Planning Inspectorate

REPORT on the IMPLICATIONS for EUROPEAN SITES

Proposed Morgan Offshore Wind Project Generation Assets

An Examining Authority report prepared with the support of the Environmental Services Team

Planning Inspectorate Reference: EN010136

06 February 2025

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1 INTRODUCTION

1.1 Background

1.1.1 Morgan Offshore Wind Limited (the applicant) has applied for a development consent order (DCO) under section 37 of the Planning Act 2008 (PA2008) for the proposed Morgan Offshore Wind Project Generation Assets ('the proposed development'). On behalf of the Secretary of State for Housing, Communities and Local Government, an Examining Authority (ExA) has been appointed to conduct an examination of the application. The ExA will report its findings and conclusions and make a recommendation to the relevant Secretary of State (SoS) as to the decision to be made on the application.

1.1.2 For applications submitted under the PA2008 regime, the relevant SoS is the competent authority for the purposes of the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (the Offshore Marine Regulations) which apply beyond UK territorial waters ie 12 nautical miles. The findings and conclusions on nature conservation issues reported by the ExA will assist the SoS in performing their duties under the Habitats Regulations and the Offshore Marine Regulations.

1.1.3 This Report on the Implications for European sites (RIES) documents and signposts the information in relation to potential effects on European sites that was provided within the DCO application and submitted during the examination by the applicant and Interested Parties (IPs), up to Deadline 5 (D5) of the examination (16 January 2025), along with Additional Submissions from Natural Resources Wales (NRW) (submitted on 30 January 2025 [AS-012]) and the applicant (submitted on 31 January 2025 [AS-013]). It is not a standalone document and should be read in conjunction with the examination documents referred to. Where document references are presented in square brackets [ ] in the text of this report, that reference can be found in the Examination Library published on the National Infrastructure Planning website at the following link:

https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010136/EN010136-000241-Morgan%20OWF%20Examination%20Library.pdf

1.1.4 For the purpose of this RIES, in line with the Habitats Regulations and relevant Government policy, the term 'European sites' includes Special Areas of Conservation (SAC), candidate SACs, proposed SACs, Special Protection Areas (SPA), potential SPAs, Sites of Community Importance, listed and proposed Ramsar sites and sites identified or required as compensatory measures for adverse effects on any of these sites. For ease of reading, this RIES also collectively uses the term 'European site' for 'European sites' defined in the Habitats Regulations 2017 and 'European Marine Sites' defined in the Conservation of Offshore Marine Habitats and Species Regulations 2017, unless otherwise stated. The 'UK National Site Network' refers to SACs and SPAs belonging to the United Kingdom already designated under the Directives and any further sites designated under the Habitats Regulations.

1.1.5 This RIES is issued to ensure that IPs, including Natural England and the Joint Nature Conservation Committee (JNCC) as the Appropriate Nature Conservation Bodies (ANCB), are consulted formally on Habitats Regulations matters. This process may be relied on by the SoS for the purposes of Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Marine Regulations.

1.1.6 It also aims to identify and close any gaps in the ExA's understanding of IPs' positions on Habitats Regulations matters, in relation to all European sites and qualifying features as far as possible, in order to support a robust and thorough recommendation to the SoS.

1.1.7 Following consultation, the responses will be considered by the ExA in making their recommendation to the SoS and made available to the SoS along with this report. The RIES will not be revised following consultation.

1.2 Documents used to inform this RIES

1.2.1 The applicant's Habitats Regulations Assessment (HRA) Report ('the HRA Report') comprised the following documents:

- HRA Stage 2 Information to Support an Appropriate Assessment (ISAA) Part 1: Introduction [APP-096]
- ISAA Part 2: Special Areas of Conservation (SAC) assessments [APP-097] ('the HRA Stage 2 SAC Report') and addendum entitled:
    - Assessment of impacts on non-ornithological features of proposed Ramsar sites within the Isle of Man [REP5-006]
- ISAA Part 3: Special Protection Area (SPA) and Ramsar site assessments ('the HRA Stage 2 SPA Report') [APP-098] and two addenda entitled:
    - Consideration of impacts on ornithological features of Ramsar sites on the Isle of Man [REP5-005]
    - Liverpool Bay/ Bae Lerpwl SPA Clarification Note [REP5-036]
- HRA Stage 1 Screening Report [APP-099]
- HRA Integrity Matrices [APP-100]

1.2.2 The HRA Report is supported and informed by several Environmental Statement (ES) appendices referred to therein [APP-050 to APP-058].

1.2.3 In addition to the HRA Report, the RIES refers to representations submitted to the examination by IPs, Statements of Common Ground (SoCG) and other examination documents as relevant. An overview of documents submitted to date of relevance to the HRA is provided in Sections 2.5 and 3.3 of this RIES. All documents can be found in the Examination Library.

1.3 RIES questions

1.3.1 This RIES contains questions predominantly targeted at the applicant, Natural England, NRW, JNCC and the Marine Management Organisation (MMO), which are drafted in ***blue, bold italic text***.

1.3.2 The responses to the questions posed within the RIES and comments received on it will be of great value to the ExA in understanding IPs' positions on Habitats Regulations matters. It is stressed that responses to other matters discussed in the RIES are equally welcomed. In responding to the questions within the main body text, please refer to the preceding paragraph number. In responding to the questions in Tables 2.5, 3.2 and 3.3, please refer to the ID number in the first column.

1.3.3 Comments on the RIES and responses to the RIES questions should be submitted by D6, 27 February 2025.

1.4 HRA matters considered during the examination

1.4.1 The examination to date has focussed on the following matters:

- Offshore ornithology - the approaches used by the applicant in various aspects of the assessments, including:
  - qualifying features
  - age class apportioning
  - non-breeding season methods for apportionment of impacts
  - the incorporation of sabbatical birds
  - approach to seasonal definitions particularly for collision risk assessments
  - collision risk model estimates
  - the displacement and mortality rates used
  - characterisation of the baseline for Manx shearwater
  - consideration of Highly Pathogenic Avian Influenza (HPAI)
  - approach to in-combination assessment, including gap filling for historical projects and accuracy of figures used
- Marine mammals:
  - behavioural disturbance
  - mitigation and monitoring

2 LIKELY SIGNIFICANT EFFECTS

2.1 European sites considered

Introduction

2.1.1 The proposed development is not connected with or necessary to the management for nature conservation of any European site.

2.1.2 Section 1.2.6 of the HRA Stage 1 Screening Report [APP-099] set out the process undertaken by the applicant to identify the European sites and features to be included in the screening assessment. This was based on the following criteria:

- Criterion 1: European site overlaps with the proposed development site boundary
- Criterion 2: European site with qualifying mobile features/ species (eg birds, Annex II marine mammals, migratory fish, otter) whose range (eg foraging, migratory, overwintering, breeding or natural habitat range) overlaps with the proposed development site boundary
- Criterion 3: European sites and/ or qualifying interest features located within the potential Zone of Influence (ZoI) of impacts associated with the proposed development (eg habitat loss/ disturbance, sound and risk of collision)

Sites within the UK National Site Network (NSN)

2.1.3 The HRA Stage 1 Screening Report [APP-099] identified 71 European sites within the UK NSN for inclusion within the assessment. The locations of the European sites relative to the proposed development are shown on Figures 1.4, 1.7 and 1.8 of the HRA Stage 1 Screening Report [APP-099].

2.1.4 The Report was structured according to European sites designated for different receptor groups, with the sites being detailed in the following tables:

- Table 1.4: Annex II diadromous fish species (includes nine UK European sites shown on Figure 1.4 [APP-099])
- Table 1.5: Annex II marine mammals (includes 15 UK European sites shown on Figure 1.7 [APP-099])
- Table 1.17: Offshore ornithological features (includes 47 UK European sites shown on Figure 1.8 [APP-099])

2.1.5 No European sites designated for Annex I habitats or onshore ornithological features were identified for inclusion in the assessment.

2.1.6 Natural England [RR-026, REP1-053] and NRW [RR-027, REP2-026] considered that Liverpool Bay SPA should also have been identified for inclusion within the Stage 1 and 2 assessments, highlighting the potential for disturbance and displacement impacts from vessel movements in the construction or operation and maintenance (O&M) phases on the red-throated

diver and common scoter qualifying features. In response, the applicant considered that there would be no adverse effect on integrity (AEoI) of the Liverpool Bay SPA as a result of disturbance impacts on the red-throated diver and common scoter qualifying features [PD1-017].

2.1.7 At D5, the applicant submitted an Addendum [REP5-036] to the HRA Stage 2 SPA Report, which presented Stage 1 and 2 assessments for the Liverpool Bay SPA. Potential LSEs were identified for the red-throated diver, common scoter and waterbird assemblage qualifying features. Potential AEoI of these features of Liverpool Bay SPA is discussed further in Section 3 of this RIES.

2.1.8 Natural England [RR-026 and REP1-053] also stated that little gull of the Liverpool Bay SPA should be considered in the assessment. In response, the applicant stated [PD1-017] that it had given due consideration to little gull in the HRA Stage 1 Screening Report [APP-099] and identified no LSE for all SPAs at which the species is a qualifying feature. It stated that no connectivity was identified between the species and the Proposed Development. At D3, Natural England stated that it considered the little gull matter to be a low-risk issue and considered the matter closed [REP3-049].

2.1.9 Aside from the Liverpool Bay SPA, in the examination to date no additional UK European sites have been identified by IPs for inclusion within the screening assessment. The SoCG between the applicant and NRW at D2 [REP2-026] recorded agreement that all European sites within Welsh waters with marine mammal features with the potential for LSE had been identified within the screening assessment.

2.1.10 European sites within the UK NSN that are located within England, Wales, Scotland and Northern Ireland have been identified for consideration within the assessment. Natural England and NRW registered as IPs and have participated in the examination to date. JNCC did not register as an IP, with Natural England's Relevant Representation (RR) [RR-026] explaining that Natural England is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for offshore renewable energy installations in offshore waters (0-200nm) adjacent to England (including the application for the proposed development). JNCC has responded to questions and ISH action points from the ExA in relation to non-English sites for which it has joint or sole responsibility [REP3-035, REP5-060; REP5-067].

2.1.11 On 5 August 2024, the ExA wrote to NatureScot and the Department of Agriculture, Environment and Rural Affairs (DAERA) of Northern Ireland inviting them to the PM as 'Other Persons' [PD-001]. The ExA in its first and second written questions [PD-004 and PD-009] specifically asked NatureScot and DAERA to confirm whether they were content with the outcomes of the applicant's HRA for the relevant non-English sites.

2.1.12 At the time of publication of this RIES, neither NatureScot or DAERA has responded or submitted any representations to the examination.

Non-UK sites

2.1.13 The HRA Stage 1 Screening Report [APP-099] also identified the following non-UK European sites for inclusion within the assessment:

- 11 Republic of Ireland and 17 French sites designated for Annex II marine mammal qualifying features
- Seven Republic of Ireland sites designated for offshore ornithological features

2.1.14 The locations of the non-UK European sites relative to the proposed development are depicted on Figures 1.7 and 1.8 of the HRA Stage 1 Screening Report [APP-099].

2.1.15 The applicant concluded there would be no AEoI on all non-UK sites [APP-096, APP-097, APP-098, APP-100].

2.1.16 The Isle of Man is not covered by the Habitats Regulations but is part of the Ramsar Convention. At the point of DCO application, the applicant's HRA documentation did not address Ramsar sites located on the Isle of Man. Further to ExA questions [PD-004], the applicant [MO.1.17, REP3-006] confirmed that consideration had been given to Ballaugh Curragh Ramsar site in the HRA screening assessment (stating that initial screening was undertaken at the species level, without reference to specific designated sites). No LSE was identified on the qualifying species, therefore the applicant stated there was no potential for LSE on the Ballaugh Curragh Ramsar site.

