THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

Natural England's Risk and Issues Log - Deadine 1 Submission

For:
The construction and operation of the Morgan Generation Offshore Wind Farm located approximately 37km from the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference [EN010136]

3rd October 2024

Natural England has created this Risk and Issues Log to track progress through the Five Estuaries examination process of risks and issues raised in our Relevant and Written Representations
The Risks and Issues Log will be submitted at each deadline and mark issues with a colour from our RAG scale depending on the level of significance of the issue. It should be noted that the colour scale is likely to be different from that used in any Statement of Common Ground provided by The Applicant.

The Risk and Issues Log is split into multiple tabs in line with the Appendices of our Relevant Representations submission.
A - DCO
B - Offshore Ornithology
C - Marine Mammals
D - Physical Processes
E - Fish and Shellfish Ecology
F - Benthic Ecology
G - Other Plans
H - SLVIA

Each updated submission of the Risk and Issues Log will reflect our position following a review of documents that we have considered in forming our position at each deadline. Any issues added to the log due to additional submissions during Examination (not included in Relevant Reps) are highlighted in Red and then coded according to RAG status.

Purple Note for Examiners and/or competent authority. May relate to DCO/DML	
Red Natural England considers that unless these issues are resolved it will have to advise that (in relation to any one of them, and as appropriate) it is not possible to ascertain beyond reasonable scientific doubt that the project will not affect the integrity of an SAC/SPA/Ramsar and/or significantly hinder the conservation objectives of an MCZ and/or damage or destroy the interest features of a SSSI and/or comply fully with the Environmental Impact Assessment requirements. Addressing these concerns may require the following: new baseline or survey data; and/or significant revisions to baseline characterisation and/or impact modelling and/or significant design changes; and/or significant mitigation In addition, Natural England may use this category to highlight where there is a significant risk that an issue will not be sufficiently addressed within the Examination timescales. Consequently, issues that start out as Amber may progress to Red in the latter stages of the examination.	
Amber Natural England does not agree with the applicant's position or approach and consider that this could make a material difference to the outcome of the decision-making process for this project. Natural England considers that these matters may be resolved through: provision of additional evidence or justification to support conclusions; and/or revisions to impact assessment methodology and/or assessment conclusions; and/or minor to moderate revisions to impact modelling; and/or well-designed mitigation measures that are adequately secured through the draft DCO/dML and/or amendments to draft plans If these issues are not addressed or are unlikely to be resolved by the end of the Examination, then they may become a Red risk as set out above.	
Yellow Natural England doesn't agree with the Applicant's position or approach. We would ideally have liked this to be addressed prior to the examination but are satisfied that for this particular project it is unlikely to make a material difference to our advice or the outcome of the decision-making process and would not expect these matters to be a ongoing focus of the examination. However, we reserve the right to revise our opinion should further evidence be presented. It should be noted by interested parties that just because these issues/comments are not raised as significant concerns in this instance, it should not be understood or inferred that Natural England would be of the same view in other cases or circumstances. Once a Risk or Issue has been categorised as yellow, Natural England will not make further comment on the matter at subsequent deadlines, unless specifically requested to through ExA Questions. These rows will then be greyed out at subsequent deadlines in order to rationalise the risk and issues log.	
Green Natural England is in broad agreement with the Applicant's approach and has no significant outstanding concerns. As above, we reserve the right to revise our opinion should new evidence be presented. Once a Risk or Issue has been categorised as green, Natural England will not make further comment on the matter at subsequent deadlines, unless specifically requested to through ExA Questions. These rows will then be shaded grey at subsequent deadlines in order to rationalise the risk and issues log.	

Point	Point Number(s) from Appendix A [RR-026]	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix A - Development Consent Order (DCO) and Deemed Marine Licence (dML) [RR-026]	RAG Status Rel and Wri Rep, and D1
1	A1/A5	The DCO and dMLs do not accurately capture all the required maximum parameters of the proposed works. Important metrics such as the maximum area and volume of scour and cable protection and the number and size of Unexploded Ordinance (UXOs) that can be detonated through High Order Detonations have not been included.	
2	A2/A9	The pre-construction documentation required under the dMLs condition 20 is to be provided four months prior to commencement. Due to the increasing complexity of construction of large offshore works, six months is now considered an appropriate period.	
3	A3/A8	There is no condition requiring an updated Offshore Operations and Maintenance Plan (OOMP) be submitted, with the SNCB consulted prior to approval. The condition should also secure that no cable protection should be deployed later than 10 years post construction. Permission for any further cable protection works after that time should be sought through a new Marine Licence.	
4	A4/A11	The monitoring conditions included within the dMLs do not secure any ecological monitoring. Monitoring of benthic, ornithological and marine mammals should be secured through appropriate conditions	
5	A6	The Applicant should update the dMLS to include the maximum hammer energy that may be used. This should be presented as a maximum for each different foundation type (monopile, pin pile etc), as it is a key metric for the potential impact on marine mammals and fish.	
6	A7	Micro-siting around features of conservation importance, such as reef of Annex I quality, is a standard mitigation. We recommend that the requirement to consider micro siting around features of conservation importance is secured within the dMLs.	
7	A10	The Underwater Sound Management Strategy will need to be supplied for both piling and UXO detonation. A minimum of two documents for each licence. This mitigation strategy is required due to the potential for in combination impacts and it is important that the document not be provided too early. Therefore, Natural England requests condition 22 require the plans to be submitted no later than 6 months and no sooner than 9 months prior to the activity.	

