.5 of the Applicant's Marine Licence Submission 1).
ML-loM-19	The TSC acknowledges that offshore ornithology has been screened in within the transboundary screening report, which is welcomed; as has been the consultation that we have received in relation to this proposal. The report states	Seabirds within the AyM array area and 4 km buffer are from different regional and national populations with particular connection to UK colonies and therefore the assessments and consideration of

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	that the effects are given within each topic chapter of the Environmental Statement. The consideration of Manx conservation features, however, has been inconsistent across the chapters of the Environmental Statement and this is something that the Territorial Sea Committee will raise again in this response.	conservation features were aligned with UK wide guidance and conservation status.  A clarification note (Document ML-1.5 of the Applicant's Marine Licence Submission 1) has been drafted to provide greater clarity to the IoM Government with respect to potential impacts from AyM when apportioned to birds from IoM's designated sites in relation to offshore ornithology.
ML-IoM-20	The Isle of Man view on the ornithology scoping has been included, in full, within the revised Scoping Report, but the applicant's responses are not stated, as they are for the UK consultations. We have therefore sought relevant evidence of consideration within the various reports. We have previously noted the lack of reference to Manx sites that are likely to relate to this study area, and specifically to the Manx shearwater and the comments of the JNCC relating to remaining flight height risks and the possible need for CRM assessment. The TSC has requested evidence of the specific consideration of the Isle of Man in such respects.	The assessment of Manx Shearwater was discussed and agreed upon through the evidence plan process. These discussions recognised the low risk of collision with respect to Manx shearwater, as evidenced through multiple guidance documents recommended by SNCBs for use in determining collision risk (Furness & Wade 2012; Bradbury et al., 2014; Johnston et al., 2014). Manx Shearwater was therefore scoped out for assessment of collision risk as agreed with SNCBs. It was also agreed with SNCBs that in order to provide a precautionary assessment on potential impacts on Manx shearwater from AyM, displacement analysis was undertaken.  Further detail with respect to flight heights and Manx shearwater is provided in Section 2.2.2 of Document ML-1.5 of the Applicant's Marine Licence Submission 1.
ML-IoM-21	We note that no 'significant effects' were found in the ornithological assessments, and therefore site attribution was not undertaken. Nevertheless, although site-related considerations have arisen in the process, we have not found any reference to Manx seabird colonies or Manx sources of migrant birds, lying within the range of the Isle of Man, where they are a feature of a number of designated sites (ASSI, MNR and sites protected under the Manx Museum and National Trust Act), nor the Ballaugh Curragh Ramsar Site. Notably, the Isle of Man wind farm proposal has been included within the cumulative effects consideration.	Due to a lack of significant effects found through the EIA process, the Applicant was not required to undertake any further assessments due to any apportionment of potential impacts to an individual species of specific sites being considered to be so low there would be no material effect.  Further detail is provided in Document ML-1.5 of the Applicant's Marine Licence Submission 1 with respect to IoM ASSI, MNR and the Ballaugh Curragh Ramsar site, in relation to offshore ornithological features.
ML-IoM-22	In the Offshore Ornithology assessment (4.12.10) the effects on linked sites are covered, noting sites not taken into consideration within the Habitats Regulations Assessment (HRA). The Isle of Man does not designate sites under the EU Habitats Regulations (which do not apply to the Island) but we have not found evidence that Manx sites of a similar level of designation or relevance	Although not presented within the RIAA, potential impacts were apportioned accordingly to IoM MNR, the details of which are provided in Section 2.2 of Document ML-1.5 of the Applicant's Marine Licence Submission 1.

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	have been taken into account and treated in the same manner, under either of these considerations, nor separately under the transboundary consideration. Only Welsh sites were picked up as linked ornithological sites outside of the HRA.	
ML-loM-23	<p>"Similarly, within 'Annex 3, HRA European Site Information';</p> <ul style="list-style-type: none"> <li>▲ The Copeland Islands (UK) SPA is designated for the following qualifying features:</li> <li>▲ Manx shearwater (<i>Puffinus puffinus</i>);</li> <li>▲ Arctic Tern (<i>Sterna paradisaea</i>).</li> </ul> <p>Both species are also designation features of several Manx Marine Nature Reserves (Ramsey Bay, Calf of Man and Wart Bank, West Coast MNRs), which are closer and therefore more relevant for consideration within the scope of the proposed development and the ornithology chapter.</p> <ul style="list-style-type: none"> <li>▲ In terms of seabird designation features, Rathlin Island SPA is very similar to the Calf of Man and Wart Bank MNR and the Baie ny Carrickey MNR, however the latter two are not acknowledged or considered, and are significantly closer.</li> <li>▲ Similarly, within 'Annex 3 HRA European Site Information', the Burry Inlet and Severn Estuary Ramsar Sites are listed, but not the Isle of Man Ramsar Site at Ba/laugh Curraghs or potential Ramsar Sites identified in a published report." </li></ul>	With respect to the Manx Shearwater feature of loM MNRs, apportioned predicted impacts from AyM are presented in Section 2.2.1 of Document ML-1.5 of the Applicant's Marine Licence Submission 1. With respect to Arctic tern, the predicted impacts from AyM apportioned to the loM's designated sites are presented in Section 4 of Document ML-1.5 of the Applicant's Marine Licence Submission 1. With respect to the hen harrier feature of Ballaugh Curragh Ramsar, apportioned predicted impacts from AyM are presented in Section 3 of Document ML-1.5 of the Applicant's Marine Licence Submission 1.
ML-loM-24	It is good to see an assessment of the risk to migrants via migratory pathways analysis, but we did not see evidence that the Isle of Man has been included within the data utilised. Hen harrier was screened out following an assessment using MigroPath. This utilised SPA features data and we do not think that Manx data may have been included in the consideration despite the presence of a high density of breeding hen harriers on the Isle of Man, some of which will cross the Irish Sea on migratory movements and dispersal, and form a likely source of this species passing southwards.	The approach to screening and assessing migrant birds was agreed with SNCBs through the evidence plan process and follows a tried and tested methodology to review and analyse potential risk levels for all species. The Applicant presents an assessment of migratory hen harrier in Section 4 of Document ML-1.5 of the Applicant's Marine Licence Submission 1.
ML-loM-25	<p>"In relation in CRM for migrant birds, little tern migration is discussed, and note is made that migration tends to follow within 10 km of the coast, and that Irish birds must pass through British waters, but no mention is made of Manx breeding little terns which must cross the Irish Sea (along with the Arctic terns which also breed on the Isle of Man). There is, in fact, no mention of the loM in the Migration (MigroPath) report.</p> <p>'Due to the migratory routes of terns described in Section 6.1, the population estimates with potential for connectivity with AyM on migration were identified</p>	The Applicant presents an assessment of migratory Arctic tern and little tern in Section 4 of Document ML-1.5 of the Applicant's Marine Licence Submission 1.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	as the Northern England and Scotland SPA populations located to the north of AyM and as a precautionary measure the total UK western non-SPA colonies, with population estimates derived from Appendix A of Furness (2015). Any Irish colonies or southern England SPA colonies were not included within the population estimates presented in Table 3, due to no connectivity identified based on their migration routes.' Page 18."	
ML-IoM-26	"We note the comments from the JNCC regarding the Rhiannon site data and the flight heights of Manx shearwaters, some of which fell within the expected rotor area for this development (see ES Volume 4, Annex 4.5: Offshore Ornithology Scoping and Consultation Responses, page 16). With reference to 4.12.14 paragraph 313, we ask on what basis Manx shearwater was scoped out of the collision risk modelling (CRM)? Our interest in this is in the protection of a recovering colony of Manx shearwaters on the Calf of Man, and that these birds are a designation feature for the Calf and Wart Bank MNR, and the West Coast MNR. The study area is within the range of the birds nesting on the Calf of Man and there is a likely connection (suggested by directional data - see previous consultation response (attached))."	The Applicant presents a collision risk assessment and selection of species considered in Section 2.2.2 of Document ML-1.5 of the Applicant's Marine Licence Submission 1.
ML-IoM-27	<p>"In the offshore ornithology sections, despite the presence of relevant species of seabird on the Isle of Man, including regionally-relevant, breeding colonies and recovery programmes, there are;</p> <p>Only three, non-specific references to Isle of Man in the main chapter</p> <ul style="list-style-type: none"> <li>Volume 2, Chapter 4: Offshore Ornithology (April 2022, Revision: B) And no reference to Isle of Man in the following reports;</li> <li>Volume 4, Annex 4.1: Offshore Ornithology Baseline Characterisation Report (April 2022, Revision: B), though kittiwake and Manx shearwater show flight directions which may connect breeding season movements with the Isle of Man</li> <li>Volume 4, Annex 4.5: Offshore Ornithology Scoping and Consultation Responses"</li> </ul>	<p>The Applicant agreed on the approach to EIA with SNCBs that is in line with other UK OWFs assessing potential impacts at different regional, national and international scales as appropriate.</p> <p>At an EIA level specific colonies from different counties, countries and the Isle of Man form part of the regional, national and international scales for assessment and therefore all are incorporated within the EIA process.</p> <p>A clarification note (Document ML-1.5 of the Applicant's Marine Licence Submission 1) has been drafted to provide greater clarity to the IoM Government with respect to impacts from AyM apportioned to IoM's designated sites in relation to offshore ornithology.</p>
ML-IoM-28	With no references, or acknowledgement of the Manx Marine Nature Reserves (which include significant seabird populations as designation features), the Calf of Man Bird Observatory (and its Manx Shearwater recovery programme), the Manx Ramsar site (Ballagh Curragh) or key sea birds colonies, including ASSis, it is difficult to confirm, or assume, that adequate consideration of Manx	



