



The Planning Inspectorate  
Yr Arolygiaeth Gynllunio

# **REPORT on the IMPLICATIONS for EUROPEAN SITES**

Proposed

Able Marine Energy Park  
(Material Change 2)

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

Planning Inspectorate Reference: TR030006

15 February 2022

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# 1 INTRODUCTION

## 1.1 Background

- 1.1.1 On 29 October 2014, Able Humber Ports Limited (the Applicant) was granted development consent for the construction and operation of a new quay and associated development on the south bank of the Humber estuary at Killingholme in North Lincolnshire (the Able Marine Energy Park Development Consent Order 2014 (S.I. 2014/2935) (the AMEP DCO)).
- 1.1.2 The Applicant has applied to the Secretary of State under Article 153 and paragraph 3(1) of Schedule 6 of the Planning Act 2008 for an Amendment Order (AO) to the AMEP DCO (the AO Application). The Secretary of State has appointed an Examining Body (ExB) to conduct an examination of the AO Application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the AO Application.
- 1.1.3 The relevant Secretary of State is the competent authority for the purposes of the Habitats Regulations<sup>1</sup> for applications submitted under the PA2008 regime. The findings and conclusions on nature conservation issues reported by the ExB will assist the Secretary of State in performing their duties under the Habitats Regulations.
- 1.1.4 This report documents and signposts information provided within the AO Application, and the information submitted throughout the examination by both the Applicant and interested parties, up to Deadline 4 of the examination (1 February 2022) in relation to potential effects on European Sites<sup>2</sup>. 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:  
[Able Marine Energy Park Material Change 2 | National Infrastructure Planning \(planninginspectorate.gov.uk\)](https://www.planninginspectorate.gov.uk/able-marine-energy-park-material-change-2/)
- 1.1.5 This RIES is issued to ensure that interested parties, including the Appropriate Nature Conservation Body (Natural England (NE)), are consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 63(3) of the Habitats Regulations. Following consultation, the responses will be considered by the ExB in making their recommendation to the Secretary of State and made available to the Secretary of State along with this report. The RIES will not be revised following consultation.

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<sup>1</sup> The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

<sup>2</sup> The term European Sites in this context includes Sites of Community Importance (SCIs), Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), possible SACs, potential SPAs, Ramsar sites, proposed Ramsar sites, and any sites identified as compensatory measures for adverse effects on any of the above. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see PINS Advice Note 10.

## 1.2 Documents used to inform this RIES

- 1.2.1 The Applicant provided a HRA report with the AO Application which comprised the following three parts:
- TR030006/APP/7A – Habitats Regulations Assessment Part 1: Likely Significant Effects (LSE) report (the LSE Report) [APP-067];
  - TR030006/APP/7B – Habitats Regulations Assessment Part 2: Report to Inform an Appropriate Assessment (the RIAA) [APP-068]; and
  - TR030006/APP/7C – Habitats Regulations Assessment Part 3 & 4: Alternative Solutions and Imperative Reasons of Overriding Public Interest (IROPI) (the Derogations Report) [APP-069].
- 1.2.2 This suite of application documents updated the HRA that was undertaken for the AMEP DCO and focused on the proposed changes to the consented scheme.
- 1.2.3 Revised versions of the LSE Report and the RIAA were submitted at Deadline 1 [REP1-023] and Deadline 3 [REP3-008]. The Derogations Report was not revised.
- 1.2.4 In response to a request in the Regulation 28 letter [PD-002], the Applicant submitted screening and integrity matrices for the Humber Estuary SAC, SPA and Ramsar site [AS-004] during the pre-examination stage. These were revised at Deadline 4 [REP4-018].

## 1.3 Structure of this RIES

- 1.3.1 The remainder of this report is as follows:
- **Section 2** provides an overview of the Applicant’s assessment and identifies the European sites and potential impacts that have been considered within the AO Application.
  - **Section 3** identifies the European sites and qualifying features screened by the Applicant for potential LSEs, either alone or in combination with other projects and plans, along with relevant matters discussed during the Examination up to Deadline 4 (1 February 2022).
  - **Section 4** identifies the European sites and qualifying features which have been considered in terms of adverse effects on site integrity, either alone or in combination with other projects and plans. The section also identifies relevant matters discussed during the Examination up to Deadline 4 (1 February 2022).
  - **Section 5** provides a summary of the information submitted by the Applicant to address derogations under the Habitats Regulations,

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and relevant matters discussed during the Examination up to  
Deadline 4 (1 February 2022).

- **Section 6** presents the ExB's understanding of the Applicant's shadow HRA in a tabular format.



## 2 OVERVIEW OF THE APPLICANT'S ASSESSMENT

### 2.1 European Sites Considered

- 2.1.1 The project is not connected with, or necessary to the management for nature conservation of, any of the European sites considered within the Applicant's assessment.
- 2.1.2 The Applicant has not identified any potential impacts on European sites in other EEA States<sup>3</sup>. Only UK European sites are addressed in this report.
- 2.1.3 The Applicant's LSE Report considered European sites within 20km of the Proposed Development, and more distant sites where there could be an ecological link to the project (described in Section 4 of the LSE Report [APP-067]). The European sites identified by the Applicant, for which the UK is responsible, are detailed in Table 2.1 below.

**Table 2.1: Sites identified in the Applicant's LSE Report**

Name of European Site	Distance from application site (nearest point)
Humber Estuary SAC	Overlaps
Humber Estuary SPA	Overlaps
Humber Estuary Ramsar site	Overlaps
Greater Wash SPA	18km
Southern North Sea SAC	35km
The Wash and North Norfolk Coast SAC	69km
Berwickshire and North Northumberland Coast SAC	210km

- 2.1.4 The qualifying features of these sites are shown in Tables 6.1 to 6.4 of this RIES.
- 2.1.5 Section 6 of the LSE Report [APP-067] concluded no LSE to the following sites due to the distance from the Application site, the nature of the Proposed Development and a lack of evidence of any ecological link:
- Greater Wash SPA;
  - Southern North Sea SAC;
  - Wash and North Norfolk Coast SAC; and
  - Berwickshire and North Northumberland Coast SAC.

<sup>3</sup> European Economic Area (EEA) States.

