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JNCC Reference: OIA-10607
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Date: 14 January 2025

To whom it may concern,

Mona Offshore Wind Project Development Consent Order Application – Environmental Statement and Management Plans – EN010137 – JNCC's Final Closing Statement

Thank you for consulting JNCC on the Mona Offshore Wind Project Development Consent Order (DCO) Application including the Environmental Statement (ES) and Management Plans. Notification of acceptance for examination by the Secretary of State for Energy Security and Net Zero was received on 21 March 2024.

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 and defer to comments provided by Natural Resources Wales Advisory (NRW (A)) for aspects relating to inshore waters and Natural England (NE) where appropriate.

The advice below relates to:

- Ornithology
- Marine Mammals
- Benthic

1 Summary

This is JNCC's final closing statement detailing outstanding concerns regarding ornithology, marine mammals, and benthic which relate to nature conservation issues in UK offshore waters (beyond the territorial limit).

The Joint Nature Conservation Committee (JNCC) is the statutory adviser to Government on UK and international nature conservation, on behalf of the Council for Nature Conservation and the Countryside, Natural Resources Wales, Natural England and NatureScot. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems.

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We are in agreement with the Applicant's methods to assess the impact on offshore ornithology with the exception of two aspects of the assessment, which we are of the opinion do not materially alter the assessment outcome on this occasion.

We agree with the Applicant's conclusions regarding no Adverse Effect on Integrity (AEoI) alone or in-combination with other plans or projects for all relevant Special Protection Areas (SPA) for which JNCC has sole or joint responsibility: Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA; Liverpool Bay/Bae Lerpwl SPA; and Irish Sea Front SPA.

We agree with the Applicant's conclusions regarding the significance of effect alone and cumulatively with other plans or projects at Environmental Impact Assessment (EIA) scale, with the exception of great black-backed gull cumulative impact. We are unable to rule out a significant adverse impact on great black-backed gull from cumulative collision mortality. However, we are satisfied that the proposed mitigation (raising of turbine air gap) is proportionate.

The one outstanding marine mammal concern relates to the inclusion of UXO clearance in the Development Consent Order (DCO)/deemed Marine License (dML). JNCC are content for the investigative surveys to be included however, we maintain our position that clearance of UXOs by detonation should not be included as a licensed activity in the DCO/dML. If low order deflagration were to remain a licenced activity, additional conditions will be required to ensure operations remain within the scenario assessed in the impact assessment and sufficient information is provided to ensure impacts can be mitigated.

Outstanding Benthic concerns include marine decommissioning activities which have not been fully considered, the inclusion of wording within the Mitigation and Monitoring Schedule in relation to the 'seapens and burrowing megafauna communities' Important Ecological Feature (IEF), increased transparency in the Applicant's calculations of the Maximum Design Scenario (MDS), and all changes and updates to be fully incorporated in clean final versions of the initial submissions.

We would also like to re-highlight the differing remits of the two Statutory Nature Conservation Bodies (SNCBs) concerned (JNCC and NRW (A)) and remind the Applicant that both agencies advice is pertinent to the specific remit and geographic area that they cover.

2 Ornithology final closing statement

2.1 Methods

We are in agreement with the Applicant's methods to assess the impact on offshore ornithology with the exception of the points raised below. We note that, although we disagree with the methods outlined below, we are of the opinion that they are not material to the assessment outcomes on this occasion.

2.1.1 Environmental Impact Assessment (EIA)-scale breeding season reference population

JNCC advice has been to define the breeding season region (and hence the reference population) within the Environmental Impact Assessment (EIA) on the Biologically Defined Minimum Population Scales (BDMPS, Furness, 2015). However, the Applicant's approach has been to define the reference population by foraging range. At the EWG07 meeting, JNCC and the Applicant agreed to disagree on this matter (D.8 of Technical Engagement

Plan Appendices A-E APP-042). Although we disagree with the method used, we are of the opinion that it does not materially alter the assessment outcome on this occasion.

2.1.2 Calculation of apportioning impacts to Special Protection Areas (SPAs) in the non-breeding season alone assessment

For the project alone assessment in the non-breeding season, two approaches have been used to apportion impacts to breeding colony Special Protection Areas (SPAs):

- The SNCB-advised approach using site-specific information on age classes from Digital Aerial Survey where available, otherwise all birds are assumed to be adults.
- The Applicant's preferred method of apportioning to SPAs in the non-breeding season.

We do not agree with the use of the Applicant's method of apportioning to SPAs in the non-breeding season if not used in conjunction with the Applicant's age-class apportioning method. We also do not agree with the combination of site-specific information on ages or 100% adults within the Applicant's SPA apportioning method. We note that the Applicant's approach generates a higher apportionment value for a designated site. Therefore, whilst we would not necessarily agree with this approach, we consider that it is unlikely to under-estimate impacts, and we are therefore satisfied with this approach for this project's assessment.

2.2 Habitats Regulations Assessment

In our view, the proposed project is not directly connected with or necessary for the conservation management of any SPA for which JNCC has sole or joint responsibility.

In summary, our conclusions on Likely Significant Effect (LSE) and Adverse Effect on Integrity (AEoI) to each SPA for which JNCC has sole or joint responsibility are presented in Table 3.1 below.

Table 3.1 Summary of the Likely Significant Effect (LSE) and Adverse Effect on Integrity (AEoI) for each SPA.

