Date: 12 December 2024
Our ref: Case: 18251 Consultation: 480575
Your ref: EN010121

National Infrastructure Planning
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BY EMAIL ONLY

Dear Robert Jackson,

Morecambe Offshore Windfarm Generation Assets

The following constitutes Natural England's formal statutory response for Examination Deadline 2.

1. Natural England's Deadline 2 Submissions

Natural England has reviewed the documents submitted by the Applicant at Deadline 1. We are submitting the following detailed responses:

- Morecambe Generation NE Risk and Issues Log Deadline 2
- Appendix B4 Natural England's comments on [REP1-080] 9.22 Offshore Ornithology Technical Note 1_EIA
- Appendix B5 Natural England's Comments on [REP1-081] 9.22 Offshore Ornithology Technical Note 2_HRA
- Appendix B6 Natural England's Comments on [REP1-082] 9.24 Offshore Ornithology Technical Note 3_RTD at Liverpool Bay SPA Update Assessment
- Appendix B7 Natural England's Comments on [REP1-093] 9.30 Update on Without Prejudice Compensatory Measures
- Appendix G Natural England's Comments on the In Principle Monitoring Plan - Deadline 2

2. Use of technical notes and update documents

The Applicant has submitted new technical notes and other updates at Deadline 1 covering some of the issues Natural England has raised concerning marine mammals and offshore ornithology. Natural England notes that much of the additional information presented in the

technical notes is not yet included in updated ES chapters, assessments or named plans. Whilst Natural England has referred to these technical notes in preparing this submission, we do not consider these issues to be addressed until updates are made to the relevant ES chapters, assessments or named plans as appropriate, and the RAG ratings in the Risk and Issues Log are reflective of this.

Natural England welcomes the clear referencing of which issues are covered by each section within the technical notes. This provides an indication of which issues are in progress: brief notes in the Risk and Issues Log are provided to note this.

Updated versions of some ES chapters, assessments and plans have been provided. However, there is no indication of what the content of these updates is. This presents significant uncertainty as to what has been updated and whether changes are minor (as is the case for most of the updated documents submitted at Deadline 1) or relate to meaningful progress on Natural England's key issues. Natural England urges the Applicant to provide clear signposting of what has been changed in all updated documents submitted.

3. Availability of supporting references

The new document REP1-093 "9.30 Update on Without Prejudice Compensation Measures - Revision 01 (Volume 9)" contains reference to an RSPB feasibility study for the Banks Marsh option. Whilst much of this is summarised in the update, the study itself is not publicly available nor is it included as a supporting Annex. In this instance, Natural England's involvement with the project means we have been able to see the full study; nonetheless, important references that are not publicly accessible should be included in submissions if possible.

For any queries relating to the content of this letter please contact me using the details provided below.

Yours sincerely,

Laurence Browning

Marine Senior Officer, Cumbria Team

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Annex 1: Natural England's Response to the Applicant's Documents Submitted at Deadline 1 Relevant to our Remit

PINS Document Reference	Document Name	Natural England's Response/Position Summary
Marine Mammals		
REP1-083	9.25 Marine Mammals Technical Note 1_EIA	Natural England has provided an update in our Risks and Issues log in relation to these documents. Please refer to Section 2 of this cover letter.
REP1-084	9.26 Marine Mammals Technical Note 2_HRA	
Offshore ornithology		
REP1-080	9.22 Offshore Ornithology Technical Note 1_EIA	Natural England's response to this/these document(s) is provided in Appendix B4. Our advice on the updated Cumulative Effects Assessment (CEA) including gap-filled projects will follow at Deadline 3.
REP1-081	9.23 Offshore Ornithology Technical Note 2_HRA	Natural England's response to this/these document(s) is provided in Appendix B5. Our advice on the updated in-combination assessment including gap-filled projects will follow at Deadline 3.
REP1-082	9.24 Offshore Ornithology Technical Note 3_RTD at Liverpool Bay SPA Update Assessment	Natural England's response to this/these document(s) is provided in Appendix B6.
REP1-093	9.30 Update on Without Prejudice Compensatory Measures	Natural England's response to this/these document(s) is provided in Appendix B7.
General		
REP1-079	9.21 Outstanding Information from the Applicant in Response to the Rule 9 Letter	Natural England has no comments to make on this document as it only signposts other documents submitted at D1 and PDA.
Various topics		
REP1-013	4.9.1 Report to Inform Appropriate Assessment_Rev02_Tracked	These documents have received minor updates only, that do not address any issues with red or amber RAG ratings. Natural England therefore has no comments to make.

REP1-015	4.11.1 Habitats Regulations Assessment Without Prejudice Derogation Case_Rev 02_Tracked	
REP1-025	5.1.7.1 Chapter 7 Marine Geology, Oceanography and Physical Processes_Rev 02_ Tracked	
REP1-031	5.1.11.1 Chapter 11 Marine Mammals_Rev 02_Tracked	
REP1-033	5.1.12.1 Chapter 12 Offshore Ornithology_Rev 02_Tracked	
REP1-045	5.2.11.2.1 Appendix 11.2 Marine Mammal Information and Survey Data_Rev 03_Tracked	
REP1-047	5.2.11.3.1 Appendix 11.3 Marine Mammal Unexploded Ordnance Assessment_Rev 02_Tracked	
REP1-049	5.2.11.4.1 Appendix 11.4 Marine Mammal CEA Project Screening_Rev 02_Tracked	
REP1-055	6.2.1 Outline Project Environmental Management Plan_Rev 02_Tracked	
REP1-057	6.8.1 Outline Scour Protection and Cable Protection Plan_Rev 02_Tracked	