2.1.17 Regarding the five proposed (p) Ramsar sites identified by the ExA, the applicant considered [MO.1.17, REP3-006] there to be no receptor-impact-pathway for the Central Valley Curragh pRamsar site. For the Dalby Peatlands pRamsar site, the applicant identified a potential impact pathway but considered there was no potential for LSE for the relevant features. The applicant noted that the remaining three pRamsar sites (Gob ny Rona, Maughold Head and Port Cornaa; Southern Coasts and Calf of Man; and the Ayres) are covered by Isle of Man Marine Nature Reserves which had been given due consideration within the ES. The applicant also noted that the Isle of Man Government did not request consideration of these sites during pre-application consultation or in its RR [RR-015].

2.1.18 The Isle of Man Government subsequently confirmed it was content that the Isle of Man Ramsar sites had been appropriately considered and that it concurred with the applicant's response to MO.1.17 [REP4-039].

2.1.19 In response to ExQ2 HRA 2.8 [PD-009], at D5 the applicant provided:

- an Addendum [REP5-005] to the HRA Stage 2 SPA Report [APP-098], which presented the assessment of ornithological features of the Isle of Man Ramsar site and pRamsar sites. The addendum identified one additional non-UK site and feature for inclusion in the Stage 2 assessment (the Southern Coasts and Calf of Man pRamsar site – guillemot qualifying feature) as a result of impacts from the proposed development in-combination with other plans and projects [REP5-005]. An assessment concluding no AEoI was presented in the same document.
- an Addendum [REP5-006] to the HRA Stage 2 SAC Report [APP-097], which presented the assessment of non-ornithological features of the Isle of Man Ramsar site and pRamsar sites. The addendum identified three

additional non-UK sites with marine mammal and fish features for inclusion in the Stage 2 assessment (Gob ny Rona, Maughold Head and Port Cornaa pRamsar site, Southern Coasts and Calf of Man pRamsar site; and the Ayres pRamsar site) as a result of impacts from the proposed development alone and in-combination with other plans and projects [REP5-006]. An assessment concluding no AEoI was presented in the same document.

2.1.20 Only sites within the UK NSN are addressed in this RIES.

2.2 Potential impact pathways

2.2.1 The HRA Stage 1 Screening Report [APP-099] detailed the potential impact pathways from the proposed development during construction, O&M and decommissioning. These are summarised in Table 2.1 below. The screening matrices within [APP-099] detail which impact pathways were considered for each European site and qualifying feature (ie those greyed out were not assessed by the applicant).

Table 2.1: Pathways for LSE assessed by the applicant

Receptor groups	LSE pathway
Annex II diadromous fish species (see Section 1.4.3 of [APP-099])	• temporary habitat loss/ disturbance • increases in suspended sediment concentrations (SSC) and sediment deposition • underwater sound impacting fish • long-term habitat loss • Electromagnetic Fields (EMF) • colonisation of hard structures • disturbance/remobilisation of sediment-bound contaminants • accidental pollution
Annex II marine mammals (see Section 1.4.4 of [APP-099])	• injury and disturbance from underwater sound generated from piling • injury and disturbance from underwater sound generation from unexploded ordnance (UXO) detonation • underwater sound from pre-construction site investigation surveys • underwater sound from vessels, other vessel activities and other (non-piling) sound producing activities • vessel collision risk • changes in prey availability

	• increased SSC and associated sediment deposition • accidental pollution • operational sound • EMF
Offshore ornithological features (see Section 1.4.5 of [APP-099])	• temporary habitat loss/ disturbance and increased SSC • disturbance and displacement from airborne sound and presence of vessels and infrastructure • changes in prey availability • accidental pollution • permanent habitat loss/ disturbance and increased SSC • collision risk • barrier to movement

2.2.2 The applicant assessed the potential impacts during construction, O&M and decommissioning. The applicant considered that all potential impacts during the decommissioning phase would be similar to, and potentially less than, those outlined in the construction phase [APP-099].

2.2.3 In the examination to date, no additional impact pathways have been identified by IPs for inclusion within the assessment.

2.3 In-combination effects

2.3.1 Section 1.5 of the HRA Stage 1 Screening Report [APP-099] detailed the applicant's overarching approach to assessing in-combination effects. For screening, it stated that it is not necessary to consider in-combination effects for sites/ features for which a LSE 'alone' has been identified; rather it is for those where no LSE was concluded. The HRA Stage 1 Screening Report did not identify specific plans or projects included in the in-combination assessment.

2.3.2 Matters discussed during the examination in relation to the in-combination assessment are detailed in Sections 2.5 and 3.3 of this RIES.

2.4 The applicant's assessment (application stage)

2.4.1 The applicant's screening conclusions at the point of the DCO application were presented in [APP-099]. Screening matrices for each European site considered were provided in Section 1.4, with a summary in Table 1.110.

Sites for which the applicant concluded no LSE on all qualifying features

2.4.2 The applicant concluded that the proposed development would not be likely to give rise to significant effects, either alone or in combination with other projects or plans, on all qualifying features of the European sites detailed in Table 2.2 below.

Table 2.2: European sites for which the applicant concluded no LSE on all qualifying features

Receptor groups	European site
Annex II marine mammals	• Monach Islands SAC • North Rona SAC • Treshnish Isles SAC
Offshore ornithological features	• Auskerry SPA • Burry Inlet SPA • Burry Inlet Ramsar site • Dee Estuary SPA • Dee Estuary Ramsar site • Dyfi Estuary/Aber Dyfi SPA • Fair Isle SPA • Foula SPA • Mousa SPA • Priest Island (Summer Isles) SPA • Ramna Stacks and Gruney SPA • Severn Estuary SPA • Severn Estuary Ramsar site • Traeth Lafan/ Lavan Sands, Conway Bay SPA • Treshnish Isles SPA

2.4.3 NRW stated [RR-027] that in addition to the features of the Dee Estuary Ramsar site, Burry Inlet Ramsar site and Severn Estuary Ramsar site identified in the HRA Stage 1 Screening Report [APP-099], waterbird assemblages were also features of these three European sites. NRW stated that the assemblages are qualifying features in their own right and recommended that the applicant include an assessment for each assemblage feature [REP1-056].

2.4.4 In response, the applicant confirmed [PD1-017] that its conclusion of no LSE for all features of Dee Estuary Ramsar site, Burry Inlet Ramsar site and Severn Estuary Ramsar site also applied to the waterbird assemblage features at those sites. The applicant explained [REP2-005] that it had considered assemblage features within the Stage 1 and 2 assessments presented in

[APP-098] and [APP-099]. The applicant stated that in all cases, conclusions of no adverse effect had been reached with these conclusions also considered applicable to the assemblage feature as a whole [REP2-005].

2.4.5 Aside from this, the applicant's conclusions of no LSE with respect to the sites in Table 2.2 above have not been disputed in the examination to date.

Sites for which the applicant concluded LSE on some or all qualifying features

2.4.6 At the point of application, the applicant concluded that the proposed development would be likely to give rise to significant effects, either alone or in combination with other projects or plans, on one or more qualifying features of the UK European sites detailed in Table 2.3 below. See Table 1.110 of [APP-099] for the qualifying feature(s) and effect(s) screened in.

Table 2.3 European sites within the UK NSN for a which a LSE was identified by the applicant

Receptor groups	European site
Annex II diadromous fish	England • River Derwent and Bassenthwaite Lake SAC • River Eden SAC • River Ehen SAC • River Kent SAC Wales • Afon Gwyrfai a Llyn Cwellyn SAC • Dee Estuary/ Aber Dyfrdwy SAC • River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC Scotland • River Bladnoch SAC • Solway Firth SAC
Annex II marine mammals	England • Isles of Scilly Complex SAC • Lundy SAC Wales • Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC • Cardigan Bay/ Bae Ceredigion SAC • North Anglesey Marine/ Gogledd Môn Forol SAC • Pembrokeshire Marine/ Sir Benfro Forol SAC

	• Pen Llŷn a`r Sarnau/ Lleyn Peninsula and the Sarnau SAC • West Wales Marine/ Gorllewin Cymru Forol SAC Northern Ireland • Murlough SAC • Maidens SAC • North Channel SAC • Strangford Lough SAC
Offshore ornithological features	England • Bowland Fells SPA • Flamborough and Filey Coast SPA • Isles of Scilly SPA • Isles of Scilly Ramsar site • Morecambe Bay and Duddon Estuary SPA • Morecambe Bay Ramsar site • Ribble and Alt Estuaries SPA • Ribble and Alt Estuaries Ramsar site Wales • Irish Sea Front SPA • Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA • Grassholm SPA • Skomer, Skokholm and the seas off Pembrokeshire/ Sgomer, Sgogwm a moroedd Benfro SPA Scotland • Ailsa Craig SPA • Buchan Ness to Collieston Coast SPA • Cape Wrath SPA • East Caithness Cliffs SPA • Flannan Isles SPA • Handa SPA • Hermaness, Saxa Vord and Valla Field SPA • Mingulay and Berneray SPA • North Colonsay and Western Cliffs SPA • North Rona and Sula Sgeir SPA • Rum SPA • Seas off St Kilda SPA

	• St Kilda SPA • Sule Skerry and Sule Stack SPA • The Shiant Isles SPA • Troup, Pennan and Lion's Heads SPA • West Westray SPA Northern Ireland • Copeland Islands SPA • Forth Islands SPA • Rathlin Island SPA

2.5 Pre-examination and examination matters

Matters agreed by SNCBs prior to examination commencing

2.5.1 As noted above, the HRA Stage 1 Screening Report [APP-099] did not identify any European sites designated for Annex I habitats for inclusion in the assessment. Natural England agreed [RR-026] that the approach used for determining LSE on European sites with Annex I habitats as features was appropriate. Therefore, Natural England confirmed [RR-026] that unless there was a change in the project design parameters, it would provide no further comment on benthic ecology in respect to the Habitats Regulations during the examination.

2.5.2 Natural England [RR-026] agreed with the findings in the HRA Stage 1 Screening Report [APP-099] of no or negligible impacts to Annex II diadromous fish species.

2.5.3 NRW [RR-027] identified only matters of concern to it.

Examination overview

2.5.4 The applicant's initial screening conclusions presented in [APP-099] were disputed by IPs and questioned by the ExA during examination in respect of offshore ornithology. No matters were specifically disputed or questioned in relation to the applicant's screening conclusions for marine mammals or Annex II diadromous fish species.

Offshore ornithology

2.5.5 NRW [RR-027] and JNCC [REP3-035] considered there were errors in the qualifying features for the Skomer, Skokholm, and seas off Pembrokeshire SPA, noting some species were components of the seabird assemblage. The applicant [PD1-017] explained it is standard practice to treat assemblage features as standalone and confirmed all identified features were considered, with several progressing to Stage 2 assessment.

2.5.6 The ExA [PD-004] sought justification for screening out operational phase barrier effects. The applicant [REP2-022 and REP3-006] explained that the likelihood of barrier effects was low due to seabirds' large foraging ranges and distances from the Morgan Array Area. NRW [REP3-051] and Natural England [REP5-080] agreed with this assessment.

Further matters discussed during examination

2.5.7 Further detail on matters raised in the examination to date, or those for which the ExA seeks clarity, in relation to LSEs are set out in Tables 2.4 and 2.5 below.