- 2.1.6 These sites were therefore not considered further in the LSE Report, with the focus being on impacts to the Humber Estuary SAC, SPA and Ramsar site. NE agreed with this conclusion in its response to the PEIR and draft HRA (dated 26 May 2021) which was provided in Updated ES (UES) Appendix UES11-4 [APP-139]. NE did not comment on these sites during the Examination.
- 2.1.7 No additional European sites were identified during the Examination by either the Applicant or other IPs as being potentially affected.

## 2.2 Potential impacts

- 2.2.1 The potential impacts considered by the Applicant in respect of the Humber Estuary SAC, SPA and Ramsar site are detailed in in Section 8 of the LSE Report [APP-067].
- 2.2.2 Table 13 of the Applicant's RIAA [APP-068] excluded AEOI to qualifying bird features as a result of noise disturbance, however identified an AEOI from 'Indirect functional habitat loss through disturbance'. The ExB was unclear what the difference between these two potential impacts was. The Applicant clarified (Q5.020 of REP4-002]) that noise disturbance has been given specific consideration, however 'Indirect functional habitat loss through disturbance' referred to all sources of disturbance including noise and visual disturbance.
- 2.2.3 Although NE has requested further information to assess impact pathways during the Examination (see section 4 of this RIES), it has not pointed to the need to identify any additional pathways not assessed by the Applicant.
- 2.2.4 The ExB has identified some inconsistencies in the Applicant's description of potential impacts between the LSE Report, the RIAA and the screening and integrity matrices. These are set out in Section 6 of this RIES. The ExB seeks clarification on these points from the Applicant.

## 2.3 In combination

- 2.3.1 The projects considered in the Applicant's in combination assessment are detailed in in Section 5 of the LSE Report [APP-067] and section 8 of the RIAA [APP-068].
- 2.3.2 NE confirmed (Q13.0.3 of [REP4-032]) that it was satisfied all relevant schemes have been assessed.

## 2.4 Relationship with the HRA for the AMEP DCO

- 2.4.1 An HRA was undertaken by the SoS for the Department of Transport (DfT) for the AMEP DCO. The Applicant concludes in Appendices 4 and 5 of the LSE Report [APP-067] that there is no change between the LSE's resulting from the AMEP DCO and the AO Application. Similarly, Table 12 of the RIAA [APP-068] concludes that there is no change to the conclusions drawn in relation to effects on integrity between the AMEP DCO and the AO Application.

- 2.4.2 The LSE Report [APP-067] also confirms that the assessment relates only to the AMEP site and that there would be no change to the Cherry Cobb Sands compensation site (or the Material Change on that site), so that has not been considered as part of the assessment. NE did not raise any concerns regarding this approach during the Examination.

### 3 STAGE 1: LIKELY SIGNIFICANT EFFECTS

#### 3.1 The Applicant's assessment

3.1.1 The Applicant's LSE Report [APP-067] identified LSEs on habitat features of the Humber Estuary SAC/Ramsar as follows:

- permanent direct loss of estuarine habitat (H1130), intertidal mudflat (H1140) and saltmarsh (H1330 / H1310);
- indirect effects on estuarine habitat (H1130), intertidal mudflat (H1140) and saltmarsh (H1330 / H1310); and
- disturbance to grey seal (S1364), sea lamprey (S1095) and river lamprey (S1099) from piling of the quay.

3.1.2 Table 14 of the LSE Report [APP-067] identified a LSE on bar-tailed godwit, black-tailed godwit, dunlin, redshank, shelduck, curlew, lapwing, ringed plover, marsh harrier, avocet, mallard, shoveler and teal of the Humber Estuary SPA/Ramsar site. The table is reproduced below.

**Table 3.1. LSEs identified by the Applicant for bird qualifying features of the Humber Estuary SPA/Ramsar (Table 14 of the LSE Report [APP-067])**

Effect	Internationally important Populations of Regularly Occurring Annex I Species			Internationally Important Migratory Species		Other Species of Waterfowl Assemblage
	Breeding	Passage	Wintering	Passage	Wintering	
Permanent direct loss of intertidal mudflat	-	-	Bar-tailed godwit	Black-tailed godwit, dunlin and redshank	Black-tailed godwit, dunlin, redshank and shelduck	Curlew, lapwing and ringed plover
Indirect changes in intertidal mudflat		-	Bar-tailed godwit	Black-tailed godwit, dunlin and redshank	Black-tailed godwit, dunlin, redshank and shelduck	Curlew, lapwing and ringed plover
Loss of terrestrial habitat	Marsh harrier	-				Curlew and lapwing
Disturbance to birds at KMFS and NKHP	Avocet and marsh harrier	-	Avocet and bar-tailed godwit	Black-tailed godwit, dunlin and redshank	Black-tailed godwit, dunlin, redshank and shelduck	Curlew, lapwing, mallard, ringed plover, shoveler and teal
Loss of NKHP as a roost site due to loss of intertidal mudflats at KMFS	-	-	Bar-tailed godwit	Black-tailed godwit, dunlin and redshank	Black-tailed godwit, dunlin, redshank and shelduck	Curlew, lapwing and ringed plover

3.1.3 Section 9 of the LSE Report [APP-067] concluded that for the qualifying features for which no LSE was identified from the project alone, no in combination effects would occur.

3.1.4 These conclusions were unchanged in the Revised HRA Report [REP1-023][REP3-008].

## 3.2 Pre-examination and examination

3.2.1 The Applicant's screening conclusions were not disputed by any IPs during the Examination. However, Table 4.1 below details the key matters queried by the ExB during the Examination in relation to screening for LSEs (up to Deadline 4). Note that questions seeking minor clarifications have not been detailed in Table 4.1.

