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MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Applicant's Response to IPs response to Examining Authority's Written Questions (ExAQ1)

Deadline: 4

Application Reference: EN010136

Document Number: MRCNS-J3309-JVW-10202

Document Reference: S_D4_5

10 December 2024

F01

Image of an offshore wind farm

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Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
F01	Deadline 4	RPS	Morgan Offshore Wind Ltd.	Morgan Offshore Wind Ltd.	December 2024

Prepared by:

RPS

Prepared for:

Morgan Offshore Wind Ltd.

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Glossary

Term	Meaning
Applicant	Morgan Offshore Wind Limited.
Department for Energy Security and Net Zero (DESNZ)	The Department for Energy Security and Net Zero (DESNZ) is focused on the energy portfolio from the former Department for Business, Energy and Industrial Strategy (BEIS).
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Environmental Statement	The document presenting the results of the Environmental Impact Assessment (EIA) process for the Morgan Offshore Wind Project.
Evidence Plan Process	The Evidence Plan process is a mechanism to agree upfront what information the Applicant needs to supply to the Planning Inspectorate as part of the Development Consent Order (DCO) applications for the Morgan Offshore Wind Project.
Inter-array cables	Cables which connect the wind turbines to each other and to the offshore substation platforms. Inter-array cables will carry the electrical current produced by the wind turbines to the offshore substation platforms.
Interconnector cables	Cables that may be required to interconnect the Offshore Substation Platforms in order to provide redundancy in the case of cable failure elsewhere.
Marine licence	The Marine and Coastal Access Act 2009 requires a marine licence to be obtained for licensable marine activities. Section 149A of the Planning Act 2008 allows an applicant for a DCO to apply for a 'deemed' marine licence as part of the DCO process.
Maximum Design Scenario (MDS)	The scenario within the design envelope with the potential to result in the greatest impact on a particular topic receptor, and therefore the one that should be assessed for that topic receptor.
Morgan Array Area	The area within which the wind turbines, foundations, inter-array cables, interconnector cables, offshore export cables and offshore substation platforms (OSPs) forming part of the Morgan Offshore Wind Project will be located.
Morgan Offshore Wind Project: Generation Assets	This is the name given to the Morgan Generation Assets project as a whole (includes all infrastructure and activities associated with the project construction, operations and maintenance, and decommissioning).
Morgan Offshore Wind Project: Generation Assets PEIR	The Morgan Generation Assets Preliminary Environmental Information Report (PEIR) that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) for the Morgan Offshore Wind Project: Generation Assets.
Morgan Offshore Wind Project: Generation Assets Scoping Report	The Morgan Scoping Report that was submitted to The Planning Inspectorate (on behalf of the Secretary of State) for the Morgan Offshore Project: Generation Assets.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The transmission assets for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm. This includes the Offshore Substation Platforms (OSPs), interconnector cables, Morgan offshore booster station, offshore export cables, landfall site, onshore export cables, onshore substations, 400kV grid connection cables and associated grid connection infrastructure such as circuit breaker infrastructure (as defined in the Morgan and Morecambe Offshore Wind Farms: Transmission Assets PEIR).

Term	Meaning
National Policy Statement (NPS)	The current national policy statements published by the Department for Energy Security & Net Zero in 2024.
Offshore Substation Platform (OSP)	The offshore substation platforms located within the Morgan Array Area will transform the electricity generated by the wind turbines to a higher voltage allowing the power to be efficiently transmitted to shore.
Statutory consultee	Organisations that are required to be consulted by an applicant pursuant to the Planning Act 2008 in relation to an application for development consent. Not all consultees will be statutory consultees (see non-statutory consultee definition).
Wind turbines	The wind turbine generators, including the tower, nacelle and rotor.
The Planning Inspectorate	The agency responsible for operating the planning process for NSIPs.

Acronyms

Acronym	Description
AEoSI	Adverse Effect on Site Integrity
AEP	Annual Energy Production
AI	Artificial Intelligence
ALARP	As Low as Reasonably Practicable
BDMPS	Biologically Defined Minimum Population Scales
CAA	Civil Aviation Authority
CEA	Cumulative Effects Assessment
CMS	Construction Method Statement
CNS	Communication, Navigation and Surveillance
CRNRA	Cumulative Regional Navigational Risk Assessment
COLREGS	Distress Signals and Prevention of Collisions
DCO	Development Consent Order
dML	Deemed Marine Licence
EEZ	European Economic Zone
EDR	Effective Deterrent Range
EMP	Environmental Management Plan
ERCoP	Emergency Response and Cooperation Plan
ExA	Examining Authority
FLCP	Fisheries Liaison
HE	Historic England
HPAI	Highly Pathogenic Avian Influenza
HRA	Habitat Regulations Assessment
IoMSPC	Isle of Man Steam Packet Company

Acronym	Description
IoMTSC	Isle Of Man Territorial Sea Committee
IP	Interested Parties
IPMP	In Principle Monitoring Plan
LSE	Likely Significant Effect
MCA	Maritime and Coastguard Agency
MDS	Maximum Design Scenario
MGN	Marine Guidance Note
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MNEF	Marine Navigation Engagement Forum
MOWL	Morecambe Offshore Windfarm Limited
MPCP	Marine Pollution Contingency Plan
NAS	Noise Abatement Systems
NPS	National Policy Statement
NRA	Navigational Risk Assessment
NREL	National Renewable Energy Laboratory
NRW	Natural Resources Wales
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SBP	Sub-Bottom Profilers
SLVIA	Seascape, Landscape and Visual Impact Assessment
SNCB	Statutory Nature Conservation Body
SoCG	Statement of Common Ground
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
TEAZ	Temporary Archaeological Exclusion Zone
TSS	Traffic Separation Scheme
UHF	Ultra High Frequency
UK	United Kingdom
UWSMS	Underwater Sound Management Strategy
UXO	Unexploded Ordinance
VHF	Very High Frequency
VLSFO	Very Low Sulphur Fuel Oil
VTMP	Vessel Traffic Management Plan
WHS	World Heritage Sites

Acronym	Description
WSI	written scheme of investigation
ZOI	Zone of Influence

Units

Unit	Description
km	Kilometers
Kj	Kilojoule
Kts	Knots
m	Metres
Nm	Nautical Miles
%	Percentage

1 APPLICANT'S RESPONSE TO EXAMINING AUTHORITY'S WRITTEN QUESTIONS (EXAQ1)

1.1 Introduction

1.1.1.1 Following Deadline 3, Morgan Offshore Wind Limited (the Applicant), has taken the opportunity to review IP responses to the Examining Authority's Written Questions (ExAQ1).

1.1.1.2 Details of the Applicant's response to IP responses to the Examining Authority's Written Questions (ExAQ1) are set out in the subsequent sections of this document and its annex.

1.1.1.3 One annex was produced to support the Applicant's response, as follows:

- S_D4_5.1: Annex 5.1 to RSPB response to EXQ1

2 APPLICANT RESPONSES TO IP RESPONSE TO WRITTEN QUESTIONS (EXQ1)

2.1 Harbour Energy

Table 2.1: REP3-031: Response to Harbour Energy ExAQ1 response.

Reference	Question is addressed to	ExA Question	Harbour Energy Response	Applicant's Response
REP3-031.1	Harbour Energy/ Chrysaor Resources	**Response to Harbour Energy Written Representations** The Applicant's response to Harbour Energy (Table 2.3 [REP2-005]) regards the range of potential effects cited including restriction of helicopter access, safety issues, potential disruption of decommissioning activities and associated economic loss and the need for the DCO to secure a Co-operation and Co-existence Agreement. The Applicant states "the Order Limits do not overlap with the marine corridors requested by Harbour Energy, and that the draft DCO and dMLs (REP1-021) do not allow for the Applicant to conduct works, including siting of temporary navigational aids or markers, outside of the Order Limits. This is noted in the Applicant's position in the SoCG with Harbour Energy submitted at Deadline 1 (REP1-031). As such, the Applicant would have no ability to adversely impact Harbour Energy's activities in the manner envisaged, and such a condition is unnecessary" (ref. REP1.044-17	**INF 1.2** Harbour Energy notes the Applicant's comments, in particular the statement that "the draft DCO and dMLs (REP1-021) do not allow for the Applicant to conduct works, including siting of temporary navigational aids or markers, outside of the Order Limits". Consequently, Harbour Energy accept that it would not be appropriate to seek protections for marine access through protective provisions. However, as outlined in Sections 4.1.1, 4.2.1, and 4.3.1 of Harbour Energy's Written Representation (REP1-044), Harbour Energy believes that a coexistence and cooperation agreement addressing mutually exclusive simultaneous operations (diving, piling, and seismic) is necessary. Therefore, the Applicant should have no issue providing the assurances sought by Harbour Energy to maintain freedom of access to the Millom field facilities for marine operations within such an agreement.	The Applicant welcomes Harbour Energy's commitment to finding solutions to allow co-existence with the Morgan Generation Assets and confirms that discussions are ongoing between the Applicant and Harbour Energy in this regard. The Applicant can confirm that the Order Limits do not overlap with the marine corridors requested by Harbour Energy, and that the draft DCO and dMLs (S_D4_8: Draft Development Consent Order) do not allow for the Applicant to conduct works, including siting of temporary navigational aids or markers, outside of the Order Limits. This is noted in the Applicant's position in the SoCG with Harbour Energy submitted at Deadline 1 (REP1-031). As such, the Applicant would have no ability to adversely impact Harbour Energy's activities in the manner envisaged or restrict freedom of access in any manner. The Applicant maintains that related to mutually exclusive simultaneous operations (diving, piling, and seismic) co-ordination post-consent between the parties using industry standard practices such as provision of Notice to Mariners (NtM). In addition, the Applicant has committed to continued engagement with relevant stakeholders through the Marine Navigation Engagement Forum (MNEF), as set out in the Outline Vessel Traffic Management Plan (VTMP), which will ensure appropriate stakeholders, like Harbour Energy are informed of works being carried out in the Morgan Generation Assets sea area. The Applicant can also provide the Construction Method Statement (CMS) and Construction Program once finalised, to ensure that Harbour Energy have good visibility of activities in advance of activity occurring. As noted in Volume 2, Chapter 11: Aviation and radar (APP-015), the Millom assets may be decommissioned prior to the construction of the Morgan

Reference	Question is addressed to	ExA Question	Harbour Energy Response	Applicant's Response
		Table 2.3 [REP2-005]). The Applicant maintains that the coordination of marine activities and process for communication is considered to be a logistical matter that can be co-ordinated post-consent between the parties using industry standard practices, and that such a Co-operation and Coexistence Agreement is not required. ExQ1: Tuesday 29 October 2024 Responses due by Deadline 3: Tuesday 12 November 2024 Page 67 of 79 ExQ1 Question to: Question: The ExA requests Harbour Energy to provide comment on the Applicant's response.		Generation Assets and as such co-ordination may not be required. Agreeing specific protocols post-consent is preferable and considered more appropriate given that further detail regarding the nature, or existence, of any overlap of mutually exclusive activities will be better known. The Applicant notes Harbour Energy's preference regarding a coexistence and cooperation agreement to be reached at this stage and is engaging to understand further the expected terms of such coexistence and cooperation agreement.

2.2 Historic England

Table 2.2: REP3-032: Response to Historic England ExAQ1 response

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
REP3-032.1	Historic England	HE 1.1 **Dimensional Parameters for Archaeological Exclusion Zones** Historic England is asked to confirm whether the dimensional parameters for Archaeological Exclusion Zones proposed in the Outline Written Scheme of Investigation (WSI) [APP-069] are acceptable.	We accept the precautionary approach adopted by the Applicant regarding use of a Temporary Archaeological Exclusion Zone (TEAZ) as described in paragraph 1.4.3.15 (aviation archaeology). We also accept the explanation for AEZ selection for anomalies of high and medium potential (Table 1.6 and Figure 1.6) and that the spatial extent to AEZs can be adjusted (as described paragraph 1.6.2.6).	The Applicant understands from HEs response that the decision to place AEZs, either individually or in cluster configuration around the anomalies considered to be of either 'high' or 'medium' potential and for the use of a Temporary AEZ (TAEZ) for the charted aircraft crash location and two sites in the array buffer zone are acceptable. Furthermore, the Applicant understands that it is HE's position that TAEZs will be required for any 'low' potential anomalies that on subsequent investigation reveal archaeological interest. This point has been agreed in the initial SoCG (S_D4_HE).
REP3-032.2	Historic England	HE 1.2 **Assessment of Residual Risk of Harm to Archaeology** In paragraph 4.11 Historic England's WR [REP1-046] HE does not agree the conclusion of no	We accept that the Applicant (Ref: REP1-045.27) has identified mitigation measures that focus on avoidance. However, it is important to highlight differences between 'mitigation' and 'offsetting' in reference to the proposed Maximum Design Scenarios (MDSs). We therefore accept the	The Applicant accepts HE's response and understands that in order to appropriately offset any unavoidable impact this requires the consent conditions proposed by the Applicant as set out in the draft DCO e.g. Schedule 3, paragraph 20(2) (REP3-013 & REP3-014).

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
		significant effects after mitigation in the ES [APP-026], on the basis that the assessment does not accurately reflect the residual risk of harm to archaeological assets despite embedded mitigation proposed. Historic England is asked to comment further on whether it is satisfied with the response given by the Applicant at section 2.4 [REP2-005] and if not, what it would need to be satisfied that effects after mitigation would not be significant in EIA terms.	response provided by the Applicant regarding avoidance where possible of presently known elements of the historic environment (as mitigation). We also acknowledge that effective implementation of an agreed WSI to inform pre-construction investigation surveys should also enable AEZs to be identified and for micrositing of Morgan Generation infrastructure. However, in situations where avoidance is deemed impossible, only offsetting measures are possible. Therefore, for offsetting measures to be effective (i.e. reduce residual risk in EIA terms) requires the consent conditions proposed by the Applicant as set out in the draft DCO e.g. Schedule 3, paragraph 20(2) (REP2-011 & 012).	
REP3-032.3	Historic England	HE 1.3 **Revised Mitigation and Means of Securing the Commitments** Please review and confirm your acceptance or	In Section 1.9 (Marine archaeology and cultural heritage) line reference 8.11, we accept the additional text in the column "description of mitigation of monitoring measure" albeit that this text should come first (i.e. prior to describing	The Applicant notes HE's points in relation to the Mitigation and Monitoring Schedule [REP2-016] and has updated this within the Commitments Register (formerly Mitigation and Monitoring Schedule) at Deadline 4 (S_D4_18).

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
		otherwise of the amended mitigation and means of securing the commitments in the revised Mitigation and Monitoring Plan [REP2-016 with tracked changes].	WSI & PAD). In the column "Means of securing the commitment", the additional text should be amended to make it clear that "…subsequent method statements are produced by the Retained Archaeologist in consultation with the Statutory Archaeological Curator in advance of all survey works commencing."	
REP3-032.4	Applicant	HE 1.5 **Improvements to the Outline Offshore WSI** In section 7 of Historic England's WR [REP1-046] HE makes a number of requests for editing and improvement of the outline offshore WSI for archaeology, particularly regarding survey methodology. To capture your responses to Historic England's WR, the ExA requests that you produce an amended outline WSI by Deadline 4 to enable further review by Historic England and	We appreciate that this question is directed to the Applicant and the attention given by the ExA to the matters raised in our WR. We will review and provide comment on any amended outline WSI as should be submitted at Deadline 4.	The response from Historic England is noted by the Applicant. A revised WSI has been provided to Historic England and comments are awaited to ensure resolution ahead of Deadline 5. A copy of the WSI as it is currently progressed has been submitted at Deadline 4.

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
		to assist the final SoCG at Deadline 6.		
REP3-032.5	Applicant	HE 1.7 **Micrositing Allowance Related to Archaeological Mitigation** Review with Historic England and report on any consequential effects to archaeological impact mitigation of changing the micrositing allowance in response to MCA's SAR requirements from 125m to the 50m dimension precedented in previous made orders for OWFs, and update the Layout principles 5 and 6 accordingly.	We appreciate that this question is directed to the Applicant and we will provide further advice to the Applicant and the ExA should that be necessary.	The response from Historic England is noted by the Applicant. Further commentary on this matter is provided in the SOCG (Document reference: S_D4_HE).
REP3-032.6	Historic England Natural England	HE 1.11 **World Heritage Sites** The ExA notes from Historic England's WR [REP1-046] that it is "prepared to agree with the assessment presented that effects during construction,	In reference to the Applicants' scoping out potential impacts on the two World Heritage Sites (WHS): • Frontiers of the Roman Empire: Hadrian's Wall; and • the English Lake District Regarding Hadrian's Wall	Historic England were consulted early on with regards to the approach proposed with regard to the two World Heritage Sites (WHS), and the Applicant incorporated their comments within the assessment. The Applicant welcomes confirmation that Historic England agree that there will be no impact upon the Hadrian's Wall WHS. A site visit determined that the one site potentially affected, the fort at Ravenglass and its associated bath house, have no intervisibility with the proposed Morgan Generation Assets. With regards to potential impacts on the Lake District WHS, the Applicant notes that neither the Statement of Outstanding Universal Value for the WHS (Lake District

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
		operations and maintenance, and decommissioning of the Morgan Generation project on the assessed designated historic assets within the English study area are not significant in EIA terms" (para 4.9) and that it has "no further comment or other advice to offer regarding the conclusions drawn by the Applicant, as relevant to any cumulative impact on the setting of heritage assets in the English coastal zone" (para 6.3). However, no specific comments are made by Historic England or Natural England regarding the Applicant's assessment of World Heritage Sites (WHS), of which both Hadrian's Wall and the English Lake District were scoped out of assessment for the	WHS, the development is a very considerable distance away from the component parts of the WHS, all of which are coastal installations beyond the western end of the Wall and down the Cumbrian coast. The idea that these installations will have had a generalised watching brief over the sea to their west is sound, and therefore the observable presence of the sea is critical to the contribution that setting makes to their significance (an ability to understand Roman military planning and land use) and the significance of the WHS. However, given the distance that the nearest component of the proposed array area lies from the WHS, we don't envisage that this ability will be impacted in any meaningful way and therefore there is very little risk of this proposed project impacting on the significance of the Hadrian's Wall WHS. Regarding the English Lake District, it is important to consider the landscape	National Park, 2024a) nor the Attributes of Outstanding Value for the WHS (Lake District National Park, 2024b) mention the sea, or the visual relationship between the land and surrounding seascape as relevant to this Outstanding Universal Value. Only one of the Special Qualities identified for the Lake District WHS (Lake District National Park, 2024c) mentions the coast (7. Mosaic of lakes, tarns, rivers and coast) and this is in the context of the richness of biological diversity). The seascape to the west and south west of the Lake District WHS undoubtedly forms part of its wider setting. However, it does not contribute positively to the attributes of Outstanding Universal Value, nor to the Special Qualities of the WHS. Site visits to the areas of the WHS within the wider study area, along with Photomontages and Viewpoints produced for the project, determined that current views in the direction of the proposed Morgan Generation Assets incorporate highly visible modern industrial infrastructure including onshore wind turbines, the large complex at HMP Haverigg and numerous offshore turbines, including the Walney Offshore Array. The proposed turbines of the Morgan Generation Assets would only be visible intermittently from the WHS on days of good visibility. When visible they will largely be visible behind the turbines of the extant Walney Offshore Array. Given that the wider seascape setting of the WHS does not contribute positively to its Attributes, Special Qualities or Outstanding Universal Value, that the particular views in question already incorporate modern infrastructure including both land based and marine wind turbine arrays, and that the turbines of the Morgan Generation Assets would only be intermittently visible and even then largely behind existing wind turbines, an initial assessment determined that there would be no change to the Outstanding Universal Value of the WHS, and it was therefore not considered further in the detailed assessment. Where individual designated assets within the WHS have been identified where there was a potential for specific impacts upon that asset, these have been incorporated in the Applicant's assessment. Given that no impacts were assessed for the Morgan Generation Assets upon the Outstanding Universal Value of the Lake District WHS, no assessment of cumulative impact was undertaken.

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
		reasons given in Appendix B of the Cultural Heritage Assessment [APP-062]. Nonetheless, the Seascape Landscape and Visual Impact Assessment (SLVIA) includes at Annex 10.5 [APP-038] an assessment of effects of the Proposed Development on the English Lake District WHS, and there are a number of viewpoints taken from within the WHS (Figures A.1 to A.3 [APP-038] and Annex 10.6 [[APP-039, 40, 41, 42, 43 and APP-044]]). Historic England and Natural England are asked: i) Whether they agree with the Applicant's reasons for scoping the WHS out of the Heritage Impact Assessment. ii) Provide comment on the above-mentioned SLVIA	scale of the WHS, and whilst the relationship with the sea is not so clearly a part of its significance, the harmonious beauty of the interaction between the natural landscape and human agropastoral system is critical. The scale of the WHS, and this emphasis on harmonious beauty, means that it is reasonable to consider impacts from out to sea, including the proposed Morgan Generation project and its anticipated distance offshore. However, it is likely that the conclusion could be reached that given the distance offshore and associated context, the impact will be very slight on the Lake District WHS, but we do consider it reasonable that this impact is properly assessed. Furthermore, we appreciate that there are other offshore wind energy developments in the vicinity, which should be part of an assessment of cumulative potential impacts on the Outstanding Universal Value of the English Lake District WHS.	

Reference	Question is addressed to	ExA Question	Historic England Response	Applicant's Response
		documents which relate to the WHS.		

2.3 Isle of Man Government (Territorial Sea Committee)

Table 2.3: REP3-033: Response to Isle of Man Government (Territorial Sea Committee) ExAQ1 response

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
REP3-033.1	Isle of Man Government (Territorial Sea Committee)	**AR 1.1** **Air Traffic Safety considerations for Ronaldsway Airport** Please explain if and how Isle of Man (IoM) Ronaldsway Airport regulations on air traffic safety relate to UK regulations and guidance including those of the Civil Aviation Authority.	**AR 1.1** **Response** *Regulations relating to aviation safety and air traffic services are set by the Isle of Man Civil Aviation Administration (IOMCAA) , which is a separate entity to Isle of Man (Ronaldsway) Airport. Isle of Man Airport is certified under the Civil Aviation (Aerodromes) Order 2022. Isle of Man Airport Air Traffic Control is approved under the Civil Aviation (Air Traffic Services) Order 2020 and holds ATS equipment approvals, also issued under that Order. IOMCAA policy on renewable energy installations, including wind farms, is set out in publication CP1: Renewable Energy. The following UK CAA policies have been adopted as outlined in CP1: CAP764, CAP1616, CAP1618, CAP670 together with all UK CAA policy statements.*	The Applicant notes IoM TSCs response.
REP3-033.2	Applicant Blackpool Airport Ronaldsway Airport	**AR 1.4** **Very High Frequency (VHF) Communications** The ExA notes that effects on VHF communications were scoped out of ES Volume 2, Chapter 11 [APP-015], but that there are ongoing discussions with Blackpool Airport and Ronaldsway Airport regarding this matter [REP1- 028 and REP1-038].	**AR 1.4** **Response** iii) At the time of pre-consultation, Isle of Man Airport did not have sufficient resource and did not have sufficient technical analysis of the potential impacts of the wind turbines on VHF ExQ1 Question to: Question and Response communications. Isle of Man Airport has commissioned independent analysis for all Communication, Navigation and Surveillance (CNS) for both Morgan and Mona developments and will be happy to share this with the applicant and Examining Authority on receipt.	Historically, there have been no concerns raised regarding offshore wind and impacts on VHF/UHF communications, and as such this was not considered to be a matter that required assessment within the Environmental Statement. None of the aviation stakeholders raised this matter as a potential issue, or a matter requiring the assessment, at either PEIR or on submission of the application. The Applicant understands that the stated concern originates from the CAA and relates to specific impacts experienced at Prestwick Airport. The situation at Prestwick Airport is fundamentally different. The topography and density, distribution and

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		i) The Applicant is asked to explain in more detail the reasoning for scoping out VHF communications. ii) The Applicant is asked to clarify if any other aerodromes would be affected by this issue. iii) Blackpool Airport and Ronaldsway Airport are asked to provide justification for their request for a review of effects on VHF communications (noting that this was not raised as a matter to be addressed in preapplication consultation). All parties are asked to provide an update on discussions on the matter of VHF communications.		proximity of onshore wind farms have created a unique circumstance at Prestwick Airport, which is not replicated in the Irish Sea. It is notable that Prestwick Airport is not impacted by offshore wind farm development. Based on engagement with stakeholders, the Applicant understands that Ronaldsway, Blackpool, Walney and Warton aerodromes all wish assessment to be undertaken in regards of the potential for impact. Ronaldsway have already commissioned a report, and the Applicant is now commissioning a report that looks at the potential for impact at the other aerodromes. The Applicant has yet to receive a delivery date for this work, but will keep the ExA updated on progress and timescales.
REP3-033.3	Isle of Man Government Territorial Seas Committee	**CF 1.5** Applicant's Response to REP1-059 regarding fishing through the SMZ Confirm if you are satisfied with the Applicant's Responses in [REP2-005], specifically to [REP1-059.4], [REP1-059.6], [REP1-059.11, REP1-059.14 and REP1-059.27 (and any other subsections upon which you may wish to comment) regarding Queen Scallop fishery, the SMZ and inter-array cabling; and if not, clarify why	**CF 1.5** **Response** The responses presented by the developer refer to the existing analysis presented in the EIA document, consultations with stakeholders, commitments to mitigation as part of the fisheries coexistence plan, and the fact the final design has not yet been concluded. We agree that the concerns raised by SFF are valid, and the response from the developer is (at this stage) adequate; however, there are still significant "unknowns" relating to the final design which the developer appears to rely upon to avoid directly addressing the concerns and/or making any further commitments at this stage.	The Applicant acknowledges the IoM TSC's response to CF 1.5, which recognises the concerns raised by the SFF and that the Applicant's response is adequate at this stage. The Applicant can confirm that engagement will continue with the fishing industry, post-consent on the final FLCP and the Applicant has committed to investigating the establishment of a commercial fisheries working group (TM03 in Table 1.2 in the S_D4_13: Outline fisheries liaison and co-existence plan F04). With specific regard to the development of the monitoring proposal since Deadline 3, and following discussions with IoM TSC on 14/11/2024, the Applicant has agreed to further revise the wording of

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		not, point-by-point and supported by evidence where possible**.**	Should the final design result in significant lengths of cable infrastructure within the SMZ, the efficacy of that mitigation measure could be significantly compromised. Furthermore, if the target burial depths for both interconnector and inter-array cables are not achieved (i.e. the minimum depth is achieved, or the cable is otherwise left exposed as in other OWF developments), the impact on commercial fisheries could be much more significant than anticipated by the developer despite the proposed SMZ mitigation measure. There appears to be an ongoing commitment to consultation, engagement and monitoring between the developer and fisheries stakeholders. This is welcomed; however, some of the detail around this ExQ1 Question re: ongoing monitoring is rather vague, in particular, in relation to period of monitoring, and what actions/measures may be able to be taken to address impacts on commercial fisheries should the final design and/or post-construction assessment show that the concerns raised are in fact realised. To summarise, it appears the developer has made efforts to assess, consult, consider and mitigate queen scallop fisheries impacts, although there remain outstanding concerns. It is of fundamental importance that the parties continue to engage and work together as the final design is developed and decided, and further, that monitoring of impacts on queen scallop biology and fisheries is undertaken pre- and post-construction to fully understand the short- and long-term impacts of the development on this important fishery.	TM17 (in Table 1.2 in the S_D4_13: Outline fisheries liaison and co-existence plan F04) to include for: • Engagement with fisheries stakeholders on the methodology of the monitoring program • The Applicant will seek alignment in methodology with other regional monitoring programs to ensure the monitoring program fits within a wider, regional context and achieves maximum value • The Applicant will report on the results annually and should the results of the monitoring show effect, engage with key stakeholders on next steps. These points are reflected in the Statement of Common Ground with IoM TSC, submitted at Deadline 3 (REP3-027), with an update provided at Deadline 4 (S_D4_IoM TSC). The updates will be incorporated into TM17 within the updated Outline FLCP submitted at Deadline 4 (S_D4_13: Outline fisheries liaison and co-existence plan F04).

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
REP3-033.4	Manx Utilities	**CE 1.8** Manx Utilities Interconnector The Cumulative Effects Screening Matrix [APP-031] includes the Isle of Man-UK Interconnector 2 as a project in pre-application (page 173), with high data confidence, however no details are provided of its temporal overlap with the Proposed Development. Could Manx Utilities provide any details which are in the public domain regarding Interconnector Cable 2, in particular its proposed route in relation to the Proposed Development and a timeline for its application and delivery, and set out any potential interactions with the Proposed Development?	**CE 1.8 Response** · Several options for future interconnection, via a second sub-sea interconnector cable, between the Isle of Man and the North West of England have been considered with a preferred off-shore cable route/corridor running to the south of the proposed Morgan Offshore Windfarm and landing south end of Blackpool. · A target date for commissioning the second interconnector is by 2030. · Consultation with the OWF project team has been undertaken by Manx Utilities and project updates and stakeholder engagement continues. · Manx Utilities would welcome further consultation where project details, not in the public domain, can be shared and discussed as appropriate to support the assessment of any potential cumulative effects and potential interactions between the projects.	The Applicant acknowledges Manx Utilities response to ExQ1 CE 1.8 and both parties continue to engage on the second interconnector positively.
REP3-033.5	Isle of Man Government Territorial Seas Committee	**HE 1.10** Setting of Isle of Man Heritage Assets Table 1.2 (and Figures 1.6 and 1.7) of the Cultural Heritage Assessment in ES Volume 4, Annex 8.2 [APP-062] indicates that there are 44 Ancient Monuments, 195 Registered Buildings and 18 Conservation Areas on the IoM within the settings study area and ZTV for	**HE 1.10** **Response** i) Manx National Heritage is the 'operating name' of the Manx Museum and National Trust constituted under the terms of the Manx Museum and National Trust Act 1959 and linked to the Isle of Man Government via the Department for Enterprise. It is a charitable body receiving partial financial support from the Isle of Man Government and its Trustees are appointed by Tynwald. On a day to day basis MNH operates at 'arm's length' but has close relationships with Government Departments including the provision	The Applicant notes the response and that the IoM TSC has no outstanding concerns with the assessment.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		the Proposed Development. Similarly, Figure 1.9 and Table A.2 set out the heritage assets on the Isle of Man taken forward for assessment. The IoM Government's LIR [REP1-047] does not include any commentary on effects on setting of terrestrial heritage assets on the IoM. Whilst noting that the Applicant has submitted a 'letter of comfort' from Manx National Heritage [REP1-036], it is not an IP in this Examination. Could the Isle of Man Government: i) Explain whether Manx National Heritage forms part of the Isle of Man Government, and if it has any comments to make on the 'letter of comfort' from Manx National Heritage. ii) Provide details of any policies and/or legislation which apply to consideration of the settings of heritage assets. iii) Confirm whether it is in agreement with the Applicant's approach to assessment in section 8.5.2 of ES Volume 2, Chapter 8 [APP-026] which notes that in the absence of a formal definition of the setting of a historic asset on the IoM,	of specialist advice on heritage matters.	
REP3-033.6	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** ii) Cultural heritage legislation relating to Ancient Monuments, Registered Buildings and Conservation Areas on the Isle of Man consists of the Manx Museum and National Trust Act 1959 ('MM&NTA') for Ancient Monuments and the Town & Country Planning Act 1999 for Registered Buildings and Conservation Areas. Manx National Heritage ('MNH', the operating name of the Manx Museum and National Trust) only has responsibility for the former, and the responses relating to Ancient Monuments are provided by MNH. Responses concerning Registered Buildings and Conservation Areas are provided by DEFA/TSC.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.7	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** **Legislation** Manx Ancient Monuments legislation is silent on the concept of 'setting'. Section 24 of the MM&NTA however states: 24 Powers and duties of Manx Museum and National Trust The Trust shall — (a) promote the permanent preservation for the benefit of the people of the Isle of Man of lands and tenements (including buildings) of beauty or historic interest and, as regards lands, the preservation (so far as practicable) of their natural aspect, features and animal and plant life; the preservation of buildings of national interest or architectural, historic or artistic interest, and places of national interest or beauty, and	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		the definition used for this assessment is the one defined in the UK's National Planning Policy Framework, an approach that has previously been used with the approval of Manx National Heritage on other projects on the IoM. iv) Provide details of the status of the IoM's heritage assets taken forward for assessment including any descriptions or assessments of their significance that are available. ExQ1 Question to: Question and Response v) Confirm whether it is satisfied with the selection of viewpoints within the vicinity of a range of the Isle of Man's heritage assets as included in ES Volume 4, Annex 10.6 [APP-039, 40, 41, 42, 43 and APP-044]. vi) Provide comment on whether it is satisfied with the content of ES Volume 2, Chapter 8 [APP-026] and ES Volume 4, Annex 8.2, the Cultural Heritage Assessment [APP-062], relating to: o The list of heritage assets taken through to assessment (Table A.2 [APP-062]), and the Applicant's reasons for scoping	the protection and augmentation of the amenities of such buildings and places and their surroundings; This has from time to time been invoked in order to justify comment by MNH on the impacts of development upon Ancient Monuments and other heritage assets within its care.	
REP3-033.8	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** **Policy** Policy The Island's overarching planning policy document is the Isle of Man Strategic Plan 2016, produced by DEFA (Planning and Building Control); this contains Environment Policy 40, which states: Environment Policy 40: Development will not be permitted which would damage, disturb or detract from an important archaeological site or an Ancient Monument or the setting thereof. DEFA (Planning and Building Control) seeks the opinion of MNH or takes comments submitted by MNH on setting matters into consideration where a development affects a monument in this way. In the absence of more detailed Isle of Man legislation and policy, MNH from time to time takes cognizance of Historic England publications such as The Setting of Heritage Assets (Historic ExQ1 Question to: Question and Response Environment Good Practice Advice in Planning Note 3) when considering the impact of development and making comment to DEFA (Planning and Building Control).	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.9	Isle of Man Government		**HE 1.10** **Response**	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
	Territorial Seas Committee	out other heritage assets set out in the Gazetteer (pages 120 to 145 [APP-062]). o The conclusions of [APP-026] relating to effects on setting of Isle of Man heritage assets both project-alone (section 8.8.7) and cumulatively (section 8.10.6). In particular, the ExA seeks your comments on cumulative Scenario 3, which concludes moderate adverse effects (significant in EIA terms) for: the Point of Ayre lighthouse (147); the Point of Ayre fog horn (297); the small lighthouse on the Point of Ayre Beach known as Winkie (298); and the Maughold lighthouse (300).	iii) As already noted within these answers, the definition used for assessment of 'setting' is the one defined in the UK's National Planning Policy Framework, an approach that has previously been used with the approval of Manx National Heritage on other projects on the IoM; where Ancient Monuments are concerned MNH has no difficulty with its use for this development and would recommend it to the Isle of Man Government. Furthermore, MNH can confirm that it is in agreement with the process undertaken be the applicant when scoping out some protected monuments and when assessing the potential impact of the development on the setting of those monuments that remained.	
REP3-033.10	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** iv) Please see attached Word document Morgan – IoM Monuments detailing the legal status of the monuments taken forward for assessment, together with the latest publicly-available description of each site. Due to the inconsistencies noted in our response to Question vi), details for sites 0557 Cashtal yn Ard and 1068 Cronk ny Merriu have been included. Assessments of significance to modern criteria and with 'official' standing have not been undertaken by MNH for existing protected monuments on the Isle of Man.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.11	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** v) The relevant professional staff at MNH have longstanding familiarity with all of the heritage assets included in the assessment and are aware that the applicant's archaeological consultants have also	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
			visited the sites when considering setting impacts.In addition, MNH is familiar with all of the viewpoints included in ES Volume 4, Annex 10.6, comprising: 18: Herring Tower Trig Point, Langness Peninsula 19: Panoramic Viewpoint at Arch Southwest of Douglas Head ExQ1 Question to: Question and Response 20: Snaefell, summit Station Trig Point 42: Maughold Head Lighthouse 43 (Day & Night): Old Laxey 44: Slieau Ruy Cairn 45: South Barrule Cairn 46 (Day & Night): Port St. Mary 49 (Day & Night): Douglas Promenade 50: Coast Path at Chasm/Sugarloaf From a general perspective, having reviewed the various types of illustrations produced for each viewpoint (Baseline photography, Wireline and Photomontage, 90° Cumulative Wirelines and 53.50° field of view Wireline and Photomontage), MNH would suggest that the selected viewpoints provide a good range of views towards the development from the Isle of Man, and therefore also of the potential scale of impact upon the setting of the archaeological heritage assets. In making this assertion, MNH is reassured that the applicant's archaeological contractor has visited all of the affected archaeological heritage assets.	
REP3-033.12	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** vi) MNH has read and assessed the Isle of Man aspects of ES Volume 2, Chapter 8: Marine archaeology and cultural heritage, and ES Volume 4,	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
			Annex 8.2: Cultural heritage assessment, and in particular has considered from the latter document i) Table 1.8: Assessment of potential effects arising from changes within the settings of terrestrial designated historic assets (printed page nos 29-39) and ii) Appendix B: Gazetteer (printed page nos 115-120). We note two possible inconsistencies: Asset Cronk ny Merriu Promontory Fort 1068.00 (printed page 38-39) has been included in Table 1.8, but omitted from Appendix B. The assessment records a 'negligible adverse' impact and a 'minor adverse' significance of effect, both of which statements we would agree with. The site is largely shielded from the development by rising ground to the east. Given that the applicant has ExQ1 Question to: Question and Response demonstrated that its setting has been considered, our view is that its omission from Appendix B causes no significant difficulty.	
REP3-033.13	Isle of Man Government Territorial Seas Committee		**HE 1.10** **Response** Gazetteer List Entries 557 Cashtal yn Ard 0557.00, 580 Eastern Keeill, Maughold 0580.00, 582 Middle Keeill, Maughold 0582.00 and 583 North Keeill, Maughold 0583.00 (printed pages 116117) were scoped 'in' for a site visit, scoped 'in' for assessment, and carry the comments 'Sea views are not intrinsic to the setting' or 'Sea views do not contribute to the significance'. Additionally the Notes for Cashtal yn Ard contain the remark, 'situated on raised land giving views overlooking most of the parish of Maughold and across the sea to the Lake District': we agree that sea views are not intrinsic to the setting, and further that, whilst the Lake District is visible from this site, the development would not	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
			interfere with this view. The omission of the site from Table 1.8 is therefore not, in our view, a difficulty. In common with other chapel sites that have been omitted from further assessment, we also agree with the omission of the three chapel sites at Maughold. Aside from these inconsistencies, MNH can confirm that it is satisfied with the list of heritage assets taken through to assessment, and with the assessment results themselves. We can also confirm that we have considered the assets which were scoped 'out' of a requirement for a site visit (printed page nos 118-120), and agree with the reasons for not taking them forward for further assessment. With regard to the last part of question vi) the TSC can confirm that it is satisfied with the selection of and assessment of the heritage assets (registered buildings and conservation areas) in APP-026, including those listed as being assessed as having moderate adverse impact. It is noted by the TSC that the applicant made substantial efforts in public consultation in the Isle of Man and would expect that these responses be fully considered in the examination.	
REP3-033.14	Isle of Man Government (Territorial Sea Committee)	**MO 1.12** Manx Shearwater Section 2.4 of the Isle of Man Government's Local Impact Report [REP1-047] notes particular concerns regarding impacts on Manx shearwaters and great black backed gulls. The RSPB also raise key concerns regarding effect on Manx shearwater [RR-035]. Can the Isle of Man	**MO 1.12** **Response** i) Manx shearwater – Amber list species (Manx BoCC 2021) Estimated 1500 pairs breeding in 2024, recovering population Most recent data – MWT annual counts for MNH, from the Calf of Man Bird Observatory. There was a huge colony of Manx shearwaters on the Calf of Man up to the end of the 18th century, probably the largest then known, and the fat young were harvested as 'puffins' and pickled for the London market. The appearance of	Please see the Applicant's response to the Examining Authority's first written questions MO 1.12 in REP3-006. The Applicant is grateful for the submission of the information. The Applicant has incorporated consideration of the seabird populations of the Calf of Man throughout the assessments presented in Volume 2, Chapter 5 Offshore ornithology (APP-023) and the baseline characterisation of the Morgan Generation Assets presented in APP-053.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		Government clarify: i) The conservation status of these species on the Isle of Man. ii) Whether they agree with the methodology and impacts in ES Volume 2, Chapter 5 [APP-023] having regard to the RSPB comments on this species. iii) Any further comments to substantiate its concerns.	rats in the 18th century seems to have caused their extinction around that time as a breeding visitor. It was later noted as 'probably breeding in small numbers', from the Bird Observatory being set up in 1959 (Cullen & Jennings, 1986, suggested perhaps only 10-12 pairs) on the basis of adult activity. Rat control was initiated in 1979, and 32 'apparently occupied burrows' were recorded in 1991, young were found in 2 burrows in 2000, proving breeding, and in 2005 the Manx Bird Atlas recorded 104 occupied burrows, from calls being played at burrow entrances. A full rat eradication project came into operation in 2012 and there have been consistent and substantial increases in the breeding numbers of Manx shearwaters since then, most recently estimated form surveys of sampled areas, at 1500 pairs (2024, unpublished, MWT pers. comm. and included in the draft 2024 UK Ramsar Report). The Calf of Man has not been declared 'rat-free', as there have been occasional appearances of rats, followed up with a control response, which are either from new arrivals or a remainder from difficult to reach areas (it is not possible to determine which). Monitoring points and reactive controls, remain. The project has nevertheless been a massive success for Manx shearwaters.	
REP3-033.15	Isle of Man Government (Territorial Sea Committee)		**MO 1.12** **Response** Great black-backed gull – Red List species (Manx BoCC 2021) Most recent data – Seabirds Count (15-yearly count across British Isles). A full survey was made on the IoM (results available from Manx BirdLife - 'The Isle of Man Seabird Census: Report on the census of	Please see the Applicant's response to the Examining Authority's first written questions MO 1.12 in REP3-006. The Applicant is grateful for the submission of the information. The Applicant has incorporated consideration of the great black-backed gull population of the Isle of Man throughout the assessments presented in Volume 2, Chapter 5 Offshore ornithology (APP-023) and the baseline