SPA	Feature	LSE concluded?	AEoI concluded?
Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA	European storm petrel	No	N/A
	Manx shearwater	Yes	No
	Atlantic puffin	Yes	No
	Lesser black-backed gull	Yes	No
	Seabird assemblage	Yes	No
Liverpool Bay/Bae Lerpwl SPA	Red-throated diver	Yes	No
	Common scoter	Yes	No

	Little gull	Yes	No
	Little tern	Yes	No
	Common tern	Yes	No
Irish Sea Front SPA	Manx shearwater	Yes	No

2.2.1 Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA

The relevant seabird features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA are:

- European storm petrel
- Manx shearwater
- Atlantic puffin
- Lesser black-backed gull
- Seabird assemblage

We detail below our conclusions regarding LSE and AEoI to each feature below.

2.2.1.1 European storm petrel

We agree with Table 1.68 of the Habitats Regulations Assessment (HRA) Stage 1 Screening (REP2-012) that there is no LSE to European storm petrel.

2.2.1.2 Manx shearwater

The predicted in-combination 1,561.38 mortalities annually (collision and 70% displacement rate and 10% mortality rate), of which Mona contributes 66.14 mortalities annually, represents a 1.32% increase in baseline mortality. The Population Viability Analysis (PVA) suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.998. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions. Therefore, we agree with the conclusion that AEoI from the project alone and in-combination with other Plans and Projects can be ruled out, even under the worst-case impact scenario.

We note that the Applicant expects to submit a revised in-combination assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the in-combination mortalities have decreased to 1,546.61 mortalities annually since the last submission (REP5-074), this is a negligible change. Therefore, the revised in-combination PVA is not significantly different to that provided previously, upon which we based our conclusions. Therefore, we are still of the opinion that AEoI from the project alone and in-combination with other Plans and Projects can be ruled out, even under the worst-case impact scenario.

2.2.1.3 Atlantic puffin

We agree with the information provided in Section 1.5.1.3 to 1.5.1.4 of REP4-030 which, through the calculation of more than 0.0 apportioned mortalities (REP4-030, Table 1-8), the Applicant has effectively concluded a LSE to Atlantic puffin. We consider that AEoI from the project alone can be ruled out on the basis that these mortalities constitute less than a 1% increase in baseline mortality (REP4-030, Table 1-8). We also consider that AEoI from the project in-combination with other Plans and Projects can be ruled out for these SPAs on the basis that these mortalities constitute less than a 0.05% increase in baseline mortality (REP4-030, Table 1-8), even under the worst-case impact scenario.

2.2.1.4 Lesser black-backed gull

We agree with the information provided in Section 1.5.2.13 to 1.5.2.15 of REP4-030 which, through the calculation of more than 0.0 apportioned mortalities (REP4-030, Table 1-17), the Applicant has effectively concluded a LSE to lesser black-backed gull. We consider that AEoI from the project alone can be ruled out on the basis that these mortalities constitute less than a 1% increase in baseline mortality (REP4-030, Table 1-17). We also consider that AEoI from the project in-combination with other Plans and Projects can be ruled out for these SPAs on the basis that these mortalities constitute less than a 0.05% increase in baseline mortality (REP4-030, Table 1-17).

2.2.1.5 Seabird assemblage

Seabird assemblage with an estimated 394,260 individuals in total at designation, and the main components are razorbill, common guillemot, black-legged kittiwake, Atlantic puffin, lesser black-backed gull, Manx shearwater, and European storm petrel. The Applicant has made individual assessments of the impact of the Project on each assemblage component:

2.2.1.5.1 Razorbill

The predicted in-combination 35.40 mortalities annually (70% displacement rate and 10% mortality rate), of which Mona contributes 3.04 mortalities annually, represents a 2.27% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.997. This suggests that even at the worst-case scenario of 70% displacement and 10% mortality there will be only a small impact on the growth rate in comparison to baseline conditions. The Applicant's preferred rates of 70% displacement and 2% mortality indicates a lower impact on growth rate than the worst-case scenario, and the population is likely to continue to grow under an impacted scenario. The latest seabird census indicates that the population has increased since 2000, by 110% at Skomer, 169% at Skokholm, and 129% at Midland Island (Middleholm) (Burnell *et al*., 2023), and annual data suggests a fluctuating population (Seabird Monitoring Programme).

We note that the Applicant expects to submit a revised in-combination assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the in-combination mortalities have increased to 35.44 mortalities annually since the last submission (REP5-074), this is a negligible increase. Therefore, the revised in-combination PVA is not significantly different to that provided previously, upon which we based our conclusions.

2.2.1.5.2 Common guillemot

The predicted in-combination 677.46 mortalities annually (70% displacement rate and 10% mortality rate), of which Mona contributes 6.77 mortalities annually, represents a 27.82% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.981. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions. The Applicant's preferred rates of 70% displacement and 2% mortality indicates a lower impact on growth rate than the worst-case scenario, and the population is likely to continue to grow under an impacted scenario. The latest seabird census indicates that the population has largely increased since 2000, by 95% at Skomer, 409% at Skokholm, and declined by 7% at Midland Island (Middleholm) (Burnell *et al*., 2023), and annual data suggests a fluctuating population (Seabird Monitoring Programme).

We note that the Applicant expects to submit a revised in-combination assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the in-combination mortalities have increased to 677.68 mortalities annually since the last submission (REP5-074), this is a negligible increase. Therefore, the revised in-combination PVA is not significantly different to that provided previously, upon which we based our conclusions.

