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MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Annex 4.4 Applicant's Response to Hearing Action Point HAP_ISH1_14: Applicants response to Seasonal Piling Restrictions

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Image of an offshore wind farm

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Glossary

Term	Meaning
Applicant	Morgan Offshore Wind Limited.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP).
Environmental Statement	The document presenting the results of the Environmental Impact Assessment (EIA) process for the Morgan Offshore Wind Project Generation Assets.
Expert Working Group (EWG)	Expert working groups set up with relevant stakeholders as part of the Evidence Plan process.
Marine licence	The Marine and Coastal Access Act 2009 requires a marine licence to be obtained for licensable marine activities. Section 149A of the Planning Act 2008 allows an applicant for a DCO to apply for 'deemed marine licences' as part of the DCO process.
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).
Project Design Envelope (PDE)	The Project Design Envelope sets out the design assumptions and parameters from which the realistic MDSs are drawn for the Morgan Generation Assets Environmental Impact Assessment (EIA). This is also often referred to as the 'Rochdale Envelope' approach.
Underwater sound	Sound waves made underwater.
Wind turbines	The wind turbine generators, including the tower, nacelle and rotor.

Acronyms

Acronym	Description
EIA	Environmental Impact Assessment
ES	Environmental Statement
ISH1	Issue Specific Hearing 1
JNCC	Joint Nature Conservation Committee
MMO	Marine Management Organisation
NPS	National Policy Statement
OSP	offshore substation platform
UWSMS	Underwater Sound Management Strategy
WTG	wind turbine generator

1 ANNEX TO RESPONSE TO HEARING ACTION POINTS: HAP_ISH1_14 SEASONAL PILING RESTRICTIONS

1.1 Introduction

1.1.1.1 On 10 September 2024, at Issue Specific Hearing 1 (ISH1) of the Morgan Offshore Wind Project: Generation Assets (hereafter referred to as 'Morgan Generation Assets'), Morgan Offshore Wind Ltd. ('the Applicant') took an action to provide a post-hearing written response regarding comments surrounding seasonal piling restrictions in relation to herring and cod spawning.

1.2 Seasonal piling restrictions for herring and cod spawning

1.2.1.1 Herring spawning is reported to occur at the Douglas Bank spawning ground off the Isle of Man from late September for three to four weeks (Dickey-Collas *et al.*, 2001). Cod spawning in the east Irish Sea is reported to occur between January and April, peaking in February and March with a high intensity mapped spawning ground spanning much of this area (Coull *et al.*, 1998; Ellis *et al.*, 2012).

1.2.1.2 The need for percussive piling to install wind turbine generator (WTG) and or offshore substation platform (OSP) foundations cannot be ruled out at this stage. Should such piling be required, underwater sound generated during this activity at the Morgan Generation Assets has potential to affect herring spawning at Douglas Bank through the project alone, and cumulatively with other projects and plans, if such piling activity overlaps with key spawning periods. Potential impacts to cod spawning in the east Irish Sea may also occur (should there be overlap in piling with peak spawning period) at the Morgan Generation Assets when considered cumulatively with other projects and plans. As such, the assessment presented in Volume 2, Chapter 3: Fish and shellfish ecology (APP-021) took a precautionary view and predicted potentially significant effects to herring (project alone and cumulatively) and cod (cumulatively) as a result of underwater sound from piling.

1.2.1.3 In their Relevant Representation (RR-020) the Marine Management Organisation (MMO) stated in RR-020.057 that a seasonal piling restriction (September to October inclusive) to protect spawning herring and their eggs and larvae during the spawning season was necessary. Further, in RR-020.058 the MMO stated that a seasonal piling restriction is likely to be necessary to protect gathering and spawning adult cod, and their eggs and larvae during the cod spawning season (January to April inclusive).

1.2.1.4 As outlined in paragraph 1.2.1.2 above, and in the Applicant's responses to RR-020.057 and RR-020.058, the Applicant acknowledges the risk of potential adverse effects to herring spawning at the Douglas Bank spawning ground off the east and northeast coasts of the Isle of Man and cod spawning in the east Irish Sea. This is reflected in the precautionary prediction of a potential moderate adverse effect to herring at the Douglas Bank spawning ground during the spawning season concluded in Volume 2, Chapter 3: Fish and shellfish ecology (APP-021) for the Morgan Generation Assets alone, and cumulatively with other projects and plans, which is significant in EIA terms. This is further supported by the Applicant's prediction of potential moderate adverse effects to spawning cod at the east Irish Sea high intensity spawning ground during the spawning period within Volume 2, Chapter 3: Fish and shellfish ecology (APP-021).

