



# Hornsea Project Four

## G2.11 Razorbill Assessment: Alone and Incombination Farne Islands SPA

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**Prepared** Sean Sweeney, APEM, March 2022  
**Checked** Dr Sarah Randall, Orsted, March 2022  
**Accepted** Francesca De Vita, Orsted, March 2022  
**Approved** Julian Carolan, Orsted, March 2022

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## Revision Summary

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## Revision Change Log

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## Glossary

Term	Definition
Appropriate Assessment (AA)	An assessment to determine the implications of a plan or project on a European site in view of the site's Conservation Objectives. An AA forms part of the Habitats Regulations Assessment and is required when a plan or project likely to have a significant effect on a European site.
Displacement	The potential for birds and other animals to avoid an area due to the presence of the wind turbines or from vessel activity.
Habitats Regulations Assessment (HRA)	A process which helps determine likely significant effects and (where appropriate) assesses adverse impacts on the integrity of European sites and Ramsar sites. The process consists of up to four stages of assessment: screening, appropriate assessment, assessment of alternative solutions and assessment of imperative reasons of overriding public interest (IROPI) and compensatory measures.
In-combination Effect	The combined effect of Hornsea Four in-combination with the effects from a number of different projects on the same feature/receptor.

## Acronyms

Term	Definition
AA	Appropriate Assessment
AEoI	Adverse Effect on Integrity
AOS	Apparently Occupied Sites
BDMPS	Biologically Defined Minimum Population Scale
ES	Environmental Statement
HRA	Habitats Regulations Assessment
LSE	Likely Significant Effect
RIAA	Report to Inform Appropriate Assessment
SMP	Seabird Monitoring Programme

## 1 Hornsea Four HRA Screening Criteria

### 1.1 Hornsea Four HRA Screening of Designated Sites and Features Alone

- 1.1.1.1 As described in Section 2.4 of **B2.2: Report to Inform Appropriate Assessment Part 1 (APP-167)** amended by document **AS-014** HRA screening is a relatively coarse filter to identify those sites and features for which, in the context of the proposed project, a potential Likely Significant Effect (LSE) cannot be discounted. For the purposes of Hornsea Four's screening, a series of criteria were applied to identify those sites and features for further consideration. The screening criteria is presented within **Appendix A – Site Selection of B2.2: Report to Inform Appropriate Assessment Part 2: Appendix A: Habitat Regulations Assessment Screening Report (APP-168)** amended by document **AS-015**. Once sites and features were identified, the consideration of potential for LSE was made for the project alone (and in-combination), based on a source-pathway-receptor approach for all stages of the project (as informed by the relevant chapters of the Environmental Statement (ES)).
- 1.1.1.2 The Applicant undertook HRA screening alone for offshore ornithology taking a very precautionary approach in response to discussions during the Evidence Plan Process (agreement OFF-ORN-5.1 to 5.9 as set out in Evidence Plan Logs which are appendices to the Hornsea Four Evidence Plan (**B1.1.1: Evidence Plan (APP-130)**)).

### 1.2 Hornsea Four HRA Screening of Designated Sites and Features In-combination

- 1.2.1.1 In response to the Applicant's precautionary screening undertaken for offshore ornithology alone, the subsequent assessment in-combination in Section 11.4 of **B2.2: Report to Inform Appropriate Assessment (APP-167 to APP-178)** is focused on those designated sites and species for which there is potential for a material contribution from Hornsea Four alone (as confirmed in the assessment alone in Section 10.4 of **B2.2: Report to Inform Appropriate Assessment (APP-167 to APP-178)**). Where an effect from Hornsea Four alone was determined to be trivial and inconsequential that would be well within the error margins of the assessment (as confirmed in the assessment alone in Section 10.4 of **B2.2: Report to Inform Appropriate Assessment (APP-167 to APP-178)**), such features and designated sites are not assessed further as there is no potential for any contribution for an in-combination effect to occur.

## 2 Natural England's Relevant Representations (RR-029) – HRA Screening Query

### 2.1 Natural England's Request for Justification as to why Razorbill (a component of the Farne Islands SPA seabird assemblage feature) was screened out for no LSE

- 2.1.1.1 Natural England's detailed Relevant Representations (**RR-029**, Point 80) on **Volume B2 Chapter 2 Report to Inform Appropriate Assessment Part 1 (APP-167)** amended by document **AS-014** requested further justification be provided as to why razorbill (*Alca torda*), an unnamed component of the Farne Islands SPA seabird assemblage, was screened out for no LSE.
- 2.1.1.2 *'Razorbill is a component of the seabird assemblage feature of Farne Islands SPA. However, whilst the other auk species trigger an LSE in the breeding season, razorbill do not. This*

*component of the assemblage should be screened in, or clarification should be provided regarding why razorbill (as a component of the seabird assemblage) has not triggered LSE.'*

- 2.1.1.3 Natural England acknowledge that razorbill, as a component of the Farne Islands SPA seabird assemblage would not trigger an LSE in the breeding season, therefore Natural England considers that only during the non-breeding season further justification is required to be provided by the Applicant.