2.2.1.5.3 Black-legged kittiwake

The predicted in-combination 19.05 mortalities annually (collision and 70% displacement rate and 10% mortality rate), of which Mona contributes 0.31 mortalities annually, represents a 4.15% increase in baseline mortality. Whilst the PVA suggests a declining population after 35 years of operation, as indicated by a growth rate below one, the Counterfactual of Growth Rate is 0.933, with the other scenarios modelled by the Applicant (collision and 30% displacement rate and 3% mortality rate, and collisions only) showing a lower level of impact. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions. The latest seabird census indicates that the population has declined by 36% since 2000 (Burnell *et al*., 2023), however, annual data suggests a fluctuating population (Seabird Monitoring Programme). The Applicant has further demonstrated that whilst the NatureScot method apportions a certain level of breeding season mortalities to the Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA, GPS tracking studies, as collated in Trevail *et al*. (2019) and Trevail (2019), show that in reality only small numbers of black-legged kittiwake breeding within the SPA are likely to forage in the area occupied by the proposed project (recognising the uncertainty as a result of the small sample size of birds breeding in the SPA in those studies, and that only birds from Skomer were tracked).

We note that the Applicant expects to submit a revised in-combination assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the in-combination mortalities have increased to 19.08 mortalities annually since the last submission (REP5-074), this is a negligible increase. Therefore, the revised in-combination PVA is not significantly different to that provided previously, upon which we based our conclusions.

2.2.1.5.4 Atlantic puffin

We agree with the information provided in Section 1.5.1.3 to 1.5.1.4 of REP4-030 which, through the calculation of more than 0.0 apportioned mortalities (REP4-030, Table 1-8), the

Applicant has effectively concluded a LSE to Atlantic puffin, but has demonstrated very low levels of impact on this species (less than one mortality per annum apportioned to the SPA (REP4-030, Table 1-8).

2.2.1.5.5 Lesser black-backed gull

We agree with the information provided in Section 1.5.2.13 to 1.5.2.15 of REP4-030 which, through the calculation of more than 0.0 apportioned mortalities (REP4-030, Table 1-17), the Applicant has effectively concluded a LSE to lesser black-backed gull, but has demonstrated very low levels of impact on this species (less than one mortality per annum apportioned to the SPA (REP4-030, Table 1-17).

2.2.1.5.6 Manx shearwater

The predicted in-combination 1,561.38 mortalities annually (collision and 70% displacement rate and 10% mortality rate), of which Mona contributes 66.14 mortalities annually, represents a 1.32% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.998. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions, even under the worst-case impact scenario.

We note that the Applicant expects to submit a revised in-combination assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the in-combination mortalities have decreased to 1,546.61 mortalities annually since the last submission (REP5-074), this is a negligible change. Therefore, the revised in-combination PVA is not significantly different to that provided previously, upon which we based our conclusions.

2.2.1.5.7 European storm-petrel

We agree with Table 1.68 of the HRA Stage 1 Screening (REP2-012) that there is no LSE to European storm petrel.

2.2.1.5.8 Seabird assemblage conclusion

In conclusion, razorbill, common guillemot, and black-legged kittiwake all show fluctuating populations, and the Applicant has demonstrated that the growth rates of these Seabird Assemblage components are unlikely to be significantly affected over the lifetime of the project. Similarly, the Applicant has demonstrated that the populations of the other main Seabird Assemblage components are unlikely to be significantly impacted and continue to be stable or increasing. There is therefore an extremely low risk that any of the main component species would become locally extinct as a result of impacts from the proposed project, or that the overall population abundance of the Seabird Assemblage qualifying feature would significantly decline over the lifetime of the project. Therefore, we agree with the conclusion that AEoI from the project alone and in-combination with other Plans and Projects can be ruled out.

We note that the Applicant expects to submit a revised in-combination assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the in-combination mortalities have increased since the last submission (REP5-074) to the figures

stated above in each corresponding section, this is a negligible increase in each case. Therefore, the revised in-combination PVA is not significantly different to that provided previously, upon which we based our conclusions. Therefore, we are still of the opinion that AEoI from the project alone and in-combination with other Plans and Projects can be ruled out, even under the worst-case impact scenario.

2.2.2 Liverpool Bay/Bae Lerpwl SPA

The relevant seabird features of Liverpool Bay/Bae Lerpwl SPA are:

- Red-throated diver
- Common scoter
- Little gull
- Little tern
- Common tern

We detail below our conclusions regarding LSE and AEoI to each feature below.

2.2.2.1 Red-throated diver

We welcome the extension of the seasonal restriction to low order unexploded ordnance (UXO) clearance within the Liverpool Bay/Bae Lerpwl SPA during the sensitive period (1 November – 31 March inclusive) as set out in Section 1.3.1 of REP5-030.

We note the assessment carried out of impacts of pre-commencement works on the non-breeding red-throated diver and common scoter qualifying features of the SPA, particularly with regard to visual disturbance from vessel movements, in APP-033 and revised in comments by the Applicant in response to Examining Authority question 3.3.9 (REP5-083).

With the application of the seasonal restriction to works within the SPA to both export cable installation activities and low order UXO clearance, the requirement for any high order UXO clearance to be licenced under separate Marine Licences with accompanying method statements, the other measures contained within REP5-030 to further reduce disturbance of rafting birds, and the low and temporary impact of remaining pre-commencement activities, JNCC is content that there would not be an AEoI of the non-breeding red-throated diver qualifying feature of the Liverpool Bay/Bae Lerpwl SPA, either from the project alone or in-combination with other plans and projects.