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	ornithological interests have been made. The Isle of Man Government has a reasonable expectation of demonstrable consideration within the Environmental Statement of issues relevant to the Isle of Man, but this is not yet apparent within the ornithological assessments.	
ML-loM-29	By contrast, the Manx MNRs have, following consultation, now been adequately acknowledged and apparently considered in respect of marine mammals and, as such, the two approaches by consultants appear inconsistent.	This is noted by the Applicant.
ML-loM-30	<p>"In respect of the application for a Marine Licence;</p> <ul style="list-style-type: none"> <li>➤ The Committee therefore requests evidence of specific consideration of the Isle of Man in relation to offshore ornithology in relation to the species and points outlined above.</li> <li>➤ Further, it is recommended that the Licence regulators or developers contact relevant on-island organisations in relation to specific consideration of local ornithological interests; Manx Birdlife, Manx National Heritage, Manx Wildlife Trust." </li></ul>	This is noted by the Applicant. If further clarification is required after reviewing the clarification note (Document ML-1.5 of the Applicant's Marine Licence Submission 1) the Applicant will facilitate further consultation.
ML-loM-31	<p>"Marine Mammals</p> <p>(Previous comments to PINS - Reference to PEIR: Chapter 7 and Baseline)</p> <p>Given the intended construction methods and expected levels and duration of significant levels of underwater noise outlined in the documents provided, the TSC believes that regionally- transiting/migratory marine mammals are an important consideration for the Marine Licence application."</p>	This is noted by the Applicant.
ML-loM-32	Noting the conclusion in the PEIR Volume 1, Annex 3.2: Transboundary Screening report that the focus for consideration will be for 'European Sites where marine mammals are qualifying features will be assessed within the HRA and RIM' and that'the assessment is anticipated to focus on SACs within the EEZ of the Republic of Ireland.'	This is noted by the Applicant.
ML-loM-33	As previously noted in earlier submissions to this development proposal, the Isle of Man is not/ has not been an EU member state, and has limited application of EU Directives, and hence European Sites or SACs. However, the Isle of Man Government is a signatory (extended via the UK) to various relevant international conservation conventions and treaties and is committed to protecting biodiversity within its jurisdiction and via its own legislation.	This is noted by the Applicant.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-loM-34	As such, and in addition to statutory protection of these species under the Isle of Man Wildlife Act 1990, the Isle of Man has 10 statutorily designated Marine Protected Areas (MPAs) within its waters ( <a href="https://www.gov.im/mnr">https://www.gov.im/mnr</a> ), several of which include marine mammals (cetaceans and seals) within their designation features ( <a href="https://www.gov.im/media/1371896/guidance-notes-for-marine-nature-reserve-designations-160221.pdf">https://www.gov.im/media/1371896/guidance-notes-for-marine-nature-reserve-designations-160221.pdf</a> ).	This is noted by the Applicant.
ML-loM-35	<p>"These designation features include the following migratory/mobile species, which are referenced within the report, '...harbour porpoise, grey seals, bottlenose dolphins, Risso's dolphins and minke whales are likely to be present in the vicinity of AyM.'</p> <p>Since these Manx MPAs do not feature in the baseline document for marine mammals, it is therefore not clear whether they have been appropriately considered within the assessment process as trans-boundary issues in the PEIR; and so consideration within the Marine Licence is similarly indicated.</p> <p>➤ Inclusion of these marine mammal features and clarification of their specific consideration from a Manx perspective is therefore requested."</p>	Marine Nature Reserves within the waters of the Isle of Man are presented in Document reference 6.4.7.1 – see Table 1: Marine mammal protected areas within the relevant MU for each species and Figure 4 Manx Marine Nature Reserves.
ML-loM-36	<p>"In addition;</p> <p>Baseline Study Cetaceans 8.7 Telemetry</p> <p>'Within the 50 km buffer of the AyM array area, there are telemetry tracks from 34 grey seals, 33 of which were tagged in the West England and Wales MU, and one of which was tagged in the West Scotland MU. The 34 grey seals within the 50 km buffer of the AyM array area showed connectivity with the following grey seal SACs: .....This connectivity between seals in the vicinity of AyM and with SACs will need to be considered in the HRA. Likewise, the connectivity with the Republic of Ireland and with the Isle of Man will need to be considered in the assessment of transboundary effects.'"</p>	This is noted by the Applicant.
ML-loM-37	It is acknowledged that the Marine Mammal Baseline report makes significant use and acknowledgement of Manx marine mammal data, however, as with seal telemetry, it is not apparent that this has subsequently been considered within the main PEIR, potentially due to the focus on European Sites/SACs.	This is noted by the Applicant. This comment relates to PEIR not the Marine Licence application.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-loM-38	<p>"As a general example, the terms 'Isle of Man' or 'Manx' do not appear in the text of the document other than in the context of references referred to in the baseline document (of which there are 6). Given the acknowledged similarity of species, and their mobility, specific Manx consideration within the main report appears to be absent. Notwithstanding it may not affect the impact conclusions, it seems appropriate that it is explicitly considered and acknowledged.</p> <p>➤ It has been previously noted that it was not apparent that Manx marine mammals have been specifically considered within the Preliminary Environmental Information Report Chapter 7: Marine Mammals. The Committee therefore requests specific and adequate consideration within the Marine Licence assessment process."</p>	This is noted by the Applicant. This comment relates to PEIR not the Marine License application.
ML-loM-39	<p>"Fish and Shellfish (Previous comments to PINS - Reference to PEIR: Chapter 6 and Baseline)</p> <p>The extensive and disruptive construction activities planned for the seabed within the proposed development site have the potential to affect regionally-important conservation and commercial benthic species. The TSC requests that adequate consideration is given to these issues and that, appropriate contingency and mitigation measures are included to ensure their adequate protection, particularly in relation to trans-boundary species."</p>	This is noted by the Applicant. This comment relates to PEIR not the Marine License application.
ML-loM-40	In particular, potential impacts on regionally important, high-density and ecologically-connected shellfish beds should be avoided and/or mitigated. The connectivities of such species within the Irish Sea is noted under the Commercial Fisheries section below.	
ML-loM-41	It is acknowledged and appreciated that within the PEIR process, specific reference to consultation with the Isle of Man Government has previously expanded the 'contextual area' for this topic, and leads to greater confidence of consideration of interests.	
ML-loM-42	"It is further noted in the Preliminary Environmental Information Report Volume 1, Annex 3.2: Transboundary Screening report that assessment of this topic 'is anticipated to focus on the Isle of Man and the Republic of Ireland, in addition to transboundary commercial interests considered through the Commercial Fisheries assessment in the EIA.'	

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	The committee further acknowledges the explicit consideration of Manx interests and input in this Section."	
ML-loM-43	"Commercial Fisheries Noting the general conclusion in the PEIR that the potential transboundary impacts on commercial fish stocks in the waters of other states (Ireland and Isle of Man) is of negligible significance, and is therefore considered to be not significant in EIA terms."	This is noted by the Applicant. This comment relates to PEIR not the Marine License application.
ML-loM-44	However, as noted in previous correspondence on this development (15 July 2020, 22 June 2022), there are a number of limitations acknowledged in the PIER assessment report, and also highlighted in the Isle of Man Government's previous submissions. As such, given the potential for fishery species and fleet behaviour to be impacted by this development proposal, consideration within the Marine Licence application process is indicated.	This is noted by the Applicant.
ML-loM-45	"Commercial fisheries has been screened in as a transboundary impact assessment for this proposed development. As noted in TSC's response to the PEIR (11th October 2021), and despite the responses to comments within 'Annex 8.2: commercial Fisheries Consultation Record, there are still only 3 non-specific references to the Isle of Man in Volume 4, Annex 8.1 Commercial Fisheries Baseline Final, and 5 non- specific references in Volume 2, Chapter 8 Commercial Fisheries v Final.  Given the overlap of the Fisheries Regional Study Area within Manx waters (i.e. 36ES), the non-specific references make it difficult to determine whether the Isle of Man commercial fishing interests have been adequately considered."	loM commercial fishing interests have been considered in the Application. As confirmed in document reference 6.4.8.2, Isle of Man fleet activity is described in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.7 and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1).  As stated within the aforementioned documents, Vessel Monitoring System (VMS) (capturing activity by vessels 15m length and over) and landings (capturing landings by fishing vessels of all lengths) data sourced from the MMO and presented in the ES include vessels registered to the following UK administrations and British crown dependencies: England, Wales, Scotland, Northern Ireland, Isle of Man, Guernsey and Jersey. Isle of Man data has been incorporated into MMO UK databases since 2011. Commercial fishing vessels that are registered to the loM are required to hold both loM and UK fishing licences. The MMO data presented in the ES therefore provides commercial landing statistics for all vessels registered to UK administrations and crown dependencies. To confirm, the most recently available VMS and landings datasets have been accessed and used to inform the EIA.  The extent of loM-registered vessel activity in and around the study area is noted. Across all of ICES Division 7a (Irish Sea), the annual average (2016-2020) landed value of scallops landed by loM vessels was £3.8