**Table 4.1. Issues raised by the ExB in relation to the Applicant's screening of LSE's (up to Deadline 4)**

Site	Issue raised by the ExB		Applicant's response and relevant docs
Humber Estuary SAC	<b>Conclusion of no LSE</b>	<p><b>ExB ExQ1 Q5.0.4 [PD-003]</b> Further evidence requested to support the assertion that that following features are outside the potential impact zone:</p> <ul style="list-style-type: none"> <li>• H1110 sandbanks;</li> <li>• H1150 coastal lagoons;</li> <li>• H2110 embryonic shifting dunes;</li> <li>• H2120 shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") (shifting dunes with marram);</li> <li>• H2130 fixed dunes with herbaceous vegetation ("grey dunes") (dune grassland) (priority habitat); and</li> <li>• H2160 dunes with <i>Hippophae rhamnoides</i> (dunes with sea-buckthorn)</li> </ul>	<p>Q5.0.4 of [REP1-019] presented the location of habitats H110, H1150, H2110, H2120, H2130 and H2160.</p> <p>Plan AME-036-30006 [REP1-020] showed the location of sandbanks.</p>
Humber Estuary SAC	<b>Coastal lagoons</b>	<p><b>ExB ExQ2 Q5.0.17 [PD-007]</b> Clarification requested as to why paragraphs 7.33 and 9.10 of the LSE Report identify the potential for coastal lagoons, as a supporting habitat to the Humber Estuary SPA, to be affected by the Proposed Development, however a LSE for this feature of the Humber Estuary SAC is excluded in the screening matrices on the basis that the feature is outside of the development impact zone.</p>	<p>Q5.0.17 of [REP4-002] confirmed that the closest lagoon is North Killingholme Pits, which forms part of the Humber Estuary SPA but is not located within the Humber Estuary SAC.</p>

### 3.3 Position at the time of publication of this RIES

- 3.3.1 A breakdown of the ExB's understanding of the Applicant's conclusions regarding LSEs for all qualifying feature of the Humber Estuary SAC, SPA and Ramsar is provided in Tables 6.1 to 6.4 of this RIES. This is based on the information provided within the LSE Report, the screening matrices and any clarification received during the Examination.
- 3.3.2 Section 6 also details the ExB's assumptions and queries regarding the Applicant's screening assessment, upon which it invites comments from the Applicant.

## 4 STAGE 2: ADVERSE EFFECTS ON INTEGRITY

### 4.1 Conservation Objectives

4.1.1 The conservation objectives for the Humber Estuary SAC and SPA were provided in Section 7 of the RIAA [APP-068].

### 4.2 Mitigation

4.2.1 Section 9 of the RIAA [APP-068] stated that the mitigation and compensation measures identified as part of the consented DCO remain suitable and fit for purpose without any need for modification. These measures are secured through the approval of various plans and method statements as specified in Schedule 8 and 11 of the extant DCO.

### 4.3 The Applicant's Integrity Test

4.3.1 Tables 12 and 13 of the RIAA [APP-068] summarised the Applicant's assessment. It confirmed that whilst there would be some changes to the extent of impacts between the AO Application and the consented AMEP DCO<sup>4</sup>, the same conclusions had been reached for the AO Application as had been reached for the consented DCO.

#### **Humber Estuary SAC/Ramsar**

4.3.2 The RIAA concluded there would be AEOI for the Humber Estuary SAC and Ramsar as a result of the direct and indirect functional habitat losses detailed in Table 4.1 below. These conclusions were unchanged in the Revised HRA Reports [REP1-023][REP3-018].

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<sup>4</sup> The Applicant (Q5.0.14 of [REP1-019]) stated that “[direct habitat loss would include] a small reduction in the loss of estuarine sub-tidal and intertidal mudflat, and a commensurate small new loss of colonising saltmarsh (as this community has recently colonised the site naturally). Regarding indirect functional loss through disturbance, this would affect a reduced area of intertidal mudflat but an increased area of colonising saltmarsh and more established saltmarsh (as a result of colonisation of this area since 2012)”.



**Table 4.1: Habitat loss from the proposed development that would result in AEOI**

Habitat type	SAC qualifying feature	Permanent direct loss	Indirect functional loss through disturbance
Sub-tidal habitat	H1130 - Estuaries	10.4ha	n/a
Intertidal mudflat and mudflat with pioneer saltmarsh	H1140 - Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats	31.3ha	7.7ha
	H1310 - <i>Salicornia</i> and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand		
Colonising saltmarsh	H1330 - Atlantic salt meadows ( <i>Glaucopuccinellietalia maritimae</i> )	1.9ha	4.7ha

### **Humber Estuary SPA and Ramsar**

4.3.3 The RIAA [APP-068] concluded there would be AEOI for the Humber Estuary SPA and Ramsar as follows:

- from the reduction in extent and distribution of supporting habitats (estuarine habitats, intertidal mudflat and saltmarsh), and indirect functional loss as a result of disturbance for:
  - avocet;
  - marsh harrier;
  - bar-tailed godwit;
  - black-tailed godwit;
  - dunlin;
  - knot;
  - redshank;

- shelduck; and
- six wintering waterbird assemblage species (curlew, lapwing, mallard, ringed plover, shoveler and teal).
- from displacement of waders from high tide NKHP roost sites for:
  - avocet;
  - dunlin;
  - black-tailed godwit; and
  - redshank.

4.3.4 Section 8 of the RIAA [APP-068] concluded that “*with mitigation measures implemented...it is likely that cumulative / in-combination impacts across developments will be reduced to minor levels, and that there would be no adverse effect on integrity for these effects for the proposed material change*”.

#### 4.4 Pre-examination and Examination

- 4.4.1 NE [RR-007] was not satisfied that it can be excluded beyond reasonable scientific doubt that the Proposed Development would not have an additional AEOI of the Humber Estuary SAC, SPA and Ramsar site. It stated that further information is required to assess potential impacts.
- 4.4.2 However, NE (Q5.0.8 of [REP1-036]) did confirm that it agreed with the Applicant’s conclusion of no AEOI for the grey seal, sea lamprey and river lamprey of the Humber Estuary SAC.
- 4.4.3 The key issues discussed during examination in relation to effects on integrity and relevant documents are detailed in Table 4.2 below. The ‘Matter agreed’ column of Table 4.2 sets out the ExB’s queries in relation to the assessment of effects on integrity. Relevant parties are invited to comment.