2.2.2.2 Common scoter

We welcome the extension of the seasonal restriction to low order UXO clearance within the Liverpool Bay/Bae Lerpwl SPA during the sensitive period (1 November – 31 March inclusive) as set out in Section 1.3.1 of REP5-030.

We note the assessment carried out of impacts of pre-commencement works on the non-breeding red-throated diver and common scoter qualifying features of the SPA, particularly with regard to visual disturbance from vessel movements, in APP-033 and revised in comments by the Applicant in response to Examining Authority question 3.3.9 (REP5-083).

With the application of the seasonal restriction to works within the SPA to both export cable installation activities and low order UXO clearance, the requirement for any high order UXO clearance to be licenced under separate Marine Licences with accompanying method

statements, the other measures contained within REP5-030 to further reduce disturbance of rafting birds, and the low and temporary impact of remaining pre-commencement activities, JNCC is content that there would not be an AEoI of the non-breeding common scoter qualifying feature of the Liverpool Bay/Bae Lerpwl SPA, either from the project alone or in-combination with other plans and projects.

2.2.2.3 Little gull

We agree with Table 1.70 of the HRA Stage 2 Information to Support an Appropriate Assessment Part Three: Special Protection Areas and Ramsar sites Assessments (REP2-010) that there would be no AEoI of the non-breeding little gull qualifying feature of the Liverpool Bay/Bae Lerpwl SPA, either from the project alone or in-combination with other plans and projects.

2.2.2.4 Little tern

We agree with Table 1.70 of the HRA Stage 2 Information to Support an Appropriate Assessment Part Three: Special Protection Areas and Ramsar sites Assessments (REP2-010) that there would be no AEoI of the breeding little tern qualifying feature of the Liverpool Bay/Bae Lerpwl SPA, either from the project alone or in-combination with other plans and projects.

2.2.2.5 Common tern

We agree with Table 1.70 of the HRA Stage 2 Information to Support an Appropriate Assessment Part Three: Special Protection Areas and Ramsar sites Assessments (REP2-010) that there would be no AEoI of the breeding common tern qualifying feature of the Liverpool Bay/Bae Lerpwl SPA, either from the project alone or in-combination with other plans and projects.

2.2.3 Irish Sea Front SPA

The relevant seabird features of Irish Sea Front SPA are:

- Manx shearwater

We detail below our conclusions regarding LSE and AEoI to each feature below.

2.2.3.1 Manx shearwater

We agree with Table 1.10 of the HRA Stage 2 Information to Support an Appropriate Assessment Part Three: Special Protection Areas and Ramsar sites Assessments (REP2-010) that there would be no AEoI of the Manx shearwater qualifying feature of the Irish Sea Front SPA, either from the project alone or in-combination with other plans and projects.

2.3 Environmental Impact Assessment

We provide our conclusions regarding the EIA assessment on each relevant species below.

2.3.1 Atlantic puffin

The predicted 648 mortalities annually (70% displacement rate and 10% mortality rate) due to the project alone represents a 0.25% increase in baseline mortality. Therefore, we agree with the conclusion of a minor adverse impact, even under the worst-case impact scenario.

2.3.2 Black-legged kittiwake

The predicted cumulative 2,346.10 mortalities annually (collision and 70% displacement rate and 10% mortality rate), of which Mona contributes 162.87 mortalities annually, represents a 1.65% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.997. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions, even under the worst-case impact scenario. Therefore, we agree with the conclusion of a minor adverse impact.

We note that the Applicant expects to submit a revised cumulative assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the cumulative mortalities have increased to 2,361 mortalities annually since the last submission (REP5-075), this is a negligible increase. The revised cumulative assessment does not use the worst-case scenario of displacement when determining whether or not a PVA is required, compared to previous submissions by the Applicant where the worst-case scenario was used in subsequent stages of assessment (REP5-075). For other species updated PVAs have been carried out on these revised totals. However, given that the change is a minor increase in mortalities for black-legged kittiwake, we are content to rely on the previously submitted PVA (Section 1.6.2 of REP5-075), and have used this in coming to our conclusions regarding the cumulative impact to black-legged kittiwake. Therefore, we still agree with the conclusion of a minor adverse impact, even under the worst-case impact scenario.

2.3.3 Common guillemot

The predicted cumulative 7,799 mortalities annually (70% displacement rate and 10% mortality rate), of which Mona contributes 558 mortalities annually, represents a 5.15% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.992. This suggests that there will be only be a small impact on the growth rate in comparison to baseline conditions, even under the worst-case impact scenario. Therefore, we agree with the conclusion of a minor adverse impact.

We note that the Applicant expects to submit a revised cumulative assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the cumulative mortalities have increased to 7,814 mortalities annually since the last submission (REP5-075), this is a negligible increase. Therefore, the revised cumulative PVA is not significantly different to that provided previously, upon which we based our conclusions. Therefore, we still agree with the conclusion of a minor adverse impact, even under the worst-case impact scenario.

2.3.4 Manx shearwater

The predicted cumulative 2,491 mortalities annually (70% displacement rate and 10% mortality rate), of which Mona contributes 89 mortalities annually, represents a 1.05% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.997. This suggests that there will be only a small impact on the growth rate in comparison

to baseline conditions, even under the worst-case impact scenario. Therefore, we agree with the conclusion of a minor adverse impact.

