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MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Inclusion of Awel y Môr in Cumulative Assessments – Clarification note

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Image of an offshore wind farm

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Glossary

Term	Meaning
Applicant	Morgan Offshore Wind Limited.
Apportioning	A method that assigns unknown entities to known entities based on weighting factors. In this report, it refers to birds of unknown origin within the study area that are assigned to colonies based on distance to colony and colony size.
Biologically Defined Minimum Population Scale	Minimum regional population size of a particular bird species at a certain time of year, defined for a range of species in Furness (2015).
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP).
Morgan Array Area	The area within which the wind turbines, foundations, inter-array cables, interconnector cables, scour protection, cable protection and offshore substation platforms (OSPs) forming part of the Morgan Offshore Wind Project: Generation Assets will be located.
Morgan Offshore Wind Project: Generation Assets	This is the name given to the Morgan Generation Assets project as a whole (includes all infrastructure and activities associated with the project construction, operations and maintenance, and decommissioning).
Ornithology	Ornithology is a branch of zoology that relates to the study of birds.
Special Protection Area	A designation under the European Union Directive on the Conservation of Wild Birds, under which countries have a duty to safeguard the habitats of migratory birds and certain particularly threatened birds.
The Planning Inspectorate	The agency responsible for operating the planning process for applications for development consent under the Planning Act 2008.

Acronyms

Acronym	Description
BDMPS	Biologically Defined Minimum Population Scale
CRM	Collision Risk Model
EWG	Expert Working Group
HRA	Habitats Regulations Assessment
JNCC	Joint Nature Conservation Committee
NRW	Natural Resources Wales
SPA	Special Protection Areas
SSSI	Site of Special Scientific Interest
SNCB	Statutory Nature Conservation Body

Units

Unit	Description
%	Percentage

1 INCLUSION OF AWEL Y MOR IN CUMULATIVE ASSESSMENTS

1.1 Introduction

1.1.1.1 This document has been prepared in response to Relevant Representations and Written Representations received from Natural Resources Wales (NRW) (RR-026; comment number 14 and REP1-056, comment 22) (see Table 1.1). These comments focussed on the collision risk estimates associated with the Awel-y-Môr offshore wind farm used for herring gull to inform cumulative and in-combination assessments presented in Volume 2, Chapter 5: Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098). The Applicant responded to these comments in PD1-017 and REP2-005. An updated response to REP1-056, comment 22, is provided in Table 1.1.

Table 1.1: Comments from Natural Resources Wales and Applicant's response.

Document reference	Comment from Natural Resources Wales	Applicant's response
RR-027, comment 14	Data included for other projects in cumulative assessments: …It appears that the figures included for Awel ŷ Mor for large gulls are those for Band Option 2, however, clarification is required as to whether this is the case.	The assessments have used Option 2 for all species for Awel y Môr with the exception of herring gull for which outputs from Option 3 were used. However, the use of Option 2 for herring gull would make no difference to the conclusions reached in Volume 2, Chapter 5 Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098).
REP1-056, comment 22	In PD1-017 the Applicant has confirmed that Option 2 figures for all species have been included for Awel y Môr with the exception of herring gull where the Option 3 figure has been included. Based on this response, it is unclear as to the reasoning for the Applicant's decision to include Option 3 figures for herring gull, but Option 2 for great black-backed gull. We note that the avoidance rates recommended for use by the Morgan Generation Assets Applicant by NE/NRW (A)/JNCC are those for the 'basic' Band model (i.e. Options 1 and 2) and are not considered appropriate for use with the 'extended' model (i.e. Option 3). We note that at the time of the Awel y Môr Examination SNCB advice would have been that the extended model (i.e. Option 3) could be used for large gulls (including herring gull) using the avoidance rates advised for the extended model. However, we note that the advice provided to the Applicant in the EWG by NE regarding CRM parameters in July 2022 stated that they no longer accept use of the extended Band model (options 3 & 4) (see Section D.3.9 of Appendix D of Technical Engagement Plan APP-092). NRW (A) agree with NE's position. Therefore, we advise that if the Option 3 herring gull	The Applicant has prepared this clarification note in order to address this comment.

Document reference	Comment from Natural Resources Wales	Applicant's response
	collision predictions for Awel-y-Môr are included in the cumulative assessments, they should not be corrected to the currently advised avoidance rates. However, if the Option 2 figures for this project are included instead (which in light of current advice would be our preferred approach), then these could be corrected to the currently recommended avoidance rates. In PD1-017 in response to this issue (response to point REP-027.30) the Applicant notes that the use of Option 2 figures for herring gull would make no difference to the conclusions of the herring gull cumulative collision assessment. Whilst this may be the case, as the Applicant intends to submit an updated cumulative effects assessment to gap fill for historic projects, we advise that the herring gull figures included for Awel y Môr are updated to include the Option 2 rather than Option 3 figures.	