**Table 4.2. Issues raised during the Examination by NE, the Environment Agency (EA) and the ExB in relation to effects on integrity**

Site	Issue	Relevant docs	Matter agreed?
Humber Estuary SAC/ Ramsar	<p><b>Impacts on estuarine and intertidal mudflat habitat</b></p>	<p><b>NE [RR-007]</b> Further information required on effects of additional dredging activities (ie vessel movements) and the effects of additional disposal of dredged material to sea.</p> <p>Applicant updated UES Appendix 11-2 [REP1-026] and confirmed [REP1-026] that the total number of dredge vessel movements are provided in Appendix UES14-1 (Navigation Risk Assessment) of the UES [APP-147]. Applicant stated [REP1-026] that dredging volumes are set out in UES Appendix 4-2, and are very similar to those in the original application. Paragraph 8.8 and Table 12 of the RIAA Report were updated at Deadline 3 [REP3-008] to conclude no AEoI from capital and maintenance dredging – no material change in vessel movements.</p>	<p><b>No</b> At Deadline 4, NE (Q5.0.6 of [REP4-002] and paragraph 4.1 of [REP4-023]) acknowledges the additional information. However, NE sought clarification on whether the mitigation measures set out in paragraphs 8.10 and 8.11 of the RIAA have been implemented, or whether it was considered not necessary to implement them. The Applicant confirmed at Deadline 4 (Q5.0.6 of [REP4-002]) that additional mitigation measures would reduce impacts but are not required to reach a conclusion of no AEoI.</p>

Site	Issue		Relevant docs	Matter agreed?
				<p><i>NE is requested to comment on whether this alleviates its concerns.</i></p> <p>NE also advised that the applicant clarifies whether this updated information takes into account the recently proposed change in construction sequence.</p> <p><i>The Applicant is requested to respond.</i></p>
	<p><b>Clarification about change in habitat loss from AMEP DCO</b></p>	<p><b>NE</b> [RR-007] Clarification required over the impacts of direct loss of estuarine and intertidal mudflat habitat due to the footprint of the development. Audit trail required.</p> <p><b>NE</b> [REP1-036][REP3-014] stated that the sHRA and UES11-2 should be updated with information on medium and long term changes. Clarification over how figures for habitat</p>	<p>Clarified by the Applicant in updated UES11-2 submitted at Deadline 1 [REP1-027].</p> <p>Paragraph 8.5 of the RIAA was revised at Deadline 3 [REP3-008] to clarify that immediate short-term impacts have been presented and that medium-term and long-term impacts are deemed to be less significant due to natural changes that would occur over time at foreshore without the scheme (ie mudflat to saltmarsh).</p>	<p><b>Yes</b></p> <p>NE paragraph 3.8 of [REP4-023].</p>

Site	Issue		Relevant docs	Matter agreed?
	change have been calculated required.		Applicant reiterated this position in Q5.0.9 of [REP4-002].	
Humber Estuary SPA/Ramsar	<b>Noise disturbance to SPA/Ramsar birds</b>	<b>NE</b> [RR-007][REP1-002][REP3-014] Further information required on impacts from noise disturbance to SPA/Ramsar birds using North Killingholme Haven Pits (NKHP) during construction and operation, particularly from vessel traffic and port activity, due to the change in the design of the quay.	The Applicant [REP1-002] referred to Section 16.4.0 of [APP-087] which confirmed no change in extent of noise disturbance from piling of quay. The Applicant confirmed (Q5.0.15 of [REP1-019]) that <i>"whilst vessels berthed on the inset quay would be closer to NKHP than in the consented scheme, the new berth is merely displacing port activity that is consented in that location."</i> Paragraph 2.5 of the LSE Report and paragraphs 8.7 and 8.17 of the RIAA were revised at Deadline 3 [REP3-008] to state that construction and operational noise contours are shown diagrammatically in Appendix 16.8 of the ES for the consented AMEP DCO, and that operational noise at NKHP would be lower than baseline levels.	<b>Yes</b> NE (Q5.0.3 and Q5.0.4 of [REP4-032] and paragraph 3.10 of REP4-023)].
	<b>Lighting impacts</b>	<b>NE</b> [REP1-002][REP3-014]	Applicant confirmed that the higher crane makes no	<b>Yes</b>

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Site	Issue	Relevant docs	Matter agreed?
	<p>Further clarification required as to the potential impacts from lighting as a result of the changes to the quay design.</p>	<p>difference to lighting levels on the ground (Q5.0.9 of [REP1-019]).</p> <p>The LSE Report and RIAA were revised at Deadline 3 (paragraphs 2.4 and 8.17 respectively of [REP3-008]) to confirm lighting columns would be repositioned but light spill controlled and that external lighting details are subject to further consultation with NE, pursuant to Schedule 11 paragraph 24 of the AMEP DCO. Positional changes were shown on drawing AME-03942B [REP4-015].</p> <p>Lux levels from the consented AMEP DCO were presented in the original ES Appendix 9, submitted by the Applicant at Deadline 4 [REP4-016]. The Applicant stated at Deadline 4 (Q5.0.5 of [REP4-002]) that lux levels from the amended scheme will not change in any material way from the original scheme.</p>	<p>Paragraph 3.10 of [REP4-023].</p>

Site	Issue		Relevant docs	Matter agreed?
Humber Estuary SPA	<b>Waterbird assemblage – ringed plover and sanderling</b>	<b>NE</b> Q5.0.1 of [REP1-036] Noted that a LSE has been identified for little ringed plover and sanderling, but these species are not considered in the AA.	Paragraph 9.4 of the LSE report [APP-067] explained there is no LSE to sanderling as they were not recorded during surveys. The LSE Report [APP-067] does not explicitly confirm if there is a LSE to little ringed plover.	<b>No</b> NE (Q5.0.2 of [REP4-032]) confirmed it was satisfied no LSE with regard to sanderling, but not little ringed plover. <i>The Applicant is requested to respond.</i>
Humber Estuary SAC	<b>Disturbance to grey seals, river lamprey and sea lamprey</b>	<b>ExB</b> ExQ1 Q5.0.7 [PD-003] and ExQ2 Q5.0.8 [PD-007] Evidence required to support conclusion of no AEoI from disturbance.	The Applicant (Q5.0.7 of [REP1-019]) referred to the original sHRA undertaken for the AMEP DCO: - River and sea lamprey section 6.5 - Grey seal – paragraphs 5.4.25 et seq. The original sHRA was submitted at Deadline 4 [REP4-017].	<b>N/a – ExB question</b> The ExB notes that paragraph 5.5.11 and Annex D of the original sHRA [REP4-017] concludes no LSE to grey seal, however a LSE is identified by the Applicant for the AO Application.
N/A	<b>Procedural clarification</b>	<b>NE</b> [RR-007] - Procedural clarification required with regard to the way mitigation and compensation have been addressed.	Revised HRA Report at Deadline 1 [REP1-023].	<b>Yes</b> Agreed with NE [REP1-036].
N/a	<b>In combination effects</b>	<b>EA</b> [REP1-032] and <b>ExB</b> ExQ2 Q13.0.1 [PD-007]	The Applicant provided further reasoning for screening out certain projects from the	<b>Yes</b>