2.5.8 The ExA understands that matters coloured green are resolved and matters coloured amber are outstanding.

2.5.9 Note that matters relating to semantics/ minor clarifications have not been included.

Table 2.4: Offshore ornithology - Issues raised in the examination to date by the ExA and IPs in relation to the applicant's screening of LSEs (alone and in-combination)

ID	Issue	Details	ExA observation/ question
2.4.1	Skomer, Skokholm and the seas off Pembrokeshire SPA – qualifying features	NRW advised [RR-027] that the qualifying features for the Skomer, Skokholm, and seas off Pembrokeshire SPA qualifying features are Manx shearwater, European storm petrel, lesser black-backed gull, Atlantic puffin and a seabird assemblage. NRW stated that guillemot, razorbill and kittiwake (identified in the applicant's assessments amongst the list of qualifying features, along with the seabird assemblage) are not features in their own right but are named components of the seabird assemblage feature. JNCC made similar comments in [REP3-035 and REP5-067]. In response to NRW's comments, the applicant stated [PD1-017] that it was standard practice in HRA assessments to assess assemblage features as features in their own right and this had been followed in the assessments for the proposed development. The applicant stated that all of the features mentioned by NRW had been considered in the HRA Stage 1 Screening Report [APP-099], with kittiwake, lesser black-backed gull, guillemot, razorbill and Manx shearwater progressed to the Stage 2 assessment. The breeding seabird assemblage was also progressed to the Stage 2 assessment. NRW agreed in [AS-012] that there would be no LSE to European storm petrel or Atlantic puffin. NRW also agreed that there would be no AEoI, alone or in-combination, to any features of Skomer, Skokholm and the seas off Pembrokeshire SPA [AS-012].	The ExA understands this matter to be resolved.

2.4.2	Barrier effects	The ExA [ExQ1 HRA 1.4, PD-004] sought further justification from the applicant for screening out operational phase barrier effects for all qualifying features of all European sites. The applicant [REP3-006] considered the likelihood of the Morgan Array Area resulting in barrier effects to be low, because of the large foraging ranges used by seabirds and the large distances from the Morgan Array Area at which the SPAs are located. NRW [REP3-051] and Natural England [REP5-080] agreed that barrier effects could be screened out of the assessment.	The ExA understands this matter to be resolved.

Table 2.5: in-combination assessment - issues raised in the examination to date by the ExA and IPs in relation to the applicant's screening of LSEs (alone and in-combination)

ID	Potential impact pathway/ issue	Details	ExA observation/ question
2.5.1	In-combination effects where no LSE from the project alone	Section 1.4 of the HRA Stage 1 Screening Report [APP-099] detailed 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 a 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 asked the applicant [ExQ1 HRA 1.5, PD-004] to provide such an assessment, where this had not been done within the HRA and to identify the projects or plans considered. The same question asked Natural England and NRW whether they considered there to be the potential for an in-combination LSE for any site/ feature where the applicant had excluded a LSE from the project alone. The applicant [REP3-006] considered that such an assessment was unnecessary, as due to the highly precautionary approach to the screening of the project alone, no additional LSEs were likely to arise as a result of in-combination effects. Natural England [REP3-048] agreed that for designated sites within English jurisdiction, the likelihood for an in-combination LSE for any	***Q. Further to the applicant's D5 submissions [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034; and REP5-035], can NRW confirm whether it agrees that all in-combination LSEs have been identified by the applicant in respect of marine ornithology?***

		site/ feature where the applicant has excluded a LSE from the project alone is low. In its response to ExQ1 HRA 1.5, NRW [REP3-051] considered that for offshore ornithology, there was potential for an in-combination LSE for Welsh site/ feature combinations. However, until revised assessments for some site and feature combinations using the SNCB advised approaches to eg displacement and breeding season age-class apportionment rate for kittiwake were submitted by the applicant (see Table 3.3 of this RIES), it was unable to provide advice on this matter. At D5 the applicant provided updated assessments [REP5-032, REP5-033, REP5-034, REP5-035] to align with the SNCB recommended methodology including the advised ranges of displacement and mortality rates and breeding season age-class apportionment rate for kittiwake. At D5, NRW [REP5-083a] stated that it was yet to review the applicant's revised in-combination assessments using the SNCB advised ranges of displacement and mortality rates. NRW [REP5-083] confirmed at D5 that the applicant had updated its assessments accordingly following the SNCB advised approaches for kittiwake apportioning by assuming all birds are adult age class. Further to its D5 position [REP5-083a] NRW has now confirmed in an Additional Submission [AS-012] that it can conclude no AEoI alone or in-combination for all Welsh SPAs, based on updated figures received by NRW on 27 January 2025. The applicant subsequently submitted the updated figures to the examination in [AS-013] (rev 2), superseding [REP5-033] (rev 1). NRW did not specifically confirm agreement in [AS-012] that all in-combination LSEs had been identified.	

2.6 Summary of examination outcomes in relation to screening

2.6.1 The ExA's understanding of the current positions of the applicant, Natural England, NRW and JNCC in relation to LSEs is set out above. The ExA understands that whilst the majority of matters relating to LSE have been resolved, the matter coloured amber remains outstanding.

2.6.2 The ExA has sought a response from NRW where indicated in Table 2.5 to provide clarity on the outstanding matter.

ExA's understanding of LSEs after D5

2.6.3 The ExA understands that a LSE from the proposed development alone or in combination with other projects or plans can be excluded for all qualifying features of the European sites listed in Table 2.2 of the RIES.

2.6.4 The ExA understands that the proposed development would be likely to give rise to significant effects, either alone or in combination with other projects or plans, on one or more qualifying feature(s) of the UK European sites detailed in Table 2.3 of this RIES.

2.6.5 Disturbance and displacement impacts to features of the Liverpool Bay SPA/ Bae Lerpwl SPA were also included in the LSE screening assessment following advice from SNCBs. Potential LSEs (alone and in-combination) were identified for the red-throated diver, common scoter and waterbird assemblage qualifying features [REP5-036].

3 ADVERSE EFFECTS ON INTEGRITY

3.1 Conservation Objectives

3.1.1 The conservation objectives for all of the SACs for which a LSE was identified by the applicant at the point of the DCO application were included within the HRA Stage 2 SAC Report [APP-097].

3.1.2 The HRA Stage 2 SAC Report [APP-097] noted that the following are in unfavourable condition:

- River Ehen SAC – freshwater pearl mussel and Atlantic salmon
- Dee Estuary/ Aber Dyfrdwy SAC – river lamprey and sea lamprey
- River Kent SAC – freshwater pearl mussel
- River Bladnoch SAC – Atlantic salmon
- River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC – Atlantic salmon, river lamprey and sea lamprey
- Afon Gwyrfai a Llyn Cwellyn SAC – Atlantic salmon
- River Eden SAC – river lamprey and sea lamprey
- Strangford Lough SAC – harbour seal

3.1.3 The HRA Stage 2 SAC Report [APP-097] noted that condition assessments were not available for the following SACs:

- 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
- Isles of Scilly Complex SAC

3.1.4 In respect of SPAs/ Ramsar sites, the applicant followed a two-step process to assessing effects on the integrity of sites for which a LSE was identified (see paragraph 3.2.4 of this RIES for further details). Conservation objectives were provided by the applicant only for the European sites that reached Step 2 of the Integrity Test [APP-098].

3.1.5 Further to ExQ1 [HRA 1.9 of PD-004], the applicant confirmed in [REP3-006] that it is not aware that condition assessments have become available since the submission of the application for Annex II marine mammals and diadromous fish as features of the SACs identified in paragraph 3.1.3 of this RIES. This was confirmed by Natural England [REP3-048] and NRW [REP3-051]. NRW also stated that they are not likely to be available during the course of the examination.

3.1.6 ExQ1 [HRA 1.10 of PD-004] identified that conservation objectives are only provided for the SPA/ Ramsar sites that reached Step 2 of the Integrity Test (see paragraph 3.2.4 of this RIES for further details). The applicant was requested to provide conservation objectives for those European sites for which a LSE has been identified and to confirm whether the qualifying features of the sites that have progressed to Stage 2 in [APP-098] are in unfavourable condition and/ or have a restore Conservation Objective target. The applicant submitted this information at D4 in a Conservation Objectives clarification note [REP4-030].

3.2 The applicant's assessment

3.2.1 The European sites and qualifying features for which LSE were identified were further assessed by the applicant to determine if they could be subject to AEoI from the proposed development, either alone or in combination.

Mitigation measures

3.2.2 The applicant's HRA Stage 2 Reports identified mitigation measures for each receptor group as follows:

- Annex II diadromous fish species – Tables 1.8 and 1.20 of [APP-097]
- Annex II marine mammals – Tables 1.56 and 1.123 of [APP-097]
- Offshore ornithology – Table 1.6 of [APP-098]

3.2.3 These were taken into account in the applicant's assessment of effects on integrity.

SPAs/ Ramsar sites - Step 1 and Step 2 assessment

3.2.4 Section 1.4.7 and Figure 1.1 of the HRA Stage 2 SPA Report [APP-098] explained that for SPAs/ Ramsar sites, a two-step process to assessing effects on the integrity of sites for which a LSE was identified. In brief:

- Step 1 – comprised a high-level assessment, based on apportioning data, to identify where there is a low risk of an AEoI (ie predicted impacts for the proposed development alone and/or in-combination cause a <1% increase in the baseline mortality of the latest population estimate for a qualifying feature).
- Step 2 - was for sites for which it is predicted that there would be an increase in baseline mortality of particular qualifying features of >1%. It comprised a more detailed assessment, based on collision risk modelling

and displacement assessments to examine impacts against each conservation objective for the relevant SPAs/ Ramsar sites.

3.2.5 At the point of DCO application, the sites and qualifying features which were taken forward to the Step 2 assessment were:

- Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar site – herring gull and breeding seabird assemblage (herring gull component feature)
- Ireland's Eye SPA – kittiwake
- Rathlin Island SPA – breeding seabird assemblage (guillemot component feature) (later corrected by the applicant – see Table 3.3, row ID 3.3.2 of this RIES)
- Isles of Scilly SPA/ Ramsar site – great black-backed gull (non-breeding season) and breeding bird assemblage (great black-backed gull component feature)
- Cape Wrath SPA – kittiwake and breeding seabird assemblage (kittiwake component feature)
- Flannan Isles SPA – guillemot (non-breeding season) and breeding seabird assemblage (guillemot component feature)
- North-West Irish Sea SPA – kittiwake

In-combination

3.2.6 The projects included in the in-combination assessments at the point of DCO application were detailed in:

- Annex II diadromous fish species – Table 1.30 and shown in Figure 1.4 of [APP-097]
- Annex II marine mammals – Table 1.125 and shown in Figure 1.12 of [APP-097]
- Offshore ornithological features - Table 1.51 and Figure 1.3 [APP-098]

3.2.7 Section 1.4.5 of the HRA Stage 2 SAC Report [APP-097] detailed the applicant's approach to the in-combination assessment for SACs.

3.2.8 Section 1.4.6 of the HRA Stage 2 SPA Report [APP-098] detailed the applicant's general approach to the in-combination assessment for SPA/ Ramsar sites.