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THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

MORECAMBE GENERATION OFFSHORE WIND FARM

Appendix B4 to Natural England's Deadline 2 Submission

Natural England's comments on [REP1-080] 9.22 Offshore Ornithology Technical Note 1_EIA

For:

The construction and operation of Morecambe Generation Offshore Wind Farm, located approximately 30 km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN010121

12 December 2024

1. Major/Complex comments

In formulating these comments, the following documents have been considered:

- REP1-080 9.22 Offshore Ornithology Technical Note 1_EIA

1.1. Summary

This note addresses the technical points raised by Natural England in our relevant reps regarding EIA methodology, and provides an analysis of the effectiveness of increasing the air gap of the turbines as a mitigation measure to reduce collision risk to great black-backed gull. We are satisfied that the correct mortality rates and reference populations are now being used for the assessment and that the use of these has not materially changed the outcome of the project-alone assessment. These changes should be incorporated into the ES chapter.

We note that the Applicant has addressed our comment regarding the adequacy of the “gap-filling” methodology for the cumulative effects assessment and that impact values are now provided for all available projects. We have not yet been able to review the methodology and figures in depth and will provide detailed comments regarding this at Deadline 3.

2. Detailed comments - Tabular

Table 1: Natural England's Advice On: 9.22 Offshore Ornithology Technical Note 1_EIA

NE Ref	Section	Key Concern and/or Update	Natural England's Advice to Resolve Issue
1	2.1.1	Natural England highlight that there were some minor differences in recommended parameters between the draft guidance supplied to the Applicant and the final published joint SNCB guidance note.	Natural England recognise that we provided clear advice on the parameters to use for collision risk modelling during the consultation process and consider that it would not be reasonable to expect the Applicant to re-run the collision risk modelling at this point on the basis of the minor differences between the draft version that was shared with the Applicant and the final published version. We therefore consider that the collision risk modelling figures presented are appropriate.
	Section 2	We welcome that the Applicant has provided updated assessments of impacts using Natural England's advised baseline mortality rates along with the explanation provided of how these rates affect the conclusions presented in the ES. Natural England are in agreement that, for project alone impacts, the use of the corrected rates does not affect the conclusion of the assessment. We also welcome that the Applicant has incorporated the updated mortality rates into the CEA, which Natural England will provide detailed comments on at Deadline 3.	The corrected mortality rates and consequent calculations should be incorporated into a revised version of the ES. Natural England will then consider this issue resolved.
2	Section 3	Natural England previously advised (B8) that the Applicant had not fully followed our advised approach to "gap-fill" the cumulative effects assessment (CEA) and that the submitted CEA still contained multiple instances of impacts from historical projects being unquantified. We	Natural England will provide detailed comments regarding the updated CEA at Deadline 3.

		welcome that the Applicant has now addressed this by producing an updated CEA for key species (guillemot, Manx shearwater, herring gull, lesser black-backed gull, great black-backed gull and little gull) in which all historical projects have annual estimated abundance/mortality figures provided. This will allow Natural England to reach conclusions regarding cumulative impacts with much more confidence. However, at this stage, we have not had time to review the figures and methodology used.	
	Section 4	We welcome the analysis the Applicant has undertaken to investigate the effect of increasing turbine hub height on great black-backed gull impacts. The analysis demonstrates that for project alone impacts, increasing the air gap from 25 to 30m leads to a 25% decrease in estimated collisions. However, we accept that given the low numbers of collisions predicted, the overall benefit from increasing the air gap is minor, particularly when considered in the context of cumulative impacts.	We accept that the Applicant has sufficiently demonstrated that this mitigation measure is unlikely to affect the outcome of the assessment, nor lead to a material improvement in terms of the Project's impact on the great black-backed gull population.

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MORECAMBE GENERATION OFFSHORE WIND FARM

Appendix B5 to Natural England's Deadline 2 Submission

Natural England's comments on [REP1-081] 9.22 Offshore Ornithology Technical Note 2_HRA

For:

The construction and operation of Morecambe Generation Offshore Wind Farm, located approximately 30 km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN010121

12 December 2024

1. Major/Complex comments

In formulating these comments, the following documents have been considered:

- REP1-081 9.22 Offshore Ornithology Technical Note 2_HRA

1.1. Summary

This note addresses the technical points raised by Natural England in our relevant reps regarding methodology for HRA, and provides an analysis of the effectiveness of increasing the air gap of the turbines as a mitigation measure to reduce collision risk to lesser black-backed gull. We are satisfied that appropriate apportioning values are now being used for the assessment and that the use of these has not materially changed the outcome of the project-alone assessment. These changes should be incorporated into the RIAA.

We note that the Applicant has addressed our comment regarding the adequacy of the “gap-filling” methodology for the in-combination assessment and that impact values are now provided for all available projects. We have not yet been able to review the methodology and figures in depth and will provide detailed comments regarding this at Deadline 3.