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		<p>million, based on MMO landings statistics. Landings from the AyM regional study area over the same period were £420,000 and from the AyM study area were £1,700. The potential for displacement of fishing activity is assessed in Volume 2, Chapter 8 (Document reference 6.2.8), Sections 8.10 to 8.12. Potential displacement of UK (including IoM) scallop dredge activity is assessed in the context of the wider Irish Sea, noting that scallop grounds extend across much of the Irish Sea and that vessels typically have large operating ranges. AyM has not been assessed as causing significant displacement of the scallop dredge fishery given key grounds are outside of the AyM area. The potential for cumulative effects on the scallop dredge fisheries is assessed in Volume 2, Chapter 8 (Document reference 6.2.8), Sections 8.13. As stated above, the scallop dredging fleet target scallop across a relatively wide area offshore and vessels typically have large operating ranges. Scallop grounds extend far beyond the extent of AyM and the other projects relevant to the cumulative effects assessment. Cumulative effects on the scallop dredge fleet have been assessed as not significant in EIA terms.</p>
ML-IoM-46	<p>The responses outlined in the Consultation Record are typically generic, and it is not apparent that further attempts to quantify the fisheries baseline have been made by engagement with relevant Manx data sources (MFPO, Department of Environment, Food and Agriculture (DEFA) or Bangor University (as the IoM Government Fisheries Science Advisors), nor specifically for any potential impact on the Isle of Man fleet.</p>	<p>Engagement with Isle of Man fishing interests has been pursued by AyM. The Applicant held meetings with the Isle of Man Government on 16 December 2020 and 8 December 2021; in both meetings commercial fisheries impact assessment and stakeholder engagement were discussed. Comprehensive engagement in the form of fisheries group meetings and individual interviews (see Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1)) with fishermen has been undertaken to understand fishing activity within the AyM study area. The Manx Fish Producers' Organisation is included on the AyM fisheries stakeholder distribution list, with contact details confirmed as correct by the IoM Government, and has been invited to attend both group meetings and individual interviews.</p> <p>As described in response to ML-IoM-45 above, the landings and spatial data sources used to inform the commercial fisheries baseline are inclusive of IoM fishing activity. Additional data sources relevant to IoM fisheries have also been considered and are fully cited in cited in Annex</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1); they include Bangor University publications (e.g., Delargy, et al., 2019)
ML-loM-47	<p>"For example: Volume 2, Chapter 8: Commercial fisheries (April 2022 Revision B)</p> <p>▲ 8.4.3 Potential receptors</p> <p>Table 3: Receptors included within Group indicate 'English Scottish, Northern Irish and Welsh vessels targeting king scallop and queen scallop.' Why does this not include equivalent Manx vessels? Does it relate only to the commercial fisheries Study Area, or to the wider Regional Study Area; although in both cases Manx scallop vessels have fished these areas within the last 7 years (both &lt;15m and over 15m).</p> <p>▲ Table 5: 'Data Sources used to inform the Commercial Fisheries ES Assessment': refers to UK- registered vessels. Technically it should be British-registered (which would include Manx), or indicate specifically Manx registered, to demonstrate that Manx vessels have been included. This may seem like a minor point, but this type of ambiguity leads to overall uncertainty of adequate consideration.</p> <p>▲ Spatial data sources: 'VMS data for UK-registered vessels of 15m length and over As previously advised, Isle of Man-registered vessels engaged in scallop fisheries operate VMS, regardless of size. Given that the majority of the Manx fleet is under 15m it is not clear that Manx scallop fishing vessels have been adequately included in this assessment. MMO will also hold VMS data for vessels under 12m fishing in Manx waters for scallops (36ES), and possibly within the wider Regional study area.</p> <p>▲ Further, it is unclear why only VMS data for over 15m has been used, when data for all UK/British/Manx-registered vessels over 12m is available from MMO. This must significantly reduce the quality of the baseline used in the assessment."</p>	<p>It is agreed that Manx vessels are an accidental omission from Table 3 in Volume 2, Chapter 8 (Document reference 6.2.8).</p> <p>It is agreed that reference could have been made to 'British-registered'. Table 5 applies the term 'UK-registered' in line with the terminology used in MMO annual landings datasets, which define vessel nationality as the 'devolved UK administration or crown dependency where the vessel was registered when landing was made'.</p> <p>Regarding VMS data, it is noted that British vessels ≥12 m in length have had VMS on board since 2012, however, to date, the MMO provide publicly available amalgamated VMS datasets for ≥15 m vessels only, which has been accessed and presented in the Application.</p> <p>See responses to comments ML-loM-45 to ML-loM-52, which seek to provide reassurance that Manx commercial fishing interests are appropriately considered in the Application.</p> <p>Engagement with Isle of Man fishing interests has been pursued by AyM. The Applicant held meetings with the Isle of Man Government on 16 December 2020 and 8 December 2021; in both meetings commercial fisheries impact assessment and stakeholder engagement were discussed. Comprehensive engagement in the form of fisheries group meetings and individual interviews (see Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1)) with fishermen has been undertaken to understand fishing activity within the AyM study area. The Manx Fish Producers' Organisation is included on the AyM fisheries stakeholder distribution list, with contact details confirmed as correct by the IoM Government, and has been invited to attend both group meetings and individual interviews.</p>
ML-loM-48	These examples do not provide reassurance that Manx commercial fishing interests have yet been adequately considered, regardless of the ultimate conclusion of the assessment.	Volume 2, Chapter 8 (Document reference 6.2.8) Table 10 confirms that the Applicant is committed to ongoing liaison with fishermen throughout all stages of the project, based upon FLOWW guidance. This is further confirmed in the Fisheries Liaison Plan, which has been developed following consultation with the fishing industry and will be finalised post-
ML-loM-49	Further, and in relation to requested engagement with the Manx Fish Producers' Organisation, the response; 'The Manx Fish Producers' Organisation is included on the AyM fisheries stakeholder distribution list and was invited to attend group meetings and respond to request for individual interview.' is considered	



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	insufficient, given the noted overlap of the Regional Study Area with Manx territorial waters. Direct contact with the representative organisation is recommended in order to clarify potential interests, and the eligibility of Manx-registered vessels for the Fisheries Cooperation Strategy (compensation scheme). [Contact details provided in response letter].	consent. The Fisheries Liaison Plan sets out the planned approach to ongoing fisheries liaison and co-existence.  The Applicant has also developed a Fisheries Liaison and Co-Existence Plan (FLCEP) (Document ML-1.21 of the Applicant's Marine Licence Submission 1), which sets out the process by which cooperation payments will be made to mitigate demonstrable financial losses by affected fishermen during the construction phase.
ML-loM-50	In summary, given the overlap of the Fisheries Regional Study Area within Manx territorial waters (ie. 36ES) and the acknowledged trans-boundary risk, there is a reasonable expectation to unequivocally demonstrate that Isle of Man commercial fishing interests have been specifically and appropriately taken into account.	As per response to ML-loM-45, which confirms that Isle of Man (IoM) commercial fishing interests have been considered in the Application.
ML-loM-51	"The documentation as presented does not adequately achieve this, given the limited, non-specific reference to the Isle of Man within the Commercial Fisheries chapter and supporting reports, application of restricted data sets (ie >15m only) and the absence of demonstrated engagement with; <ul style="list-style-type: none"> <li>▲ The Manx Fish Producers' Organisation</li> <li>▲ The Department of Environment, Food and Agriculture (Isle of Man Government)</li> <li>▲ Bangor University (in their capacity as fisheries science advisors to the Isle of Man Government)."</li> </ul>	As per response to ML-loM-45, which confirms that Isle of Man (IoM) commercial fishing interests have been considered in the Application.  Furthermore, engagement with Isle of Man fishing interests has been pursued by AyM. The Applicant held meetings with the Isle of Man Government on 16 December 2020 and 8 December 2021; in both meetings commercial fisheries impact assessment and stakeholder engagement were discussed. Comprehensive engagement in the form of fisheries group meetings and individual interviews (see Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1)) with fishermen has been undertaken to understand fishing activity within the AyM study area. The Manx Fish Producers' Organisation is included on the AyM fisheries stakeholder distribution list, with contact details confirmed as correct by the IoM Government, and has been invited to attend both group meetings and individual interviews.  Bangor University publications have been reviewed in preparation of the application. These are cited in Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1) and include (Delargy, et al., 2019)
ML-loM-52	"The Isle of Man Government has a reasonable expectation of demonstrable consideration within the Environmental Statement of issues relevant to Isle of Man interests, and this is not yet apparent within the Commercial Fisheries assessments.	As per response to ML-loM-45, which confirms that Isle of Man (IoM) commercial fishing interests have been considered in the Application.



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	In the context of significant offshore windfarm development within the Irish Sea, and the nature of both fisheries stocks and fishing fleet behaviour, the Isle of Man Government believes that adequate and specific consideration of commercial fishing interests is undertaken, in particular for the expected cumulative impacts of the current and future windfarm development rounds."	

## 2.16 The Maritime and Coastguard Agency (MCA)

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-MCA-1.1	Thank you for the opportunity to comment on the Marine Licence application and supporting information for the proposed Awel y Môr offshore wind farm project. The MCA's remit for offshore renewable energy development is to ensure that safety of navigation is preserved, as progress is made towards government targets for renewable energy. The Navigation Risk Assessment (NRA) and the shipping and navigation elements of the Environmental Statement have been reviewed and we would like to comment as follows:	This is noted by the Applicant. The Applicant is continuing to actively engage with MCA via the DCO Examination, including the progression of a SoCG, the most recent revision of which is included at Document ML-1.33 of the Applicant's Marine Licence Submission 1.
ML-MCA-1.2	"Environmental Statement Volume 4, Annex 9.1: Navigation Risk Assessment RWE has undertaken a detailed NRA and we are satisfied it has been conducted in accordance with the published guidance, MGN654, and NRA risk assessment methodology. We are satisfied that appropriate traffic data has been collected in accordance with MGN654, which includes twelve months of AIS data in addition to the minimum AIS and radar data requirements. Key and appropriate stakeholders were identified, and we are content that suitable consultation took place via a hazard identification workshop and dedicated meetings. A completed MGN 654 Checklist has been provided as part of the NRA, and we are content the recommended NRA process has been followed. Subject to the agreement and implementation of the requested marine licence conditions (see below) we are content with the assessment's conclusions that the risks to navigation and SAR will be Tolerable or Broadly Acceptable."	This is noted by the Applicant.
ML-MCA-1.3	"Environmental Statement Volume 2, Chapter 9: Shipping and Navigation The list of mitigation measures in Table 9 are agreed to be appropriate for the site and we would expect them to be reflected in the conditions of the marine licence."	This is noted by the Applicant.
ML-MCA-1.4	"Cable Routes Export cable routes, cable burial protection index and cable protections are issues that are yet to be fully developed. However due cognisance needs to address cable burial and protection, particularly close to shore where impacts on navigable water depth may become significant. Any consented cable protection works must ensure existing and future safe navigation is not compromised. The MCA would accept a maximum of 5% reduction in	This is noted by the Applicant and a Condition relating to compliance with Marine Guidance Note (MGN) 654 (as required) has been included in Condition 30 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence submission 1).