3.2.9 Section 1.4.7 of the HRA Stage 2 SPA Report [APP-098] stated that where the proposed development alone represents an impact of <0.05% increase in baseline mortality of the relevant SPA population, it is considered that the impact is not measurable and is within the natural limits of variation and so would not be considered in an in-combination assessment. In-combination assessments therefore were only undertaken for the following UK SPAs/ Ramsar sites and features:

- Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar site – in-combination impacts from collision risk during operation and maintenance to herring gull
- Ireland's Eye SPA – in-combination impacts from displacement, collision and their combined effects on kittiwake
- Isles of Scilly SPA/ Ramsar site – in-combination impact from collision risk to great black-backed gull (non-breeding season)
- Flannan Isles SPA – in-combination impact from combined effects from disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure impacts to guillemot (non-breeding season)
- Cape Wrath SPA – in-combination and collision risk and combined impacts from collision and displacement to kittiwake (it is noted that there is a discrepancy in Table 1.46 of [APP-098] where it states that kittiwake are not progressed to Step 2)

3.2.10 Matters discussed during the examination in relation to the in-combination assessment are detailed in Section 3.3 and Table 3.4 of this RIES.

Applicant's conclusions in relation to site integrity

3.2.11 At the point of application, the applicant concluded that the proposed development would not adversely affect the integrity of any of the European sites and features assessed, either alone or in-combination with other projects or plans. The assessments were summarised in Table 1.187 of [APP-097] for SACs and Table 1.86 of [APP-098] for SPA and Ramsar sites. The applicant's integrity matrices can be found in [APP-100].

3.3 Pre-examination and examination matters

Matters agreed by SNCBs prior to examination commencing

3.3.1 NRW [RR-027] agreed there would be no AEoI to the following:

- Annex II diadromous fish features of the Welsh protected sites: Dee Estuary/ Aber Dyfrdwy SAC, River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC, and Afon Gwyrfai a Llyn Cwellyn SAC.

3.3.2 Natural England [RR-026] agreed there would be no AEoI to the following:

- Annex II diadromous fish features of the English protected sites: River Ehen SAC, River Derwent and Bassenthwaite Lake SAC, River Kent SAC and River Eden SAC.

Examination overview

Marine mammals

3.3.3 There has been limited dispute or questioning of the applicant's initial conclusions in the HRA Stage 2 SAC Report [APP-097] during the course of

the examination in respect of European sites for marine mammals (project alone or in-combination).

3.3.4 By D5, Natural England [REP5-080], NRW [REP4-044] and JNCC [REP3-035] had all agreed that AEoI alone and in-combination can be excluded for the marine mammal qualifying features of the SACs within their remit.

3.3.5 NRW stated that its agreement in this regard was on the proviso that the Underwater Sound Management Strategy (UWSMS), Marine Mammal Mitigation Protocol (MMMP) and other post-consent mitigation was secured [REP4-044]. JNCC's agreement in this regard was on the basis that the measures in the outline (o) MMMP and oUWSMS are sufficient to mitigate the potential impacts [REP3-035].

3.3.6 The oMMMP and oUWSMS as submitted with the DCO application have been updated throughout the examination (to date) in response to comments from the SNCBs and other parties. At D5, the latest versions comprise [REP5-021] (oMMMP) and [REP5-025] (oUWSMS).

3.3.7 Submission of the final MMMP and UWMSM (in accordance with the oMMMP and oUWSMS) for approval by the MMO is secured through draft DML Part 2 Conditions 20, 22 and 23 [REP5-017].

3.3.8 Measures to minimise disturbance to marine mammals (and rafting birds) from transiting vessels are described in [REP5-046] and would be included in the Offshore EMP, which is secured through the draft DMLs (Condition 20) [REP5-017].

Table 3.1: Annex II diadromous fish – key issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation/ question
3.1.1	River Eden SAC and management Plans	The applicant's Stage 2 SAC Report [APP-097] appeared to rely upon measures in an Offshore Construction Method Statement (CMS) to avoid adverse effects on the qualifying features of the River Eden SAC from EMF associated with subsea electric cables. Table 1.20 [APP-097] made the commitment to bury cables *"where possible".* A draft/ outline version of the CMS was not submitted with the application. The ExA [HRA 1.8 of PD-004] requested an outline Offshore CMS, which encapsulated all relevant measures, to be certified within the DCO and referred to within relevant conditions. In response, the applicant provided an Outline CMS (incorporating (incorporating Outline Cable Specification and Installation Plan) at D4 [REP4-032]. Table 5.3 of the document confirmed that that *"The Cable Specification and Installation Plan (CSIP) will include measures for cable burial where possible…".* In response to ExQ2 [DCO 2.9 of PD-009], the applicant updated condition 20(1)(d) within each draft DML to refence the outline Offshore CMS and also included the outline Offshore CMS within the list of documents to be certified [REP5-017].	The ExA understands this matter to be resolved.

Table 3.2: Marine mammals – key issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation/ question
3.2.1	Cardigan Bay and Pen Llyn a'r Sarnau SACs, bottlenose dolphin feature - connectivity of sites	NRW [RR-027] advised that the bottlenose dolphin populations of Cardigan Bay and Pen Llyn a'r Sarnau SACs are highly connected and that the two protected sites should be considered together. The applicant [PD1-017] stated that both sites had been considered in detail separately in line with the HRA process so that effects could be assessed against the two site's conservation objectives. At D1, NRW agreed (having reviewed the applicant's response in [PD1-017]) that this did not materially impact the conclusions of the application and considered that this matter could be closed [REP1-056].	The ExA understands this matter to be resolved.
3.2.2	Sites and features listed in Table 1.49 of [APP-097] – injury and disturbance from elevated underwater sound during pre-construction site investigation surveys	The HRA Stage 2 SAC Report [APP-097] states (eg in Table 1.8) that a MMMP and an UWSMS are proposed to secure measures for injurious effects and disturbance from piling, UXO clearance and some geophysical activities. Submission of a MMMP and UWMSM (in accordance with the oMMMP and oUWSMS) for approval by the MMO is secured through draft DML Part 2 Conditions 20, 22 and 23. However none of these Conditions referred to geophysical activities [REP5-017]. At D3, the applicant stated [ExQ1 MM1.3, REP3-006] that it had included the proposed mitigation for geophysical surveys within the oMMMP [then APP-072, now REP5-021]. The applicant considered [ExQ1 MM1.3 of REP3-006] that as geophysical surveys are not a licensable activity and the	The ExA understands this matter to be resolved.

		necessary mitigation would be secured through the European Protected Species licensing process, it was not necessary to include provision in the draft DCO to secure this mitigation. The applicant considered this to be the standard approach for consenting of offshore wind generating stations. Text was added to the oMMMP at D4 to clarify that Acoustic Deterrent Devices would not be used as a measure for geophysical surveys [REP4-020] (in line with Natural England's request [RR-026]), and at D5 [para 1.1.1.4, REP5-021] to reflect the applicant's response to ExQ1 MM1.3 [REP3-006]. At D5, Natural England [REP5-080] and the MMO [REP5-068] confirmed that they were satisfied with the applicant's response to ExQ1 MM 1.3. NRW [REP5-083] deferred to the MMO.	
3.2.3	Sites and features listed in Table 1.49 of [APP-097] – disturbance from elevated underwater sound during pre-construction site investigation surveys	Natural England [RR-026, REP1-053] did not agree with the conclusion regarding pre-construction site surveys, presented in paragraph 1.6.4.220 of the HRA Stage 2 SAC Report [APP-097]: *"…all geotechnical and geophysical surveys will be of a very short duration (over a period of several months), activities are likely to be intermittent and animals are expected to recover quickly after cessation of the survey activities."* Natural England did not agree that a period of several months could be considered a "very short duration". The applicant subsequently clarified in its Errata Sheet [REP3-011] that this should read "medium term duration". In addition, Natural England referenced new data collected in Wales which showed that Sub-Bottom Profiler (SBP) surveys cause marked and prolonged reduction in acoustic porpoise detection [RR-026, REP1-053]. Natural England advised that appropriate mitigation should be considered for these surveys within the MMMP and UWSMP	***Q. The MMO is requested to provide its view on the need for inclusion of monitoring of SBP surveys in the IPMP.*** ***Natural England may also wish to comment on the applicant's response to ExQ MM 2.10 [REP5-015].***

		[RR-026, REP1-053] and at D3 advised that the applicant should follow the JNCC guidelines for minimising the risk of injury to marine mammals from geophysical surveys (JNCC, 2017) for mitigation, as a minimum [REP3-049]. The ExA pursued this matter in ExQ MM 1.23 [PD-004] which asked the applicant to identify appropriate mitigation measures that could be included in a future iteration of the oMMMP. In response, the applicant [REP3-006] highlighted that for SBP surveys, the only appropriate mitigation measures which are currently available are Marine Mammal Observers and Passive Acoustic Monitoring, which align with the JNCC guidelines and had already been included in the oMMMP. At D4, Natural England acknowledged that there are currently no other mitigation options available for SBP surveys (besides those outlined in the JNCC guidelines) and instead advised that monitoring should be considered with the aim to collect data before, during and after SBP surveys to examine changes in the baseline [REP4-043]. Natural England stated that inclusion of this monitoring in the IPMP would resolve this issue. The ExA asked the applicant whether it was willing to include the monitoring in the IPMP [ExQ MM 2.10, PD-009]. The applicant responded that there was no potential for significant effects as a result of site investigation survey sources (including SBP) and as such, it considered monitoring to be disproportionate to the risk [REP5-015]. The applicant therefore does not consider it necessary to include this monitoring in the outline IPMP and explained that following discussions with the MMO, it anticipated that the MMO would concur that monitoring is not required.	

		Notwithstanding this concern, Natural England has agreed [REP5-080] that AEoI alone and in-combination can be excluded for the marine mammal qualifying features of the SACs within its remit.	
3.2.4	Sites and features listed in Table 1.49 of [APP-097] – impulsive sound	NRW stated [RR-027] that for impulsive noise sources both the Marine Mammals ES Chapter [then APP-022, now REP5-023] and HRA Stage 2 SAC Report [APP-097] reference that changes in the impulsive characteristics of impulsive sound at range implies that disturbance thresholds for piling noise should be precautionary at long range (ie a few kilometres). NRW did not agree with this conclusion and recommended that this error was rectified [RR-027]. The applicant responded [PD1-017] that its approach aligned with the latest scientific guidance. NRW subsequently agreed that this issue did not materially affect the conclusions, since assessment results were based on the full modelled range of disturbance [REP1-056].	The ExA understands this matter to be resolved.

Offshore ornithology

3.3.9 In respect of ornithology, Natural England [RR-026], NRW [RR-027] and RSPB [RR-035] considered the methodology in the assessments inappropriate and not in line with SNCB guidance, undermining any agreement on AEoI conclusions. They also noted inconsistencies in the assessment of Rathlin Island SPA and its breeding seabird assemblage, omission of an assessment for Liverpool Bay SPA features, removal of sabbatical birds in assessment apportioning, and a lack of separate presentation of gannet and kittiwake collision and displacement impacts from the project alone.

3.3.10 NRW [RR-027; REP1-056], Natural England [RR-026; REP1-052; REP1-053; REP1-054; REP1-055] and RSPB [RR-035; REP1-057] initially set out their concerns with the applicant's approach to its assessment, with all parties lacking confidence in the Stage 1 and/ or Stage 2 assessments as a result. The comments related to the applicant's approach to various aspects of the assessments including collision risk estimates, displacement and mortality rates, approach to seasonal definitions particularly for collision risk assessments, age class apportioning, the use of herring gull survival rates for black-backed gull population viability analysis (PVA), use of data, and survival rates. Natural England, NRW, RSPB and JNCC [REP3-035] considered that the assessments should be updated with the SNCB advised approach. These issues related to both the Stage 1 and 2 assessments and are detailed in Table 3.3 below, as relevant.