### **3 Hornsea Four Justification for Screening Out Razorbill from Farne Islands SPA**

#### **3.1 The Population of Razorbill from the Farne Islands SPA**

- 3.1.1.1 Outside of the breeding season, when the population of razorbills within the North Sea contains a mix of birds from UK breeding colonies and breeding colonies from further away (e.g. Furness 2015; Dunn et al. 2020), a much lower percentage of birds can be attributed to any particular breeding colony SPA population. Apportionment of specific SPA populations during the non-breeding season can be based on calculating the proportion of the adult razorbills within the UK North Sea and English Channel Biologically Defined Minimum Population Scale (BDMPS) that can be attributed to the Farne Islands SPA as defined by Furness (2015), based on the data within that report.
- 3.1.1.2 The BDMPS for razorbill in the North Sea and English Channel are estimated to be 591,874 individuals in the migration seasons (August to October and January to March) and 218,622 individuals during the winter season (November and December) according to Furness (2015). The estimated proportion of adult razorbills that remain within these populations from the Farne Islands SPA are 100% during the migratory seasons and 90% during the winter season, based on the UK North Sea non-SPA colonies proportions detailed in Appendix A of Furness (2015). The Seabird Monitoring Programme (JNCC, 2022) colony count for razorbill for the year of 2015 at the Farne Islands was 476 Apparently Occupied Sites (AOS), which can be estimated to be 952 adults. The 2015 colony count was used to provide a level of consistency with the other colony counts presented in Furness (2015) for other razorbill colonies. Therefore, all 952 adults are assumed to contribute to the migratory season BDMPSs for the UK North Sea and English Channel, whilst 857 would remain during the winter season. This would mean that the proportion of adult razorbills from the Farne Islands SPA within the North Sea and English Channel BDMPS would equate to an apportionment rate of 0.08% during the migratory seasons and 0.20% during the winter season.
- 3.1.1.3 On the basis of the Farne Islands SPA population of razorbill being an extremely minor component of the overall North Sea and English Channel BDMPS across the wider non-breeding season it was determined that an LSE would not be apparent and therefore it was ruled out further consideration.

#### **3.2 Potential Impacts on Razorbill from Hornsea Four**

- 3.2.1.1 By way of further clarification and in order for the examining authority and Natural England to understand that the Applicant's approach was justified an assessment is provided to reduce uncertainties around this topic and in order for this matter to be closed out.

As described in Section 10.4 of the **B2.2: Report to Inform Appropriate Assessment Part 1 (APP-167)** amended by document **AS-014**) the number of razorbill predicted to be displaced from the array area and a 2 km buffer (applying displacement rates of 50%) in the return

migration bio-season is 186 (185.50) individuals, in the post-breeding migration bio-season is 1,795 (1,794.94) individuals and in the migration free winter bio-season is 237 (237.07) individuals. The predicted consequent mortality (applying a mortality rate of 1%) in the return migration bio-season is two (1.86) individuals, in the post-breeding migration bio-season is 18 (17.95) individuals and in the migration free winter bio-season is two (2.37) individuals. Additional evidence provided in support of the Applicant's preferred displacement rate of up to 50% and consequent mortality rate of up to 1% was submitted to the examination as [Deadline 1 Submission - G1.47 Auk Displacement and Mortality \(REP1-069\)](#).

- 3.2.1.2 On the basis of 0.08% of all the birds in the migratory bio-seasons predicted to be displaced being adult birds from the Farne Islands SPA, then the consequent mortality from being displaced is estimated at 0.001 breeding adults per annum during the return migration season and 0.014 breeding adults per annum during the post-breeding migration season. On the basis of 0.20% of all the birds in the winter season predicted to be displaced being adult birds from the Farne Islands SPA, then the consequent mortality from being displaced is estimated at 0.005 breeding adults in the winter season per annum. This equates to a total consequent mortality from displacement across the entire non-breeding season of significantly less than one (0.021) adult razorbill per annum from the Farne Islands SPA. The estimated displacement mortality rate for razorbill is so low as to be considered no material contribution to the natural baseline mortality rates at this colony.
- 3.2.1.3 Should Natural England's range of displacement mortality rates (applying a range of 30% displacement with 1% mortality and 70% displacement with 10% mortality) be considered alongside the Applicant's preferred approach, then the impact of displacement is a prediction of consequent mortality of less than one (0.012 to 0.288) breeding adult bird from the SPA across the non-breeding seasons per annum, even when considering Natural England's upper displacement rate of 70% and a mortality of 10%. These estimated displacement mortality rates for razorbill are so low as to be considered no material contribution to the natural baseline mortality rates at this colony.
- 3.2.1.4 Following this additional assessment, it can be concluded with certainty that the original HRA screening decision that considered no LSE for razorbill from the Farne Islands SPA was correct. The findings within this clarification note provide additional supporting evidence that there is no potential for an Adverse Effect on Integrity (AEoI) on razorbill (as a component of the seabird assemblage) or to the conservation objectives of the seabird assemblage feature of the Farne Islands SPA in relation to disturbance and displacement effects in the operation and maintenance phase from Hornsea Four alone. Therefore, subject to natural change, both razorbill (as an unnamed component of the Farne Islands SPA seabird assemblage) and the seabird assemblage of the Farne Islands SPA will be maintained in the long term.
- 3.2.1.5 It can also be concluded that the impact of displacement consequent mortality of less than one (0.012 to 0.288) breeding adult bird from the SPA across the non-breeding seasons per annum (even when considering Natural England's upper displacement rate of 70% and a mortality of 10%) will not provide any meaningful contribution to any in-combination effects. Therefore, the potential for an AEoI in relation to in-combination effects can be ruled out, based on Hornsea Four's impact level being of no material contribution to any in-

combination assessment of razorbill (as a component of the seabird assemblage). Therefore, subject to natural change, both razorbill (as an unnamed component of the Farne Islands SPA seabird assemblage) and the seabird assemblage of the Farne Islands SPA will be maintained in the long-term with respect to the conservation objectives of the Farne Islands SPA.

## 4 References

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