Point	Point Number(s) from Appendix B [RR-026]	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix B - Offshore Ornithology [RR-026]	RAG Status Rel and Wri Rep
1	B1	Natural England do not consider the Cumulative Effects Assessment (CEA) to be sufficiently robust due to the lack of quantitative consideration of some historic projects. The Applicant has not followed SNCB advice on this matter. Historic projects without quantified impacts have been considered qualitatively. Thus, we consider there to be a high level of uncertainty in the Applicants assessments. Natural England also advise that the Round 4 Irish Sea windfarms should be using the same data to conduct their cumulative and in-combination assessments and urge collaboration on this aspect. This is important both with respect to historic projects and the Round 4 projects themselves, especially as these projects are in examination simultaneously and the impact estimates may be considered subject to change.	
2	B2	Natural England have outstanding concerns relating to both the Collision Risk Modelling (CRM) and displacement assessments and subsequent apportioning undertaken by the Applicant which we consider currently preclude any consideration of the conclusions drawn by the Applicants assessments. Key issues are the use of appropriate flying bird density data, not using SNCB preferred flight speed parameters and using specific displacement and mortality rates of auks, rather than the SNCB advised ranges. Greater clarity and transparency is required on the results of assessments, and how these are used in later stages (e.g. apportioning), especially those using various CRM parameters. Furthermore, we consider that the full range of SNCB advised displacement and mortality rates must be considered when apportioning impacts.	
3	B3/B18/B52	The worst-case scenario 'air gap' is usually stated as blade tip height above Highest Astronomical Tide (HAT). The Applicant should present the air gap above HAT to facilitate comparison with other projects and the required minimum air gap of 22m relative to HAT.	
4	B4	Copy paste error. Table A.2 is titled the same as previously presented table. Update table title for clarity.	
5	B5	Natural England are satisfied that appropriate baseline data has been gathered for the purposes of ornithological impact assessment.	
6	B6	Recent seabird population trends section does not consider the impacts of Highly Pathogenic Avian Influenza (HPAI) in the region.	
7	B7	Table 1.19 is not supplied in full. The Applicant should provide the complete table in an updated assessment.	
8	B8	Connectivity with designated sites method is incomplete, including the non-breeding season. The full methodology used should be detailed here, and throughout the application, for clarity and consistency.	
9	B9	It is highly likely that little gulls observed at the project will also be using the nearby Liverpool Bay SPA and therefore it would be appropriate for the assessment to consider the implications of this.	
10	B10	Natural England question if it is safe to assume that flying and sitting birds do not have different distributions assumption for the key species. Natural England advise that it may be necessary to use the design-based density estimates for CRM unless the Applicants approach can be demonstrated to accurately describe the densities of flying birds within the array area.	
11	B11	Please clarify the source of the correction factor for puffin and confirm that it is appropriate to apply this correction factor to sitting birds only. If the time spent underwater is as a proportion of all time (i.e. not only time on the water) then the application of a correction factor should reflect this.	
12	B12	The Applicant has persisted with calculating regional populations using a method that the SNCBs do not agree with. While we accept that the project conclusions will be unchanged, Natural England continue to advise that it would be preferable for the SNCB method (supplied as written advice to the EWG) to be adopted. This ensures consistency with other projects, as well as within the project for the alone and cumulative assessments. We welcome consideration of the SNCB advised regional population figures for Manx shearwater and gannet in the project alone assessments, and for all species in the cumulative assessment.	
13	B13	Natural England consider that the Applicant have identified the key pressures, impacts and receptors.	
14	B14	We note that the Applicant has discounted the following operational projects from the CEA due to no temporal overlap between the operational phases of these projects and the Morgan Generation Assets: Arklow Bank Phase 1, Barrow, North Hoyle and Rhyl Flats. If the operational offshore wind farm projects are re-powered, or maintained beyond current operational consents, those projects would require a consent and thus produce new cumulative assessments that include the impacts of Morgan OWF. In that context, the Applicant's proposed approach is acceptable.	
15	B15	Natural England do not agree with the approach of allocating March to the pre breeding season for kittiwake, which should be March to August inclusive. However, we do not consider it necessary to assess displacement for kittiwake in any case and agree with the breeding seasons defined for all other species. We suggest double-checking that the breeding season months used for the kittiwake displacement assessment are acceptable to JNCC and any other relevant interested parties.	
16	B16	The Applicant should clarify and confirm the method used for CRM and update the submitted documents to reflect this. Regardless of the method used, clarification is required on the bird density data considered. We highlight that supply of the bootstrapped data is required not only to verify the sCRM, but also to enable future access for consideration in cumulative and in-combination assessments.	
17	B17	Natural England note that the great black-backed gull bird length SD has been updated since the provision of draft advice and agreement on the parameters to be used during the EWG engagement process. Natural England are content with the parameters used for the assessment. However, we suggest that if the Applicant undertakes any further CRM the EWG is consulted to confirm the latest guidance is followed.	
18	B19	Natural England do not consider it appropriate to use the proportion of birds in flight across the entire surveyed area (array+10km buffer) to estimate the proportions of birds in flight within the array area only, and thus calculate the densities of flying birds that will be considered by CRM. Natural England advise that abundance and density estimates (with associated CIs) of birds on the water and in flight should be calculated separately using design-based methods. For CRM, these densities of birds in flight should be an accurate representation of the data collected within the array area specifically. Thus, given the uncertainties around the proportions of birds in flight from the model-based density estimates, we advise design-based density estimates of flying birds within the array area should be used in preference. However, in the first instance we recommend a basic analysis to determine if the proportion of birds in flight in the array only is broadly comparable to that across the entire survey area. This may give some comfort that the Applicants approach is appropriate, or alternatively, that further investigation or use of design based estimates is required.	
19	B20	The Applicant states, "… if MRSea generated a density of 10 black-legged kittiwake per km2 in the Morgan Array Area for all behaviours, and there were a total of 2,000 black-legged kittiwake in the raw data for the Morgan Array Area, 600 of which were in flight. The density of flying birds in the Morgan Array Area would then be calculated as 600/2000 * 10 = 3 kittiwake per km2." Natural England assume the worked example refers to 2000 birds in the total survey area, not the array. The Applicant should review the worked example text and edit if necessary.	
20	B21	Natural England advise that the Applicant's chosen methodology for calculating density estimates does not follow best practice guidance. Further, we do not consider it appropriate to take an average of confidence limits. The Applicant should present an updated assessment in line with Natural England's advice on this matter.	
21	B22	Natural England highlight that the estimates calculated using SNCB advised parameters should be progressed through all stages of the assessment. Impacts estimated using the SNCB advised approach must be considered for apportioning, when calculating increases in baseline mortality, and in any subsequent PVA. For clarity, Natural England request that the results of CRM arising from the SNCB advised flight speed and avoidance rates are highlighted in updated tables.	