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	surrounding depth referenced to Chart Datum. Existing charted anchorage areas should be avoided."	
ML-MCA-1.5	"Safety Zones Construction and operational safety zones will only be granted subject to a detailed justification with significant evidence from the construction and operational phases in addition to the baseline NRA required supporting the case."	This is noted by the Applicant.
ML-MCA-1.6	"Bathymetric Survey Data MGN 654 Annex 4 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the UKHO and MCA for updating of nautical charts and publications. This should include a cable route survey post-construction."	This is noted by the Applicant and a Condition relating to compliance with Marine Guidance Note (MGN) 654 (as required) has been included in Condition 30 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence submission 1).
ML-MCA-1.7	"Turbine Layout Plan The turbine layout plan will require discussion and approval of the MCA and Trinity House prior to construction commencing. This is to ensure risks to navigation safety and search and rescue operations are minimised."	This is noted by the Applicant and a Condition relating to compliance with Marine Guidance Note (MGN) 654 (as required) has been included in Condition 30 of the Marine Licence Principles (Document ML-1.14 of the Applicant's Marine Licence submission 1).
ML-MCA-2.0	"Marine Licence Conditions The MCA would expect the above comments to be addressed by the applicant before the MCA can confirm its support of the Marine Licence application. Once these has been discussed further the MCA would like to request the following navigations safety conditions and advisories are included in the Marine Licence:"	This is noted by the Applicant.
ML-MCA-2.1	"Notifications and Inspections The undertaker must inform NRW in writing at least 5 days prior to the commencement of the authorised project or any part thereof, and within 5 days of completion of the authorised project."	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-MCA-2.2	<p>"The Kingfisher Information Service of Seafish, must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised project or any part thereof by email to kingfisher@seafish.co.uk :-</p> <p>a. at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data, and;</p> <p>b. as soon as reasonably practicable and no later than 24 hours of completion of all offshore activities.</p> <p>Confirmation of notification must be provided to the NRW within 5 days."</p>	This is noted by the Applicant.
ML-MCA-2.3	<p>"The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised project or any part thereof advising of the start date of each Work No.&lt;insert&gt; and the expected vessel routes from the construction ports to the relevant location.</p> <p>Copies of all notices must be provided to NRW, MCA and UKHO within 5 days."</p>	This is noted by the Applicant.
ML-MCA-2.4	<p>"The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least 5 days before any planned operations (or otherwise agreed) and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under deemed marine licence condition &lt;insert&gt;.</p> <p>Copies of all notices must be provided to NRW and UKHO within 5 days."</p>	This is noted by the Applicant.
ML-MCA-2.5	<p>"The undertaker must notify the UKHO of the completion (within 14 days) of the authorised project or any part thereof in order that all necessary amendments are made to nautical charts.</p> <p>Copies of all notices must be provided to NRW and MCA within 5 days."</p>	This is noted by the Applicant.
ML-MCA-2.6	<p>In case of damage to, or destruction or decay of, the authorised project seaward of MHWS or any part thereof, excluding the exposure of cables, the undertaker shall as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify NRW, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UKHO.</p>	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-MCA-2.7	In case of exposure of cables on or above the seabed, the undertaker must within three days following identification of a potential cable exposure, notify mariners and inform Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to NRW, MCA, Trinity House, and the UKHO within 5 days.	This is noted by the Applicant.
ML-MCA-2.8	"Pre-construction plans and documents The authorised project shall not commence until the following have been submitted to and approved by NRW. Each programme, statement, plan, protocol, scheme or other detail required to be approved under this condition must be submitted to NRW for approval at least 6 months prior to the commencement of the authorised project except where otherwise stated."	This is noted by the Applicant.
ML-MCA-2.9	"A plan to be agreed in writing with NRW following appropriate consultation with Trinity House, the MCA and UKHO, setting out proposed details of the authorised project, including the: a. number, dimensions, specification, foundation type(s) and depth for each WTGs, offshore platforms, substations and meteorological masts; b. the grid coordinates of the centre point of the proposed location for each WTG, platform, substation and meteorological mast; c. proposed layout of all cables; and d. location and specification of all other aspects of the authorised project."	This is noted by the Applicant.
ML-MCA-2.10	An Aids to Navigation Management Plan to be agreed in writing by NRW following appropriate consultation with Trinity House specifying how the undertaker will ensure compliance with conditions (1) to (4) of 'Aids to Navigation' from the commencement of construction of the authorised project to the completion of decommissioning.	This is noted by the Applicant.
ML-MCA-2.11	No part of the authorised project may commence until NRW, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised project contained within MGN654 "Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues" and its annexes.	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-MCA-2.12	<p>"A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of:</p> <p>a. Cable specification, installation and monitoring, to include:</p> <p>i. technical specification of offshore cables below MHWS;</p> <p>ii. a detailed cable laying plan for the Order limits, incorporating a burial risk assessment encompassing the identification of any cable protection that exceeds 5% of navigable depth referenced to chart datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised or such similar assessment to ascertain suitable burial depths and cable laying techniques, including cable protection; and</p> <p>iii. proposals for monitoring offshore cables including cable protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of unburied or shallow buried cables."</p>	This is noted by the Applicant.
ML-MCA-2.13	<p>"Pre-construction monitoring and surveys</p> <p>A swath bathymetric survey to IHO Order 1a of the area within the Offshore Order Limits extending to an appropriate buffer around the site, must be undertaken. The survey shall include all proposed cable routes.</p> <p>This should fulfil the requirements of MGN654 and its supporting 'Hydrographic Guidelines for Offshore Renewable Energy Developers', which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications. This must be submitted as soon as possible, and no later than [three months] prior to construction. The Order Limit shapefiles must be submitted to MCA. The Report of Survey must also be sent to NRW."</p>	This is noted by the Applicant.
ML-MCA-2.14	<p>"Aids to Navigation</p> <p>The undertaker shall during the whole period from the commencement of construction of the authorised project to the completion of decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation, and to take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct."</p>	This is noted by the Applicant.



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-MCA-2.15	<p>"The undertaker must during the whole period from the commencement of construction of the authorised project to the completion of decommissioning keep Trinity House and NRW informed of progress of the authorised project including;</p> <p>a. notice of commencement of construction of the authorised project within 24 hours of commencement having occurred;</p> <p>b. notice within 24 hours of any aids to navigation being established by the undertaker; and</p> <p>c. notice within 5 days of completion of construction of the authorised project."</p>	This is noted by the Applicant.
ML-MCA-2.16	The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition <insert> using the reporting system provided by Trinity House.	This is noted by the Applicant.
ML-MCA-2.17	The undertaker must during the whole period from the commencement of construction of the authorised project to the completion of decommissioning notify Trinity House and NRW of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.	This is noted by the Applicant.
ML-MCA-2.18	<p>"Colouring of structures</p> <p>Except as otherwise required by Trinity House the undertaker must paint all structures forming part of the authorised project yellow (colour code RAL 1023) from at least HAT to a height as directed by Trinity House. Unless NRW otherwise directs, the undertaker must paint the remainder of the structures grey (colour code RAL 7035)."</p>	This is noted by the Applicant.
ML-MCA-2.19	<p>"Construction Monitoring</p> <p>Construction monitoring must include vessel traffic monitoring by automatic identification system for the duration of the construction period. An appropriate report must be submitted to NRW, Trinity House and the MCA at the end of each year of the construction period."</p>	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
ML-MCA-2.20	All dropped objects must be reported to NRW, UKHO and HMCG as soon as reasonably practicable and no later than 6 hours of the undertaker becoming aware of an incident. Immediate notification should be made to HM Coastguard via telephone where there is a perceived danger or hazard to navigation. On receipt of the notification, NRW may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and NRW may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.	This is noted by the Applicant.
ML-MCA-2.21	"Post-construction plans and documents  The undertaker must conduct a swath bathymetric survey to IHO Order 1a of the installed export cable route and provide the data and survey report(s) to the MCA and UKHO. NRW should be notified once this has been done, with a copy of the Report of Survey also sent to NRW."	This is noted by the Applicant.
ML-MCA-2.22	"On post decommissioning, the undertaker must conduct a swath bathymetric survey to IHO Order 1a of the cable route and the installed generating assets area and provide the data and survey report(s) to the MCA and UKHO.  This should fulfil the requirements of MGN654 and its supporting 'Hydrographic Guidelines for Offshore Renewable Energy Developers', which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications."	This is noted by the Applicant.
ML-MCA-2.23	Post construction monitoring must include vessel traffic monitoring by automatic identification system for a duration of three consecutive years following the completion of construction of authorised project, unless otherwise agreed in writing by NRW. An appropriate report must be submitted to NRW, Trinity House and the MCA at the end of each year of the three year period.	This is noted by the Applicant.
ML-MCA-2.24	"Completion of Construction  The undertaker must submit a close out report to NRW, MCA, UKHO within three months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details:  a. the final number of installed wind turbine generators;  b. as built plans; and	This is noted by the Applicant.

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	<p>c. latitude and longitude coordinates of the centre point of the location for each wind turbine generator and offshore platform, substation, booster station and meteorological mast; provided as Geographical Information System data referenced to WGS84 datum.</p> <p>d. latitude and longitude coordinates of the inter array and export cable routes; provided as Geographical Information System data referenced to WGS84 datum."</p>	
ML-MCA-3	<p>"Notifications to MCA should be sent to:</p> <ul style="list-style-type: none"> <li>UK Technical Services – Navigation: <a href="mailto:navigationsafety@mcga.gov.uk">navigationsafety@mcga.gov.uk</a></li> <li>HM Coastguard: <a href="mailto:renewables@hmcg.gov.uk">renewables@hmcg.gov.uk</a> and <a href="mailto:zone32@hmcg.gov.uk">zone32@hmcg.gov.uk</a>"</li> </ul>	This is noted by the Applicant.
ML-MCA-4.1	<p>"Advisories</p> <p>No radio beacon or radar beacon operating in the Marine frequency bands shall be installed or used on the works without prior written approval by OFCOM."</p>	This is noted by the Applicant.
ML-MCA-4.2	Any jack up barges / vessels utilised during the works/laying of the cable, when jacked up, should exhibit signals in accordance with the UK Standard Marking Schedule for Offshore Installations.	This is noted by the Applicant.
ML-MCA-4.3	It should be noted there is a legal obligation, under part 9 of the Merchant Shipping Act 1995, to report all recoveries of wreck material to the Receiver of Wreck. This must be done within 28 days of recovery. Failure to report the recovery of wreck material to the Receiver is a criminal offence. Additional information and a report of wreck and salvage form can be found at <a href="http://www.gov.uk/guidance/wreck-and-salvage-law">www.gov.uk/guidance/wreck-and-salvage-law</a> .	This is noted by the Applicant.
ML-MCA-5	<p>"Conclusion</p> <p>On the understanding that above requirements will be agreed and implemented, and all maritime safety legislation will be followed, I can confirm we have no objections to a licence being granted on this occasion.</p> <p>If you have any questions regarding any of the above, please do not hesitate to contact me or colleagues within UK Technical Services Navigation."</p>	This is noted by the Applicant.

