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JNCC Reference: OIA-10529
PINS Reference: EN010136
Date: 12 November 2024

By email: morganoffshorewindproject@planninginspectorate.gov.uk

To whom it may concern,

Morgan Offshore Wind Project: Generation Assets – EN010136 – Response to the Examining Authority's written questions and requests for information (ExQ1)

Thank you for consulting JNCC on the Morgan Offshore Wind Project Examining Authority's questions and requests for information

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).

In response to Examining Authority's question HRA 1.6, can the JNCC confirm whether they are in agreement with the outcomes of the Applicant's HRA [APP-096, 097, 098, 099 and APP-100] for the relevant non-English sites? Please see ornithology and marine mammal comments below.

Ornithology

JNCC are pleased to provide our advice on the implications of the Morgan OWF project for Special Protection Areas (SPAs) for which we have joint or sole responsibility, as requested in ExQ1 (PD-004, HRA 1.6). These sites are:

- Irish Sea Front SPA
- Seas off St Kilda
- Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA

- Liverpool Bay/Bae Lerpwl SPA

In providing our advice, we have reviewed the following documents:

- Draft Development Consent Order (APP-005)
- Environmental Statement Volume 2, Chapter 5: Offshore ornithology (APP-023)
- Environmental Statement Volume 4, Annex 5.5: Offshore ornithology apportioning technical report (APP-057)
- Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels Section 1.3 (APP-070)
- Technical engagement plan appendices part 4 (Appendix D) (APP-092)
- HRA Stage 1 Screening Report (APP-099)
- HRA Stage 2 ISAA Part 3 – SPA and Ramsar Sites Assessments (APP-098)
- HRA integrity matrices (APP-100)
- Environmental Statement Volume 4, Annex 5.1: Offshore ornithology baseline characterisation F02 (REP1-026)
- Annex 4.5 to Response to Hearing Action Point 15: Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects Note (REP1-010)
- Displacement Rates Clarification Note (REP1-011)
- Annex 4.7 to Response to Hearing Action Point 15: Apportioning Sensitivity Analysis (REP1-012)
- NRW Relevant Representations (REP1-056)
- Review of Cumulative Effects Assessment and In-Combination Assessment (REP2-023)

Overarching comments

While we have endeavoured to be as comprehensive as possible in both our review and our advice, JNCC wish to note that we have not been involved in advising on this Project since the examination began. We have endeavoured to raise points in this response to the Examiners Question (ExQ) which JNCC considers to be of most relevance to sites for which we have responsibility within the time available, given the deadline for response to ExQ and that we were not notified of a ExQ directed at us at the time of publication. Where we have not highlighted issues raised by other SNCBs, this should not be taken as either not of concern to JNCC or lack of support for the position of another SNCB. There may be other elements which we disagree or agree with which have not been identified and raised here due to time and resource constraints. We reserve to right to raise other queries later in the examination should the need arise.

Irish Sea Front SPA

JNCC agrees with the conclusions of the Habitats Regulations Assessment (HRA) (APP-098) that an Adverse Effect on Site Integrity can be ruled out, both from the Project alone, and in-combination with other Plans and Projects

Seas off St Kilda SPA

JNCC agrees with the conclusions of the HRA (APP-098) that an Adverse Effect on Site Integrity can be ruled out, both from the Project alone, and in-combination with other Plans and Projects

Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA

Overall comments

JNCC disagree with several elements of the assessment to offshore ornithology within the Environmental Statement (ES) and the Habitats Regulations Assessment (HRA). For example, among other things, we disagree with:

- Incorrect SPA features
- The seasonal definition used for black-legged kittiwake
- Age class apportioning of black-legged kittiwake
- The use of only specific displacement rates and mortality rates, rather than a range of rates, in the HRA displacement assessment.

Multiple disagreements in approaches, such as these, may result in compounding differences in the final impact numbers. In addition, we are aware that further documents have been submitted to the examination beyond the original application. We are concerned that these updates to the assessment have been considered individually, and have not been propagated through the assessment, for example use of different colony count data in the apportioning of impacts to colonies (REP1-012).

