



The Planning Inspectorate  
Yr Arolygiaeth Gynllunio

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

## **Proposed Viking Carbon Capture and Storage Pipeline**

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

Planning Inspectorate Reference: EN070008

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# 1 INTRODUCTION

## 1.1 Background

- 1.1.1 Chrysaor Production (UK) Limited (the Applicant) has applied for a development consent order (DCO) under section 37 of the Planning Act 2008 (PA2008) for the proposed Viking Carbon Capture and Storage (CCS) Pipeline ('the Proposed Development'). On behalf of the Secretary of State for Levelling Up, Housing and Communities, 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 The relevant SoS 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 ExA will assist the Secretary of State in performing their duties under the Habitats 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<sup>2</sup> that was provided within the DCO application and submitted during the Examination by the Applicant and Interested Parties (IPs), up to and including Deadline 4 (DL4) of the Examination (29 July 2024). 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:  
<http://infrastructure.planninginspectorate.gov.uk/document/EN070008-000342>
- 1.1.4 This RIES is issued to ensure that IPs including the Appropriate Nature Conservation Body (ANCB) - 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.
- 1.1.5 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

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

<sup>2</sup> For the purposes 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. "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.

sites and qualifying features as far as possible, in order to support a robust and thorough recommendation to the Secretary of State.

- 1.1.6 Following consultation, the responses will be considered by the ExA 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.

## 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:

- 6.5 Report to Inform the Habitats Regulations Assessment [APP-118], updated as:
  - [AS-026] in response to the Inspectorate's s51 advice [PD-003]
  - at DL2 [REP2-024];
  - at DL4 [REP4-017].
- The HRA also refers to a separate report provided as document 6.4.13.4 Environmental Statement - Volume IV - Appendix 13-4: Habitats Regulations Assessment (HRA) Noise Assessment [APP-111].

- 1.2.2 Unless otherwise stated, all references to the Applicant's HRA report refer to the version submitted at DL4 [REP4-017], as this is the most recent version available at the time of publication of this RIES.

- 1.2.3 The HRA Report concluded that adverse effects on the integrity of all European sites could be excluded.

- 1.2.4 In addition to the HRA Report, the RIES refers to representations submitted to the Examination by IPs, Issue Specific Hearing (ISH) documents, Statements of Common Ground (SoCG) and other Examination documents as relevant. All documents can be found in the Examination Library.

## 1.3 Change Requests

- 1.3.1 To date, the Applicant has made the following change requests:

- Change Request 1 – In summary, Change Request 1 (dated 19 March 2024, submitted as [AS-038 to AS-054], accepted 03 April 2024 in Annex C of [PD-009]) related to "design changes 1 and 2". Design change 1 was for the Reduction of the Order Limits for works related to the Immingham Facility and associated accesses, and design change 2 was for the removal of an option for the pipeline route in section 1 of the Proposed Development.
- Change Request 2 – In summary, Change Request 2 (dated 19 June 2024, submitted as [AS-063 to AS-084], accepted on 03 July 2024 in [PD-018]), related to "design change 3 to 8":

- Change 3: Relocate Block Valve Station 3 (Louth Road BVS) to the south of Louth Road near Alvingham.
- Change 4: Narrowing of the Order Limits near the Anglian Water Treatment Works near Louth, to the South of Louth Road BVS.
- Change 5: Removal of Theddlethorpe Facility Option 2 from the Application.
- Change 6: Removal and modification of the Order Limits around the Theddlethorpe Facility Option 1 and Option 2.
- Change 7: Removal of a construction access point in Northeast Lincolnshire that adjoins the A18 Barton Road south of Laceby.
- Change 8: Removal of a construction access point in Northeast Lincolnshire that adjoins the A46 west of Laceby.

1.3.2 Within each change request, the Applicant provided an environmental technical note ([AS-053] for Change Request 1, [AS-080] and [AS-081] for Change Request 2), which summarised the position of the Applicant in relation to whether the change requests had the potential to change the results of the HRA report. As the changes generally related to a refinement or reduction of the Order Limits, refinement of design and the areas removed as a result of the changes were not required to mitigate or compensate for any potential effects on the Integrity of European Sites, no relevant HRA matters arose from these change requests.

1.3.3 No Interested Parties raised concerns over the implications of the change requests on the findings of the HRA report.

## 1.4 RIES questions

1.4.1 This RIES contains questions predominantly targeted at the Applicant and NE, which are drafted in *blue, underlined italic text.*

1.4.2 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 text and Tables 2.2 (Screening), 3.1 (Adverse Effects on Integrity), and A1.1 – A1.5 (Summary), please refer to the ID number.