1.1.1.2 This clarification note therefore considers the potential impact on the assessment conclusions reached for the Morgan Generation Assets in both Volume 2, Chapter 5: Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) if collision risk estimates calculated using Option 2 of the Band collision risk model were used instead for herring gull.

1.2 Methodology

1.2.1.1 The assessments conducted for the Morgan Generation Assets utilised collision risk estimates for herring gull calculated using Option 3 of the Band collision risk model, which at the time of the assessments conducted for the Awel y Môr Offshore Wind Farm aligned with the SNCB recommended methodology (JNCC *et al.,* 2014). NRW have indicated that the herring gull assessments should now incorporate collision risk estimates calculated using Option 2 of the Band collision risk model. Collision risk estimates calculated using Option 2 have therefore been extracted from the Awel y Môr application. A comparison has been undertaken between cumulative and in-combination totals incorporating collision risk estimates for herring gull calculated using Option 2 and Option 3 to determine if the use of collision risk estimates calculated using Option 2 would result in a change in the conclusions reached in the assessments undertaken for the Morgan Generation Assets.

1.3 Review of cumulative and in-combination assessments

1.3.1 EIA

1.3.1.1 The cumulative assessment presented for herring gull in Volume 2, Chapter 5: Offshore ornithology (APP-023) utilised collision risk estimates calculated using Option 3 of the Band CRM. As discussed in section 1.1, NRW have suggested that the assessment for the Morgan Generation Assets should utilise collision risk estimates calculated using Option 2 of the Band CRM. Table 1.2 provides a comparison between the contribution of the Awel y Môr Offshore Wind Farm to the cumulative impact on herring gull when using collision risk estimates calculated using Options 2 and 3.

Table 1.2: Collision risk estimates for herring gull at the Awel y Môr Offshore Wind Farm calculated using different model options and avoidance rates.

Note:[a] Avoidance rates are presented for both the Expert Working Group (EWG) (99.39%) and Applicant's (99.52%) positions.

Option	Collision risk estimate (collisions/annum)[a]	
	99.39% avoidance rate	99.52% avoidance rate
2	3.6	2.8
3	1.8	1.4
Difference	1.8	1.4

1.3.1.2 Using collision risk estimates calculated using Option 2 would approximately double the contribution of Awel y Môr to the cumulative assessment for herring gull presented in Volume 2, Chapter 5: Offshore ornithology (APP-023). The potential implications this has for the assessment conclusions presented in Volume 2, Chapter 5: Offshore ornithology (APP-023) are considered in relation to the increase in baseline mortality of the relevant Biologically Defined Minimum Population Scale (BDMPS) population in Table 1.3.

Table 1.3: Increase in baseline mortality as a result of cumulative collision impacts on herring gull.

Note:[a] Avoidance rates are presented for both the EWG (99.39%) and Applicant's (99.52%) positions.

Option	Avoidance rate (%)[a]	Awel y Môr contribution to cumulative collision total (collisions/annum)	Cumulative collision total (incl. Awel y Môr)	Increase in baseline mortality (%)
2	99.39	3.6	153.0	0.41
	99.52	2.8	119.3	0.32
3	99.39	1.8	151.2	0.41
	99.52	1.4	117.9	0.32

1.3.1.3 The use of Option 2 collision risk estimates for Awel y Môr makes a negligible difference to the increase in baseline mortality metric used as part of cumulative assessments. This would therefore lead to no change in the assessment conclusions reached for herring gull in Volume 2, Chapter 5: Offshore ornithology (APP-023) which concluded an impact of minor adverse significance which is not significant in EIA terms.

1.3.2 HRA

1.3.2.1 The in-combination assessment presented for herring gull as a qualifying feature of the Morecambe Bay and Duddon Estuary SPA/Morecambe Bay Ramsar in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) also utilised collision risk estimates calculated using Option 3 of the Band CRM. As discussed in section 1.1, NRW have suggested that the assessments for the Morgan Generation Assets should utilise collision risk estimates calculated using Option 2 of the Band CRM. Table 1.4 provides

a comparison between the contribution of the Awel y Môr Offshore Wind Farm to the in-combination impact on herring gull at the Morecambe Bay to Duddon Estuary SPA when using collision risk estimates calculated using Options 2 and 3.

Table 1.4: Contribution of the Awel y Môr Offshore Wind Farm to the in-combination impact on herring gull at the Morecambe Bay to Duddon Estuary SPA.

Note:[a] Avoidance rates are presented for both the EWG (99.39%) and Applicant's (99.52%) positions.