Point	Point Number(s) from Appendix B [RR-026]	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix B - Offshore Ornithology [RR-026]	RAG Status Rel and Wri Rep
22	B23	Natural England are not persuaded that the use of flight speeds derived by Skov et al (2018) as proposed is appropriate. Further, we urge general caution when proposing alternative parameters due to the methods used to define avoidance rates. The calculation of avoidance rates involves a comparison of how many collisions are predicted by the model, in the absence of avoidance and using given parameters, with real-world collision data collected from wind farms. If the model parameters are changed so that fewer collisions are predicted in the absence of avoidance, then a lower avoidance rate may also be warranted - the smaller the gap between predicted (without avoidance) and observed collisions, the lower the avoidance rate. If the Applicant wishes to retain their review of evidence and proposed updates to flight speed parameters, a full consideration of the implications of this should be reflected within that review i.e. that other parameters may also need to be recalculated.	
23	B24	Natural England do not currently consider the use of species specific rates to be appropriate for CRM. In short, this is because the paucity of offshore, species-specific data undermines the confidence we can place in species-specific rates at this stage. Further, some of the high value collision data collected offshore could not confirm specific species identifications, so there is more data to inform grouped rates in some cases. Again, we highlight that the estimates calculated using SNCB advised parameters should be progressed through all stages of the assessment.	
24	B25	Natural England welcome the consideration of migratory birds and impact estimates derived by CRM. Natural England are satisfied that the project alone will not result in any significant level of impact to migratory birds.	
25	B26	Natural England advise that Seabirds Count data be used for apportioning to colonies in the breeding season. The Applicant should present an updated assessment using Seabirds Count data. For apportioning in the non-breeding season, the Applicants approach remains appropriate.	
26	B27	The Applicant has followed a method developed by Hornsea Project Two to undertake kittiwake age apportioning which SNCBs do not support. Natural England reiterate the SNCB advice provided to the EWG, that we do not agree with the use of this method. Natural England advise a more appropriate approach for age-apportioning kittiwakes in the breeding season would be to simply use the 84.11% of adults recorded in the Morgan site-specific DAS data. Alternatively, given the general uncertainty around the value of ageing data for kittiwakes we advise the Applicant should take a precautionary approach and assume all birds present in the breeding season are adults for the purposes of impact assessment.	
27	B28	Natural England acknowledges that sabbaticals represent a knowledge gap for ecologically realistic impact assessments. However, we do not believe that simply removing them from assessments during apportioning is appropriate. We therefore welcome the presentation of results derived from adult populations that have not been altered to take sabbaticals into account. We advise that integrity judgements should be based on assessments that do not remove sabbatical birds at the apportioning stage.	
28	B29	Natural England consider it of fundamental importance that the discussion around sabbatical rates remains evidence-based and fully considers the quality of any evidence, its more general applicability, the high levels of uncertainty and significant residual knowledge gaps. Natural England advise that the Applicant should ensure assessments that do not apportion sabbatical birds are clearly presented, and that those mortality estimates are considered in relation to baseline mortality and taken through to PVA where required.	
29	B30	Following review of all submitted documents, Natural England assume that impact assessments that have removed sabbaticals are not actually progressed through all stages of assessment. In document E1.3 the Applicant states, "The apportioning values do not include consideration of sabbatical birds." The Applicant should confirm that this is the case and edit text for clarity as necessary.	
30	B31	For the great black-backed gull PVA, the Applicant has used the herring gull survival rates, including using the adult herring gull figure. Natural England advise using the herring gull 0-1 year survival rate and the adult great black-backed gull rate detailed in Horswill and Robinson, which is considered precautionary in terms of weighted mean survival rates for 1% thresholds.	
31	B32	Natural England note that the Applicant presents two total mortality impacts for consideration by PVA of great black backed at the Isles of Scilly (IoS) SPA. Two different avoidance rates are detailed. However, it is not clear here if all other parameters considered in the CRM to derive these estimates are in line with SNCB advice, or those preferred by the Applicant (or a mixture). Please clarify the parameters used to derive mortality estimates considered in the PVA models. Natural England reiterate that we will only consider the findings based on our recommended parameters when making integrity judgements.	
32	B33	The Applicant presents evidence relating to displacement of auks to justify the consideration of 50% displacement rates and 1% mortality rates in the assessment, drawing on APEM (2002) and MacArthur Green (2023). Natural England do not agree with the Applicant's interpretation of this evidence, and . highlight that a recent study in the German North Sea suggested that displacement of auks could be occurring at much greater distances from OWFs (up to 19.5km) than are currently considered by best practice impact assessments (Peschko et al, 2024). Natural England therefore advise that SNCB guidance is followed throughout the assessments so we can provide our advice into the Examination.	
33	B34	Natural England do not consider there to be any convincing evidence that is broadly supportive of auk displacement from OWFs being a short-term effect, or that birds will habituate to them. Natural England do accept that there is a large degree of uncertainty regarding displacement rates and effects. Although we hope that new evidence will reduce uncertainty with respect to displacement effects and impact assessment, at present, SNCB guidance remains unchanged.	
34	B35	We do not consider the Applicant's displacement rate range for used for kittiwake an accurate reflection of the EWG advice. Natural England and NRW advised that displacement was not assessed for kittiwake. Therefore Natural England will not review or consider the findings of the displacement assessment for kittiwake.	
35	B36	Our pre-application advice detailed a pragmatic hierarchical method to 'gap-fill' the Irish Sea cumulative & in-combination assessments, given the number of historic projects in the Irish Sea (Annex I). The proposed approach was relatively basic, with acknowledged limitations but was designed to generate indicative estimates for currently unknown (zeroed) impacts. This would then enable more informed expert judgement to be made on the likelihood of significant impacts and Adverse Effect on Integrity (AEoI), and thus if further investigation by a more rigorous assessment was warranted. Despite this, the Applicant's cumulative and in-combination assessments still do not quantitatively consider impacts from a number of relevant projects due to the acknowledged lack of data. Impacts specified as 'unknown' have been assessed qualitatively, but ultimately treated as zero. This approach will inevitably underestimate impacts and compromises future assessments for any further development in the region. Natural England continue to advise this approach is unacceptable, and hence consider it inappropriate to comment on the potential significance of cumulative or in-combination impacts presented.	
36	B37	While Natural England consider that project alone impacts are likely to be relatively small, a number of methodological issues must be resolved before we can take an informed view on the conclusions of the assessment. Natural England advise updating the assessments and their conclusions as required.	
37	B38/B39	We highlight that Natural England are the relevant SNCB to consult on impacts to English sites, but we cannot advise on integrity judgements on sites located in Wales, Scotland or Northern Ireland. We advise that the Applicant consult the relevant SNCBs regarding impacts to non English sites. Natural England can only comment on the following sites screened into the HRA: Morecambe Bay and Duddon Estuary SPA (and Ramsar site); Ribble and Alt Estuaries SPA (and Ramsar site); Bowland Fells SPA; Flamborough and Filey Coast SPA; Isles of Scilly SPA (and Ramsar).	
38	B40	The Applicant states, "Where a species has not been recorded during the breeding season or has been recorded in only small numbers that would not be commensurate with a measurable impact, it is discounted for further consideration in the breeding season only." - The Applicant should clarify what constitutes 'small numbers' and 'non-negligible numbers', and clarify the method used to identify these. Natural England advise that an arbitrary approach (e.g. <10 birds) is not necessarily appropriate as very low numbers of seabirds from small populations could be significant.	
39	B41	Natural England advise that red-throated diver and common scoter at Liverpool Bay SPA should be assessed in the HRA Stage 2 ISAA Part 3 report. Vessel traffic should be considered from port to site as well as within the array, and any overlap with protected sites and the distribution of these features within the site properly considered. We note the commitment to secure and adhere to best practice vessel operations to minimise disturbance and suggest that the assessment fully considers the value and potential effectiveness of such measures. As regards suitable measures, Natural England has developed a Best Practice Protocol setting out some examples.	