1.4.3 Comments on the RIES are timetabled for Deadline(DL) 5 (02 September 2024).

## 1.5 HRA Matters Considered During the Examination

1.5.1 The Examination to date has focussed on the following matters in relation to likely significant effects:

- The timings and coverage of ornithological surveys.
- Effects from changes to water quality.

- Effects from maintenance venting and the presence of venting equipment.
- Effects to individual qualifying species including natterjack toads and lamprey.
- Assessment of non-breeding birds, including temporary loss of functionally linked land during construction.
- Noise, vibration and visual disturbance to breeding and non-breeding birds at all project stages.
- Effects of changes to air quality and generation of dust.
- Effects as a result of cumulative and in combination impacts, including a holistic approach to the interaction between the onshore and offshore elements of the Proposed Development.
- Effects from lighting at all project stages.
- General methodology matters and points of clarification.

1.5.2 The Examination to date has focussed on the following matters in relation to adverse effects on integrity:

- Impacts from changes to water quality.
- Effects to individual qualifying species including grey seals.
- Assessment of non-breeding birds, including temporary loss of functionally linked land during construction.
- Noise, vibration and visual disturbance to breeding and non-breeding birds at all project stages.
- Effects as a result of cumulative and in combination impacts, including a holistic approach to the interaction between the onshore and offshore elements of the Proposed Development.
- Direct works within the designated sites.
- General methodology matters and points of clarification.

## 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 The Scope of the HRA is defined in Section 4.1 of the HRA report [APP-118]. For statutory designated nature conservation sites subject to the provisions of the Habitats Regulations, a search radius of 10 km has been chosen based on standard industry guidance on the assessment of air quality effects.

#### Sites within the UK National Site Network (NSN)

- 2.1.3 The Applicant's HRA Report [APP-118] identified five No. European site(s) within the UK National Site Network for inclusion within the assessment. These are listed in Section 4.2 of the HRA Report and are as detailed in Table 2.1 below.

**Table 2.1: European sites in the UK NSN identified in the Applicant's HRA Report [APP-118]**

Name of European site	Distance from Proposed Development (km)
Humber Estuary Special Protection Area (SPA)	Overlapping with the eastern extent of the Order Limits
Humber Estuary Ramsar	Overlapping with the eastern extent of the Order Limits
Humber Estuary Special Area of Conservation (SAC)	1.27km
Saltfleetby – Theddlethorpe Dunes and Gibraltar Point SAC	Overlapping with the eastern extent of the Order Limits
Greater Wash SPA with Marine Components	Overlapping with the eastern extent of the Order Limits

- 2.1.4 The locations of these sites relative to the Proposed Development are depicted on Figure 1 of the HRA Report [APP-118].
- 2.1.5 No additional UK European sites have been identified by IPs for inclusion within the assessment in the Examination to date.

- 2.1.6 The ANCB agreed [RR-073, NE1] that all relevant European sites and or European site features that could be affected by the project had been identified by the Applicant.

## 2.2 Potential impact pathways

- 2.2.1 Sections 6.2 (construction), 6.3 (operation) and 7 (decommissioning) of the HRA Report detailed the potential impacts from the Proposed Development, along with the potential geographical extent of effects. Section 4.2, 6.2 (construction), 6.3 (operation), 7 (decommissioning), Appendix F and Appendix G (Tables 1-5) of the HRA Report lists the sites and qualifying features and the impact pathways which could affect them.
- 2.2.2 Tables A1.1 – A1.5 in Annex 1 of this RIES details the potential impact pathways considered in the HRA Report [REP4-017] by European site and qualifying features.
- 2.2.3 The HRA Report assessed the potential impacts during construction, operation and maintenance 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-118].
- 2.2.4 During the Examination, IPs and the ExA sought clarity relating to potentially identified additional impact pathways (see Table 2.2 of this RIES for further details).

## 2.3 In-combination effects

- 2.3.1 Section 7.4 of the HRA Report [APP-118] detailed the Applicant's approach to assessing in-combination effects. The projects included in the in-combination assessment were detailed in Appendix A of the HRA Report [APP-118]. The locations of these projects are not depicted on a figure within the HRA, however the application included Figure 20-2 [APP-066] (as part of the Environmental Statement) which shows the in combination/cumulative schemes.
- 2.3.2 No additional plans or projects have been highlighted by IPs in the Examination to date.
- 2.3.3 During the Examination, IPs and the ExA sought clarity relating to the in-combination effects methodology (see Tables 2.2 and 3.1 of this RIES for further details).