Option	Collision risk estimate (collisions/annum)[a]	
	99.39% avoidance rate	99.52% avoidance rate
2	0.15	0.12
3	0.08	0.06
Difference	0.07	0.06

1.3.2.2 Using collision risk estimates calculated using Option 2 would approximately double the contribution of Awel y Môr to the in-combination assessment for herring gull at the Morecambe Bay and Duddon Estuary SPA/Morecambe Bay Ramsar presented in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098). The potential implications this has for the assessment conclusions presented in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) are considered in relation to the increase in baseline mortality of the SPA population in Table 1.5.

Table 1.5: Increase in baseline mortality as a result of in-combination collision impacts on herring gull at the Morecambe Bay and Duddon Estuary SPA/Morecambe Bay Ramsar.

Note:[a] Avoidance rates are presented for both the EWG (99.39%) and Applicant's (99.52%) positions.

Option	Avoidance rate (%)[a]	Awel y Môr contribution to in-combination collision total (collisions/annum)	In-combination collision total (incl. Awel y Môr)	Increase in baseline mortality (%)
2	99.39	0.15	19.4	7.5
	99.52	0.12	15.3	5.9
3	99.39	0.08	19.4	7.5
	99.52	0.06	15.2	5.9

1.3.2.3 The use of Option 2 collision risk estimates for Awel y Môr makes a negligible difference to the increase in baseline mortality metric used as part of in-combination assessments.

1.3.2.4 The generic apportioning approach, applied in the breeding season as part of the assessments presented for a number of projects, considered that in-combination assumes that foraging trips undertaken by herring gulls extend into the marine environment by applying generic foraging ranges from Woodward *et al*. (2019). Tracking studies show that herring gulls from the SPA make limited use of the offshore environment (Thaxter *et al*., 2017) preferring to utilise the area immediately around the colony most frequently. Birds also utilise terrestrial and intertidal habitats as well as

nearby mussel beds to the south of Barrow-in-Furness and birds have been recorded extensively using the South Walney and Piel Channel Flats SSSI (Thaxter *et al.*, 2017; Natural England, 2023a). Birds can also frequently be found on intertidal mud flats, as well as nearby fields, rubbish dumps and bodies of freshwater.

1.3.2.5 In HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098), it was therefore considered that impacts in the breeding season could be excluded. This reduced the equivalent impacts to those presented in Table 1.5 to 0.8-1.0 collisions/annum. The contribution of Awel y Môr to this total was less than 0.1 collisions/annum and would remain so if collision risk estimates calculated using Option 2 were used.

1.3.2.6 This would therefore lead to no change in the assessment conclusions reached for herring gull at the Morecambe Bay and Duddon Estuary SPA/Morecambe Bay Ramsar in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) which concluded no adverse effect on the integrity of the SPA and Ramsar site.

1.4 Conclusion

Table 1.6 provides a summary of the information presented in section 1.3. There is no material change in the impact magnitudes due to the use of Option 2 collision risk estimates from the Awel y Môr Offshore Wind Farm. There would therefore be no changes to the conclusions of the cumulative assessments presented for the Morgan Generation Assets (minor adverse significance which is not significant in EIA terms) in Volume 2, Chapter 5: Offshore ornithology (APP-023) or the in-combination assessments for the Morgan Generation Assets in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) which concluded no adverse effect on the integrity of the SPA and Ramsar site.

Table 1.6: Summary of conclusions reached in this report.

Species/qualifying feature	Assessment	Change to Morgan Generation Assets assessment	Implications for assessments undertaken in the Morgan Generation Assets application	Conclusion
Herring gull (EIA)	Cumulative	Use of Option 2 collision risk estimates instead of Option 3 collision risk estimates	Option 2 collision risk estimates are higher than those estimated using Option 3	Increase in impact magnitude is non-material and has no impact on the conclusions reached in Volume 2, Chapter 5: Offshore ornithology (APP-023).
Herring gull at the Morecambe Bay and Duddon Estuary SPA/Morecambe Bay Ramsar	In-combination			The increase in apportioned collision risk estimates is negligible and therefore has no effect on the conclusions reached in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098).

1.5 References

JNCC, Natural England, Natural Resources Wales, Northern Ireland Environment Agency and Scottish Natural Heritage (2014) Joint Response from the Statutory Nature Conservation Bodies to the Marine Scotland Science Avoidance Rate Review.

Thaxter, C.B., Clewley, G., Barber, L., Conway, G.J., Clark, N.A., Scragg, E.S. and Burton, N.H.K. (2017) Assessing habitat use of Herring Gulls in the Morecambe Bay SPA using GPS tracking devices. BTO Research Report No. 693.

Woodward, I., Thaxter, C.B., Owen, E. and Cook, A.S.C.P. (2019) Desk-based revision of seabird foraging ranges used for HRA screening. BTO Report 724 for The Crown Estate.