Point	Point Number(s) from Appendix B [RR-026]	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix B - Offshore Ornithology [RR-026]	RAG Status Rel and Wri Rep
40	B42	Natural England note that there is precedence for calculating collision risk estimates for projects for which project specific values are not available. E.g., novel CRM of other projects was undertaken during the examination of Walney Extension for LBBG. This example was sent to the Applicant by Natural England on 16/04/24.	
41	B43	Natural England are supportive of updating historical data in contemporary assessments for collision risk estimates, but request that the methodology employed is detailed by the Applicant in an updated submission.	
42	B44	The Applicant's approach to HRA screening and assessment is appropriate for this project as predicted project alone impacts are small. However, we highlight that it may not be an appropriate methodology for other OWF projects. We also note for the avoidance of doubt, that impacts from the Morgan project should not be excluded from in-combination totals for future project assessments using this rationale.	
43	B45	Natural England believe that there are errors in the diagram, e.g. Are effectively 0 birds impacted? Yes should rule out LSE, not no. The figure should be amended to reflect the approach taken.	
44	B46	Natural England welcome the Applicant's stated approach to apportioning with respect to sabbatical birds. We advise that this is made clear where appropriate throughout the submitted documents.	
45	B47	Natural England do not consider the Applicant's use of single values of 50% displacement and 1% mortality to be appropriate. We continue to advocate for a range based approach to displacement assessments to capture the very high levels of uncertainty in potential rates of both displacement and mortality, and advise that the project fully considers the SNCB advised ranges of displacement and mortality rates in all assessments.	
46	B48	Natural England are not persuaded that the evidence on displacement effects presented is sufficient to justify the Applicants position. We highlight that a comprehensive evidence review has not been undertaken and the interpretation of some evidence is questionable. Natural England advise that a range of displacement rates should be considered (30-70%) throughout the assessments.	
47	B49	Natural England are concerned that the range of predicted collision impacts presented in the Step 1 assessment tables of the HRA Stage 2 ISSA Part 3 (SPAs and Ramsars) are not based on the results of CRM calculated using the SNCB advised model parameters. Natural England reiterate that we will only consider the conclusions of assessments that follow SNCB guidance and therefore seek an updated assessment which clearly presents CRM outputs based on all SNCB advised parameters.	
48	B50	Natural England request that kittiwake collision and displacement impacts are presented separately. This will facilitate their incorporation into future in combination assessments, noting that Natural England NRW do not currently advise displacement is assessed for this species.	
49	B53	Natural England advise that if vessel movements are expected to transit through the Liverpool Bay SPA then they should strictly adhere to pre-existing shipping routes to reduce the risk of additional disturbance to wintering red throated diver and common scoter. The levels of existing shipping traffic, as well as red-throated diver and common scoter density distribution in those areas may require consideration to ascertain the likely additional impacts of vessel movements associated with the project.	
50	B54	The Applicant has not proposed any post-consent monitoring in relation to offshore ornithology. We advise that the Applicant should commit to post-consent monitoring in relation to key offshore ornithology receptors, drawing on SNCB advice regarding potential risks and Natural England's Phase IV post-consent monitoring and environmental considerations in our Best Practice Advice. We advise that Natural England should be consulted on the suitability of any post consent monitoring proposed.	
51	B55	While we are in general agreement with the Applicant that their project-alone impacts are low, Natural England do not currently consider it appropriate to comment on the assessment conclusions. This is due to a number of methodological issues. We would particularly highlight the issues arising from deviations from SNCB advice in the assessment of displacement and collision, and especially the consideration of historic impacts in the cumulative and in-combination assessments.	

Point	Point Number(s) from Appendix C	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix C - Marine Mammals	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status at D1
1	C1, C11 & C35	Natural England have concerns on the assessment methodology. We see the issues as follows: • Dual effect categories in the assessment matrix where in certain cases non-significant and significant effects can result from the same combination of magnitude and sensitivity. It is generally accepted that the assessment should follow the precautionary principle thus further justification is needed when lower effect categories are chosen. Or, ideally, dual categories in the matrix should be avoid. • Terminology used to base the conclusions of the assessment is not defined thus there is uncertainty as to what spatial or temporal scale terms such 'short term', 'medium term', long term', "temporary", "small scale", "regional', 'highly localised' mean. The assessment methodology be revised.		No change	
2	C2 & C12	Natural England has concerns regarding the conclusion of negligible magnitude for injury and disturbance to marine mammals, especially harbour porpoises, from elevated underwater sound due to piling activities. We note that the assigned magnitude in the previous iteration of the assessment presented at PEIR was low thus we ask for further justification why this score has been downgraded. At PEIR, Natural England stated that "we do not agree that assigned magnitude low is appropriate for Permanent Threshold Shift (PTS) as it is irreversible injury. As per magnitude definition (Table 9.11 …"the impact would lead to permanent effects on individuals"…), the more appropriate score would medium". Revise the assigned magnitude scores in relation to injury and disturbance form piling activity.		No change	
3	C3 & C13	There is over-reliance in the assessment on Acoustic Deterrent Devices (ADDs) as a key mitigation tool to prevent the injury while the impact of the additional noise produced by ADDs has not been taken into the consideration. The onus should be on reducing the noise at the source as a priority (please see our advice below on Noise Abatement Systems (NAS)). Furthermore, careful consideration needs to be given when choosing the right type of ADD to be used to balance prevention of injury with production of unnecessary noise with potential negative effects. If relying on ADDs as a main mitigation tool to reduce the risk of injury, the impact of additional noise produced by ADDs, and any unintended consequences, should be acknowledged and considered in the assessment which is especially important for harbour porpoises and cumulative assessment.		No change	
4	C4	Natural England does not support use of scare charges for UXO clearance thus we advise that this measure is removed from the final Marine Mammal Mitigation Protocol (MMMP).		No change	
5	C5, C21 & C43	Standard industry mitigation measures are intended to minimise the risk of injury, thus they cannot be used as a justification to conclude that there will be no significant disturbance of the species. Mitigation measures aimed to reduce disturbance should be considered instead of relying on measures for reducing the risk of injury. This needs to be revised throughout the assessment.		No change	
6	C6 & C23	The inter-related effects have potential to create a more significant effect on a receptor than if just assessed in isolation. Thus, this assessment needs to be given the appropriate credence and the outcomes of the inter-related effects assessment should be presented in the marine mammal chapter. We note the 'light touch' approach of the assessment (Volume 2, Chapter 15: Inter-related effects, Table 15.9) especially when it comes to assessment of disturbance. We disagree with the outcome of the assessment for receptor-led effects. Outcomes of the inter-related effects assessment should be included in this report. In particular, the receptor-led effects from disturbance should be assessed adequately.		Applicant provided Annex 3.4 to the Applicant's Response to Relevant Representation from Natural England and Natural Resources Wales: Interrelated Effects	
7	C7	Natural England strongly advises the Applicant to commit to using noise abatement (NAS) as mitigation during construction. Noise abatement systems are proven to reduce the level of noise generated by piling and its propagation through the marine environment. As the noise levels are reduced at or close to the source, the range and area over which noise-related impacts occur will be reduced significantly. Defra will be publishing a marine noise policy paper soon (announced at MMO workshop, 13th March 2024) which will include the expectation that all offshore wind pile driving activity in English waters will be required to demonstrate that they have utilised best endeavours to deliver noise reductions through the use of primary and/or secondary noise mitigation methods in the first instance from January 2025. We expect that the majority of piling from 2025 onwards will not be able to go ahead without noise abatement in place. We strongly advise that the Applicant fully commits to using NAS as mitigation to reduce both injury and disturbance to marine mammals receptors during the construction activities (i.e. piling and high order UXO clearance).		No change	