3.3.11 The RSPB [REP1-057] considered that the methodology for the baseline characterisation for Manx shearwater was not appropriate. The applicant defended its approach [REP1-039]. This remains outstanding with no further comments from either party to date.

3.3.12 The RSPB [RR-035] also raised concerns that the implications of HPAI had not been adequately considered in the HRA assessments.

3.3.13 The RSPB [RR-035; REP1-057] did not agree with the conclusion of no AEoI for collision impacts arising from the project alone and in combination with other projects due to concerns about the methodology incorporating historical data. For the project alone, they did not agree there would be no AEoI on Manx shearwater of the following sites:

- Irish Sea Front SPA
- Copeland Islands SPA
- Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA
- Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA
- Rum SPA
- Isles of Scilly SPA
- St Kilda SPA

3.3.14 Natural England stated early in the examination [RR-026; REP1-053] that it was not satisfied that it could be excluded beyond reasonable scientific doubt that the proposed development would have an AEoI, alone or in-combination, on the following sites:

- Liverpool Bay SPA
- Morecambe Bay and Duddon Estuary SPA and Ramsar site
- Ribble and Alt Estuaries SPA and Ramsar site
- Bowland Fells SPA
- Isles of Scilly SPA
- Flamborough and Filey Coast SPA

3.3.15 Similarly NRW's position early in the examination was that it was unable to confirm definitively whether an adverse effect, beyond reasonable scientific doubt, could be ruled out for any European site in its remit [REP3-051].

3.3.16 Natural England [RR-026, REP1-053] and NRW [RR-027, REP2-026] could not agree no AEoI to features of Liverpool Bay SPA as it had not initially been included in assessment; however, they considered that adherence to specific measures secured through the Offshore EMP may mitigate these impacts.

3.3.17 Given the number of additional documents related to offshore ornithology that have been submitted to date in the examination, a summary is provided below for ease of understanding. A large proportion of the offshore ornithology methodological concerns relate to both the Stage 1 and 2 assessments, see below for details of the relevant documents submitted to date by the applicant to address these concerns.

3.3.18 Pre-examination: The applicant provided an Errata Sheet [PD1-003] to address errors in the Stage 1 and Stage 2 assessments. The applicant also responded to concerns from NRW and Natural England [PD1-017] around the methodology for assessment and submitted a regional population comparison [PD1-016] between the applicant's methodology applied in the HRA assessments and the Expert Working Group calculations undertaken in pre-application.

3.3.19 Deadline 1: The RSPB [REP1-057] considered that there would be an AEoI on great black-backed gull of the Isles of Scilly SPA, from the proposed development in-combination with other plans or projects.

3.3.20 Due to methodological concerns, the RSPB also did not agree that AEoI could be ruled out for "a range of species/ SPA combinations" (not specified) resulting from collision impacts and distribution change, from the proposed development in combination with other plans or projects [REP1-057]. These concerns remain outstanding, however the RSPB [REP5-091] has confirmed it will review and update its position on methodological concerns at D6.

3.3.21 The applicant submitted the following updated documents:

- Offshore Ornithology Baseline Characterisation [REP1-026]

- Offshore Ornithology Cumulative Effects Assessment (CEA) and In-combination Gap-filling of Historical Projects Note [REP1-010] which quantifies impacts from historical offshore wind projects that were previously assessed qualitatively
- Displacement Rates Clarification Note [REP1-011] to address comments from Natural England and NRW on displacement and mortality rates used in the HRA Stage 2 assessments for SPA and Ramsar sites. It clarifies that incorporating additional rates does not change the conclusions of no AEoI
- Apportioning Sensitivity Analysis [REP1-012] which responds to Natural England's comment on the data used for apportioning analyses in HRA Stage 2 assessments for SPA and Ramsar sites

3.3.22 Deadline 2: The applicant submitted an updated Errata Sheet [REP2-009] which contained corrections and the following updates within the errata annex:

- Updates to the Offshore Ornithology Apportioning Technical Report [APP-057] for calculation of non-breeding season apportioning values for lesser black-backed gulls
- Updates to the HRA Stage 1 Screening Report [APP-099] for annual mean predicted mortality estimates across species and seasons from collision risk and displacement

3.3.23 The applicant also submitted the following documents to address the identified concerns:

- Treatment of Birds in Flight Data in Abundance Estimation [REP2-021] to provide a comparison between the proportions of birds in flight calculated using data from the Morgan Generation Assets survey area (as presented in the application) and the Morgan Array Area as requested by Natural England [RR-026]
- Great Black-backed Gull Regional Populations [REP2-022] to consider implications of updated regional population data on the relevant assessments
- Review of CEA and In-Combination Assessment [REP2-023] to account for new and updated project information

3.3.24 Deadline 3: The ExA [ExQ1, HRA 1.3 PD-004] queried whether the HRA had assessed the worst-case scenario, as well as whether the new *'Joint advice note from the SNCBs regarding bird collision risk modelling for offshore wind developments'* (published August 2024) would have any implications for the ES and HRA assessments [ExQ1, MO 1.1 PD-004]. The ExA [ExQ1, MO 1.8 PD-004] also sought clarity from the applicant around how HPAI had been considered and queried whether the RSPB considered any additional information was required from the applicant regarding HPAI effects.

3.3.25 The applicant confirmed [REP3-006] that the maximum design scenario was appropriately secured and assessed in the HRA and that it had considered HPAI in its application documents following Natural England guidance. The applicant also identified differences between the new advice note and the applicant's collision risk values and concluded that they have negligible impact on the assessment.

3.3.26 Natural England [REP3-046], NRW [REP3-050; REP3-051] and JNCC [REP3-035] considered that the SNCB advice on methodology for assessment had still not been followed and that whilst the comparison of approaches was welcome, it did not address their concerns.

3.3.27 The JNCC [REP3-035] could not initially agree to no AEoI for Skomer, Skokholm, and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA due to shared concerns with Natural England and NRW about the methodology. However, it agreed with no AEoI for features of Irish Front SPA and Seas off St Kilda SPA, both alone and in-combination. JNCC also agreed [REP3-035] that on the basis of the measures set out in section 1.3 of [APP-070] secured through Schedule 3, Part 1, (20) of the deemed marine licence [REP3-013], an AEoI can be ruled out for non-breeding red-throated diver and common scoter qualifying features of the Liverpool Bay SPA.

3.3.28 The applicant submitted further documents to address the identified concerns:

- Review of CEA and In-Combination Assessment: Offshore ornithology [REP3-019] to account for new and updated project information
- Kittiwake apportioning clarification note [REP3-020] to address comments from Natural England [RR-026] and NRW [RR-027; REP1-056] on the methodology for calculating adult proportions in apportioning analyses for kittiwake in HRA Stage 1 and Stage 2 assessments

3.3.29 Deadline 4: Natural England [REP4-042] deferred comments on offshore ornithology on the basis it would review new ornithology data at D5. NRW considered the applicant's updated documents 'stress-tested' its approach, however it could not rule out AEoI for Welsh sites until the methodological concerns were fully addressed.

3.3.30 Deadline 5: In response to ExQ2 [HRA 2.1, REP5-015] the applicant explained that it had submitted the information requested by Natural England in [REP5-032, REP5-033, REP5-034, REP5-035] and considered that it had closed all remaining methodological issues. The applicant anticipated that NE could confirm resolution of the outstanding methodological issues at D5 [HRA 2.1, REP5-015].

3.3.31 Natural England confirmed in [REP5-079] (having reviewed draft spreadsheets from the applicant with the summary data ahead of D5) that the information to be submitted by the applicant at D5 addressed its concerns around methodological issues.

3.3.32 NRW considered [MO 2.3, REP5-083] that project-alone methodological concerns had been resolved, but at D5 it not yet been able to review the in-combination assessment. NRW subsequently confirmed in an Additional Submission [AS-012] that it had now reviewed [REP5-033] and could conclude

no AEoI alone or in combination for Welsh SPAs, with the exception of the gannet feature of Grassholm SPA (with NRW having identified errors in the data for that site). Based on updated figures the applicant then shared with them, NRW confirmed in [AS-012] it is also able to agree to no AEoI, alone or in-combination, on gannet of Grassholm SPA. The applicant subsequently submitted the updated figures to the examination in [AS-013] (rev 2), superseding [REP5-033] (rev 1).

3.3.33 JNCC confirmed that it had no outstanding not-agreed methodological issues with the application [REP5-067].

3.3.34 Natural England, NRW and JNCC's agreements at D5 were on the proviso that the figures that the applicant presented to the examination at D5, were in accordance with the figures shared with them in advance of D5. NRW's agreement in [AS-012] was on the proviso that the updated figures submitted to the examination by the applicant [AS-013] are in accordance with the figures received by NRW on 27 January 2025.

3.3.35 RSPB [REP5-091] maintained that HPAI has still not been appropriately considered in the HRA assessments. In response to ExQ2 [MO 2.3, PD-009], the RSPB confirmed [REP5-091] that it would review all relevant submissions and submit a list of agreed and not agreed methodological issues at D6.

In-combination effects

3.3.36 NRW [REP1-025; REP3-050; REP3-051] confirmed it was content with the projects included in the in-combination assessments with respect of benthic subtidal and ecology, fish and shellfish ecology, and marine mammals.

3.3.37 For offshore ornithology, NRW [RR-027, REP1-056] requested the in-combination assessment be updated to include Morecambe Offshore Windfarm Generation Assets, as reported in Table 3.4 below.

3.3.38 Meath County Council [OD-006] highlighted the omission of three offshore windfarms in the in-combination assessments for offshore ornithology and Annex II diadromous fish, as reported in Table 3.4 below.

3.3.39 Natural England [RR-026, REP1-053], NRW [RR-027, REP1-056] and JNCC [REP3-035] raised concerns around the applicant's approach to in-combination assessment, including the accuracy of the figures used, the need for gap filling for historical projects, apportioning, and deviations from SNCB-advised parameters for collision risk and displacement. NRW [REP1-056] was also concerned that for herring gull, the 'extended' Band model Option 3 figures had been included for Awel y Môr in the cumulative and in-combination assessments. It recommended use of Option 2 figures.

3.3.40 At D3, the applicant provided a clarification note [REP3-018] considering the potential impact on the assessment conclusions if collision risk estimates calculated using Option 2 of the Band collision risk model were used instead for herring gull. It was reported that there would be no change to the conclusions of no AEoI reached in the HRA Stage 2 SPA Report [APP-098].

3.3.41 Natural England [REP3-049; REP4-042] and NRW [REP4-044] continued to advise that updates should be made to the in-combination assessments, as reported in Table 3.4 below.

3.3.42 The applicant submitted updated ornithological data at D5 [REP5-031; REP5-032; REP5-033; REP5-034; REP5-035], aligning with Natural England and NRW's advised approach, and considered [REP5-015] that it had closed all remaining methodological issues.

3.3.43 Natural England [REP5-079] identified the single outstanding issue at D5 as disturbance/ displacement effects from vessel movements on the red-throated diver qualifying feature of Liverpool Bay SPA.

3.3.44 At D5, Natural England advised [REP5-079] that, based on the updated impact figures the applicant had shared with them, an AEoI could be ruled out for all other English SPAs for the project alone. Natural England also advised that AEoI could be ruled out for all other English sites from in-combination collision effects.

3.3.45 The applicant confirmed [REP5-001] that it had committed to measures requested by Natural England to protect red-throated diver of the Liverpool Bay SPA and had included these within an updated version of the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [REP5-047] submitted at D5.