Due to these disagreements, and that there are additional projects and data to be included in the cumulative and in-combination assessment, we do not have confidence in the results, nor are we able to agree with the overall conclusions with regards to Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro Special Protected Area (SPA), either alone or in-combination with other Plans and Projects.

Incorrect SPA features & seasons

Throughout the HRA, the qualifying features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA appear to be incorrect (e.g. Table 1.39 APP-100, Table 1.9 APP-099, Table 1.2 APP-057). We recommend the features and assemblages are carefully checked against the SPA designation information (found here: https://jncc.gov.uk/our-work/skomer-skokholm-and-the-seas-off-pembrokeshire-mpa), and the details within the HRA updated. We have advised on errors in the description of features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA during the Section 42 PEIR response the Mona and Morgan offshore wind projects, yet the errors remain.

We disagree with the seasonal definition of the breeding season for black-legged kittiwake (Table 5.16, APP-023). We advise that the full breeding season from Furness (2015), and other seasons are adjusted accordingly to ensure no months are considered in two seasons. For black-legged kittiwake, we advise that the seasons are defined as follows:

- Full breeding season - March to August
- Post-breeding season - September to December
- Pre-breeding season - January to February

For the collision assessment, this results in different seasonal impact numbers. Although this results in the same annual impacts regardless of the seasonal definition used within the EIA, it does result in different seasonal impacts being apportioned to SPAs in the HRA.

For the displacement assessment, this results in different seasonal impacts being apportioned to SPAs in the HRA.

Use of range of displacement rates

We welcome the information supplied by the Applicant in the Displacement Rates Clarification Note (REP1-011). However, we note that the Applicant has chosen to assess two displacement and mortality rate combinations, rather than the full range of displacement and mortality rates advised by the Statutory Nature Conservation Bodies (SNCBs).

The Applicant has instead presented assessments against a scenario of 70% displacement and 2% mortality rates from the Secretary of State's HRA for the Sheringham Shoal Extension and Dudgeon Extension offshore wind farms and Hornsea Four offshore wind farm decision for guillemot, razorbill. It should be noted that both of these projects are located in the North Sea, and not in the Irish Sea where the Morgan OWF project is located.

Additionally, the Applicant has also chosen to consider these rates to be applicable to the other species features combinations assessed for displacement for the Morgan Generation Assets HRA of Manx shearwater and black-legged kittiwake, although there is no precedent setting of these rates having been applied at other project consents.

We note and agree with the comments by NRW in their Relevant Representations (paragraph 27, REP1-056) on the applicability of the Trinder *et al.* (2024) study to determining appropriate displacement rates for impact assessment.

For most species, the evidence suggests that there is a range of displacement rates occurring at operational wind farms, including the upper end of the SNCB-advised range, and sometimes beyond. For example, with regard to the evidence of displacement rates and distance, Peschko *et al*. (2023) observed a reduction of 91% of common guillemot within offshore wind farms plus a 1km buffer, and 76% within offshore wind farms plus a 10km buffer, in autumn. In winter, they found a reduction of 67% within offshore wind farms plus a 1km buffer, and 50% within offshore wind farms plus a 10km buffer. Guillemot density in autumn was significantly affected up to a mean distance of 19.5km (range 18–21km) with a reduction of 79% within this area. Guillemot density in winter was significantly affected up to a mean distance of 16.5km (range 15–18km) with a reduction of 51% within this area. In addition, Pesckho *et al*. (2020a) found a reduction in guillemot densities during the breeding season inside offshore wind farms of 63% (75% when the blades were turning). Further, a study by Pesckho *et al*. (2020b) found a 63% reduction in guillemot density in the wind farm plus a 3km buffer, and a 49% reduction in the wind farm plus a 9km buffer during spring. A 44% reduction was found in the wind farm plus a 3km buffer during the breeding season. Therefore, we regard a 70% displacement rate to be within a potential range of displacement. This variation in displacement rates is why we advise that a range of potential impacts are considered.

