

Peter Morrison
Lead Specialist Officer (Marine Licencing)
Natural Resources Wales
Cambria House
Cardiff

JNCC Reference: OIA-08802
Date: 3 August 2022

Dear Peter,

ORML2233 - Awel y Môr Offshore Wind Farm Limited, Marine Licence under Part 4 of the Marine and Coastal Access Act 2009

Thank you for consulting JNCC on the RWE Renewables UK Marine Licence application, which we received on 22 June 2022.

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.

The advice below relates to:

- **Marine Ornithology**
- **Marine Mammals**

Marine Ornithology Comments

6.2.4. Environmental Statement Volume 2, Chapter 4: Offshore Ornithology

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 25.13km².

Paragraph 167 gives a density of common scoter of between 99.2 and 138.2 individuals/km². 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.

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.

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.

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.

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.

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.

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.

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.

5.2 Report to Inform Appropriate Assessment

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.

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.

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.

5.2.5. Report to Inform Appropriate Assessment, Annex 5: Ornithology Apportioning Note

Full apportioning calculations for all SPAs and designated features should be presented in this annex. Please provide these calculations.

Marine Mammal Comments

6.2.7. Environmental Statement Volume 2, Chapter 7: Marine mammals

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.

Sensitivity of cetaceans to PTS

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.

Existing environment

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.

PTS assessment

We agree with the methodology applied and that potential injury ranges using both the SPL_{peak} (referred to as instantaneous PTS) and SEL_{cum} (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.

Disturbance assessment for piling

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.

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 understand how different species may react to different situations, and what other factors may influence their behaviour.

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.

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.

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.

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.

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 the NE Atlantic area. We request the applicant consider submitting their baseline data to this project.

6.4.7.3. Volume 4, Annex 7.3 Marine mammal quantitative assessment assumptions

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.

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.

6.4.6.2. Volume 4, Annex 6.2 Underwater noise technical report

We have no additional comments on this report.

6.4.7.2. Volume 4, Annex 7.2 Draft Marine Mammal Mitigation Plan (MMMP)

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.

Other comments:

ADD choice

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.

Duration of ADD deployment

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.

Noise abatement

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).

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.

Report 5.2 Report to Inform Appropriate Assessment

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.

We defer to NRW regarding adverse effects to SACs designated for seals and bottlenose dolphins as these are solely within territorial waters.

Section 10.2 Assessment of adverse effects alone for marine mammals

Injury (PTS) to harbour porpoise

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.

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.

Disturbance to harbour porpoise

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.

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 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.

Section 11.2 Assessment of adverse effects in-combination for marine mammals

Injury (PTS) to harbour porpoise

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.

Disturbance to harbour porpoise

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.

Please contact me with any questions regarding the above comments.

Yours sincerely,

Jillian Whyte

Offshore Industries Adviser

Email: [REDACTED]

Telephone: [REDACTED]