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
			breeding seabirds in the Isle of Man 2017-18' - or data and summaries from the Seabird Monitoring Partnership (via the JNCC)). Manx BoCC 2021 – red list species, qualifying under the following criteria: BDp1 -78.5%; BDp2 -70.6%; BDr1 -59.2% (see definitions below). The decline in this species may actually have aided the recovery of the Manx shearwaters. - BDp Decline in breeding population Estimated maximum number of definite, probable and possible breeding pairs per annum.BDp1 Short-term decline 1998-2003 to 2006-16, except seabirds for which 1999 to 2017-18: Red ≥50% decline, Amber = 25-49% decline. BDp2 Longer-term decline 1977-81 to 2006-16, except seabirds for which 1969-70 to 2017-18: Red ≥50% decline, Amber = 25-49% decline. - BDr Decline in breeding range Range = number of squares in which definite, probable or possible breeding recorded.BDr2 is possible only at 5km square resolution, for which loss of sensitivity in identifying range declines is offset by more sensitive Red and Amber thresholds than for BDr1 which can be assessed at a resolution of 1km squares.BDr1 Short-term decline 1998-2003 to 2006-16, except seabirds for which 1999 to 2017-18, assessed at 1km square resolution: Red ≥50% decline, Amber = 25-49% decline. BDr2 Longer-term decline 1977-81 to 2006-16, except seabirds for which 1977-81 to 2017-18, assessed at 5km square resolution: Red ≥35% decline, Amber = 15-34% decline.	characterisation of the Morgan Generation Assets presented in APP-053.
REP3-033.16	Isle of Man Government (Territorial		**MO 1.12** **Response**	The Applicant welcomes the engagement from IoM TSC and recognition that there is no need to further update the assessment. Please see the Applicant's

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
	Sea Committee)		ii) The TSC acknowledges the difficulties in baseline characterisation with regard to Manx Shearwaters. In particular there are challenges in characterising the nocturnal activity on a site, which will create a level of error around the results of daylight surveys with respect to those species that have been shown to be active nocturnally. There are uncertainties around the response of this species to a variety of illumination situations and the levels at which this becomes disorientating or attracting to shearwaters, and its flight characteristics in poorer weather conditions and heavier seas might vary from those measured in studies during lighter weather. These are recognised issues in the scientific literature. With current understanding and available data it is difficult to see how these uncertainties could be further resolved within this assessment, but where the science is lacking, then monitoring is an option for enlightening the situation with regard to future development assessments.	response to the Examining Authority's first written questions MO 1.12 in REP3-006. Please also see the Applicant's response to the RSPB's Relevant Representation, specifically RR-035.12 to RR-035.17 in PD1-017. In summary, the baseline characterisation surveys undertaken to inform the assessments conducted for the Morgan Generation Assets follow best practice guidance from the SNCBs (Parker *et al.,* 2022). The methodology for these surveys was discussed and agreed with the EWG as part of the Evidence Plan process (please see Technical engagement plan appendices Part 4 (Appendix D) (APP-092)). In relation to the attraction of Manx shearwater to light, please see the Applicant's response to the RSPB's Relevant Representation (RR-035.16 and RR-035.17 in PD1-017.
REP3-033.17	Isle of Man Government (Territorial Sea Committee)	**SN 1.7** **Mooir Vannin navigational risk and safety assessment** Please confirm the assumptions of the Applicant for the Morgan Generation Assets Proposed Development in its ES Volume 2, Chapter 7 [APP-025] and restated in [PD1-017, RR-021.7] that: i) Potential navigational safety effects, including any arising from cumulative and/or	**SN 1.7 Response** The TSC is not currently in a position to confirm the assumptions in respect of the proposed Mooir Vannin OWF. The Department of Infrastructure continues to prepare the necessary legislation and requirements to support the consideration of an application in respect of offshore renewable energy generation and will continue to work with advisors to understand what will be required to be ExQ1 Question to: Question and Response submitted to satisfy the relevant stakeholders and will be subject to an Examination. Shipping and Navigation will be considered as part of an Environmental Impact Assessment undertaken by an applicant, and the subsequent Environmental Statement will form part of the submitted application,	Whilst the Applicant notes the uncertainty of legislation and evaluation mechanism, the Applicant highlights the commitment of the proponent of the Mooir Vannin Offshore Wind Farm within their Scoping Report to undertake the assessment in line with the UK's MGN654. This requires "*an assessment of the cumulative and individual effects*" of the project on shipping and navigation receptors (MGN654 4.6.d). Section 6.1 of MGN654 Annex 1 states that "*Developers should aim to achieve agreement with stakeholders that risks in the hazard log are reduced to a level that is as low as reasonably practicable (ALARP)".* In their response to ExQ1 SN1.8 (REP3-041), Mooir Vannin Offshore Wind Farm Limited confirm that they will undertake a cumulative effects

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		interactive impacts together with the Morgan Generation Assets Proposed Development, will be addressed through the development consent process for the Mooir Vannin OWF project, as assumed by the Applicant. ii) Navigational Risk Assessment for the Mooir Vannin OWF project consent application will be required by the relevant authority in the Isle of Man to follow the guidance of UK MCA Marine Guidance Note MGN654 and its Annex 1 'Methodology for Assessing Marine Navigational Safety and Emergency Response Risks'.	subject to consultation and Examination. However, the TSC would also expect that as part of this application, the proposed Morgan OWF will also be taking into account the proposed Mooir Vannin OWF as part of their Navigational Risk Assessment and will work with the relevant project teams to consider and agree to any required mitigation measures to satisfy both projects, providing safe navigation should the projects be built. The TSC further expects continued engagement with the IOMSPC and Mezeron (if required under Scenario 3 where there could be impacts on the Glasson route) to ensure a suitable outcome is reached to ensure there are no impacts on these routes, noting that the magnitude of impact to the IOMSPC is considered to be high.	assessment as part of their Navigation Risk Assessment. As described in the Applicants response to ExQ1 SN 1.17 (REP3-006) and response to Written Representation by the MCA REP1-051.21 (REP2-005), the Applicant has followed due process and best practice with regards to the assessment of cumulative projects and note that there remains significant uncertainty as to the final design of the Mooir Vannin Offshore Wind Farm (Scoping boundary) (response to ExQ1 SN1.9 REP3-041), which as highlighted by Mooir Vannin Offshore Wind Farm Limited may not be available until after the close of the Morgan Generation Assets Examination (response to ExQ1 SN1.8 REP3-041). The Applicant has therefore mitigated the navigational risks and impacts for which it is either able or has sufficient information and reiterates that as part of the "*process of finalising the design of the project*" (response to ExQ1 SN1.9 REP3-041), Mooir Vannin Offshore Wind Farm Limited will need to address cumulative risks introduced by their development.
REP3-033.18	Isle of Man Government (Territorial Sea Committee)		**SN 1.7** **Response** The Department of Infrastructure continues to consider the relevant Guidance that will apply in respect of the applications for marine infrastructure consent, including shipping and navigation. The Mooir Vannin Scoping Opinion sets out that "With regards Guidance, it is noted in Chapter 2 at section 2.5 that whilst there may be areas where the Isle of Man is lacking in guidance in respect of specific topics, the applicant will have regard to guidance, and that regard will be given where appropriate to advice published in the UK and the EU, subject to consultation with and the agreement of the DoI. This is accepted and the various Departments will welcome future consultations and discussions on what they will require as the project progresses. It should be further clarified that agreement to use advice and guidance from neighbouring jurisdictions will not always lie with the	

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
			DOI; whilst the DOI can suggest what is used in respect of its statutory responsibilities and duties, in respect of receptors for which it is not responsible, that confirmation and acceptance of guidance and advice will lie with the relevant Departments of the Isle of Man Government.	
REP3-033.19	Isle of Man Government (Territorial Sea Committee)	**SLV 1.4** SLVIA Methodology and Viewpoints – Isle of Man i) The IoM Government is asked to confirm if it is satisfied with the range, location, accuracy and quality of viewpoints on the Isle of Man as listed at Table 10.19 [APP-014] and shown within ES Volume 4, Annex 10.6 [APP-039, 40, 41, 42, 43 and APP-044], and if not, provide suggestions for additional/alternative viewpoints. ii) Does the IoM Government agree with the Applicant's assessment of effects on users of the Raad ny Foillan Coast Path and individuals at the	**SLV 1.4** **Response** i) The TSC is satisfied with the viewpoints selected and the presentation of them in the ES. See also response to questions in HE 1.10.	The Applicant notes the response and that the IoM TSC has no outstanding concerns with viewpoint selection.
REP3-033.20	Isle of Man Government (Territorial Sea Committee)		ii) The TSC agrees with the assessment of the effects mentioned as moderate to major adverse. However, there does seem to be some contradiction over the significance of these. In Table 10.24 "moderate to major" is assessed as "not significant" in some places but "potentially significant" in others. Notwithstanding the contradictions, there doesn't appear to be justification as to how a major negative impact can be assessed as not significant.	The Applicant submitted a SLVIA Clarification Note [REP3-010] at Deadline 3 that the Applicant considers addresses this point and will have resolved matters for IoM TSC. The SLVIA Clarification Note [REP3-010] has provided more information in respect of the locations where "major negative impacts" where seen to arise and has reviewed the significance of these impacts. A number have therefore been re-categorised as significant. An explanation of how methodology has been applied is provided in the note. It is anticipated that this document will have resolved matters for IoM TSC.

Reference	Question is addressed to	ExA Question	IoM TSC Response	Applicant's Response
		coastal settlements of Douglas and Laxey as moderate to major adverse and not significant? (refer to previous question for the references).	It is also noted in volume 8 that "moderate adverse" visual effects are assessed as "significant". It is noted by the TSC that the applicant made substantial efforts in public consultation in the Isle of Man and would expect that these responses be fully considered in the examination.	Due consideration has been given to public consultation.

Table 2.4: REP3-033.20 to REP3-033.41: Response to Isle of Man Government (Territorial Sea Committee) Monuments ExAQ1 response.

Reference	IoM TSC's submission	Applicant's response
REP3-033.20	**31 Hango Hill, Malew (0031.00)** Medieval burial mound; execution site; banqueting hall; gun battery. This prominent artificial mound stands on a natural summit at the northernmost point of Castletown Bay. It is believed to have served several uses, the earliest perhaps being for prehistoric burials. It is more likely to have been a pagan Viking burial monument, similar to mounds at Knock Rushen and Balladoole just to the west, and to others around Jurby in the north of the Island. The Vikings seem later to have used it as a place of execution, since its name is derived from the Old Norse for 'hanging hill'. The site is most well known as the place where William Christian was executed in 1663 for his part in surrendering the Royalist held Island to Parliamentary forces in 1651. The Earls of Derby built a hall on the top of the hill shortly after, of which only the ruinous northern end survives: it was originally about 10m long. Early drawings show a building with battlements, though it seems only ever to have served as a banqueting hall and a summerhouse. It is associated with horseracing organised by the Earls along the dunes to the east onto Langness the first 'Derby' races. A battery of four small cannon is recorded as present in the later 17th century but had fallen into decay in the first half of the following century. The banqueting hall was undermined by coastal erosion and was in ruins by the end of the 18th century. The hill is now protected from further damage by a seawall.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.21	**41 Cronk Carran, The Chasms Hut Circle (0041.00)**	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	Roundhouse. This neatly formed stone building, constructed using several large stones, is about 6m in diameter and by size would appear to be a small Bronze or Iron Age hutcircle. Its coastal location and isolation are unusual.	
REP3-033.22	**74 Cashal Rhunt, Cass ny Hawin (0074.00) Listed Monument** Iron Age defended promontory; medieval watch station. The site is protected by an earthen bank and ditch across the landward side, and on the north side by precipitous cliffs on the north and east. The bank is 7m wide with a maximum inner height of 1.5m and outer height of 2.2m. A ditch to the landward of this is 6m wide on average and 1m deep, though it has suffered plough damage. Excavation by PS Gelling in 1957 showed that the rampart was faced with dry walling inside and out and was 3.8m wide. The excavator believed that both faces were part of a reconstruction, for they stood on a layer of slatey rubble and building stone, which was thought to be Iron Age in origin. The rebuilding of the rampart probably took place before the construction of the rectangular longhouse within the enclosed promontory. Prior to investigation, there were surface indications of the building, but excavation proved it to be orientated NW SE, with bowed walls and internal measurements of 7.5m by 4m. There was a possible entrance 2m wide in the south east corner, but no trace of stonework. Apart from a few postholes for support for the roof and entrance, little else survived to indicate the construction of the walls, which seem to have been of earth and turf. There was a rudimentary raised bench along each long wall and at the west gable, formed by cutting down into the bedrock in the centre of the building; here there was also a hearth. The excavator believed that the house represented Medieval reoccupation of the site. More recently it has	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	been argued that the building was used as a watch house as part of a system of watch and ward, and did not serve a domestic purpose.	
REP3-033.23	**75 Derby Fort, St Michael's Isle, Malew (0075.00)** **Sixteenth and seventeenth century coastal fort.** This circular fort dates from the 1540s and was built for Henry VIII of England. The fort is about 24m in diameter and has walls 3m thick and 5m high, and was constructed to protect Derbyhaven Bay against enemy shipping. The island on which it stands is sometimes named Fort Island in its honour. About a century later the fort was modernised by James Stanley, 7th Earl of Derby and Lord of Man. Stanley was a Royalist and built several fortifications on the Island during the Great Civil War against Parliamentary attack. Later, the fort was used as a lighthouse, though the short tower housing the light was removed around the end of the 19th century. Today the fort has a battlemented walkway, below which are openings for seven cannon. A further opening has been filled in and replaced with a chimney flue for one of two ruined buildings constructed inside; their origin is not certain. The cannon are not original, but have been collected from various sites around the Island. A worn sandstone plaque above the entrance bears the remains of a crown, the letters 'I.S.' for James Stanley, and a date beginning 164--. The slight remains of an earthwork fort lie just to the south--west. The fort was part of a system of coastal defences instigated by Henry VIII to counter attacks from France and Spain. The most well--known are on the south coast of England, but Henry actually started the network in the north, so this may be an early example.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
REP3-033.24	**77 Hango Broogh, Langness, Promontory Fort (0077.00) Listed Monument** Defended promontory. Earthwork remains survive on a raised rocky triangular promontory on south side of the narrow channel between St Michael's Isle and Langness. The interior is surrounded by a bank except for a 20m strip to the south east. A pathway to the entrance is grooved with shallow steps cut into a natural shelf in the rock. This may also have served as a slipway for small boats. The entrance takes the form of a scooped hollow through the bank, 4m wide at the base and 9m wide across the top. The scooping of the entrance continues well into the interior of the fort. The strength of the perimeter bank is variable, in some places surviving to maximal widths of 4 to 6m and heights of 1.1 to 1.6m above the interior. Elsewhere it is weaker and more fragmentary with an average width of 1.5m and an average height of 0.4m. No outer ditch is necessary and there is no visible trace of internal structures. Limited excavation in 2000 recovered gorse charcoal dated to the 11th and 13th centuries. This may represent the firepit of a beacon serving as part of a watch and ward system of coastal defence.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.25	**79 Knock Rushen Burial Mound (0079.00) Listed Monument** Medieval burial mound; execution site. The mound is about 14m in diameter and 2.1m high, but is somewhat irregular due to disturbance in the past. While the natural limestone bedrock is very close to the surface and outcrops in the vicinity, the mound itself appears to be of mixed stone and earthen construction. The site has never been excavated, but is perfectly located to have served as a burial monument of the kind	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	constructed by pagan Viking settlers on the Island in the late 9th or early 10th century. Tradition states that the mound was used also as a place of execution.	
REP3-033.26	**80 Castle Rushen (0080.00)** **Medieval stone castle.** Castle Rushen is widely regarded as one of the most complete medieval fortresses in Europe. It was begun by the Norse kings of Man in the later 12th century, probably by Reginald (1187 1226), though its form was influenced by Anglo Norman design. It was captured by Robert Bruce during a Scottish raid in 1313 that was intended to frustrate English activity in the Irish Sea, but seems to have undergone repair and significant development soon after. In 1417 it was the location for a Tynwald assembly and again in 1422 for an assembly held before Sir John Stanley, the new English overlord. At this time it had attained its modern height and a curtain wall had been added. By the 16th century further development had taken place, transforming it into an artillery fortress protected against cannon fire by an outer glacis. In the mid 17th century the castle was refortified by James Stanley the 7th Earl of Derby as part of his defence of the Island against Parliamentary forces. In spite of this the castle fell due to a rebellion by the Manx against the Stanley family in 1651 in the face of a threatened siege by Parliamentary forces. More recently the castle served a more administrative function, acting as the governor's residence and as a prison. In the early 1900s the many late accretions resulting from its development as a prison were removed, restoring it to some of its former glory as a medieval fortress and the seat of kings whose power held sway over the Irish Sea and the Western Isles of Scotland.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
REP3-033.27	**132 St Michael's Chapel, St Michael's Isle, Malew (0132.00)** Medieval chapel. St Michael's Chapel gives its name to the islet lying at the north end of Langness in the mouth of Derbyhaven Bay. One of the earliest references to it is found in an entry for 1250 in the Chronicles of the Kings of Man and the Isles, and shows that it was an important strategic site. By this time the chapel may have already been in existence for about a hundred years. The chapel is 9m long by 4.5m wide: because it was used for congregational worship it is significantly larger than the earlier chapels or 'keeills' that are so characteristic of the Island, but it was not part of the parish system that replaced them, and is shown ruinous in a mid 17th century illustration. The same illustration shows the characteristic belfry on the west gable. Both the chapel and the burial ground in which it stands were used by Catholic worshippers from the 16th to the 18th centuries and for the victims of shipwreck more recently, but probably had its origins in the 12th or 13th centuries. The coastal location of St Michael's Chapel echoes some of the churches built around the 12th century in the Western Isles and Orkney, at a time when Manx links with these islands were strongest.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.28	**174 Upper Lighthouse, Calf of Man (0174.00)** Lighthouse. This lighthouse, together with its twin nearby, was built in 1818 for the Northern Lighthouse Board to the designs of Robert Stevenson, one of the Board's most famous engineers. The two lighthouses worked in tandem, indicating to passing ships if they were in danger of colliding with the Chicken Rock nearly 2km to the south. The Stevenson lighthouses were replaced by a lighthouse on the Chicken Rock itself in 1875, after several difficult years	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	of construction. More recently a modern light, warning of the dangers of the Calf of Man itself rather than the sinister reef to the south, was installed close to the old Stevenson towers in 1967, but this was decommissioned in 2007 as unnecessary in the modern age of satellite enabled navigation and global positioning. The Chicken light was upgraded at the same time so that its light is visible from a distance of 21 miles. In common with many of the NLB's installations, each lighthouse was attached to a keeper's house, with adjoining garden and other basic facilities. The buildings are now maintained as nesting sites for birdlife in keeping with the status of the Calf of Man as a nature reserve and bird observatory.	
REP3-033.29	**229 Vowlan; Hangman's Hill; Danes' Fort (0229.00)** Defended promontory. The site lies within the morainic landscape of the northern end of the Isle of Man and is necessarily different from other promontory fortifications which rely on the rocky character of the rest of the Island's coastline. The site relies for its defence on a large gully to the north and a shallow one to the south, and formerly on the sea to the east, although this is now obscured by land reclamation. Quarrying for sand, gravel and marl has mutilated the cliffline and is likely to have reduced the extent of the promontory. The site was excavated by Gerhard Bersu in 1946. He found posthole evidence of a series of lightweight timber buildings, with walls of stakes probably woven with withies; no daub or clay was identified. The buildings varied in size from 3.9 m by 7.8 m to 5.4 m by 9.8 m. They were rectilinear, with rounded corners, a central aisle, and unlined cooking pits or hearths. The buildings were superimposed one upon the other with little time lapse between construction. No datable material was	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	found, but by analogy they could be classified as Viking of 9th century onwards. Bersu considered them not to be farmhouses but more likely to be temporary dwellings within a defensive enclosure used by raiders for the period of their raid. The beach and old rivermouth just to the south would tend to strengthen such a suggestion. The site is now overgrown, but inspection since Bersu's excavation has failed to find traces of the bank surrounding the promontory surveyed by the Ordnance Survey in 1869. Any landward ditch has been damaged or obscured by the later track which led to a 19th century marl pit just to the south. Quarrying would appear to have reduced the extent of the promontory, even since the 1869 Survey. The Castle Rushen Papers contain a reference in 1627 to 'Hangmans Hill' as the site of the night watch station for the parish of Lezayre. The same source later makes reference to the 'Danes fort' in 1719. The coastline of Lezayre is quite short, and this is probably the only location suitable for the Night Watch. It is tempting to see both references as relating to Vowlan, though the latter is perhaps somewhat fanciful. Bersu's interpretation as a raiding party's defence is based on rather outdated views of Viking activity in the Irish Sea from the late 8th century onwards, and it would seem more appropriate to see the site as performing a function associated with policing the coastline and perhaps also overseeing beach markets.	
REP3-033.30	**557 Cashtal Yn Ard (0557.00) Guardianship Ancient Monument** Neolithic chambered tomb. The well preserved chambered tomb of Cashtal yn Ard is situated on raised land giving views overlooking most of the parish of Maughold and across the sea to the Lake District. Although the stone cairn has been	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	stripped away, the largest, firmly set stones create a dramatic burial site. The impressive arcade of the sharply curved forecourt, now restored, measures 6.7 m wide by 5.8 m deep. The largest of the stones forming the forecourt stand 2.3m above ground level. Five stone built chambers extend eastwards from the forecourt, each chamber separated from its companion by lateral stone slabs. The maximum height of the stones forming the chambers is 1m, gradually reducing eastwards. The longest of the chambers is 3.2 m and the shortest is 2 m long; the average width is 1.2 m. The overall length of the tomb is 39 m. When first recorded in the 19th century, the cairn was clearly almost rectangular, and stood almost 1.2 m high, the body of the cairn being revetted behind post and panel walling. The walling, most of the cairn material, and some of the orthostats forming the forecourt were removed in the middle of the 19th century for house building. A few flints and some sherds of Neolithic pottery were found in the chambers.	
REP3-033.31	**558 Keeill Chiggyrt, Keeill Casherick (0558.00) Listed Monument** Medieval chapel. The site was investigated by the Manx Archaeological Survey (1915). The Survey found that the chapel was orientated NE SW, with walls standing up to 0.6 m high, and 0.9 m thick. The chapel itself measured 6.1 m by 3.5 m internally, and had a doorway in the 'western' gable. Only faint traces of an east window were observed, although local reminiscence recorded at the time suggest others may once have existed. The outside faces of the walls, particularly on the north, east and south sides, were obscured by collapsed masonry.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	A semi circular dais extending almost the full width of the 'east' wall was interpreted as marking the base of the altar. Two crosses (Manx Crosses 79, 163) have been found on the site.	
REP3-033.32	**559 Gob ny Garvain Promontory Fort (0559.00) Listed Monument** Defended promontory. The fort is located on a headland jutting south eastward into the sea. It is lozenge shaped, its longest axis running SW NE measuring roughly 50 m across. Natural defences are provided by precipitous gullies on the west and north sides thus providing a natural all round sheer rock face on all but a 20 m strip to the north west. Here an inner bank 4 m wide at the base with a maximum interior height of 1m has been constructed; it has no apparent entrance. The bank is paralleled to the north by a ditch, beyond which lie an outer bank and ditch. The eastern half of both have been mutilated by a field boundary and cultivation. There is no visible trace of any internal structures. The site is most likely of Iron Age origin, but may have been re used during the medieval period.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.33	**560 Rullic Keeill Vael, The Barony (0560.00) Listed Monument** Bronze Age barrow cemetery; medieval chapel and burial ground. Approximately fifteen burial mounds were surveyed on the Barony hilltop at the time of the Ordnance Survey in 1867. The remains are now less distinct. Amongst the mounds are the remains of a medieval chapel which was investigated by the Manx Archaeological Survey in 1915 and found to measure 7.2 m by 3.8 m internally. The Survey noted that the	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	western end of the chapel was largely destroyed. The structure is now obscured by field clearance stones. At the time of the Survey the medieval chapel was noted as lying within a well defined enclosure about 45 m long by 40 m wide. The remains are now rather more fragmentary and ill defined.	
REP3-033.34	**580 Eastern Keeill, Maughold (0580.00) Guardianship Monument** Medieval chapel and burial ground. The site was investigated by the Manx Archaeological Survey in 1915. The structure is orientated ESE WNW, and measures 6.4 m by 3.4 m internally, with a doorway in the 'west' gable; the walls are 0.4 m high and 0.7 m thick. The chapel has been obscured by a later structure and a well, the latter of which was sunk through the south east corner and appears to have destroyed any trace of an altar. Traces of early burials have been recorded nearby, and two fragments of carved stone crosses were recovered by the Survey. Maughold is thought to have been an early medieval monastery, focussed around a shrine to St Maughold. The site was significant and wealthy enough to be threatened by a raid in 1158, but was saved by a miracle as recorded in the Chronicle of the Kings of Man and the Isles.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.35	**582 Middle Keeill, Maughold (0582.00) Guardianship Monument** Medieval chapel and burial ground. The site was investigated by the Manx Archaeological Survey (1915). The building is orientated ESE WNW, and measures 5.8 m by 3.5 m internally. It has walls 0.3 m high and 0.6 m thick. The doorway is in the 'west' gable, but no other architectural details survive.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	A carved stone (Manx Cross 43) was found just outside the chapel, and fragmentary evidence for burials inside. Maughold is thought to have been an early medieval monastery, focussed around a shrine to St Maughold. The site was significant and wealthy enough to be threatened by a raid in 1158, but was saved by a miracle as recorded in the Chronicle of the Kings of Man and the Isles.	
REP3-033.36	**583 North Keeill, Maughold (0583.00) Guardianship Monument** Medieval chapel and burial ground. The site was investigated by the Manx Archaeological Survey (1915). The chapel is orientated ESE WNW, and measures 4.7 by 2.8 m internally. The walls are 0.7 m thick, and stand 0.8 m high from the floor, which is now cobbled. The Survey found no trace of an altar, nor windows, though a recess or aumbry was noted in the 'north' wall. The door is in the 'west' gable. The chapel stands within a slightly raised area, which the Survey took to represent a cemetery earlier than the present parish graveyard: lintel graves and unlined inhumations were noted, and two carved stone crosses recovered from separate graves. Maughold is thought to have been an early medieval monastery, focussed around a shrine to St Maughold. The site was significant and wealthy enough to be threatened by a raid in 1158, but was saved by a miracle as recorded in the Chronicle of the Kings of Man and the Isles.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.37	**762 Purt ny Ceabagh Promontory Fort (0762.00) Guardianship Monument** Iron Age defended promontory. This headland stands higher than the adjacent land, a natural defence which is augmented by a bank and ditch protecting the interior of the promontory. The bank	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	still rises 2.5 m from the bottom of the ditch, despite the former no doubt being eroded and the latter partially filled with debris. The inner height of the bank is 1.3m. The whole site is covered by vegetation and the interior of the promontory shows no trace of internal structures, nor of a peripheral bank. It has never been excavated. The site lies just 250 m from the defended promontory of Cronk ny Merriu (1068).	
REP3-033.38	**765 Arragon Mooar, Claugh Vane (0765.00) Listed Monument** Bronze Age burial mound. The site has not been excavated, but appears to consist of a burial mound on which are set a ring of large quartz boulders. The monument is classically and prominently located on a ridge rising from Arragon Mooar and extending north east towards Santon Church. The mound is about 14 m in diameter, and is more than a metre high. The ring of stones is about 6m across, and the area within is slightly sunken as if collapsed, robbed out or eroded.	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.
REP3-033.39	**1064 Langness Point Promontory Fort (1064.00) Listed Monument** Defended promontory. The end of Langness peninsula contains the remains of a promontory fort of unique form amongst other Manx forts such as Cronk ny Merriu, Cass ny Hawin and Close ny Chollagh. Enclosures and earthworks can be seen on a series of small islets at the south western tip of the peninsula. The first of these enclosures stands on the promontory attached to the peninsula. Two sea inlets form a natural ditch, and beyond these a defensive bank stands to a height of 1 m. At the far end of this promontory the arrangement is repeated, with another natural ditch and a bank defending the landward side of the first islet. The	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	second islet shows no sign of defence, but the third is protected by another bank. Although not particularly high today, it is quite possible that these banks were once augmented with timber palisades. There is no evidence for ancient buildings on any of the islets, and the small brick built structure is associated with mine working in the late 1800s. Copper has been extracted from Langness from probably as early as the Bronze Age, since stone tools, of a type used to break up the ore, have been found throughout the area.	
REP3-033.40	**1068 Cronk ny Merriu Promontory Fort (1068.00) Guardianship Monument** Defended promontory. When first surveyed by the Ordnance Survey in 1868, the most obvious features on the site were the large, grass covered bank, standing 3.5m high and 5m wide, and the less substantial remains of a rectangular building behind it on the promontory. The scale of the bank led to an assumption that it represented a prehistoric burial mound, a belief compounded by its name, which translates as 'hill of the dead'. Excavation in 1950 51 found that the promontory had first been protected by a timber stockade, which was later replaced by a timber reinforced earthen rampart. A ditch had also been excavated in front of the bank, to a depth of about 1m below modern ground level; the ditch was spanned by a causeway at the west end to allow access to the headland. The rampart was further augmented by a timber platform, or raised walkway. The defensive site so created was considered to be of Iron Age character, though no features of this period were identified within the site. Several residual finds, however, confirm an Iron Age presence. The interior of the headland is now dominated by a later longhouse which is likely to have disturbed or destroyed most traces of earlier occupation. The longhouse measures 13.5m by 7.5m, with earthen walls 1.5m thick	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	faced inside and out in stone. The walls originally stood to a height of around 1.5m, and probably supported a pitched roof. Two doorways are located opposite each other near the west end, and low stone benches run along both of the long walls and across the western gable. There was little evidence of domestic activity, only rather basic remains of a hearth, and no domestic rubbish. The form of the building thus conforms to a domestic Viking longhouse, while the excavated evidence suggests that it was not permanently occupied. Several other defended promontories (Cass ny Hawin, Close ny Chollagh and Borrane) have similar buildings within their ramparts, leading to the suggestion that existing promontory forts were reused as part of a 'watch and ward' system of coastal defence and perhaps also to police beach markets. No dating evidence was found during the excavations but in 1970, a half penny of Edward I, dating 1280 81, was found in the back fill of the dig and presumably indicates some occupation of the site after the end of Norse rule on the Island in 1265.	
REP3-033.41	**1077 Maughold Head Hillfort (1077.00)** Defended hilltop; cairn; lookout. This prominent summit is naturally defended by cliffs and steep slopes to the north east and south east, and to west and north by an artificial bank. There are signs of a possible entrance at the most westerly point, but it is not entirely clear whether these features represent a truly defended site. Similarly, the cairn on the summit, which is substantial and more than 10 m in diameter, could be funerary or no more than a landmark. The Castle Rushen Papers contain a document dated 1627 which lists the 'hills of the day watch and the ports of the night watch', from which a watch system was kept	The Applicant notes the response and that the Isle of Man Government Territorial Seas Committee has no outstanding concerns with the assessment.

Reference	IoM TSC's submission	Applicant's response
	around the coastline of the Island from Medieval times: Maughold Head was the point from which a daytime watch was maintained until at least the 17th century.	

2.4 Isle of Man Steam Packet Company Limited

Table 2.5: REP3-034: Response to Isle of Man Steam Packet Company Limited ExAQ1 response

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
REP3-034.1	IoMSPC	**SN 1.10** In response to the Morgan Planning Inspectorate's request please see below the IOM Steam Packet Company's response to Question SN 1.10 which asks: "Analysis of effect of route deviations Further to its Written Representation, IoM Steam Packet Company (IoMSPC) is invited to submit an analysis of deviations required by the effect of the Proposed Development alone and the cumulative effect of proposed development of Morgan, Morecambe and Ørsted wind farms on the IoMSPC Liverpool-Douglas and Heysham-Douglas services and consequent effects including fuel consumption and in-port operations."	**Reference: - IOM Steam Packet Company's Response to Shipping and Navigation Question SN 1.10 Posed by the Morgan Planning Inspectorate.** Ship examples referred to in this response are Ben my Chree, a conventional passenger ferry for passengers, vehicles and freight (average speed is 17 kts with max 618 passengers), and Manannan, a high-speed passenger craft for passengers and vehicles (average speed of 32 kts with 890 passengers). **Morgan Proposed development alone** The current berth to berth distance from Douglas to Heysham is 60nm. At 17 kts this takes 3h 32m. New route distances as a result of the proposed Morgan windfarm site are; Douglas - Heysham (north of Morgan WF) is 61nm – at 17kts takes 3h 35m (an increase of 1nm and 3 minutes sailing time) Douglas - Heysham (south of Morgan WF) is 65 nm – at 17 kts takes 3h 49m (an increase of 5 nm and 17 minutes sailing time)	The Applicant notes that these calculations were based on the Ben My Chree which has been replaced by the Manxman. The Manxman as a newer modern vessel is likely to be more environmentally friendly, generating less emissions, more fuel efficient, reducing costs and having better sea keeping in adverse weather. Therefore, the analysis presented by the IoMSPC is likely precautionary. In addition, as per the Strategic Sea Services Agreement, the Manannan ferry is due for replacement in 2026. It is assumed that this replacement will be to a more modern and fuel efficient vessel. The Applicant notes that there are differences in the deviation distances proposed by IoMSPC compared with those in the Application. Passage plans used in the Application were developed and verified with ferry operators during navigation simulations which were attended by IoMSPC. For example, the Douglas to Heysham typical route shows twice the deviation distance from 0.5 nm (1.6 minutes deviation) in the Application to 1 nm in the IoMSPC response, but note with this precautionary passage plan the increase in time is still only three minutes on a three hour and 45 minute timetabled service which the Applicant considers to be minor.
REP3-034.2	Isle of Man Steam Packet Company (IoMSPC)	**SN 1.10** (as above)	**Using Ben my Chree as an example** Per trip Fuel Oil -tonnes, Lubrication Oil – litres and CO2 emissions;	Noting the comments above on more conservative deviation distances (REP3-034.1), the Applicant also notes that the IoMSPC give a fuel cost of £795/tonne. This is significantly

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
			(see table) Number of voyages between Douglas and Heysham is approximately 1300 per year Assuming BMC sails 95% Short and 5% long routes Annual dist short 75335nm Annual dist long 4225nm Total Annual Dist 79560nm Current annual dist 78000nm Therefore annual distance increase to current distance is 1560nm Increase to fuel oil, lubrication oil, CO2 emissions and associated costs are as follows; (see table)	more than the current market rate for Very Low Sulphur Fuel Oil (VLSFO) on various indexes, which is closer to £400. Though the Applicant recognises that fuel price varies, the IoMSPC have not justified why this cost has been utilised. The IoMSPC have also assumed that 5% of sailings would be adverse weather routes. This is significantly higher than at present as shown in the Application of less than 2% (Table 7.23 of APP-025). Whilst the Applicant expects this figure could increase, the IoMSPC have not justified this figure of 5% and the Applicant considers to be overly precautionary.
REP3-034.3	Isle of Man Steam Packet Company (IoMSPC)	**SN 1.10** (as above)	**Using Manannan as an example**, Voyages between Douglas and Heysham is approximately 40 per year (see table) Assuming Manannan sails 95% Short and 5% long routes 40 voyages IOM Heysham route Annual dist short 2318nm Annual dist long 130nm Total Annual Dist 2448nm Current annual (2019) dist 2400nm Therefore annual distance increase to current distance is 48nm.	The Applicant notes this and refers to the response to REP3-034.1 and REP3-034.2 above.
REP3-034.4	Isle of Man Steam Packet Company (IoMSPC)	**SN 1.10** (as above)	**Morgan Morecambe Orsted windfarm sites** In combination with other windfarm sites a narrow bottle neck is created to the north of Morgan between the Morgan site and the Isle of Man Mooir Vannin site. In compliance with the Isle of Man and United Kingdom Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations (COLREGS) all ships are obliged to comply with the COLREGS by either adjusting their speed and/or course where risk of collision exists	The Applicant notes these comments and as shown in the CRNRA (APP-060), the assessment concludes that unacceptable risks would only arise due to navigation for passages between the Morgan Array Area and Mooir Vannin Offshore Wind Farm Scoping boundary. The CRNRA, and as reflected in the Statement of Common Ground with the IoMSPC (REP3-026), also concludes that passages between the Morgan Generation Assets, Mona Offshore

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
			depending on the circumstances and conditions of the case. To maintain a safe passing distance from other ships, pleasure craft, fishing vessels etc and the windfarms themselves it may be necessary for the ship to slow down. Sea-room to alter course is restricted by the presence of the windfarm sites and any action to reduce speed would impacts upon the vessel's scheduled service. This circumstance would also be exacerbated by adverse weather or poor visibility which could necessitate further reduction in the ship's speed to comply with the COLREGS. Significant delays can take days to recover which ultimately negatively affects the service delivery for passengers and freight vital to the Isle of Man's economy. It should be noted any emergency action to avoid collision within a windfarm corridor could put the vessel further at risk of collision with another vessel or risk allision with a wind turbine. For a passenger ship with around 1000 persons on board this could potentially turn into a mass casualty event. In combination with other windfarm sites the increase in fuel oil, lubrication oil, CO2 emissions and associated cost increase for the Isle of Man to Liverpool route is as follows; Current berth to berth distance from Douglas to Liverpool is 71 nm. At 31 kts this takes 2h 17m.	Wind Project, Morecambe Generation Assets and existing OWFs was shown to be Tolerable and ALARP.

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
REP3-034.5	Isle of Man Steam Packet Company (IoMSPC)	**SN 1.10** (as above)	New route distances as a result of the proposed windfarm sites are; Douglas - Liverpool (south of Morgan WF) is 72nm – at 31kts takes 2h 19m (an increase of 1nm and 2 minutes sailing time) Using Manannan as an example, Per trip Fuel Oil -tonnes, Lubrication Oil – litres and CO2 emissions; (see table) Voyages between Douglas and Liverpool is approximately 630 per year Assuming Manannan sails 95% Short and 5% long routes 630 voyages IOM LPL route Annual dist short 43092nm Annual dist long 2646nm Total Annual Dist 45738nm Current annual (2019) dist 44730 nm Therefore annual distance increase to current distance is 1008nm Increase to fuel oil, lubrication oil, CO2 emissions and associated costs are as follows; (see table) In total it is estimated the combined Ben my Chree and Manannan increase to fuel oil, lubrication oil, CO2 emissions and associated costs are as follows; (see table)	The Applicant notes that the increase in deviation distance in typical conditions as a result of Morgan is almost five times higher than that given in the Application (Table 7.18 of APP-025) of 0.2 nm as opposed to 1.0 nm. However, the Applicant notes even with this precautionary passage plan presented by the IoMSPC the increase in time is still only one minute on a two hour and 45 minute voyage which the Applicant considers to be minor. The Applicant also notes that the IoMSPC calculations compare the future case deviations in adverse weather to the base case typical route passage plans. It would be more appropriate to compare the future case adverse weather routes to the existing adverse weather routes as has been done in the Application, otherwise it overestimates the increase. As a result, and in combination with the response to REP3-034.1 and REP3-034.2 above, the Applicant considers these numbers overly conservative in nature.
REP3-034.6	Isle of Man Steam Packet Company (IoMSPC)	**SN 1.10** (as above)	The increase in cost may or may not be passed on to passengers and freight customers depending on commercial and any political considerations. Such a cost increase to a lifeline service has a negative socioeconomic impact to the national economy of the Isle of Man.	The Applicant makes the following responses to points raised by IoMSPC: • Increased costs: – As set out in the Application where a moderate adverse impact was identified (APP-025), the Applicant recognises there

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
			National implementation in the United Kingdom and Isle of Man Merchant Shipping (Prevention of Air Pollution from Ships) Regulations regulate heavily on the amount of CO2 emissions. An increase in CO2 emissions also make compliance with the existing regulations more onerous and incur extra costs to achieve the required compliance. Any significant increase in a ship's voyage time between ports also has implications to a ship's ability to keep to a scheduled service and impacts on the time available to conduct safe port operations. The IOM Steam Packet would be opposed to speed up operations at the expense of ship and shore worker's safety. Time in port could be extended to accommodate delayed arrivals but this would result in a delayed service departure inconveniencing passengers and freight. On some occasions, the ship may be tidally restricted and forced to depart port on an ebbing tide regardless of passengers or freight in order to maintain a safe under-keel clearance and avoid damaging the ship by sitting on the seabed. In such circumstances, passengers and/or freight may have to be left behind. In conditions of adverse weather the likelihood of the Captain cancelling a sailing may increase where the option to 'weather route' (ie sailing a more comfortable course and speed reacting to the sea conditions for passenger and cargo safety) has diminished. Windfarm corridors will force to ships to navigate particular courses. Should the windfarm course be particularly uncomfortable according to the prevailing adverse weather conditions, and thus unsafe for the carriage of passenger and freight, the likelihood is the Captain will cancel the sailing on grounds of safety. Cancelled sailings, delayed departures or departing without booked passengers or freight are highly detrimental to the operation of a lifeline passenger service vital to the Isle of Man's economy. The number of sailings	will be an increased cost to the IoMSPC as a result of increased deviations caused by the Morgan Generation Assets. – Notwithstanding the comments above that the Applicant considers these figures overly precautionary (REP3-034.1 to 4), the quantum of the increase in cost given is less than 2%, and is relatively minor. – The Applicant is engaging with the IoMSPC to resolve residual commercial effects in parallel to the Examination. • Emissions: – As noted above in REP3-034.1, the calculations are based on the older Ben My Chree, since replaced with a newer more efficient vessel, and the Manannan, also due for replacement in 2026. Therefore, these figures are also likely to be conservative. • Schedules: – The Applicant notes through analysis of historical vessel traffic data, that there is a significant variation in the transit time and turnaround time in ports of IoMSPC vessels which is currently being managed by operators. – The Applicant notes that as per the IoMSPC website, sailings are defined as punctual if they depart within 15 minutes of the scheduled time and the typical impacts of the Morgan Array Area (in more than 95%) on sailings are between 1.6 and 3 minutes which is minimal (depending on Applicant or IoMSPC provided figures).