## 2.17 Janet Finch-Saunders MS

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
0	<p>Dear Sir/Madam,</p> <p>I hope that this letter finds you well. I am writing with regards to the marine licence application for the proposed Awel y Môr (AyM) offshore wind farm.</p> <p>Having considered the documentation, I wish to formally object to the granting of a licence. Please find below the reasons below:</p>	<p>This is noted by the Applicant.</p>
1	<p>I understand that the geophysical assessment of the interlink area between AyM and Gwynt y Môr is reliant solely on a previous assessment undertaken by Wessex Archaeology. However, the survey data for that previous assessment did not cover the entire interlink area. As such, and as is noted in the document entitled 'Category 6: Environmental Statement Volume 2, Chapter 11: Offshore Archaeology and Cultural Heritage' the potential remains for unidentified features of archaeological potential to be present within the interlink area. As such I think it reasonable to suggest that a geophysical assessment be undertaken of the whole interlink area;</p>	<p>The data gap in this area is acknowledged by the Applicant in paragraph 51 of the Offshore Archaeology and Cultural Heritage chapter (Document reference 6.2.11), however it should be noted that it is considered the existing data collected in the interlink area for the GyM site is considered adequate for characterising the receiving environment for EIA purposes, as characterised by the Offshore Archaeology Desk Based Assessment (Document reference 6.4.11.1).</p> <p>Addressing this data gap is addressed within the mitigation section of the assessment chapter, specifically under Section 11.10.4, which recommends that in line with the outline offshore WSI (Document reference 8.3), archaeologists be involved during the post-consent phase of the interlink area to ensure a full assessment of the area is achieved pre-construction. It is anticipated that NRW will include a WSI as a condition in the Marine Licence. The Applicant has recognised this in Condition 27 of the Marine Licence Principles document (Document ML-1.14 of the Applicant's Marine Licence Submission 1) and does not consider that this results in any changes to the outcomes of the assessment.</p>
2	<p>It is my understanding that although the proposed development is confined to the Site Investigation Boundary, the exact layout of the proposed turbines, other structures and cable route have not been confirmed. As such, there is no clear Maximum Design Scenario for assessing potential adverse impacts on offshore archaeological and cultural heritage receptors. Therefore, I am concerned that the worst-case scenario approach does not properly ensure that any difference in layout has been fully captured as part of the assessment in the Environmental Statement;</p>	<p>In line with the 'Design Envelope' approach (see Section 1.2 of the Offshore Project Description chapter (Document reference 6.2.1), at this stage in the AyM development process, decisions on exact locations of infrastructure and the precise technologies and construction methods employed cannot be made. Therefore, the ES at this stage sets out the main components and parameters of the project and the design envelope approach (often referred to as the 'Rochdale Envelope') has been used to provide certainty that the final project as built will not exceed these parameters, whilst providing the necessary flexibility to</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		accommodate further project refinement during the detailed design phase post-consent. This approach is accepted within the National Policy Statement (NPS) for Renewable Energy Infrastructure (EN-3), for example in paragraph 2.6.42, and has been recognized by the relevant stakeholders as appropriate.
3	<p>There is a risk of total or partial loss of archaeological receptors during the decommissioning phase due to the draw-down of sediments. I understand that the draw-down of sediment into voids left by removed turbine foundations could lead to loss of sediment, destabilising archaeological sites and contexts, and exposing such material to natural, chemical or biological processes, and causing or accelerating loss of the same. Even more concerning, is that RWE have tried to justify this by explaining that currently only general locations of known wrecks and obstructions are available, with the position and extent of the marine archaeological resources not yet established, and therefore that mitigation will include a review of the geophysical survey and monitoring data throughout the life of the project to gain a greater understanding of the archaeological resource and the long-term effect of the development. I think it unacceptable for the project to proceed until such a time that there is complete certainty as to the position and extant of the marine archaeological resources.</p> <p>Indeed, whilst I acknowledge that there is an intention to report unexpected finds, this provides no certainty that the risk of total or partial loss of the archaeological receptor can or will be mitigated;</p>	<p>This is noted by the Applicant, however it is considered that the mitigation proposed, such as archaeological review of post-consent monitoring data in addition to the Protocol for Archaeological Discoveries (PAD) in relation to unexpected finds, will reduce potential adverse effects to non-significant levels. Furthermore, it is considered that should there be increased sedimentation resulting in the burial of archaeological material, there could be a minor beneficial effect. This approach is outlined in the Outline Offshore WSI (Document reference 8.3).</p>
4	<p>According to RIAA Annex 5: Ornithology Apportioning Note there is the potential for offshore wind farms to have a negative effect on the integrity of Special Protection Areas within foraging range of the offshore wind farm site during the breeding season;</p>	<p>The Applicant has produced a thorough Report to Inform Appropriate Assessment (RIAA) (Document reference 5.2), inclusive of designated ornithological interests, the methodology for which has been widely discussed and agreed with the relevant statutory nature conservation bodies via the Evidence Plan process (see the Evidence Plan Report and supporting appendices (Document reference 8.2, 8.2.1 and 8.2.2)). The RIAA has concluded that there will be no Adverse Effect on Integrity (AEol) on any of the SPAs screened-in to the assessment process, which has also been agreed with NRW (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
5	The document entitled '6.2.7_AyM_ES_Volume2_Chapter7_MarineMammals_vFinal' seems to be unavailable for download and study by interested parties;	The marine mammals chapter is available on the PINS website (Document 6.2.7). Minor typographical errors were noted in this document which is now superseded by a revised version (available under reference AS-026 of the DCO Examination Library on the PINS website). Additional errors have been corrected in the Errata list submitted at Deadline 1, (PINS reference REP1-004).
6	The applicant has not been able to carry out a quantitative assessment of the magnitude or significance of the impact of temporary threshold shift (TTS) on marine mammals. Whilst such an approach has been agreed with Natural England, the MMO and CEFAS and, as such, recent projects have not presented an assessment of magnitude, sensitivity or resulting significance for TTS-onset, I am unclear as to the NRW stance on the matter;	As described within the marine mammals chapter (Document reference 6.2.7), full details of the underwater noise modelling and the resulting TTS-onset impact areas and ranges are detailed in Volume 4, Annex 6.2: Subsea Noise Technical Report (Document reference 6.4.6.2). However, there are no thresholds to determine a biologically significant effect from TTS onset, therefore the predicted ranges and area for the onset of TTS are presented, but no assessment of the number of animals, magnitude, sensitivity or significance of effect is given. This approach was agreed with members of Marine Mammals & Marine Ecology Expert Topic Group (which included NRW) through the Evidence Plan process (21 September 2020) and follows the advice provided in the Scoping Opinion. Further to this, the Applicant has engaged with NRW in post-application consultation and provided a clarification note (Document ML-1.8 of the Applicant's Marine Licence Submission 1). It is understood that this matter is now resolved and NRW are in agreement with the Applicant's position (see the offshore SoCG (Document ML-1.28 of the Applicant's Marine Licence Submission 1)).
7	The commercial fisheries stakeholder group meeting held on September 2020 saw concerns raised about underwater noise and effects of fish resources; potential for extension of the Traffic Separation Scheme north of AyM; long term effects from construction and operation; and cumulative effects from other projects. I believe that further dialogue is required with the stakeholder group so to ensure that they are content with proposals before granting a licence;	Extensive consultation has been undertaken with commercial fishermen and fisheries groups throughout the pre-application phase, as described in the commercial fisheries consultation record (Document reference 6.4.8.2). The Applicant is committed to ongoing liaison with fishermen throughout all stages of the project and has appointed a Fisheries Liaison Officer (FLO) to maintain effective communications between the Applicant and fishermen. The Applicant has provided an updated FLCEP (Document ML-1.21 of the Applicant's Marine Licence Submission 1).
8	The Welsh Fishermen's Association have highlighted that while it is acknowledged that there is no statutory location data on most 12m and under vessels, due to current VMS rules, the National Policy Statement EN-3 says	Commercial fisheries activity is described in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.7 and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1).



REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
	<p>'Robust baseline data should have been collected and studies conducted as part of the assessment'. I agree with the Association that such missing vessel location information is of serious concern, and as such I would be grateful if you could ascertain whether the applicant has or will complete the data set as part of the assessment. The majority, approximately 90%, of the Welsh fleet are vessels 12m and under in length. As such, I agree with the suggestion that the information gap makes the impact pathway assessment conclusions unreliable with respect to the impacts on commercial fisheries from all aspects of the development. This seem to be the case when considering that RWE have noted that VMS data available to the applicant does not include vessels &lt;15m length;</p>	<p>All available baseline data sources have been collected and analysed, as described in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.7 and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1).</p> <p>VMS data available to the Applicant does not include vessels &lt;15m length. VMS data sourced from MMO displays the value of catches by different gear types and covers UK registered vessels ≥15m length. VMS data from 2017 was presented at PEIR as it represented the most recent data made publicly available by the MMO at the time of PEIR publication. Data for 2018/19 is now available and has been presented in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.7 and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1).</p> <p>Fisheries landings statistics sourced from the MMO include landings made by vessels of both under and over 10m length. Limitations associated with data sources are clearly identified in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.4.5 and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1). Comprehensive engagement in the form of fisheries group meetings and individual interviews with fishermen has been undertaken to understand fishing activity within the AyM area; findings have been incorporated into the description of existing fishing activity presented in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.7, and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1). The Consultation Report (Document reference 5.1) provides a detailed account of all consultation undertaken during the AyM project evolution, including consultation with the commercial and recreational charter fishing interests.</p>
9	<p>Lack of consideration given to the impact on proposals for large areas of integrated multi trophic aquaculture development close to the proposed AyM site;</p>	<p>As described in the commercial fisheries consultation record (Document reference 6.4.8.2), it is acknowledged that whilst the Welsh National Marine Plan identifies potential for the future development of aquaculture production, that shellfish farming is currently undertaken within the Menai Strait, and there exist initial proposals for the development of three shellfish cultivation sites off the North Wales coast, no existing or future development locations were identified within</p>

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
		proximity to the AyM boundaries within the planning system. The Applicant has discussed the project with Deepdock Aquaculture who have future plans for long-line aquaculture in the region. The Applicant would welcome any more specific information from Janet Finch-Saunders on this matter.
10	Concern that the fishers in the area have been reporting changes in fish abundance and diversity in this local area for many years, since the construction of the North Hoyle, Rhyl Flats and Gwynt y Môr windfarms that have impacted their livelihoods. There needs to be complete clarity that the development would not result in a negative impact on the livelihoods of fishers and changes in fish abundance before a licence is granted.	Trends in commercial landings have been described in Volume 2, Chapter 8 (Document reference 6.2.8), Section 8.7 and Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1). In interviews with fishermen, a question was asked around observed trends in catches. Trends are understood to be influenced by a number of factors, as described in Annex 8.1: Commercial Fisheries Technical Report (Document reference 6.4.8.1).

## 2.18 Angel Bay Seal Volunteers

REFERENCE	STAKEHOLDER COMMENT	APPLICANT'S RESPONSE
1	<p>We are a group of volunteers, supported by the North Wales Wildlife Trust, who have been monitoring grey seals for the last 6 years at Porth Dyniewaid (Angel Bay), Llandudno (grid reference SH 818 827). We have also begun to assist monitoring efforts at Pigeon's Cave, the Great Orme (grid reference SH 778 838).</p> <p>As raised during the previous two direct Awel y Mor consultations, we wish to re-state that there are two significant Grey Seal Haul-out sites at Llandudno and Penrhyn Bay.</p> <p>We frequently have over 200 seals hauled out, in one instant, at Angel Bay. Also, our combined haul-out count, at Angel Bay and the Great Orme has, on more than one occasion, exceeded 300.</p> <p>These haul-out sites are:</p> <ul style="list-style-type: none"> <li>➤ 12 km away from the Array Area and are on the edge of Awel y Mor's published pile-driving impact decibel chart.</li> <li>➤ Used for pupping, mating and moulting from Mid-August to April inclusive and visited by seals all year round.</li> <li>➤ Well known to the SMRU, NWWT, Cofnod and NRW. Our data has been shared with these organisations.</li> </ul> <p>We feel that, if the construction goes ahead, it would be a valuable opportunity to perform an up-to-date scientific study of the impact of windfarm construction on marine life, as these two haul out sites are easily accessible for observation.</p> <p>If you require any further information, please do not hesitate to contact us.</p>	<p>The haul-out sites monitored by the Angel Bay Group were included in the marine mammal baseline technical report (Document reference 6.4.7.1), including both text on the size of the haul-outs, their locations relative to the Project and figures taken from the recent report: Angel Bay Seal Volunteer Group. 2021. Angel Bay Seal Data Summary 2020/2021.</p> <p>With regard to the potential to use these as a study site for the impacts of offshore wind farms on seals, the Applicant is willing to explore this and can keep the Angel Bay Seal Volunteers notified of the timing of offshore construction works which may help inform any future monitoring plans the group may have.</p>

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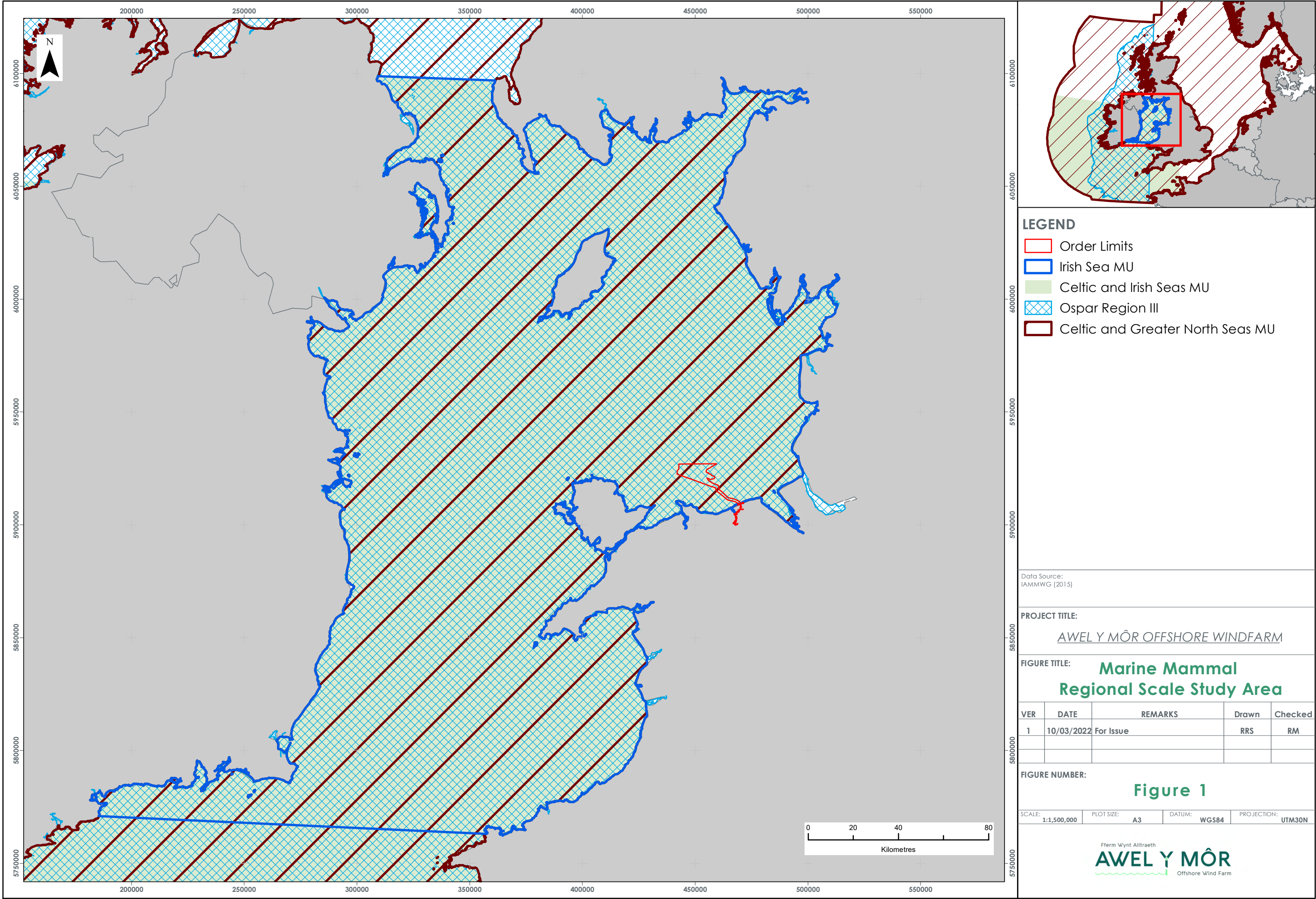
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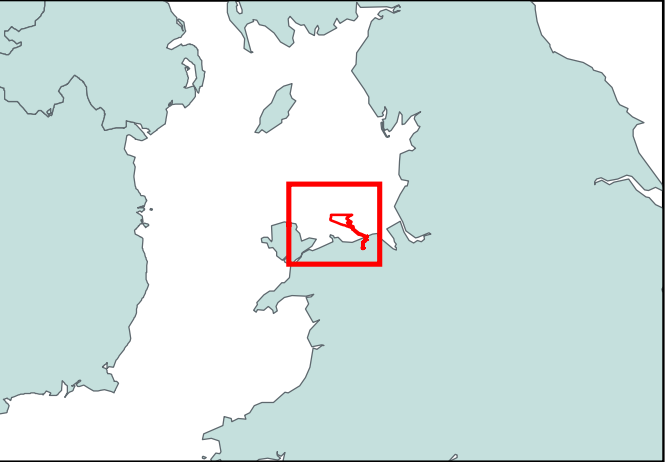
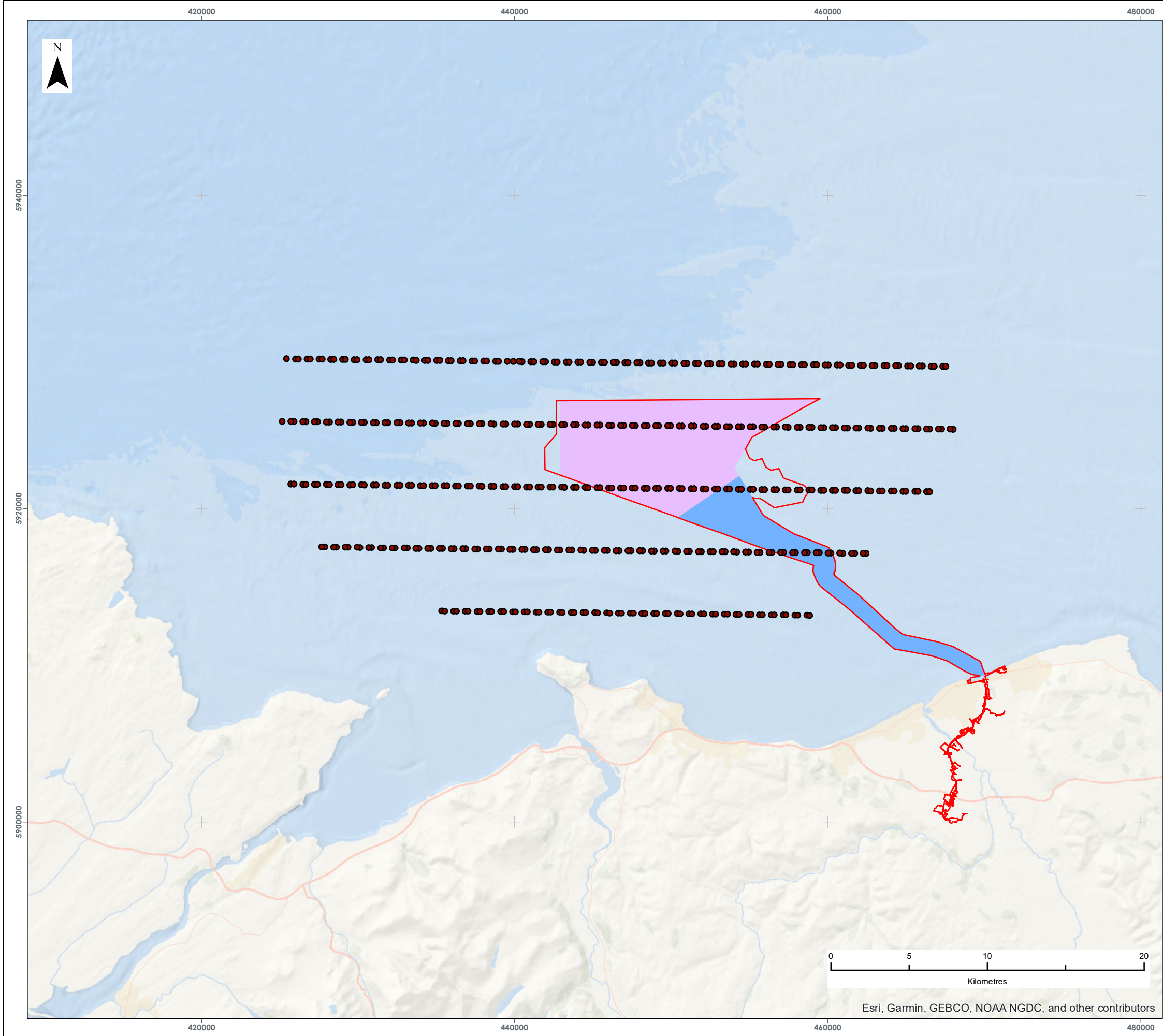
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## 4 Appendix A - Corrected Figures 1, 2, 18, 19 and 21 from Revised Marine Mammals Chapter (Document reference 6.2.7)