We note that the Applicant expects to submit a revised cumulative assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the cumulative mortalities have increased to 2,492 mortalities annually since the last submission (REP5-075), this is a negligible increase. The revised cumulative assessment does not use the worst-case scenario of displacement when determining whether or not a PVA is required, compared to previous submissions by the Applicant where the worst-case scenario was used in subsequent stages of assessment (REP5-075). For other species, updated PVAs have been carried out on these revised totals. However, given that the change is a minor increase in mortalities for Manx shearwater, we are content to rely on the previously submitted PVA (Section 1.6.6 of REP5-075), and have used this in coming to our conclusions regarding the cumulative impact to Manx shearwater. Therefore, we still agree with the conclusion of a minor adverse impact, even under the worst-case impact scenario.

2.3.5 Northern gannet

The predicted 861.87 mortalities annually (collision and 80% displacement rate and 10% mortality rate) due to the project alone represents a 0.674% increase in baseline mortality even under the worst-case impact scenario. Therefore, we agree with the conclusion of a minor adverse impact.

2.3.6 Razorbill

The predicted cumulative 1,370 mortalities annually (70% displacement rate and 10% mortality rate), of which Mona contributes 176 mortalities annually, represents a 1.31% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.997. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions, even under the worst-case impact scenario. Therefore, we agree with the conclusion of a minor adverse impact.

We note that the Applicant expects to submit a revised cumulative assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the cumulative mortalities have increased to 1,372 mortalities annually since the last submission (REP5-075), this is a negligible increase. Therefore, the revised cumulative PVA is not significantly different to that provided previously, upon which we based our conclusions. Therefore, we still agree with the conclusion of a minor adverse impact, even under the worst-case impact scenario.

2.3.7 Great black-backed gull

The predicted cumulative 163.51 mortalities annually, of which Mona contributes 4.83 mortalities annually, represents a 9.70% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.990. For the reasons stated in REP4-098 we do not agree with the conclusion of a minor adverse impact. We are unable to rule out a significant adverse impact on great black-backed gull from cumulative collision mortality. However, we are satisfied that the proposed mitigation (raising of turbine air gap) is proportionate.

We note that the Applicant expects to submit a revised cumulative assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the cumulative mortalities have increased to 167.41 mortalities annually since the last submission (REP5-075), this is a negligible increase. Therefore, the revised cumulative PVA is not significantly different to that provided previously, upon which we based our conclusions. Therefore, we remain unable to rule out a significant adverse impact on great black-backed gull from cumulative collision mortality, and remain satisfied that the proposed mitigation (raising of turbine air gap) is proportionate.

2.3.8 Herring gull

The predicted 293.24 mortalities annually due to the project alone represents a 0.790% increase in baseline mortality. Therefore, we agree with the conclusion of a minor adverse impact.

2.3.9 Lesser black-backed gull

The predicted cumulative 291.17 mortalities annually, of which Mona contributes 1.92 mortalities annually, represents a 1.00% increase in baseline mortality. The PVA suggests an increasing population after 35 years of operation, as indicated by a growth rate above one, and the Counterfactual of Growth Rate is 0.999. This suggests that there will be only a small impact on the growth rate in comparison to baseline conditions. Therefore, we agree with the conclusion of a minor adverse impact.

We note that the Applicant expects to submit a revised cumulative assessment at Deadline 7 and have provided a draft of this to JNCC prior to Deadline 7. Whilst the cumulative mortalities have increased to 299.28 mortalities annually since the last submission (REP5-075), this is a negligible increase. Therefore, the revised cumulative PVA is not significantly different to that provided previously, upon which we based our conclusions. Therefore, we still agree with the conclusion of a minor adverse impact.

3 Marine Mammals final closing statement

The following presents a final summary of JNCCs position regarding potential impacts to marine mammal features from the proposed project.

3.1 Assessment baseline and methodology

The Applicant engaged with JNCC pre-submission of the application via a marine mammal Expert Working Group (EWG), which enabled several topics pertinent to the development of the Environmental Statement (ES) to be discussed and agreed. Included in these discussions were consideration of key species to be assessed, which activities to scope into the impact assessment, sensitivities of those species to the proposed activities, and methodology proposed to assess impacts from underwater noise. Agreement was reached on these areas ahead of the Preliminary Environmental Information Report (PEIR) being submitted.

One area where there was not agreement was the digital aerial survey methodology for marine mammals. These surveys began before commencement of the EWG. Once consulted, JNCC did not agree with the methodology with respect to marine mammals (MM-EWG01 in Appendix C.2 of the Technical Engagement Plan Appendices A-E (e.g. APP-

042)). However, it was agreed with the EWG (MM-EWG02 in Appendix C.3 of the Technical Engagement Plan Appendices A-E (APP-042)) these surveys would not be the primary data source when characterising marine mammals in the project area, making agreement with this point not material. Agreement was also reached regarding what other sources of information would inform baseline characterisation of the project area for marine mammals.

JNCC did request more detail on the survey coverage in their Relevant Representation (RR-033), which the Applicant provided (RR-033.69 in PDA-008). JNCC then confirmed no further action was needed from the Applicant on this matter (see REP2-097.64 in the Applicant's Response to JNCC D2 Submission (REP3-036)).

For avoidance of doubt, we confirm we are content with the agreement made between the Applicant and NRW (A) on how disturbance to marine mammals from vessel noise was assessed. JNCC conferred with NRW (A) on these discussions throughout the examination process and agreed with comments being provided but left it to NRW (A) to lead.