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
			undertaken are also monitored by the Isle of Man Government under the commitment to the Strategic Sea Services Agreement to undertake a minimum number of sailings per annum. Each sailing not undertaken are detrimental to the Isle of Man Steam Packet Company's obligations and reputation as a whole as a reliable ferry operator.	– To some extent these delays could be absorbed in existing schedules with not all sailings operating to full capacity. • Tidal delays: – The Applicant notes that this is an existing constraint against which IoMSPC are able to optimise their operations. Responsibility for dredging the harbour lies with Peel Ports and therefore this is primarily a harbour issue which the Applicant cannot address. – It is highly unlikely that the small percentage of time at which sailings are tidally constrained (on a falling tide) coincide with adverse weather routeing. Furthermore, the sailing would need to be significantly delayed for the tidal cycle to be a new constraint on sailings. • Cancellations: – The Applicant argues that the Morgan Array Area does not "diminish" the opportunity to weather route; safe routes will continue to exist as demonstrated in the navigation simulations (APP-060), but that the greater deviation distance may lead to schedule impacts which may lead to delays. Therefore, there is no reason why the Master would cancel on the grounds of safety. – The primary causes of cancellations are understood to be excessive wind speed which prevents safe access to ports and harbours or mechanical issues (as described in the Applicant's response to ExQ1 SN1.14/SN1.21 REP3-006), neither

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
				of which is impacted by the presence of the Morgan Array Area. – Whereas Masters can currently "feel" their way across the Irish Sea with more comfortable headings, with the Morgan Array Area in place the Masters will be required to make a decision whether to pass north or south of Morgan, with the longer route more comfortable in prevailing southwesterly conditions. – The Applicant believes that the Morgan Generation Assets could result in increased delays, which could lead to cancellations in some circumstances but that this is unlikely. • Strategic Sea Services Agreement: – Schedule 2 Part 2 of the Strategic Sea Services Agreement notes the minimum requirement of 947 return services per year to a port in NW England (or 1,894 crossings). – Table 17 of the CRNRA (Appendix D of APP-060) notes that in 2019 there were 2,046 IoMSPC sailings between Douglas, Heysham and Liverpool and in 2022 this was 2,044. This means there would need to be more than 150 additional cancellations (>7% of all sailings) to breach the minimum requirement which the Applicant considers is highly unlikely. – The Applicant also notes that Schedule 2 Part 2 Section 2.4 that the Required Number of 947 return services per year includes "sufficient Overnight Crossings to

Reference	Question is addressed to	ExA Question	Isle of Man Steam Packet Company Limited Response	Applicant's Response
				meet the economic and social needs of the island". A minimum number of services per day/week for the Liverpool to Douglas route in summer of at least once per day, twice on a Saturday, and during the winter two return services per week. The Applicant notes these would be subject to adverse weather cancellations in the basecase situation, so these minimums are unlikely to be achieved in all cases irrespective of the Morgan Generation Assets.

2.5 JNCC

Table 2.6: REP3-035: Response to JNCC ExAQ1 response

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
REP3-035.1	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6** HRA Stage 1 and Stage 2 Assessments The sites for which LSE could not be excluded include those in Wales, Northern Ireland and Scotland. NE's RR [RR-026] highlights need for Applicant to consult the relevant SNCBs on impacts to non-English sites. NRW's RR [RR-027] highlights concerns with the assessment. The SNCBs for Scotland and Northern Ireland (NatureScot, and the Department of Agriculture, Environment and Rural Affairs (DAERA)) have been invited to participate in the Examination as Other Persons in Appendix B of the ExA's Rule 6 letter [PD-001]. The Applicant's response to NE [RR-026] [PD1-017, p142] confirms that it has consulted	Thank you for consulting JNCC on the Morgan Offshore Wind Project Examining Authority's questions and requests for information. The advice contained within this minute is provided by JNCC as part of our statutory advisory role to the UK Government and devolved administrations on issues relating to nature conservation in UK offshore waters (beyond the territorial limit). In response to Examining Authority's question HRA 1.6, can the JNCC confirm whether they are in agreement with the outcomes of the Applicant's HRA [APP-096, 097, 098, 099 and APP-100] for the relevant non-English sites? Please see ornithology and marine mammal comments below:	The Applicant notes JNCC's comments and has responded to each of the comments, where relevant, below.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
		with all relevant stakeholders, including NatureScot, and refers to the Consultation Report [APP088], the Technical Engagement Plan [APP-094] and appendix D Part 4 [APP-092]. Can NatureScot, DAERA and the JNCC confirm whether they are in agreement with the outcomes of the Applicant's HRA [APP-096, 097, 098, 099 and APP-100] for the relevant non English sites?		
REP3-035.2	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Ornithology** JNCC are pleased to provide our advice on the implications of the Morgan OWF project for Special Protection Areas (SPAs) for which we have joint or sole responsibility, as requested in ExQ1 (PD-004, HRA 1.6). These sites are: • Irish Sea Front SPA • Seas off St Kilda • Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA • Liverpool Bay/Bae Lerpwl SPA	The Applicant notes the remit of JNCC's advice and has responded, where relevant, below.
REP3-035.3	NatureScot Northern Ireland Department of Agriculture, Environment	**HRA 1.6**	In providing our advice, we have reviewed the following documents: • Draft Development Consent Order (APP-005) • Environmental Statement Volume 2, Chapter 5: Offshore ornithology (APP-023) • Environmental Statement Volume 4,	This is noted by the Applicant.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	and Rural Affairs JNCC		Annex 5.5: Offshore ornithology apportioning technical report (APP-057) • Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels Section 1.3 (APP-070) • Technical engagement plan appendices part 4 (Appendix D) (APP-092) • HRA Stage 1 Screening Report (APP-099) • HRA Stage 2 ISAA Part 3 – SPA and Ramsar Sites Assessments (APP-098) • HRA integrity matrices (APP-100) • Environmental Statement Volume 4, Annex 5.1: Offshore ornithology baseline characterisation F02 (REP1-026) • Annex 4.5 to Response to Hearing Action Point 15: Offshore Ornithology CEA and Incombination Gap-filling of Historical Projects Note (REP1-010) • Displacement Rates Clarification Note (REP1-011) • Annex 4.7 to Response to Hearing Action Point 15: Apportioning Sensitivity Analysis (REP1-012) • NRW Relevant Representations (REP1-056) • Review of Cumulative Effects Assessment and In-Combination Assessment (REP2- 023).	
REP3-035.4	NatureScot Northern Ireland	**HRA 1.6**	**Overarching comments** While we have endeavoured to be as comprehensive as possible in both our review and our advice, JNCC wish to	The Applicant notes the remit of JNCC's advice and has responded, where relevant, below.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Department of Agriculture, Environment and Rural Affairs JNCC		note that we have not been involved in advising on this Project since the examination began. We have endeavoured to raise points in this response to the Examiners Question (ExQ) which JNCC considers to be of most relevance to sites for which we have responsibility within the time available, given the deadline for response to ExQ and that we were not notified of a ExQ directed at us at the time of publication. Where we have not highlighted issues raised by other SNCBs, this should not be taken as either not of concern to JNCC or lack of support for the position of another SNCB. There may be other elements which we disagree or agree with which have not been identified and raised here due to time and resource constraints. We reserve to right to raise other queries later in the examination should the need arise.	
REP3-035.5	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Irish Sea Front SPA** JNCC agrees with the conclusions of the Habitats Regulations Assessment (HRA) (APP098) that an Adverse Effect on Site Integrity can be ruled out, both from the Project alone, and in-combination with other Plans and Projects	The Applicant welcomes and agrees with this conclusion.
REP3-035.6	NatureScot	**HRA 1.6**	**Seas off St Kilda SPA** JNCC agrees with the conclusions of the HRA (APP-098) that an Adverse	The Applicant welcomes and agrees with this conclusion.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC		Effect on Site Integrity can be ruled out, both from the Project alone, and in-combination with other Plans and Projects	
REP3-035.7	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA** **Overall comments** JNCC disagree with several elements of the assessment to offshore ornithology within the Environmental Statement (ES) and the Habitats Regulations Assessment (HRA). For example, among other things, we disagree with: • Incorrect SPA features • The seasonal definition used for black-legged kittiwake • Age class apportioning of black-legged kittiwake • The use of only specific displacement rates and mortality rates, rather than a range of rates, in the HRA displacement assessment.	The Applicant has provided responses to these matters previously (please see the Applicant's responses to RR-026.B.56, RR-026.B.74, RR-026.B.90, RR-027.26, RR-027.27 and RR-027.33 in PD1-017). Within the application the Applicant has provided all the information that would enable JNCC to complete assessments following their recommended position. In addition, the Applicant has submitted a number of clarification notes that address the concerns raised during the examination. In relation to the points raised this includes REP3-020 and REP1-011.
REP3-035.8	NatureScot Northern Ireland Department of Agriculture, Environment	**HRA 1.6**	Multiple disagreements in approaches, such as these, may result in compounding differences in the final impact numbers. In addition, we are aware that further documents have been submitted to the examination beyond the original application. We are concerned that these updates to the	The conclusions of these clarification notes confirm that the potential changes to methodologies considered in these notes have no material effect on the conclusions reached in Volume 2, Chapter 5: Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098). It is the Applicant's position that updates to the assessments presented in Volume 2, Chapter 5: Offshore

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	and Rural Affairs JNCC.		assessment have been considered individually, and have not been propagated through the assessment, for example use of different colony count data in the apportioning of impacts to colonies (REP1-012).	ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) are therefore not required.
REP3-035.9	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	Due to these disagreements, and that there are additional projects and data to be included in the cumulative and in-combination assessment, we do not have confidence in the results, nor are we able to agree with the overall conclusions with regards to Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro Special Protected Area (SPA), either alone or in-combination with other Plans and Projects.	Please see response to REP3-035.8.
REP3-035.10	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Incorrect SPA features & seasons** Throughout the HRA, the qualifying features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a Moroedd Penfro SPA appear to be incorrect (e.g. Table 1.39 APP-100, Table 1.9 APP-099, Table 1.2 APP-057). We recommend the features and assemblages are carefully checked against the SPA designation information (found here: https://jncc.gov.uk/our-work/skomer-skokholm-and-the-seas-off-pembrokeshire-mpa), and the details within the HRA updated. We have advised on errors in the description of features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer,	The Applicant has provided a response to this matter previously (please see the Applicant's response to RR-027.26 in PD1-017). The Applicant has considered all features listed on the link provided by JNCC. For clarity the conclusion of the HRA for each feature are: • European storm petrel – no LSE • Red-billed chough – terrestrial species, no impact pathway • Short-eared owl – no LSE • Manx shearwater – LSE, progressed to ISAA, impact represents less than 0.05% of baseline mortality, no adverse effect • Atlantic puffin – no LSE

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
			Sgogwm a Moroedd Penfro SPA during the Section 42 PEIR response the Mona and Morgan offshore wind projects, yet the errors remain.	• Leser black-backed gull – LSE, progressed to ISAA, impact represents less than 0.05% of baseline mortality, no adverse effect • Razorbill (assemblage feature) – LSE, progressed to ISAA, impact represents less than 0.05% of baseline mortality, no adverse effect • Guillemot (assemblage feature) – LSE, progressed to ISAA, impact represents less than 0.05% of baseline mortality, no adverse effect • Black-legged kittiwake (assemblage feature) – LSE, progressed to ISAA, impact represents less than 0.05% of baseline mortality, no adverse effect. As stated previously, it is standard practice for assemblage features to be treated as individual features in the assessments required, an approach that has been followed by the Applicant.
REP3-035.11	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	We disagree with the seasonal definition of the breeding season for black-legged kittiwake (Table 5.16, APP-023). We advise that the full breeding season from Furness (2015), and other seasons are adjusted accordingly to ensure no months are considered in two seasons. For black-legged kittiwake, we advise that the seasons are defined as follows: • Full breeding season - March to August • Post-breeding season - September to December • Pre-breeding season - January to February.	The Applicant has provided responses to these matters previously (please see the Applicant's responses to RR-026.B.56 in PD1-017). The full breeding season of March to August is defined in Furness (2015). Furness (2015) also defines a migration-free breeding season from May to July which is the period in which the presence of migratory birds in a given sea area would not be expected. The Morgan Generation Assets is located beyond the mean-maximum foraging range of kittiwake from any UK SPA colony, although it is within foraging range of a number of UK SPA colonies if the standard deviation associated with the mean-maximum foraging range is also used. This approach is used in the HRA Stage 1 Screening Report (APP-099) as a precautionary coarse filter to ensure that sites are not erroneously omitted from the HRA process. However, in reality it is highly unlikely that any birds from these colonies will show connectivity with the Morgan Generation Assets due to the large distances involved.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
				The Applicant has used April to August as the breeding season for kittiwake. It is not ecologically valid to assume that the only birds present at the Morgan Generation Assets between March and August will be breeding kittiwake from those colonies with some degree of connectivity with the Morgan Generation Assets, as kittiwake will still be migrating during at least March and April (as indicated by the seasons in Furness (2015)). Given the distance between the Morgan Generation Assets and all significant breeding colonies (i.e. SPAs) for kittiwake, the Applicant's approach is considered representative of the behaviour of kittiwake and suitably precautionary for the purposes of the assessments presented.
REP3-035.12	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	For the collision assessment, this results in different seasonal impact numbers. Although this results in the same annual impacts regardless of the seasonal definition used within the EIA, it does result in different seasonal impacts being apportioned to SPAs in the HRA.	Please see response to REP3-035.11.
REP3-035.13	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC.	**HRA 1.6**	For the displacement assessment, this results in different seasonal impacts being apportioned to SPAs in the HRA.	Please see response to REP3-035.11.
REP3-035.14	NatureScot Northern Ireland	**HRA 1.6**	**Use of range of displacement rates** We welcome the information supplied by the Applicant in the Displacement	The Applicant has provided responses on this matter previously (please see the Applicant's responses to RR-026.B.74, RR-026.B.90 and RR-027.33 in PD1-017 and REP1-011).

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Department of Agriculture, Environment and Rural Affairs JNCC		Rates Clarification Note (REP1-011). However, we note that the Applicant has chosen to assess two displacement and mortality rate combinations, rather than the full range of displacement and mortality rates advised by the Statutory Nature Conservation Bodies (SNCBs).	The Applicant presented displacement matrices across the full range of displacement and mortality rates required by JNCC in Volume 4, Annex 5.2 Offshore ornithology displacement technical report (APP-054). Where appropriate, full displacement matrices are also included in Volume 2, Chapter 5 Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098).
REP3-035.15	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	The Applicant has instead presented assessments against a scenario of 70% displacement and 2% mortality rates from the Secretary of State's HRA for the Sheringham Shoal Extension and Dudgeon Extension offshore wind farms and Hornsea Four offshore wind farm decision for guillemot, razorbill. It should be noted that both of these projects are located in the North Sea, and not in the Irish Sea where the Morgan OWF project is located.	The Applicant has provided responses on this matter previously (please see the Applicant's responses to RR-026.B.74, RR-026.B.90 and RR-027.33 in PD1-017 and REP1-011). The Applicant has presented a comprehensive literature review that considers information in relation to displacement and mortality rates for guillemot and razorbill from wind farms across a wide geographic area incorporating the Irish Sea and throughout the North Sea (UK and non-UK waters). This review contextualised the recommended displacement and mortality rates against the evidence from projects in the Irish Sea. Monitoring at projects in the Irish Sea indicate weak attraction/weak avoidance by auk species (APEM, 2022). If there is therefore a difference in the behaviour of guillemot and razorbill between the North Sea and Irish Sea, the available evidence provides support to the use of the displacement and mortality rates advocated by the Applicant. Despite this, the Applicant has assessed displacement and mortality rates recommended by Natural England to the Secretary of State with this representing the only precedent for this sort of assessment. The Applicant notes that JNCC, in REP3-035.17, present information from studies undertaken in the Danish, German and Dutch North Sea to suggest that the Applicant utilise different displacement rates for guillemot and razorbill despite this being a difference sea area within which may not be representative of auk displacement behaviour.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
REP3-035.16	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	Additionally, the Applicant has also chosen to consider these rates to be applicable to the other species features combinations assessed for displacement for the Morgan Generation Assets HRA of Manx shearwater and black-legged kittiwake, although there is no precedent setting of these rates having been applied at other project consents.	The Applicant has provided responses on this matter previously (please see the Applicant's responses to RR-026.B.74, RR-026.B.90 and RR-027.33 in PD1-017 and REP1-011).
REP3-035.17	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	We note and agree with the comments by NRW in their Relevant Representations (paragraph 27, REP1-056) on the applicability of the Trinder et al. (2024) study to determining appropriate displacement rates for impact assessment.	The Applicant has provided responses on this matter previously (please see the Applicant's responses to RR-026.B.74, RR-026.B.90 and RR-027.33 in PD1-017 and REP1-011).
REP3-035.18	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	For most species, the evidence suggests that there is a range of displacement rates occurring at operational wind farms, including the upper end of the SNCB-advised range, and sometimes beyond. For example, with regard to the evidence of displacement rates and distance, Peschko et al. (2023) observed a reduction of 91% of common guillemot within offshore wind farms plus a 1km buffer, and 76% within offshore wind farms plus a 10km buffer, in autumn. In winter, they found a reduction of 67% within offshore wind farms plus a 1km	The Applicant has provided responses on this matter previously (please see the Applicant's responses to RR-026.B.74, RR-026.B.90 and RR-027.33 in PD1-017 and REP1-011). However, the Applicant notes that the studies quoted by JNCC are all by the same author in the same area of sea which may not be representative of the behaviour of birds at the Morgan Generation Assets. The Applicant has provided a thorough review of the evidence for displacement rates for the species of relevance to the assessments conducted for the Morgan Generation Assets, incorporating a wide range of studies. This review considered the ability of each study to provide robust results, finding that in many cases those studies suggesting high rates of displacement had methodological issues that undermined the conclusions reached.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
			buffer, and 50% within offshore wind farms plus a 10km buffer. Guillemot density in autumn was significantly affected up to a mean distance of 19.5km (range 18–21km) with a reduction of 79% within this area. Guillemot density in winter was significantly affected up to a mean distance of 16.5km (range 15–18km) with a reduction of 51% within this area. In addition, Pesckho et al. (2020a) found a reduction in guillemot densities during the breeding season inside offshore wind farms of 63% (75% when the blades were turning). Further, a study by Pesckho et al. (2020b) found a 63% reduction in guillemot density in the wind farm plus a 3km buffer, and a 49% reduction in the wind farm plus a 9km buffer during spring. A 44% reduction was found in the wind farm plus a 3km buffer during the breeding season. Therefore, we regard a 70% displacement rate to be within a potential range of displacement. This variation in displacement rates is why we advise that a range of potential impacts are considered.	
REP3-035.19	NatureScot Northern Ireland Department of Agriculture, Environment	**HRA 1.6**	We do not consider therefore that there is sufficient evidence to support such a narrow range of displacement and mortality as used by the Applicant and consider that there is sufficient evidence around the variability in observed displacement rates for auk species to support the need for consideration of a	The Applicant has provided responses on this matter previously (please see the Applicant's responses to RR-026.B.74, RR-026.B.90 and RR-027.33 in PD1-017 and REP1-011). The Applicant has held discussions with Natural England (13 November 2024) and is working with Natural England to provide a summary of data to be submitted into the examination which will resolve all outstanding methodological issues. JNCC have confirmed that they will defer to Natural England or NRW

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	and Rural Affairs JNCC		range of 30-70% displacement and 1-10% mortality, as per the joint SNCB displacement advice note (SNCBs, 2022). We reiterate our advice that the same displacement rates are used for black-legged kittiwake (APP-092, D.3.10). For Manx shearwater we reiterate our advice that a range of displacement rates are used (APP-092, D.3.13). Until the assessments are presented in accordance with SNCB advice, alongside the Applicant's preferred approach should they wish, we are unable to rule out an Adverse Effect on Site Integrity, either alone or in-combination. We therefore recommend that the Applicant presents both their preferred approach and JNCC's advised approach throughout the HRA.	on any remaining issues and it is therefore considered that this will also provide JNCC with the information necessary to close out many of the outstanding issues relating to the methodologies applied without the need for updated assessment documentation.
REP3-035.20	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	To that end JNCC notes the instruction to the Outer Dowsing Offshore Wind Project by the Examining Authority in that Examination in their Rule 17 letter dated 3rd July 2024 (Macarthur, 2024) and to the Mona Offshore Wind Project by the Examining Authority in that Examination in their Rule 17 letter dated 15th August 2024 (Jones, 2024) requesting that the SNCB-advised approach is presented. The relevant text from these letters are, respectively:	The Applicant considers that the information requested by the SNCBs and the Planning Inspectorate as part of the Mona Offshore Wind Project and Outer Dowsing Offshore Wind applications is already included in the Morgan Generation Assets application and the provision of additional information is not required.
REP3-035.21	NatureScot Northern Ireland	**HRA 1.6**	*"The ExA appreciates that the Applicant may not entirely agree with the preferred methodological approaches*	Please see response to REP3-035.20.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Department of Agriculture, Environment and Rural Affairs JNCC		*on some matters that have been referenced in the RRs from NE [RR-045], the Marine Management Organisation [RR-042] the RSPB [RR056] and the Environment Agency [RR-018]. Nevertheless, where differences of opinion have been detailed in the aforementioned RRs the ExA considers it to be very important that it is presented with assessment outputs based on the methodological approach adopted by the Applicant as well as the approach respectively advocated by these organisations, and which make use of the most up to date data available to the Applicant."*	
REP3-035.22	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	*And;* *"The Applicant to provide as soon as possible but no later than Deadline 3 (30 September 2024), an additional submission consisting of an assessment of effects on ornithological features (for both the EIA and HRA) using the methods and parameters highlighted by NRW(A) and JNCC during pre-application consultation, and in their relevant representation [RR-011; RR-033] and written representations [REP1-056; REP1-066 and REP1-067]. This additional submission should include an incombination assessment using the SNCB's proposed methodology for gap-filling for historic projects"*	Please see response to REP3-035.20.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
REP3-035.23	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	Therefore, we recommend that the approaches and parameters that we advise should be used are presented and taken through the impact assessment in the EIA and the HRA. This also includes approaches and parameters which we understood to have been previously agreed between JNCC and the Applicant during pre-application consultation, but which in the application documents submitted to date (particularly REP1-011 and APP-098) go against agreements reached through the EWG process (APP-092).	The Applicant considers that the information requested by the SNCBs and the Planning Inspectorate both as part of the Mona Offshore Wind Project and Outer Dowsing Offshore Wind applications or as agreed through EWG consultation is already explicitly included or can be calculated from the information provided as part of the application or has been provided through the provision of additional information during the Examination. The Applicant has been working with Natural England, as the most engaged SNCB, to address outstanding methodological concerns and present information not only based on what the Applicant considers to be the most ecological appropriate and evidenced approach, but also in line with the methodologies advocated by the SNCBs. The Applicant trusts that JNCC will engage constructively on the outputs from the work currently being undertaking in consultation with NE.
REP3-035.24	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Age class apportioning** Age classes have been based on site-specific information for gannet, herring gull, great black-backed gull, and lesser black-backed gull (Table 1.4, APP-057), and we agree with this approach.	The Applicant welcomes agreement on this approach.
REP3-035.25	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs	**HRA 1.6**	However, we disagree with the calculation of black-legged kittiwake age classes (Table 1.5, APP-057). This approach was not raised by the applicant during EWG meetings or subsequently, and therefore JNCC has not agreed to this approach. The Hornsea Offshore Wind Farm Project Two approach to apportioning to age	The Applicant's response to this matter is summarised in the Kittiwake apportioning clarification note (REP3-020) submitted at Deadline 3.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	JNCC		class referred to in Section 1.2.3.13 relies on reliable counts of first year birds, i.e. in the case of black-legged kittiwake first summer birds which by August of that year have largely transitioned to adult plumage and therefore indistinguishable from adults. Therefore, the identification rate of first summer black-legged kittiwake is questionable and calculations derived from this, for example, applying survival rates to define an age class structure is also questionable. It is noticeable that more recent projects such as Hornsea Offshore Wind Farm Project Four and the East Anglia projects have not used this approach. Further, we advise that stable age structures are not derived using population viability analysis, and the method outlined in this report is effectively a manual version of this, which we do not recommend. We therefore disagree with the percentage of black-legged kittiwake adults and immatures in the breeding season in Table 1.5.	
REP3-035.26	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6** .	**Sabbatical birds** It is not clear whether sabbatical birds have been removed from the assessment or not. There is suggestion that they haven't, yet the heading of Table 1.6 (APP-057) suggests that sabbatical rates are considered within the HRA. We do not agree with the application of sabbatical rates.	The Applicant has provided responses to this point previously (please see the Applicant's responses to RR-026.B.69, RR-026.B.70 and RR-027.33 in PD1-017).

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
REP3-035.27	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Cumulative & in-combination Gap-filling of Historical Projects** In their 'Review of Cumulative Effects Assessment and In-Combination Assessment' (REP2-023), the Applicant has identified several additional projects that have the potential to contribute to cumulative and in-combination collision and/or displacement offshore ornithology impacts that now have data available and that were not included in the CEA (REP2-023, Table 1.3), in addition to those presented in REP1-010. We also note that in addition, updated figures for the Morecambe Generation Assets project are now available following the submission of the application for this project. The Applicant has noted in REP2-023 that additional work is required to understand the potential cumulative and incombination effects of these projects for collision and displacement and has indicated that this will be undertaken for Deadline 3.	The Applicant has undertaken this work, submitted at Deadline 3 (REP3-019). The note included consideration of impact estimates submitted as part of the Morecambe Offshore Windfarms: Generation Assets application and the conclusions reached in the assessments for projects in Irish and Welsh waters that have also submitted applications since the submission of the Morgan Generation Assets application. In all cases, the overarching conclusions reached were consistent with those reached in the Morgan Generation Assets application (i.e. no significant effects at an EIA level and no adverse effects on designated sites).
REP3-035.28	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	JNCC advise that the Applicant presents apportioned impacts across the full ranges of SNCB-advised assessment approaches (see comments on displacement ranges above), and where predicted impacts from the project alone exceed 0.05% of baseline mortality for any apportioned impact across the advised assessment ranges, the site-feature combination should be taken through to in-	Whilst cumulative and in-combination totals increase when impacts associated with the gap-fill projects are included, Annex 4.5 to Response to Hearing Action Point 15: Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects Note (REP1-010) demonstrates and concludes that this makes no material difference to the conclusions of the assessments undertaken in both Volume 2, Chapter 5: Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098).

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
			combination assessments. We recommend that in such instances, the results of the gap-filling exercise undertaken in REP1-010 are subsequently used within the in-combination assessments. The gap-filled results provide the most comprehensive estimate of mortalities at each project that was previously not quantified.	
REP3-035.29	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Appropriate assessment** Due to the use of singular displacement and mortality rates used in the displacement assessment, rather than the SNCB-advised range of rates, we cannot agree with the results of the alone Appropriate Assessment for relevant features of Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA (black-legged kittiwake, guillemot, razorbill, and Manx shearwater, though note out other comments regarding blacklegged kittiwake not being a stand-alone feature of this SPA). Given this issue and the fact that the need for an in-combination assessment is based on the alone impact, we are also not able to agree with the conclusions of the in-combination assessment for this SPA. It may be that, using the SNCB-advised range of displacement and mortality rates, in-combination assessments are required for features of Skomer, Skokholm and the Seas off	The Applicant provided an update to the assessment conducted in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) in the Displacement Rates Clarification Note (REP1-011) submitted at Deadline 1. The Applicant has held discussions with Natural England (13 November 2024) and is working with Natural England to provide a summary of data to be submitted into the examination which will resolve all outstanding methodological issues. JNCC have confirmed that they will defer to Natural England or NRW on any remaining issues and it is therefore considered that this will also provide JNCC with the information necessary to close out many of the outstanding issues relating to the methodologies applied without the need for updated assessment documentation.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
			Pembrokeshire/Sgomer, Sgogwm a moroedd Benfro SPA, but these have currently not been carried out.	
REP3-035.30	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	**Liverpool Bay/Bae Lerpwl SPA** We note the comments made by NRW in their Written Representations with regard to impacts on the non-breeding red-throated diver and common scoter qualifying features of the Liverpool Bay/Bae Lerpwl SPA (REP1-056, paragraph 26). We also note the measures described in Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels (APP-070, Section 1.3) will be included in an offshore Environmental Management Plan (Environmental Statement Volume 2, Chapter 5: Offshore ornithology Table 5.26, APP-023),secured through the deemed marine licence (dML) in Schedule 3 Part 2 of the draft Development Consent Order (APP-005). Noting that these measures only apply to vessel movements associated with the wind farm array (the export cable corridor being subject to a separate application), we agree that on the basis of the measures to be applied, an Adverse Effect on Site Integrity can be ruled out.	The Applicant welcomes agreement that an adverse effect can be ruled out.
REP3-035.31	NatureScot	**HRA 1.6**	The following advice relates to SACs designated for marine mammals in	The Applicant notes the JNCC's response.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC		Welsh and Northern Irish offshore waters only. In line with our delegation with Natural England and NatureScot, we defer to the respective agencies for offshore sites in English and Scottish waters. In line with our offshore remit, we also defer to the respective agencies for sites in territorial waters e.g. for seals and bottlenose dolphins.	
REP3-035.32	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	The following documents have been reviewed to provide this advice: • Outline underwater sound management strategy (APP-068) • Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels (APP-070) • Outline vessel traffic management plan (APP-071) • Outline marine mammal mitigation plan (APP-072) • HRA stage 2 – Introduction (APP-096) • HRA stage 2 – Special Areas of Conservation (APP-097) • HRA stage 1 - Screening report (APP-099) • HRA integrity matrices (APP-100).	The Applicant notes the JNCC's response.
REP3-035.33	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs	**HRA 1.6**	**Offshore marine mammal SACs** The only offshore SACs designated for marine mammals are for harbour porpoise. The closest of these to the Morgan array area is the North Anglesey Marine SAC, located approx. 28km away in Welsh waters. The next closest site is the North Channel SAC, 64km away in Northern Irish waters.	The Applicant notes the JNCC's response.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	JNCC		While other harbour porpoise sites have been identified in the HRA screening process, they are all further away from the array location than the two mentioned previously. Given the distance to the different sites, we have focussed our review on the North Anglesey Marine SAC, as this will be the site at greatest risk from activities associated with the Morgan development.	
REP3-035.34	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	The activities we advise pose the greatest potential to impact the North Anglesey Marine SAC is impact piling and clearance of unexploded ordnance (UXO). A spatial/temporal noise management approach has been developed for this and other harbour porpoise SACs. This states that noise disturbance within a harbour porpoise SAC from a plan or project, individually or in combination, is considered to be significant if it excludes harbour porpoise from more than: 1. 20% of the relevant area (summer/ winter) of the site in any given day, or 2. An average of 10% of the relevant area of the site over a given season.	The Applicant notes the JNCC's response. The Applicant confirms that, as set out in APP-097, for the impact of sound from piling, if applying 15 km EDRs, there no overlap between the 15 km EDR and North Anglesey Marine/Gogledd Môn Forol SAC, therefore there will be no adverse effect alone or in-combination. If applying an unweighted sound threshold value of 14 dB re 1 μPa^2s SEL_{ss} (Tougaard, 2021) this results in a maximum spatial overlap of 0.002% of the total North Anglesey Marine/Gogledd Môn Forol SAC area (for single piling of 4,400 kJ) which is below the daily 20% guidance threshold from JNCC (2020). In terms of disturbance across the site averaged over the season (summer, 183 days), a daily footprint of 0.06 km^2, over 114 days of piling across the construction phase would result in an average of 0.01% of the relevant area of the SAC being affected over the season. This therefore falls well below the threshold of 10% of the relevant area of the site over the season. The Applicant also highlights that the approach was highly precautionary, as not all foundations will be piled at the maximum hammer energy (as per the MDS of 16 foundations at 4,400 kJ, 48 foundations at 3,000 kJ). The Applicant confirms that, as set out in APP-097, for the impact of UXO clearance, the implementation of a 26 km EDR for the Morgan Generation Assets does not result in any

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
				overlap with the North Anglesey Marine/Gogledd Môn Forol SAC, given that it is located 28.2 km from the Morgan Array Area. Therefore, disturbance associated with UXO detonation would not contribute to or exceed the daily 20% disturbance threshold or the 10% threshold of the relevant area of the SAC over the season. Therefore, there will be no adverse effect on integrity alone or in-combination on the North Anglesey Marine/Gogledd Môn Forol SAC or any other European site. Indeed, NRW have confirmed they agree with the conclusions of the ISAA in relation to marine mammals SACs both alone and in-combination as set out in the Statement of Common Ground (REP2-026).
REP3-035.35	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	JNCC advocate the use of fixed effective deterrent ranges (EDRs) based on empirical evidence when estimating the area within which disturbance within a site could occur to harbour porpoise. For mono-piling without noise abatement and high order clearance of UXOs, the EDR is currently 26km; for pin piles and mono-piles with noise abatement, the EDR is currently 15 km.	The Applicant notes the JNCC's response. The Applicant confirms that for the impact of piling, a 15 km EDR was applied to the HRA Stage 2 Information to support an appropriate assessment for marine mammals (as set out APP-097), alongside the application of an unweighted sound threshold value of 14 dB re 1 μPa^2s SEL_{ss} (Tougaard, 2021) (in line with guidance from stakeholders (JNCC, NRW and Natural England). The Applicant confirms that for the impact of UXO clearance a 26 km EDR was applied to the HRA Stage 2 Information to support an appropriate assessment (ISAA) for marine mammals (as set out APP-097). The ISAA (APP-097) concluded there will be no adverse effects on integrity alone or in-combination on any European sites. NRW have confirmed they agree with the conclusions of the ISAA in relation to marine mammals SACs both alone and in-combination, as set out in the Statement of Common Ground (REP2-026).
REP3-035.36	NatureScot Northern Ireland Department of Agriculture,	**HRA 1.6**	Using either of these metrics, there should be no overlap with the site by the area within which disturbance could occur from piling with the Morgan array area. As a result, all of the North Anglesey Marine SAC should be	The Applicant welcomes and notes the JNCC's response of no adverse effect on the North Anglesey Marine SAC. The Applicant confirms that for the impact of piling, the application of a 15 km EDR to the HRA Stage 2 Information to support an appropriate assessment for marine mammals did

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Environment and Rural Affairs JNCC		available to harbour porpoise during the construction period and impact piling should not have an adverse effect on site integrity. This same conclusion can be applied to all other harbour porpoise sites as these are further away from the array area.	not result in overlap with the North Anglesey Marine/Gogledd Môn Forol SAC, located 28.2 km from the Morgan Array Area (as set out APP-097). The Applicant confirms that for the impact of UXO clearance, the application of a 26 km EDR to the HRA Stage 2 Information to support an appropriate assessment for marine mammals did not result in overlap with the North Anglesey Marine/Gogledd Môn Forol SAC, located 28.2 km from the Morgan Array Area (as set out APP-097). The ISAA (APP-097) concluded there will be no adverse effects on integrity alone or in-combination on any European sites. NRW have also confirmed they agree with the conclusions of the ISAA in relation to marine mammals SACs both alone and in-combination, as set out in the Statement of Common Ground (REP2-026).
REP3-035.37	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	Please note, this conclusion assumes that measures contained within the outline Marine Mammal Mitigation Plan (APP-072) and outline Underwater Sound Management Strategy (APP-068) are sufficient to enable conclusions to be drawn regarding potential impacts to SACs (i.e. potential impacts can be mitigated); and that agreeing the final versions of these plans with the relevant regulator and SNCBs post-consent will be secured as a condition of consent. We highlight that the inclusion of noise abatement is currently included in the mitigation plan as a tertiary measure. This should be amended to state it will be considered as a secondary measure, as per the outline Underwater Sound Management Strategy (APP068). We acknowledge this may have already been agreed by the applicant, as is the case for the	The Applicant notes the JNCC's response and can confirm that the UWSMS will be updated to reflect that the use of NAS technologies is classified as a 'secondary' mitigation measure.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
			Mona development which is also currently going through examination. Regardless, we strongly recommend that final versions of all such plans and strategies are submitted to the examination library before the process is completed so there is a clear and easily accessible audit of all documents used to support conclusions. This will also aid completion of the final versions of the documents by ensuring the version which is to be updated is clearly identified and all parties agree with what it contains.	
REP3-035.38	NatureScot Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC	**HRA 1.6**	We also note that the outline Vessel Traffic Management Plan (APP-071) refers to measures to reduce impacts to marine wildlife (Section 1.2) however it is not clear who will undertake any measures required. While we anticipate such measures would be undertaken by vessel crew, should any of this be required to be undertaken by personnel conducting marine mammal mitigation for noise, this should be clearly detailed in the MMMP and sufficient personnel provided to ensure all mitigation is adequately staffed.	The measures to reduce impacts to marine wildlife are undertaken as best practice by the vessel crew for all vessels. Such measures are separate to any mitigation that will carried out by a dedicated MMO team to reduce the risk of injury to marine mammals due to elevated subsea noise from activities including piling, geophysical surveys and UXO clearance. As such there is no requirement to include these measures in the MMMP.
REP3-035.39	NatureScot Northern Ireland Department of Agriculture, Environment	**HRA 1.6**	Finally, we highlight that we are also providing advice for the Mona wind farm development and for this we have advised the Examining Authority that UXO clearance should not be included in the DCO/deemed marine license as a licensed activity. Our primary concern is	The Applicant notes the JNCC's position on inclusion of high order clearance of UXOs and highlights the following: • The Applicant is mindful of the SNCB position with respect to preference for low order clearance of UXO and reiterates that this is also the Applicants preference as per the mitigation hierarchy set out in the UWSMS (APP-021). The Applicant highlights that the SNCB joint

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	and Rural Affairs JNCC		the inclusion of high order clearance as an option. We feel too little is known at this stage regarding what will be required to be cleared and how it can be cleared to properly assess potential impacts. We also feel including the high order option conflicts with the government's position statement on UXO clearance (https://www.gov.uk/government/publications/marineenvironment-unexploded-ordnance-clearance-joint-interim-position-statement). The Examining Authority have proposed UXO clearance is included in the consents without the high order clearance option. We are content with this option however the applicant is not so we are engaging in further discussions with them to see if sufficient assurances can be secured in the consents to satisfy all parties.	position paper does not refute the requirement for high order clearance and states "*..it is acknowledged that high order detonation may be needed in some limited instances as a contingency, where low noise alternatives are not feasible, or where pre-planning is not a viable option (where urgent clearance is required because of immediate safety concerns."* The use of high order clearance has been included in the MDS for the purpose of understanding the potential effects only in the event of the situation where low order clearance may not be possible (i.e. for practical/safety reasons). • The Applicant highlights that the MDS captures the maximum adverse scenario likely to require clearance within the Morgan Generation Assets Project boundary. The Applicant highlights that the details of the exact type and size of UXO are unknown until the final investigation survey (using Remotely Operated Vessels (ROVs) or scuba divers which takes place immediately prior to the clearance activity. Therefore, even if the UXO clearance were to be the subject of a separate application this application would also be based upon an MDS rather than exact details of the size and type of UXOs. • Finally, the Applicant highlights that in assessing the MDS there is confidence that the impact of UXO clearance associated with the project would fall below the described magnitude. The marine mammal chapter (Volume 2, Chapter 4: Marine Mammals (AS-010)) concluded that with the MMMP and UWSMS in place, underwater sound levels from UXO clearance at Morgan Generation Assets will be managed, so that UXO clearance would not result in a significant effect on marine mammals.
REP3-035.40	NatureScot	**HRA 1.6**	References Peschko, V., Mercker, M. & Garthe, S.	The Applicant notes the references provided.

Reference	Question is addressed to	ExA Question	JNCC Response	Applicant's Response
	Northern Ireland Department of Agriculture, Environment and Rural Affairs JNCC		(2020a) Telemetry reveals strong effects of offshore wind farms on behaviour and habitat use of common guillemots (Uria aalge) during the breeding season, Marine Biology, Vol. 167, Article 118 Peschko, V., Mendel, B., Müller, S., Markones, N., Mercker, M. & Garthe, S. (2020b) Effects of offshore windfarms on seabird abundance: Strong effects in spring and in the breeding season, Marine Environmental Research, Vol. 162, Article 105157 Peschko, V., Schwemmer, H., Mercker, M., Markones, N., Borkenhagen, K. & Garthe, S.(2023) Cumulative effects of offshore wind farms on common guillemots (Uria aalge) in the southern North Sea - climate versus biodiversity? Biodiversity and Conservation, Vol. 33, pp. 949-970	

2.6 Marine Management Organisation

Table 2.7: REP3-037: Response to Marine Management Organisation ExAQ1 response

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
REP3-037.1	The Applicant All Interested Parties	GEN 1.3 **Artificial Intelligence (AI)** The Examining Authority (ExA) requests all parties taking part in the Examination to confirm if you have used AI to create or alter any part of your submitted documents, information or data in submissions up to Deadline 2. All future submissions are required to clearly confirm whether AI has been used to create or alter any part of those documents, information or data in accordance with the guidance recently published by the Planning Inspectorate.	The MMO has not used AI to create or alter any part of its submitted documents, information or data in submissions up to Deadline 2. The MMO can confirm that AI will not be used in any future submissions.	The response from the MMO is noted by the Applicant.
REP3-037.2	Applicant MMO Natural England	GEN 1.8 **Monitoring 1** Paragraph 2.8.221 of National Policy Statement (NPS) EN-3 requires Applicants to develop an ecological monitoring programme to monitor impacts during the pre-construction, construction and operational phases to identify the actual impacts caused by the project and compare them to what was predicted in the EIA/HRA. Natural England (NE) also raise this issue in their Relevant Representations and further advise in their Written Representation at Deadline 1 [REP1-054] that the In-Principle Monitoring Plan (IPMP) should focus on what the uncertainties and evidence gaps of the EIA and /or HRA are. Can the Applicant:	The MMO is reviewing these documents to ensure they are in line with the comments from relevant representation and will provide an update at Deadline 4.	The response from the MMO is noted by the Applicant.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		i) Summarise how it has met the NPS EN-3 requirement and whether it will liaise with NE to improve the IPMP, and if not why not? Can the MMO and NE: ii) Review and provide comments on the Applicant's revised outline Offshore In-Principle Monitoring Plan at Deadline 2 [REP2-014 Tracked Change Version] and the Mitigation and Monitoring Schedule [REP2-016 Tracked Change Version]?		
REP3-037.3	MMO	GEN 1.9 **Monitoring 2** Is the MMO satisfied with the Applicant's position that its precautionary 'Rochdale Envelope' approach to EIA means that monitoring would not be needed where no LSE has been assessed, having regard to NPS EN-3 para 2.8.221 as set out in Question GEN 1.10 above.	The MMO provided the following comments at Deadline 2 relating to additional monitoring where no LSE has been assessed. An assessment of the prevalence / abundance of sediment bound paint flakes pre- and post-construction would further our understanding of this potential impact on benthic ecology. However, the MMO notes that no further assessment of this impact has been proposed. This is in line with other similar developments where Applicants have not been required to undertake additional monitoring or research. Adequate sampling of the pre-construction condition is a pre-requisite for robust comparison with post-construction condition and the MMO requests the Applicant to seek opportunities for collaboration between researchers and industry to ensure that the opportunity to investigate this relatively recently identified potential impact to benthic ecology (see Tagg et al. 2024) is not missed. The MMO have advised the Applicant that MMO.BE.5 in the Statement of Common Ground (SoCG) can be changed to 'agreed' as there is an agreement to the scoping of impacts for the	With regards to the MMO's comments relating to the assessment and monitoring of paint flakes pre- and post-construction, a full response to this has been provided in the Applicant's Deadline 3 response to the MMO's written submission at Deadline 2 (see REP2-029.44 of REP3-004). The Applicant notes that this matter is now agreed in the Statement of Common Ground between the Applicant and the MMO (REP3-028). With regards to the MMO's comments relating to the monitoring of cryptic invasive non-native species (INNS), a full response to this has been provided in the Applicant's Deadline 3 response to the MMO's written submission at Deadline 2 (see REP2-029.45 of REP3-004). The Applicant notes that this matter is now agreed in the Statement of Common Ground between the Applicant and the MMO (REP3-028).