1.2.1.5 As a result of the predicted potential significant effect to herring and cod, the Applicant committed (during the pre-application phase) to the development of an Underwater Sound Management Strategy (UWSMS), an Outline of which is provided with the Application (APP-068). The mitigation secured through the UWSMS will reduce any potential impacts to not significant.

1.2.1.6 The purpose of the UWSMS is to apply the mitigation hierarchy, from design refinement to the application of additional measures, where required (such as temporal management, or the application of additional measures such as Noise Abatement Systems; NAS, pending forthcoming policy changes), with stakeholder input to manage the effects of underwater sound to non-significant levels to ensure no residual significant effect. The UWSMS is secured as a condition of the deemed marine licences within the draft Development Consent Order (AS-003). Therefore, no piling activity (should it be required) will be able to commence until the MMO and its advisors are satisfied that the residual impacts (including to fish spawning) of the final installation methods are acceptable.

1.2.1.7 The Applicant requires flexibility in the design and construction methods at this stage in the consenting process, due to ongoing design refinement (including foundation type and installation methods) and construction programming. It would not be considered appropriate to apply a blanket restriction when the final design parameters and construction programme and potential impacts may not require the implementation of additional mitigation measures.

1.2.1.8 The Applicant's indicative construction programme is presented in Figure 3.4 in Volume 1, Chapter 3: Project description (APP-010). The Applicant intends the project to be operational by 2030 in order to contribute to the UK Government's renewable energy targets. The application of seasonal restrictions would be challenging and place pressure on project delivery and the contribution of the project to the 2030 targets. The complex ground conditions at the Morgan Array Area, as confirmed during the initial site investigation surveys, have shown that construction will likely take longer than typical installation durations. The seasonal restrictions would prohibit construction in some of the months of the year within which metocean conditions are more likely to be favourable for safe and efficient installation therefore, increasing the risk of timeous project delivery.

1.2.1.9 The application of blanket seasonal restrictions at this stage could be disproportionate to the ecological risk and would not adequately consider spatial factors which would be fully investigated and managed (where necessary) under the UWSMS.

1.2.1.10 Notwithstanding the above, it is material to note that an extension to the construction period (even by a full year) as a result of seasonal restrictions would not invalidate the ES assessments as a total piling phase (foundation installation) of up to two years within a four-year construction programme for the assessment was assumed, as presented in Volume 2, Chapter 3: Fish and shellfish ecology (APP-021).

1.2.1.11 The UWSMS is consistent with the approach to the Site Integrity Plan (North Sea) / Piling Strategy (Scotland) and will be developed with stakeholder engagement. The UWSMS is secured as a Condition under Part 2 of schedules 3 and 4 of the draft Development Consent Order (AS-003) and will require approval from the MMO prior to any construction activities commencing. This strategy enables a variety of mitigation measures to be considered for implementation (including seasonal and spatial planning) once the project

design and construction programme is finalised. This is to ensure no significant effects to either fish or marine mammal species. This approach is endorsed within NPS EN-3 (paragraph 2.8.135).

1.2.1.12 Through the Evidence Plan Process, at Expert Working Group Meeting 7 on the 23 April 2024, the Joint Nature Conservation Committee (JNCC) confirmed agreement with the principle of the UWSMS and the outline UWSMS being finalised post-consent. At the same meeting, Natural England welcomed the proposed implementation of the UWSMS and the commitment to reduce the risk of injury and disturbance, with positive feedback to the structure of the outline UWSMS.

1.2.1.13 The UWSMS will be based upon the final design and construction programme and is therefore considered a robust and proportionate measure to manage the impacts of underwater sound to ensure effects to herring during their spawning season are not significant, thereby avoiding the need to condition a seasonal restriction under the DCO.

1.3 Herring nursery grounds

1.3.1.1 Mapped herring nursery grounds are relatively widespread along the northwest coast of the UK in the east Irish Sea, predominantly in inshore areas (Coull *et al.*, 1998; Ellis *et al.*, 2012). Whilst juvenile herring at nursery grounds are still considered sensitive to underwater sound (as herring are known hearing specialists), nursery grounds are not restricted by the same highly specific substrate conditions as herring spawning grounds. As such, short-term temporary and intermittent displacement of juvenile herring into other areas, which are likely to still comprise nursery grounds, is not considered to have potential to lead to a significant effect. When this is compared to herring spawning, temporary displacement from highly discrete spawning grounds may lead to reduced reproductive success due to disruption to spawning activity, due to the potential for lack of suitable substrate in areas of displacement. This is reflected in the precautionary nature of the assessment for spawning herring presented within Volume 2, Chapter 3: Fish and shellfish ecology (APP-021), and the acknowledgement of the potential risks to herring as outlined above in section 1.2.

1.3.1.2 Underwater sound from piling (if required) for the Morgan Generation Assets is therefore not expected to result in potentially significant effects to juvenile herring at nursery grounds.