Point	Point Number(s) from Appendix C	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix C - Marine Mammals	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status at D1
8	C8 & C32	Natural England notes that the Applicant did not propose monitoring for marine mammals within the Mitigation and Monitoring Schedule document and the Offshore In-principle Monitoring Plan. We do not agree that because no significant impacts are predicted, no monitoring is required. Marine mammal monitoring should be undertaken in addition to the standard monitoring of underwater noise generated from the piling of the first four piles. Further detailed discussion is required on the monitoring plans. The Applicant should compile an in-principle monitoring plan for marine mammals. 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.		No change	
9	C9	Natural England does not agree with the approach of using 100km and 50km buffer regions for grey seal and harbour seal respectively in order to determine connectivity with the Morgan Generation Assets based upon average foraging ranges for the two species. Maximum foraging distances from Carter et al., 2022 should be used to determine the connectivity from an identified haul out site and the project area. Natural England previously raised this issue during the PEIR stage and it has not been addressed. We do not now anticipate any material changes would be made to the baseline.			
10	C10	We note that Unexploded Ordinance (UXO) clearance is included as a licenced activity in the DCO/marine licence (which includes high order clearance). However, we advise that a separate licence is sought for UXO clearance due to the lack of information available and the over precaution that must be incorporated into the impact assessment at this stage. For example, the most likely maximum size of UXO to be encountered is expected to be 130kg Net Explosive Quantity (NEQ), however, it also states the size of device could range between 25kg and 907kg as an absolute maximum. Without further information on what size of devices will proceed to clearance stage, the assessment (and associated mitigation protocols) must consider the worst-case scenario presented within the Environmental Statement (ES) (907kg) and describe mitigation measures that will reduce those predicted impacts. We agree that the UXO clearance should be included in the assessment at this stage as it represents a holistic approach including all noisy activities.			
11	C14 & C31	Natural England notes the statement that the main objective of the Outline underwater sound management strategy (UWSMS) is to reduce the magnitude of impact of piling such that any residual significant effects from the project alone are reduced to a non-significant level. However, the Applicant has assessed the magnitude of the impacts as mostly negligible for PTS and low for disturbance resulting in non-significant effects. Thus, there are currently no residual effects. We advise that the Applicant revises the objective of the UWSMS. We also note that it is currently presented as high-level and that various secondary mitigation measures for piling and UXO clearance will be considered including NAS in order to support the conclusions of "not significant effects". However, we expect that the Applicant commits fully to using NAS. At this stage, we are not content with the tentative approach e.g. "… these potential Measures [NAS] will be considered as an option under the Underwater sound management strategy (Document Reference J13) post consent, if required."(Table 4.5). Natural England is happy to work with the Applicant to further develop the strategy and to finalise it post-consent. We agree with the intention to secure the strategy within the dMLs in the Draft DCO.			
12	C15	It was estimated that there will be an additional 1,929 installation vessel movements during the construction phase within the Morgan Array Area thus there will be a significant increase in traffic in the area outside of the shipping lanes. We also note that the estimated number of animals disturbed by vessels is based on the static impact radii (Table 4.44) thus the conclusions of the assessment are not based on the realistic scenarios. As such, this assessment should be revised, particularly the magnitude, taking into account the increase in the number of vessels in the project area compared to baseline as well as sensitivity of harbour porpoise to vessel noise. This is of particular importance for cumulative assessment with other projects. Furthermore, we do not agree with the statement: "Given the existing levels of vessel activity in the Morgan shipping and navigation study area it is expected that marine mammals could tolerate the effects of disturbance…" considering that the tolerance threshold levels of harbour porpoises to vessel disturbance are not known, claims such as this cannot be made. N.B. The same comment applied to HRA Stage 2 Information to support an appropriate assessment, paragraph 1.6.4.315. Revise the assessment for disturbance from elevated underwater sound due to vessel use and other (non-piling) sound producing activities.		Applicant provided Annex 3.5 to the Applicant's response to Relevant Representations from Natural England (RR-026) and Natural Resources Wales (RR-027): Impacts on Marine Mammals and Elevated Underwater Sound Due to Vessel Use	
13	C16	The predicted disturbance ranges for Sub-bottom profilers (SBPs) and vibro-coring are 17.3km and 8.8km respectively. However, no mitigation measures have been discussed for these large disturbance ranges. Geophysical and geotechnical surveys should be included in the MMMP and UWSMS and appropriate measures considered to mitigate disturbance over such large ranges. Also, they need to be appropriately assessed for cumulative impacts of disturbance (Table 4.55) Consider appropriate mitigation measures to mitigate the large impact ranges as a result of the SBP and vibro-coring activities.			

Point	Point Number(s) from Appendix C	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix C - Marine Mammals	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status at D1
14	C17	Natural England disagrees that a period of several months can be considered as a "very short duration". Also, we find it confusing that in the next paragraph, the same period of time is referred to as "medium term duration". Thus, the terms used for temporal impacts need to be clearly defined and universally applied across the assessment. Define the terms to describe both temporal and spatial impacts and apply them consistently across the assessment.			
15	C18	Inconsistency in the approach when assigning the sensitivity score for effects on marine mammals due to changes in prey availability, particualarly for harbour porpoise and harbour seal where their score should be medium.			
16	C19	If basing the assessment on the statement that "all marine mammals are deemed to have some tolerance to disturbance", robust evidence needs to be provided to support it.			
17	C20	Natural England recommend application of the tiered approach for cumulative assessment as outlined in the Natural England Best Practice Guidelines Phase III document. We advise that the same Tier system is used for HRA as well.			
18	C22	Given the cumulative number of vessels across all projects as well as large disturbance ranges for some vessels of up to 20km, Natural England does not agree with the assigned magnitude score 'low' for disturbance from elevated underwater sound due to vessel use and other (non-piling) sound producing activities. The assessment should be revised accordingly.		No change	
19	C24	Outline Marine Mammal Mitigation Protocol: The PAM guidance was updated in December 2023 (JNCC 2023). This updated version should be used to inform the final MMMP.			
20	C26	Natural England notes that a conservative mitigation zone of 1,700 m has been identified for piling. This range will be difficult to monitor with the standard MMO and PAM methods, thus thoughtful consideration needs to be given to the technologies that can effectively monitor this range. Natural England is happy to engage with the Applicant to discuss the appropriate monitoring strategies/technologies for this size of mitigation zone.			
21	C27	We disagree with the statement: "The PTS onset ranges will be further reduced by application of ADDs…". The purpose of the ADD is to encourage animals to leave the area of the impact before the commencement of the activity, in this case piling, not to reduce the impact of the sound itself. In order to reduce the noise at the source, NAS needs to be employed. Natural England strongly advises the implementation of NAS be considered to reduce the noise at source and reduce the reliance on ADDs.			
22	C28	Piling mitigation flow chart lacks detail e.g. duration of the ADD activation; breaks of less than 10min need to be monitored by MMO/PAM to make sure no marine mammals are in the mitigation zone prior to re-commencement of piling; procedures for ADDs during the break. Provide further detail in the MMMP.			
23	C29	Natural England notes that a 30 minute duration of ADD activation has been proposed at this stage. We advise that this is revised and agreed post-consent in agreement with SNCBs. Moreover, Natural England do not agree that NAS should be used exclusively for UXO changes larger than 130kg as this is not in line with the current policy plus this technology is routinely used for smaller charges. The applicant should commit to reduce the noise at the source as far as possible. Update the MMMP with consideration of use of NAS for UXO charges smaller then 130kg.			