2. Detailed comments - Tabular

Table 1: Natural England's Advice On: 9.22 Offshore Ornithology Technical Note 2_HRA

NE Ref	Section	Key Concern and/or Update	Natural England's Advice to Resolve Issue
1	2.1, 2.2	We welcome the Applicant's use of updated figures for apportioning lesser black-backed gull (LBBG) impacts to Morecambe Bay and Duddon Estuary SPA and Ribble and Alt Estuary SPA, and the use of the most recent colony counts as reference populations.	We are satisfied with the project-alone assessments presented for LBBG at Morecambe Bay and Duddon Estuary SPA and Ribble and Alt Estuary SPA. We accept that there will be no project-alone adverse effect on either of these sites. Once this assessment is incorporated into a revised RIAA, we are satisfied that this issue will be resolved.
2	3.1	We welcome that the Applicant has produced an updated in-combination assessment of impacts on the lesser black-backed gull feature of Morecambe Bay and Duddon Estuary SPA and Ribble and Alt Estuary SPA in which all historical projects have annual estimated abundance/mortality figures provided. This will allow Natural England to reach conclusions regarding in-combination impacts with much more confidence. However, at this stage, we have not had time to review the figures and methodology used.	We will provide detailed comments regarding the updated in-combination assessment at Deadline 3.
3	3.2	We thank the Applicant for providing us with collision risk modelling (CRM) input and log files, allowing us to confirm that the methodology used for the little gull CRM is appropriate.	
4	3.2	We also welcome the Applicant's review of the in-combination assessment for little gull and note that it has led to a slight increase in the total predicted collisions.	Natural England will review the "gap-filling" methodology used by the Applicant to update the in-combination assessment and advise on a final conclusion around the impact on this species at Deadline 3.

5	Section 4	We welcome the analysis the Applicant has undertaken to investigate the effect of increasing turbine hub height on lesser black-backed gull impacts. The analysis demonstrates that for project alone impacts, increasing the air gap from 25 to 30m leads to a c.23% decrease in estimated collisions. However, we accept that given the low numbers of collisions predicted, the overall benefit from increasing the air gap is minor, particularly when considered in the context of apportioned in-combination impacts.	We accept that the Applicant has sufficiently demonstrated that this mitigation measure is unlikely to affect the outcome of the assessment, nor lead to a material improvement in terms of the Project's impact on the lesser black-backed gull feature of Morecambe Bay and Duddon Estuary SPA and Ribble and Alt Estuary SPA.

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THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

MORECAMBE GENERATION OFFSHORE WIND FARM

Appendix B6 to Natural England's Deadline 2 Submission

Natural England's comments on [REP1-082] 9.24 Offshore Ornithology Technical Note 3_RTD at Liverpool Bay SPA Update Assessment

For:

The construction and operation of Morecambe Generation Offshore Wind Farm, located approximately 30 km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN010121

12 December 2024

1. Major/Complex comments

In formulating these comments, the following documents have been considered:

- REP1-082 9.24 Offshore Ornithology Technical Note 3_RTD at Liverpool Bay SPA Update Assessment

1.1. Summary

The Applicant has presented additional analysis of the Project's impact on the red-throated diver feature of Liverpool Bay SPA. While this adds useful context, Natural England continue to advise that an adverse effect on integrity (AEOI) cannot be ruled out due to the displacement effects of the Project on the distribution of this feature within the site, which has "restore" conservation objective attributes with respect to feature distribution and availability of supporting habitat.

The technical note contains an incorrect statement regarding Natural England's position on Awel-y-Môr OWF. We must clarify that Natural England was not an Interested Party (IP) in the Examination of Awel-y-Môr OWF and therefore did not have a position regarding the impact of this OWF on the red-throated diver feature of Liverpool Bay SPA. This is because the project was not thought to impact upon nature conservation receptors in England, including the part of Liverpool Bay SPA in English waters.

Our position that AEOI on Liverpool Bay SPA cannot be ruled out from the Morecambe OWF is consistent with advice provided to other OWFs elsewhere in English waters. We continue to advise that the most effective way to mitigate the impact is to limit the distance from the original SPA boundary at which turbines are built.

Natural England welcomes continued engagement from the Applicant alongside the Examination process to progress resolutions to these issues.

2. Detailed comments - Tabular

Table 1: Natural England's Advice On: 9.24 Offshore Ornithology Technical Note 3_RTD at Liverpool Bay SPA Update Assessment

NE Ref	Section	Key Concern and/or Update	Natural England's Advice to Resolve Issue
1	2.2	The Applicant asserts that the area within the original SPA boundary potentially impacted by the project is of low importance to red-throated divers, as the densities recorded there are lower than elsewhere in the SPA. Natural England do not consider this to be a particularly pertinent argument, as the location of the original SPA boundary was drawn with respect to an objective and repeatable analysis that identified the most important parts of the wider area surveyed for red-throated diver. This analysis led to the inclusion of the impacted area within the SPA, as part of the 'most suitable territories' for the species. Comparison of the respective importance of different areas within the SPA should therefore not detract from the fact that the impacted area was classified as part of an SPA for a nationally important population of red-throated diver.	For information only
2	2.3	We welcome the Applicant's review of existing traffic within the affected area as it provides useful contextual information about the SPA. The review found relatively high levels of helicopter traffic within the affected area, associated with nearby offshore gas platforms. Further information would be useful. It seems	For information only

		likely that the gas platform was in use at the time that the SPA was designated and the helicopter traffic was comparable at that point, in which case it may have already been exerting a negative disturbance impact on the distribution of the divers within that area. yet the area was nonetheless considered to be of sufficient importance to be included within the SPA boundary. Similarly vessel traffic is likely to have been high in parts of the SPA at the time of the classification, but that did not reduce the level of diver usage to a level that meant the impacted area was not within the SPA It should also be recognised that helicopter and vessel traffic exerts a temporary disturbance effect, while offshore wind farms have a continuous, long term impact. Currently, any time that the helicopter or vessel traffic within the area lessens or ceases, the disturbance effect is reduced and the area becomes potentially available as habitat for the divers. Once the Project is built, a perpetual displacement effect would be exerted. It is therefore reasonable to consider the displacement effects of the Project within the affected area as potentially having an impact on the distribution of the feature regardless of existing levels of helicopter and vessel traffic.	
3	2.4	The Applicant has restated their position regarding the “effective displacement area”. Natural England have already advised that, whilst we recognise the desire to factor in the diminishing displacement effect to the	For information only