**LEGEND**

- Order Limits
- Array Area
- Offshore Export Cable Corridor
- Site Specific Surey Area - GPS Positions

Data Source:  
APEM

PROJECT TITLE:  
AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:  
**Marine Mammal  
Site Specific Survey Area**

VER	DATE	REMARKS	Drawn	Checked
1	10/03/2022	For Issue	RRS	RM

FIGURE NUMBER:  
**Figure 2**

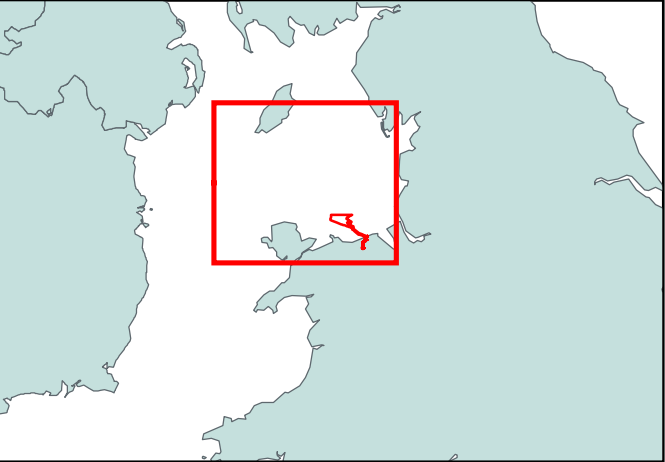
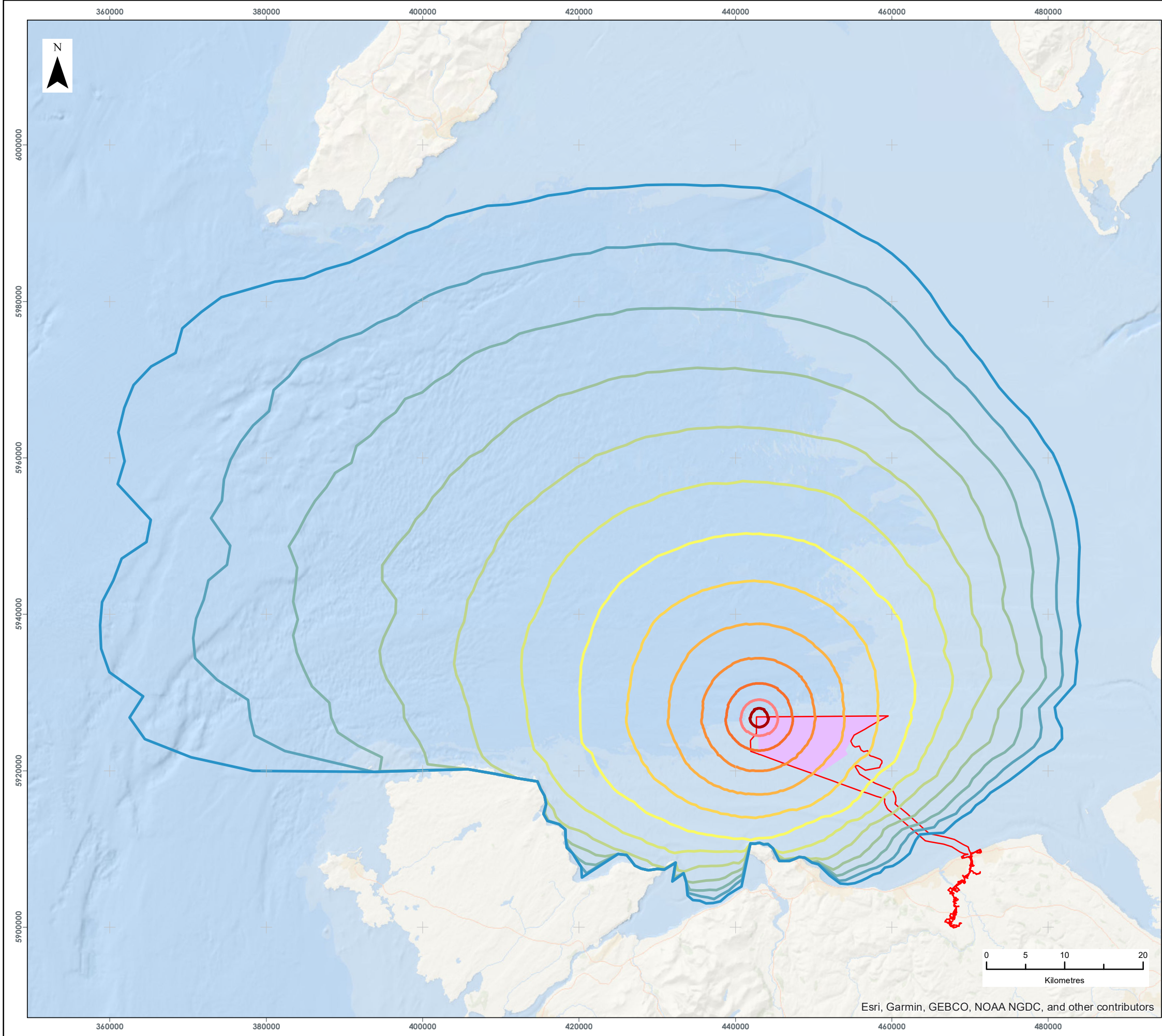
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AWEL Y MÔR

Offshore Wind Farm





**LEGEND**

Order Limits

Array Area

NW Monopile Disturbance Dose-Response Contours

- 120 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 125 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 130 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 135 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 140 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 145 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 150 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 155 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 160 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 165 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 170 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 175 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 180 SELss dB re 1  $\mu\text{Pa}^2\text{s}$