We do not consider therefore that there is sufficient evidence to support such a narrow range of displacement and mortality as used by the Applicant and consider that there is sufficient evidence around the variability in observed displacement rates for auk species to support the need for consideration of a range of 30-70% displacement and 1-10% mortality, as per the

joint SNCB displacement advice note (SNCBs, 2022). We reiterate our advice that the same displacement rates are used for black-legged kittiwake (APP-092, D.3.10). For Manx shearwater we reiterate our advice that a range of displacement rates are used (APP-092, D.3.13). Until the assessments are presented in accordance with SNCB advice, alongside the Applicant's preferred approach should they wish, we are unable to rule out an Adverse Effect on Site Integrity, either alone or in-combination. We therefore recommend that the Applicant presents both their preferred approach and JNCC's advised approach throughout the HRA.

To that end JNCC notes the instruction to the Outer Dowsing Offshore Wind Project by the Examining Authority in that Examination in their Rule 17 letter dated 3rd July 2024 (Macarthur, 2024) and to the Mona Offshore Wind Project by the Examining Authority in that Examination in their Rule 17 letter dated 15th August 2024 (Jones, 2024) requesting that the SNCB-advised approach is presented. The relevant text from these letters are, respectively:

> *"The ExA appreciates that the Applicant may not entirely agree with the preferred methodological approaches on some matters that have been referenced in the RRs from NE [RR-045], the Marine Management Organisation [RR-042] the RSPB [RR-056] and the Environment Agency [RR-018]. Nevertheless, where differences of opinion have been detailed in the aforementioned RRs the ExA considers it to be very important that it is presented with assessment outputs based on the methodological approach adopted by the Applicant as well as the approach respectively advocated by these organisations, and which make use of the most up to date data available to the Applicant."*

And;

> *"The Applicant to provide as soon as possible but no later than Deadline 3 (30 September 2024), an additional submission consisting of an assessment of effects on ornithological features (for both the EIA and HRA) using the methods and parameters highlighted by NRW(A) and JNCC during pre-application consultation, and in their relevant representation [RR-011; RR-033] and written representations [REP1-056; REP1-066 and REP1-067]. This additional submission should include an in-combination assessment using the SNCB's proposed methodology for gap-filling for historic projects"*

Therefore, we recommend that the approaches and parameters that we advise should be used are presented and taken through the impact assessment in the EIA and the HRA. This also includes approaches and parameters which we understood to have been previously agreed between JNCC and the Applicant during pre-application consultation, but which in the application documents submitted to date (particularly REP1-011 and APP-098) go against agreements reached through the EWG process (APP-092).

Age class apportioning

Age classes have been based on site-specific information for gannet, herring gull, great black-backed gull, and lesser black-backed gull (Table 1.4, APP-057), and we agree with this approach.

However, we disagree with the calculation of black-legged kittiwake age classes (Table 1.5, APP-057). This approach was not raised by the applicant during EWG meetings or subsequently, and therefore JNCC has not agreed to this approach. The Hornsea Offshore

Wind Farm Project Two approach to apportioning to age class referred to in Section 1.2.3.13 relies on reliable counts of first year birds, i.e. in the case of black-legged kittiwake first summer birds which by August of that year have largely transitioned to adult plumage and therefore indistinguishable from adults. Therefore, the identification rate of first summer black-legged kittiwake is questionable and calculations derived from this, for example, applying survival rates to define an age class structure is also questionable. It is noticeable that more recent projects such as Hornsea Offshore Wind Farm Project Four and the East Anglia projects have not used this approach. Further, we advise that stable age structures are not derived using population viability analysis, and the method outlined in this report is effectively a manual version of this, which we do not recommend. We therefore disagree with the percentage of black-legged kittiwake adults and immatures in the breeding season in Table 1.5.

Sabbatical birds

It is not clear whether sabbatical birds have been removed from the assessment or not. There is suggestion that they haven't, yet the heading of Table 1.6 (APP-057) suggests that sabbatical rates are considered within the HRA. We do not agree with the application of sabbatical rates.