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
			EIA for Benthic Subtidal and Intertidal Ecology. Furthermore, the MMO welcomes the Applicant's commitment to review suitable imagery acquired during monitoring related to maintenance activities for the presence of Invasive Non-Native Species (INNS) which will allow for an assessment of unambiguous INNS. However, the presence of cryptic INNS will not be adequately assessed through review of this imagery alone. The MMO notes that no significant effect from INNS was predicted within the Environmental Statement because of the Applicants commitment to adopt measures which act to reduce the likelihood of introduction of INNS. However, should INNS be identified during review of the imagery, the MMO requests that the Applicant reconsiders the collection of samples to: 1) confirm species identification and; 2) understand the fouling assemblage more fully to include cryptic INNS The MMO will review the Applicants response to these points which is expected to be provided at Deadline 3.	
REP3-037.4	Marine Management Organisation	GEN 1.14 **Marine Policy Compliance tabulation** Can the MMO confirm satisfaction with the new document [REP2- 006] submitted by the Applicant at D2 as Annex 3.1, combining how the North West Marine Plan policies have been considered, topic by topic.	The MMO has reviewed the Applicant's Deadline 2 submission (REP2-006) regarding the North West Marine Plan Policy Assessment and confirm that the assessment is appropriate and has satisfied the MMO's request. The MMO thanks the Applicant for providing the Marine Plan Policy Assessment in a standalone document which has addressed all relevant policies within the North West Marine Plan	The Applicant welcomes confirmation that this matter is now resolved.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
			Policy, and has signposted the relevant documents for further information.	
REP3-037.5	Applicant	GEN 1.21 **Decommissioning Plan** [APP-010] states that a draft of a decommissioning plan "will be submitted prior to construction commencing". i) How is production and approval of a decommissioning plan secured, noting that the draft DCO Requirement 5 only secures submission of a decommissioning programme to the SoS when so required to do so by the SoS? ii) What would be the principal components of the decommissioning plan? iii) Why has an outline plan not been submitted as part of the DCO application? The ExA notes that the [PD1-017] response to NE's RR-026.G11 is unsatisfactory and incomplete? iv) Would it include principles of financial security for decommissioning (see also Question GEN 1.21 above)? v) Provide a briefing note on current industry discussions on decommissioning, as referenced in the Statement of Common Ground (SoCG) with the MMO [REP1-035].	The MMO would like to highlight to the ExA that they are currently reviewing decommissioning for NSIPs and the requirement for an outline plan alongside a new standard DML condition. The MMO notes that decommissioning will not be consented as part of the DCO and a new marine licence will be required but to assist with the holistic review of the project and understanding of the conclusions within the Environmental Statement believe that an outline plan would be beneficial at this stage.	The Applicant refers its own response to GEN1.21 of ExAQ1 (REP3-006) and to comments on this matter made at ISH2, which are set out in the Applicant's summary or oral submissions at ISH2 [S_D4_4 Written Summaries - Issue Specific Hearing 2].
REP3-037.6	Marine Management Organisation	**Commercial Fisheries** CF 1.1 **Medium-term monitoring of effects on commercial fisheries** Please confirm whether you agree with both the IoM Government Territorial Seas Committee (TSC) [RR-015] that medium-term monitoring to validate baseline data and	The MMO is currently discussing this internally to understand the post consent requirements and will provide an update in due course.	The Applicant acknowledges the response and refers the MMO to its recent response to CF 1.1 of ExAQ1 (REP3-006).

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		assumptions for Commercial Fisheries impacts is preferable to review only and the National Federation of Fishermens Organisation/ Welsh Fishermen's Association WR [REP2-031] that the outline Fisheries Liaison and Co-Existence Plan (FLCP) [APP-065] needs to clarify commitments to monitoring of fisheries activity and effects on commercial fisheries and should include a timetable for regulator review of monitoring during the operations and maintenance phase.		
REP3-037.7	Applicant	CF 1.7 **Outline Fisheries Liaison and Co-existence Plan - arbitration** The Applicant is requested to further revise the Outline FLCP and make it clear that the MMO will not act as arbitrator regarding compensation and will not be involved in discussions on any compensation.	The MMO welcomes this request.	The Applicant has responded to this request and refers the MMO and the ExA to the latest version of the Outline Fisheries and Co-existence Plan (OFLCP) submitted at Deadline 3 (REP3-022). Section 1.3.3 of this document states "*The MMO will not act as arbitrator or be involved in any commercial negotiations with any association/organisation, and/or individual fisheries stakeholders*".
REP3-037.8	Applicant	**DCO Draft Development Consent Order (DCO)** **Parts 1 and 2** DCO 1.1 **Part 1 Article 2: Interpretation** Further to your response to the MMO [PD-017, RR-020.17 and RR020.18] and looking more closely at precedent from Norfolk Boreas and Hornsea Four made DCOs, the Applicant is asked to reconsider and respond further on the strong request from the MMO in its [RR-020 section 3.5] and its further comments in [REP2- 029] that "*wording*	The MMO maintains a watching brief on the Applicant's response.	The Applicant has updated the wording as suggested in question DCO1.1 and considers that this point is now closed.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		should be updated to 'do not give rise to any new or different environmental effects to those assessed in the environmental information'. This also applies to the definition of 'maintain'". Also review and comment on the Norfolk Boreas made DCO cited as precedent which is worded such that permitted amendments or variations are limited to those that are "*minor or immaterial", and consider whether new wording that conditions "different adverse environmental effects" would provide useful control for the MMO*.		
REP3-037.9	Applicant	DCO 1.2 **Part 2 Article 7: Benefit of the Order** i) Precedent made DCOs quoted in the Explanatory Memorandum (EM) [REP1-023] include a paragraph in articles regarding benefit of the order: "*The undertaker must consult the Secretary of State before making an application for consent under this article by giving notice in writing of the proposed application*." Explain whether this paragraph has been omitted in error and as appropriate amend the drafting in paragraphs (2) and (3) "Subject to paragraph (x)..." or "Subject to paragraphs (x) and (y)..." ii) Article 7(4): Precedent made DCOs use the words "The Secretary of State must consult ..." not "…shall consult" and there is no note in the EM [REP1-023] on this change. Justify which usage is appropriate in this draft DCO. iii) Article 7(11): Consider and attempt to agree with the MMO whether Article 7(11) should incorporate extended wording based on that used in the Hornsea Project Four	The MMO maintains a watching brief on the Applicant's response.	The Applicant refers its own response to DCO1.2 of ExAQ1 (REP3-006) and has nothing further to add.

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		made order: "…*save that the MMO may amend any deemed marine licence granted under Schedule 3 or Schedule 4 of the Order to correct the name of the undertaker to the name of a transferee or lessee under this article 7 (Benefit of the Order*)." iv) If the Applicant considers that the Sheringham and Dudgeon made order recommendation and decision adds or differs from the made order precedent cited in the EM [REP1-023], justify why that may be important and relevant.		
REP3-037.10	Applicant Marine Management Organisation	Schedule 1 – Authorised Development **DCO 1.3** **Piling Hammer Energy** An upper limit on hammer pile energy is not referred to in the draft DCO. Should the maximum hammer energy assessed in the ES for single and concurrent piling be specified within the design parameters in the draft DCO and both draft DML's given that this is the best available means to ensure and secure that the sound generated from piling does not exceed that assessed within the ES? If not, why not?	The MMO would request that the piling limit is included on the face of the DML and suggests the following wording: X) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed— (a) 4,400kJ in respect of pile jacket foundations; and (b) 4,400kJ in respect of pin piles, for 16 locations only then 3,000kJ for any remaining locations.	The Applicant updated Requirement 2(5) of the draft DCO at Deadline 3 to include parameters for maximum hammer energies. The Applicant therefore considers this matter to now be addressed.
REP3-037.11	Defence Infrastructure Organisation Marine Management Organisation NATS Safeguarding	DCO 1.9 **Requirement 3: Aviation Safety** The DIO, MMO and NATS are asked whether they seek conditions controlling lighting of turbines be included within DML conditions as well as in DCO Requirement 3	The MMO understands similar conditions have been included on other offshore wind DCOs either within the DCO or DML or both. As the requirements are already secured within the DCO the MMO questions the benefit of the duplication of including these within the DML but is happy to discuss these	The Applicant agrees with the MMO that there would be no benefit to having these requirements included within the DML as separate conditions.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		[REP2-011] regarding both aviation safety and marine navigational safety.	requirements with DIO, NATS and the Applicant.	
REP3-037.12	Applicant	DCO 1.10 **Requirement 7 (and Schedules 3 & 4 paragraph 9): Amendments to approved details** The Applicant quotes the Norfolk Boreas made DCO as precedent [REP1-023], but that DCO has a substantially more comprehensive drafting, including a sub-paragraph (2). The Applicant is asked to add further detail to this draft requirement and attempt to secure MMO agreement, having regard to the MMO's WR [REP1-048].	The MMO welcomes this request and is working with the Applicant to try and reach an agreement during examination.	The Applicant refers its response to DCO1.10 of ExAQ1 (REP3-006) and has nothing further to add.
REP3-037.13	Marine Management Organisation	**Schedules 3 & 4 – draft Deemed Marine Licences** DCO 1.13 **Schedules 3 and 4 – Paragraph 6 decommissioning** The Applicant's response to Natural England RR-026.D26 and RR-026.F16 [PD1-017], states that "It is the Applicant's intention to secure decommissioning activities through separate standalone marine licences at the relevant time." The MMO is asked: i) If it satisfied with that procedure and with draft DCO Schedules 3 & 4 paragraph 6. ii) If the production of an outline Offshore Decommissioning Plan should be secured by condition in the draft DMLs.	i) The MMO has reviewed REP2-002 and is content with the wording used in Paragraph 6 of Schedules 3 and 4 and understands this is standard within OWF DMLs. The MMO would like to highlight to the ExA that they are currently reviewing decommissioning for NSIPs and the requirement for an outline plan alongside a new standard DML condition. The MMO notes that decommissioning will not be consented as part of the DCO and a new marine licence will be required but to assist with the holistic review of the project and understanding of the conclusions within the Environmental Statement believe that an outline plan would be beneficial at this stage. The MMO is hoping to have an update for Deadline 4 or 5 and will liaise with the	The Applicant notes the MMO's suggestion that it is reviewing its position on the need for a 'standard' condition within DMLs for offshore wind farms relating to decommissioning. For the reasons set out within the Applicant response to GEN1.21 of ExAQ1 (REP3-006) and the Applicant's summary or oral submissions at ISH2 [S_D4_4: Written Summaries - Issue Specific Hearing 2], the Applicant considers that such a condition would be unnecessary.

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			Applicant on this requirement in between deadlines.	
REP3-037.14	Applicant Marine Management Organisation	DCO 1.14 **Schedules 3 and 4, Paragraph 9** i) The Applicant is asked to correct the revised wording in the draft DCO [REP2-011] which has a proofreading error missing out the word "or" before the new words "will not". ii) ii) The MMO is asked to clarify if it would like any further action taken with regard to the drafting of the DMLs Paragraph 9.	ii) The MMO has reviewed REP2-002 and thanks the Applicant for the requested changes albeit with a proofreading error. The MMO welcomes the update and is currently reviewing materiality as a whole and will provide an update at Deadline 4.	The Applicant refers its response to DCO1.14 of ExAQ1 (REP3-006) and has nothing further to add.
REP3-037.15	Marine Management Organisation	DCO 1.15 **Schedules 3 and 4 Condition 13 (3) Activities in the Outline Offshore Operations and Maintenance Plan (OOMP)** Is the MMO satisfied with the range of activities identified in the Outline OOMP [APP-079 Table 1.2] and does it accept the qualification presented by [APP-079 paragraph 1.3.1.3]: *"Maintenance due to unexpected occurrences cannot be anticipated and therefore cannot be included within the application for Development Consent or within this plan."*	The MMO has provided further comments within Section 11 of our written response on the activities within the OOMP and the updates required. The MMO understands there needs to be flexibility at the post consent stage for unexpected activities that may be required and review these on a case-by-case basis post consent on if they should be a new licence or variation or are within the parameters assessed.	The Applicant has responded separately to the MMO's comments in REP3-037.100 to REP3-037.104 in S_D4_6_Morgan Applicant's Response to IP submissions submitted at Deadline. The Applicant has nothing further to add at this time in response to the ExA's question DCO 1.15.
REP3-037.16	Marine Management Organisation	DCO 1.18 **Schedules 3 and 4 Condition 15 (11)** Which does the MMO consider would be the most appropriate Plan to secure "periodic validation surveys of cable burial and	The MMO always recommends all monitoring to be in the Outline In Principle Monitoring Plan as this makes it clear to all parties what is required post consent.	The Applicant confirms that all monitoring is captured within the Outline IPMP. The Applicant notes that the Applicant has submitted an Outline Construction Method Statement at Deadline 4 [S_D4_22 Outline

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		protection" post-construction, as proposed by the Applicant in the mitigation and monitoring schedule (item 7.27 [REP2-015]).	The MMO notes that Condition 20 1(d)(cc) states: "*-details of cable monitoring including details of cable protection until the authorised scheme is decommissioned which includes a risk based approach to the management of unburied or shallow buried cables;"* As there is no Outline Construction Method Statement (CMS) (as the MMO understands this is based on the final design parameters) it would be beneficial for another document to secure this at this stage but reference the details would be done through the CMS. The MMO notes that this has been updated within Table 1.8 of the Outline IPMP by the Applicant and welcomes this. The results of this monitoring will be submitted to the MMO for review and approval and is conditioned under **Post construction monitoring** "29(5) Following the installation of cables, details of cable monitoring required under 20(1)(d)(i) must be updated with the results of the post installation surveys. The statement must be implemented until the authorised scheme is implemented and reviewed as specified within the statement, following cable burial surveys, or as instructed by the MMO." Please see further comments in response to question DCO 1.22.	Offshore Construction Method Statement_F01] . The Applicant has no further comments on this question.
REP3-037.17	Marine Management Organisation	DCO 1.21 **Schedules 3 & 4 Part 2 Condition 20(1)(d)(i): cable installation plan** Historic England (paragraph 2.7 [REP1-046]) advises that precommencement surveys	The MMO requests Condition 20 (1)(f) is moved to a standalone Condition (e.g. Condition 20 (2) and Condition 20 (2) becomes condition 20 (3) and the wording updated to: "The authorised scheme must not commence unless no later than six	The Applicant has updated the draft DCO [S_D4_8] at Deadline 4 to move previous condition 20(1)(f) in each DML into a standalone condition.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		should be analysed to actively inform cable route selection in relation to features of known or potential archaeological interest. Paragraph 7.4 also refers to this. The outline written scheme of investigation (WSI) (paragraph 1.6.2.10 [APP-069] commits to archaeologist input to acquisition of survey data as the project progresses. Paragraph 1.6.3.1] requires archaeologist input to preparation of cable route clearance. However, Historic England recommends (paragraphs 10.3 and 10.4 [REP1-046]) that all such post-consent survey and data analysis "*must occur in a timely way to inform any pre-construction finalisation.*" The MMO is asked what additional security it would like to see provided by amendment to the outline WSI and the draft DMLs to enable the MMO advised by Historic England to be satisfied before construction commences that layout, cable routing and engineering design finalisation has been adequately informed in a timely way by archaeological survey data and analysis. Condition 20(1)(f) and/or Condition 20(2) and/or Condition 27 are also potentially affected.	months prior to the commencement a written scheme of archaeological investigation has been submitted to and approved by the MMO following consultation with the statutory historic body, in accordance with the outline marine written scheme of investigation, and in accordance with industry good practice, following consultation with the statutory historic body to include—…" The timeline of six months prior to activities for the provision of the WSI will also be and condition 27. The MMO believes this will allow HE to be satisfied prior to construction that layout, cable routing and engineering design finalisation has been adequately informed in a timely way by archaeological survey data and analysis but is open to further discussion with HE and the Applicant.	
REP3-037.18	Marine Management Organisation	DCO 1.22 **Schedules 3 and 4 Part 2 Condition 20(1)(d)(i)(cc): cable monitoring burial surveys post-construction** The MMO is asked if the CMS is an appropriate and adequate means to secure "periodic validation surveys of cable burial and protection" in the Operations and Maintenance phase, as proposed by the Applicant in the mitigation and monitoring	As per the response to DCO 1.20 the MMO notes that this monitoring has been included in the Outline In Principle Monitoring Plan and the MMO believes there will be an overview within this document at the post consent/preconstruction stage. Although the CMS is submitted at the preconstruction stage this can approve all monitoring for the project. The MMO notes are alternatives such as standalone cable and scour installation and	The Applicant confirms that all relevant monitoring is captured within the Outline IPMP, and the Applicant notes that the Applicant has submitted an Outline Offshore Construction Method Statement (CMS) at Deadline 4 (S_D4_22 Outline Offshore Construction Method Statement_F01) . The Applicant considers that the provision of the Outline Offshore CMS, which incorporates relevant cable monitoring commitments, in

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		schedule (item 7.27 [REP2-015]), considering that it is essentially a plan for the construction phase.	monitoring plans alongside the CMS and IPMP on other projects that cover the whole timeline in one document, this is usually to cover more specific environmental concerns but could be adapted in this instance if required.	addition to the Offshore IPMP, therefore resolves this matter. The Applicant has no further comments on this question.
REP3-037.19	Marine Management Organisation	DCO 1.24 **Schedules 3 and 4 Part 2 Condition 20(1)(e): Environmental Management Plan** Having regard to the Applicant's explanation in its written hearing summaries (item 41 [REP1- 004]), would the MMO confirm the following: i) When it would expect final versions of these plans to be submitted for consultation with the MMO and other stakeholders. ii) Whether these plans should include reporting obligations to the Isle of Man authorities. iii) If a separate EMP for the decommissioning phase should be secured by the DCO if made.	i) The MMO would expect to see an outline plan at this stage. This would include the standard requirements and not just be a table of contents. Please See Rampion 2 (REP6-214) and Norfolk Boreas (REP5-035) for examples. The MMO requests an outline PEMP is submitted and Condition 20(1)(e) is updated to: "a project environment management plan which accords with the outline project environment management plan, which shall be submitted to the MMO at least six months prior to commencement of the authorised scheme or the relevant part thereof, to include details of" ii) It would be beneficial to include this as part of the plan so it was clear that the Isle of Man would receive this plan. The MMO has included within our internal system the requirement to consult the Isle of Man on this plan should consent be granted. iii) As above in response to question XX the MMO is looking to include a decommissioning plan condition, as part of this plan you could have a section on EMP, however as a new consent will be required the detail of	In relation to point i), the Applicant has provided an Outline Offshore Environmental Management Plan (EMP) at Deadline 4 (S_D4_11). The Applicant maintains that an Outline Offshore EMP is not required to accompany the application, as set out in the summary of the Applicant's oral submission at ISH1 (REP1-004) and response to Relevant Representations (PD1-017), however an Outline Offshore EMP has been provided in order to move the discussion forward in the interests of the Examination. In relation to point ii), the Applicant has set out in the Outline Offshore EMP (S_D4_11) that the Offshore EMP will be submitted to and approved in writing by the MMO. In relation to point iii), please see the Applicant's response to ExQ1 GEN 1.21 (REP3-006) which stated that a separate legislative regime is in place under the Energy Act 2004 to control the decommissioning process for offshore renewable energy installations and it is not considered necessary or appropriate to duplicate this through consents issued under the Planning Act 2008. Therefore, no outline decommissioning plan is considered to be necessary for inclusion with this application and the Applicant agrees that an Outline

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			this should be included as part of that consent, therefore the MMO does not believe a full EMP for decommissioning is not required in the DCO.	Offshore EMP for the decommissioning phase is consequently also not required.
REP3-037.20	Marine Management Organisation	DCO 1.25 **Schedules 3 and 4 Part 2 Condition 20(1)(e)(v)** The MMO is asked to clarify: i) Whether it sufficient that the proposed Scallop Mitigation Zone (SMZ) is secured only through the outline FLCP, such that it would only effectively be secured under the condition to develop an offshore EMP. ii) The proposed SMZ is not referenced on the Works Plan [APP-082] whereas the outline fisheries liaison and coexistence plan (FLCP) [REP2-019] illustrates an "indicative SMZ". Should the Works Plan be amended to show the "indicative" SMZ and should co-ordinates for the SMZ be included in the draft DCO/DMLs?	The MMO always prefers any exclusions zones or additional mitigation to be required to be clear on the face of the DML and not within a plan. However, any plan and its contents is enforceable and would be approved by the MMO in consultation with interested parties prior to the start of construction. The MMO understands this is an ongoing discussion between the Applicant and commercial fisheries interested parties to try to come to an agreement. This includes what activity may take place within the SMZ noting that activity may be close to the SMZ or within depending on the further design refinement at the post consent stage. The MMO has concerns on the SMZ only being indicative at this stage and any outstanding comments. Mainly, if at the post consent stage there were further disagreements between interested parties and the Applicant the MMO would have to make a decision on something the MMO's believes should be agreed during the consenting phase. As set out above the MMO will not act as an arbitrator for compensation matters and as this is linked to potential compensation the MMO could be put in a position where we are unable to approve a document at the post consent phase.	The Applicant acknowledges the response and refers the MMO to its recent response to DCO 1.25 of ExAQ1 (REP3-006). The Applicant has not suggested at any point that it intends to request the MMO to act as an arbitrator in any matter. The Applicant directs the MMO to its recent response to CF 1.7 of ExAQ1 (REP3-006).

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			If the SMZ is finalised a works plan could be beneficial.	
REP3-037.21	Applicant Marine Management Organisation	DCO 1.27 **Schedules 3 & 4 Condition 20(h)** i) The ExA notes that Condition 20(h) of the draft DMLs [REP2-011] requires submission of a final Marine Mammal Mitigation Protocol (MMMP) for approval for piling operations and Unexploded Ordnance (UXO) clearance. Can the Applicant clarify if Condition 23(b) of the draft DMLs is therefore necessary and if so, why? ii) In the event that there would be more than one final MMMP, can the Applicant comment if there is a need for coordination of their provisions to ensure consistency? iii) Can the Applicant clarify why Condition 20(h) does not contain a requirement for the MMO to consult the relevant statutory conservation nature body. iv) Can the Applicant and the MMO clarify if they would have any objection to including a provision that requires the MMO to consult the Isle of Man Government before approval of any MMMP? v) Can the Applicant clarify if Condition 28(3) of the draft DMLs should be incorporated into Condition 20(h).	iv) The MMO would not object to the inclusion of this on the DML.	The Applicant refers the MMO and ExA to its response to DCO1.27 of ExAQ1 (REP3-006) and has nothing further to add.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
REP3-037.22	Marine Management Organisation Natural England Natural Resources Wales	**Marine Fish & Shellfish Ecology** MFS 1.2 **Seasonal Exclusion Period for Piling** A seasonal piling restriction has been suggested by Natural England [RR-026] and the MMO [RR-020] to mitigate underwater sound and vibration effects on herring and cod during installation of the offshore substation. The Applicant's Deadline 1 submission in response to Issue Specific Hearing 1 Action Point 14 [REP1-009] states that the application of blanket seasonal restrictions at this stage could be disproportionate to the ecological risk. i)What is the MMO and Natural England's view on the proportionality point? ii) Is any further evidence available to help define an appropriate and informed 'sensitive' exclusion period for the area of the Proposed Development? iii)Could a refined spatial piling exclusion area be defined instead of an exclusion period over the whole array area? iv)Noting that soft-start ramp ups has been explicitly rejected by the MMO, Natural England and NRW as a primary mitigation measure to reduce the risk of injury/mortality to fish, what type of measures are feasible and specific to fish that could prevent	i) The MMO believes that the project impact alone is significant enough to warrant a seasonal restriction and fundamentally disagrees with the Applicant. ii) The MMO has been working with the Applicant to address this point. The MMO provided a written letter to the Applicant on 28 October 2024 which detailed the reasons behind the MMO's current decision to include a seasonal piling restriction. The letter also detailed what information the Applicant is required to provide to the MMO in order to resolve the current issues surrounding seasonal piling restrictions. The details of this letter have been included in this deadline submission under section 4 for the benefit of the ExA and discussions are continuing. iii) This has been part of the discussions with the Applicant and further maps and information is being reviewed. iv) Please see section 4 of this response. v) Yes the MMO is currently reviewing the DML and how the seasonal restriction would work alongside the Underwater Sound Management Strategy to provide the Applicant with condition wording and will provide this to the ExA at Deadline 4.	i) The Applicant has addressed the same point raised in REP2-029.55 (REP3-004) and will continue to engage with the MMO on this matter. Please also refer to our response to relevant representations (PD1-017) where we highlight the precaution in the assessment (which concluded no residual significant effects in Volume 2, Chapter 3: Fish and Shellfish Ecology (APP-021)), design refinement which will reduce potential impacts and how the underwater sound management strategy (UWSMS) is the most appropriate(agreed in principle by stakeholders) effective, and proportionate approach, is the best approach to consider the range of mitigation options allowing the flexibility to deploy the most appropriate mitigation measure if required, which can only be determined following design refinement. Furthermore, even it is determined that mitigation is required, and indeed that a seasonal restriction is the most appropriate form to manage the risk through the UWSMS, the period over which that restriction should apply needs to be informed by spawning intensity and also how this may potentially overlap with specific piling activity (please see S_D4_6.1 Annex 6.1 to the Applicant's response to Written Submissions from MMO at Deadline 3: Cod Spawning Period regarding the ongoing discussion on spawning intensity periods). Therefore, the Applicant maintains that the UWSMS is absolutely the most appropriate, pragmatic and robust mechanism to control this issue. ii) The Applicant welcomes this additional information and has provided an analysis as

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		the need for a seasonal piling restriction? v)Are any changes necessary to the draft DCO/DMLs to reflect seasonal piling restrictions as a fallback position in the event that appropriate post consent controls/measures are not able to be agreed in the final Underwater Sound Management Strategy?		a long response in S_D4_6.1 Annex 6.1 to the Applicant's response to Written Submissions from MMO at Deadline 3: Cod Spawning Period_F01. iii) As per response to ii) above the Applicant has reviewed the additional information on cod spawning periods within the Irish Sea near to the Morgan Offshore Wind Project: Generation Assets, and has provided further responses based on this information in REP3-037.75 to 77 in S_D4_6 Applicant's Response to IP submissions submitted at Deadline 3. The Applicant has also provided maps in Section 1.2 of Annex 3.1 to the Applicant's response to Written Submissions from MMO at Deadline 2 (REP3-005) in response to the MMO's Comments on Written Representations (REP2-029, Section 1, Paragraphs 1.1.6 and 1.1.8) based on requested underwater sound thresholds in relation to cod spawning grounds to further inform the assessment conclusions. The Applicant will continue to engage on this matter. iv) The Applicant has responded to these issues within Section 4 in REP3-037.57 to 61 in S_D4_6 Applicant's Response to IP submissions submitted at Deadline 3. v) The Applicant welcomes further engagement on this issue.
REP3-037.23	Applicant Marine Management Organisation Natural England	MFS 1.3 **Scoped Out Impacts** In its Scoping Opinion the Planning Inspectorate advised that it was not content to scope out the possible impacts of underwater wind turbine sound and it	ii) The MMO raised no concerns in relation to operational noise during pre-application or at the relevant representation stage. However, the MMO is reviewing this point with our scientific advisors and will provide an update at Deadline 4.	ii) The Applicant notes that the MMO will provide a further response at Deadline 4. Please also see the Applicant's response to MFS 1.3 (REP3-006) at Deadline 3 which confirms the scoped out impacts.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		reserved its position on scoping out underwater sound from vessels. There does not appear to be any information on wind turbine sound impacts on fish and shellfish receptors during the operational phase submitted. The ExA notes the justification provided in Table 3.8 of ES Volume 2, Chapter 3 [APP-021] but is unclear if the evidence referenced can be applied to turbines of the size and number proposed. i) Can the Applicant provide project specific information on underwater sound from wind turbines during the operational phase? ii) Can the MMO and NE advise of any specific concerns regarding potential underwater sound from turbines and/ or vessels during the operational phase impacting fish and shellfish receptors?		
REP3-037.24	Applicant Marine Management Organisation Natural England	MFS 1.6 **Recovery Period for Temporary Habitat Loss/Disturbance** Paragraph 3.9.2.18 of ES Volume 2, Chapter 3 [APP-021] states that the recoverability and rate of recovery of an area after large scale seabed disturbance is linked largely to substrate type, but that gravelly and sandy habitats, similar to those found in the Morgan fish and shellfish ecology study area, have been shown to return to baseline species abundance in 5-10 years. Paragraph 3.9.2.61 states that the MDS for the decommissioning phase assumes that all foundations and cables will be removed and that the decommissioning sequence will	The MMO is reviewing this point with our scientific advisors and will provide an update at Deadline 4.	The Applicant notes that the MMO will provide a further response at Deadline 4. Please also see the Applicant's response to MFS 1.6 at Deadline 3 (REP3-006) to further reaffirm the Applicant's position.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		generally be a reverse of the construction sequence. Assuming that it would take another 5-10 years post decommissioning to return to the baseline species abundance, can the Applicant, the MMO and Natural England advise why the impact of construction and decommissioning on large scale seabed disturbance should not be reconsidered as a long-term habitat loss impact.		
REP3-037.25	Applicant Marine Management Organisation Natural England Natural Resources Wales	**Marine Mammals** MM 1.2 **Concurrent Piling and Unexploded Ordnance (UXO) Clearance** Can the Applicant: i) Advise if it is feasible that piling and UXO clearance activities may be undertaken concurrently? If so what are the implications for potential injury/disturbance to marine mammals (and fish). Can the IPs: ii) Advise whether there is a necessity to restrict or control the possibility of concurrent piling and UXO clearance activities?	The MMO is reviewing this point with our scientific advisors and will provide an update at Deadline 4.	The Applicant notes that the MMO will respond to this at Deadline 4. Please see the Applicant's response to MM 1.2 at Deadline 3 which confirms that there is no potential for overlap in UXO clearance activities and piling activities.
REP3-037.26	Applicant	MM 1.3 **Marine Mammal Mitigation Protocol (MMMP): Points of Clarification** At Issue Specific Hearing 1 the Applicant explained that a separate Marine Licence will need to be sought prior to construction for pre-construction geophysical and geotechnical surveys. The MMMP is	The MMO maintains a watching brief on this response.	The Applicant notes this response and, as confirmed in response to MM 1.3 at Deadline 3, the geophysical and geotechnical surveys that are included in the outline MMMP (APP-072) will be covered by the deemed Marine Licence and secured via the DCO and a final MMMP will be agreed post-consent in advance of any surveys being undertaken.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		intended to reduce or eliminate the risk of injurious effects of underwater sound due to piling, UXO clearance and geophysical surveys on marine mammals, yet if preconstruction geophysical and geotechnical surveys are to be controlled by separate marine licence, the mitigation measures in the MMMP will not be triggered for those operations. This seems at odds with paragraph 1.5.1.2 of the outline MMMP [APP-072] which states that the specific measures to mitigate the injurious effects of UXO clearance, piling and geophysical surveys during the pre-construction and construction phases of the Morgan Generation Assets will be determined post-consent in consultation with the licensing authority (MMO) and SNCBs. i) Can the Applicant therefore confirm for the avoidance of doubt that the MMMP will specifically apply to preconstruction geophysical surveys if they involve sound generating activities such as multibeam echosounders and sub-bottom profilers, and if so which condition(s) in the dDMLs would trigger the submission and approval of a final MMMP before pre-construction geophysical surveys could be conducted? ii) Would the definition of 'commence' (which currently excludes pre-construction surveys) need to be amended? If not, how would pre-construction geophysical surveys currently excluded in the definition of commence be controlled, monitored and mitigated?		

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
REP3-037.27	Marine Management Organisation Natural England Natural Resources Wales	MM 1.5 **Masking** In relation to the assessment of effects from underwater sound on marine mammals the Applicant states at Paragraph 4.9.1.2 of ES Volume 2, Chapter 4 [AS-010] that there is insufficient evidence to properly evaluate masking and no relevant threshold criteria to enable a qualitative assessment. Can the MMO, Natural England and NRW advise if they agree with this statement? If not can they suggest whether the Applicant needs to address the masking scenario?	The MMO is reviewing this point with our scientific advisors and will provide an update at Deadline 4.	The Applicant notes that the MMO will respond to this at Deadline 4. The Applicant refers to their response to MM 1.5 at Deadline 3 regarding the lack of published criteria and directs the ExA to NE's response at Deadline 3 (REP3-048.13 in S_D4_5 Applicants response to IPs responses to EXQ1 F01) which agrees that there is limited evidence to inform an assessment on masking and to the response by NRW (A) at Deadline 3 (REP3-051.10) which states that they are satisfied with the Applicant's assessment of masking.
REP3-037.28	Marine Management Organisation Natural England	MM 1.8 **UXO High Order Clearance Sound Modelling** Paragraph 4.9.3.2 ES Volume 2, Chapter 4 [AS-010] relating to UXO clearance states that sound modelling for high order detonation, acoustic modelling was undertaken following the methodology described in Soloway and Dahl (2014). Given the 2014 date of the Soloway and Dahl publication, can the MMO and NE advise if this is the most up to date/ best practice method?	The MMO is reviewing this point with our scientific advisors and will provide an update at Deadline 4. The MMO advise that the Soloway and Dahl (2014) is widely accepted with regards to the UXO High Order Clearance Sound Modelling, despite its age.	The Applicant notes that the MMO will respond to this at Deadline 4.
REP3-037.29	Marine Management Organisation Natural England Natural Resources Wales	MM 1.12 **Cumulative Underwater Sound: Residual Effects** The cumulative effects assessment in ES Volume 2, Chapter 4 Marine Mammals [AS-010] identifies potentially significant adverse residual effects in terms of cumulative piling	The MMO is aware of multiple mitigation options for both piling (such as bubble curtains) and UXO clearances (low order techniques) and the MMO understands these will be finalised post consent through the MMMP.	The Applicant notes the advice from the MMO and will consider any available published guidelines on the abatement of underwater sound including the use of Noise Abatement Systems (NAS), in the development and finalisation of the Outline underwater sound management strategy

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		sound impacts on Bottlenose Dolphin and cumulative UXO clearance sound on harbour porpoise. The Applicant proposes that mitigation measures will be developed in consultation with the licensing authority and SNCBs post-consent to reduce any potential residual effects for Bottlenose Dolphin and Harbour Porpoise. Can the MMO, Natural England and NRW confirm if they are confident that mitigation options exist to reduce the residual effects	The MMO is aware that Defra are actively considering updating marine noise policy, and that an announcement is likely to be made in the near future. The policy direction is towards an expectation that all offshore wind developers carrying out pile driving activity in English waters should 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. The MMO will update the ExA on any policy changes. The MMO will keep a watching brief over NE response to this question.	(UWSMS) (APP-068) and outline MMMP (APP-072).
REP3-037.30	Applicant Marine Management Organisation Natural England	MM 1.13 **Cumulative Assessment – Injury due to Collision with Vessels** Table 4.57 in ES Volume 2, Chapter 4 [AS-010] relating to the cumulative increased likelihood of injury due to collision with vessels suggests that sound emissions from vessels will likely deter animals from the potential zone of impact. Given that this part of the Irish Sea is well-trafficked with vessels, and given the potential temporal and spatial overlap with other projects, can the Applicant, the MMO, NE and NRW clarify if there a possibility that an animal fleeing the sound of construction/maintenance vessels (or indeed piling/ UXO clearance) from one project might find themselves within the zone of influence of another project?	The MMO notes from NE's issues log that *"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."* The MMO agrees with NE's comments that *"we do not agree with the statement: "Given*	The Applicant highlights their response to MM 1.13, of ExAQ1 (REP3-006). The Applicant also highlights the Deadline 3 update to Natural England's Risk and Issues log (REP3-049), the status of which (C15) is now Yellow and therefore considered closed.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
			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." Given the temporal and spatial overlap with other projects the MMO considers that there is potential that an animal fleeing the sound of construction/maintenance vessels (or indeed piling/ UXO clearance) from one project might find themselves within the zone of influence of another project.	
REP3-037.31	Marine Management Organisation	**European Protected Species Licences** MM 1.24 **European Protected Species (EPS) licences** The MMO is responsible for wildlife licensing of activity in English waters. The Applicant [APP-064] states that any necessary EPS licences would be applied for post grant of DCO. The Applicant does not explain which species this may/would relate to, but it is likely to be marine mammals. Can the MMO confirm if it is satisfied with the Applicant's approach as set out in [APP-064] to submit any necessary EPS licence applications post-consent?	The MMO is content that the Applicant will submit any necessary EPS licence applications post consent. The approval of the EPS licence requires more detail in relation to the design and any required mitigation. The MMO would highlight that the EPS has different legislative requirements in providing consent and the test for mitigation could be considered higher. Therefore, as per our comments in REP1- 053 the MMO strongly advises that NAS is committed to at this stage.	The Applicant notes the MMO's response. The Applicant will consider any available published guidelines on underwater sound abatement including the use of NAS, in the development and finalisation of the Outline underwater sound management strategy (UWSMS) (APP-068). As per the Applicant's previous response on NAS, the Applicant has made a commitment in the Outline UWSMS (APP-068) to considering the use of NAS as part of further mitigation options in the UWSMS if required (i.e. where there remains a residual significant effect even with the inclusion of primary and tertiary measures adopted). Its implementation will be decided in consultation with the licencing authority and SNCBs, including the MMO, as part of the final UWSMS, prior to construction. NAS options are discussed in the Outline UWSMS (APP-068) (sections 1.8.2 for piling and 1.8.3 for UXO) and if required will be refined post-

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
				consent. In the UK, while there is available guidance outlining measures to prevent harm to marine mammals (JNCC 2020a; 2020b), specific recommendations for how NAS is to be used to mitigate injury and disturbance are scarce in the UK. Instances of such guidance have emerged in connection to particular Marine Protected Areas (MPAs) designated for the well-being of marine mammals, aiming to restrict impulsive sound levels and minimise disturbances (JNCC, 2020a and 2020b). The approach adopted for the Application (i.e. the inclusion of an UWSMS) follows the latest industry good practice for offshore wind in the UK and takes such guidance and advice into account. As such, the proposed approach to mitigating risks of underwater sound on marine life is considered to be proportionate and robust.
REP3-037.32	Applicant Marine Management Organisation Natural England	**Marine Physical Processes and Benthic Ecology** MP 1.5 **Secondary Scour** Both the MMO and Natural England have raised concerns that secondary scour has been scoped out of the ES. The Applicant's response [PD1-017] stated that "secondary scour has been assessed within the context of impacts to sediment transport and sediment transport pathways due to presence of infrastructure in section 1.9.5 of Volume 2, Chapter 1: Physical processes (APP013) for the operations and maintenance phase. Where scour protection measures are to be furnished, they will be	The MMO is reviewing this point with our scientific advisors and will provide an update at Deadline 4.	The Applicant notes that the MMO will respond to this at Deadline 4. Regarding secondary scour the Applicant has previously provided further detail on the assessment of seabed scour in the Applicant's Response to Relevant Representations (PD1-017, RR-026.D.18). Additional information on the provision of scour protection to minimise secondary scour is supplied in the Applicant's Response MP1.5 of ExAQ1 submitted at Deadline 3 (REP3-006).

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		subject to engineering design to ensure they minimise as much as practical the occurrence of scour. Therefore, any residual/secondary scour would be very localised and of negligible magnitude." i) Can the Applicant advise how it has arrived at the conclusion of negligible magnitude given that final design of scour protection is not yet determined, whether secondary scour will be monitored over time, and what provisions will be in place to deal with scour in the event that the protection measures fail. ii) Can the MMO and Natural England comment on the likelihood of scour occurring if best practice scour protection methods are employed, and provide examples of where secondary scour has occurred on other operational windfarms and what the implications were.		
REP3-037.33	Marine Management Organisation	MP 1.6 **Drilling Arisings** The Planning Inspectorate advised the Applicant at Scoping stage that the ES should identify the likely site for disposal of drilling arisings and include an assessment of effects from these activities. Schedule 1, Part 1, 1(f) of the draft DCO [REP2-011] seeks to consent 'the removal of material from the seabed and the disposal of inert material of natural origin within the Order Limits produced during construction drilling…'. The Morgan Array Area Site Characterisation Report [APP-067] also	The MMO has reviewed the Site Characterisation Report and is content with the assessment of the Array disposal site. The MMO is currently designating disposal sites and once these references are identified will request these are included within the DML.	The Applicant is pleased to note that the MMO is content with the assessment of the Array disposal site and that the MMO will request that the disposal site, once designated by the MMO, is included within the dML.