## 2.4 The Applicant's assessment

- 2.4.1 The Applicant's conclusions in respect of screening and effects on integrity are presented in Sections 6.2 (construction), 6.3 (operation), 7 (decommissioning) and 7.2 (summary) of the HRA Report [APP-118], respectively. They are summarised in the Applicant's screening and integrity matrices in Appendices G and H [APP-118].



**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 Greater Wash SPA.
- 2.4.3 NE confirmed it agreed with the Applicant's conclusion of no LSEs in respect of this European site [RR-073, NE1]. However, the Applicant's conclusions in respect of the Greater Wash SPA were questioned by the ExA during Examination. See Section 2.5 of this RIES for further details.

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

- 2.4.4 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 of the qualifying features of:
- Humber Estuary SPA, Ramsar and SAC; and
  - Saltfleetby–Theddlethorpe Dunes and Gibraltar Point SAC.
- 2.4.5 The qualifying features and LSE pathways screened in by the Applicant are detailed in Sections 4.2, 6.2 (construction), 6.3 (operation), 7 (decommissioning), Appendix F and Appendix G of the HRA Report [APP-118].
- 2.4.6 The Applicant's decision to exclude certain LSE impact pathways were disputed by IPs and questioned by the ExA during Examination. See Section 2.5 of this RIES for further details.
- 2.4.7 In response to the ExA's first written question to summarise its overall position [PD-010, 1.12.13], NE confirmed the following:
- With the exception of some minor corrections and additions, in particular points NE6 (Lapwing and Pink Footed Goose), NE7 (Black Tailed Godwit) and NE8 (Lighting), the information in the screening matrices in Appendix G are considered to be complete and acceptable.
  - NE agreed with the Applicants' overall conclusions regarding potential for likely significant effects in Table 7-1.

## 2.5 Examination matters

- 2.5.1 Matters raised in the Examination to date, or for which the ExA seeks clarity, in relation to LSEs screened out [or not considered] by the Applicant are summarised in Table 2.2 below.
- 2.5.2 The tables below have been drafted, where possible, to reflect the issue identity and title as given in responses by NE [RR-073] (as requested by the ExA in first written question 1.12.1 [PD-010]). Where matters have been raised by other parties or the ExA's questions during the examination, these have been included under the same subheadings where possible.

2.5.3 A number of points raised in the tables below are also noted to relate to similar matters as follows (referring to both LSE and AEOI):

- Matters related to the sequence/ timings of works (temporary loss of functionally linked land and noise and visual disturbance) are raised in NE3, NE6, NE9, NE10, NE12, NE14, EXQ 1.12.6, 1.12.9 and 1.12.10)
- Matters relating to cumulative and in-combination assessments are listed raised in NE3, NE6 and NE12 (bird species) and NE17, NE24 and NE25 (general).
- Matters relating to the spatial coverage and timings of ornithological surveys are raised in NE4, NE5 and EXQ 1.12.2.
- Matters relating to noise and visual disturbance to non-breeding birds within functionally linked land during construction and decommissioning are raised in NE7, NE16, NE18, and EXQ 1.12.24.
- Matters relating to noise and visual disturbance to breeding birds within functionally linked land during construction are raised in NE14 and NE15.
- Matters relating to effects from changes to water quality are raised in EXQ 1.12.3 and 1.12.5.
- Matters relating to effects from maintenance venting and the presence of venting equipment are raised in EXQ 1.12.4 and 1.12.11.
- Matters related to effects to natterjack toads are raised in EXQ 1.12.7 and NE30.

2.5.4 The ExA notes that the affected host local authorities who have registered as Interested Parties (East Lindsey District Council, Lincolnshire County Council, North Lincolnshire Council, Northeast Lincolnshire Council, and West Lindsey District Council) have provided limited commentary on HRA matters to date, recorded as follows:

- The SoCG with North Lincolnshire Council [REP1-020] noted that a detailed review of the HRA was pending. No further submissions have been provided on this matter.
- The SoCG with North Lincolnshire Council [REP1-020] noted the requirement for the Applicant to provide clarity on in-combination and cumulative effects. This matter was also noted to be subject to ongoing discussions in the SoCG with Lincolnshire County Council [REP1-021] and the Local Impact Report from East Lindsey District Council [REP1-053]. The Lincolnshire County Council submission at DL3 [REP3-035] indicated agreement with the Applicant's position on this matter, however no further submission have been received from East Lindsey District Council or North Lincolnshire Council.