3.3.46 NRW's position at D5 [REP5-083a] was that it was content that an AEoI could be ruled out for the Welsh SPAs for the project alone. However, NRW could not definitively rule out AEoI for in-combination impacts to Welsh SPAs until it had been able to review the updated figures for in-combination impacts [REP5-083, REP5-083a]. As reported above, NRW subsequently confirmed in an Additional Submission [AS-012] that it was now able to agree to no AEoI, alone or in-combination, for all Welsh SPAs.

3.3.47 JNCC [REP5-067] confirmed that the applicant's updated documents provided at D5 have resolved its concerns with the methodology for the in-combination assessment. JNCC has now agreed [REP3-035, REP5-067] with the conclusions of no AEoI, alone and in-combination, for all sites within its remit.

3.3.48 Natural England, NRW and JNCC's agreements at D5 were on the proviso that the figures that the applicant presented to the examination at D5, were in accordance with the figures shared with them in advance of D5. NRW's agreement in [AS-012] was on the proviso that the updated figures submitted to the examination by the applicant [AS-013] are in accordance with the figures received by NRW on 27 January 2025.

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Table 3.3: Offshore ornithology – key issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation/ question
3.3.1	Disturbance and displacement to red-throated diver and common scoter features of Liverpool Bay SPA	Natural England [RR-026, REP1-053] and NRW [RR-027, REP2-026] considered that Liverpool Bay SPA should also have been identified for inclusion within the Stage 1 and 2 assessments, highlighting the potential for disturbance and displacement impacts from vessel movements in the construction or O&M phases on the red-throated diver and common scoter qualifying features. However, they considered that adherence to specific measures secured through the Offshore EMP may mitigate these impacts. In response, the applicant considered that there would be no AEoI of the Liverpool Bay SPA as a result of disturbance impacts on the red-throated diver and common scoter qualifying features [PD1-017]. The applicant stated that for similar projects, the increase in vessel movements is negligible when compared to the existing level of vessel traffic in the area, with this of particular relevance to the Irish Sea [PD1-017]. The applicant referenced the mitigation measures listed in Table 5.26 of ES Chapter 5: Offshore Ornithology [APP-023], which it stated would be included in an Offshore EMP that would include measures to minimise disturbance to rafting birds from transiting vessels. JNCC [REP3-035] confirmed it was in agreement with the applicant's conclusion of no AEoI of the red-throated diver and common scoter features of the Liverpool Bay SPA. In response to a question from the ExA [HRA 1.11, PD-004], the applicant submitted an Outline Offshore EMP at D4 [REP4-018]. Annex E of the Outline Offshore EMP cross-	***Q. Can Natural England and NRW confirm whether the additional measures included in the updated version of the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [REP5-047] allow them to agree that an AEoI of all qualifying features of the Liverpool Bay SPA can be excluded, alone and in-combination.***

		referred to the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [APP-070] and the Outline Vessel Traffic Management Plan [then REP2-017, now REP5-037] for the relevant measures to minimise disturbance to rafting birds from transiting vessels. The ExA [ExQ2 HRA 2.3, PD-009] asked the applicant to update the Stage 2 SPA Report [APP-098] to record consideration of the Liverpool Bay SPA. The same question also sought confirmation from Natural England and NRW as to whether the measures included within documents provided at D4 [REP4-018, REP4-025] would allow them to conclude no AEoI of Liverpool Bay SPA, alone and in-combination. At D5, the applicant submitted an Addendum [REP5-036] to the Stage 2 SPA Report [APP-098] ('Liverpool Bay/ Bae Lerpwl SPA clarification note') and updated data to reflect the advised SNCB approach [REP5-032; REP5-033] (later superseded by [AS-013]); REP5-034; and REP5-035].The Addendum [REP5-036] states that impacts would be temporary and localised and are not expected to result in any detectable increase in mortality or disturbance of red-throated diver, common scoter or the waterbird assemblage. The Addendum concluded that there would be no AEoI, alone or in combination, on any of the qualifying features of Liverpool Bay SPA [REP5-036]. Natural England [REP5-080] and NRW [REP5-083] considered the measures were inadequate in the updated Outline Offshore EMP [REP4-018]. Natural England specified the measures it considered should be adopted by the applicant [REP5-079, REP5-080, REP5-081], as did	

		NRW in [REP5-083]. The applicant confirmed [REP5-001] that it had committed to the measures requested by Natural England and had included these within an updated version of the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [REP5-047] submitted at D5. On the premise that these measures are secured, Natural England confirmed [REP5-079] that it would be able to conclude no AEoI on the red-throated diver feature of Liverpool Bay SPA. Natural England did not discuss agreement on the conclusion of impacts to common scoter or the waterbird assemblage in its D5 submissions. NRW did not comment specifically on whether AEoI of the qualifying features of Liverpool Bay SPA could be excluded in its Additional Submission [AS-012].	
3.3.2	Rathlin Island SPA - breeding seabird assemblage	There were inconsistencies in the information presented in the HRA Stage 2 SPA Report [APP-098] regarding whether the breeding seabird assemblage qualifying feature of Rathlin Island SPA had been carried forward to the Step 2 integrity test. ExQ1 HRA 1.7 [PD-004] asked the applicant to confirm the outcome of the Step 1 integrity test for all features of the Rathlin Island SPA and if necessary, provide the feature account information for the breeding seabird assemblage feature omitted from Section 1.6.2 of [APP-098]. In response, the applicant confirmed [REP3-006] that the breeding assemblage of the Rathlin Island SPA did not require consideration in the Step 2 integrity test as the impact from the Proposed Development alone on all features that constitute the assemblage represented less than a 0.05% increase in the baseline mortality of the SPA	The ExA understands this matter to be resolved.

		population. The applicant included this matter in its Errata Sheet [REP3-011].	
3.3.3	Sabbatical birds	Natural England raised concerns [RR-026][REP1-053] that sabbatical birds had been removed from assessments during apportioning. Natural England advised that integrity judgements should be based on assessments that do not remove sabbatical birds at the apportioning stage [RR-026][REP1-053]. In response to Natural England's concerns, the applicant [PD1-017] confirmed that the proportion of any impact that may be attributable to sabbatical birds had only been considered qualitatively and has not been incorporated into any apportioning calculations, stating that this was in alignment with Natural England's recommendations and that it had applied the best available evidence in a qualitative fashion within the assessments. In response to ExQ1 MO 1.9 [PD-004], Natural England [REP3-048] advised that it was broadly content with the applicant's responses to its concerns regarding sabbatical birds. Natural England advised that the wording within the submitted assessment should be updated with the clarification given by the applicant in [PD1-017]. Natural England had no further comments to make and considered this matter to be closed at D3 [REP3-049]. In response to ExQ2 MO.2.4 [PD-009], the applicant [REP5-015] stated that the requested text was already included in the HRA Stage 2 SPA Report [APP-098] and Offshore ornithology apportioning technical report [APP-057] and provided cross-references to the relevant paragraph numbers.	The ExA understands this matter to be resolved.

3.3.4	In-combination assessment of collision risk to herring gull with r Awel y Môr	Natural England [RR-026] expressed concern around the methodology for assessing in-combination effects from collision risk on the basis that it deviated from SNCB advice and that historic impacts had not been taken into account. NRW [REP1-056] raised similar concerns, as well as a concern that for herring gull, the 'extended' Band model Option 3 figures had been included for Awel y Môr in the cumulative and in-combination assessments. It recommended use of Option 2 figures. The applicant [PD1-017] confirmed that assessments had used Option 2 for all species for Awel y Môr with the exception of herring gull, for which outputs from Option 3 were used. However, the applicant stated that use of Option 2 for herring gull would make no difference to the conclusions reached in the ES Offshore Ornithology Chapter [APP-023] and HRA Stage 2 SPA Report [APP-098]. At D3, the applicant provided a clarification note [REP3-018] considering the potential impact on the assessment conclusions if collision risk estimates calculated using Option 2 of the Band collision risk model were used instead for herring gull. The applicant concluded [REP3-018] that there would be no change to the conclusions of no AEoI reached in the HRA Stage 2 SPA Report [APP-098]. NRW [REP4-044] welcomed the comparison of figures between the applicant's approach versus the SNCB advised approach for the Band model options provided in [REP3-018]. However, NRW continued to advise that herring gull figures are updated to present Option 2 figures clearly and concisely as the SNCB preferred approach. NRW did accept that the conclusions are unlikely to be materially changed irrespective of approach taken [REP4-044].	The ExA understands this matter to be resolved.

		At D4, Natural England considered [REP4-042] that the comparison of figures between the applicant's approach versus the SNCB advised approach for the Band model options provided in [REP3-018] serves as 'stress-testing' of the applicant's conclusions and maintained that the required update should be applied. At D5, the applicant submitted updated in-combination collision data [REP5-032; REP5-033 (later superseded by [AS-013]) REP5-034; and REP5-035] using the parameters advocated by the SNCBs which include impact values for historical projects that were not previously included. At D5 Natural England considered [REP5-079] that these updated assessments now aligned with the advised approach provided by Natural England and NRW. Natural England agreed that an AEoI could be ruled out for collision effects, alone and in-combination, for all English sites [REP5-079]. As described above, further to its D5 position [REP5-083a] NRW has now confirmed in [AS-012] that it can conclude no AEoI alone or in-combination for all Welsh SPAs.	
3.3.5	Apportioned Collision Risk Modelling impacts and avoidance rates and flight speeds from project alone (Also applicable to Stage 1 assessments)	NRW [RR-027] noted that the flight speeds in the HRA Stage 1 Screening Report [APP-099] did not reflect the flight speeds advised by the SNCBs for use in the collision risk model. RSPB [REP1-057] and Natural England [RR-026] agreed with this position and considered that estimates calculated using SNCB advice should be applied through all stages of the assessment. The applicant acknowledged the error and corrected these at [REP3-018]. NRW [REP4-044] confirmed the applicant had clearly indicated which outputs are from the SNCB advised avoidance rates and which are the applicant's. Natural	***Q. Can Natural England explain why 95% confidence intervals are not appropriate and/ or precautionary and explain why its preferred rates are more suitable?***

		England [REP3-049] highlighted concern that confidence intervals associated with collision estimates were not in line with SNCB advice and therefore the approach to screening is not precautionary. The applicant [REP4-009; REP5-012] disagrees with the approach recommended by Natural England in relation to confidence intervals and maintains the approach of using 95% confidence intervals and that using foraging ranges and including features with minimal impact is precautionary.	
3.3.6	Worst-case scenario (Also applicable to Stage 1 assessments)	The ExA [ExQ1 HRA 1.3, PD-004] queried whether the HRA had assessed the worst-case scenario and requested assurances that the impacts of greater magnitude than have been assessed would not occur. The ExA pointed out the HRA assesses up to 96 wind turbines with a maximum diameter of 250m and a maximum blade tip above Lowest Astronomical Tide (LAT) of 293m. Schedule 2 of the draft DCO [REP2-011] allows up to 96 turbines with a maximum rotor diameter of 320m and maximum blade tip above LAT of 364m. The applicant confirmed [REP3-006] that the maximum design scenario involves the highest number of turbines (96) and the largest physical footprint, consistent with previous offshore wind farm applications. To prevent building 96 turbines with the maximum rotor diameter (320m), the maximum rotor swept area was specified in the draft DCO (Schedule 2, Requirements 2(2), Table 1) at D1 [then REP2-011, now REP5-017]	The ExA understands this matter to be resolved.
3.3.7	Seasonal definitions	JNCC [REP3-035] and NRW [REP1-056] did not agree with splitting monthly collision impacts across two different seasons for kittiwake on the basis that it would result in	The ExA understands this matter to be resolved.