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		states that drill arisings may consist of large, granular materials that are too large to be moved by tidal currents and may remain in situ for long periods of time. Can the MMO advise if it is satisfied with the proposed disposal arrangement without knowing the exact scope for this potential impact and without further conditions.		
REP3-037.34	Applicant Natural England Marine Management Organisation	**MP 1.10** **Inter-related Effects: monitoring and surveying** Several ES chapters have referred to the possible biodiversity benefits from the introduction of artificial structures and the potential for increased foraging opportunities for fish and thus increased prey opportunities for marine mammals, as well as potential benefits to the fisheries from colonisation of the structures and reef effects allowing species like crab and lobster for example to expand their habitats. The ExA notes that the evidence presented for such benefits is limited and not conclusive, to the extent that it is not possible for the Applicant to quantity the biodiversity benefit that artificial structures may have over time and thus also not possible to appraise the future impact of the subsequent loss of that biodiversity benefit during the decommissioning stage when the artificial structures are removed. i) The Applicant is asked to justify as to why it does not intend to undertake any operational phase monitoring to verify and supplement the findings of the ES in this regard.	The MMO will look to provide a response to the Applicant's suggested wording at Deadline 4.	The Applicant notes that the MMO will respond to this at Deadline 4. The Applicant's response to MP 1.10 of ExA Q1 (REP3-006) which was submitted at Deadline 3 highlights the wording which has been updated in the Offshore In-Principle Monitoring Plan (REP2-013, S_D2_9 to include a new commitment to monitoring the colonisation of novel hard structures (i.e., GBS foundations).

Reference	Question is addressed to	ExA Question	MMO Response	Applicant's response
		ii) The Applicant is requested to suggest wording for a condition being added to the DMLs requiring that a survey of any species, habitats and reef structures present on the foundation structures is undertaken prior to decommissioning. Natural England and the MMO are invited to respond to the Applicant's suggested wording at the subsequent deadline.		
REP3-037.35	Applicant Marine Management Organisation Natural England	MP 1.12 **Unexploded Ordnance Clearance Impacts** The ExA notes that UXO clearance has not been considered for impacts on physical processes and benthic habitats. While the ExA acknowledges the Applicant's response on this matter to Natural England [PD1-017] (RR-26.D17 and RR-26.F15), the ExA notes that paragraph 2.9.2.9 of ES Volume 2, Chapter 2 [APP-020] seems to base the impacts of UXO clearance on the most likely (common) UXO clearance of 130kg. However, the absolute maximum UXO clearance could be a 907kg high order explosion. The Applicant is asked to direct the ExA to the details of the worst case (907kg) assessment for physical processes and benthic subtidal ecology receptors. If such an assessment has not been undertaken, one is required to be carried out and Chapters 1 and 2 updated by no later than Deadline 4. The MMO and NE are requested to submit a response to the Applicant's response at Deadline 5.	The MMO will keep a watching brief over the Applicant's response to this and look to provide a response at Deadline 5.	The Applicant notes that the MMO will respond to this at Deadline 5. The Applicant's response to MP 1.12 of ExA Q1 (REP3-006) which was submitted at Deadline 3 provides further detail on the likely crater sizes caused by larger UXO (up to 700kg) which fall within the MDS assessed for temporary habitat loss/disturbance from sandwave clearance.

2.7 Maritime and Coastguard Agency

Table 2.8: REP3-038: Response to Maritime and Coastguard Agency ExAQ1 response

Reference	Question is addressed to	ExA Question	Maritime and Coastguard Agency Response	Applicant's Response
REP3-038.1	Maritime and Coastguard Agency	SN 1.1 **Navigational safety authority in Isle of Man Territorial Waters** Please confirm whether the MCA (on behalf of the UK Government Department of Transport) is the navigation authority for Isle of Man Territorial Waters (outside harbour limits) as well as for the territorial waters and EEZ waters of Great Britain and Northern Ireland; and if not, who exercises in those waters the equivalent role or roles to those of the MCA.	The MCA is not the navigation authority for the Isle of Man territorial waters outside of statutory harbour authority limits. This falls to the relevant department in the Isle of Man Government.	The Applicant notes this and confirms it engaged with the Isle of Man Department of Infrastructure including the Harbours Division throughout the NRA including the MNEF and hazard workshop.
REP3-038.2	Maritime and Coastguard Agency	SN 1.2 **Sea lanes essential to international navigation within the UK EEZ** Please confirm the following: i) If any of the navigational routes passing to east, south or west of the Proposed Development are considered by the MCA to be recognised 'sea lanes essential to international navigation' in terms of UNCLOS Article 60(7). ii) Whether any of the routes in (i) above might be considered to be designated and charted as a Traffic Separation Scheme (TSS) in the foreseeable future.	i) In the context of paragraphs 2.8.316 and 2.8.317 in the National Policy Statement for Renewable Energy Infrastructure (EN-3), 'sea lanes essential to international navigation' is understood to mean IMO-adopted Traffic Separation Schemes. The navigation routes passing east, west and south of the proposed Morgan wind farm are not Traffic Separation Schemes, however they are considered to be strategic routes essential to regional, national and international trade. ii) There are no plans to propose the introduction of a new Traffic Separation Scheme in the Irish Sea. iii) N/A	The Applicant notes this response and as set out in the Statement of Common Ground with the MCA submitted at Deadline 2 (REP2-024) the Applicant and the MCA's interpretation of NPS paragraphs 2.8.316 and 2.8.317 are in alignment. The Applicant also welcomes confirmation that the MCA does not propose to change the Traffic Separation Schemes in the Irish Sea.

Reference	Question is addressed to	ExA Question	Maritime and Coastguard Agency Response	Applicant's Response
		iii) The minimum width between obstructions to navigation that a TSS would require.		
REP3-038.3	Maritime and Coastguard Agency	SN 1.3 **Sea lanes essential to international navigation within Isle of Man territorial sea** Further to the MCA's Written Representation at Deadline 1 [REP1-051, item 9] regarding a residual separation distance of only 2.6nm of sea space between the boundary of the proposed Mooir Vannin offshore wind development and the proposed northern boundary of the Morgan Generation Assets Proposed Development about 50metres inside UK EEZ waters, could the MCA clarify: i) Does that sea space between the two proposed developments constitute a 'sea lane essential to international navigation' in terms of UNCLOS Article 60(7). ii) What alternative separation distance might be sufficient to ensure that interference to international navigation through that sea space by would be unlikely in adverse metocean conditions, whether approaching Douglas Harbour or on international passage to the east of the Isle of Man. iii) Whether any part of that sea space between the two proposed offshore wind developments referred to above might be considered for designation and charting as a TSS in the foreseeable	i) The sea space between the proposed Morgan and Mooir Vannin wind farms is not a Traffic Separation Scheme and does not constitute a 'sea lane essential to navigation'. ii) In determining the acceptable sea space between the two sites a Navigation Risk Assessment must be conducted. It is assumed this will be carried out by the applicant of Mooir Vannin. iii) This decision will be subject to the results and conclusions of the Mooir Vannin Navigation Risk Assessment.	The Applicant notes that the MCA expects to see a Navigation Risk Assessment submitted by the proponent of the Mooir Vannin Offshore Wind Farm to determine what the acceptable sea space is between the Morgan Array Area and Mooir Vannin Offshore Wind Farm. The Applicant refers to its response to ExQ1 SN 1.17 (REP3-006) within which the process by which it assessed the agreement for lease (subsequently the scoping boundary) of the Mooir Vannin Offshore Wind Farm was assessed within the CRNRA (Appendix D of APP-060). The Applicant reiterates that there remains uncertainty as to the boundaries of the Mooir Vannin Offshore Wind Farm, which is currently at Scoping stage, and therefore, like the MCA, await the results of their navigation risk assessment to determine how the risks associated with the proximity to the Morgan Array Area can be mitigated.

Reference	Question is addressed to	ExA Question	Maritime and Coastguard Agency Response	Applicant's Response
		future, summarising considerations that would be taken into account in that regard.		
REP3-038.4	Maritime and Coastguard Agency	SN 1.4 **Stakeholder engagement post-consent** i) In addition to monitoring and reporting, can the MCA confirm if continued stakeholder engagement post-construction is required to achieve compliance with the recommendations of Marine Guidance Note MGN654, in addition to monitoring and reporting other as noted in paragraph 6.6(c), or by any other MGN. ii) Does the MCA have guidance to offer on the minimum appropriate frequency of stakeholder engagement throughout the operation/maintenance phase and should it be secured explicitly by condition in the dMLs.	i) In addition to monitoring and reporting, stakeholder engagement with MCA would be expected for emergency response planning and preparedness throughout the lifetime of the wind farm, as per the requirements in MGN654 Annex 5. This will include maintaining effective emergency response and environmental plans, having robust emergency arrangements and regularly demonstrating emergency response exercise planning and execution. ii) There is no MCA guidance or requirements for the frequency of the engagement in the post-consent stage. There is no need to secure the frequency in the dML.	As per the Applicant's response to ExQ1 SN 1.16 (REP3-006), the Applicant confirms that stakeholder engagement through monitoring and reporting requirements will be undertaken. Further engagement to develop the Emergency Response and Cooperation Plan (ERCoP) will be required as described in the Applicant's response to ExQ1 SN 1.20 (REP3-006). The Applicant notes that condition 25 of each deemed marine licence within the draft DCO prevents the Proposed Development from commencing until the MMO, in consultation with the MCA, has confirmed in writing that the Applicant has adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN654 (or any equivalent guidance that replaces or supersedes it). The Applicant would also like to note that the Marine Navigation Engagement Forum (MNEF) is not a requirement of MGN654 but that the Applicant has committed to continuing this forum post-consent as an effective means of stakeholder communication to maintain navigational safety and minimise impact on operators.
REP3-038.5	Maritime and Coastguard Agency	SN 1.5 **Marine Guidance notes other than MGN654** Would the MCA please confirm if there are any MGNs other than MGN654 that	There is no other MCA guidance document to be followed by developers in regard to the post-consent plans secured in DMLs for offshore renewable energy installations.	The Applicant notes this response.

Reference	Question is addressed to	ExA Question	Maritime and Coastguard Agency Response	Applicant's Response
		should be required to be followed in mitigation plans secured by the draft DCO/DMLs including the Outline Fisheries Liaison and Coexistence Plan [APP-065], the Outline Vessel Traffic Management Plan [APP-071] and the Outline Offshore Operations and Management Plan [APP-079]?		
REP3-038.6	Maritime and Coastguard Agency	**SN 1.6** **Minimum infrastructure spacing** i) Please confirm that you accept the Applicant's proposal (as confirmed at ISH1) that the layout development principle "minimum infrastructure spacing of 1,400m" is to be measured from centre points of structures and is subject to reduction by the micrositing allowance and constructional tolerance dimension. ii) Please clarify what constructional tolerance dimension you would consider normal and acceptable in addition to the micrositing allowance that you have yet to agree with the Applicant and the MMO.	i) MCA is content for the minimum spacing to be measured from the structure centre points. ii) MCA would be content for the same tolerance and micrositing that has been agreed for the Mona offshore wind farm which is 50m for micro-siting and 5m for tolerance.	The Applicant notes this response and has committed to reduce the micrositing allowance to 50m and 5m for tolerance for Morgan Generation Assets at Deadline 3. This is now included within condition 20(1)(a)(ii) of each deemed marine licence.

2.8 Mooir Vannin Offshore Wind Farm Limited

Table 2.9: REP3-039,40,41,42,43: Response to Mooir Vannin Offshore Wind Farm Limited ExAQ1 response

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
REP3-041.1	Mooir Vannin Offshore Wind Farm Limited	**Cross-Topic and General** **GEN1.5** Interrelationship report on other infrastructure projects An Interrelationship Report was submitted by the Applicant at Deadline 1 [REP1-017] The applicants of the other named projects which are IPs in this Examination are asked to provide comments on the content of the Report.	No assessment of Mooir Vannin is provided in the Interrelationship Report due to the determination provided by the Applicant to the Low level of detail of project information available to inform the assessment. Mooir Vannin provided Order Limits and an Indicative Layout to the Applicant in July 2023. We have a NonDisclosure Agreement with the Applicant to allow information sharing and have had no request from the Applicant for further information. We share with the Applicant and the Ex.A Order Limits and an Indicative Layout (Aug 2024) used to inform our Preliminary Environmental Information (PEI) and 2nd Phase of Community Consultation in August and September 2024. As the Environmental Impact Assessment (EIA) concludes over the coming weeks and months the assessment outcomes, along with the baseline data to inform those assessments, can be shared with the Applicant on key receptors groups such as marine ecology and human environment. Hopefully this increases the level of detail provided to the Applicant to facilitate the conclusion of the relevant assessments.	The Applicant wishes to clarify that the CEA considering the Mooir Vannin project is presented within the Morgan Generation Assets application, rather than in the Report on Interrelationships with Other Infrastructure Projects (REP1-017 and S_D4_10). The Applicant carefully reviewed the requested content of the Report on Interrelationships with Other Infrastructure Projects, as set out by the ExA in Appendix G of the Rule 6 letter, and notes that there is no requirement to include a CEA in that document (except for a summary of effects with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets) (PD-001). The Report on Interrelationships with Other Infrastructure Projects (REP1-017 and S_D4_10) sets out a summary of the information on the other projects relied upon for the CEA, and any changes since the application was submitted, in line with the requirements set out in Appendix G of the Rule 6 letter, and provides cross-reference to the CEA reviews carried out. Until further information in the form of a draft or final EIA is made publicly available for Mooir Vannin then the Applicant considers that it has considered the project as far as it reasonably can at this stage.

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
REP3-041.2	Mooir Vannin Offshore Wind Farm Limited	**AR Aviation and Radar** **AR1.6** Mitigation of cumulative impacts Your Relevant Representation [RR-021] notes that it is not clear how potential mitigation methods including the use of additional MultiLAT sensors would be implemented to contribute to mitigation of cumulative impacts at Ronaldsway Airport. The Applicant's response (p.86 [PD1-017]) points to section 11.10 of ES Volume 2, Chapter 11 [APP015], but also notes that in February 2024, the Airport's position changed to commissioning a review of its surveillance strategy including all applicable proposed offshore and onshore wind farm projects (the results of this were expected in summer 2024) and requesting relevant projects to contribute to reach a mutually agreed mitigation solution which will reduce any impact to acceptable levels. Could Mooir Vannin Offshore Wind Farm Limited clarify if it has any further comments to raise on this matter?	Mooir Vannin are aware that the Isle of Man Airport have now received their surveillance strategy report. A highlevel summary of this report has been shared with Mooir Vannin and an initial meeting held with the Isle of Man Airport regarding the outcomes and mitigation identified in this report. Further engagement regarding the requirement for, and implementation of, mitigation is ongoing with the Airport. Mooir Vannin is aware that the Airport will require further engagement with all OWF developers in the area (including the Applicant), to be able to reach a final mitigation solution that will reduce cumulative impacts to an acceptable level.	The Applicant acknowledges Mooir Vannin's comments, and would state that the Applicant's pattern of engagement and dialogue with Ronaldsway Airport mirrors this.
REP3-041.3	Applicant Mooir Vannin Offshore Wind Farm Limited	**CE Cumulative Effects** **CE1.5** Mooir Vannin Offshore Wind Farm Mooir Vannin Offshore Wind Farm Limited [RR-021] sets out that a Scoping Report was submitted to the	Mooir Vannin confirms that the information available within the public domain for Mooir Vannin Offshore Wind Farm is an EIA Scoping Report and Preliminary Environmental Information (PEI). The PEI Project Description, Indicative Layout and Order Limits	As noted in response to REP3-041.1, the CEA considering the Mooir Vannin project is presented within the Morgan Generation Assets application, where the Mooir Vannin project was considered as a Tier 2 project. The Applicant wishes to highlight that an EIA must be carried out based on information available in the public

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
		Isle of Man Government in 2023 and that it is preparing to submit an application for Marine Infrastructure Consent in 2025. Concerns relate to cumulative and incombination effects, and potential mitigation. The Applicant's summary of ISH1 [REP1-004] at point 53 notes that the only information in the public domain for Mooir Vannin Offshore Wind Farm is a Scoping Report and 'limited other consultation materials', which it considers to be 'insufficient information on which to base a meaningful cumulative assessment with a high degree of certainty'. Paragraph 1.2.1.5 of the Interrelationship Report [REP1-017] notes that only the Scoping Report and early stage environmental information is publicly available. Paragraph 1.3.1.3 notes that 'Mooir Vannin Offshore Wind Farm is currently in early stages of the pre-application process', and therefore specific coordination was not carried out due to the different project timelines. The Applicant is asked to clarify the publicly available 'early stage environmental information' and 'limited other consultation materials', on which it has based its CEA and Interrelationship Report. Mooir Vannin Offshore Wind Farm Limited is asked to provide:	provide information on which to base assessment and are attached to this submission. While the PEI material that is publicly available may be considered early-stage environmental information they do differ from the materials in the Scoping Report. Some of this material (Order Limits and Indicative Layout) has been shared with the Applicant previously (July 2023) at their request. While not publicly available, Mooir Vannin have completed draft impact assessments to inform our Marine Infrastructure Consent (MIC) Application. These are available upon request to ensure a complete assessment (for Ornithology, Aviation, SLVIA, Fish and Fisheries and Marine Mammals). The following sections address the numbered comments in the Ex.A Questions which are replicated and underlined for clarity. i) A copy of the Scoping Report and Scoping Opinion. The Scoping Report and Scoping Opinion are attached to this submission. ii) A timeline for the project, including stages of past and future consultation, submission of an application to the Isle of Man Government, and if such an application is successful the predicted timescales for commencement of development	domain. This is important to allow the conclusions of the assessment to be fully scrutinised by stakeholders and members of the public. An EIA is a public process and should not be informed by material which his not available in the public domain. This is reflected in the Planning Inspectorate's advice which states that 'The Planning Inspectorate acknowledges that the EIA process is iterative and includes public participation as an essential component' (Advice Note Seven, 2020). The Applicant would like to add that in order to undertake a detailed CEA of another project, there must be a project alone assessment available for that project. It would not be appropriate for the promoter of one project to undertake impact assessment for another developer's project in advance of them having done so. Similarly, it is not the Applicant's role to interpret the project description chapter of other developments. It should be noted that the Maximum Design Scenario (MDS) tables included in technical topic chapters need to be reviewed by the project engineers before an assessment takes place to confirm correct interpretation of the parameters, and that correct calculations, where required, have been made. It is the responsibility of Mooir Vannin Offshore Wind Farm Limited to prepare the project alone assessment. The Applicant has prepared a CEA to the extent that it reasonably can, based on the information publicly available. The Applicant has updated the Report on Interrelationships with Other Infrastructure Projects at Deadline 4 (S_D4_10) to reflect the updated timescales provided by Mooir Vannin, where applicable. In relation to the timescales for consent award, the Applicant notes that the Isle of Man Government (Territorial Sea Committee) has stated (see REP3-033) that it is continuing to prepare the necessary legislation and requirements to support the consideration of an application in respect of offshore renewable energy

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
		i) A copy of the Scoping Report and Scoping Opinion. ii) A timeline for the project, including stages of past and future consultation, submission of an application to the Isle of Man Government, and if such an application is successful the predicted timescales for commencement of development and operation of the wind farm. iii) A plan of the site boundary and array area as currently proposed, shown in relation to the Morgan Offshore Wind Project: Generation Assets, and territorial boundaries. iv) The maximum design scenario as currently proposed. v) Details of the proposed location(s) for landfall and the onshore electricity transmission connection. vi) Any other publicly available information about the project it would like to submit into the Examination. vii) Comments on the Interrelationship Report and	and operation of the wind farm. The timeline of the project is summarised below: • Submission of EIA Scoping Report - November 2023 • Phase 1 Community Consultation - November 2023 • Publication of Preliminary Environmental Information (PEI) - August 2024 • MIC Application - anticipated March 2025 • Examination - anticipated July to December 2025 • MIC Consent Award - anticipated June 2026 • Construction Start - anticipated Q2 2030 iii) A plan of the site boundary and array area as currently proposed, shown in relation to the Morgan Offshore Wind Project: Generation Assets, and territorial boundaries. This submission contains the Mooir Vannin Order Limits in relation to the Morgan Offshore Wind Project and Isle of Man and England Territorial boundaries and an Indicative Layout based on the Maximum Design Scenario (MDS) used to inform the EIA and consultation materials presented at PEI.	generation. Mooir Vannin Offshore Wind Farm Limited has stated its aspiration to submit the application in March 2025 with a target of receiving consent approximately 18 months after submission, a date which would be well after the consent decision for the Applicant's project.

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
		the accuracy of Tables 1.1 and 1.2.	iv) The maximum design scenario as currently proposed. The MDS for the Mooir Vannin Project is provided in the PEI version of the Project Description. Should any further clarification be required this can be provided by Mooir Vannin. v) Details of the proposed location(s) for landfall and the onshore electricity transmission connection. The Mooir Vannin Offshore Wind Farm Project (referred to as the "Whole Project") comprises the Mooir Vannin Generation Project and East Irish Sea Transmission Project. The Mooir Vannin Generation Project comprises a proposed Island Link (electrical export cable) which links the wind farm with the Island of Man electrical grid making landfall at Groudle and/or Port Skillion. The East Irish Sea Transmission Project is in early-stage development and will make landfall along the Lancashire or Merseyside coast connecting to grid at Penwortham. vi) Any other publicly available information about the project it would like to submit into the Examination. No further information is provided. Mooir Vannin Offshore Wind Farm is currently in the late stages of our	

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
			pre-application process', with the final updates to our Environmental Impact Statement (EIS) being prepared for submission in March 2025. These updates will be informed by feedback from our technical stakeholders as a result of the Evidence Plan Process (EPP) and Community Consultation. The consultation feedback will be used to inform material changes to the project prior to Application. Any changes to the provided Indicative Layout and Order Limits will be shared with the Applicant and Ex.A in a timely manner. vii) Comments on the Interrelationship Report and the accuracy of Tables 1.1 and 1.2. Please see comments above.	
REP3-041.4	Applicant Mooir Vannin Offshore Wind Farm Limited	**CE1.6** **Spacing between Morgan and Mooir Vannin Arrays** While the proposed Mooir Vannin offshore windfarm would be situated in Isle of Man territorial waters and is not subject to the Crown Estate Round 4 Memorandum which specifies that no offshore wind projects could be located within 7.5km of an existing offshore wind farm, it is nonetheless noted that the distance between the Morgan Array Area to the proposed Mooir Vannin	During discussions between Mooir Vannin and shipping operators who regularly transit the route between the proposed Morgan and Mooir Vannin Offshore Array areas, it has been raised that the 4.8km 'gap' between the two projects does not provide a safe navigable space for transitting vessels. Mooir Vannin is also aware that this has been raised to the Applicant via the Marine Navigation Engagement Forum meetings, Hazard Workshop and consultation responses. Mooir Vannin is aware that this area of sea has the potential to be highly	The Applicant's assessment of the cumulative impacts with the Mooir Vannin Offshore Wind Farm, reported within the CRNRA (APP-060) and summarised within the response to ExQ1 SN 1.17 (REP3-006), was based on the best information available in the public domain at the time. Whilst the Applicant was provided with the IoM Agreement for Lease area in 2022, this was as defined in 2015 and there had been no further updates on the status of this project and no Scoping Report was issued in the public domain. Therefore, whilst the Applicant could note the presence of Mooir Vannin as a Tier 3 project within the PEIR, there was insufficient information to meaningfully assess the impacts on shipping and navigation. Similarly, whilst pre-Scoping information was

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
		offshore wind farm would be as little as 4.8km. Would the Applicant and Ørsted Mooir Vannin explain the implications of this for both projects and whether there would need to be an adjustment to the layout or site area of one or both arrays to increase the separation (and if so, which array requires adjustment)?	congested and so provided the Applicant with a copy of the Mooir Vannin AfL boundary in October 2022 to facilitate early consideration of the cumulative impacts ahead of Mooir Vannin's Scoping Report submission in October 2023. However, it is noted that Mooir Vannin was not included in the Applicant's PEIR as this was published prior to Scoping Report submission, and was instead only included withni the Environmental Statement submitted at Application. The response below to SN1.8 outlines the further engagement with the Applicant on shipping and navigation in the area. It is recognised by Mooir Vannin that further refinement will be needed by either one or both of the projects to increase the space between them. However, Mooir Vannin maintains that it is unreasonable for the Applicant to assume all further mitigation will be undertaken by Mooir Vannin without meaningful engagement on this topic.	issued on 01 September 2023, this was after most of the Navigation Risk Assessment (NRA) studies had been completed by the Applicant, including: • Boundary amendments announced by the Applicant in January 2023 • Completion of all modelling and analysis of amended boundaries • Undertaking full bridge simulations with Stena Line and CLdN • Preparation of draft hazard log and preparation of material for hazard workshop. Despite this, and the release of the Scoping Report in October 2023, the Applicant endeavoured to assess the Mooir Vannin Offshore Wind Farm as far as possible and as appropriate for a Tier 2 project, producing a standalone CRNRA Addendum (APP-060) to support the NRA. The Applicant would also note that Mooir Vannin Offshore Wind Farm Limited has not engaged with the Applicant to date over its own shipping and navigation assessment and understands that draft NRAs have been produced without any consultation or involvement with the Applicant. Mooir Vannin Offshore Wind Farm Limited have been aware of the refined boundaries of the Morgan Array Area since January 2023 (i.e. almost two years), and the results of the CRNRA since October 2023 (i.e. over a year), and has therefore had sufficient time to incorporate the Morgan Array Area into their own assessments and develop appropriate mitigation. The Applicant notes that the Mooir Vannin is hosting a hazard workshop in December 2024 (which the Applicant will attend), and looks forward to constructive engagement in this process. The Applicant notes Mooir Vannin Offshore Wind Farm Limited's response to ExQ1 SN1.9 (REP3-041), which

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
				suggests that the updated design following the hazard workshop may not be available until March 2025, after the close of the Morgan Generation Assets Examination. For context, the Applicant would like to note that the shipping and navigation assessment of the revised boundaries of the Morgan Array Area developed in January 2023 took 10 months which included new analysis, modelling, stakeholder consultation, navigation simulations and a second hazard workshop.
REP3-041.5	Mooir Vannin Offshore Wind Farm Limited	**SN Shipping and Navigation** **SN1.8** **Cumulative and inter-related navigational risk assessment between Mooir Vannin and Morgan OWF developers** i) Provide an update report on contact between the Mooir Vannin OWF project developer and the Applicant for the Morgan Generation Assets project, specifically having regard to navigational safety concerns expressed by the MCA in [REP1-051]. ii) Advise if a Cumulative Regional Navigational Risk Assessment (NRA) will be carried out to take account of existing infrastructure in the east Irish Sea plus the proposed Morgan Generation Assets and Morecambe Generation Assets and Mona offshore wind projects.	i) Prior to the beginning of the Morgan OWF Examination, the engagement between the Applicant and Mooir Vannin Offshore Windfarm included: • 08/02/2024: Mooir Vannin attended MNEF 6 virtual meeting • 12/12/2023: Meeting between representatives of Morgan, Morecambe and Mona (MoMoMo) Projects. • 27-28/09/2023: Mooir Vannin attended Hazard Workshop but unable to comment on conclusions of assessments in workshop as we had not yet undertaken our own Navigational Risk Assessment, and Mooir Vannin not included within draft NRA presented. • 21/09/2023: Mooir Vannin attended Marine Navigation Engagement Forum (MNEF) 5 virtual meeting 24/03/2023: Meeting between representatives of MoMoMo	The Applicant confirms it will attend the hazard workshop hosted by Mooir Vannin Offshore Wind Farm Limited and, as per Issue Specific Hearing Action Point 5 (EV5-014), it will submit a report summarising the findings of that workshop to the ExA at Deadline 5. No pre-read material has been shared in advance of this workshop. As noted in response to ExQ1 SN1.8, the Applicant has engaged with Mooir Vannin Offshore Wind Farm Limited throughout the pre-Application assessment stage. Whilst the Applicant has not specifically engaged with Mooir Vannin Offshore Wind Farm Limited on shipping and navigation since the start of Examination, the Applicant notes that Mooir Vannin Offshore Wind Farm Limited have been undertaking their own NRA process. Details of this were shared with stakeholders (but not the Applicant) in July and August 2024. At this stage, the Applicant has not been provided with any further information regarding the boundaries of the Mooir Vannin Offshore Wind Farm following that received for the Mooir Vannin Scoping submission in October 2023. The Applicant notes that Mooir Vannin's NRA will include a cumulative assessment but that this may not be publicly available until March 2025, after the close of the Morgan Generation Assets Examination. The Applicant welcomes clarification from Mooir Vannin Offshore Wind Farm Limited on the guidance and legislation by which their assessment is undertaken. The

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
		iii) Summarise the policy considerations related to navigational safety and coexistence with other sea users which are being taken into account by Mooir Vannin Offshore Wind Farm Limited.	Projects and Mooir Vannin consents team. • 18/01/2023: Mooir Vannin invited to and attended MNEF 4 virtual meeting • 20/10/2022: Introductory meeting between representatives of MoMoMo Projects and Mooir Vannin consents team to discuss engagement and programme. • 11/10/2022: Mooir Vannin formal submission of AfL coordinates and request to be included in baseline assessments and Hazard Workshops regarding NRA to MoMoMo Projects. • Mooir Vannin have had no engagement with the Applicant regarding Shipping and Navigation since the beginning of their Examination in September 2024. With regards to the gap between the two projects, Mooir Vannin have continued engagement with both the operators of the Douglas-Heysham Route and the MCA, and will be holding a Hazard workshop in December 2024, to which the Applicant is invited. ii) The final Navigational Risk Assessment to be submitted at Application (March 2025) to the Isle of Man Government will include a cumulative effects assessment taking into account the existing infrastructure in	Applicant notes that the UK's MGN654 is the primary guidance for the NRA and therefore the approach would be consistent with that utilised by the Applicant. The Applicant notes that during ISH2, the Isle of Man Territorial Seas Committee stated that the MCA would be a consultee on relevant planning applications in the Isle of Man (EV4-003).

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
			the east Irish Sea, as well as those projects that fall within the study area. This includes the Morgan, Mona and Morecambe Offshore Windfarm generation projects. iii) As the Mooir Vannin Offshore Wind Farm falls wholly within the Isle of Man territorial seas, it falls under the jurisdiction of the Isle of Man government. In instances where Isle of Man specific policy and legislation does not exist, it has been agreed appropriate with stakeholders on the Isle of Man that Mooir Vannin follow relevant UK guidance. As such, a summary of the legislation, policy and guidance related to shipping and navigation that is of relevance to the Mooir Vannin Offshore Wind Farm navigational risk assessment is tabulated in a separate table below.	
REP3-041.6	Mooir Vannin Offshore Wind Farm Limited	**SN1.9** **Finalising design envelope and NRA for the Mooir Vannin OWF application** Could Mooir Vannin Offshore Wind Farm Limited confirm when it anticipates finalising its design envelope and NRA for application to the relevant consenting authority(ies), and will it be collaborating with the developer of the Morgan Generation Assets project in updating the Cumulative Regional NRA such that it might helpfully inform the ExA before the close of Examination.	Mooir Vannin is currently in the process of finalising the design of the project. With regards to shipping and Navigation, a draft Navigational Risk Assessment has been drafted for Mooir Vannin and shared with shipping operators for initial comment on potential routing impacts and a Hazard Workshop is planned for December 2024. The Applicants for Morgan, Mona and Morecambe Offshore Wind Farms have been invited to attend the Hazard Workshop. Following the hazard workshop, Mooir Vannin will be in a position to share information with the ExA on the final design of the project to be submitted at Application. Updating and/or reporting on the NRA will be done	The Applicant notes this response and that Mooir Vannin Offshore Wind Farm Limited are undertaking further studies which could result in amendments to their array scoping boundary but that these may not be available until after the close of the Morgan Generation Assets Examination. The Applicant confirms it will attend the Mooir Vannin Hazard Workshop planned for 12 December 2024 and, as per Issue Specific Hearing Action Point 5 (EV5-014), it will submit a report on the Applicant's participation in the Mooir Vannin NRA workshop the findings of that workshop to the ExA at Deadline 5. No pre-read material has been shared in advance of this workshop.

Reference	Question is addressed to	ExA Question	Mooir Vannin's Response	Applicant's Response
			for final application following the Hazard Workshop and will be completed by Application (March 2025). As such, the final NRA including any updated design information, may not be available to the ExA of the Morgan OWF project before the close of their examination.	
REP3-041.7	Mooir Vannin Offshore Wind Farm Limited	SN1.8.	Additional to SN1.8. The below table shows the legislation, policy and guidance of relevance to shipping and navigation for Mooir Vannin. (see table)	The Applicant welcomes clarification from Mooir Vannin Offshore Wind Farm Limited on the guidance and legislation by which their assessment is undertaken. The Applicant notes that the UK's MGN654 is the primary guidance for the NRA and therefore the approach would be consistent with that utilised by the Applicant.
REP3-039.1		Additional submissions in response to **CE1.5**	See Figure in EN010136-000540-Mooir Vannin Indicative Layout.pdf for Mooir Vannin Indicative Layout.	The Applicant does not intend to comment on the Mooir Vannin Indicative Layout set within their Scoping Boundary.
REP3-040.1		Additional submissions in response to **CE1.5**	See EN010136-000538-Mooir Vannin PEI Project Description.pdf for Mooir Vannin Project Description	The Applicant notes that this document is the same as that published with the Mooir Vannin early consultation materials on 15 July 2024.
REP3-042.1		Additional submissions in response to **CE1.5**	See EN010136-000584-Mooir Vannin Scoping Opinion 2024.pdf for Mooir Vannin Scoping Opinion	The Applicant does not intend to comment on the Mooir Vannin Scoping Opinion.
REP3-043.1		Additional submissions in response to **CE1.5**	See IMW01_Scoping_Report for Mooir Vannin Scoping Report	The Applicant does not intend to comment on the Mooir Vannin Scoping Report.

2.9 Morecambe Offshore Windfarm Limited

Table 2.10: REP3-044: Response to Maritime and Coastguard Agency ExAQ1 response

Reference	Question is addressed to	ExA Question	Morecambe Offshore Windfarm Limited's (MOWL)'s Response	Applicant's Response
REP3- 044.1	Morecambe Offshore Windfarm: Generation Assets	**GEN 1.5** **Interrelationship report on other infrastructure projects** An Interrelationship Report was submitted by the Applicant at Deadline 1 [REP1-017]. The applicants of the other named projects which are IPs in this Examination are asked to provide comments on the content of the Report.	**GEN 1.5** Morecambe Offshore Windfarm Ltd have reviewed the Interrelationship Report and were provided an early draft by the Applicant to allow input and collaboration. As such Morecambe Offshore Windfarm Ltd are generally aligned on the overall content of the Report. It is noted that a similar document has been requested as part of the Examination in respect of the Morecambe Generation Assets, and Morecambe Offshore Windfarm Ltd will submit its own such interrelationship report at Deadline 1 for that Examination, which follows a similar structure and has been informed by the Applicant's Report (REP1-017).	The Applicant acknowledges MOWL's response. The Applicant notes that MOWL has now submitted their own Interrelationship Report at Deadline 1 (Morecambe Offshore Windfarm: Generation Assets Examination Reference REP1-078), and that a draft was also shared with the Applicant prior to submission in the interests of continued collaboration.
REP3- 044.2	Morecambe Offshore Windfarm: Generation Assets	**MO 1.14** **Morecambe Offshore Windfarm: Generation Assets, Collaborative Monitoring** Paragraph 2.8.87 of NPS EN-3 states that "Where appropriate, applicants are also encouraged to consider monitoring collaboratively with other developers and sea users. Work is ongoing between government and industry to support effective collaboration and the development of monitoring at a strategic level". The ExA is aware that the submitted IPMP for Morecambe Offshore Windfarm: Generation Assets (EN010121 [APP-148])	**MO 1.4** The Morgan Generation Assets is located beyond 10 km from the Liverpool Bay SPA and as stated by the Applicant no red-throated diver were recorded in the baseline surveys (see Table 5.12 of Volume 2, Chapter 5 Offshore ornithology (APP023)). The Morecambe Generation Assets are adjacent to the Liverpool Bay SPA and Morecambe Offshore Windfarm Ltd consider that there would be differences between the assessments for each project for red-throated diver.	Please see the Applicant's response to ExQ MO 1.14 (REP3-006).
REP3- 044.3	Morecambe Offshore Windfarm: Generation Assets		**MO 1.4** Morecambe Offshore Windfarm Ltd. have included options for potential offshore ornithology monitoring in the IPMP submitted in the Morecambe Generation DCO Application (EN010121) as a basis for discussion with SNCBs, but with no direct commitment to monitoring. Since the submission of the IPMP, concerns in relation to potential effects on	Please see the Applicant's response to ExQ MO 1.14 (REP3-006).

Reference	Question is addressed to	ExA Question	Morecambe Offshore Windfarm Limited's (MOWL)'s Response	Applicant's Response
		includes provision for ornithological monitoring. The Applicant and Morecambe Offshore Windfarm Ltd are both asked to: i) Explain what are the differences in effects to ornithological receptors that have triggered monitoring in the case of Morecambe OWF but not for the Proposed Development? ii) Comment on whether collaborative ornithological monitoring is being considered between Morgan and Morecambe, and if so, the form which this is likely to take. Include collaborative monitoring in the next version of the Interrelationship Report [REP1-017] (for ornithology and any other topics as applicable).	red-throated diver (Natural England, Morecambe Offshore Windfarm: Generation Assets Examination Library Reference RR-061) have been raised, and this is intended to be the focus of Morecambe Offshore Windfarm Ltd proposed ornithological monitoring (see RR-061-40 in 8.3 The Applicant's Response to Relevant Representations (EN010121 PD1-011, Morecambe Offshore Windfarm: Generation Assets Examination Library Reference)).	
REP3- 044.4	Morecambe Offshore Windfarm: Generation Assets		**MO 1.4** Morecambe Offshore Windfarm Ltd consider discussions on ornithological monitoring for the Morgan project are best placed between the Applicant and SNCBs. While Morecambe Offshore Windfarm Ltd would be open to consider the possibility of collaborative monitoring if any was identified to be required for the Morgan project, Morecambe Offshore Windfarm Ltd have not identified the requirement or need for any collaborative monitoring and state in our IPMP that any opportunities would be discussed outwith the IPMP and are not required to mitigate effects from the projects.	Please see the Applicant's response to ExQ MO 1.14 (REP3-006).

2.10 Natural England

Table 2.11: REP3-048: Response to Natural England ExAQ1 response

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
REP3-048.1	Applicant	**Cross-Topic and General** **GEN 1.1** **Errata and Additional Documents** A number of errata sheets and other additional documents have been submitted into the Examination to date to correct certain discrepancies and provide clarification to Interested Parties (IPs), particularly in relation to ornithological matters. Whilst it is understood that the documents do not affect the conclusions on significance in the Environmental Statement (ES), the Examining Authority (ExA) is concerned that the deadline format of the errata sheet and range of additional submissions will make the original ES and other application documents difficult to follow as the Examination progresses and may not be adequately secured as Certified Documents. Furthermore, it may prejudice IPs ability to access the correct information so that they can make reasoned and informed comments. This has also been highlighted by Natural England [REP2-032]. The Applicant is asked to confirm its approach to errata sheets going forward in the Examination from Deadline 3 and confirm that where there are a number of amendments, updated clean versions of the relevant ES chapters and annexes, Habitats Regulations Assessment (HRA) and other	**GEN 1.1** Natural England welcomes the ExA comments in relation to Errata and Additional Documents submitted by the Applicant. We support the request for updated clean versions of the relevant ES chapters and annexes, HRA and other documents to be provided by the Applicant at Deadline 6. Natural England will review the updated documents once they have been submitted.	The Applicant responded to ExQ1 GEN 1.1 in REP3-006.

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		documents will be provided by Deadline 6 along with tracked changed versions.		
REP3-048.2	Natural England	**GEN 1.6** **Responses within Natural England's Risk and Issues Log** The ExA notes that a large number of issues identified within Natural England's Risk and Issues Log remain unchanged or are greyed out without comment by Natural England at Deadlines 1 and 2 [REP1-053 and REP2-033]. Natural England are asked to advise the ExA whether the Applicant's responses to the matters listed below satisfy the concerns of Natural England, but if not, why not, and what further information is the Applicant required to provide to try to secure NE's agreement? • Natural England References C5/ C21/ C43; Applicant Responses [PD1-017 RR-26.C5/C21/ C43] • C9 [PD1-017 RR-26.C9] • C16 [PD1-017 RR-26.C16] • C36 [PD1-017 RR-026.C36] • C39 [PD1-017 RR-026.C39] • C40 [PD1-017 RR-026.C40] • C41 [PD1-017 RR-026.C41] • D8 [PD1-017 RR-26.D10] • D9/ D17 [PD1-017 RR-26.D11/ D19] • F2/ F11 [PD1-017 RR-26.F2/F11] • F7 [PD1-017 RR-26.F7]	**GEN 1.6** Natural England provides the following clarifications on our Risk and Issues Log: Each comment has been assigned a RAG rating depending on the scale of significance, as defined in our 'How to Read Risk and Issues Log' tab. If an issue which was initially classed as Red or Amber in our Risk and Issues Log is resolved during the Examination, we will reflect that by updating the comment to green if there is a broad agreement. In some cases where Natural England doesn't agree with the Applicant's position or approach but are satisfied that for this particular project it is unlikely to make a material difference to our advice, the comment will be updated to yellow Due to the high workload highlighted in our Relevant Representations across all the Round 4 projects, and the overlap with the Morgan and Morecambe Transmission Assets Relevant Representations period, Natural England do not have capacity to engage any further with yellow comments, given that they will not materially affect the outcomes of the assessment in this instance. Therefore, we advise that we have no further comments to make on the following, and therefore from our perspective these issues	The Applicant welcomes the update provided by Natural England.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		•F10 [PD1-017 RR-26.F10] • G17 [PD1-017 RR-26.G21] In addition, while the ExA acknowledges Natural England's reason for using the greyed out method within the Risk and Issues Log, can it advise the ExA that an issue which is agreed during the Examination between NE and the Applicant will go green before grey, for the ExA will be seeking to understand at the close of the Examination how many issues NE has agreed with the Applicant throughout the Examination?	can be considered closed: • C9 [PD1-017 RR-26.C9] • C16 [PD1-017 RR-26.C16] • C36 [PD1-017 RR-026.C36] • C39 [PD1-017 RR-026.C39] • C40 [PD1-017 RR-026.C40] • C41 [PD1-017 RR-026.C41 We have provided further clarification on the following comments within our Risk and Issues Log submitted at Deadline 3 (Appendix I3): • C5/ C21/ C43 • D8 [PD1-017 RR-26.D10] • D9/ D17 [PD1-017 RR-26.D11/ D19] • F2/ F11 [PD1-017 RR-26.F2/F11] • F7 [PD1-017 RR-26.F7] •F10 [PD1-017 RR-26.F10] • G17 [PD1-017 RR-26.G21]	
REP3-048.3	Applicant MMO Natural England	**GEN 1.8** **Monitoring 1** Paragraph 2.8.221 of National Policy Statement (NPS) EN-3 requires Applicants to develop an ecological monitoring programme to monitor impacts during the pre-construction, construction and operational phases to identify the actual impacts caused by the project and compare them to what was predicted in the EIA/HRA. Natural England (NE) also raise this issue in their Relevant Representations and further advise in their Written Representation at Deadline 1 [REP1-054] that the In-Principle Monitoring Plan (IPMP) should focus on what the	**GEN 1.8** Natural England welcomes the Applicant's inclusion of monitoring proposals across several receptors in the revised updated Offshore IPMP submitted at Deadline 2. We have acknowledged this in our updated response to the Offshore In-Principal Monitoring Plan (Appendix H3) and also reflected this in comments D23, F4 and F14 in our Risk and Issues Log (Appendix I3). However, we note that the ExA have requested further information, particularly in relation to ornithological monitoring as set out in ref: MO 1.13. Natural England is supportive of this request and advise that	The Applicant responded to ExQ1 GEN 1.8 and MO 1.13 in REP3-006 and has responded to Natural England's submission at Deadline 3 in S_D4_6_Applicant's Response to IP submissions submitted at Deadline 3. Please also refer to section 7. b) of the Written Summaries - Issue Specific Hearing 2 (S_D4_4) and the response to HAP_ISH2_18 and HAP_ISH2_23 in the Issue Specific Hearing 2 Hearing Action Points (S_D4_3).