Site	Issue		Relevant docs	Matter agreed?
	<p>Justification required to exclude certain projects from the cumulative effects assessment. (Note, this matter was raised by the EA in relation to the Environmental Impact Assessment cumulative effects assessment, however it is considered to be equally applicable to the HRA in combination assessment by the ExA).</p>		<p>cumulative effects assessment in Q13.0.1 [REP4-002].</p>	<p>Agreed with the EA (paragraph 4.2 of [REP4-021]).</p>
N/a	<p><b>In combination effects</b></p>	<p><b>ExB</b> ExQ2 Q13.0.2 [PD-007] Further details required to substantiate the conclusions drawn in the in combination assessment.</p>	<p>The Applicant stated in Q13.0.2 of [REP-002] that <i>"in combination effects only occur if there are residual effects of a project because impacts of the project have not been fully mitigated (or compensated) which could then cause a significant impact when taken together with another project that has not fully mitigated its impacts."</i></p> <p>The Applicant stated that as with the consented AMEP DCO, all impacts are either fully</p>	<p><b>N/a – ExB question.</b> <i><u>NE is invited to comment on the Applicant's in combination assessment presented for the AO.</u></i></p>



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Site	Issue	Relevant docs	Matter agreed?
		<p>mitigated or compensated, as follows:</p> <ul style="list-style-type: none"> <li>- where an AEoI from the project alone has been identified, this has been compensated for (see Section 5 of this RIES);</li> <li>- mitigation for SPA species using the Killingholme fields is provided with Mitigation Area A (in the AMEP DCO); and</li> <li>- disturbance effects are mitigated by conditions within the DML and in Schedule 11 of the AMEP DCO.</li> </ul>	

## 4.5 Position at the time of publication of this RIES

- 4.5.1 A breakdown of the ExB's understanding of the Applicant's conclusions regarding AEOI for each qualifying feature of the Humber Estuary SAC, SPA and Ramsar is provided in Tables 6.1 to 6.4 of this RIES. This is based on the information provided within the RIAA Report, the integrity matrices, and the examination to date.
- 4.5.2 Due to some discrepancies between the Applicant's RIAA and integrity matrices, the ExB has made a number of assumptions in Section 6 upon which it invites comments from the Applicant.
- 4.5.3 At the time of publication, the ExB understands that NE is not able to conclude there would be no additional AEOI of the Humber Estuary SAC, SPA and Ramsar site as further clarification is required in the revised sHRA regarding the potential impacts from dredging and disposal at sea (paragraph 4.2 of [REP4-023]). As noted in Table 4.1, NE is invited to comment on whether the Applicant's responses at Deadline 4 have alleviated these concerns and to confirm its position with regards to AEOI.

## 5 STAGE 3: DEROGATIONS

### 5.1 Applicant's information

5.1.1 The Derogations Report [APP-069] provided the following information:

- Section 2 - a review and, where relevant, updates to the information on alternatives that was submitted for the consented AMEP DCO;
- Section 3 - a review and, where relevant, updates to the IROPI information that was submitted for the consented AMEP DCO.

5.1.2 The revised HRA Report [REP1-023] explained that a compensation scheme was agreed for the AMEP DCO. It concluded that given the magnitude of impacts is slightly reduced as a result of the AO, the scheme is expected to provide the appropriate quantum of compensation. Details of the losses and compensation ratios for the habitat that would be lost were provided in Technical Appendix UES11-2 (submitted in [APP-137] and revised in [REP1-027]).

### 5.2 Pre-examination and Examination

5.2.1 As noted in Table 4.1 of this RIES, NE requested [RR-007] procedural clarifications in the way mitigation and compensation were addressed in the Applicant's HRA report but confirmed [REP1-036] it was content this was addressed in the revised HRA Report [REP1-023].

5.2.2 NE [RR-007] [REP1-002][REP4-023] confirmed that compensatory habitat at Cherry Cobb Sands will remain adequate and advised [REP1-002] it be created as soon as practically possible, and commenced at the latest 7 months prior to construction of the quay.

5.2.3 No further matters relating to derogations were raised during the Examination.

## 6 EXB'S UNDERSTANDING OF THE APPLICANT'S ASSESSMENT

### 6.1 ExB's assumptions and queries on outstanding matters

6.1.1 Tables 6.1 to 6.4 set out the ExB's understanding of the Applicant's shadow HRA. The ExB has made some assumptions and has some queries for the Applicant, as detailed below.

#### **Humber Estuary SAC/Ramsar**

6.1.2 The Humber Estuary SAC screening matrix excluded a LSE from changes in intertidal habitat for all qualifying features; this is not consistent with Appendix 5 of the LSE Report [REP3-008] which identified a LSE for changes to habitat for saltmarsh (H1330/H1310). *The Applicant is invited to comment.* See **?(1)** (shaded in pink) in Table 6.1.

6.1.3 The Humber Estuary SAC screening matrix identified a LSE for river lamprey and sea lamprey from habitat loss. This conclusion does not accord with paragraph 9.14 and Appendix 5 of the LSE Report [REP3-008]. *The Applicant is invited to comment.* See **?(2)** (shaded in pink) in Table 6.1.

6.1.4 The Applicant's Humber Estuary Ramsar matrices did not address Criterion 1 (Representative example of near-natural estuary). *The Applicant is invited to comment.* See **?(3)** (shaded in pink) in Table 6.3.

6.1.5 The screening matrices identify water quality changes as a potential impact in relation to sea and river lamprey of the Humber Estuary SAC, but not for the Humber Estuary Ramsar (Ramsar Criterion 8). *The Applicant is invited to comment.* See **?(4)** (shaded in pink) in Table 6.3.