		assessment, we do not agree with this method of assessing displacement impacts, as it underestimates the area over which some level of displacement effects would occur.	
4	2.5	The Applicant states: *"It is acknowledged by the Applicant that the small relative contribution of the Project is not strictly relevant when considering the total in-combination effect. However, it is the case that there must be a threshold of effect that is considered by NE to generate an AEoI, and below which AEoI can be ruled out. In this case, therefore, it appears that NRW (**and by proxy NE**) considered that the effect up to and including Awel y Môr OWF was below such a threshold"* The assertion highlighted in bold above is incorrect. Awel-y-Môr OWF sits entirely within Welsh territorial waters and Natural Resources Wales (NRW)/Joint Nature Conservation Committee (JNCC)are therefore the relevant statutory nature conservation bodies. Natural England did not register as an interested party for the Awel-y-Môr OWF Examination, and hence provided no position during the Examination process. Whilst the SNCBs strive for alignment in the advice we provide, this does not mean that the position of one can automatically be considered to be shared by the other. In any event, as highlighted in our Relevant Representations (B34) NRW/JNCCs advice on Awel-y-Môr OWF took into account site-specific factors. We note there is a cluster of existing windfarms in the vicinity of Awel-y-Môr OWF, including three long-standing	For information only

		projects that are likely to have depressed diver densities in this part of the SPA (Rhyl Flats and North Hoyle, Burbo Bank) as well as the more recent developments (Burbo Bank Extension, Gwynt y Môr) that the Applicant has presented displacement buffers for. This congested situation contrasts with the northern part of the SPA, where only the displacement buffer of West of Duddon Sands OWF impinges on the SPA boundary. We highlight that Natural England have advised since the application process of Burbo Bank Extension that adverse effect on the red-throated diver feature of Liverpool Bay SPA due to impacts on the distribution of the feature and the availability of supporting habitat cannot be ruled out.	
	General	This technical note provides useful information for consideration of the potential impacts of the Project on the distribution of the red-throated diver feature of Liverpool Bay SPA. However, it does not alter Natural England's position that the feature will be negatively impacted by the displacement effect of the Project across 18km^2 of the SPA. We consider that the SPA is already adversely affected by the combined impacts of multiple OWFs within and near the SPA boundary, which limit the distribution/supporting habitat availability of the red-throated diver feature. Given the site conservation objectives to restore the distribution of the feature and prevent deterioration from its current level, every effort should be made to minimise the impact of the	Natural England continues to advise that the Project adversely effects on the red-throated diver feature of Liverpool Bay SPA. We continue to advise that the most effective way to mitigate the impact is to limit the distance from the original SPA boundary at which turbines are built. We advise that the Applicant considers implementing such measures and encourage them to explore the feasibility of different impact reduction options.

		Project. This is consistent with advice Natural England has previously given regarding impacts on red-throated diver at Liverpool Bay and elsewhere.	

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MORECAMBE GENERATION OFFSHORE WIND FARM

Appendix B7 to Natural England's Deadline 2 Submission

Natural England's comments on [REP1-093] 9.30 Update on Without Prejudice Compensatory Measures

For:

The construction and operation of Morecambe Generation Offshore Wind Farm, located approximately 30 km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN010121

12 December 2024

1. Major/Complex comments

In formulating these comments, the following documents have been considered:

- REP1-093 9.30 Update on Without Prejudice Compensatory Measures

1.1. Summary

The Applicant has presented an update on progress with the preparation of potential compensation measures. Natural England is engaged with this process and considers that the compensation options presented are likely to be feasible and effective.

2. Detailed comments - Tabular

Table 1: Natural England's Advice On: 9.30 Update on Without Prejudice Compensatory Measures

NE Ref	Section	Key Concern and/or Update	Natural England's Advice to Resolve Issue
1	3.1.3; 23/25	We welcome the reported progress made in relation to the Banks March predator-exclusion fence in the Ribble and Alt Estuaries SPA. We appreciate that this proposed project is still in the planning stages and agree that the area quoted, at approximately 1750 Ha could theoretically provide more than enough habitat to satisfy any compensation requirement (if deemed necessary) if a sufficiently large area is suitable as lesser black-backed gull nesting habitat.	We understand that a draft feasibility study has been completed by the RSPB for the Banks Marsh mega fence. however, it has not yet been made available in Examination documents. We therefore make the following comments on the Banks Marsh option whilst acknowledging that more information may be contained in the study report. We are aware that the Applicant would be making a financial contribution towards the construction and maintenance of the enclosure, rather than managing Banks Marsh itself. However, it is not yet clear how much of the 1750 Ha quoted is considered currently suitable habitat for nesting gulls, how much has previously been used by gulls (noting an apparent complete colony collapse since 2022), nor how much will be assigned to the without-prejudice compensation project. In addition, we are aware that some of this area is not protected by a new embankment, is consequently liable to flooding at certain times (e.g. high spring tides), and this has previously resulted in reduced lesser black-backed gull breeding success. We understand that climate-related higher tides (amongst other things) cannot be ruled out as a contributory factor in the recent colony collapse. As such, we consider it would be useful if an indicative location and figure for the extent of land suitable for nesting gulls could be provided, including the area to be