3.2 Environmental Impact Assessment

Impact pathways assessed in the ES included underwater sound from piling, clearance of unexploded ordnance (UXO), site investigation surveys, vessel use, and operational turbines; collision with vessels; and changes in prey availability.

JNCC agree with the conclusions of all the assessments in EIA terms however, some of this agreement is condition on appropriate mitigation being secured in the DCO/dML. Of key concern is the risk of injury from piling and UXO clearance.

3.2.1 Piling

The scenario's modelled assumed maximum hammer energies of 4,400kJ and 3,000kJ, and specified min/max separations distances for concurrent piling. A risk of injury was predicted for all marine mammal hearing groups (Table 4.23 and 4.24 in APP-056). Aside from for minke whale, the range from the pile within which injury could occur were within distances which can be mitigated using standard measures (e.g. by following JNCC mitigation guidelines). For minke whale (a low frequency cetacean), injury using the cumulative sound exposure metric (SELcum) was predicted to occur at between 4.2km and 7.5km depending on the scenario being considered. While it is possible to mitigate these kinds of injury ranges using a combination of visual observers, acoustic monitoring and acoustic deterrents, the duration over which an acoustic deterrent would need to be activated could be great. There is a need to balance introducing additional noise into the marine environment with potential reduction in injury risk. As a result, JNCC required noise abatement measures to be considered within the outline Marine Mammal Mitigation Plan (oMMMP, REP-033) and outline Underwater Noise Sound Management Strategy (oUWSMS, REP5-029). After some discussion as to how noise abatement were considered within these documents, JNCC are content the final versions of these documents can be finalised post-consent (should it be awarded). JNCC's agreement is conditional of measures being secured within the DCO/dML that these documents will be approved by the licensing authority through consultation with the appropriate SNCBs (in this case, JNCC and NRW (A)) ahead of any piling occurring. Such measures are proposed to be secured in Schedule 14 of the draft DCO.

We highlight that as the purpose of deploying acoustic deterrents is to deliberately disturb, a European Protected Species (EPS) licence to disturb would be required. We anticipate this licence would also be required to cover disturbance from piling, due to the duration over which this activity will occur. While this licence would not be applied for until after the design

envelope is refined, we highlight that additional information will be required to support this application above that provided for this examination process. In particular, the application will be required to demonstrate there are no satisfactory alternatives, which will need to include consideration of alternative mitigation measures. We would expect this to include consideration of noise abatement in order to reduce the number of animals that could be disturbed (Table 4.28 in APP-056). If the Applicant chooses not to use noise abatement, they will need to robustly justify this in their EPS licence application.

3.2.2 UXO clearance

While we agree with the conclusions of the assessment for the scenario's considered, we maintain our position that clearance of UXOs by detonation should not be included as a licensed activity in the DCO/dML (see below for further comment). Reasons for this were provided in REP-5-096. With respect to the assessment provided in the ES, the scenario assessed was for 22 UXOs within the array and cable corridor. The maximum size of UXO (based on volume of explosive content) was assumed to be 907kg. Although it was claimed the most likely size to be found will be 130kg, that is not known at this stage so the worst-case scenario must be considered. The assessment considered both high order and low order clearance methods although we note the Applicant has since removed high order clearance from the DCO.

Of the two low order methods considered, we focus our comments on the deflagration method as there is no evidence currently to support claims low yield methods are effective (for example, see Alford *et al.*, 2022). The noise modelling assumed a 0.08kg (80g) donor charge when predicting injury ranges for marine mammals. This is lower than used at the Moray West Offshore Windfarm in their recent clearance campaign (Ocean Wind, 2024), where the donor charge weight was either 150g or 250g, depending on the device being cleared. During this campaign, 83 devices of six different types were all successfully cleared using the Alford deflagration tool. Based on our experience of reviewing low order deflagration clearance activities for this and other developments, we are concerned this impact assessment does not realistically represent the worst-case scenario and there are no provisions in the DCO to ensure operations remain within the assessed parameters (see below for further comment). This further supports our request that UXO clearance is not included in the DCO/dML due to the lack of information available at this time.

3.3 Habitat Regulations Assessment

The closest offshore European protected site to the proposed development is the North Anglesey Marine Special Area of Conservation (SAC). This site is designated for harbour porpoise and is approximately 22km from the project array area and 17km from the cable corridor and access areas.

The conservation objectives for this site require consideration of whether death, injury, and disturbance to harbour porpoise could occur as a result of a planned activity, and how those activities may affect prey availability. Now that high order clearance has been removed as a licensed activity from the DCO/dML, we agree with the Applicant's conclusion of no AEoI of the North Anglesey Marine SAC, both alone and in-combination with the other projects identified for the purpose of assessment. This agreement is on the condition that appropriate mitigation measures to reduce identified risks are secured in the DCO/dML.

While we maintain our position that UXO clearance is not included in the DCO/dML as a licensed activity, this agreement includes adverse effects from low order deflagration

methods of UXO clearance. This is because, even though we question the appropriateness of the assessment provided, we do not expect injury or disturbance ranges to overlap with the site when using this method of clearance. We would expect disturbance to occur within the site from high order clearance of UXOs, although the level of overlap would be dependent on the size of UXO being cleared.

3.4 Mitigation and monitoring plans

As indicated in our recent submission (REP6-135), we are now content with the oMMMP (REP-033) and oUWSMS (REP5-029). Generally, these documents provide sufficient assurances that appropriate mitigation measures are available, and they will be considered appropriately to reduce impacts to marine mammals from piling identified in the ES.