Cumulative & in-combination Gap-filling of Historical Projects

In their 'Review of Cumulative Effects Assessment and In-Combination Assessment' (REP2-023), the Applicant has identified several additional projects that have the potential to contribute to cumulative and in-combination collision and/or displacement offshore ornithology impacts that now have data available and that were not included in the CEA (REP2-023, Table 1.3), in addition to those presented in REP1-010. We also note that in addition, updated figures for the Morecambe Generation Assets project are now available following the submission of the application for this project. The Applicant has noted in REP2-023 that additional work is required to understand the potential cumulative and in-combination effects of these projects for collision and displacement and has indicated that this will be undertaken for Deadline 3.

JNCC advise that the Applicant presents apportioned impacts across the full ranges of SNCB-advised assessment approaches (see comments on displacement ranges above), and where predicted impacts from the project alone exceed 0.05% of baseline mortality for any apportioned impact across the advised assessment ranges, the site-feature combination should be taken through to in-combination assessments. We recommend that in such instances, the results of the gap-filling exercise undertaken in REP1-010 are subsequently used within the in-combination assessments. The gap-filled results provide the most comprehensive estimate of mortalities at each project that was previously not quantified.

Appropriate assessment

Due to the use of singular displacement and mortality rates used in the displacement assessment, rather than the SNCB-advised range of rates, we cannot agree with the results of the alone Appropriate Assessment for relevant features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA (black-legged kittiwake, guillemot, razorbill, and Manx shearwater, though note out other comments regarding black-legged kittiwake not being a stand-alone feature of this SPA). Given this issue and the fact that the need for an in-combination assessment is based on the alone impact, we are also

not able to agree with the conclusions of the in-combination assessment for this SPA. It may be that, using the SNCB-advised range of displacement and mortality rates, in-combination assessments are required for features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA, but these have currently not been carried out.

Liverpool Bay/Bae Lerpwl SPA

We note the comments made by NRW in their Written Representations with regard to impacts on the non-breeding red-throated diver and common scoter qualifying features of the Liverpool Bay/Bae Lerpwl SPA (REP1-056, paragraph 26). We also note the measures described in Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels (APP-070, Section 1.3) will be included in an offshore Environmental Management Plan (Environmental Statement Volume 2, Chapter 5: Offshore ornithology Table 5.26, APP-023),secured through the deemed marine licence (dML) in Schedule 3 Part 2 of the draft Development Consent Order (APP-005).

Noting that these measures only apply to vessel movements associated with the wind farm array (the export cable corridor being subject to a separate application), we agree that on the basis of the measures to be applied, an Adverse Effect on Site Integrity can be ruled out.

Marine Mammals

The following advice relates to SACs designated for marine mammals in Welsh and Northern Irish offshore waters only. In line with our delegation with Natural England and NatureScot, we defer to the respective agencies for offshore sites in English and Scottish waters. In line with our offshore remit, we also defer to the respective agencies for sites in territorial waters e.g. for seals and bottlenose dolphins.

The following documents have been reviewed to provide this advice:

- Outline underwater sound management strategy (APP-068)
- Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels (APP-070)
- Outline vessel traffic management plan (APP-071)
- Outline marine mammal mitigation plan (APP-072)
- HRA stage 2 – Introduction (APP-096)
- HRA stage 2 – Special Areas of Conservation (APP-097)
- HRA stage 1 - Screening report (APP-099)
- HRA integrity matrices (APP-100)

Offshore marine mammal SACs

The only offshore SACs designated for marine mammals are for harbour porpoise. The closest of these to the Morgan array area is the North Anglesey Marine SAC, located approx. 28km away in Welsh waters. The next closest site is the North Channel SAC, 64km away in Northern Irish waters. While other harbour porpoise sites have been identified in the HRA screening process, they are all further away from the array location than the two mentioned previously. Given the distance to the different sites, we have focussed our review on the

North Anglesey Marine SAC, as this will be the site at greatest risk from activities associated with the Morgan development.