			monitored for the purposes of satisfying any compensation requirement (if deemed necessary). Some consideration of the future impacts of climate change on flooding extent and periodicity within the potential timescale of compensation (if required), i.e. approximately the next 40 years, which includes the period of construction plus the 35-year lifespan of Morecambe OWF would also be useful.
2	26	We note the reference to the success of predator-exclusion fence enclosures at Hesketh Out Marsh East and Hesketh West in 2021 and autumn 2022 which has resulted in 2022 and 2023 in *"over 40 pairs within the fenced area with productively reaching 1.55 chicks per pair in 2023"*. It is unclear what species this refers to.	We assume this refers specifically to lesser black-backed gull but please clarify the species involved.
3	3.1.4; 30	We welcome the progress being made with the proposed habitat management on Steep Holm Island. We are aware however that several attempts at visiting Steep Holm in summer and autumn 2024 were cancelled due to prevailing weather conditions restricting transit.	We recognise that the Applicant has no control over the weather and accept that there may be occasions when visits to Steep Holm are not possible. We would nevertheless reiterate the advice we provided in our response to the 4.11 Habitats Regulations Assessment Without Prejudice Derogation Case submitted at application, that, should this measure be adopted, opportunities for scrub clearance are maximised at an appropriate time of year (i.e. September to February), subject to landowner agreement, whenever they become available within this timeframe to mitigate the risk that these essential elements of the project cannot be undertaken. This is also the case for nest/productivity monitoring/colour ringing (May to July).
4	3.2.4; 37	We confirm that we see no issues with any necessary NE-related consents (e.g. SSSI consent) for the proposed scrub clearance works on Steep Holm.	For information only

5	48/49	We note that a flood risk activity environmental permit application will need to be made to the Environment Agency for works on a floodplain for the Banks Marsh mega fence.	We understand that for the majority of its route, the mega fence will be replacing existing enclosure infrastructure (fences, gates etc.) and no issues have been raised during informal consultation of local Environment Agency staff. Nevertheless, we would encourage the Applicant to ensure the necessary permissions are pursued as soon as possible such that we can have confidence this proposal can be progressed if considered necessary.
6	Appendix B	We welcome consideration of the Health and Safety aspects of the proposed Steep Holm habitat management option and note that hazards have been identified and solutions either proposed or currently subject to further consideration (e.g., lack of hot running water for showers). Should this latter issue be unresolvable we accept that daily visits rather than stays over multiple nights may be necessary.	We recognise that the health and safety of all those involved in this project is of the utmost importance and overrides all other considerations.

3. References

Flotation Energy (2024). PINS Document Reference: 4.11 APFP Regulation: 5(2)(g) Volume 4 Habitats Regulations Assessment Without Prejudice Derogation Case. PINS Document Reference: 4.11 APFP Regulation: 5(2)(g) Rev. 1

The Town and Country Planning (General Permitted Development) (England) Order 2015. SI 2015/596. At; The Town and Country Planning (General Permitted Development) (England) Order 2015 [accessed 06/12/2024]

THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

MORECAMBE GENERATION OFFSHORE WIND FARM

Appendix G to Natural England's Deadline 2 Submission

Natural England's comments on the Offshore in Principle Monitoring Plan [APP-148]

For:

The construction and operation of Morecambe Generation Offshore Wind Farm, located approximately 30 km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN010121

12 December 2024

Appendix G Natural England's Comments on the Offshore In Principle Monitoring Plan [APP-148]

In formulating these comments, the following documents have been considered:

- [APP-148] 6.4 Offshore In Principle Monitoring Plan

1) Introduction

1. Natural England welcomes the submission of the Morecambe Generation Offshore In-Principle Monitoring Plan (IPMP) as part of the application. Further, we welcome the Applicant's inclusion of the general guiding principles for proposed monitoring (Section 1.3). We also refer the Applicant to Natural England's Best Practice Advice document which sets out our expectations in terms of monitoring. This document is available at: Environmental considerations for offshore wind and cable projects - Phase IV Best Practice Advice for Post-Consent Monitoring, Version 1.0, July 2022.pdf. Relevant sections are also included in Annex A of this document for reference.

2. This document outlines Natural England's overarching concerns with the Offshore IPMP [APP-148], particularly in relation to the overall aim of ensuring adaptive monitoring and remediation is secured within the DCO. In addition, this document provides further advice on each of the offshore nature conservation receptors: physical processes, benthic subtidal ecology, fish and shellfish ecology, offshore ornithology, and marine mammals.

2) Overarching Concerns with the IPMP

3. Natural England advises that this is a live document which is updated throughout examination and post consent to reflect the outcome of discussions and/or monitoring.

4. In recognition of the emphasis being placed by projects currently in the post consent phase on the IPMP when setting the monitoring requirements and parameters; Natural England highlights the importance of this document. Natural England emphasises the requirement to agree the scope of the IPMP and hypotheses which will be tested by the monitoring as part of the consenting phase.

5. Overall, Natural England feels that much more detail is required than is provided in the IPMP in its current form. For example;

- What are the hypotheses the monitoring will be testing and how do they relate to the assessments undertaken in the ES?
- How will the monitoring be designed to ensure that the desired outcomes can be achieved i.e. is the monitoring fit for purpose?
- What are the indicative timings of the surveys?
- Can lessons be learnt from previous thematic surveys and how will modifications to surveys design be incorporated between survey campaigns?
- What does 'success' look like to demonstrate that no further monitoring is required?
- What happens if the results do not support the null hypothesis? Is further monitoring required (with/without modifications)? If impacts are greater than predicted, do actions need to be undertaken to address these impacts? How will further monitoring and actions be secured, is a change to the wording of the dML required? And if so, how will success of any action/s be monitored and what will be the success criteria before monitoring can cease?

To answer the above, Natural England considers the IPMP should focus on what the uncertainties and evidence gaps of the EIA and/or HRA are, rather than repeating the outcomes of the EIA only (Sections 2.2 – 2.6). We consider that establishing and agreeing the uncertainties and evidence gaps of the EIA and/or the HRA is necessary to inform what monitoring should be undertaken.