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		uncertainties and evidence gaps of the EIA and /or HRA are. Can the Applicant: (i) Summarise how it has met the NPS EN-3 requirement and whether it will liaise with NE to improve the IPMP, and if not why not? Can the MMO and NE: ii) Review and provide comments on the Applicant's revised outline Offshore In-Principle Monitoring Plan at Deadline 2 [REP2-014 Tracked Change Version] and the Mitigation and Monitoring Schedule [REP2-016 Tracked Change Version]?	once the Applicant has considered this request and updated their Offshore IPMP accordingly, we will provide comments at the subsequent deadline.	
REP3-048.4	Natural England	**CE Cumulative Effects** **CE 1.7** The Triton Knoll Offshore Wind Farm Order 2013 and stranded assets Natural England advise that it is broadly content that the approach to the different scenarios in the CEA but maintain several concerns related to the wider issue of the 'coordinated approach' and stranded assets as outlined in Annex 1 of its RR [RR-026]. A copy of the decision documents associated with the Triton Knoll Offshore Wind Farm Order 2013 and an explanation of how the Proposed Development differs from this were provided by the Applicant at Deadline 1 [REP1-007 and REP1-008]. The Interrelationship Report [REP1- 017] also refers to the approach at section 1.8. Could Natural England clarify if it has any further comments on this matter, and does it continue to recommend a requirement is	**CE 1.7** Natural England notes the Applicants position. Whilst Natural England's overarching advice on stranded assets remains unchanged, we highlight that the submission of the Morgan and Morecambe Transmission Assets Application in October 2024 provides an opportunity for issues raised in regard to holistically assessing the project to be addressed. However, this is dependent upon CEA and in-combination assessments being updated accordingly to reflect any changes made during the two examinations. We do note that at the scheduled determination date for the Morgan generation assets, the transmission asset Examination is unlikely to have concluded and/or the Examiners report to DESNZ will not be available. Therefore, and depending on the extent of outstanding issues in relation to the	The Applicant does not have anything further to add to its previous submissions on this matter (see PD1-015 and REP1-004). The Applicant maintains that Natural England's concerns are misplaced and the suggested requirement unnecessary.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		imposed similar to that recommended for Triton Knoll?	transmissions assets and the cumulative/in-combination assessments, it is plausible that the decision maker may wish to consider the use of a condition along the lines recommended by the Triton Knoll Examining Authority to manage any risks.	
REP3-048.5	Applicant Natural Resources Wales	**HRA Habitat Regulations Assessment** **HRA 1.1** **Habitats Regulations Assessment Derogation** NPS EN-1 paragraph 5.4.27 states that a derogation case should be provided by an Applicant as soon as is reasonably possible and before the close of the examination if a Statutory Nature Conservation Body (SNCB) gives an indication in Examination that the Proposed Development is likely to adversely impact the integrity of habitat sites. NE [RR-026 and REP1-053] have stated it is not satisfied that it can be excluded beyond reasonable scientific doubt that the Proposed Development would have an adverse effect alone or in-combination on the integrity of the following sites: • Liverpool Bay Special Protection Area (SPA); • Morecambe Bay and Duddon Estuary SPA and Ramsar; • Ribble and Alt Estuaries SPA and Ramsar; • Bowland Fells SPA; • Isles of Scilly SPA; and • Flamborough and Filey Coast SPA. The ExA notes that in recent decisions on offshore windfarms, the Secretary of State	**HRA 1.1** Natural England considers the risk of adverse effects on the SPAs listed is generally low, and that the submission of in-principle compensatory measures with respect to English SPAs is unlikely to be necessary. This may not be the case for Welsh or Scottish SPAs however, and the advice of NRW and NatureScot should be sought. However, at present it is not possible for Natural England to definitively rule out adverse effects, for the following reasons: Liverpool Bay SPA – we have outstanding concerns regarding the disturbance and displacement effects on red-throated diver and common scoter due to the vessel movements during the construction and operations & maintenance (o&m) phases. See response to HRA1.5 below. Other SPAs – whilst the collision risk on the classified features of these sites is likely to be low, the Applicant's reluctance to provide impact assessment outputs in line with all elements of SNCB advice means that we cannot confidently rule out adverse effects in-combination with other plans and projects. However, we are hopeful that should such	The Applicant is confident that there is no adverse effect on integrity for any European sites both alone and in combination (HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098)). The Applicant has provided numerous clarification notes to present information in the manner requested by Natural England. The Applicant has also completed the historic projects gap filling exercise as requested by Natural England which is an approach that goes beyond that presented for any previous offshore wind farm application, providing quantitative consideration of impacts for those projects considered qualitatively (REP1-010). The Applicant has held recent discussions with Natural England (13 November 2024) and is working with Natural England to provide a summary of data (tabulated or a spreadsheet) to be submitted into the Examination which will reduce the volume of documents submitted into the Examination and resolve the outstanding methodological issues to allow the conclusion of no adverse effect along and in combination for all European sites. It is the Applicant's understanding based on recent discussions with Natural England (13 November 2024) that the matter in relation to

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		has agreed that derogations cases are required in relation to effects on the Flamborough and Filey Coast SPA. The Applicant is requested to provide an in principle derogations case in view of the SNCB position. The ExA is mindful of the Secretary of State's duties under the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017, and of the impact of this submission on the smooth running of the Examination.	outputs be provided, this issue should be resolvable. We understand that the Applicant is submitting a further Cumulative Effects Assessment (CEA) at Deadline 3 that we would also wish to review before confirming our integrity advice. We highlight that a greater 'air gap' between the turbine blades and the sea surface will reduce the potential collision risk from the project, which would further decrease the likelihood of adverse effects. It would also help address the contribution of the project to the potentially significant cumulative EIA-level impact on great black-backed gull.	the Liverpool Bay SPA will be resolved through the submission of the Outline Offshore EMP submitted at Deadline 4 (S_D4_11) (see also Natural England's response at REP3-048.8, REP2-018 and APP-070). This issue is also resolved with NRW and therefore the Applicant considers this issue closed. In relation to collision risk, the Applicant provided collision risk estimates calculated applying Natural England's recommended parameters and incorporated these into the assessments presented in Volume 2, Chapter 5: Offshore ornithology (APP-023) and HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098). Since the submission of the application, the Applicant has continued to provide additional information to satisfy the requests of Natural England, including many aspects that were out of the control of the Applicant (i.e. the submission of the Seabirds Count dataset subsequent to the completion of apportioning for the project). The Applicant has worked efficiently to provide this information and considers that the information provided should allow Natural England to confirm that the potential for any adverse effect on integrity of a site can be ruled out. The Applicant has already committed to an increased air gap as part of the project design (34 m above LAT, section 5.8 of APP-023) and this is reflected in the very low impact magnitudes predicted for all species

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
				and qualifying features. The Applicant notes that for the Mona Offshore Wind Project, JNCC and NRW have welcomed the inclusion of a 34 m air gap in the project design with JNCC stating that *"We do not therefore propose that the Applicant needs to implement additional mitigation measures."*. See REP4-098 and REP4-112 of the Mona Offshore Wind Project examination.
REP3-048.6	Applicant Natural England Natural Resources Wales	HRA 1.5 **In-combination Effects at Screening** Section 1.4 of the HRA Stage 1 Screening Report [APP-099] details the Applicant's overarching approach to assessing in-combination effects. For screening LSE in combination, it states that it is not necessary to consider in-combination effects for sites/ features for which an LSE 'alone' has been identified – rather, it is for those where no LSE was concluded. However, this is contradicted in numerous screening matrices which state that (ExA emphasis): "Where the additional mortality associated with the Morgan Generation Assets is zero birds or it has been concluded for the project alone that there is no LSE it is considered that the Morgan Generation Assets will not act in-combination with other plans and projects and therefore no LSE is concluded" (eg. Table 1.67 note g [APP-099]). The ExA notes the Applicant's commitment to assessing in-combination effects where no LSE from the project alone has been	Natural England consider that for designated sites within English jurisdiction, the likelihood for an in-combination LSE for any site/feature where the Applicant has excluded an LSE from the project alone is low. However, we continue to be concerned that the Screening Report did not identify an LSE from the project alone for red-throated diver and common scoter at Liverpool Bay SPA, as referenced in our Relevant Representations ([RR-026], B41 and B53). We advise that the Applicant should consider Liverpool Bay SPA at the appropriate assessment stage, and include the Natural England Best Practice Protocol for vessel movements within 2km of the SPA as a mitigation measure in order to rule out an AEoI. We advise that this commitment should be secured within the Outline EMP (please also see our response to question HRA 1.11).	It is the Applicant's understanding based on recent discussions with Natural England (13 November 2024) that the matter in relation to the Liverpool Bay SPA will be resolved through the submission of the Outline Offshore EMP submitted at Deadline 4 (S_D4_11) (see also REP3-048.8, REP2-018 and APP-070). The Outline Offshore EMP includes the 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' (APP-070) as an Annex, which states that all vessel operators even beyond 2 km must follow the best practices to minimise disturbance.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		concluded, as set out in section 1.4 of the HRA Stage 1 Screening Report [APP-099]. i) Can the Applicant provide such an assessment, where this has not been done within the HRA and identify the projects or plans considered? ii) Do NE or NRW consider that there is the potential for an in-combination LSE for any site/ feature where the Applicant has excluded a LSE from the project alone?	We defer to NRW for comment on sites within their jurisdiction.	
REP3-048.7	Applicant Natural England Natural Resources Wales	HRA 1.9 **HRA Stage 2 Assessment – SAC Condition Assessments** The Stage 2 SAC Report [APP-097] notes that condition assessments are not available for a number of SACs. Can the Applicant and NE/ NRW confirm whether condition assessments have since become available or are likely to become available during the course of the examination for any of the following: • River Derwent and Bassenthwaite Lake SAC; • Solway Firth SAC; • North Anglesey Marine/ Gogledd Môn Forol SAC; • North Channel SAC; • Murlough SAC; • The Maidens SAC; • Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC;	Natural England can confirm that the condition assessments for the SACs listed within Natural England's jurisdiction are not available. We defer to NRW to comment on SACs within their jurisdiction.	The Applicant notes Natural England's response that the condition assessments for the SACs listed in Natural England's jurisdiction are not available. NRW has also confirmed at Deadline 4 (S_D4_5, HRA 1.9) with regards to SACs in Welsh waters from this list that there are no condition assessments available and there are not likely to be any available during the course of examination.

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		• Lundy SAC; and • Isles of Scilly Complex SAC.		
REP3-048.8	Applicant Natural England	HRA 1.11 **Environmental Management Plan and Liverpool Bay SPA** NRW in its RR [RR-027] raises concerns around impacts to red-throated diver and common scoter of Liverpool Bay SPA from vessel movements, noting that the offshore EMP would include measures to minimise disturbance to rafting birds from transiting vessels. The Stage 2 SAC Report [APP-097] and Stage 2 SPA/Ramsar Report [APP-098] rely upon measures in an Offshore EMP to avoid adverse effects on marine mammal and offshore ornithological qualifying features. The Applicant has responded to concerns raised by NE and NRW [RR-026; RR-027] regarding potential disturbance and displacement impacts from vessel movements on qualifying features of Liverpool Bay SPA (page 144 [PD1-017]). NRW [REP1-056] has subsequently stated that "… based on the adoption of best practice vessel operations to minimise disturbance it is likely that an AEoSI from operation and maintenance vessel movements can be ruled out…". Can the Applicant provide an outline Offshore EMP to provide assurance that all measures relied upon to avoid AEoI are secured? This should include any proposed measures to minimise disturbance to rafting	**HRA 1.11** Natural England notes and welcomes the request from the ExA to the Applicant to provide an outline Offshore EMP. We advise that the adoption of best practice vessel operations to minimise disturbance from o&m vessel movements should be included within the outline Offshore EMP. We have supplied a copy of Natural England's Best Practice Protocol in our Relevant Representations ([RR-026], B41). Once this mitigation is secured within the outline Offshore EMP and submitted into Examination, it is likely that we can agree that an AEoI from operation and maintenance vessel movements can be ruled out.	Please see the Applicant's response to REP3-048.6.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		birds from transiting vessels, noting this is a specific concern of NE [RR-026] and NRW [RR-027] in relation to qualifying features of Liverpool Bay SPA. Can Natural England subsequently confirm whether the Applicant's response addresses their concerns and what mitigation, if any, would allow them to agree that an AEoI could be excluded?		
REP3-048.9	Historic England Natural England	**HE 1.11** **World Heritage Sites** The ExA notes from Historic England's WR [REP1-046] that it is "prepared to agree with the assessment presented that effects during construction, operations and maintenance, and decommissioning of the Morgan Generation project on the assessed designated historic assets within the English study area are not significant in EIA terms" (para 4.9) and that it has "no further comment or other advice to offer regarding the conclusions drawn by the Applicant, as relevant to any cumulative impact on the setting of heritage assets in the English coastal zone" (para 6.3). However, no specific comments are made by Historic England or Natural England regarding the Applicant's assessment of World Heritage Sites (WHS), of which both Hadrian's Wall and the English Lake District were scoped out of assessment for the reasons given in Appendix B of the Cultural Heritage Assessment [APP-062]. Nonetheless, the Seascape Landscape and	**HE 1.11** Natural England defer to Historic England for comment on documents which relate to World Heritage Sites (WHS). However, we highlight that we reviewed the SLVIA reports following acceptance of the Application and raised a technical issue with the SLVIA assessment visualisations in the cover letter of our Relevant Representations [RR-026, Section 5.6]. However, we advise that issue has now been resolved, as set out in our Risk and Issues Log (Appendix I3), and therefore we do not have any outstanding concerns with the SLVIA assessment regarding potential impacts on designated landscapes, including the Lake District National Park.	The Applicant notes the response and that Natural England have no further comments or concerns regarding the SLVIA.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		Visual Impact Assessment (SLVIA) includes at Annex 10.5 [APP-038] an assessment of effects of the Proposed Development on the English Lake District WHS, and there are a number of viewpoints taken from within the WHS (Figures A.1 to A.3 [APP-038] and Annex 10.6 [[APP-039, 40, 41, 42, 43 and APP-044]]). Historic England and Natural England are asked: i) Whether they agree with the Applicant's reasons for scoping the WHS out of the Heritage Impact Assessment. ii) Provide comment on the above-mentioned SLVIA documents which relate to the WHS		
REP3-048.10	Marine Management Organisation Natural England Natural Resources Wales	**MFS Marine Fish & Shellfish Ecology** **MFS 1.2** **Seasonal Exclusion Period for Piling** A seasonal piling restriction has been suggested by Natural England [RR-026] and the MMO [RR-020] to mitigate underwater sound and vibration effects on herring and cod during installation of the offshore substation. The Applicant's Deadline 1 submission in response to Issue Specific Hearing 1 Action Point 14 [REP1-009] states that the application of blanket seasonal restrictions at this stage could be disproportionate to the ecological risk. i) What is the MMO and Natural England's view on the proportionality point? ii)	**MFS 1.2** Natural England notes that the seasonal piling restriction was raised by the MMO and CEFAS. However, we support the advice given by the MMO and CEFAS. And continue to defer to them on this matter.	The Applicant notes Natural England's response.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		Is any further evidence available to help define an appropriate and informed 'sensitive' exclusion period for the area of the Proposed Development? iii) Could a refined spatial piling exclusion area be defined instead of an exclusion period over the whole array area? iv) Noting that soft-start ramp ups has been explicitly rejected by the MMO, Natural England and NRW as a primary mitigation measure to reduce the risk of injury/mortality to fish, what type of measures are feasible and specific to fish that could prevent the need for a seasonal piling restriction? v) Are any changes necessary to the draft DCO/DMLs to reflect seasonal piling restrictions as a fallback position in the event that appropriate post consent controls/measures are not able to be agreed in the final Underwater Sound Management Strategy?		
REP3-048.11	Applicant Marine Management Organisation Natural England	**MFS 1.3** **Scoped Out Impacts** In its Scoping Opinion the Planning Inspectorate advised that it was not content to scope out the possible impacts of underwater wind turbine sound and it reserved its position on scoping out underwater sound from vessels. There does not appear to be any information on wind turbine sound impacts on fish and shellfish receptors during the operational phase submitted. The ExA notes the justification provided in Table 3.8 of ES Volume 2,	Natural England highlights that underwater noise from turbines are not typically assessed for fish receptors because at present there is limited evidence/information to suggest a need to do so. However, for all fish related underwater noise assessments relating to this project we defer to Cefas's technical expertise.	The Applicant notes and welcomes Natural England's response.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		Chapter 3 [APP-021] but is unclear if the evidence referenced can be applied to turbines of the size and number proposed. i) Can the Applicant provide project specific information on underwater sound from wind turbines during the operational phase? ii) Can the MMO and NE advise of any specific concerns regarding potential underwater sound from turbines and/ or vessels during the operational phase impacting fish and shellfish receptors?		
REP3-048.12	Applicant Marine Management Organisation Natural England	**MFS 1.6** **Recovery Period for Temporary Habitat Loss/Disturbance** Paragraph 3.9.2.18 of ES Volume 2, Chapter 3 [APP-021] states that the recoverability and rate of recovery of an area after large scale seabed disturbance is linked largely to substrate type, but that gravelly and sandy habitats, similar to those found in the Morgan fish and shellfish ecology study area, have been shown to return to baseline species abundance in 5-10 years. Paragraph 3.9.2.61 states that the MDS for the decommissioning phase assumes that all foundations and cables will be removed and that the decommissioning sequence will generally be a reverse of the construction sequence. Assuming that it would take another 5-10 years post decommissioning to return to the baseline species abundance, can the Applicant, the MMO and Natural England advise why the impact of construction and decommissioning on large	**MFS 1.6** Natural England agrees with the ExA that more persistent impacts from habitat disturbance, may be considered long term. However, there remains an argument for EIA impacts to still be considered temporary. This is because following cessation of disturbance, there is evidence that fish populations can recover and without further seabed disturbance be maintained over the operational phase of the windfarm and/or post decommissioning. Therefore, we advise that any further habitat disturbance impacts from decommissioning should be considered as a separate discrete impact. Natural England highlights that lasting habitat loss would occur where infrastructure is installed for the lifetime of the project. However, we do believe that mitigation measures for loss of supporting habitat for	The Applicant notes the response provided by Natural England and welcomes the agreement that mitigation is not required for this impact on fish and shellfish receptors. The effects of temporary habitat loss as a result of decommissioning have been assessed in section 3.9.2.61 of Volume 2, Chapter 3 (APP-021). With regard to the timescales of recovery, the timescales quoted in this question are considered precautionary as set out in the Applicant's response to this question (REP3-006).

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		scale seabed disturbance should not be reconsidered as a long-term habitat loss impact.	fish and shellfish are not required for this project.	
REP3-048.13	Marine Management Organisation Natural England Natural Resources Wales	**MM Marine Mammals** **MM 1.5** **Masking** In relation to the assessment of effects from underwater sound on marine mammals the Applicant states at Paragraph 4.9.1.2 of ES Volume 2, Chapter 4 [AS-010] that there is insufficient evidence to properly evaluate masking and no relevant threshold criteria to enable a qualitative assessment. Can the MMO, Natural England and NRW advise if they agree with this statement? If not can they suggest whether the Applicant needs to address the masking scenario?	**MM 1.5** **Masking** Natural England agree that there is limited evidence to inform an assessment on masking. However, we highlight that with the implementation of NAS, the personified areas will be smaller which would reduce the impact of masking.	The Applicant notes Natural England's response.
REP3-048.14	Marine Management Organisation Natural England	**MM 1.8** **UXO High Order Clearance Sound Modelling** Paragraph 4.9.3.2 ES Volume 2, Chapter 4 [AS-010] relating to UXO clearance states that sound modelling for high order detonation, acoustic modelling was undertaken following the methodology described in Soloway and Dahl (2014). Given the 2014 date of the Soloway and Dahl publication, can the MMO and NE advise if this is the most up to date/ best practice method?	**MM 1.8** Natural England advise that the Soloway and Dahl (2014) is widely accepted with regards to the UXO High Order Clearance Sound Modelling, despite its age.	The Applicant notes Natural England's response.
REP3-048.15	Marine Management Organisation Natural England	**MM 1.12** **Cumulative Underwater Sound: Residual Effects**	**MM 1.12** NAS are proven to reduce the level of noise generated at source and its propagation	The Applicant notes the expected commencement of the Defra policy implementation to be January 2025. To date, the Applicant (and wider industry) has not

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
	Natural Resources Wales	The cumulative effects assessment in ES Volume 2, Chapter 4 Marine Mammals [AS-010] identifies potentially significant adverse residual effects in terms of cumulative piling sound impacts on Bottlenose Dolphin and cumulative UXO clearance sound on harbour porpoise. The Applicant proposes that mitigation measures will be developed in consultation with the licensing authority and SNCBs post-consent to reduce any potential residual effects for Bottlenose Dolphin and Harbour Porpoise. Can the MMO, Natural England and NRW confirm if they are confident that mitigation options exist to reduce the residual effects.	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. We highlight that Defra are actively considering updating marine noise policy, and that an announcement is likely to be made in the near future. The policy direction is towards an expectation that all offshore wind developers carrying out pile driving activity in English waters should 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 onwards. We will keep the Examination updated on any policy changes.	been provided with a draft of the policy, or a summary of its content, despite the potential significant implications. The Applicant will consider the Defra policy as soon as it is available.
REP3-048.16	Applicant Marine Management Organisation Natural England Natural Resources Wales	**MM 1.13** **Cumulative Assessment – Injury due to Collision with Vessels** Table 4.57 in ES Volume 2, Chapter 4 [AS-010] relating to the cumulative increased likelihood of injury due to collision with vessels suggests that sound emissions from vessels will likely deter animals from the potential zone of impact. Given that this part of the Irish Sea is well-trafficked with vessels, and given the potential temporal and spatial overlap with other projects, can the Applicant, the MMO, NE and NRW clarify if there a possibility that an animal fleeing the sound of construction/maintenance vessels (or indeed piling/ UXO clearance) from one	**MM 1.3** Natural England advise there is a possibility that an animal fleeing the sound of construction/maintenance vessels (or indeed piling/ UXO clearance) from one project might find themselves within the zone of influence of another project. Therefore this should be adequately assessed within the cumulative assessment.	The Applicant notes Natural England's response and refers to its own response to the ExA's question in our submission at Deadline 3 (MM 1.13, REP3-006). In this submission the Applicant has offered further detail to support the conclusions of the impact assessment and considers a robust cumulative assessment of impacts on marine mammals has been presented and it is considered highly unlikely that marine mammals would be at greater risk of collision from moving from the zone of influence of one project into the zone of influence of another project.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		project might find themselves within the zone of influence of another project?		
REP3-048.17	Natural England	**MM 1.20** **Joint Nature Conservation Committee (JNCC) Guidance on UXO Clearance** In the Applicant's response to Relevant Representations [PD1-017] it makes reference to new guidance being published soon by the JNCC on UXO clearance. As the consultee authorised to exercise the JNCC's functions in English Waters, can Natural England advise when publication of this guidance is expected, and if not, can it advise what guidance is currently in place and submit it into the Examination.	**MM 1.20** The new UXO guidance is an updated joint statement due to be published the same time as the anticipated updated marine noise policy, as outlined in MM 1.12. The current joint statement on UXO clearance is here - Marine environment: unexploded ordnance clearance joint interim position statement - GOV.UK For completeness, the current UXO mitigation guidance from JNCC is here - JNCC guidelines for minimising the risk of disturbance and injury to marine mammals whilst using explosives | JNCC Resource Hub.	The Applicant notes Natural England's response.
REP3-048.18	Natural England	**MM 1.21** **Scare Chargers for UXO Clearance** In its RR [RR-026] Natural England raised concern (C4) that it does not support the use of scare charges for UXO clearance and request this measure is removed from the final MMMP. Can NE explain if it is seeking inclusion of an alternative mitigation measure for impacts to marine mammals, or just removal of scare charges for UXO clearance?	**MM 1.21** Natural England is content with the removal of scare changers from the MMMP. No alternative measures are required.	The Applicant notes Natural England's response. The Applicant considers the response on this issue previously supplied at Deadline 3 to Natural England's Relevant Representations (RR-026, C4) to be robust (PD1-017). The Applicant highlighted that the final MMMP will be developed in consultation with key SNCBs, including Natural England, and that there will be due consideration to the judicial use of scare charges as a mitigation tool if required. The Applicant highlights that such charges would only be required in the event of high order detonation of UXOs and that, as per the mitigation hierarchy set out in the outline UWSMS

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
				(APP-068) and the outline MMMP (APP-072), the preference is for a low order clearance option in the first instance. The Applicant notes that there has been no update on Natural England's position at further deadlines.
REP3-048.19	Natural England	**MM 1.22** **Marine Mammal Sensitivity and Prey Availability** In its RR [RR-026] Natural England raised concern (C18) that the Applicant had been inconsistent in its approach to assigning the sensitivity score for effects on marine mammals due to changes in prey availability. The Applicant's response [PD1-017] (RR-026.C18) stated that Minke whale are considered to have reliance on herring, whereas harbour porpoise and seal have ability to switch prey, and hence have different sensitivity. Can Natural England advise if Minke whale sensitivity should be upgraded to high based on single prey reliance? The ExA notes that Natural England has greyed out the C18 field in its Deadline 1 submission [REP1-053], which suggests NE does not think it will make a material difference, but clarity on this matter is required.	**MM 1.22** Natural England is content with the assigned sensitivity score for minke whales. Due to the vulnerability of harbour porpoise and harbour seal to changes in prey availability, we advised that their assigned sensitivity score should be upgraded to medium.	The Applicant notes Natural England's response that they are content that the sensitivity rating for minke whale in the assessment is 'medium'. The Applicant has responded to Natural England's Relevant Representation of amending the sensitivity of other marine mammal species to fish and shellfish prey availability at Deadline 1 (RR-026.C.18) and considers no further action is required. The Applicant highlights to the ExA that this matter was considered a 'yellow' risk in Natural England's risk register and that it is not a material matter of disagreement and as set out in REP3-048.2 Natural England have stated that these issues can be considered closed.
REP3-048.20	Applicant Natural England	**MM 1.23** **Sub-Bottom Profiler Surveys** Natural England maintains that mitigation for displacement of harbour porpoises caused by SBP surveys should be identified (NE Risk and Issues Log C37, REP2-033). Can the Applicant identify appropriate mitigation	**MM 1.23** Natural England notes the ExA's request for the Applicant to identify appropriate mitigation measures. Once the Applicant has provided this information, we will respond at the subsequent deadline.	The Applicant has provided a response to the Ex.A's Q1 (MM 1.23, REP3-006) on mitigation for SBP and awaits Natural England's feedback.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		measures that could be included in a future iteration of the outline MMMP? NE are then invited to provide a subsequent response.		
REP3-048.21	Applicant Natural England	**MP Marine Physical Processes and Benthic Ecology** **MP 1.3** **Ballast Material Disposal** Paragraph 1.9.2.34 of ES Volume 2, Chapter 1 [APP-013] which relates to increase in suspended sediments, states that during decommissioning of gravity bases the ballast material will be disposed of 'off-site'. The ExA notes the Applicant's response to Natural England's Relevant Representation on the fate of ballast material [PD1-017] (RR-026.D20) but the ExA still remains unclear by what is meant by off-site disposal given the Applicant's reliance on a post consent decommissioning plan. i) Can the Applicant provide more information on the likely possible disposal options for ballast material at decommissioning? ii) Can Natural England advise if it is satisfied with the Applicant's response in [PD1-017] (RR-026.D20) that any potential changes to sediment budgets or sediment transport regimes as a result of the Morgan Generation Assets will not cumulatively impact with the Mona Offshore Wind Project.	**MP 1.3** Natural England is also unclear on the Applicant's disposal options for ballast material at decommissioning. We would welcome further clarity from the Applicant on what is meant by 'reused or disposed of offsite' which has been stated in the Applicant's response ([PD1-017], RR-026.D20). Until more information is provided on the proposed location for ballast disposal, Natural England is unable to advise with any certainty on the likelihood and significance of any disposal on designated sites within English waters.	The Applicant has provided a response to this question (MP 1.3) in the Applicant's response to ExA Q1 (REP3-006).
REP3-048.22	Applicant Marine Management	**MP 1.5**	**MP 1.5**	The Applicant has provided a full response to this question (MP 1.5) in the Applicant's response to ExA Q1 (REP3-006) and notes

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
	Organisation Natural England	**Secondary Scour** Both the MMO and Natural England have raised concerns that secondary scour has been scoped out of the ES. The Applicant's response [PD1-017] stated that "secondary scour has been assessed within the context of impacts to sediment transport and sediment transport pathways due to presence of infrastructure in section 1.9.5 of Volume 2, Chapter 1: Physical processes (APP-013) for the operations and maintenance phase. Where scour protection measures are to be furnished, they will be subject to engineering design to ensure they minimise as much as practical the occurrence of scour. Therefore, any residual/secondary scour would be very localised and of negligible magnitude." i) Can the Applicant advise how it has arrived at the conclusion of negligible magnitude given that final design of scour protection is not yet determined, whether secondary scour will be monitored over time, and what provisions will be in place to deal with scour in the event that the protection measures fail. ii) Can the MMO and Natural England comment on the likelihood of scour occurring if best practice scour protection methods are employed, and provide examples of where secondary scour has occurred on other operational windfarms and what the implications were.	Until the Applicant has provided the information requested by the ExA at (i) Natural England is unable to advise with certainty on the likelihood of secondary scour occurring and where is does what the significance will be. However, from the information we have seen there is potential that the impacts will not be significant from a nature conservation perspective and subject to further information being provided this matter could be readily resolved. For awareness, secondary scour is specific to the location, the marine processes occurring and the type and design of infrastructure place in/on the seabed. Therefore, all projects have a risk of secondary scour occurring, but for some projects like Scroby Sands OWF or Race Bank OWF the impacts are more severe, not only impacting the wider environment, but also structural integrity. But in all cases the implications are likely to be the same i.e., requirement for further scour prevention to be placed on the seabed and removal at the time of decommissioning.	that, once Natural England has reviewed this, the Applicant expects it is likely this matter can be readily resolved.
REP3-048.23	Applicant Natural England Marine	**MP 1.10** **Inter-related Effects: monitoring and surveying** Several ES chapters have referred to the	**MP 1.10** Natural England will respond to the Applicant's suggested wording at the subsequent deadline. However, we highlight	The Applicant highlights the updated Offshore In-Principle Monitoring Plan (REP2-013, REP3-006) which now contains a commitment to monitoring the colonisation of

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
	Management Organisation	possible biodiversity benefits from the introduction of artificial structures and the potential for increased foraging opportunities for fish and thus increased prey opportunities for marine mammals, as well as potential benefits to the fisheries from colonisation of the structures and reef effects allowing species like crab and lobster for example to expand their habitats. The ExA notes that the evidence presented for such benefits is limited and not conclusive, to the extent that it is not possible for the Applicant to quantity the biodiversity benefit that artificial structures may have over time and thus also not possible to appraise the future impact of the subsequent loss of that biodiversity benefit during the decommissioning stage when the artificial structures are removed. i) The Applicant is asked to justify as to why it does not intend to undertake any operational phase monitoring to verify and supplement the findings of the ES in this regard. ii) The Applicant is requested to suggest wording for a condition being added to the DMLs requiring that a survey of any species, habitats and reef structures present on the foundation structures is undertaken prior to decommissioning. Natural England and the MMO are invited to respond to the Applicant's suggested wording at the subsequent deadline.	that decommissioning will be subject to whole new EIA Application process in which relevant pre (decommissioning) application monitoring surveys will be required, which would negate the need for this condition. But, whilst not a standard requirement on OWF development presently, there is an evidence gap in regard colonisation of infrastructure. Therefore, we would welcome monitoring over the next 10 years/ during the operational life of the project to fill that evidence gap.	novel hard structures. Further information on how this is being secured is provided in the Applicants response to ExA Q1 MP 1.10 at Deadline 3 (REP3-006). Therefore this matter can be considered resolved.
REP3-048.24	Applicant Marine Management	**MP 1.12** **Unexploded Ordnance Clearance Impacts** The ExA notes that UXO clearance has not	**MP 1.12** Natural England welcomes this request from the ExA and will submit a response to the	The Applicant's response to this question was submitted at Deadline 3 (REP3-006, MP 1.12) and as a result the Applicant therefore

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
	Organisation Natural England	been considered for impacts on physical processes and benthic habitats. While the ExA acknowledges the Applicant's response on this matter to Natural England [PD1-017] (RR-26.D17 and RR-26.F15), the ExA notes that paragraph 2.9.2.9 of ES Volume 2, Chapter 2 [APP-020] seems to base the impacts of UXO clearance on the most likely (common) UXO clearance of 130kg. However, the absolute maximum UXO clearance could be a 907kg high order explosion. The Applicant is asked to direct the ExA to the details of the worst case (907kg) assessment for physical processes and benthic subtidal ecology receptors. If such an assessment has not been undertaken, one is required to be carried out and Chapters 1 and 2 updated by no later than Deadline 4. The MMO and NE are requested to submit a response to the Applicant's response at Deadline 5.	Applicant's response at Deadline 5 if required.	considers this matter to be resolved. If any further clarifications are requested these will be submitted at Deadline 5, if required, however the Applicant considers the Deadline 3 response sufficiently detailed to close this matter.
REP3-048.25	Natural England Natural Resources Wales	**MO Marine Ornithology** **MO 1.3** **Deadline 2 submissions for SNCBs review** The ExA notes Natural England has confirmed it will provide at Deadline 3 a response to documentation submitted by the Applicant at Deadline 1, relevant to the SNCB's key concerns on offshore ornithology. Additional relevant documentation has been submitted by the Applicant at Deadline 2 [REP2-005, REP2-021, REP2-022, REP2-023]. Natural England and NRW are requested to respond to documentation	**MO 1.3** Natural England have provided a response to the documentation submitted by the Applicant at Deadlines 1 and 2. Our response is provided in Appendix B3 and updates to the Risk and Issues Log have been made (Appendix I3).	Please see the Applicant's response on Natural England's submissions at Deadline 3 (S_D4_6).

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		relevant to the SNCB's key concerns on offshore ornithology which has been submitted by the Applicant at Deadlines 1 and 2 and to confirm which elements of the Applicant's responses have addressed their concerns.		
REP3-048.26	Applicant Natural England	**MO 1.6** **"Air Gap" (Blade Clearance)** ES Volume 1, Chapter 3 [APP-010] Table 3.5 and Volume 2, Chapter 5 [APP-023] Tables 5.25 and 5.26 set out a minimum lower blade tip height of 34m above Lowest Astronomical Tide (LAT). Table 1.4 of ES Volume 4, Annex 5.3 [APP-055], in setting out the wind turbine parameters in the MDS, states an air gap of 30m above mean sea level (MSL). The glossary refers to Air Gap as "The gap between the sea and the lowest point of a wind turbine rotor blade. Expressed in relation to sea level (e.g. MSL, LAT or HAT)". Natural England's RR [RR-026] (Appendix B B3/B18/B52) requests presentation of the air gap above Highest Astronomical Tide (HAT) to facilitate comparison with other projects, and sets out a required minimum air gap of 22m relative to HAT. The Applicant [PD1-017] confirms that the minimum air gap at HAT would be 26m, and confirms that the model has been parameterised to ensure the model uses MSL. Whilst the minimum lower blade tip above LAT is stated in draft DCO Requirement 2 (table 1) and DML condition 10 (tables 2 and 3) as 34m above LAT, the distance above HAT is not. The ExA also notes that there appears to be an inconsistent approach to presentation of the	**MO 1.6** Natural England welcomes the ExA request for the Applicant to consistently present the air gap, and to express the air gap within the draft DCO (Requirement 2 and DML condition 10) as a minimum above HAT as well as LAT, clearly stating the differential between LAT and HAT in metres. We are satisfied with the Applicant's response to our comments in relation to clearly presenting the minimum air gap for this particular project. However, we agree that this should be updated for consistency in the Application documents as per the ExA request. As noted in HRA1.1 above, we highlight that increasing the air gap has the potential to reduce the collision risk to seabirds, We would therefore welcome further investigation by the Applicant of whether the air gap can be increased in a way that reduces the collision risk without affecting project viability.	Please see response to REP3-048.5 . Please also see the Applicant's response to the Examining Authority's first Written Questions, MO 1.6 in REP3-006.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		MDS for the air gap between various documents. The Applicant is asked to: i) Provide an update to the relevant Tables in the above-mentioned documents and consistently present the air gap, expressed above LAT, HAT and MDS. ii) Express the air gap within the draft DCO (Requirement 2 and DML condition 10) as a minimum above HAT as well as LAT, clearly stating the differential between LAT and HAT in metres. Natural England are asked to confirm if it is satisfied with the Applicant's response to their comments in relation to the minimum air gap [PD1-017] or whether it requires any further information on this point.		
REP3-048.27	Natural England	**MO 1.7** **Baseline Characterisation** ES Volume 4, Annex 5.1 [REP1-026] has been updated at D1. The Applicant states that these are minor amendments which have no material effect and there is no change to the conclusions of no significant effect in terms of EIA and no adverse effect on integrity in regards of HRA. These amendments follow the Errata Sheet issued at the Procedural Deadline [PD1-003]. Could Natural England confirm if the update reflects their comments made in Table 2 of (B4 to B12) [RR-026] or whether it requires any additional information.	**MO 1.7** Natural England note that document submitted by the Applicant [REP1-026] reflect changes to the baseline characterisation for age class data. Natural England did not raise anything on this matter during our Relevant Representations. Therefore this document does not reflect any changes made to our R&I Log.	The Applicant has no further response on this matter.
REP3-048.28	The Applicant Natural England Royal Society for the	**MO 1.8** **Highly Pathogenic Avian Influenza (HPAI)** Paragraph 5.5.6.3 [APP-023] of ES Volume 2, Chapter 5 refers to 61 bird species being affected by HPAI, in particular gannet and	**MO 1.8** Natural England advise that the HPAI note provided in Annex 2 of our Relevant	Please see the Applicant's response to the Examining Authority's first Written Questions, MO 1.8 in REP3-006.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
	Protection of Birds	great skua. Paragraph 5.6.2.4 states that the overall recoverability defined for the purposes of assessment is based on the longer-term population trends and not the impacts caused by HPAI which are as yet unknown. Natural England [RR-026 and REP1-053] refer to a lack of consideration of HPAI and at Annex 2 provides its September 2022 advice on impact assessment. The Royal Society for the Protection of Birds (RSPB) [RR-035] acknowledge that it is currently unclear what the population scale impacts of the HPAI will be, but note that it is likely that they will be severe, meaning that "seabird populations will be much less robust to any additional mortality arising from offshore wind farm developments", and therefore advises a high level of precaution to be included in examination of impacts arising from the Proposed Development. It also does not consider that such concerns have been adequately considered in the Assessment. The Applicant in its responses to both NE and the RSPB [PD1-017] states that the effect of HPAI has been considered in line with Natural England's guidance, and refers to ES Volume 2, Chapter 5 [APP-023] paragraph 5.6.2.4 of and assessments for individual species in section 5.9. The Applicant considers it has incorporated HPAI into the assessments as best as possible, based on the available information. Can the Applicant: i) Signpost the ExA to the individual species assessments which are of relevance in terms of potential HPAI effects in section 5.9 of ES Volume 2, Chapter 5 [APP-023] or elsewhere	Representations [RR-026] is the most up-to-date version.	

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		in the submission, and provide any additional or updated information on HPAI which would assist the Examination. ii) 'HPAI' is not listed in the acronyms list for ES Volume 2, Chapter 5 [APP-023]. Ensure it is added to any future version. Can Natural England: iii) Provide clarification on whether Annex 2 [RR-026] is up-to-date, in particular point 11 which refers to advice to Defra underpinning an English Seabird Conservation and Recovery Plan. iv) Provide details of the most up-to-date version of this document and point to its contents which the ExA should be aware of. Can the RSPB: v) Provide a response to the Applicant's response to RRs [PD1-017] (in particular references RR-035.10, 35 and 37) and confirm if you consider any additional information or assessment is required from the Applicant, and why, regarding HPAI effects.		
REP3-048.29	Applicant Natural England	**MO 1.9** **Sabbatical Birds** Natural England in its Risk & Issues Log (B28 to B30 [REP1-053]) acknowledge that sabbatical birds represent a knowledge gap for ecologically realistic impact assessments, but advise that integrity judgements should be based on assessments that do not remove sabbatical birds at the apportioning phase, and that the Applicant should ensure assessments that do not apportion sabbatical birds are clearly presented, and that those mortality assessments are considered in	**MO 1.9** Natural England acknowledge the Applicant's response and advise that we are broadly content with the Applicant's responses regarding sabbatical birds at Deadlines 1 and 2. However, we advise that the wording within the submitted assessment should be updated with the clarification given by the Applicant in their response (B.69, B.70 [PD1-017]).	The Applicant has no further response on this matter.