With regard UXO clearance, despite us requesting this is removed from the DCO/dML, we do feel it appropriate to include this activity in the oUWSMS (REP5-029). However, we expect this to be added at the appropriate time when more is known about what clearances are required and how it will be undertaken. In line with our position, we do not expect UXO clearance to be included in the oMMMP, and instead would expect a stand-alone MMMP to be submitted alongside any required marine licence application.

We note both the oUWSMS and oMMMP include reference to mitigation for geophysical surveys, to support future EPS licence applications. The mitigation considered is appropriate for reducing the risks of injury from such surveys, however they do not consider disturbance. We highlight that the information provided within these documents is not sufficient to support compliance with the three tests required when applying for an EPS licence. As discussed earlier, additional information would be required to support any licence application including consideration of alternative mitigation measures.

3.5 Draft Development Consent Order (DCO)

Our conclusions are conditional on appropriate mitigation being secured in the DCO/dML, (and the separate ML required for the section of the cable corridor which passes through Welsh territorial waters). Sections of particular relevance found in Schedule 14 of the draft DCO (REP5-007) are:

3.5.1 Part 1, Section 2 Details of licenced marine activities

> (d) site clearance and preparation works including clearance of low order unexploded ordnance, debris, boulder clearance and the removal of out of service cables and static fishing equipment;

This condition had been updated to now refer specifically to low order clearance. We do agree that surveys to identify and investigate potential unexploded targets can be included in the DCO as a licenced activity. However, we request this condition is amended to only refer to these surveys and be clear that clearance of UXOs is not permitted.

3.5.2 Part 2, Section 18 Pre-construction plans and documentation

> (1) (h) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol in accordance with the outline marine mammal mitigation protocol, the intention of which is to prevent injury to marine

mammals, following current best practice as advised by the statutory nature conservation body

We are content this condition secures the need for a MMMP and links it with the oMMMP (REP-033), although note no timeframe is included for submitting construction plans, including the MMMP, to the licensing authority. We recommend this is clarified in the DCO.

We also agree with the final MMMP following best practice as advised by the appropriate SNCBs (JNCC and NRW (A)) and highlight we would expect this to mean best practice at the time of the activity and not be restricted to methods contained within the oMMMP. The intention to do this is stated in the oUWSMS (Paragraph 1.8.2.17) but the linkage between the UWSMS and MMMP (i.e. that the MMMP will form an annex of the UWSMS) is not clear in the DCO. It currently reads as if these are two independent documents with overlapping remits.

3.5.3 Part 2, Section 20 Underwater Sound Management Strategy

This section of the consent requires a management strategy in accordance with the oUWSMS (REP5-029) to be submitted and approved in writing by the licencing authority in consultation with the SNCB before piling can commence. We are content with the information provided in the outline strategy for piling and how finalising this document is to be secured in the DCO/dML. We highlight that the appropriate SNCBs for this project would be JNCC and NRW (A).

We note reference to detonation of unexploded ordnance was removed from this section of the dDCO at the last submission deadline (REP5-007) however the Applicant has since informed us they plan to reinstate it at Deadline 7. While our position is to remove UXO clearance as a licenced activity from the DCO/dML, we note UXO clearance was not removed from the updated oUWSMS (REP5-029) submitted by the Applicant. We do see benefit to adding UXO clearance to this document at the appropriate time. A condition to secure this could also be added to any subsequent marine licence required.

3.5.4 Part 2, Section 21 Low order unexploded ordnance clearance

As indicated in the Applicants latest submission (REP6-094), the DCO has been updated to only refer to low order clearance.

JNCC maintain their position that UXO clearance is not included in the DCO as a licensed activity. While we have previously said we would be supportive of low order being included, this has always been and remains our second choice with regard the two options posed by the Examining Authority (REP3-084).

If low order clearance was to be a licenced activity and noting the issues we have raised with regard available information, additional measures would need securing in the DCO. As a minimum this must include:

- All references to low order amended to state low order deflagration, as this is the specific low order method that has been assessed in the ES.
- A maximum number of UXOs to be cleared must be stated i.e. 22. (to reflect the scenario presented in the ES).
- A maximum volume of explosive material to be contained within the donor charge must be stated i.e. 80g (to reflect the scenario presented in the ES).

- A separate clearance plan in addition to the method statement will be required. Currently the DCO refers to potential UXO, not confirmed UXO, meaning the method statement could be submitted ahead of the investigative surveys being completed. This will not provide any additional information regarding what is to be cleared than is currently within the ES.
    - The clearance plan will need to include as a minimum a map with the location of all UXOs to be cleared, and for each device, information on the type of UXO and its physical state (i.e. how degraded the casing may be, presence/coverage of marine growth etc), the degree of burial, and the method proposed to be cleared i.e. confirm deflagration will be attempted. Note, if it is felt high order clearance is required, the additional marine licence application will need to consider impacts to the seabed and any nearby protected benthic features in addition to noise as it will result in a crater.
    - The clearance methodology will need to provide details of the exact tool to be used, not a vague reference to undertaking deflagration. As a minimum this must include the volume of explosive material to be contained, and evidence to support the use of that tool e.g. evidence of its effectiveness, how it will be deployed, and post-clearance surveys to remove debris.

The limitations referred to above regarding what is to be cleared, and the size of donor charge mirror the scenario assessed in the ES. Including these would align this condition with those for piling which include, for example, maximum hammer energy values. The above measures will need to be secured in the DCO, in addition to being referred to in the oUWSMS and oMMMP.