#### **Humber Estuary SPA/Ramsar**

6.1.6 The screening and integrity matrices for the Humber Estuary SPA and Ramsar site did not use impact headings consistent with one another or the LSE Report and RIAA. The headings used in the matrices were as follows:

- Screening matrices:
  - Loss of foraging resources;
  - Direct loss of supporting habitat; and
  - Displacement or disturbance through increased noise or lighting.
- Integrity matrices:
  - Direct intertidal habitat loss;
  - Indirect intertidal habitat loss through disturbance; and
  - Displacement from high tide roost site (NKHP).

- 6.1.7 The ExB has used the information within the LSE Report and RIAA and the matrices to identify the following potential impact headings for use in Tables 6.2 and 6.3 of this RIES:
- *Loss of foraging resources* - as a result of direct habitat loss from capital maintenance dredging and construction of quay/manufacturing area;
  - *Permanent loss of supporting habitat* - estuarine (intertidal mud, saltmarsh and sub-tidal) or terrestrial;
  - *Noise disturbance*;
  - *Indirect functional habitat loss through disturbance* - noise, lighting and visual disturbance combined;
  - *Displacement from high tide NKHP roost site* - due to loss of intertidal mudflats at KMFS;
  - *Indirect changes in intertidal mudflat* - see paragraph 6.1.11 below.
- 6.1.8 *The Applicant is invited to comment on the ExB's understanding of its assessment as presented in these Tables.*
- 6.1.9 The Applicant's integrity matrices did not distinguish between disturbance from noise, and those from visual impacts. However, the ExB understands from paragraph 8.28 and Table 13 of the RIAA [REP3-008] that an AEoI has been determined from the combination of noise and visual impacts together only; this has been reflected in Tables 6.2 and 6.3 of this RIES. *The Applicant is invited to comment.*
- 6.1.10 LSEs were not identified for red knot in Table 14 of the LSE Report, but were identified in the screening matrices from habitat loss and disturbance. The Applicant confirmed (Q5.0.16 of [REP4-002]) that there is an error in the LSE Report and that a LSE should be identified. *The Applicant is requested to confirm if the ExBs understanding of its assessment for red knot, as presented in Table 6.2 of this RIES, is correct.*
- 6.1.11 Table 14 of the LSE Report identifies LSEs to SPA/Ramsar species from 'indirect changes in intertidal mudflat'. This potential impact is not described or considered further in the RIAA. *The ExB requests clarification on the conclusions in regard to this potential impact (as denoted by **?(5)** (shaded in pink) within Tables 6.2 and 6.3) along with signposting to relevant information to support the conclusions drawn.*
- 6.1.12 'Loss of foraging resource' was not used as an impact heading in the Applicant's Humber Estuary SPA and Ramsar integrity matrices, despite a LSE being identified for some features in the screening matrices. *The ExB requests clarification on the conclusions in regard to this potential impact (as denoted by **?(6)** (shaded in pink) within Tables 6.2 and 6.3) along with signposting to relevant information to support the conclusions drawn.*
- 6.1.13 The Humber Estuary SPA integrity matrix identified an AEoI to wintering avocet from 'Displacement from high tide roost site (NKHP)' but not to

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breeding avocet. The Applicant is requested to explain why this is the case.  
See **?(7)** (shaded in pink) in Table 6.2.

Table 6.1: The ExB’s understanding of the Applicant’s screening exercise and assessment of effects on integrity for Humber Estuary SAC

<b>TABLE 6.1: HUMBER ESTUARY SAC</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Sandbanks which are slightly covered by sea water all the time (H1110)	Water quality changes	X	X
	Habitat change	X	X
	Permanent habitat loss	X	X
	Changes to estuary morphology, hydrodynamics & sedimentary regime	X	X
Estuaries (H1130)	Water quality changes	X	X
	Habitat change	X	X
	Permanent habitat loss <sup>5</sup>	✓	✓
	Changes to estuary morphology, hydrodynamics & sedimentary regime	X	X
Mudflats and sandflats not covered by seawater at low tide (H1140)	Water quality changes	X	X
	Habitat change	X	X
	Permanent habitat loss	✓	✓

<sup>5</sup> Permanent direct loss reduced from 45ha (31.5ha of intertidal mudflat and 13.5ha of sub-tidal habitat) in the AMEP DCO to 43.6 ha (31.3 ha of intertidal mudflat and 10.4 ha of sub-tidal habitat, plus an additional loss of 1.9ha of colonising saltmarsh) for the AO, but no change to conclusions reached, i.e. AEoI.

<b>TABLE 6.1: HUMBER ESTUARY SAC</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Changes to estuary morphology, hydrodynamics & sedimentary regime	X	X
Coastal lagoons (priority habitat) (H1150)	Water quality changes	X	X
	Habitat change	X	X
	Permanent habitat loss	X	X
	Changes to estuary morphology, hydrodynamics & sedimentary regime	X	X
Salicornia and other annuals colonising mud and sand (H1310)	Water quality changes	X	X
	Habitat change	<b>?(1)</b>	<b>?(1)</b>
	Permanent habitat loss	✓	✓
	Changes to estuary morphology, hydrodynamics & sedimentary regime	X	X
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) (H1330)	Water quality changes	X	X
	Habitat change	✓	✓
	Permanent habitat loss	✓	✓
	Changes to estuary morphology, hydrodynamics & sedimentary regime	X	X
Embryonic shifting dunes (H2110)	Habitat change	X	X



<b>TABLE 6.1: HUMBER ESTUARY SAC</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Permanent habitat loss	X	X
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (‘white dunes’) (H2120)	Water quality changes	X	X
	Habitat change	X	X
	Permanent habitat loss	X	X
Fixed dunes with herbaceous vegetation (‘grey dunes’) (priority habitat) (H2130)	Habitat change	X	X
	Permanent habitat loss	X	X
Dunes with <i>Hippophae rhamnoides</i> (H2160)	Habitat change	X	X
	Permanent habitat loss	X	X
Sea lamprey	Disturbance/ displacement	✓	X
	Water quality changes	X	X
	Habitat loss	<b>?(2)</b>	<b>?(2)</b>
River lamprey	Disturbance/ displacement	✓	X
	Water quality changes	X	X
	Habitat loss	<b>?(2)</b>	<b>?(2)</b>
Grey seal	Disturbance/ displacement	✓	X
	Water quality changes	X	X
	Habitat loss	X	X