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		relation to baseline mortality and taken through to population viability analysis where required. NE assumes that impact assessments that have removed sabbaticals are not actually progressed through all stages of assessment; the Applicant should confirm that this is the case and edit text for clarity as necessary. The Applicant's response to RR-026 (B.69, B.70 [PD1-017]) confirms that the proportion of any impact that may be attributable to sabbatical birds has only been considered qualitatively and has not been incorporated into any apportioning calculations, stating that this is in alignment with NE's recommendations and that it has applied the best available evidence in a qualitative fashion within the assessments. Natural England is asked to explain if the Applicant's responses at Deadlines 1 and 2 are sufficient or if any additional information is required. The Applicant is asked to provide any further clarification sought by Natural England.		
REP3-048.30	Natural England Natural Resources Wales The Applicant	**MO 1.10** **Kittiwake Age Apportioning** Natural England (Appendix B B35 [RR-026] and Appendix I1 B27, B35, B50 [REP1-053] and NRW (paragraph 21 [RR-027] and paragraph 50 [REP1-056]) have not reviewed the displacement assessment for Kittiwake because it is not considered to be an accurate reflection of SNCB advice. The use of the kittiwake adult proportion that was calculated for Hornsea 2 is considered by	**MO 1.10** Natural England advises that the Applicant's response (RR-026.B.68 and RR-027.27 [PD1-017] does not address our initial advice. We reiterate that the SNCBs do not support the Applicant's methodology for kittiwake age apportioning, as we did during the pre-application phase. We continue to advise that the Applicant use the 84.11% of adults recorded in the Morgan site-specific DAS data to undertake kittiwake age	The Applicant has held recent discussions with Natural England (13 November 2024) and is working with Natural England to provide a summary of data to be submitted into the Examination that reduces the volume of documents submitted into the Examination. The Applicant has submitted a clarification note addressing this issue at Deadline 3 (Kittiwake apportioning clarification note (REP3-020)) and awaits Natural England's

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		both Natural England and NRW to be inappropriate to apply to Morgan Generation Assets. The Applicant's response (RR-026.B.68 and RR-027.27 [PD1-017] maintains, as discussed in ES Volume 4, Annex 5.5: Offshore ornithology apportioning technical report [APP-057], the approach applied is ecological valid whilst remaining precautionary and is still highly likely to return an immature proportion that is an under-estimate (and therefore over-estimate the adult proportion). NRW are also directed to section 1.3.3 of the 'Orme Head SSSI Clarification Note' [REP1-013] regarding apportioning of kittiwake in the breeding season. Natural England and NRW are asked to confirm if they are satisfied with the Applicant's response or whether any additional information or assessment is required. Can the Applicant confirm whether using 84.11% of adults for the breeding season (in line with the advice from the SNCBs) would result in a material change to its ES and HRA assessments.	apportioning and submit this into Examination to allow Natural England to provide advice based on an impact assessment that uses our advised parameters.	response. The clarification note concludes that the exclusion of older immatures from the apportioning value applied in the breeding season (i.e. applying 84.11% of adults) makes no material difference to the conclusions reached in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098).
REP3-048.31	Applicant	**MO 1.13** **Ornithological Monitoring** Natural England highlights the importance of the In-Principle Monitoring Plan (IPMP) and the emphasis being placed by projects currently in the post-consent phase on it when setting monitoring requirements and parameters. Establishing and agreeing the uncertainties and evidence gaps of the EIA and/or the HRA is necessary to inform what monitoring	**MO 1.13** Natural England is supportive of the ExA request for the Applicant to include ornithological monitoring of key ornithology receptors within the IPMP and appropriately secure it within the draft DCO, drawing on SNCB advice. Ideally, this will be a collaborative assessment across the Mona and Morgan Generation projects with a focus on receptors which are not usually the subject of post-construction monitoring. For	Please see the Applicant's response to the Examining Authority's first written questions (REP3-006) in relation to ExQ MO 1.13. In relation to Manx shearwater, the Morgan Generation Assets are not located in an area of importance for Manx shearwater as illustrated by the results of the baseline aerial surveys undertaken in support of the application and other survey programmes and analyses (e.g. Waggitt *et al.,* 2020) as presented in APP-053. During site-specific

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		should be undertaken, and advice is provided within NE's submission which should be addressed by the Applicant in the next version of their IPMP. Paragraphs 2.8.83 to 2.8.87 and 2.8.295 of NPS EN-3 set out the importance of monitoring specifically in relation to offshore wind. Where requested by the Secretary of State, applicants are required to undertake environmental monitoring (e.g. ornithological surveys) prior to and during construction and operation. This will enable an assessment of the accuracy of the original predictions and improve the evidence base for future mitigation and compensation measures, enabling better decision-making in future EIAs and HRAs. In respect of ornithology, no post-consent monitoring is proposed for bird species in the submitted IPMP [REP2-013]. The ExA notes the Applicant's position (pages 106 and 150 [PD1-017] that very small predicted impacts are not considered to justify monitoring and it would be difficult to define options that would achieve statistical robustness. It is also noted that monitoring may not be undertaken on other recent OWFs (for example Walney Extension). The reasoning given is not adequate justification in this case given the presence of knowledge and evidence gaps which NE highlights that "Data acquired during post-consent monitoring could be used to validate predictions and assumptions made within the application and also help to detect unforeseen effects and address uncertainty. This is particularly valuable for receptors not usually the subject of post-	example, Digital Aerial Surveys (DAS) monitoring of manx shearwater displacement from OWF array areas could fill an important evidence gap. Natural England would welcome further engagement once the Applicant has proposed ornithological monitoring within the IPMP.	baseline aerial surveys, the abundance of Manx shearwater was relatively low, in the context of the Irish Sea, throughout the breeding season, increasing into the post-breeding season in the second year of surveys. The increase noted is likely ephemeral in nature, driven not by the importance of the area but more by prevailing weather conditions pushing migrating birds out of favoured foraging areas (e.g. the South-west Approaches or those associated with the Irish Sea Front) into the north-east Irish Sea. The regional distribution maps presented in Appendix B of APP-053 show that the Morgan Generation Assets study area supports relatively low to negligible densities through the year. Higher densities occur further west, closer to Ireland, and are associated with the Irish Sea Front, an area known for its importance for the species. As a result, there is no guarantee that the abundance of Manx shearwater would be high enough for robust conclusions to be drawn as part of any post-consent monitoring. The Applicant therefore maintains that the uncertainties associated with the assessments are better addressed through strategic monitoring programmes which can be targeted at areas in which seabird abundance is higher therefore increasing the chances that robust datasets can be collected and robust conclusions drawn. For the reasons set out in REP3-006 and above, the Applicant considers that there is clear justification for not undertaking project

Reference	Question is addressed to	ExA Question	Natural England's Response	Applicant's Response
		construction monitoring e.g. manx shearwater" (paragraph 16 [REP1-054]). The Applicant is asked to include ornithological monitoring of key ornithology receptors within the IPMP and appropriately secure it within the draft DCO, drawing on SNCB advice.		specific ornithological monitoring in this instance.
REP3-048.32	Historic England Natural England Natural Resources Wales	**SLV Seascape, Landscape and Visual** **SLV 1.7** **National and International Designations** The SLVIA study area includes the following designated sites: • Isle of Anglesey National Landscape • The Lake District National Park • The English Lake District World Heritage Site Historic England, Natural England and NRW are asked whether they have any specific comments to make on ES Volume 4, Annex 10.5: International and nationally designated landscape study [APP-038], as this is not referenced in responses received to date. The IPs are also directed to Question [HE 1.11] and may wish to combine answers.	**SLV 1.7** Natural England defer to Historic England for comment on documents which relate to World Heritage Sites (WHS). However, we highlight that we reviewed the SLVIA reports following acceptance of the Application and raised a technical issue with the SLVIA assessment visualisations in the cover letter of our Relevant Representations [RR-026, Section 5.6]. However, we advise that issue has now been resolved, as set out in our Risk and Issues Log (Appendix I3), and therefore we do not have any outstanding concerns with the SLVIA assessment regarding potential impacts on designated landscapes, including the Lake District National Park.	The Applicant notes the response and that Natural England have no further comments or concerns regarding the SLVIA.

2.11 Natural Resources Wales

Table 2.12: REP3-051: Response to Natural Resources Wales ExAQ1 response.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
REP3-051.1	The Applicant All Interested Parties	**GEN Cross-Topic, General and Miscellaneous Questions** **Cross-Topic and General** **GEN 1.3** **Artificial Intelligence (AI)** The Examining Authority (ExA) requests all parties taking part in the Examination to confirm if you have used AI to create or alter any part of your submitted documents, information or data in submissions up to Deadline 2. All future submissions are required to clearly confirm whether AI has been used to create or alter any part of those documents, information or data in accordance with the guidance recently published by the Planning Inspectorate.	NRW (A) have not used AI to create or alter any part of our submitted documents.	The Applicant notes NRW's comment.
REP3-051.2	Applicant Natural Resources Wales	**HRA 1.1** **HRA Habitats Regulations Assessment** **Habitats Regulations** **Assessment Derogation** NPS EN-1 paragraph 5.4.27 states that a derogation case	Of the sites listed by the ExA, these are all English SPAs, with the exception of Liverpool Bay SPA, which is a joint site located across English and Welsh waters. It is not within NRW's remit to comment on significance of impacts on English designated sites and hence we defer the answer to this question regarding these sites to Natural England. For Liverpool Bay SPA, which is a shared site	The Applicant has submitted the relevant documentation (REP2-018). It is therefore considered that this issue is closed and that a conclusion of no adverse effect on the integrity of the Liverpool Bay SPA (as well as other European sites) can be agreed with both NRW and Natural England. The Applicant is continuing to engage with

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		should be provided by an Applicant as soon as is reasonably possible and before the close of the examination if a Statutory Nature Conservation Body (SNCB) gives an indication in Examination that the Proposed Development is likely to adversely impact the integrity of habitat sites. NE [RR-026 and REP1-053] have stated it is not satisfied that it can be excluded beyond reasonable scientific doubt that the Proposed Development would have an adverse effect alone or in-combination on the integrity of the following sites: • Liverpool Bay Special Protection Area (SPA); • Morecambe Bay and Duddon Estuary SPA and Ramsar; • Ribble and Alt Estuaries SPA and Ramsar; • Bowland Fells SPA; • Isles of Scilly SPA; and • Flamborough and Filey Coast SPA. The ExA notes that in recent decisions on offshore windfarms, the Secretary of State has agreed that	between NE, NRW and JNCC, please see our response to question HRA 1.11 below. With regard to impacts to Welsh designated sites, please see our response to question HRA 1.2 below.	Natural England and has discussed a way forward as set out in the response to Natural England's response to the ExA questions (REP3-048.5 in S_D4_5: Applicants response to IPs responses to EXQ1). The Applicant is confident there is no adverse effect on site integrity alone or in-combination for any European sites.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		derogations cases are required in relation to effects on the Flamborough and Filey Coast SPA. The Applicant is requested to provide an in principle derogations case in view of the SNCB position. The ExA is mindful of the Secretary of State's duties under the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017, and of the impact of this submission on the smooth running of the Examination.		
REP3-051.3	Natural Resources Wales	**HRA 1.2** **Welsh Designated Sites** NRW [RR-027, point 25] has stated that it cannot yet reach conclusions on the level and significance of impacts to Welsh designated site features from the project alone, based on the information currently provided. NRW is requested to confirm its position whether an adverse effect beyond reasonable scientific doubt cannot be ruled out for any European site.	With regard to impacts from the project alone on Welsh designated sites, as the Applicant has undertaken various updates to assessment approaches (e.g. to apportioning, displacement assessments etc) all in isolation of each other and these updates haven't been transposed through to an overall updated assessment, nor have they provided apportioned impacts across the range of SNCB advised % displacement and % mortality rates or at least the full apportioned displacement matrices for some species and feature combinations, we consider it premature to reach conclusions on impacts from the project alone at present (see our comments on REP1-011 for further details). With regard to in-combination impacts, whilst the Applicant has undertaken a gap-filling for historic projects exercise in	Please see the Applicant's response to REP3-050.2 in S_D4_6: Applicant's Response to IP submissions submitted at Deadline 3.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
			REP1-010, we note that where the Applicant has undertaken additional in-combination assessments for site/feature combinations in REP1-011 that were not previously assessed in the HRA Stage 2 ISAA Part 3 (SPAs and Ramsars) [APP-098], such as for guillemot from Skomer, Skokholm and seas off Pembrokeshire SPA (see Section 3.4.2 of REP1-011), the Applicant has not currently included the gap-filled projects in their in-combination assessments they have presented and hence these contain several gaps and cannot be considered complete (as set out in our comments on REP1-011). Additionally we note that whilst the Applicant has provided in-combination assessments (with gaps) where impacts from the project alone exceeds 0.05% of baseline mortality, they have still not considered apportioned displacement impacts across the full ranges of SNCB advised % displacement and % mortality rates. We consider that a site/feature combination should be taken through to in-combination assessments where the project alone predicted impact exceeds 0.05% of baseline mortality at any scenario across the full range of advised rates. We note that this advice is consistent with that provided by both NRW and JNCC to the Mona project applicant, and we also note that this approach has now been followed by that applicant in their recent Deadline 3 assessments: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010137/EN010137-001205-S_D3_19_Mona%20Offshore%20Ornithology%20Supporting%20Information.pdf Given the above, we are not currently able to confirm definitively whether we consider that an adverse effect, beyond reasonable scientific doubt, cannot be ruled out for any European site. Whilst at this stage we can indicate that	

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
			we consider it unlikely that there will be an Adverse Effect On Site Integrity for any European Site as a result of the Mona development, this cannot be confirmed until both parties have had sufficient time to fully and comprehensively review current and forthcoming submissions. We also note that this advice is with respect to Welsh designated sites only. We defer advice on other sites (e.g. Scottish, Irish, English etc) to the respective SNCBs.	
REP3-051.4	Natural England Natural Resources Wales	**HRA 1.4** **Barrier Effects** The Applicant states that *"The likelihood of the Morgan Array Area resulting in barrier effects for qualifying features of SPAs are low…"* (paragraph 1.4.5.16 of [APP-099]. The screening matrices [APP-099] further explain that this is due to the large foraging ranges used by seabirds and the large distances from the Morgan Array Area at which the SPAs are located. Do NE and NRW agree with the Applicant's statements and that barrier effects can be screened out for all phases?	At present we note that there is no widely applicable method of directly assessing barrier effects. Barrier effects limit the migration, or free movement of individuals or populations, thus requiring them to divert from their intended path in order to reach their original destination. The impacts to birds from barrier effects are most likely through increased energetic costs flights, usually between breeding colonies and foraging areas, and/or increased time elapsed between provisioning of young. Individuals are less constrained during the non-breeding season, and therefore increases to overall flight costs due to barrier effects while on migration are likely to be very small (Topping & Petersen 2011). Birds on the water and in flight are both included within the displacement assessment presented by the Applicant, as per SNCB advice (SNCBs 2022). Birds experiencing barrier effects are typically in flight, but not necessarily always so, therefore including birds in flight within a displacement assessment is the closest method available. For the Welsh seabird colony SPAs that may be impacted by the Morgan Generation Assets proposal (Skomer,	The Applicant welcomes agreement on this point.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
			Skokholm and the seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA; Grassholm SPA and Aberdaron Coast and Bardsey Island / Glannau Aberdaron ac Ynys Enlli SPA), for which NRW has responsibility, we do not consider that barrier effects are a significant consideration. This is because the proposed project is not located in a direct path between it and the key foraging areas contained within the marine portion of these SPAs or within other marine SPA foraging areas such as the Irish Sea Front SPA for Manx shearwater. Additionally, we do not consider that the proposal is likely to result in significantly increased energetic costs to individuals travelling from the SPA to foraging areas beyond the proposal. We also note that tracking data (e.g. from Votier et al. 2010) and utilisation distributions (e.g. Wakefield et al. 2013) suggest that gannets have been shown to display spatial segregation between colonies and that it is unlikely that gannets from Grassholm SPA will forage in the Morgan Generation Assets area and hence barrier effects to individuals travelling from the SPA to foraging areas will be negligible for this colony. Foraging by both breeding and non-breeding qualifying features of the Liverpool Bay/Bae Lerpwl SPA occur within the SPA and therefore barrier effects due to the operational project array will not occur. With regard to barrier effects for migratory waterbirds travelling to and from non-breeding SPAs on the coast to breeding grounds, we do not consider that the proposal is likely to result in significantly increased energetic costs to individuals travelling additional distance twice a year to navigate around the project. Therefore, based on the above, NRW agrees with the Applicant's statement that barrier effects can be screened	

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
			out of the assessment with respect to Welsh SPAs. We defer advice on other sites (e.g. Scottish, Irish, English etc) to the respective SNCBs.	
REP3-051.5	Applicant Natural England Natural Resources Wales	**HRA 1.5** **In-combination Effects at Screening** Section 1.4 of the HRA Stage 1 Screening Report [APP-099] details the Applicant's overarching approach to assessing in-combination effects. For screening LSE in combination, it states that it is not necessary to consider in-combination effects for sites/ features for which an LSE 'alone' has been identified – rather, it is for those where no LSE was concluded. However, this is contradicted in numerous screening matrices which state that (ExA emphasis): "Where the additional mortality associated with the Morgan Generation Assets is zero birds or it has been concluded for the project alone that there is no LSE it is considered that the Morgan Generation Assets will not act in-combination with other plans and projects and therefore no LSE is concluded" (eg. Table 1.67 note g [APP-099]).	With regard to marine ornithology, at present we consider that there is the potential for an in-combination LSE for Welsh site/feature combinations. However until revised assessments (or as a minimum the full apportioned displacement matrices) for some site and feature combinations using the SNCB advised approaches to e.g. displacement (i.e. to consider impacts across the full range of advised % displacement and % mortality rates), and apportioned kittiwake collisions using the SNCB advised breeding season age-class apportionment rate for kittiwake rather than the Hornsea 2 approach are submitted by the Applicant, we are unable to provide advice.	The Applicant's response to this matter is summarised in the Kittiwake apportioning clarification note (REP3-020) submitted at Deadline 3 and awaits NRW's response. The clarification note concludes that the exclusion of older immatures from the apportioning value applied in the breeding season makes no material difference to the conclusions reached in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098).

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		The ExA notes the Applicant's commitment to assessing in-combination effects where no LSE from the project alone has been concluded, as set out in section 1.4 of the HRA Stage 1 Screening Report [APP-099]. • Can the Applicant provide such an assessment, where this has not been done within the HRA and identify the projects or plans considered? • Do NE or NRW consider that there is the potential for an in-combination LSE for any site/feature where the Applicant has excluded a LSE from the project alone?		
REP3-051.6	Applicant Natural England Natural Resources Wales	**HRA 1.9** **HRA Stage 2 Assessment- SAC Condition Assessments** The Stage 2 SAC Report [APP-097] notes that condition assessments are not available for a number of SACs. Can the Applicant and NE/ NRW confirm whether condition assessments have since become available or are likely to become available during the course of the examination for any of the following:	Regarding the SACs in Welsh waters with marine mammal features (North Anglesey Marine/ Gogledd Môn Forol SAC and Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC) there are no condition assessments available and there are not likely to be any available during the course of examination.	The Applicant notes NRW's response that the condition assessments for the SACs with marine mammals listed in Welsh waters are not available and they are not likely to be available during the course of Examination.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		• River Derwent and Bassenthwaite Lake SAC; • Solway Firth SAC; • North Anglesey Marine/ Gogledd Môn Forol SAC; • North Channel SAC; • Murlough SAC; • The Maidens SAC; • Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC; • Lundy SAC; and • Isles of Scilly Complex SAC.		
REP3-051.7	Applicant Natural England	**HRA 1.11** **Environmental Management Plan and Liverpool Bay SPA** NRW in its RR [RR-027] raises concerns around impacts to red-throated diver and common scoter of Liverpool Bay SPA from vessel movements, noting that the offshore EMP would include measures to minimise disturbance to rafting birds from transiting vessels. The Stage 2 SAC Report [APP-097] and Stage 2 SPA/Ramsar Report [APP-098] rely upon measures in an Offshore EMP to avoid adverse effects on marine mammal and offshore	Although directed at the Applicant, NRW (A) consider it pertinent to respond to this question. We remain concerned that the HRA Stage 1 Screening Report does not consider the potential for disturbance and displacement impacts from vessel movements in the construction or operation and maintenance phase on the red-throated diver and common scoter features of Liverpool Bay SPA. Please see deadline 3 submission, paragraph 16 for more details. We note and welcome the request from the ExA to the Applicant to provide an outline Offshore EMP. We again note the measures listed in Table 5.26 of Volume 2, Chapter 5 [APP-023] of adherence to an offshore Environmental Management Plan (EMP) that will include measures to minimise disturbance to rafting birds from transiting vessels (as set out in APP-070) and include a Marine Pollution Contingency Plan (MPCP). We note and agree that the offshore EMP is secured within the deemed marine licence (dML) in Schedule 3 Part 2 of the draft DCO	Please see the Applicant's response to REP3-NRW.2.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		ornithological qualifying features. The Applicant has responded to concerns raised by NE and NRW [RR-026; RR-027] regarding potential disturbance and displacement impacts from vessel movements on qualifying features of Liverpool Bay SPA (page 144 [PD1-017]). NRW [REP1-056] has subsequently stated that "… based on the adoption of best practice vessel operations to minimise disturbance it is likely that an AEoSI from operation and maintenance vessel movements can be ruled out…". Can the Applicant provide an outline Offshore EMP to provide assurance that all measures relied upon to avoid AEoI are secured? This should include any proposed measures to minimise disturbance to rafting birds from transiting vessels, noting this is a specific concern of NE [RR-026] and NRW [RR-027] in relation to qualifying features of Liverpool Bay SPA. Can Natural England subsequently confirm whether the Applicant's response addresses their concerns and what mitigation, if any, would	[APP-005]. Therefore, based on the adoption of best practice vessel operations to minimise disturbance we would consider it is likely that an AEoSI from operation and maintenance vessel movements can be ruled out for these features of the SPA. However, given the location of Morgan Generation Assets project in English waters, we would recommend that the advice of Natural England is sought regarding this.	

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		allow them to agree that an AEoI could be excluded?		
REP3-051.8	Marine Management Organisation Natural England Natural Resources Wales	**MFS Marine Fish & Shellfish Ecology** **MFS 1.2** **Seasonal Exclusion Period for Piling** A seasonal piling restriction has been suggested by Natural England [RR-026] and the MMO [RR-020] to mitigate underwater sound and vibration effects on herring and cod during installation of the offshore substation. The Applicant's Deadline 1 submission in response to Issue Specific Hearing 1 Action Point 14 [REP1-009] states that the application of blanket seasonal restrictions at this stage could be disproportionate to the ecological risk. • i) What is the MMO and Natural England's view on the proportionality point? ii) Is any further evidence available to help define an appropriate and informed 'sensitive' exclusion period for the area of the Proposed Development? • Could a refined spatial piling exclusion area be defined	As the development is within English territorial waters, NRW defer to advice from Natural England (NE) on all fish species not originating from Welsh protected sites.	The Applicant notes this response.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		instead of an exclusion period over the whole array area? • Noting that soft-start ramp ups has been explicitly rejected by the MMO, Natural England and NRW as a primary mitigation measure to reduce the risk of injury/mortality to fish, what type of measures are feasible and specific to fish that could prevent the need for a seasonal piling restriction? • v) Are any changes necessary to the draft DCO/DMLs to reflect seasonal piling restrictions as a fallback position in the event that appropriate post consent controls/measures are not able to be agreed in the final Underwater Sound Management Strategy?		
REP3-051.9	Applicant Marine Management Organisation Natural England Natural Resources Wales	**MM 1.2** **Concurrent Piling and Unexploded Ordnance (UXO) Clearance** Can the Applicant: • Advise if it is feasible that piling and UXO clearance activities may be undertaken concurrently? If so what are the implications for potential	Regarding marine mammals NRW (A) would not be in support of concurrent piling with UXO clearance. Both activities can create impactful underwater noise in isolation let alone both occurring concurrently. We would advise the restriction and control of these activities as follows: UXO clearance alone should be restricted, to only low-order clearance charges in line with the 2022 SNCB position statement on UXO clearance where SNCBs explicitly stated that low order clearance should be the default method. Inclusion of low-order clearance of UXO in the DCO and DML is advised. Additionally piling should	As per the Applicant's response to the Examining Authority (S_D3_4: Applicant's Response to Examining Authority's Written Questions (ExAQ1)) (REP3-006), the Applicant notes that concurrent UXO clearance and piling activities are not proposed, as these activities are planned to be managed in separate project phases. UXO clearance will be undertaken in the pre-construction phase, prior to construction activities commencing. Piling activities will take place in the construction phase, once all

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		injury/disturbance to marine mammals (and fish). Can the IPs: • Advise whether there is a necessity to restrict or control the possibility of concurrent piling and UXO clearance activities?	follow the 2010 SNCB protocol for minimising the risk of injury to marine mammals from piling noise. As the development is within English territorial waters, NRW defer to advice from Natural England (NE) on all fish species not originating from Welsh protected sites.	UXO has been cleared and seabed preparation works completed. Therefore, there is not a realistic scenario whereby these activities take place at the same time. As such, the Applicant considers that there is no requirement for further controls or restrictions to be added to the draft DCO. As set out in Volume 2, Chapter 4: Marine mammals (AS-010), the MMMP (APP-072) and the UWSMS (APP-068), UXO clearance will follow a mitigation hierarchy, which follows a prioritisation path of i) avoid UXO ii) clear UXO with low order techniques, where possible (i.e. low order clearance is the default method), in line with the position statement from SNCBs on UXO clearance (that low order alternatives should be prioritised when clearing UXO (Defra, 2022)). The Applicant highlights that low order techniques or avoidance of confirmed UXO are not always possible and are dependent upon the individual situations surrounding each UXO. The Applicant has committed to the development of and adherence to the MMMP (APP-072), secured in the deemed marine licences within the draft DCO. The draft DCO (REP3-013) states that "*Any unexploded ordnance clearance activities must be undertaken in accordance with the method statement and marine mammal mitigation protocol approved under sub-paragraph (1).*" As highlighted above, and to re-iterate, this MMMP (APP-072) sets out the prioritisation of avoiding UXO or clearing UXO with low order techniques.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
				Finally, the Applicant confirms that (as set out in Volume 2, Chapter 4: Marine mammals (AS-010), the MMMP (APP-072) and the UWSMS (APP-068)) piling activities will follow the 2010 SNCB protocol for minimising the risk of injury to marine mammals from piling noise. The Applicant has made a commitment in the Outline UWSMS (APP-068) to considering the use of Noise Abatement Systems (NAS) as part of further mitigation options, if required. Its implementation will be decided in consultation with the licencing authority and SNCBs, as part of the final UWSMS, prior to construction. The Applicant welcomes that Defra will be publishing a marine noise paper soon and the final UWSMS will be developed in accordance with the most up to date published guidance and policy.
REP3-051.10	Marine Management Organisation Natural England Natural Resources Wales	**MM 1.5** **Masking** In relation to the assessment of effects from underwater sound on marine mammals the Applicant states at Paragraph 4.9.1.2 of ES Volume 2, Chapter 4 [AS-010] that there is insufficient evidence to properly evaluate masking and no relevant threshold criteria to enable a qualitative assessment. Can the MMO, Natural England and NRW advise if they agree with this statement? If not can	NRW (A) are satisfied with the applicant's assessment of masking.	The Applicant thanks NRW (A) for this confirmation and notes that Natural England agreed "that there is limited evidence to inform an assessment on masking" (see REP3-048).

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		they suggest whether the Applicant needs to address the masking scenario?		
REP3-051.11	Marine Management Organisation Natural England Natural Resources Wales	**MM 1.12** **Cumulative Underwater Sound: Residual Effects** The cumulative effects assessment in ES Volume 2, Chapter 4 Marine Mammals [AS-010] identifies potentially significant adverse residual effects in terms of cumulative piling sound impacts on Bottlenose Dolphin and cumulative UXO clearance sound on harbour porpoise. The Applicant proposes that mitigation measures will be developed in consultation with the licensing authority and SNCBs post-consent to reduce any potential residual effects for Bottlenose Dolphin and Harbour Porpoise. Can the MMO, Natural England and NRW confirm if they are confident that mitigation options exist to reduce the residual effects.	NRW(A) can confirm that mitigation options exist to reduce the residual effects if implemented correctly. Notably these being the 2022 SNCB position statement on UXO clearance where SNCBs explicitly stated that low order clearance should be the default method. Inclusion of low-order clearance of UXO in the DCO and dML is both in agreement with the position statement and demonstrates more commitment to the low order approach since no additional ML applications would be needed except in the case of a high order clearance. And for Piling mitigation the inclusion of the 2010 SNCB protocol for minimising the risk of injury to marine mammals from piling noise.	The Applicant confirms that UXO clearance will follow a mitigation hierarchy, which follows a prioritisation path of i) avoid UXO ii) clear UXO with low order techniques, where possible (i.e. low order clearance is the default method), in line with the position statement from SNCBs on UXO clearance (that low order alternatives should be prioritised when clearing UXO (Defra, 2022)) (as set out in Volume 2, Chapter 4: Marine mammals (AS-010), the MMMP (APP-072) and the UWSMS (APP-068)). The Applicant has committed to the development of and adherence to the MMMP (APP-072), secured in the deemed marine licences within the draft DCO. The draft DCO (REP3-013) states that "*Any unexploded ordnance clearance activities must be undertaken in accordance with the method statement and marine mammal mitigation protocol approved under sub-paragraph (1).*" The Applicant notes that the regulatory authority will not approve the MMMP and or EPS licence application associated with any UXO clearance activity until the Applicant has demonstrated it has followed the steps set out above. The Applicant considers there to be no residual risk associated with this matter and that all necessary controls are in place as it stands.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
				Finally, the Applicant confirms that (as set out in Volume 2, Chapter 4: Marine mammals (AS-010), the MMMP (APP-072) and the UWSMS (APP-068)) piling activities will follow the 2010 SNCB protocol for minimising the risk of injury to marine mammals from piling noise.
REP3-051.12	Applicant Marine Management Organisation Natural England Natural Resources Wales	**MM 1.13** **Cumulative Assessment – Injury due to Collision with Vessels** Table 4.57 in ES Volume 2, Chapter 4 [AS-010] relating to the cumulative increased likelihood of injury due to collision with vessels suggests that sound emissions from vessels will likely deter animals from the potential zone of impact. Given that this part of the Irish Sea is well-trafficked with vessels, and given the potential temporal and spatial overlap with other projects, can the Applicant, the MMO, NE and NRW clarify if there a possibility that an animal fleeing the sound of construction/maintenance vessels (or indeed piling/ UXO clearance) from one project might find themselves within the	Yes, there is a possibility that an animal fleeing the sound of construction/maintenance vessels (or indeed piling/ UXO clearance) from one project might find themselves within the zone of influence of another project. This is in part due to the close vicinity of each of these projects (in particular Morgan, Mona and Morecombe), therefore there is a possibility that this may happen. There is a current lack of research and evidence on the effects of more than one impact pathway occurring on one population at a given time. Therefore, we are unable to rule out such effects on animals fleeing between sites in such close proximity. However, for piling specifically, there is probably less likelihood of this as simultaneous piling is unlikely to occur with the ZOI of all these projects given the limited number of piling vessels available to the industry, but more likely for other pathways.	The Applicant highlights their response to MM 1.13, as set out in the S_D3_4: Applicant's Response to Examining Authority's Written Questions (ExAQ1) (REP3-006).

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		zone of influence of another project?		
REP3-051.13	Natural England Natural Resources Wales	**MO Marine Ornithology** **MO 1.3** **Deadline 2 submissions for SNCBs review** The ExA notes Natural England has confirmed it will provide at Deadline 3 a response to documentation submitted by the Applicant at Deadline 1, relevant to the SNCB's key concerns on offshore ornithology. Additional relevant documentation has been submitted by the Applicant at Deadline 2 [REP2-005, REP2-021, REP2-022, REP2-023]. Natural England and NRW are requested to respond to documentation relevant to the SNCB's key concerns on offshore ornithology which has been submitted by the Applicant at Deadlines 1 and 2 and to confirm which elements of the Applicant's responses have addressed their concerns.	NRW (A) have provided a response to the documentation submitted by the Applicant at Deadlines 1 and 2. Please see our deadline 3 submission.	The Applicant notes NRW's response at Deadline 3 (REP3-050) and will respond to specific points where necessary in S_D4_6: Applicant's Response to IP submissions submitted at Deadline 3.
REP3-051.14	Natural Resources Wales	**MO 1.5** **Cumulative Effects Assessment Methodology 2** NRW [RR-027] refer to ongoing internal discussions regarding	We note that this comment has now been superseded by the joint SNCB discussion held with the Morgan Generation Assets project and Mona project Applicant's on 29th August 2024, where their proposed approach to gap-filling of historic projects was discussed. The Applicant has subsequently submitted at Deadline 1 a note on 'Offshore	The Applicant has provided a response to relevant comments in S_D4_6_ Applicant's Response to IP submissions submitted at Deadline 3.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		the development of an approach which may help address the issue of uncertainty with (qualitative) assessments of projects for which data is unavailable. Can NRW provide an update on this, including timescales, and any other relevant information which may assist in the ExA's consideration of this matter.	Ornithology CEA and in-combination gap filling of historical projects' in REP1-010. NRW (A) have provided a response to this document in our deadline 3 submission.	
REP3-051.15	Natural England Natural Resources Wales The Applicant	**MO 1.10** **Kittiwake Age Apportioning** Natural England (Appendix B B35 [RR-026] and Appendix I1 B27, B35, B50 [REP1-053] and NRW (paragraph 21 [RR-027] and paragraph 50 [REP1-056]) have not reviewed the displacement assessment for Kittiwake because it is not considered to be an accurate reflection of SNCB advice. The use of the kittiwake adult proportion that was calculated for Hornsea 2 is considered by both Natural England and NRW to be inappropriate to apply to Morgan Generation Assets. The Applicant's response (RR-026.B.68 and RR-027.27 [PD1-017] maintains, as discussed in ES Volume 4, Annex 5.5: Offshore ornithology apportioning technical report	NRW (A) advises that the Applicant's response (RR-056.29 and RR-056.30 [PD1-017] does not address our initial advice. We reiterate that the SNCBs do not support the Applicant's methodology which was developed by Hornsea Project Two to undertake kittiwake age apportioning. We continue to advise that the Applicant use the 84.11% of adults recorded in the Morgan site-specific DAS data to undertake kittiwake age apportioning and submit this into Examination. We do however note and welcome that in Section 1.3.3 of the Applicant's 'Great Orme's Head SSSI Clarification Note' [REP1-013], the Applicant has not applied the Hornsea 2 approach to kittiwake age-class apportioning and has instead taken the most precautionary approach of assuming all birds are adults. We suggest the Applicant also considers revising its use of the Hornsea 2 age-class apportionment approach for all the other assessed designated sites (i.e. SPAs) for kittiwake.	The Applicant has presented in the Kittiwake apportioning clarification note (REP3-020) submitted at Deadline 3, the assessments as presented in HRA Stage 2 information to support an appropriate assessment Part Three: Special Protection Areas and Ramsar Site assessments (APP-098) when using the 84.11% of adults recorded in the Morgan site-specific DAS data to undertake kittiwake age apportioning , as NRW requested. The Applicant has prepared an additional note in relation to the Pen y Gogarth/Great Orme's Head SSSI addressing NRW's comments, for submission at Deadline 4 (S_D4_19: Project alone and cumulative assessment for the Great Orne's Head SSSI).

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		[APP-057], the approach applied is ecological valid whilst remaining precautionary and is still highly likely to return an immature proportion that is an under-estimate (and therefore over-estimate the adult proportion). NRW are also directed to section 1.3.3 of the 'Orme Head SSSI Clarification Note' [REP1-013] regarding apportioning of kittiwake in the breeding season. Natural England and NRW are asked to confirm if they are satisfied with the Applicant's response or whether any additional information or assessment is required. Can the Applicant confirm whether using 84.11% of adults for the breeding season (in line with the advice from the SNCBs) would result in a material change to its ES and HRA assessments.		
REP3-051.16	Natural Resources Wales	**MO 1.11** **Pen y Gogarth / Great Orme Head Site of Special Scientific Interest (SSSI)** The Applicant's response [REP1-013] to NRW's RR [RR-027] provides further clarification and updated assessments regarding species	NRW (A) have provided a response to the Applicant's Deadline 1 'Great Orme's Head SSSI Clarification Note' document [REP1-013] in our deadline 3 submission.	The Applicant has provided a response to relevant comments in S_D4_6_ Applicant's Response to IP submissions submitted at Deadline 3.

Reference	Question is addressed to	ExA Question	Natural Resources Wales response	Applicant's Response
		that are features of the Pen y Gogarth / Great Orme Head SSSI (kittiwake, guillemot and razorbill). NRW are asked to confirm if it is satisfied with this response or whether any additional information is required.		
REP3-051.17	Historic England Natural England Natural Resources Wales	**SLV 1.7** **National and International Designations** The SLVIA study area includes the following designated sites: • Isle of Anglesey National Landscape • The Lake District National Park • The English Lake District World Heritage Site Historic England, Natural England and NRW are asked whether they have any specific comments to make on ES Volume 4, Annex 10.5: International and nationally designated landscape study [APP-038], as this is not referenced in responses received to date. The IPs are also directed to Question [HE 1.11] and may wish to combine answers.	NRW are happy with the decision in the SLVIA to scope out statutory designated landscapes in Wales and have no comments on ES Volume 4 Annex 10.5.	The Applicant welcomes the response and notes that Natural Resources Wales have no further comments or concerns on the SLVIA.

2.12 RSPB

Table 2.13: REP3-052: Response to RSPB ExAQ1 response.

Reference	Question is addressed to	ExA Question	RSPB's Response	Applicant's Response
REP3-RSPB.1	The Applicant Natural England RSPB	**MARINE ORNITHOLOGY** **MO 1.8** Highly Pathogenic Avian Influenza (HPAI) Paragraph 5.5.6.3 [APP-023] of ES Volume 2, Chapter 5 refers to 61 bird species being affected by HPAI, in particular gannet and great skua. Paragraph 5.6.2.4 states that the overall recoverability defined for the purposes of assessment is based on the longer-term population trends and not the impacts caused by HPAI which are as yet unknown. Natural England [RR-026 and REP1-053] refer to a lack of consideration of HPAI and at Annex 2 provides its September 2022 advice on impact assessment. The Royal Society for the Protection of Birds (RSPB) [RR-035] acknowledge that it is currently unclear what the population scale impacts of the HPAI will be, but note that it is likely that they will be severe, meaning that "seabird populations will be much less robust to any additional mortality arising from offshore wind farm developments", and therefore advises a high level of precaution to be included in examination of impacts arising from the Proposed Development. It also does not consider that such concerns have been adequately considered in the Assessment. The Applicant in its responses to both NE and the RSPB [PD1-017] states that the effect of HPAI has been considered in line with Natural England's guidance, and refers to ES Volume 2, Chapter 5 [APP-023] paragraph 5.6.2.4 of and assessments for individual species in section 5.9. The Applicant considers it has incorporated HPAI into the	The impacts of HPAI and thus reductions in colony sizes may be manifested through the direct effects of mortality or the indirect effects arising through physiological constraints due to infection. These could arise for example, through impaired foraging ability or lower productivity. The severity and rate of recovery from these effects will determine the utilisation of space by seabird populations and consequently their interactions with wind farms. As well as changes to population numbers, HPAI infection is likely to cause variation in space use over time between individual birds and colonies, in part due to a likely decrease in competition, but also potentially related to physiological changes, such as in vision and fitness. This change in space use will be reflected in changes in the extent of interactions with wind farms, and in the lethal and sub-lethal consequences of those interactions. Recent research into the impact of the 2022 HPAI outbreak on gannet movements and space use has revealed that surviving gannets instigated unprecedented long-distance exploratory movements during the outbreak, likely as a	The Applicant has previously provided information in relation to the issues raised, please see the Applicant's response to RR-026.B.19, RR-026.B.21, RR-035.10, RR-035.37, RR-035.38 in PD1-017. The Applicant would also highlight the information presented in Spina *et al.* (2022) and Furness (2015) which provide further evidence indicating no connectivity between great black-backed gulls from the Isles of Scilly SPA and the north-eastern Irish Sea. Furness (2015) states: *"Adult great black-backed gulls from UK colonies may remain very close to the colony throughout the year, while immatures tend to move south but not over very large distances. So the distribution of UK SPA birds within the BDMPS is likely to be aggregated in waters close to SPA colony sites. This may be especially the case in the West of Scotland BDMPS, with adult birds from North Rona mainly being close to North Rona, and in UK South-west waters and Channel with adult birds being around the Scillies all through the year."* Spina *et al.* (2022) indicates that no great black-backed gull ringed in the Isles of Scilly has been recorded at a more northernly latitude than the southern coast of Ireland. A total of 62 great black-backed gull were ringed in the Isles of Scilly and recovered elsewhere

Reference	Question is addressed to	ExA Question	RSPB's Response	Applicant's Response
		assessments as best as possible, based on the available information. Can the Applicant: i) Signpost the ExA to the individual species assessments which are of relevance in terms of potential HPAI effects in section 5.9 of ES Volume 2, Chapter 5 [APP-023] or elsewhere in the submission, and provide any additional or updated information on HPAI which would assist the Examination. ii) 'HPAI' is not listed in the acronyms list for ES Volume 2, Chapter 5 [APP-023]. Ensure it is added to any future version. Can Natural England: iii) Provide clarification on whether Annex 2 [RR-026] is up-to-date, in particular point 11 which refers to advice to Defra underpinning an English Seabird Conservation and Recovery Plan. iv) Provide details of the most up-to-date version of this document and point to its contents which the ExA should be aware of. Can the RSPB: v) Provide a response to the Applicant's response to RRs [PD1-017] (in particular references RR-035.10, 35 and 37) and confirm if you consider any additional information or assessment is required from the Applicant, and why, regarding HPAI effects.	shortterm response to HPAI-related disturbance (Jeglinski et al. 2023). Breeding gannets tracked several months following the outbreak showed a high degree of breeding colony fidelity and foraging time budgets that are characteristic for the species, but birds showed reduced foraging effort, that is foraging trips were shorter in duration, and in maximal and total distance travelled, compared to data from previous years, likely because of reduced competition (Gremillet et al. 2023). The Applicant, RR035.35, suggests that the PVA modelling is overly precautionary for Great Blackbacked Gull population of the Isles of Scilly. The RSPB disagrees. Firstly their evidence of a lack of connectivity is based on an relatively old citation (Wernham et al., 2002, which is cited but not included in the references of APP-098. Presumably it refers to the 2002 Migration Atlas: Movements of the Birds of Britain and Ireland) which only provides limited evidence of a lack of connectivity, based on ring recovery. Secondly, not only does the assessment not account for changes in longer term trends in the population through the impacts of HPAI, but it gives no consideration any of the potential changes in space use and consequent interaction with the proposed development that could also occur.	as shown in Figure 1.1 in S_D4_5.1: Annex 5.1 to RSPB response to EXQ1 (F01). Additionally, a ringing project undertaken on Skokholm Island on great black-backed gull, which lies approximately 200 km further north than the Isles of Scilly, showed no connectivity between birds from the island and the north-eastern Irish Sea (Figure 1.2 in S_D4_5.1: Annex 5.1 to RSPB response to EXQ1 (F01). Between 2014 and 2022, none of the 266 great black-backed gulls ringed between 2012 and 2021 that were re-sighted away from the colony were recorded in the north-eastern Irish Sea (Skokholm Bird Observatory, 2023).