- East Lindsey District Council [REP1-053] also noted that matters relating to lamprey mitigation were considered to be outstanding. No further submissions have been provided on this matter.
- 2.5.5 To date, these are the only representations to be received to the examination by the local authorities in relation to HRA matters.
- 2.5.6 ***RIESQ1 - To the host local authorities: The ExA requests that the five host local authorities provide a summary of any HRA matters that they consider to be outstanding.***
- 2.5.7 In relation to general matters between the Applicant and NE, the ExA notes that the Applicant's written summary of oral submissions at Issue Specific Hearing (ISH) 3 [REP4-052] refers to "Natural England have confirmed to the Applicant that they have only five minor concerns remaining which largely concern clarification/improvement of wording in the HRA". However, the DL4 submission by NE [REP4-093] only refers to two amber (NE16, NE30) and one yellow (NE12). Previous yellow issues are noted to be NE4 and NE7, however it is not clear whether these are the five issues the Applicant understands to be outstanding.
- 2.5.8 ***RIESQ2 - To the Applicant and NE - The ExA requests that the Applicant and NE provide information to confirm what are the five issues the Applicant consider are outstanding (as detailed in paragraph 1.2 of [REP4-052]).***
- 2.5.9 In relation to the submission at DL4 [REP4-093], NE indicate that it was provided with a copy of the HRA report submitted as [REP4-017] in advance of submission by the Applicant, and therefore its DL4 comments relate to this version.

**Table 2.2: 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 / matter	Details of issue	ExA observation/ question
<b>Humber Estuary SPA and Ramsar</b>			
<b>2.2.1 / NE2</b>	Assessment of non-breeding bird assemblage - Use of the most recent waterbird assemblage data	NE [RR-073] advised that the most recent list of component species of the Humber Estuary SPA waterbird assemblage should be referred to in determining the relevant features, as this was omitted from APP-118.  The Applicant amended the HRA at DL2 [REP2-024] at paragraph 4.2.8 – 4.2.10, and throughout where discussing the assemblage, to include details on the full assemblage and the potential LSE to these individual species where relevant.	N/A
<b>2.2.2 / NE3</b>	Assessment of non-breeding bird assemblage - Use of a “per field” methodology	NE [RR-073] noted that the significance of qualifying bird populations has been assessed on a “per field basis”, and therefore there is potential for cumulative impacts to birds using functionally linked land. NE advised that the HRA should therefore consider the significance of bird numbers across the project area and the potential for cumulative impacts.  NE additionally recommended [REP1-079] that further detail should be provided on the sequence/ timing of works and the availability of roost and feeding sites within the study area to provide context on the proportion of suitable habitat that would be affected at any one time.  The Applicant [REP1-044] confirmed that the HRA report has been updated (provided at [REP2-024] at paragraphs 7.3.8, 7.3.21 and 7.4.5) to discuss the likelihood of cumulative impacts across the development site. The key areas of value for SPA birds are identified to be in pipeline sections 1 and 5	<b><u><a href="#">RIESQ3 – To the Applicant – Can the Applicant confirm how the mitigation measure of sequential rather than simultaneous pipeline construction is secured</a></u></b>

		<p>in particular, which are parts of the Proposed Development separated by a large distance. The pipeline route sections will be installed sequentially rather than simultaneously. Therefore, it was considered that there is limited potential for cumulative impacts from multiple parts of the Proposed Development being worked simultaneously.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at paragraph 6.3.14 and 7.3.11 - 7.3.16 to confirm that routine maintenance would be undertaken outside of the nesting bird season and to provide further information in the HRA on the duration of pipeline construction.</p> <p>NE confirmed [REP4-093] that potential cumulative impacts have been considered appropriately, no LSE were noted and that no further information was required.</p>	<p><a href="#"><u>within the dDCO?</u></a></p>
<p><b>2.2.3 / NE6</b></p>	<p>Assessment of non-breeding bird assemblage - Temporary loss of functionally linked land for non-breeding birds during construction</p>	<p>NE [RR-073] indicated that Figures 13-31 of Appendix 6-7 of the ES [APP-083] indicate other qualifying species, including lapwing and pink-footed goose, have been recorded in numbers greater than 1% of qualifying populations in proximity to the red line boundary. Therefore, likely significant effects for these could not be screened out and should be included in the list of species in Table 7-1 for further assessment.</p> <p>NE [REP1-079] also advised that the appropriate assessment should consider the potential cumulative impact on these species across the project area.</p> <p>The Applicant confirmed [REP1-044] that Paragraph 6.2.57 of the HRA [APP-118] identifies that lapwing and pink-footed goose have the potential to be affected by noise and visual disturbance and were taken forward to Appropriate Assessment. However for clarity, lapwing and pink-footed goose were added into Table 7-1 in the updated HRA [REP2-024].</p> <p>The Applicant provided a further update to the HRA [REP4-017] at paragraph 7.3.11 - 7.3.16 to provide further information on the duration of pipeline construction.</p>	<p>N/A</p>