Table 6.2: The ExB’s understanding of the Applicant’s screening exercise and assessment of effects on integrity for Humber Estuary SPA

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Great bittern <i>Botaurus stellaris</i> (non-breeding)	Loss of foraging resources	X	X
	Permanent loss of supporting habitat	X	X
	Noise disturbance	X	X
	Indirect functional loss of supporting habitat	X	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X
Great bittern <i>Botaurus stellaris</i> (breeding)	Loss of foraging resources	X	X
	Permanent loss of supporting habitat	X	X
	Noise disturbance	X	X
	Indirect functional loss of supporting habitat	X	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Common shelduck <i>Tadorna tadorna</i> (non-breeding)	Loss of foraging resources	X	X
	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>
Eurasian marsh harrier <i>Circus aeruginosus</i> (breeding)	Loss of foraging resources	✓	X
	Permanent loss of supporting habitat	✓	X (estuarine habitat) ✓ ( <b>terrestrial habitat</b> )
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X
	Loss of foraging resources	X	X

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Hen harrier <i>Circus cyaneus</i> (non-breeding)	Permanent loss of supporting habitat	X	X
	Noise disturbance	X	X
	Indirect functional loss of supporting habitat	X	X
	Displacement from high tide NKHP roost site	X	X
Pied avocet <i>Recurvirostra avosetta</i> (non-breeding)	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	✓
	Indirect changes in intertidal mudflat	X	X
Pied avocet <i>Recurvirostra avosetta</i> (breeding)	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
	Noise disturbance	✓	X

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	<b>?(7)</b>
	Indirect changes in intertidal mudflat	X	X
European golden plover <i>Pluvialis apricaria</i> (non-breeding)	Loss of foraging resources	X	X
	Permanent loss of supporting habitat	X	X
	Noise disturbance	X	X
	Indirect functional loss of supporting habitat	X	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X
Red knot <i>Calidris canutus</i> (non-breeding) <sup>6</sup>	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
	Noise disturbance	✓	X

<sup>6</sup> The Applicant's matrices [REP4-018] referred to both wintering and passage red knot. However, the NE Conservation Objectives for the Humber Estuary SPA identify non-breeding red knot only; therefore the ExB has not included breeding red knot in this table.

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X
Dunlin <i>Calidris alpina</i> (non-breeding) <sup>7</sup>	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	✓
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>
	Noise disturbance	✓	X
Ruff <i>Philomachus pugnax</i> (non-breeding)	Loss of foraging resources	X	X
	Permanent loss of supporting habitat	X	X

<sup>7</sup> The Applicant's matrices [REP4-018] referred to both wintering and passage dunlin. However, the NE Conservation Objectives for the Humber Estuary SPA identify non-breeding dunlin only; therefore the ExB has not included breeding dunlin in this table.

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Noise disturbance	X	X
	Indirect functional loss of supporting habitat	X	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X
Black-tailed godwit <i>Limosa limosa</i> (non-breeding) <sup>8</sup>	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ <b>(estuarine habitat)</b> X (terrestrial habitat)
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	✓
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>
Bar-tailed godwit <i>Limosa lapponica</i> (non-breeding)	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ <b>(estuarine habitat)</b>

<sup>8</sup> The Applicant's matrices [REP4-018] referred to both wintering and passage black-tailed godwit. However, the NE Conservation Objectives for the Humber Estuary SPA identify non-breeding black-tailed godwit only; therefore the ExB has not included breeding black-tailed godwit in this table.

<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
			X (terrestrial habitat)
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	✓
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>
Redshank <i>Tringa totanus</i> (non-breeding) <sup>9</sup>	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	✓
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>
	Loss of foraging resources	X	X

<sup>9</sup> The Applicant's matrices [REP4-018] referred to both wintering and passage redshank. However, the NE Conservation Objectives for the Humber Estuary SPA identify non-breeding redshank only; therefore the ExB has not included breeding redshank in this table.



<b>TABLE 6.2: HUMBER ESTUARY SPA</b>			
<b>Feature</b>	<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Little tern <i>Sterna albifrons</i> (breeding)	Permanent loss of supporting habitat	X	X
	Noise disturbance	X	X
	Indirect functional loss of supporting habitat	X	X
	Displacement from high tide NKHP roost site	X	X
	Indirect changes in intertidal mudflat	X	X
Assemblage qualification – the site qualifies under article 4.2 of the Birds Directive because it regularly supports 153,394 individuals waterbirds in the non-breeding season	Loss of foraging resources	✓	<b>?(6)</b>
	Permanent loss of supporting habitat	✓	✓ <b>(estuarine habitat)</b> ✓ <b>(terrestrial habitat)</b>
	Noise disturbance	✓	X
	Indirect functional loss of supporting habitat	✓	✓
	Displacement from high tide NKHP roost site	✓	✓
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>

Table 6.3: The ExB’s understanding of the Applicant’s screening exercise and assessment of effects on integrity for Humber Estuary Ramsar

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>				
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Ramsar criterion 1	Representative example of near-natural estuary	Water quality changes	?(3)	?(3)
		Changes to intertidal habitat	?(3)	?(3)
		Habitat loss	?(3)	?(3)
		Changes to estuary morphology, hydrodynamics & sedimentary regime	?(3)	?(3)
Ramsar criterion 3	Breeding colony of grey seals <i>Halichoerus grypus</i>	Loss of foraging resources	✓	X
		Permanent loss of supporting habitat	✓	X
		Noise disturbance	✓	X
	Natterjack toad <i>Bufo calamita</i>	Loss of foraging resources	X	X
		Permanent loss of supporting habitat	X	X
		Noise disturbance	X	X
		Loss of foraging resources	✓	?(6)