	(Also applicable to Stage 1 assessments)	different seasonal impacts being apportioned to SPAs in the HRA. They advised the full breeding season should be used and that other seasons are adjusted accordingly to ensure no months are considered in two seasons. The applicant acknowledged this and updated the assessments at D5 [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034; and REP5-035].	
3.3.8	Displacement modelling and mortality rates for alone and in-combination (Also applicable to Stage 1 assessments)	The applicant undertook an evidence-based assessment on displacement and mortality rates and based the apportioned impacts on a preferred displacement of 50% and mortality of 1%. Natural England [RR-026] [REP5-082b], JNCC [REP3-035], RSPB [REP1-057] and NRW [RR-027 and REP1-056] did not consider the applicant's use of single values of 50% displacement and 1% mortality to be appropriate. They advised that a range of displacement rates (30-70%) and mortality ranges (1-10%) should be considered throughout the assessments. The applicant submitted a number of updates to the assessment [REP1-011; REP3-019]. This resulted in additional SPAs/ features being progressed to Step 2 of the ISAA process, which had not previously been progressed to Step 2 of the ISAA process in the HRA Stage 2 SPA Report [APP-098]: • Howth Head Coast SPA - kittiwake feature • Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a moroedd Benfro SPA - guillemot feature • a number of Scottish SPAs – guillemot feature.	***Q. Are Natural England, NRW and JNCC content that an appropriate range of displacement and mortality has been presented in [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034; and REP5-035] to enable an informed decision to be made by the Secretary of State?***

		As a result of the additional Step 2 assessments presented in [REP1-011], there was no change to the overall conclusion of no AEoI reached in the HRA Stage 2 SPA Report [APP-098]. Natural England [REP4-042] and NRW [REP4-044] considered that the comparison of figures between the applicant's approach versus the SNCB advised approach for the Band model options provided in [REP3-018] is 'stress-testing' and maintained that the required update should be applied. Both parties considered 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. At D5 the applicant provided a number of updated assessments [REP5-032; REP5-033; REP5-034; REP5-035] to align with the recommended methodology including the advised ranges of displacement and mortality rates. At D5, Natural England advised [REP5-079] that, based on the updated impact figures the applicant had shared with them in advance of D5, an AEoI could be ruled out for all English SPAs for the project alone. Whilst Natural England [REP5-079] discuss the methodology and conclusions in relation to the EIA for displacement and mortality, there is no discussion of agreement on the conclusions of the in-combination assessment in the HRA for displacement and mortality. As described above, further to its D5 position [REP5-083a] NRW has now confirmed in [AS-012] that it can conclude no AEoI alone or in-combination for all Welsh SPAs, based on updated figures received by NRW on 27 January 2025. The applicant subsequently submitted the updated figures to the	

		examination in [AS-013] (rev 2), superseding [REP5-033] (rev 1). At D5, JNCC [REP5-067] confirmed that the applicant's D5 submissions addressed its concerns in relation to displacement and mortality rates.	
3.3.9	Age class apportionment: kittiwake in the breeding season (Also applicable to Stage 1 assessments)	Natural England [RR-026; REP2-033] and NRW [RR-027; REP1-056] did not agree with the applicant's approach to age class apportioning using a method developed by Hornsea Project Two. They advised that a more appropriate approach for age-apportioning kittiwakes in the breeding season would be to use the 84.11% of adults recorded in the Morgan site-specific Digital Aerial Survey data. Or, to take a precautionary approach and assume all birds are adults. JNCC raised similar concerns [REP3-035]. The ExA [ExQ1 MO 1.10, PD-004] asked the applicant to 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. The applicant submitted a clarification note [REP3-020] in response, stating that this provided assessments incorporating Natural England and NRW's preferred approach to calculating the proportion of immature kittiwake present (ie a 84.11% adult proportion). [REP3-020] stated that the increase in impact that resulted from the use of a higher adult proportion had no effect on the conclusions of HRA Stage 1 Screening Report [APP-099] and did not change the conclusion of no AEoI on any SPA at which kittiwake was a qualifying feature. The concerns from Natural England and NRW were retained at D3 [REP3-049 and REP3-050 respectively]. At D4, Natural England [REP4-043] stated that it had advised the applicant	***Q. Further to the applicant's submissions at D5 [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034; and REP5-035], can Natural England confirm whether it is satisfied that the applicant's approach to age class apportionment for kittiwakes in the breeding season is appropriate and whether its previous concerns have been resolved.***

		on the required updated assessments and would provide further comments in response to any additional material at D5. NRW [REP4-044] considered that the correct approach had still not been applied. Also at D4, the applicant submitted responses to D3 submissions from Natural England and NRW [REP4-007 and REP4-009] and an additional clarification note 'Differences between Morgan and Mona in abundance estimates used in the CEA' [REP4-031]. At D5, the applicant submitted updated impact figures [REP5-032; REP5-033; REP5-034; REP5-035] in an effort to resolve this concern. Natural England [REP5-082b] confirmed that the applicant had shared a draft version of the updated impact figures with them in advance of D5 and anticipated that this matter would be resolved by D6, once Natural England had reviewed the final versions submitted to the examination. NRW [REP5-083] confirmed at D5 that the applicant had updated its assessments accordingly following the SNCB advised approaches for kittiwake apportioning by assuming all birds are adult age class. JNCC confirmed at D5 [REP5-067] that it had no outstanding methodological issues with the application, subject to confirmation that the figures that the applicant presented to the examination at D5, were in accordance with the figures shared with them in advance of D5. The applicant subsequently submitted updated figures to the examination in [AS-013] (rev 2), superseding [REP5-033] (rev 1).	

3.3.10	Age class apportionment for all other species in the breeding and non-breeding seasons (Also applicable to Stage 1 assessments)	NRW [RR-027] requested clarification on the methodology for apportioning age classes for species without site specific data. The applicant confirmed that where immature age class was identifiable, this approach was used and where they were not, all birds were assumed adults. NRW [REP1-056] consider this matter resolved.	The ExA understands this matter to be resolved.
3.3.11	Seabird count data for breeding seasons (Also applicable to Stage 1 assessments)	Natural England [REP1-056] advised that Seabirds Count data should be used for apportioning to colonies in the breeding season and requested an updated assessment to reflect this. The applicant provided additional information in [REP1-011; REP1-012; REP2-021]. Following further consultation with NE, the applicant submitted a revised assessment to incorporate apportioning values calculated using data from the Seabirds Count at D5 [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034, and REP5-035]. Natural England [REP5-079] confirmed that its concerns have been addressed.	The ExA understands this matter to be resolved.
3.3.12	Presentation of kittiwake and gannet collision and displacement impacts separately as well as combined,	The applicant [APP-023; APP-099; APP-098] presented the collision and displacement impacts for kittiwake and gannet as combined. NRW [REP1-056] and NE [REP1-053] agreed that displacement impacts for kittiwake do not need to be assessed. They considered that collision and displacement impacts to kittiwake should be presented separately, as well	The ExA understands this matter to be resolved.

	from project alone (Also applicable to Stage 1 assessments)	as combined, with NRW also raising this point in relation to gannet. The applicant responded [REP2-005] that impact estimates were used in the HRA Stage 1 Screening Report [APP-099] to identify where apportioned impacts represented more than zero and that for Step 1 in the HRA Stage 2 SPA Report [APP-098], the same reasoning applied. The purpose of this step was to identify whether any impact, whether this be collision or displacement (alone or combined) surpasses the 1% threshold of baseline mortality of the SPA population [REP2-005]. The applicant stated [REP2-005] that the assessments of combined displacement and collision risk impacts were only required in Step 2 of the assessment in the HRA Stage 2 SPA Report [APP-098] for kittiwake at Ireland's Eye SPA and Cape Wrath SPA and signposted to the relevant sections. The applicant stated it had provided detailed reports on displacement mortality, collision risk estimates, and apportioning rates for relevant SPAs, allowing for future impact assessments if needed. At D5, the applicant submitted its updated assessments to the examination [REP5-032, REP5-033; REP5-034; REP5-035]. Both Natural England [REP5-079] and NRW [REP5-083a] [AS-012] agreed that an AEoI could be ruled out for all English and Welsh SPAs for the project alone, based on the updated impact figures the applicant had shared with them in advance of D5 and updated figures for Welsh SPAs received by NRW on 27 January 2025 (subsequently submitted to the examination in [AS-013] (rev 2), superseding [REP5-033] (rev 1)).	

3.3.13	HPAI (Also applicable to Stage 1 assessments)	The RSPB [RR-035] raised concerns that the implications of HPAI had not been considered in the applicant's HRA assessments. Natural England [RR-026; REP1-053] stated that the recent seabird population trends section of the applicant's Offshore ornithology baseline characterisation [APP-053] does not consider the impacts of HPAI in the region, but presented this in its Risk and Issues Log only as a note to Examiners and/ or the competent authority and did not add further comment to the Log. The ExA [ExQ1 MO 1.8, PD-004] sought clarity from the applicant around how HPAI had been considered and asked RSPB to confirm if it considered any additional information or assessment was required from the applicant, and why, regarding HPAI effects. The applicant [REP3-006] responded that it had considered HPAI in its application documents following Natural England guidance. It stated that there are no large breeding seabird colonies near the proposed Morgan Generation Assets, so HPAI likely hasn't impacted local populations and the HRA Stage 2 assessments use recent population sizes, considering post-HPAI effects. Few HPAI cases were reported in breeding seabirds in 2024, with some colonies showing improved breeding numbers however, it considers longer datasets are needed to determine HPAI's impact on breeding productivity [REP3-006]. At D5 [REP5-091] RSPB still considered this unresolved and requested the applicant to consider: • influence of the HPAI outbreak on baseline characterisation, including population size and space use	The ExA notes this matter is not resolved with the RSPB. A further submission from the RSPB is expected at D6**.**

		• changes in interactions with wind farms, potentially due to physiological changes and lethal/ sub-lethal consequences • impact on the robustness of protected populations and additional mortality from wind farms	
3.3.14	Baseline environment for Manx shearwater (Also applicable to Stage 1 assessments)	The RSPB [RR-035] considered the applicant's Digital Aerial Survey (DAS) effort was unlikely to properly characterise the activity of Manx shearwater at the application site. It stated that it did not have confidence in the baseline densities of Manx shearwater presented, and therefore it is impossible to make any conclusions as to the significance of impacts. However, the applicant [REP1-039] considered its surveys to be sufficient and the appropriate data (including aerial surveys) has been used to inform assessment. There have been no further comments on the matter to date.	The ExA notes this matter is not resolved with the RSPB. A further submission from the RSPB is expected at D6.
3.3.15	Data gaps in cumulative and in-combination assessments (Also applicable to Stage 1 assessments)	Natural England [RR-026, REP1-053] and NRW [RR-027, REP3-051] considered that the applicant had not included the gap-filled projects in its cumulative and in-combination assessments. They pointed out that impacts specified as 'unknown' had been assessed qualitatively but treated as zero, which they considered would underestimate impacts and affect future assessments. In an effort to resolve these concerns, the applicant submitted a gap-filling exercise for historic projects [REP1-010] at D1 and a review of the cumulative and in-combination assessments [REP3-019] at D3. At D5, the applicant submitted updated in-combination assessments for impacts on herring gull as a feature of Morecambe Bay and Duddon Estuary SPA, and for great black-backed gull as a feature of the Isles of Scilly SPA	The ExA understands this matter to be resolved.