6. As per the Applicant's 'General Principles and Guidance' (Section 1.3) Natural England advises an approach mechanism in which the Applicant presents a clearly defined hypothesis or null hypothesis of no impact would be beneficial. Monitoring thereafter would aim to test this. We advise a review period during which Statutory Nature Conservation Bodies (SNCBs) and regulatory bodies such as the Marine Management Organisation (MMO) are consulted by the Applicant to assess the results of the first period of monitoring. For example, one mechanism that could be introduced for particular receptors would be a live document which is reflective of what the monitoring is observing, including consideration of species/habitat recovery.

7. We advise that monitoring should be effective in providing sufficient evidence pre-construction to inform the deployment of mitigation measures, and similarly demonstrate the efficacy of mitigation measures during construction and post-construction. This is important to demonstrate compliance with the measures identified in assessments to mitigate significant impacts. It is also important to provide evidence

to assess the significance of adverse effects, evaluate the success of mitigation measures and to help inform whether further remedial measures are required.

8. In relation to remedial measures, Natural England wishes to highlight the importance of ensuring that all relevant monitoring proposals for Morecambe Generation (and/or associated DCO/dML conditions) consider the aim of securing a mechanism for **adaptive monitoring** when unforeseen impacts are detected. Thus, ensuring remedial measures (**i.e., adaptive management**) are triggered should the results of monitoring demonstrate impacts that are significantly greater than predicted and/or incorrect assumptions were made following review of the conclusions of the environmental statement and supporting documents. We advise that the potential for certain monitoring to trigger the development of countermeasures (with associated monitoring of those measures) should be clearly stated in relevant tables of the IPMP and incorporated into the DCO conditions where relevant.

3) Nature conservation thematic advice

3.1 [Section 2.1] Engineering and design related monitoring

9. It is unclear to Natural England if this also encompasses monitoring surveys to inform final project design including those required to inform mitigation measures such as avoidance of certain sensitive receptors particularly environmental ones. If so, it would be useful if the Applicant could specify the purpose of each aspect of the engineering and design related monitoring in full. We highlight that geotechnical investigations will be critical to inform the cable burial risk assessment and in relation to reducing down the direct or indirect impacts to environmental receptors. We request that further details are provided to answer the questions posed in our overarching comments.

3.2 [Section 2.5] Marine Mammals

10. Natural England notes that the Applicant did not propose monitoring for marine mammals within the Mitigation and Monitoring Schedule document and the Offshore IPMP. Natural England does not agree that because no significant impacts are predicted, no monitoring is required. Currently the only post-consent monitoring that has been proposed is the industry-standard monitoring of underwater noise from the first 4 piles. However, monitoring undertaken as part of the Marine Mammal Mitigation Plan (MMMP) should not be considered post-consent monitoring as it does not meet

the objective of validating impacts. Natural England is concerned that no monitoring has been outlined that would evidence the impacts to marine mammals e.g. monitoring of animal responses to impacts, including mitigated impacts. We highlight that some of the impact pathway assessments factor in mitigation to conclude no significance, therefore validating the effectiveness of the mitigation is a reasonable aim for monitoring. There has been no consideration of the areas of the assessment where assumptions have been made and where the project could contribute to filling knowledge gaps that would inform the project's assessment.

11. Therefore, we advise that further detailed discussion is required on the monitoring plans. We understand that this is proposed to occur post-consent. However, at present we have limited understanding, and therefore low confidence, in how the monitoring will evidence the outcomes of the marine mammal assessments. The Applicant should revise the In Principle Monitoring Plan (IPMP) in discussion with Natural England. Detailed requirements for In Principal monitoring (IPMP), can be found in: Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards Phase IV: Expectations for monitoring and environmental requirements at the post-consent phase. This document outlines Natural England's recommendations for an effective IPMP and should be considered when planning monitoring post-consent.

3.3 [Section 2.6] Ornithology

12. Natural England is concerned that no pre and post construction Ornithology monitoring is secured within the DCO/dML at conditions 14 and 16. Given the potential disturbance and displacement impacts to Liverpool Bay SPA Red Throated Diver population, it is unlikely that any changes in abundance and distribution could be determined without both pre and post construction monitoring. In addition, Natural England is currently in the process of reviewing documents submitted at Deadline 1 and therefore until this is completed, we are unable to advice further on potential Ornithology monitoring requirements. Once our review is complete, we would welcome further discussion with the Applicant in regard to monitoring of key species.

Annex A: Natural England's Advice on an In-Principle Monitoring Plan (IPMP) extracted and summarised from: Environmental considerations for offshore wind and cable projects - Phase IV Best Practice Advice for Post-Consent Monitoring, Version 1.0, July 2022.pdf **(Parker *et al* 2022).**

1. **Purpose of the IPMP document**

The outcomes of monitoring are necessary to:

- validate the predictions that were made during the consenting phase;
- mitigate against unforeseen impacts;
- evidence the effectiveness/success of mitigation measures;
- inform adaptive management strategies

Therefore, it is important that the IPMP represents a useful document that ensures the monitoring commitments are detailed and can be referred back to throughout the monitoring process.

2. **Advice relating to post-consent monitoring (PCM)**

The process and structure of the planning system, including post-consent monitoring, is currently under review by Government, Defra, Natural England and other bodies (see Section 3.1). Options for how PCM can be improved to increase our understanding of the marine environment, the effects of offshore wind development and provide information-rich data over relevant spatial and temporal scales are being considered, such as the promotion of strategic or collaborative monitoring (see Section 4.4). The following section provides Natural England's advice and recommendations for the production and delivery of receptor-specific monitoring plans at the post-consent phase.