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>				
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Ramsar criterion 5	Assemblages of non-breeding waterfowl	Permanent loss of supporting habitat	✓	✓ (estuarine habitat) ✓ (terrestrial habitat)
		Noise disturbance	✓	X
		Indirect functional loss of supporting habitat	✓	✓
		Displacement from high tide NKHP roost site	✓	✓
		Indirect changes in intertidal mudflat	✓	?(5)
Ramsar criterion 6: species/populations occurring at levels of international importance	European golden plover <i>Pluvialis apricaria</i> (non-breeding)	Loss of foraging resources	X	X
		Permanent loss of supporting habitat	X	X
		Noise disturbance	X	X
		Indirect functional loss of supporting habitat	X	X
		Displacement from high tide NKHP roost site	X	X
		Indirect changes in intertidal mudflat	X	X
		Loss of foraging resources	✓	?(6)

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>				
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Red knot <i>Calidris canutus</i> (breeding and non-breeding)	Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
		Noise disturbance	✓	X
		Indirect functional loss of supporting habitat	✓	✓
		Displacement from high tide NKHP roost site	X	X
		Indirect changes in intertidal mudflat	X	X
	Dunlin <i>Calidris alpina</i> (breeding and non-breeding)	Loss of foraging resources	✓	<b>?(6)</b>
		Permanent loss of supporting habitat	✓	✓ ( <b>estuarine habitat</b> ) X (terrestrial habitat)
		Noise disturbance	✓	X
		Indirect functional loss of supporting habitat	✓	✓
		Displacement from high tide NKHP roost site	✓	✓
		Indirect changes in intertidal mudflat	✓	<b>?(5)</b>

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>				
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
Black-tailed godwit <i>Limosa limosa</i> (breeding and non- breeding)	Loss of foraging resources	✓	<b>?(6)</b>	
	Permanent loss of supporting habitat	✓	✓ <b>(estuarine habitat)</b> X (terrestrial habitat)	
	Noise disturbance	✓	X	
	Indirect functional loss of supporting habitat	✓	✓	
	Displacement from high tide NKHP roost site	✓	✓	
	Indirect changes in intertidal mudflat	✓	<b>?(5)</b>	
Redshank <i>Tringa totanus</i> (non- breeding)	Loss of foraging resources	✓	<b>?(6)</b>	
	Permanent loss of supporting habitat	✓	✓ <b>(estuarine habitat)</b> X (terrestrial habitat)	
	Noise disturbance	✓	X	
	Indirect functional loss of supporting habitat	✓	✓	
	Displacement from high tide NKHP roost site	✓	✓	

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>				
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Common shelduck <i>Tadorna tadorna</i> (non-breeding)	Indirect changes in intertidal mudflat	✓	?(5)
		Loss of foraging resources	X	X
		Permanent loss of supporting habitat	✓	✓ (estuarine habitat) X (terrestrial habitat)
		Noise disturbance	✓	X
		Indirect functional loss of supporting habitat	✓	X
		Displacement from high tide NKHP roost site	X	X
		Indirect changes in intertidal mudflat	✓	?(5)
	Bar-tailed godwit <i>Limosa lapponica</i> (breeding)	Loss of foraging resources	✓	?(6)
		Permanent loss of supporting habitat	✓	✓ (estuarine habitat) X (terrestrial habitat)
		Noise disturbance	✓	X
		Indirect functional loss of supporting habitat	✓	✓
Displacement from high tide NKHP roost site		✓	✓	

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>					
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>	
		Indirect changes in intertidal mudflat	✓	<b>?(5)</b>	
		Eurasian golden plover (wintering) <i>Pluvialis apricaria</i>	Loss of foraging resources	X	X
			Permanent loss of supporting habitat	X	X
			Noise disturbance	X	X
			Indirect functional loss of supporting habitat	X	X
			Displacement from high tide NKHP roost site	X	X
			Indirect changes in intertidal mudflat	X	X
			Noise disturbance	✓	X
Ramsar criterion 8	River lamprey <i>Lampetra fluviatilis</i>	Loss of foraging resources	✓	<b>?(6)</b>	
		Permanent loss of supporting habitat	✓	X	
		Noise disturbance	✓	X	
		Water quality changes	<b>?(4)</b>	<b>?(4)</b>	
		Loss of foraging resources	✓	<b>?(6)</b>	

<b>TABLE 6.3: HUMBER ESTUARY RAMSAR</b>				
<b>Feature</b>		<b>Potential impact (construction and operational phases)</b>	<b>LSE alone or in combination</b>	<b>AEoI alone or in combination</b>
	Sea lamprey <i>Petromyzon marinus</i>	Permanent loss of supporting habitat	✓	X
		Noise disturbance	✓	X
		Water quality changes	<b>?(4)</b>	<b>?(4)</b>



Table 6.4: The ExB’s understanding of the Applicant’s screening exercise and assessment of effects on integrity for Greater Wash SPA, Southern North Sea SAC, The Wash and North Norfolk Coast SAC and Berwickshire and North Northumberland Coast SAC

European site	Feature	Potential impact	LSE alone or in combination	AEoI alone or in combination
<b><u>Greater Wash SPA</u></b>	Red-throated diver	n/a – see paragraphs 2.1.2 to 2.1.3 of this RIES	X	X
	Little gull		X	X
	Sandwich tern		X	X
	Common tern		X	X
	Little tern		X	X
	Common scoter		X	X
<b><u>Southern North Sea SAC</u></b>	Harbour porpoise	n/a – see paragraphs 2.1.2 to 2.1.3 of this RIES	X	X
<b><u>The Wash and North Norfolk Coast SAC</u></b>	Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	n/a – see paragraphs 2.1.2 to 2.1.3 of this RIES	X	X
	Coastal lagoons (priority habitat)		X	X
	Large shallow inlets and bays		X	X
	Mediterranean and thermo-Atlantic halophilous scrubs ( <i>Sarcocornetea fruticosi</i> ). (Mediterranean saltmarsh scrub)		X	X

European site	Feature	Potential impact	LSE alone or in combination	AEoI alone or in combination
	Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)		X	X
	Reefs		X	X
	Salicornia and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand)		X	X
	Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)		X	X
	Common seal		X	X
	Otter		X	X
<b><u>Berwickshire and North Northumberland Coast SAC</u></b>	Large shallow inlets and bays	n/a – see paragraphs 2.1.2 to 2.1.3 of this RIES	X	X
	Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)		X	X
	Reefs		X	X
	Submerged or partially submerged sea caves		X	X
	Grey seal		X	X

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