Point	Point Number(s) from Appendix C	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix C - Marine Mammals	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status at D1
24	C30	There is no requirement to use ADDs during the geophysical surveys. Thus, this mitigation should not be considered for these activities and the MMMP updated accordingly.		NE acknowledges that the Final MMMP will be developed in consultation with relevant stakeholders, including NE. However, our comments will remain until we have seen the final version.	
25	C33	Natural England defers to CEFAS as the underwater noise specialists to comment on the Underwater Noise Technical Report.			
26	C34	Please note that it is Natural England's remit to provide advice on the assessment in so much as it relates to SACs in English waters. We defer to the relevant SNCBs on the appropriate approach for assessing SACs outside English waters.			
27	C36	We note that iPCoD modelling for bottlenose dolphin was carried out for a period of 25 years. Our advice at PEIR was that the results are presented for shorter periods alongside 25 years and that those periods are also considered in the assessment (e.g. the first 6 years, based on the Favourable Conservation Status (FCS) reporting period). This comment applies to all instances where iPCoD modelling was used.			
28	C37	Natural England disagrees with the conclusion regarding the pre-construction site investigation surveys. Natural England does not consider that a period of several months can be considered a 'very short duration'. New data collected in Wales by Veneruso et al. 2024 should be given credence in the assessment especially given very large disturbance ranges (17.3km). We advise that appropriate mitigation is considered for these surveys within the MMMP and UWSMP.		Natural England notes the applicant's errata sheet addition to correct the term "very short duration". However, our concerns around SBP displacement still remain.	
29	C39	We note that the total number of animals disturbed as a result of elevated underwater sound during piling for each tier is missing in the table. The numbers of animals per project/tier should be summed to get the total number of animals disturbed and what proportion of the relevant MU that constitutes (e.g. Morgan Generation Assets and Transmission Assets have the potential to affect up to 5.5% of the CIS MU for harbour porpoises; Tier 1 projects could disturb up to 15.36% of CIS MU, etc). Thus, there is a potential that more than 20% of the CIS MU population of harbour porpoise may be disturbed at any one time from all projects in-combination. Whilst we acknowledge no spatial overlap between the Project and the Bristol Channel Approaches SAC, our concern is whether this level of in-combination disturbance could impact the ability of harbour porpoise to remain a viable component of the site (Conservation Objective 1). This supports the necessity to commit to NAS as a mitigation method in order to reduce the distance ranges and decrease the proportion of animals disturbed. Natural England advises the Applicant commit to the adoption of NAS to ensure no AEoI to harbour porpoise SACs from in-combination disturbance effects.			
30	C40	Natural England does not agree with the statement made in Table 1.142: "It is assumed that whilst some ecological functions could be inhibited in the short-term due to behavioural disturbance …(e.g. cessation of feeding), these are reversible on recovery of harbour porpoise hearing and therefore not considered likely to lead to any long-term effects on the individual". On contrary, a study by Yang et al, (2021) ~~(https://www.frontiersin.org/articles/10.3389/fmars.2021.606736/full)~~ suggests that the long term effect of stress caused by noise can lead to effect on the individual. Thus, such conclusions are not based on the evidence and cannot be used to justify no significant disturbance. Natural England advises these conclusions be revisited and reconsidered.			
31	C41	Considering the behavioural ecology of bottlenose dolphins i.e. a highly social species living in medium to large groups that very rarely occur solitary, the estimated number of dolphins impacted by piling in-combination with other projects, cannot be considered as an over-estimate and highly precautionary. Consider ecology of the species in the assessment in order to come to robust conclusions of the magnitude of the impacts.			

Point	Point Number(s) from Appendix C	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix C - Marine Mammals	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status at D1
32	C42	We note that the mitigation measures to minimise disturbance to marine mammals included within the Offshore EMP are only relevant to the transiting vessels. Thus, these measures are not sufficient to address the overall disturbance from elevated underwater sound due to other (non-piling) sound producing activities. Consider appropriate measure for all other (non-piling) sound producing activities, not just transiting vessels.			

Point	Point Number(s) from Appendix D	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix D - Physical Processes	RAG Status Rel and Wri Rep, and D1
1	D1	Not all worse case scenarios for marine proccess are agreed. Applicant to provide the necessary updated project parameters, evidence and assessment in updated Application documents.	
2	D2/D10/D12	Natural England agrees that on the basis of the evidence presented that the baseline description of physical processes through the desktop review of existing literature and existing data sources, project specific surveys and numerical modelling baseline scenarios are sufficient to appropriately characterise the study area. Additionally, we agree with the numerical modelling approach and scenarios conducted in relation to hydrodynamics, waves and sediment transport to inform the potential changes in the Morgan Generation physical processes study area arising from the construction, operation and decommissioning. Natural England advises that unless there are significant changes to project design parameters we will provide no further comment on data during examination.	
3	D3	Natural England advises that not all potential pressures/impacts have been considered/assessed. Updated ES chapters should be submitted which includes and assesses these pressures/impacts across the EIA .	
4	D4	Further consideration of the mitigation hierarchy is required to ensure that environmental impacts are reduced as much as possible. And All embedded mitigation measures proposed should be secured in the DCO/dML.	
5	D5	Natural England advises that as per Offshore Wind Best Practice guidance on 'Tiers' and inclusion of projects within in-combination assessments; that further plans/projects should be included within the assessment. Natural Egland advises that the CEA is updated to include all projects which are having ongoing impacts to marine process and those where there is sufficient evidence in the public domain to undertake an assessment.	
6	D6	We advise that further detail is required in the project description to inform the Maximum Design Scenario (MDS) and Environmental Impact Assessment (EIA).	
7	D7	Natural England queries if the width MDS parameters are realistic for sandwave clearance? Natural England advises that further evidence is required to support the realistic MDS parameters as set out in the DCO/dML.	
8	D8	Further detail on the cable crossing design parameters and impacts assessment are required. These should be in with Natural England's Best Practice Guidance Phase III. Once this is provided we believe that this matter can be readily resolved	
9	D9/D17	Further detail to inform MDS figures for cable repairs and WTG/OSP maintenance e.g. seabed footprint disturbed due to cable repair and infrastructure maintenance, sediment displaced during cable repair and reburial and any associated cable protection is required. Ideally this information would also be included within an Outline Operation and Maintenance Plan and submitted into examination	
10	D11	Natural England notes that there are site specific surveys referenced throughout the chapter which have not been provided with the ES reports. We advise that these should be provided to ensure there are no issues with the EIA as presented.	
11	D13	Natural England requests that the Applicant confirms all physical processes and impact pathways have been identified and therefore assessed.	
12	D14	Given the active sediment transport in the study area and the availability of recharge material, we advise that consideration should be given to sandwave recovery monitoring in post-installation surveys. Appropriate survey design and power analysis should be conducted to ensure that adequate data is collected for long term comparisons of the effect of change compared to baseline data.	
13	D15	Natural England advises that physical process impacts due to UXO clearance should be considered and assessed within updated Application documents.	
14	D16	Impacts of seabed scour due to the presence of windfarm infrastructure during the operation and maintenance phase has not been included as an impact. Natural England advises that this impact should be considered and assessed by the Applicant and included in the updated application documents.	
15	D18	Further information on the impacts to the wider marine environment and sediment transport budget as a result of sediment extraction in order to stabilise conical gravity based foundations and disposal of ballast at the time of decommissioning is required. Ideally the latter would be included in an Outline Decommissioning Plan and submitted to support the consenting phase Additionally, we advise that further information is provided on the ballast proposal in-combination with the Mona Offshore Wind Farm Project proposals.	
16	D19	The Applicant to check and confirm figures for ballast within the gravity base foundation and ensures that correct volumes are included in any assessment and the DCO/DML.	