Reference	Question is addressed to	ExA Question	RSPB's Response	Applicant's Response
			The Applicant argues, RR035.37, that the effect of HPAI has been considered within the assessments presented in paragraph 5.6.2.4 and in individual species assessments. As noted above, paragraph 5.6.2.4 only highlights that a population's recoverability, as included in the impact assessment criteria, is based on the longer-term population trends and not the impacts caused by HPAI. The individual species assessments do, in some cases, include counts that include populations impacted by HPAI, but does not consider long term implications of the outbreak on population numbers and their use of the marine environment . Cunningham, E.J.A., Gamble, A., Hart, T., Humphries, L.M., Philip, E., Tyler, G. and Wood, M.J., 2022. The incursion of Highly Pathogenic Avian Influenza (HPAI) into North Atlantic seabird populations: an interim report. Seabird, 34, 1 - 8 Gremillet, D., Ponchon, A., Provost, P., Gamble, A., Abed -Zahar, M., Bernard, A., Courbin, N., Delavaud, G., Deniau, A., Fort, J. and Hamer, K.C., 2023. Strong breeding colony fidelity in northern gannets following High Pathogenicity Avian Influenza Virus (HPAIV) outbreak. bioRxiv, 2023 -05. Jeglinski, J.W.E., Lane, J., Votier, S.C., Furness, R.W., Hamer, K.C.,	

Reference	Question is addressed to	ExA Question	RSPB's Response	Applicant's Response
			McCafferty, D., Nager, R.G., Sheddan, M., Wanless, S. and Matthiopoulos, J., 2023. HPAIV outbreak triggers enhanced colony connectivity in a seabird metapopulation. doi:10.21203/rs.3.rs - 3128162/v1. Lane, J.V., Jeglinski, J.W., Avery - Gomm, S., Ballstaedt, E., Banyard, A.C., Barychka, T., Brown, I., Brugger, B., Burt, T.V., Careen, N. and Castenschoid, J.H., 2023. High pathogenicity avian influenza (H5N1) in Northern Gannets: Global spread, clinical signs, and demographic consequences. Ibis: doi.org/10.1111/ibi.13275	

2.13 Ørsted IPs

Table 2.14: REP3-53, REP3-54, REP3-56 to 69: Response to Ørsted IPs ExAQ1 response.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
REP3-053.1			**RESPONSE TO EXQ1 ON BEHALF OF THE ØRSTED IPs** **Introduction** 1.1 We represent six owners1 of operational offshore windfarms in the East Irish Sea, who we refer to together as the "Ørsted IPs" in respect of the application by Morgan Offshore Wind Farm Limited (the "Applicant") for an Order under the Planning Act 2008 (the "Act") granting Development Consent for the Morgan Offshore Wind Farm (the "Project"). 1.2 This document provides some brief commentary on articles provided by the Ørsted IPs in response to question INF1.4 of the written questions of the examining authority [PD-004] ("ExQ1"), in accordance with Deadline 3 of the examination timetable. 1.3 The Ørsted IPs' responses to ExQ1 are set out in the table overleaf. The Ørsted IPs have responded to the following questions, which have been directed towards them: 1.3.1 MO1.5; 1.3.2 INF1.4; and 1.3.3 INF1.6. 1.4 Please note that parts of question INF1.4 are dealt with in separate documents, submitted alongside this submission. Those documents are a suite of articles and other evidence demonstrating that wake loss occurs at	The Applicant notes the response and has responded accordingly below.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			separation distances over 7.5km, and an explanatory memorandum. 1.5 We also note the examining authority's request at INF1.7 of ExQ1. To avoid repetition going forward, where the Ørsted IPs wish to raise the same matters, a single submission on behalf of all the Ørsted IPs will be provided to the case manager via email.	
REP3-053.2	Ørsted IPs	**MO 1.15** **Ørsted IPs Environmental Concerns** The Ørsted IPs refer to environmental concerns which relate to ornithology and the CEA, questioning the robustness of the assessments [PD1-024, REP1-060, REP1-061, REP1-062, REP1-063, REP1-064 and REP1-066]. The responses state that Natural England have raised similar concerns and that it will be best placed to further address the issues raised. Can the Ørsted IPs clarify whether they will be making further submissions regarding ornithology which may specifically related to the OWFs which it operates, or if they are content to defer the matter to Natural England.	The Ørsted IPs consider that Natural England is best placed address the issues they have raised. Therefore, the Ørsted IPs general approach will be to defer to Natural England. However, if particular information arises which the Ørsted IPs consider it would be helpful to provide their own response to, they may choose to do so.	The Applicant notes that the Ørsted IPs defer to Natural England.
REP3-053.3	Barrow Offshore Wind Limited Burbo Extension	INF 1.4	The Ørsted IPs have separately submitted a number of articles and an explanatory memorandum which outline the academic basis	The Applicant notes Ørsted IPs submissions at Deadline 3 covers four main points:

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
	Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	**Potential wake effects 2** Further to the responses submitted by the Ørsted IPs [PD1-024, REP1-060, REP1-061, REP1-062, REP1-063, REP1-064, REP1-066] and the not agreed matter in the SoCG [REP2- 027], the Ørsted IPs are asked to submit to the Examination any available evidence and data that you wish to rely on to support your contention of potential for loss of yield due to wake effects, including evidence base on their existing portfolio of OWFs, and answer the following:	for wake loss at wind farm separation distances of well beyond 7.5km. The Ørsted IPs also note that preliminary results of modelling they have commissioned indicates that the Project-alone impact on their developments of up to 3.5% Annual Energy Production ("AEP"), and cumulative effects (including effects from the proposed Mona and Morecambe developments) being up to 5.3%. The Ørsted IPs maintain that it is the Applicant's responsibility to undertake an assessment of wake effects, and that they are best placed to do this	• Existence of wake effects beyond 20 km • Need for a wake loss assessment as part of the Morgan Generation Assets application either to comply with policy or from EIA perspective in terms of GHG assessment • Ability to undertake an assessment, including provision of confidential information • Extent to which the SoS can consider compliance with NPS policy EN3 para 2.8.345 in relation to site selection and design minimising disruption, economic loss or adverse effect on safety of other offshore industries. The Applicant responded to these points during the ISH2 and refers to the summary (S_D4_4). The Applicant notes that Ørsted IPs preliminary modelling indicates that the Morgan Generation Assets could impact their developments 0.2 to 3.5% AEP, and cumulatively with Mona and Morecambe this increases to 5.3% AEP. The Applicant notes that the same figures have been submitted to the Mona examination where the ExA has requested full details of the modelling used to come up with these numbers for Mona's Deadline 5 (3 December 2024). The Applicant is aware of the Wake Impact Assessment Report submitted to the Mona examination at Deadline 5 (REP5-120) and assumes the same report will be submitted for the Morgan Generation Assets at Deadline 4. The Applicant is still reviewing the report (and will review the version once submitted for the Morgan Generation Assets) and will respond in due course and in no way suggests agreement with the figures presented. The Applicant would like to highlight that when there are two or more projects that are going to be jointly

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
				causing a wake impact an operational project, the effects cannot generally be summed linearly, and they must be considered in combination, therefore the overall loss to the operational project cannot easily be attributed to the individual future projects. The Applicant maintains that an assessment of wake effects is not required, appropriate or necessary as discussed during ISH2 under Agenda item 4a and summarised in S_D4_4 and responses given in S_D4_6.
REP3-053.4	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	INF 1.4 i) Agreement that Table 9.8 of [APP-027] accurately reflects the approximate distances between the proposed Morgan array area and the operational wind farms that you represent.	These distances between the Project array area and the Ørsted IPs developments are displayed on the map provided at **Appendix 1** of this document. These are approximately the same as those listed in Table 9.8 of [APP-027].	The Applicant notes the Ørsted IPs response and this is also agreed in the SoCG submitted at Deadline 2 (OIP.OWF.1 in REP2-027).
REP3-053.5	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	INF 1.4 ii) Provide a plan/map which marks on the distances from each of Ørsted IP's OWFs to the Morgan order limits.	A map displaying these distances is provided at **Appendix 1** of this document.	The Applicant notes that the map displaying the distances (REP3-054) has different distances to that agreed in the SoCG (REP2-027) for the Walney Extension project as summarised in the table below: **SoCG agreed distance (REP2-027)** / **Ørsted IPs distances (REP3-054)** Walney Extension offshore wind farm (8.1 km) / 8.2 km to Walney Extension 3 (WOW3) 9.5 km to Walney Extension 4 (WOW4)

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
				The Applicant acknowledges the breakdown in distances provided by Orsted IPs for WOW3 and WOW4.
REP3-053.6	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	**INF 1.4** iii) Noting that the distance and orientation/wind direction of each of the Ørsted IP's OWFs varies, do the Ørsted IPs have concerns about all of the operational projects that you represent, or would effects be more pronounced for particular operational projects.	The degree of wake impact experienced at each of the Ørsted IPs' developments depends on a range of factors including location relative to wind resource (which can be illustrated by the wind rose), distance between sites, the wind regime on the site, as well as the size, number and density of the turbines. Preliminary modelling commissioned by the Ørsted IPs reflects these factors, and indicates there will be an impact at all of the developments (of up to 3.5% from the Project alone). Therefore, the Ørsted IPs are concerned about the impacts at all of their developments. However, due to the proximity and nature of the wind resource (as illustrated by the wind rose for the Walney Extension Windfarm provided at **Appendix 1**) the Ørsted IPs developments immediately to the North East of the Project will experience the most significant impacts, namely the Walney Extension and West of Duddon Sands Windfarms.	The Applicant notes that Ørsted IPs preliminary modelling indicates that the Morgan Generation Assets could impact their developments 0.2 to 3.5% AEP alone and that Walney Extension and West of Duddon Sands wind farms due to proximity and wind direction will experience the most significant impacts. The Applicant has briefly seen the details and parameters used in the preliminary external modelling undertaken by the Ørsted IPs to calculate these numbers, as provided into the Mona examination at Deadline 5 (REP5-120). The Applicant is still reviewing the report (and will review the version once submitted for the Morgan Generation Assets) and will respond in due course and in no way suggests agreement with the figures presented.
REP3-053.7	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited	**INF 1.4** iv) Are you able to specify if there is a distance at which wake effects are substantially reduced, and the factors which affect loss of yield?	Wake impacts depend on more than the distance between the assets alone. Other important factors include nature of the wind resource (as illustrated by the wind rose and wind speed distribution), turbine characteristics and atmospheric conditions. A brief description of each factor is provided below. The Ørsted IPs are able to provide additional information regarding these factors, if that would be helpful: - **turbine characteristics** – the larger and denser the turbines in the wind farm causing the wake,	The Applicant does not dispute the other important factors (turbine characteristics, wind rose, wind speed distribution, atmospheric conditions) described by Ørsted IPs in response to INF 1.4 iv) or that wake effects travel over large distances, but this does not mean that an assessment is required to be undertaken. The Applicant responded to iv) at Deadline 3 (REP3-006) to highlight other factors that are important and relevant to wake effects and loss of yield; turbine

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
	(collectively "the Ørsted IPs")		the higher the wake impact on neighbouring wind farms; - **wind rose** – illustrates how often the wind blows from each direction and the wind speed. It predicts whether the wind direction which causes a wake from one asset on another is a common occurrence. **Appendix 1** includes a wind rose alongside a map of the East Irish Sea. This demonstrates that prevailing winds originate from the SouthWest direction; - **wind speed distribution** – how often different wind speeds occur. This is important because the turbine response and hence the strength of the wake depends on the incoming wind speed; - **atmospheric conditions** - such as air density, ambient turbulence and atmospheric stability. These are important factors to consider as they affect the duration of the wake. Turbulence describes frequent wind speed changes due to obstacles in the flow or due to air movements from thermal effects. Wakes are dissipated faster in high turbulence environments where there is more mixing between the slow-moving wake and fast moving un-waked wind. Atmospheric stability describes the thermal stratification whereby layers of air with different temperature and density characteristics sit on top of each other. For unstable atmospheres warm air sits at the surface and rises resulting in more turbulent mixing and hence reduced wake duration. Stable atmospheres describe the opposite; cooler air at the surface is prevented from rising by warmer air above, reducing turbulence and increasing wake duration. The offshore environment is both low turbulence due to the absence of obstacles, and frequently a stable atmosphere due to the cooling effects of the sea on the air above, hence causing	spacing and location of projects relative to each other (in terms of distance between projects).

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			wakes to propagate much further relative to, say, onshore wind farms. There is no specific distance where wakes stop having an impact – as mentioned above it depends on many factors and it is hence very typical in the industry for a wake assessment to be undertaken. The Ørsted IPs have also provided a range of academic evidence alongside this document, which demonstrate wakes can extend up to 90km downstream. Furthermore, based on information gathered across Ørsted A/S's (a parent company of the Ørsted IPs) extensive range of operational assets, wake impacts are clearly observable beyond 50 km. Observations of the power produced by existing wind turbines both before and after a neighbouring wind farm has been installed clearly demonstrate the impacts. These "natural experiments" occur with increasing frequency as the number of offshore wind farms that are installed globally increases. As the owner of the world's largest offshore wind portfolio, Ørsted A/S is very well placed to use its own operational data to observe the wake impacts of neighbouring wind farms. In a presentation delivered at the Wind Europe Technology Workshop 2023, Ørsted's Nicolai Nygaard shared some of this evidence. The presentation (which has been provided in the Ørsted IPs portfolio of academic evidence) is referenced in the Frazer-Nash Consulting Study referred to by the Applicant. The presentation uses operational data from 37 offshore wind farm pairs located in Northern Europe to demonstrate the neighbouring wake effect through the reduction of power generated by front row turbines. The paper demonstrates that when a	

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			wind farm is in the wake of a neighbour at a distance of 30 km you can expect a power reduction of just under 10%, whereas at 50km the reduction is still about 5% of the available power.	
REP3-053.8	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	**INF 1.4** v) The likelihood of loss due to both direct and indirect effects.	Preliminary modelling suggests the Project will have a direct impact on the Ørsted IPs' developments by reducing AEP by up to 3.5% on a Project-alone basis and by up to 5.3% on a cumulative basis (including the proposed Mona and Morecambe Offshore Windfarms). Additionally, the Ørsted IPs consider there will be losses as a result of indirect effects which should be taken into account, including: - Increased wind turbulence resulting from the Project could accelerate the deterioration of the turbines & foundations at the Ørsted IPs developments faster than expected thus reducing the developments' operational duration; - the Ørsted IPs' developments are expected to continue operation for a minimum period of 24-years. The Ørsted IPs do not consider that operating assets beyond this period will require additional consents. Therefore, the Ørsted IPs may decide to continue to operate the developments beyond this initial 24-year period. This will primarily be subject to maintaining foundation integrity and a profitable business case, both of which will be impacted by the Project. These impacts are of a level which is likely to impact long term decisions on the future of the assets.	As stated in response to REP3-058.3 and REP3-058.6, the Applicant will wait for the detailed breakdown of these calculations that will be submitted into the Morgan Generation Assets examination (Deadline 4, 10 December 2024), in addition to reviewing the version that has been submitted into the Mona examination at Deadline 5 (REP5-120).
REP3-053.9	Barrow Offshore Wind Limited Burbo Extension	**INF 1.4** vi) Comments on any other matters which form the basis	Based on publicly available documentation regarding the Crown Estate's round 4 bidding process, it is not clear what factors resulted in the	The Applicant notes that the ExA for the Outer Dowsing Offshore Wind (Generating Station) Examination asked a question to The Crown Estate

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
	Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	for the Crown Estate's stipulation of a 7.5km separation distance between OWF arrays.	7.5km separation distance stipulation. We note that the 7.5km separation distance was set out in the Crown Estate's Round 4 Leasing Information Memorandum dated September 2019, which has no reference to wake effect. The Frazer-Nash study referred to by the Applicant is dated 5 October 2023. Therefore, the 7.5km distance was not based on outcomes of this study. The Ørsted IPs cannot speculate as to the factor or factors which resulted in the stipulation of the 7.5km separation distance. The 7.5km separation distance is solely linked to the agreement for lease process and has no bearing on the subsequent and separate DCO consenting process. We note that Agreement for Lease Areas are not fixed at the outset but rather are tested through the consenting process.	(ExQ1 OG 1.2) in order to clarify if the minimum 7.5 km distance required between Leasing Round 4 projects takes the potential for wake effects into account (REP2-080). In their response, The Crown Estate confirm that the distance between wind farms (unless developers consent to closer proximity) is a separation distance to enable develops to develop, operate and maintain wind farms by allowing for a range of factors including, amongst other matters, wake effects, navigation and safety. The increase from 5 km (Round 3) to 7.5 km (Round 4) was for the purpose of de-risking tenders by providing additional mitigation and assurance to participants through limiting proximity.
REP3-053.10	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	**INF 1.4** vii) Whether lack of prescription in EIA regulations or precedent for wake assessment are obstacles to making estimation or quantification of likely effects.	First, the Ørsted IPs reiterate their position that they consider the need for an assessment of the wake effects of the Project is grounded in the NPS-EN3. Primarily, this requirement is created by the following provisions: • paragraph 2.8.197 requires that, where a potential offshore wind farm is proposed "close to existing operational infrastructure or has the potential to affect activities for which a licence has been issued by government" the applicant should assess the potential effects on that development; and • paragraphs 2.8.344-2.8.345, which relate to SoS decision making, direct that where a project potentially affects other offshore infrastructure or activity, applicants should work with the relevant sector to minimise negative impacts, and that the SoS should be satisfied that "the site selection and site design of a proposed offshore wind farm and offshore transmission has been made with a	The Applicant refers to its response to the Ørsted IPs Deadline 3 Submission [S_D4_6], where it has responded to the points raised by the Ørsted IPs in more detail.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			view to avoiding or minimising disruption or economic loss… to other offshore industries" Therefore, an assessment is required whether the EIA regulations make particular provision for one. However, the Ørsted IPs consider that such an assessment does fall within the scope of the EIA Regulations. Regulation 5(2) of the EIA Regulations sets out the factors for which significant effects should be assessed. These factors include 'climate'. Effects on climate are further elaborated on in under Schedule 4 (Information for inclusion in Environmental Statements), which relevantly provides that "the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions)" should be assessed. The Applicant has carried out an assessment of the Project's impacts in respect of climate change in its Environmental Statement (F2.12 Environmental Statement - Volume 2, Chapter 12 Climate change) [APP-016]. This assessment includes a net assessment of the GHG emissions arising from the Project, and concludes the Project will have a significant benefit in EIA terms, as a result of avoided emissions. While the Ørsted IPs do not dispute that the Project will result in avoided emissions, they consider that the assessment contains inaccuracies, in that it does not account for the loss of renewable generation at their developments, arising from the Project. More generally, the Ørsted IPs do not consider lack of singular guidance on carrying out wake assessments prevents a robust assessment from being undertaken. Projects of the scale contemplated by the NSIP consenting process are likely to result in a large variety of potential	

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			effects, some of which may not yet be subject to single industry guidance. These effects cannot simply be ignored. The purpose of the highlighted NPS-EN3 policies is to ensure that the effects of a project on pre-existing/authorised infrastructure are understood and addressed. Applicants for developments of this significance should take a dynamic approach and be prepared to respond to the potential for such effects. As directed by the NPS-EN3, applicants should be working with the relevant sector with an aim of resolving issues. Further, we note there is a significant body of research on wake effects between offshore windfarms (as evidenced by the research submitted by the Ørsted IPs alongside this submission). Specialist consultants who work with the offshore wind industry have developed software and models to assist the industry in understanding energy yield and wake effects. As with other modelling, assumptions require to be made in carrying out such assessments. In that regard, there is the potential to utilise both publicly available and private information to facilitate the modelling of effect. As we have previously submitted, the Applicant is best placed to provide information regarding site layout and information about existing schemes is in the public domain. There are also ways confidential information can be provided which assists in improving the accuracy and robustness of the assessment. This is standard practice in the offshore wind industry and there is no reason why this information should be withheld. Therefore, wake loss is an effect which, practically speaking, can be accurately and robustly assessed.	

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			We note also that the NPS-EN3 directs that applicants engage with interested parties in the potentially affected offshore sectors early with an aim to resolve as many issues as possible before an application is submitted.[1] Regrettably, the Applicant has not taken this approach in respect of engagement with the Ørsted IPs. Additionally, we note that there is precedent for this issue being considered in the Awel y Mor DCO application. As the panel will be aware, the examining authority and Secretary of State ("SoS") in that case considered that the NPSEN3 policies required such an assessment to be undertaken. As a result, a DCO requirement was imposed which required a wake loss assessment to be undertaken before the construction of any turbines. Evidently, the decision makers in that case were not deterred by a lack of prescriptive guidance on this matter. In fact, the examining authority indicated these assessments were likely to become increasingly common: "…it is likely such circumstances [wake loss disputes] may become more common with the increase in offshore wind development, it is important to fully understand the economic effects on existing offshore wind farms".[2]	
REP3-053.11	Barrow Offshore Wind Limited Burbo Extension Limited Walney Extension Limited	**INF 1.4** viii) What level of information might reasonably be considered as an 'assessment' having been	These provisions of NPS EN-3 are framed in relatively broad terms. However, should enable the SoS to carry out decision making in the manner envisaged by paragraphs 2.8.342-2.8.348.	The Applicant refers to its response to the Ørsted IPs Deadline 3 Submission [S_D4_6], where it has responded to the points raised by the Ørsted IPs in more detail.

[1] At 2.8.200.

[2] Paragraph 5.14.85 of the examining authority's recommendation report.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
	Morecambe Wind Limited Walney (UK) Offshore Windfarms Limited Ørsted Burbo (UK) Limited (collectively "the Ørsted IPs")	carried out in accordance with NPS EN-3 paragraphs 2.8.197 and 2.8.198].	In particular, any assessment should ensure paragraph 2.8.345 can be satisfied: "the Secretary of State should be satisfied that the site selection and site design of a proposed offshore wind farm and offshore transmission has been made with a view to avoiding or minimising disruption or economic loss… to other offshore industries" and ensure the SoS can understand if the circumstances require 2.8.347 to be applied: "Where a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity, the Secretary of State should give these adverse effects substantial weight in its decision-making." It is noted that wake loss assessments are extremely commonplace in the wind industry. Developers will likely carry out thousands of wake loss assessments while developing a project as they are essential to estimate the expected production of a project which feeds into the economic assessment. There are multiple softwares available in the industry, both commercial and open source, which have been validated with operational data. In addition specialist consultants provide wake modelling services, typically to feed into an independent view of the project economics to support financing decisions. A brief overview of the steps typically involved in a wake loss assessment is provided below: - Assessment of the wind climate at the project under consideration. Typically this will be based on a high quality wind measurement campaign on or near the project in question. It will inform the expected long-term distribution of the wind speed, the wind direction and other atmospheric	

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			parameters such as the air density, the turbulence intensity and potentially other parameters. Such measurement campaigns exist in the Irish Sea – there are currently 7 publicly available wind datasets available on the Crown Estate Marine Data Exchange which could be used for this study. Additionally, the Project recently announced that it had successfully deployed high-tech wind measurement devices in its lease area. - An assessment of the horizontal extrapolation of the wind speed between the project and the project which is being waked. Typically, this is achieved using weather models, and many commercial and free models exist and are widely used in the industry. This aims to correct for the fact that the wind speed will naturally vary across distances whether waked or not. - An assessment of the vertical extrapolation of the wind speed – if the project under consideration and the project being waked use different hub heights then the change in wind speed from one turbine rotor to another must be estimated. Typically, this can be calculated from measurements as is the case in the Irish Sea where wind measurements at multiple heights exist. - Assumptions on the turbine technology and layouts. For the Irish Sea the operational projects represented by the Ørsted IPs are known – the layouts, hub heights and turbine technologies are a matter of public record. For the Project, some assumptions must be made as the turbine type and layout are not currently known, however there are limited suppliers for offshore turbines and hence the models are well known to developers and consultants.	

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			- The wake model is a mathematical model of how the wind speed will change when it interacts with a turbine. There are many complexities to this which are captured within the software which is running the model - For a study such as this it is important to establish a baseline – what will the wake situation be if the Project is not built – and then compare it to the scenario where the new development is added. For the Irish sea the baseline can be achieved by calculating the wake on the existing assets, both internal to each asset and for each asset on each other. Then different scenarios can be run by adding a new development and calculating how the wake in the existing project changes – scenarios can be run for Morgan alone and also for cumulative impacts if Morgan is added with other projects such as Mona and Morecambe. In order for the SoS to have the information required by the NPS-EN3 to make a decision on the Project, the Ørsted IPs consider a wake loss assessment which follows the process outlined above (and details the findings of such process) must be provided.	
REP3-053.12	The Ørsted IPs The Applicant	**INF 1.6** **Potential wake effects 4** In the event that no wake assessment was undertaken during the Examination, would both the Applicant and the Ørsted IPs comment whether a requirement along the same lines of Requirement 25 of The Awel y Mor Offshore Wind Farm	The NPS EN-3 requires that, where a potential offshore wind farm is proposed close to existing operational offshore infrastructure or has the potential to affect activities for which a licence has been issued by government, the Applicant should undertake an assessment of the potential effects of the proposed development on such existing or permitted infrastructure or activities. Independent literature as well as modelling commissioned by the Ørsted IPs indicate that the	The Applicant refers to its response to the Ørsted IPs Deadline 3 Submission [S_D4_6], where it has responded to the points raised by the Ørsted IPs in more detail.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
		Order 2023 (requiring such an assessment post-consent) would be justified and would meet the relevant legal and policy tests.	Project will have an impact on energy yield at their developments. This is a matter which can and must be properly assessed by the Applicant. We do not consider the effects of the Project can be properly understood and therefore factored into the design process, until such an assessment is undertaken. This effect should properly be assessed before the examining authority makes its recommendation on the Project, such that examining authority and the SoS are in a position to understand the implications and effects of the Project before making their decisions. The Ørsted IPs consider that, if wake effects remain unassessed at the close of the examination, the examining authority will not be in a position to understand the degree of the potential effect and how it has been mitigated nor the extent to which a requirement could provide mitigation for any residual impacts. As such, the SoS would not be in a position to make a decision in accordance with the NPS EN-3. Any requirement should be based on an understanding of the effect that it is seeking to mitigate or offset. In addition, any residual effects post-mitigation should be understood. Any requirement cannot make up for a lack of assessment nor a failure to properly account for relevant information in the decision-making process.	
REP3-054.13			**See Appendix 1** Irish Sea Distances from Morgan to Orsted wind farms (area edge to area edge)	See response to REP3-053.5.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
REP3-056.1		INF1.4	**EXPLANATORY MEMORANDUM REGARDING DOCUMENTS SUBMITTED IN RESPONSE TO EXQ1** **Introduction** 1.1 We represent six owners1 of operational offshore windfarms in the East Irish Sea, who we refer to together as the "Ørsted IPs" in respect of the application by Morgan Offshore Wind Farm Limited (the "Applicant") for an Order under the Planning Act 2008 (the "Act") granting Development Consent for the Morgan Offshore Wind Farm (the "Project"). 1.2 This document provides some brief commentary on research and articles provided by the Ørsted IPs in response to question INF1.4 of the written questions of the examining authority [PD-004] ("ExQ1"), in accordance with Deadline 3 of the examination timetable. 1.3 The research and articles, which provide evidence for material wake loss effects occurring at farm-farm separation distances greater than 30km, fall into the following categories: 1.3.1 Satellite observations and aircrafts; 1.3.2 Scanning LiDAR; 1.3.3 Wake and other atmospheric models; and 1.3.4 Observations from existing turbines' SCADA data. 1.4 In this document, we provide some commentary these different groups of evidence, and passages of particular relevance from the articles and research submitted are noted.	The Applicant notes that in the technical submissions from Ørsted IPs much emphasis is placed on the distance which wakes can propagate over in certain circumstances. The Applicant does not disagree with this observation in general, however it is noted that length of wakes is not a proxy for the magnitude of the wake losses – in fact, losses decrease with downstream distance and can be considered negligible beyond a certain range, even where they are deemed to still exist. The Applicant acknowledges the number of publications and ongoing research and considers that this is unsurprising given the common regard to improving understanding of this topic. The science remains at an early stage of development. Atmospheric conditions are one of five Grand Challenges identified by the National Renewable Energy Laboratory (NREL) in wind energy, reiterated as recently as 2023 (https://www.nrel.gov/wind/grand-challenges.html): *"To improve wind turbine performance and reliability, researchers must increase characterization of air turbulence, wakes (slower air movement downwind of a wind turbine), and local climates to understand their effect on energy generation. Specifically for offshore wind farms, additional research is needed to optimize for offshore wind environments."*
REP3-056.2			**2. Satellite Observations and aircrafts**	The Applicant notes this response.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			2.1 Synthetic Aperture Radar or 'SAR' installed on satellites can be used to directly observe wakes in the sea. The papers referred to below (documents 1-3 in the index) combine this approach with specially equipped research aircraft and laser measurements or models to measure the wake impact directly.	
REP3-056.3			2.2 Key relevant findings of this research regarding wake loss beyond 20km include: 2.2.1 Platis, A., Siedersleben, S., Bange, J. et al 'First in situ evidence of wakes in the far field behind offshore wind farms':2 "…*satellite imagery reveals wind-farm wakes to be several tens of kilometres in length under certain conditions (stable atmospheric stratification), which is also predicted by numerical models. The first direct in situ measurements of the existence and shape of large wind farm wakes by a specially equipped research aircraft in 2016 and 2017 confirm wake lengths of more than tens of kilometres under stable atmospheric conditions, with maximum wind speed deficits of 40%..."*	While accepting that wakes can exist at downstream distances of over 20 km, the Applicant notes that these are observed in this study for specific wind conditions and that the quoted 40% wind speed deficit is a maximum value. These specific observations cannot be directly compared to the annual energy loss experienced by neighbouring turbines due to wake effects which is due a wide range of atmospheric conditions, particularly a variety of wind directions.
REP3-056.4			2.2.2 Platis, A et al 'Long-range modifications of the wind field by offshore wind parks –results of the project WIPAFF':3 "*The in situ measurements recorded on-board the research aircraft DO128 and remote sensing by laser scanner and SAR prove that wakes of more than 50 kilometers exist under certain atmospheric conditions."*	The Applicant notes that the wakes were observed at significant distance only under certain atmospheric conditions.
REP3-056.5			2.2.3 Hasager, C.B.; Vincent, P.; Badger, J.; Badger, M.; Di Bella, A.; Peña, A.; Husson, R.; Volker, P.J.H, 'Using Satellite SAR to	The Applicant notes these are the longest wakes which are observed and so are not reflective of an

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			Characterize the Wind Flow around Offshore Wind Farms':4 "*The approximate extent of the individual wind farm wakes is outlined in the image. The longest is at Belwind around 55 km long while at Thornton Bank it is 45 km…"*	average value which is more relevant to annual wake loss estimates.
REP3-056.6			3. **Scanning LiDAR** 3.1 Scanning LiDARs are wind measurement devices that use the doppler shift of laser beams to accurately measure wind speed. The majority of modern offshore wind farms have their energy yield analysis based on measurements from LiDAR technology. The papers referred to below (documents 4-5 in the index) contain relevant findings based on this data source: 3.1.1 J. Schneemann et al. 'Cluster wakes impact on a far-distant offshore wind farm's power':5 *"Our results showed clear wind speed deficits that can be related to the wakes of wind farm clusters up to 55 km upstream in stable and weakly unstable stratified boundary layers resulting in a clear reduction in power production…"* 3.1.2 B. Cañadillas et al. 'Offshore wind farm cluster wakes as observed by long-rangescanning wind lidar measurements and mesoscale modelling':6 "*Both the observations (Fig. 8a) and model (Fig. 9) show a wake extending at least 40 km downstream of the N-3 wind farm cluster…"*	The Applicant agrees that wakes can exist at downstream distances of over 20 km.
REP3-056.7			4. **Wake and other atmospheric models** 4.1 Mathematical models can also be used to predict the extent of offshore wakes by modelling the behaviour of the atmosphere when interacting with offshore wind farms. In all cases these	The Applicant notes this response.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			models have been validated on operational data from offshore wind farms and hence can be relied on as good predictors of the behaviour of offshore wakes.	
REP3-056.8			4.2 The following papers (documents 6-12 in the index) contain relevant findings based on these models: 4.2.1 D. Rosencrans et al 'Seasonal variability of wake impacts on offshore wind plant power production':7 "*The strongest wakes, propagating 55 km, occur in summertime stable stratification…"* 4.2.2 Akhtar, N., Geyer, B., Rockel, B. et al. 'Accelerating deployment of offshore wind energy alter wind climate and reduce future power generation potentials':8 "*The mean deficit, which decreases with distance, can extend 35–40 km downwind during prevailing southwesterly winds."* 4.2.3 R. Borgers et al 'Mesoscale modelling of North Sea wind resources with COSMOCLM':9 *"In weakly stable conditions, absolute capacity factor reductions are much higher, as these exceed 13 % over large zones within and outside the wind farm clusters and 5 % more than 20 km from wind farm clusters and larger wind farms*" 4.2.4 Sara C. Pryor, Rebecca J. Barthelmie, Tristan J. Shepherd 'Wind power production from very large offshore wind farms':10 "*Under some flow conditions whole wind-farm wakes can extend up to 90 km downwind of the largest lease areas…*" 4.2.5 P. Baas et al 'Energy production of multi-gigawatt offshore wind farms':11	The Applicant agrees that wakes can exist at downstream distances of over 20 km. In documents 7 and 8, the Applicant notes that the wakes were observed at significant distance only under certain atmospheric conditions. In document 9, the referenced capacity factor reduction exceeding 13% is for an extensive hypothetical future build-out scenario in the North Sea with very dense turbine layout and small separation between projects. This is not representative of the scenario(s) under examination in the Irish Sea where the anticipated build-out is more modest and considerable separation between proposed and existing projects has been maintained. In document 12, the Applicant notes the quoted wind deficit of 7% at 100 km downwind is a specific case with a scenario selected to "*maximise the waking of arrays"* which is not a case relevant to that under examination.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			"In this case, a clear wake is visible, which is still present as the flow reaches the southern edge of the domain. Clearly, for studying wake lengths behind windfarms of *this size, much larger domains are required than the present 80 km*." 4.2.6 Sanchez Gomez M. et al 'Can mesoscale models capture the effect from cluster wakes offshore?':12 *"Long wakes from offshore wind turbine clusters can extend tens of kilometers downstream, affecting the wind resource of a large area"* 4.2.7 Stoelinga M. et al 'Estimating Long-Range External Wake Losses in Energy Yield and Operational Performance Assessments Using the WRF Wind Farm Parameterization':13 *"The simulations produced dramatic hub-height project-scale wake swaths that extended over 50 km downwind, with a specific example showing a waked wind speed deficit of 7% extending 100 km downwind from the array of turbines that produced it*."	
REP3-056.9			**5. Observations from existing turbines' SCADA data** 5.1 Another way to evidence the impact of wake effects at distances of greater than 30km is to use observations of the power produced by existing wind turbines both before and after a neighbour wind farm has been installed. These "natural experiments" occur with increasing frequency as the number of offshore wind arms that are installed globally increases. As the owner of the world's largest offshore wind portfolio, Ørsted A/S (the parent company of the Ørsted IPs) is uniquely placed to use its own operational data to	The Applicant notes this response.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			observe the wake impacts of neighbouring wind farms.	
REP3-056.10			5.2 In a presentation delivered at the Wind Europe Technology Workshop 2023, Ørsted's Nicolai Nygaard shared some of this evidence.14	The Applicant notes this response.
REP3-056.11			5.3 The presentation (document 13 in the index) is referenced in the Fraser-Nash Consulting Study referred to by the Applicant. The presentation uses operational data from 37 offshore wind farm pairs located in Northern Europe to demonstrate the neighbouring wake effect through the reduction of power generated by front row turbines. The presentation demonstrates that when a wind farm is in the wake of a neighbour at a distance of 30 km you can expect a power reduction of just under 10%, whereas at 50km the reduction is still about 5% of the available power. It should be noted that the paper provides these impacts for a wind speed of 8m/s. The power also shows how the wake impact varies depending on the wind speed, the stability of the atmosphere at the time of the observation and also the size, distance, shape and density of the neighbour wind farm.	The evidence presented to support Ørsted IPs view in this presentation is limited and, as far as is known, has not been made available for independent or peer review. Little detail is provided on the analysis or methodology employed, and the 37 scenarios mentioned are not individually identified. In the presentation, the example of the application of TurbOPark to model the influence of Walney 1+2 to the turbine pair at Barrow (slide 7) shows the predictions from TurbOPark to be generally poor, well outside the scatter in the measured data over a wide wind direction range. This is the most relevant example to the Morgan Generation Assets scenario. When the 37 wind farm cases presented by Ørsted are aggregated together in slide 12 and correlated to the distance between wind farms, the level of scatter is remarkable. Ørsted quote a value of 10% wake impact at 30 km but any reasonable fitted trend through the data suggests this would be a maximum figure. **A minimum figure may be taken as approximately 2% - this is a very high uncertainty in the model predictions**. Furthermore, Ørsted's graph on slide 14 then shows TurbOPark to be significantly overpredicting the fitted trend for distances of up to 40 km.
REP3-056.12			5.4 As the Project is anticipated to be 1.5 GW, and is in the predominant wind direction of many of the Ørsted IPs' developments, the Ørsted IPs expect the wake impact to be material on the wind available to the Ørsted IPs' developments.	The Applicant notes this response.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
			This expectation has been confirmed by preliminary results of external modelling commissioned by the Ørsted IPs, as outlined in their substantive response to ExQ1.	
REP3-057.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	**Satellite Observations & Aircraft** 1. Platis, A., Siedersleben, S., Bange, J. et al. First in situ evidence of wakes in the far field behind offshore wind farms. Sci Rep 8, 2163 (2018).	The Applicant notes this response and has no specific comments on this paper.
REP3-058.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	2. Platis, A et al. Long-range modifications of the wind field by offshore windparks – results of the project WIPAFF. Meteorologische Zeitschrift Vol. 29 No. 5 (2020)	Energy losses due to wakes over annual or long-term periods cannot be trivially related to headline outcomes from research studies, which are often provided for selected cases with specific wind speeds, wind direction and atmospheric conditions. For instance, from Platis *et al.,* Ørsted quote maximum wind speed deficits of 40% - this cannot be related in any way to any annual energy loss experienced by neighbouring turbines in the scenario being examined.
REP3-059.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	3. Hasager, C.B.; Vincent, P.; Badger, J.; Badger, M.; Di Bella, A.; Peña, A.; Husson, R.; Volker, P.J.H. Using Satellite SAR to Characterize the Wind Flow around Offshore Wind Farms. Energies 2015, 8.	The Applicant notes this response and has no specific comments on this paper.
REP3-060.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	**Scanning LiDAR** 4. J. Schneemann et al. Cluster wakes impact on a far-distant offshore wind farm's power. Wind Energ. Sci., 5, 2020	The Applicant notes this response and has no specific comments on this paper.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
REP3-061.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	5. B. Cañadillas et al.: Offshore wind farm cluster wakes as observed by long-range-scanning wind lidar measurements and mesoscale modelling. Wind Energ. Sci., 7, 2022	The Applicant notes this response and has no specific comments on this paper.
REP3-062.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	**Wake and other atmospheric Models** 6. D. Rosencrans et al.: Seasonal variability of wake impacts on offshore wind plant power production. Wind Energ. Sci., 9, 2024.	The Applicant notes this response and has no specific comments on this paper.
REP3-063.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	7. Akhtar, N., Geyer, B., Rockel, B. et al. Accelerating deployment of offshore wind energy alter wind climate and reduce future power generation potentials. Sci Rep 11, 11826 (2021).	The Applicant notes this response and has no specific comments on this paper.
REP3-064.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	8. R. Borgers et al.: Mesoscale modelling of North Sea wind resources with COSMO-CLM. Wind Energ. Sci., 9, 2024	Ørsted quote that capacity factor reductions exceed 13% within and outside clusters studied. This is for an extensive build-out scenario in the North Sea with very dense turbine layout and with little separation between projects. The Applicant is mindful that this figure is in no way relevant to the scenario under examination.
REP3-065.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	9. Sara C. Pryor, Rebecca J. Barthelmie, Tristan J. Shepherd. Wind power production from very large offshore wind farms. Joule 5, October 20, 2021.	The Applicant notes this response and has no specific comments on this paper.

Reference	Question is addressed to	ExA Question	Orsted IP Response	Applicant's Response
REP3-066.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	10. P. Baas et al. Energy production of multi-gigawatt offshore wind farms. Wind Energ. Sci., 8, 2023.	The Applicant notes this response and has no specific comments on this paper.
REP3-067.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	11. Sanchez Gomez M. et al. Can mesoscale models capture the effect from cluster wakes offshore? Journal of Physics: Conference Series 2767 (2024) 062013 1	The Applicant notes this response and has no specific comments on this paper.
REP3-068.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	12.Stoelinga M. et al 'Estimating Long-Range External Wake Losses in Energy Yield and Operational Performance Assessments Using the WRF Wind Farm Parameterization'	The Applicant notes this response and has no specific comments on this paper.
REP3-069.1		Documents Concerning Assessment of Wake Effects Provided in Response to ExQ1 INF 1.4	**Orsted SCADA Presentation** 13. Presentation by Nygaard, Nicolai at wind Europe Technology Workshop (June 2023): "Wind farms interacting with the boundary layer: Impact of long-distance wakes between offshore wind farms assessed using operational data".	The Applicant notes this response and has no specific comments on this paper.

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