Data Source:  
Subacoustech Enviromental Ltd

PROJECT TITLE:  
*AWEL Y MÔR OFFSHORE WINDFARM*

FIGURE TITLE:  
**Harbour Porpoise  
Disturbance Contours**

VER	DATE	REMARKS	Drawn	Checked
1	10/03/2022	For Issue	RRS	RM

FIGURE NUMBER:  
**Figure 18**

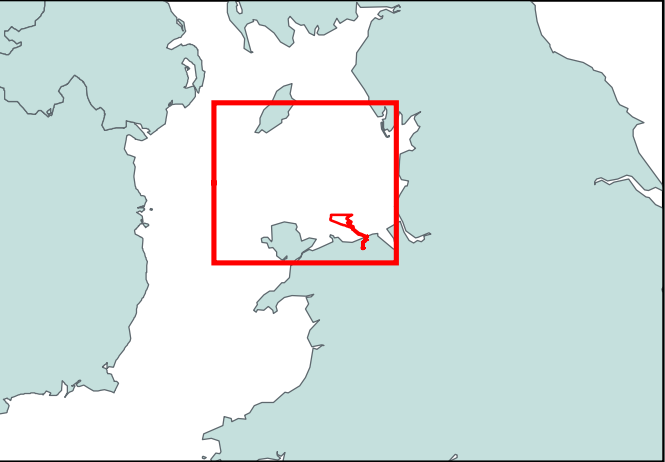
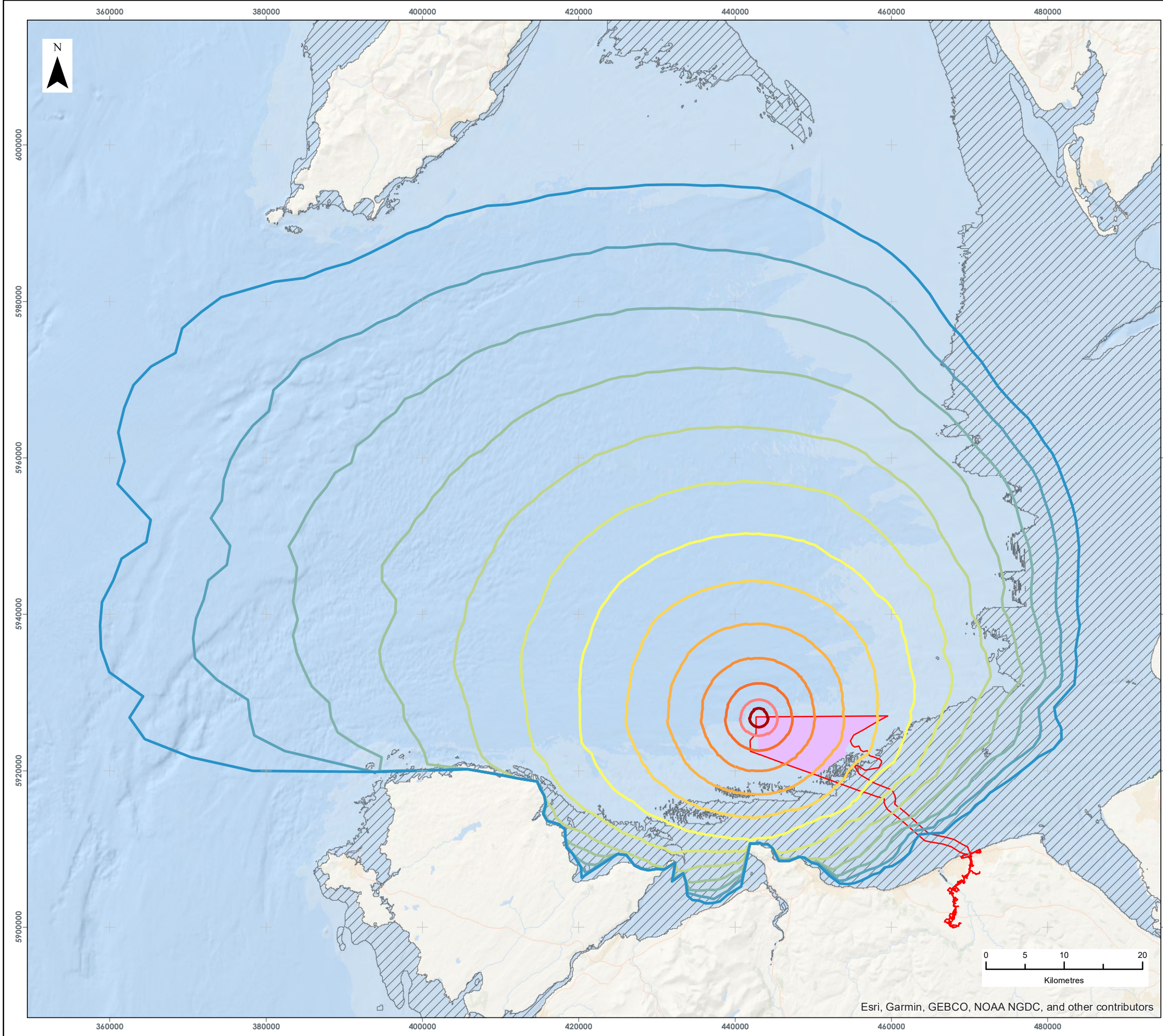
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Offshore Wind Farm





LEGEND

- Order Limits
- Array Area
- 20 m Depth Contour

NW Monopile Disturbance Dose-Response Contours

- 120 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 125 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 130 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 135 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 140 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 145 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 150 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 155 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 160 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 165 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 170 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 175 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- 180 SELss dB re 1  $\mu\text{Pa}^2\text{s}$

Data Source:  
Subacoustech Environmental Ltd

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:

**Bottlenose Dolphin  
Disturbance Contours**

VER	DATE	REMARKS	Drawn	Checked
1	10/03/2022	For Issue	RRS	RM

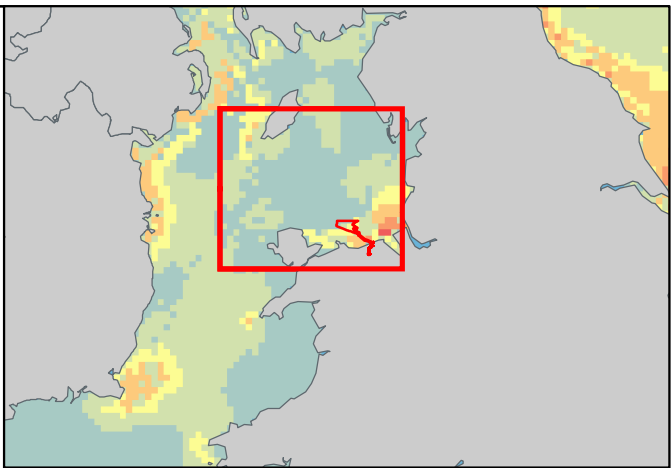
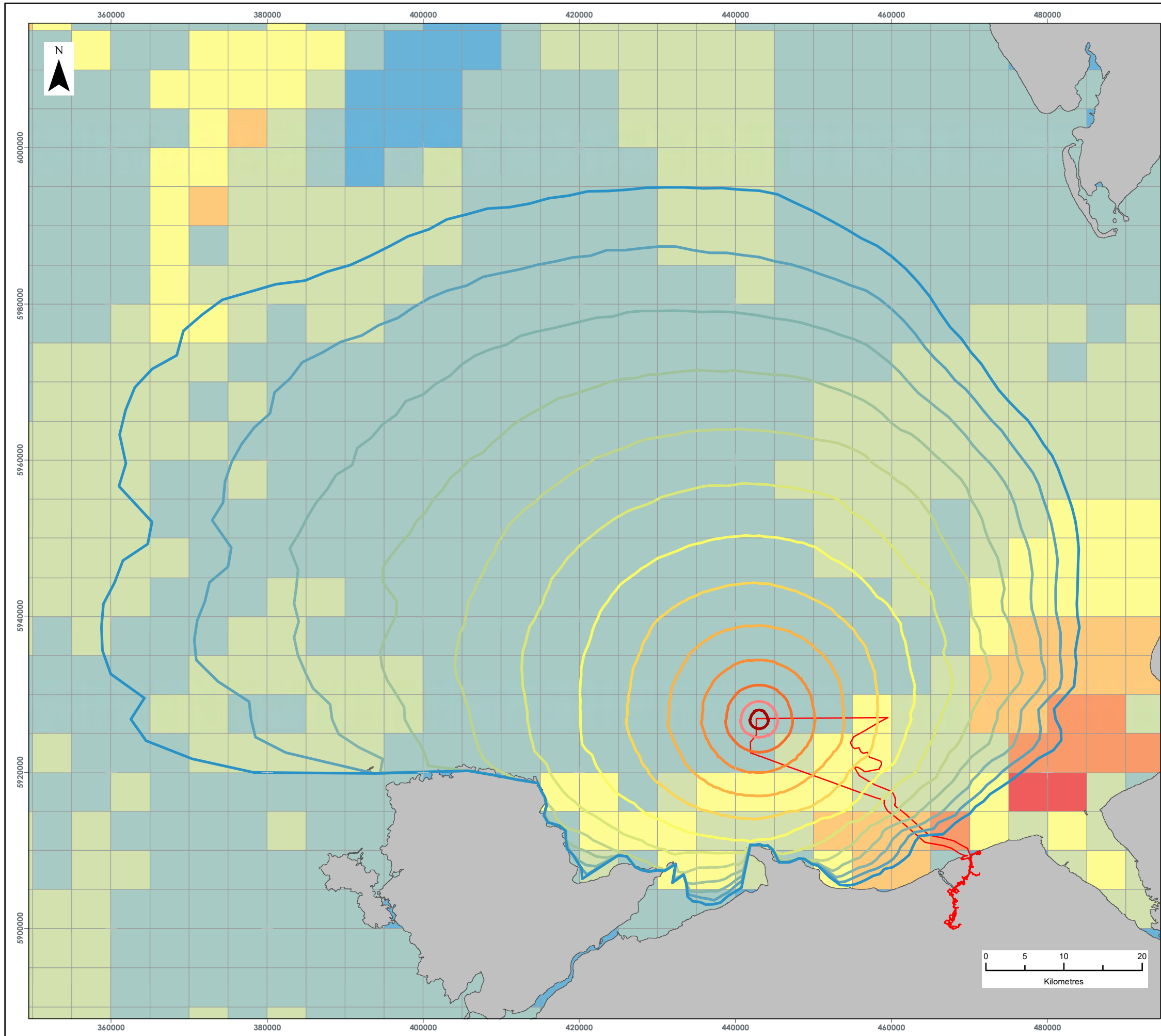
FIGURE NUMBER:

**Figure 19**

SCALE: 1:500,000	PLOT SIZE: A3	DATUM: WGS84	PROJECTION: UTM30N
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Offshore Wind Farm





### LEGEND

- Order Limits
- NW Monopile  
Disturbance Dose-  
Response Contours
- 120 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 125 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 130 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 135 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 140 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 145 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 150 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 155 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 160 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 165 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 170 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 175 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
  - 180 SELss dB re 1  $\mu\text{Pa}^2\text{s}$
- % British Isles At-  
Sea Population  
per 25 km<sup>2</sup> cell
- 0.00
  - 0.00 - 0.001
  - 0.001 - 0.005
  - 0.005 - 0.01
  - 0.01 - 0.025
  - 0.025 - 0.05
  - >0.05

Data Source:  
Subacoustech Environmental Ltd

#### PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

#### FIGURE TITLE:

**Grey Seal  
Disturbance Contours**

VER	DATE	REMARKS	Drawn	Checked
1	10/03/2022	For Issue	RRS	RM

#### FIGURE NUMBER:

**Figure 21**

SCALE:	1:500,000	PLOT SIZE:	A3	DATUM:	WGS84	PROJECTION:	UTM30N
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