3. **Natural England's recommendations**

- **Early and continued engagement with SNCBs** – engagement with the relevant SNCB(s) is recommended at the earliest possible opportunity to agree the focus of monitoring plans and to allow for continual engagement as plans evolve.
- **Clear aims, objectives and hypotheses**– post-consent monitoring plans should be targeted and have clear aims and hypotheses (Chambers et al. 2012; MMO, 2014; Lindeboom et al. 2015). Monitoring should be proportionate to the level of risk to biological receptors and should not be delivered for the sake of monitoring, but instead

focus on sensitive receptors and be driven by a clear understanding of what the monitoring is seeking to address (MMO, 2014). This helps to collect data that is information rich, as well as data rich (Wilding et al. 2017). Early engagement with NE or relevant SNCB is recommended to help agree monitoring plans.

- **Detection of unforeseen impacts** – post-consent monitoring should be targeted, with clear monitoring aims and objectives. Whilst PCM plans should not be designed to detect unforeseen impacts, the analysis of the results of PCM may identify unforeseen impacts which arise during offshore wind farm development across relevant spatial and temporal scales (MMO, 2014). If detected, unforeseen effects can be investigated through adaptive monitoring (see Section 4.3). Participation in collaborative or strategic-level monitoring projects may be also appropriate for identifying long term and lasting effects to marine receptors as a result of offshore wind development.
- **Statistical power** – the ability of a survey to collect a sufficiently large amount of data to make robust statistical inferences about changes is known as its power (Maclean et al. 2006). Where possible, power analyses should be undertaken before monitoring commences to inform the design of PCM to ensure sufficient statistical power in subsequent analyses to detect meaningful changes (Bennet et al. 2016). Projects should also aim to reduce dependence within or between sampling units and plan the statistical tests and/or modelling approach so that the nature and quantity of data collected is suited to conduct the required tests/modelling (Bennet et al. 2016; Noble-James et al. 2018). Early engagement with Natural England is recommended when considering the statistical power of analyses and how this is used to inform survey design, or if power analyses indicate that the expected statistical power may not be sufficient to draw meaningful conclusions.
- **Uncertainty and significance** – as set out within MMO (2014), uncertainty and significance are two important considerations when designing and implementing PCM plans. Uncertainty reflects the extent of error or assumptions that were made when predicting impacts. There is a greater need to monitor topics if there is higher uncertainty regarding the effects of an impact or resulting recovery of receptors. The significance of an impact is another important consideration for PCM and helps to inform whether further management or remedial measures are required (MMO, 2014).
  Sufficient duration – PCM should be of a suitable duration to capture lags in impacts to receptors being detected as some impacts may only be detectable after a duration of time, depending on the receptor and the monitoring objectives. In addition, PCM may be required to monitor the recovery of receptors after an impact has occurred (e.g., impacts from construction) or a compensation measure has been put in place. Monitoring plans should be designed to incorporate long term or lasting impacts to

validate predictions made within the ES and to improve our understanding of long-term effects and recovery of marine receptors. Monitoring plans should also have a clearly defined criteria for when and how decisions will be made on the conclusion of monitoring during the post-consent phase, for example when monitoring will be deemed to have met the objectives of the monitoring programme. Refer to the adaptive management approach principle below (Section 4.3).

- **Strategy for consequence** – a key role of post-consent monitoring is to validate the predictions of the ES, HRA, EIA or MCZ Assessment (Section 4). Monitoring plans should therefore have a clear strategy for subsequent remedial action if the monitoring shows that the original conclusions are incorrect, such as the significance of an impact upon a receptor or the timeframe for its recovery (MMO, 2014). Thresholds can be used to set acceptable levels of change for some environmental indicators, which if exceeded, can trigger additional monitoring or the implementation of mitigation or management measures to avoid adverse effects (Bennet et al. 2016; Wilding et al. 2017).
- **Sharing of data** – in order to maximise the usefulness of post-consent monitoring, data and reports should be made publicly available and provided to the relevant data repositories, such as the Marine Data Exchange (MDE) and the Marine Environmental Data and Information Network (MEDIN). All reports should be supported by the source/raw data and provide a description of the collection methodology and protocols followed (MMO, 2014). Metadata and environmental metadata should also be made publicly available (Chambers et al. 2012). Natural England advise that PCM data should be shared within the relevant data repositories as a matter of best practice. This could be secured as a licence condition for projects.
- **Maximise use of baseline characterisation data and existing data** – where possible, data collected at the pre-application phase should be used to supplement post-consent monitoring data. The results of baseline characterisation surveys may also be useful to inform the design of post-consent monitoring plans (e.g., the key areas or receptors for monitoring to focus upon). There may also be suitable existing datasets which can be used to provide context or supplement site-specific monitoring data. However, the validity and suitability of existing datasets must be carefully considered if used beyond providing a historical context for subsequent monitoring data (Noble-James et al. 2018). Parker et al. (2022a) provides advice and principles for the use of existing data to inform baseline characterisation surveys.
- **Comparable and standardised data** – data should be collected and presented in a consistent format which, where possible, enables effective comparisons with other

datasets and other monitoring programmes. Consistent data standards may also allow for backwards/forwards compatibility of monitoring methods over time. Data collection should follow the MEDIN data standards and guidelines as a matter of best practice.9A consistent naming convention should also be followed. Species should be recorded using the World Register of Marine Species (WoRMS) list of accepted scientific names and biotopes should be recorded using the EUNIS classification system (EEA, 2019). A consistent and comparable approach also enables effective cumulative and in-combination assessments and improves the functionality of data repositories.