Point	Point Number(s) from Appendix D	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix D - Physical Processes	RAG Status Rel and Wri Rep, and D1
17	D20	There are several projects which seem to be missing from the CEA . We advise that these projects are either in pre-application stages or have submitted their relevant applications and have the potential to interact with Morgan Generation Assets. Natural England advises that the Applicant should review the projects taken forward into the CEA and update the assessment accordingly.	
18	D21	Natural England advises that pre construction geotechnical data should be used to inform the CBRA. We also advise that we should be consulted on the suitability of the OCMS ahead of commencement activities. This should be secured in the DCO/dML.	
19	D22	Natural England advises that all embedded mitigation measures proposed should be agreed prior to consent and secured in the DCO/dML.	
20	D23	Natural England would welcome and encourage the Applicant to consider future monitoring of benthic and physical processes to be included as a commitment to review whether priority habitats/species and morphological features such as sandbanks has recovered from construction activities and these are secured in an In Principle Monitoring Plan. We note that geophysical surveys may be required as a condition of the marine licence. We therefore advise that the surveys should have adequate scope to include long term impact monitoring, with a particular focus on sandwave recovery.	
21	D24	Regardless of legislation or being outside of designated sites, the Applicant should aim to remove infrastructure at the time of decommissioning to avoid irreversible (permanent) habitat loss, thus returning the seabed habitat to its pre-developed baseline status as required by OSPAR. Natural England advises that the Applicant considers using scour and cable protection which is more readily removable at the time of decommissioning. We would welcome and encourage this to be secured as a commitment. Ideally this would also be included in an Outline Decommissioning Plan submitted to support the consenting phase.	
22	D25/D26	Natural England are in broad agreement that the relevant sites have been screened in and an appropriate HRA methodology has been used to assess the project in relation to physical processes. However, the HRA should reflect the final CEA and in-combination assessments.	
23	D26	Natural England are in broad agreement that the relevant sites have been screened in and an appropriate MCZ Assessment methodology has been used to assess the project in relation to physical processes. However, this assessment should align with the CEA and in-combination assessment.	

Point	Point Number(s) from Appendix E	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix E - Fish and Shellfish Ecology	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status at D1
1	E1 & E3	Natural England do not agree with the use of the Outline Marine Mammal Mitigation Protocol (OMMMP) methods of soft starts and ramp ups as a means of mitigation for fish species. We do not include these measures as appropriate mitigation for impacts to fish species.		No change	
2	E2	Natural England acknowledges and agrees with the findings of no or negligible impacts to Annex II fish species.			
3	E6	Whilst underwater noise modelling has been conducted to determine noise thresholds for impacts to fish as both moving and static receptors, it is Natural England's view that fish should only be considered as static receptors when modelling underwater sound thresholds and assessments should be based on the static animal modelling results.			
4	E7	Further to the above comment, whilst it is useful to display TTS range (23,900m) for fish in a tabular format, it would be more useful to have a site contour map displaying the array red line boundary, designated sites and this range to allow Natural England to visually assess proximity to protected sites more easily. Provide a contour map for TTS range.		Contour maps for TTS range have been provided by the Applicant. Comment resolved.	

Point	Point Number(s) from Appendix F	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix F - Benthic Ecology	RAG Status Rel and Wri Rep and D1
1	F1	Not all worse case scenarios for benthic ecology are agreed. Applicant to provide the necessary updated project parameters, evidence and assessment in updated Application documents.	
2	F2/F11	Natural England advises that full consideration of the likely nature, extent, duration, and significance of impacts upon SPA and SAC supporting habitats is required to inform a robust assessment of the likely impacts upon designated ornithological and marine mammal features.	
3	F3	Natural England advises that all embedded mitigation measures proposed are secured in the DCO/dML. In addition to the mitigation proposed by the Applicant, we advise that further mitigation in considered by the Applicant.	
4	F4	Natural England would welcome and encourage the Applicant to consider future monitoring of benthic and physical processes to be included as a commitment to review whether priority habitats/species and morphological features such as sandbanks has recovered from construction activities and these are secured in an In Principle Monitoring Plan. We therefore advise that the surveys should have adequate scope to include long term impact monitoring, with a particular focus on sandwave recovery.	
5	F5	Further detail is required in the project description to inform the Maximum Design Scenario (MDS) and Environmental Impact Assessment (EIA).	
6	F6	Natural England queries if the width MDS parameters are realistic for sandwave clearance? Natural England advises that further evidence is required to support the realistic MDS parameters as set out in the DCO/dML.	
7	F7	Further detail on the cable crossing design parameters and impacts assessment are required. These should be in with Natural England's Best Practice Guidance Phase III. Once this is provided we believe that this matter can be readily resolved	
8	F8	Natural England agrees that the data included in the baseline characterisation for benthic ecology is sufficient to characterise the study area. Therefore, unless there is a change in the project design parameters, we will provide no further comment on the data during examination.	
9	F9	Natural England notes that there are site specific surveys referenced throughout the chapter which have not been provided with the ES reports. We advise that these should be provided to ensure there are no issues with the EIA as presented.	
10	F10	We advise that impacts should be minimised as much as possible, with consideration being given to the deposition locations in similar habitat type and avoiding sensitive habitats such as Habitats of Principal Importance listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Natural England advise that this is considered further by the Applicant and updated in the ES accordingly. And any mitigation measures to minimise the impacts secured within the DCO/dML or within a named plan.	
11	F12	Natural England welcomes the commitment to implementation of a mitigation hierarchy with the UXO clearance which will also reduce benthic impacts. Natural England also notes that the UXO clearance method statement will be secured in the dML/ Draft DCO and should be agreed pre-construction in consultation with the relevant SNCB.	
12	F13	Natural England advises that pre construction geotechnical data should be used to inform the Cable Burial Risk Assessment (CBRA). We also advise that Natural England should be consulted on the suitability of the Offshore Construction Method Statement (CMS) ahead of commencement activities. This should be secured in the DCO/dML.	