		[REP5-031; REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034; and REP5-035]. These included impact values for historical projects that were not included in the original assessment or were assessed qualitatively and have now been calculated in line with the advised approach provided by Natural England and NRW. Natural England [REP5-079] confirmed that this has addressed its concerns. Natural England's agreement was on the proviso that the figures that the applicant presented to the examination at D5, were in accordance with the figures shared with them in advance of D5. As described above, further to its D5 position [REP5-083a] NRW has now confirmed in [AS-012] that it can conclude no AEoI alone or in-combination for all Welsh SPAs. NRW's agreement in [AS-012] was on the proviso that the updated figures submitted to the examination by the applicant [AS-013] are in accordance with the figures received by NRW on 27 January 2025.	
3.3.16	Black-backed gull PVA survival rates (Also applicable to Stage 1 assessments)	Natural England [REP1-053] identified that the applicant had applied herring gull survival rates to the black-backed gull for PVA. It recommended using the herring gull 0-1 year survival rate and the adult great black-backed gull rate from Horswill and Robinson, as it is considered precautionary for weighted mean survival rates at 1% thresholds. As described above, Natural England also requested clarification on the parameters used to derive the mortality estimates recommending that they align with SNCB advice. The applicant provided updated PVA modelling for great black-backed gull using parameters recommended by Natural England at D5 [REP5-031].	The ExA understands this matter to be resolved.

		Natural England [REP5-079] confirmed that this has addressed its concerns.	

Table 3.4: In-combination effects (general) - key issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Potential impact pathway/issue	Details of issue	ExA observation/ question
3.4.1	Morecambe Offshore Windfarm Generation Assets, and Morgan and Morecambe Transmission Assets	NRW [RR-027, REP1-056] requested the in-combination assessment be updated to take into account Morecambe Offshore Windfarm Generation Assets. At D2, the applicant submitted a review of the CEA and in-combination assessment [REP2-023], following acceptance of the Morecambe Offshore Windfarm Generation Assets application for examination in June 2024. This updated Morecambe Offshore Windfarm Generation Assets to a Tier 1 project and confirmed (Tables 1.4 and 1.5) that with the exception of offshore ornithology, there was no change in the conclusions of the cumulative and in-combination assessments for all topics [REP2-023]. Morecambe Offshore Windfarm Generation Assets was subsequently included in the applicant's review of the CEA and in-combination assessment for offshore ornithology, submitted at D3 [REP3-019]. The submission [REP3-019] concluded that there would be no changes to the conclusions of the in-combination assessments presented in the HRA Stage 2 SPA Report [APP-098]. At D4, the applicant submitted a further review of the CEA and in-combination assessment, including the Morgan and Morecambe Transmission Assets [REP4-024]. The review concluded that there was no change to the conclusions of the cumulative and in-combination assessments for all receptor groups.	The ExA understands this matter to be resolved.

		At D5, NRW stated [REP5-083a] that it had reviewed [REP4-024] and had no comments to make at that time.	
3.4.2	Oriel, North Irish Sea Array, and Arklow Bank Wind Park 2 offshore wind farms	The HRA documentation did not include these three offshore windfarms in the in-combination assessments for offshore ornithology and Annex II diadromous fish. Meath County Council responded to the Secretary of State's transboundary consultation under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [OD-006] identifying that applications had been submitted for these three projects. The applicant's reviews of the CEA and in-combination assessments at D2 [REP2-023] and D3 [REP3-019] considered these three projects, as well as Codling Offshore Wind Farm and Llŷr floating offshore wind project (for which applications had also been submitted). The reviews concluded that there was no change in the conclusions of the cumulative and in-combination assessments for all topics. In a late response to D5 [REP5-100] Meath County Council confirmed that it had no further comments to make at this time.	The ExA understands this matter to be resolved.

3.4 Summary of examination outcomes in relation to adverse effects on integrity

3.4.1 As noted in Tables 3.1 to 3.4 above, the ExA understands that some matters have been resolved, whilst those coloured amber remain outstanding. The ExA is seeking updates and responses to unresolved matters from the applicant, Natural England, NRW, JNCC and MMO where indicated, in order to provide clarity on the outstanding matters.

3.4.2 At D5, the applicant remained of the opinion that an AEoI can be excluded for all European sites, from the project alone and in combination with other plans or projects [REP5-035].

Annex II diadromous fish

3.4.3 The conclusion of no AEoI for European sites with Annex II diadromous fish qualifying features was agreed between the applicant, Natural England and NRW prior to the examination commencing.

Marine mammals

3.4.4 By D5, Natural England [REP5-080], NRW [REP4-044] and JNCC [REP3-035] had all agreed that AEoI alone and in-combination can be excluded for the marine mammal qualifying features of the SACs within their remit.

3.4.5 Notwithstanding the agreement that AEoI can be excluded, there is an outstanding disagreement between Natural England and the applicant over mitigation and monitoring for harbour porpoise in relation to prolonged impacts of SBP surveys leading to behavioural disturbance. The ExA has sought the view of the MMO on this matter in Table 3.2 of this RIES.

Offshore ornithology

3.4.6 The applicant agreed during the examination that the following should be progressed to Step 2 of the ISAA process, which had not previously been progressed to Step 2 of the ISAA process, for displacement and mortality impacts:

- Howth Head Coast SPA - kittiwake feature
- Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a moroedd Benfro SPA - guillemot feature
- a number of Scottish SPAs – guillemot feature

3.4.7 By D5, Natural England [REP5-079] had agreed that an AEoI could be ruled out for all English SPAs for the project alone. Natural England also advised that AEoI could be ruled out for all English sites from in-combination collision effects.

3.4.8 Natural England [REP5-079] identified the single outstanding issue at D5 as disturbance/ displacement effects from vessel movements on the red-throated diver qualifying feature of Liverpool Bay SPA.

3.4.9 NRW's position at D5 [REP5-083a] was that it was content that an AEoI could be ruled out for the Welsh SPAs for the project alone. However, NRW could not definitively rule out AEoI for in-combination impacts to Welsh SPAs until it

had been able to review the updated figures for in-combination impacts [REP5-083, REP5-083a]. NRW subsequently confirmed in [AS-012] that it had now reviewed [REP5-033] and could conclude no AEoI alone or in combination for Welsh SPAs, with the exception of the gannet feature of Grassholm SPA (with NRW having identified errors in the data for that site). Based on updated figures the applicant then shared with them, NRW confirmed in [AS-012] it is also able to agree to no AEoI, alone or in-combination, on gannet of Grassholm SPA. The applicant subsequently submitted the updated figures to the examination in [AS-013] (rev 2), superseding [REP5-033] (rev 1).

Q. Further to the applicant's D5 documents and Additional Submission [AS-013], does Natural England agree that for all pathways, AEoI alone and in-combination with other plans or projects can be excluded for all of the European sites within its remit?

3.4.10 JNCC has agreed [REP3-035, REP5-067] with the conclusions of no AEoI, alone and in-combination, for all sites within its remit.

3.4.11 Natural England, NRW and JNCC's agreements at D5 were on the proviso that the figures that the applicant presented to the examination at D5, were in accordance with the figures shared with them in advance of D5. NRW's agreement in [AS-012] was on the proviso that the updated figures submitted to the examination by the applicant [AS-013] are in accordance with the figures received by NRW on 27 January 2025.

Q. The applicant is requested to confirm that the updated impact figures provided to Natural England, NRW and JNCC in advance of D5, are identical to those submitted to the examination at D5 in [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034; and REP5-035].

Q. The applicant is requested to confirm that the updated impact figures sent to NRW on 27 January 2025 are identical to those submitted to the examination as an Additional Submission [AS-013, superseding REP5-033].

3.4.12 The ExA notes that NatureScot and DAERA have not participated in the examination in respect of Scottish and Northern Irish sites. The applicant has concluded no AEoI of all European sites and no submissions have been made identifying specific concerns in relation to European sites located within Scotland or Northern Ireland.

4 DEROGATIONS FROM THE REGULATIONS

4.1 Overview

4.1.1 On the basis that the applicant concluded there would be no AEoI on any European site as a result of the proposed development alone or in combination with other projects, the applicant did not submit a derogation case with its DCO application. However, Natural England stated early in the examination [RR-026 and REP1-053] that it was not satisfied that it could be excluded beyond reasonable scientific doubt that the proposed development would have an AEoI, alone or in-combination, on the following sites:

- Liverpool Bay SPA;
- Morecambe Bay and Duddon Estuary SPA and Ramsar site
- Ribble and Alt Estuaries SPA and Ramsar site
- Bowland Fells SPA
- Isles of Scilly SPA
- Flamborough and Filey Coast SPA

4.1.2 Similarly NRW's position early in the examination was that it was unable to confirm definitively whether an adverse effect, beyond reasonable scientific doubt, could be ruled out for any European site in its remit [REP3-051].

4.1.3 The ExA requested in ExQ1 [HRA 1.1, PD-004] that the applicant provide an 'in principle' derogations case in view of the SNCB position. In response [REP3-006], the applicant considered it was likely that the methodological issues with the ornithological assessments could be resolved during the examination and AEoI ruled out for the sites of concern to Natural England. The applicant therefore considered that a derogations case was not required [REP3-006].

4.1.4 The ExA pursued this matter at ISH2 [EV5-014], requesting that if agreement of no AEoI with Natural England, NRW or JNCC was not confirmed by D4, the applicant should submit a derogation case by D5.

4.1.5 At D4, the applicant maintained [REP4-004] that the ornithology methodological issues could be resolved during the examination and that it was unnecessary to present a without prejudice derogations case. The applicant [REP4-004] maintained its position that there would be no AEoI from the proposed development, alone or in-combination, and considered that the SNCBs would reach the same conclusion upon review of the information provided by the applicant at D5.

4.1.6 At D4, Natural England explained that it considered the risk of AEoI on the sites listed to be generally low and that the submission of in-principle compensatory measures for English SPAs was unlikely to be necessary [REP4-042]. Natural England stated that AEoI was unlikely, but that it was not possible for Natural England to definitively rule out AEoI until the applicant had addressed the issues identified with their impact assessment [REP4-042].

4.1.7 NRW's position at D4 [REP4-044] was that it could not rule out an AEoI for marine ornithological features of Welsh designated sites until all of its comments on methodology and CEA had been addressed, and it had had the opportunity to fully review the latest information provided by the applicant at D4. NRW anticipated that the remaining issues are capable of being resolved before the close of examination and therefore derogation and compensation may not be required [REP4-044].

4.1.8 As noted in Section 3.4 above, at D5 the applicant submitted the information requested by Natural England in [REP5-032; REP5-033 (later superseded by [AS-013]); REP5-034 and REP5-035] and an updated version of the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [REP5-047]. Natural England has agreed that AEoI from the project alone can be excluded and has identified the single outstanding issue at D5 as disturbance/ displacement effects from vessel movements on the red-throated diver qualifying feature of Liverpool Bay SPA [REP5-079].

4.1.9 In an Additional Submission following D5, NRW confirmed [AS-012] that it can now conclude no AEoI alone or in-combination for all Welsh SPAs.

4.1.10 JNCC has agreed [REP3-035, REP5-067] with the conclusions of no AEoI, alone and in-combination, for all sites within its remit.

4.1.11 In summary, whilst Natural England has an outstanding concern with the assessment of AEoI at D5 with regards to marine ornithology, this looks to be resolved by the applicant's D5 submissions and it considers that a derogations case is unlikely to be necessary.