- **Follow industry standards, methodologies and protocols** – monitoring programmes should follow the current industry standards, methodologies and protocols as a matter of best practice. This may apply to data collection, handling or analysis (Chambers et al. 2012). Receptor-specific advice is provided within the relevant sections below. Whilst this document will be periodically updated to reflect evolving best practice for industry standards and survey methodologies, Natural England would welcome the opportunity to discuss proposals to use the latest industry monitoring methods, standards or protocols.
- **Novel and emerging monitoring methods** – Natural England acknowledges the role of offshore wind farm developers in exploring and testing new monitoring methods. Natural England supports innovation and welcomes the exploration of novel and emerging monitoring methods, such as environmental DNA (eDNA), or passive monitoring methods. Although there can be challenges presented by the relative novelty of some techniques in early stages, collaborative working can unlock many wider benefits if planned carefully. Early engagement with Natural England is recommended if novel approaches are proposed.
- **Strategic / joined up approach** – a strategic, collaborative or joined up approach can deliver monitoring programmes of a greater scale and scope, thereby providing a greater understanding of ecological impacts, sensitivity or recovery (see Section 4.4). Natural England strongly supports strategic or collaborative monitoring proposals and can provide bespoke advice on a case-by-case basis.

4. Adaptive monitoring and discharge of conditions

Adaptive monitoring is the process of evaluating data collected to date, to help inform the duration and/or design of further monitoring (Bennet et al. 2016). It can also be used to assess whether monitoring should continue or if the relevant licence conditions can be discharged (MMO, 2014). Adaptive monitoring can also inform on the requirement for further mitigation, compensation or restoration measures. Adaptive monitoring is of particular importance for

where there is scientific uncertainty regarding lasting impacts or recovery of receptors (Bennet et al. 2016) or where monitoring is seeking to validate predictions of the ES, EIA, HRA or MCZ Assessment.

Adaptive monitoring is relevant during the post-construction phase where monitoring is investigating changes to the natural environment and ecological receptors over an undefined timescale, such as until a receptor recovers. Licence conditions should incorporate flexibility over the duration of monitoring plans, to allow the results of monitoring surveys to inform the requirement for future surveys or the implementation of management measures (MMO, 2014). This helps to ensure monitoring programmes are delivering the agreed aims and objectives set out by the monitoring plans and ensure monitoring is proportionate to the level of data required. For example, if the ES predicted a full recovery of an MPA feature within a certain timeframe, monitoring may be required until full recovery has occurred and can be agreed between the applicant, SNCB and MMO as the relevant regulator. Conversely, if a receptor has demonstrated the predicted level of recovery, and if agreed by all parties, the requirement for additional post-construction surveys may be discharged early.

In addition, another aspect of adaptive monitoring is the flexibility of the monitoring plan. Due to the long timeframe between projects obtaining consent and completing PCM surveys after construction, monitoring plans need to capture the scope for changes to the methodology or focus of surveys over time. This may be due to new evidence or understanding of impacts to marine receptors, or due to new technology becoming available which enables more ambitious studies. For example, seabird tagging projects should allow for flexibility in methods as new tracking devices become available. Natural England can provide advice on a case-by-case basis.

5. **Collaborative / strategic monitoring**

Delivering monitoring projects collaboratively could have many benefits for the collection of post-consent monitoring data and can help to answer key evidence gaps or research priorities. Collaborative monitoring could include joint monitoring programmes across zones or regions where projects pool resources to achieve monitoring aims, or where key research questions are divided between projects within a zone or region to allow sufficient time and resources to be dedicated to each question. Collaborative monitoring could also comprise individual offshore wind projects contributing data, money or resources to a strategic research project led by another organisation, such as by ORJIP or ORSMRF, to address shared research questions or evidence gaps. Working collaboratively allows for the pooling of resources and/or division of labour, which enables monitoring programmes to be of a greater scale and scope

than possible on a project-specific basis. This enables data collection to produce useful and information-rich data over sufficient spatial and temporal scales to enhance our understanding of the marine environment and the effect of offshore wind development upon ecological receptors (Wilding et al. 2017).

In addition, collaborative monitoring could be undertaken over larger spatial and temporal scales than project-specific monitoring plans, which could enable the detection of wider community changes, unforeseen or long-term effects, and allow for greater statistical power in subsequent analyses. Some projects have worked collaboratively to address key shared questions of mutual interest at the post-consent phase (e.g., see Section 6.3.1). If implemented effectively, this allows for the division of labour and allows multiple projects to undertake more insightful monitoring programmes than possible on an individual project-level.

Whilst there is widespread agreement of the benefits of collaborative monitoring across sector groups, a framework is required to facilitate strategic monitoring programmes at the government level. Facilitating strategic monitoring is a key objective of Natural England's Approach to Offshore Wind (Natural England, 2021) and Natural England supports the implementation of strategic monitoring as a mechanism to address key evidence gaps and to deliver monitoring projects at scale. Natural England are also leading the Planning Offshore Wind Strategic Environmental Impact Decisions (POSEIDON) project. This is a multi-year project, funded through the Crown Estate's Offshore Wind Evidence and Change (OWEC) programme, which is seeking to address strategic data collection for offshore wind projects. The outputs of the POSEIDON project will be incorporated into this advice when available. Projects should consider whether data collection for some aspects of post-consent monitoring could be undertaken collaboratively with other regional projects in order to answer specific monitoring aims and priorities. Natural England strongly supports the implementation of collaborative monitoring programmes across projects, zones or regions, and can provide advice on a case-by-case basis.