Point	Point Number(s) from Appendix F	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix F - Benthic Ecology	RAG Status Rel and Wri Rep and D1
13	F14	Natural England would welcome and encourage the Applicant to consider future monitoring of benthic and physical processes to be included as a commitment to review whether priority habitats/species and the seabed morphological features such as sandbanks has recovered from construction activities, and these are secured in an In Principle Monitoring Plan.	
14	F15	Natural England advises that the Applicant needs to consider the potential impacts from UXO detonation on benthic habitats and/or mitigation measures for making the UXO safe without impacting on benthic habitats. Further detail is required on the potential impacts of UXO detonation on benthic habitats and/or mitigation measures to prevent impacts to benthic habitats.	
15	F16	Regardless of legislation or being outside of designated sites, the Applicant should aim to remove infrastructure at the time of decommissioning to avoid irreversible (permanent) habitat loss, thus returning the seabed habitat to its pre-developed baseline status as required by OSPAR. Natural England advises that the Applicant considers using scour and cable protection which is more readily removable at the time of decommissioning. We would welcome and encourage this to be secured as a commitment. Ideally this would also be included in an Outline Decommissioning Plan submitted to support the consenting phase.	
16	F17	Natural England agrees that the approach used for determining LSE on European sites with Annex I habitats as features is appropriate. Therefore, unless there is a change in the project design parameters, we will provide no further comment on the Habitat Regulations during examination.	
17	F18	Natural England agrees with the conclusions of the MCZ screening for benthic habitat features of MCZs. Therefore, unless there is a change in the project design parameters, we will provide no further comment on the MCZ assessment during examination.	
18	F19	Natural England agrees that appropriate plans and projects have been identified. Therefore, unless there is a change in the project design parameters, we will provide no further comment on other plans and projects during examination.	
19	F20	The following plans are mitigation measures, these should be considered at the time of consent: -Biosecurity Risk Assessment -Outline EMP -Marine Pollution Control Plan (MPCP) To inform consenting, these plans should be provided as part of the application and submitted into Examination.	

Point	Point Number(s) from Appendix G	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix G - Other Plans	RAG Status Rel and Wri Rep, and D1
1	G1	We advise that this is the first time Natural England has had sight of the IPMP, and that we have not been involved in its development. We look forward to working with the Applicant to defining the parameters of the plan to ensure it is fit for purpose.	
2	G2	We strongly advise that rather than focusing on the exact details of the surveys, and as highlighted by the Applicant, the IPMP should set out the fundamental hypotheses/questions that will be tested by the monitoring based on the outcomes of the HRA, EIA and address issues of uncertainty and/or residual impacts. while there is agreement that IPMPs are finalised post consent based on project design and timescales; this should not limit updating and agreeing the IPMP prior to consent.	
3	G3	We advise that the DCO/dML conditions should ensure that the monitoring is relevant to the issues raised, and that adaptive management is secured should post-construction monitoring identify impacts that are significantly outside of those predicted in the Application.	
4	G4	Natural England advises that a key consideration is that the type of scour protection used will be removable upon decommissioning. Options that involve introducing plastic to the marine environment have the potential to degrade during the lifetime of the project and raise concerns with regards to marine pollution. The Applicant should seek to identify the most sustainable and removable form of scour protection.	
5	G5	The dCO should stipulate that we are consulted on the final scour prevention and cable protection plan and the requirements for future surveys.	
6	G6	We advise the Applicant considers lessons learnt from other wind farm projects in relation to potential scour and cable exposure, particularly around Wind Turbine Generations (WTGs), and that this is evidenced within the plan.	
7	G7	The Applicant should produce an Outline Decommissioning Plan that outlines all decommissioning options (maintain, full removal and partial removal) during the consenting phase. These options can be assessed and refined closer to the time of decommissioning itself in consultation with Natural England.	
8	G8	Further detail on cable protection, scour protection and cable burial which would ideally be included in the final version of the Cable Burial Risk Assessment (CBRA) sound be considered further. We advise that the CBRA should be informed by geotechnical data to further understand the scour and cable protection requirements to ensure that a realistic worst-case scenario is presented.	
9	G9	We advise that it is critical that engineering decisions include a hierarchy of the different cable protection methodologies and their relative environmental impacts, and that these work areas are progressed in tandem. We advise that the options for scour prevention and cable protection should be limited to those which sufficiently meet both engineering and ecological requirements and this is agreed as part of the consenting phase. Natural England advise that post-installation/decommissioning recovery will need to be demonstrated by monitoring, particularly for methods where full recovery has not been achieved previously in similar sedimentary conditions.	
10	G10	Natural England understand that the Offshore Environmental Management Plan (OEMP) will be produced prior to construction and will be developed following the detailed design process. We advise that until these details are fully understood Natural England cannot provide final comment on the suitability of the management measures proposed. Therefore, we advise that more detail is provided within an outline OEMP and that Natural England are consulted on the final plan prior to construction. We advise a holistic approach to the final plan to bring together all agreed measures across the ES.	
11	G11	We advise that pollution incidents, reports, and situation updates should be emailed to the Natural England Marine Incidents Mailbox: marineincidents@naturalengland.org.uk. We note that a Marine Pollution Contingency Plan will be included within the OEMP, and advise that a draft of this is included an outline OEMP to be submitted into the Examination.	
12	G12	We note that the OEMP will include a Biosecurity Risk Assessment and INNS Management plan. We advise that a draft plan is submitted into examination as part of an outline OEMP.	
13	G13	Natural England understands that this is an outline plan, which will be developed post consent. We advise that clarity should be provided regarding how the potential impacts of the finalised plan will be checked against the assessments made in the ES, MCZ Assessment, HRA etc. Sufficient information should be provided at the pre-consent stage to allow operations and maintenance (O&M) activities to be fully assessed.	
14	G14	All reasonably predictable activities should be assessed within the ES at the pre-consent stage, and sufficient data should be gathered to avoid the need for further licences unless something unpredictable occurs. In relation to unpredictable works, we advise that the Applicant seeks to understand what may have been required on other offshore wind projects to date to inform their predictions at the pre-consent stage. We also advise including a definition of what constitutes emergency work.	
15	G15	We advise undertaking required monitoring and recording and in turn this should be used to inform 5 yearly reviews of the activities, which Natural England wish to be consulted on. This should be stipulated in the DCO/dML.	
16	G16	We advise that deployment of scour/cable protection under the DCO should be no later than 10 years post construction. Permission for any further cable protection works after that time should be sought through a new Marine Licence.	

Point	Point Number(s) from Appendix G	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix G - Other Plans	RAG Status Rel and Wri Rep, and D1
17	G17	Where seabed disturbance is necessary and use of equipment such as jack-up vessels are required, the Applicant should provide details showing how they will ensure the avoidance of sensitive features such as Habitats of Principal Importance listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act and Annex I features. Consideration needs to be given to ongoing data collection required to inform micro-siting of activities during the lifetime of the project, and further details provided during the consenting phase.	
18	G18	Natural England would support reburial where exposure has occurred, or where cable repair/replacement is required, over the placement of rock protection. We advise that the Applicant includes a cable burial hierarchy which makes reburial the priority.	
19	G19	We note that there is currently no information on how the impacts of O&M works will be monitored. We advise that the Applicant considers this further in an updated plan.	

Point	Point Number(s) from Appendix G	Taken from Natural England's Relevant and Written Representations Morgan Generation Appendix G - Other Plans	RAG Status Rel and Wri Rep	Update at Deadline 1	RAG Status D1
1	N/A	As advised at the PEIR stage, Natural England request that single frame images with a Horizontal Frame of View (HFoV) of 39.6° are included within the SLVIA for all viewpoints. Natural England also note that a couple of the images within the SLVIA documents still have issues with sun glare obscuring the Wind Turbine Generator (WTG) representations (e.g. images for viewpoint 14 in document APP-039). Updated material should be submitted into the Examination in due course.		The Applicant has resolved our comments relating to HFoV 39.6 degrees for images and sun glare issues, no further comment needed.	