The activities we advise pose the greatest potential to impact the North Anglesey Marine SAC is impact piling and clearance of unexploded ordnance (UXO). A spatial/temporal noise management approach has been developed for this and other harbour porpoise SACs. This states that noise disturbance within a harbour porpoise SAC from a plan or project, individually or in combination, is considered to be significant if it excludes harbour porpoise from more than:

1. 20% of the relevant area (summer/ winter) of the site in any given day, or
2. An average of 10% of the relevant area of the site over a given season.

JNCC advocate the use of fixed effective deterrent ranges (EDRs) based on empirical evidence when estimating the area within which disturbance within a site could occur to harbour porpoise. For mono-piling without noise abatement and high order clearance of UXOs, the EDR is currently 26km; for pin piles and mono-piles with noise abatement, the EDR is currently 15km.

Using either of these metrics, there should be no overlap with the site by the area within which disturbance could occur from piling with the Morgan array area. As a result, all of the North Anglesey Marine SAC should be available to harbour porpoise during the construction period and impact piling should not have an adverse effect on site integrity. This same conclusion can be applied to all other harbour porpoise sites as these are further away from the array area.

Please note, this conclusion assumes that measures contained within the outline Marine Mammal Mitigation Plan (APP-072) and outline Underwater Sound Management Strategy (APP-068) are sufficient to enable conclusions to be drawn regarding potential impacts to SACs (i.e. potential impacts can be mitigated); and that agreeing the final versions of these plans with the relevant regulator and SNCBs post-consent will be secured as a condition of consent. We highlight that the inclusion of noise abatement is currently included in the mitigation plan as a tertiary measure. This should be amended to state it will be considered as a secondary measure, as per the outline Underwater Sound Management Strategy (APP-068). We acknowledge this may have already been agreed by the applicant, as is the case for the Mona development which is also currently going through examination. Regardless, we strongly recommend that final versions of all such plans and strategies are submitted to the examination library before the process is completed so there is a clear and easily accessible audit of all documents used to support conclusions. This will also aid completion of the final versions of the documents by ensuring the version which is to be updated is clearly identified and all parties agree with what it contains.

We also note that the outline Vessel Traffic Management Plan (APP-071) refers to measures to reduce impacts to marine wildlife (Section 1.2) however it is not clear who will undertake any measures required. While we anticipate such measures would be undertaken by vessel crew, should any of this be required to be undertaken by personnel conducting marine mammal mitigation for noise, this should be clearly detailed in the MMMP and sufficient personnel provided to ensure all mitigation is adequately staffed.

Finally, we highlight that we are also providing advice for the Mona wind farm development and for this we have advised the Examining Authority that UXO clearance should not be

included in the DCO/deemed marine license as a licensed activity. Our primary concern is the inclusion of high order clearance as an option. We feel too little is known at this stage regarding what will be required to be cleared and how it can be cleared to properly assess potential impacts. We also feel including the high order option conflicts with the government's position statement on UXO clearance (https://www.gov.uk/government/publications/marine-environment-unexploded-ordnance-clearance-joint-interim-position-statement). The Examining Authority have proposed UXO clearance is included in the consents without the high order clearance option. We are content with this option however the applicant is not so we are engaging in further discussions with them to see if sufficient assurances can be secured in the consents to satisfy all parties.

References

Peschko, V., Mercker, M. & Garthe, S. (2020a) Telemetry reveals strong effects of offshore wind farms on behaviour and habitat use of common guillemots (Uria aalge) during the breeding season, Marine Biology, Vol. 167, Article 118

Peschko, V., Mendel, B., Müller, S., Markones, N., Mercker, M. & Garthe, S. (2020b) Effects of offshore windfarms on seabird abundance: Strong effects in spring and in the breeding season, Marine Environmental Research, Vol. 162, Article 105157

Peschko, V., Schwemmer, H., Mercker, M., Markones, N., Borkenhagen, K. & Garthe, S. (2023) Cumulative effects of offshore wind farms on common guillemots (Uria aalge) in the southern North Sea - climate versus biodiversity? Biodiversity and Conservation, Vol. 33, pp. 949-970

Please contact me with any questions regarding the above comments.

Yours sincerely,

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