While our preference is that UXO clearance is not contained within the DCO, we do agree that surveys to identify and investigate potential unexploded targets can be included. This would enable this activity to be completed ahead of submitting any required marine licence application for clearance, which would ensure accurate information can be provided.

4 Benthic final closing statement

At close of the final deadline, Deadline 7, Tuesday 14 January 2024, JNCC consider that there are some outstanding issues/concerns which remain with the Project in relation to the marine offshore (past 12nm) benthic environment. These are detailed below.

4.1 SNCB remit

On a number of occasions within responses from the Applicant, references have been made by the Applicant to the fact that although JNCC have concerns, NRW (A) have not raised similar or corresponding concerns. In the most part it is not appropriate to make such a comparison since JNCC have an offshore remit (outside 12nm) and NRW (A) have an inshore remit (within 12nm). This leads to independent concerns raised by the two organisations which should be treated as such and not compared. JNCC has previously detailed the legal basis of these remits within our response to the Examiners Questions 1 (Q1.17.4; REP3-084) and would direct the Applicant to that response. We have highlighted some specific examples below from the Applicant's Deadline 6 submissions:

- REP6-091, Applicant's response to REP5-094.1 – Marine Decommissioning.
  The Applicant states their approach to decommissioning "*accords with NRW (A)'s position*". However, the bulk of marine decommissioning for the Mona Project occurs in offshore waters (past 12nm) which is within JNCC's remit and we would therefore

maintain that JNCC's position for offshore decommissioning, as stated in REP5-094, should not be compared with that of NRW (A) and taken into consideration.

- REP6-091, Applicant's response to REP5-094.4 – Maximum Design Scenario (MDS). The Applicant states that: "*Other than the JNCC, no other interested party, including NRW (A), have raised concerns regarding the MDS defined in Volume 2, Chapter 2: Benthic subtidal and intertidal ecology (APP-054)*". However, all wind turbines and Offshore Substation Platforms (OSPs) are located offshore (past 12nm), and therefore fall within JNCC's remit. As these infrastructures constitute the bulk of the MDS, it would be expected that JNCC would be the main, and possibly only, stakeholder to raise concerns in this instance.

4.2 Marine decommissioning

Marine decommissioning is our greatest outstanding concern with the Project in relation to the offshore marine benthic environment. Decommissioning activities have not been fully considered. The recently published guidelines by Offshore Energies UK (OEUK, 2024) for 'Designing for Decommissioning of Offshore Wind' states that:

> "*Assets should be designed to be decommissioned with a technology available at the time of commissioning*"

The Examining Authority for Five Estuaries Offshore Wind Farm Limited (project EN010115) has requested from the Applicant that:

> "*Decommissioning is required to be assessed in order that the Examining Authority (ExA) and Secretary of State can have regard to the likely significant effects of the whole project over its lifecycle in making a recommendation and determination.*"

This can be achieved by following the OEUK 'Designing for Decommissioning of Offshore Wind' guidelines and assessing decommissioning based on available technologies now and not in the future. JNCC consider that without assessing decommissioning now, it is not possible to determine the likely significant effects of the project as a whole for the offshore environment.

4.3 Significance of effect and mitigation and monitoring of 'seapens and burrowing megafauna communities' IEF

Based on the Applicant's re-analysis of the magnitude of effects and sensitivity, and the resulting significance of effects (REP4-062; reference REP3-084.5), which JNCC would consider to be a moderate adverse effect, we have suggested the following be added to the mitigation measures and conditions outlined in Volume 2, Chapter 2: Benthic subtidal and intertidal ecology (APP-054), the Mitigation and Monitoring Schedule (APP-196), and the DCO (PDA-003).

> "*If seapens are noted during pre-construction surveys they should be avoided as much as practically possible during the subsequent proposed operations.*"

The above suggested wording brings our advice in line with all other offshore industry sectors and projects that we advise on where an IEF is present outside of a marine protected site.

If the above is included in the Mitigation and Monitoring Schedule submitted at Deadline 7, and subsequently secured through the DCO, JNCC would then consider this point to be Agreed.

4.4 Maximum design scenario

In the Applicant's Deadline 3 submission 'Response to JNCC D2 Submission' (REP3-036; response REP2-097.72), the Applicant provided an explanation to the Maximum Design Scenario including a table detailing Option 1 and Option 2 for suction bucket 4-legged jacket foundations. JNCC found this to be very useful and clear, providing much needed transparency in the Applicant's calculations of the maximum design scenario.

JNCC would therefore request that similar tables are provided and incorporated into the final documentation, including Volume 2, Chapter 2: Benthic subtidal and intertidal ecology (APP-054), regarding all foundation types (see our original comment for which tables this would apply to; REP3-036, response REP2-097.72, REP2-097.77 and REP4-048, responses REP3-086.90, REP3-086.96) and Offshore Substation Platform (OSP) foundation sizes (as commented on in REP3-036; response REP2-097.77) so we can be confident that the values which the Applicant quotes are correct and to allow for complete transparency.

4.5 Documentation updates

Throughout the Examination process, a large quantity of documentation has been produced which the Applicant has updated through a number of additional responses. JNCC has welcomed these updates by the Applicant but for clarity and transparency, especially with future Projects looking back on methodologies and conclusions of this work, we would like these changes and updates to be fully incorporated in clean final versions of the initial submissions.

5 References

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Please contact me with any questions regarding the above comments.

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