		NE confirmed [REP4-093] that potential cumulative impacts have been considered appropriately, and that no further information was required.	
<b>2.2.4 / NE4</b>	Bird surveys - Survey frequency during non-breeding season	<p>NE [RR-073] raised a query in relation to non-breeding bird surveys being undertaken once per month, as it advised a frequency of twice monthly, with weekly visits during the autumn and spring passage periods to ensure peak counts. NE confirmed that based on the nature and duration of construction works, the survey frequency was sufficient in this case, however recommended a precautionary approach to the assessment and data limitations.</p> <p>In their response [REP1-044], the Applicant confirmed that the precautionary approach has already been taken within the HRA with regard to use of peak counts, however additional information was provided at paragraph 6.2.50 of the DL2 submission [REP2-024].</p> <p>In response to the ExA's first written question [PD-010, 1.12.13], NE again confirmed that it was satisfied with the amount of survey data used to inform the HRA and appropriate assessment.</p> <p>This matter is noted to currently be yellow and has been since [RR-073], which NE consider is unlikely to make a material difference to its advice or the outcome of the decision-making process.</p>	N/A
<b>2.2.5 / NE5 / EXQ 1.12.2</b>	Bird surveys - Surveys of the northern compound	<p>NE [RR-073], and the ExA [PD-010, 1.12.2] indicated that the area proposed to be utilised as the northern construction compound had not been subject to a detailed bird survey, despite being located within 10km of the Humber Estuary sites, and therefore had the potential to have a functional linkage to the SPA/ Ramsar.</p> <p>The Applicant [REP1-044 and REP1-045] has confirmed that the Northern Compound will be located within an arable field immediately south of the A160 on a site previously used as a construction compound for other projects. The land was appraised for its suitability to support breeding and</p>	N/A

		<p>wintering birds and due to the proximity to a major road, was considered unlikely to be functionally linked.</p> <p>NE confirmed agreement with this in its D1 response [REP1-079], pending provision of an updated HRA report to include this information, which was received at DL2 [REP2-024] with the information included in paragraph 6.2.53.</p>	
<p><b>2.2.6 / NE7 / EXQ 1.12.24</b></p>	<p>Noise and visual disturbance to non-breeding birds within functionally linked land during construction and decommissioning – Black tailed godwit (Rosper Road pools)</p>	<p>NE [RR-073] considered that significant numbers of black-tailed godwit are present at Rosper Road Pools and advised that likely significant effects could not be screened out and should be included in the list of species in Table 7-1 for further assessment.</p> <p>The ExA also noted [PD-010, 1.12.24] that Table 2 of Appendix G and subsequently Table 7 of Appendix H, did not include an assessment of black-tailed godwit.</p> <p>The Applicant noted [REP1-045] that noise and visual disturbance of black-tailed godwit was taken forward to appropriate assessment as impacts on Rosper Road Pools had already been taken forward for appropriate assessment. The matrices were however updated in the DL2 submission [REP2-024] to include black-tailed godwit.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at paragraphs 7.3.29 - 7.3.35 to provide further information on the screening thresholds used and proposed mitigation.</p> <p>This matter is noted to currently be yellow (from amber at [RR-073]), which NE consider is unlikely to make a material difference to its advice or the outcome of the decision-making process.</p>	<p>N/A</p>
<p><b>2.2.7 / NE9</b></p>	<p>Noise and visual disturbance to breeding birds within</p>	<p>NE [RR-073] noted that further assessment was required to breeding birds at the Viking fields during dune valve maintenance works, as whilst likely significant effects from noise and visual disturbance to breeding birds during</p>	<p>N/A</p>

	<p>functionally linked land during operation – Dune valve / Viking fields.</p>	<p>operation had been screened out in the HRA, the ES states that maintenance to the Dune Isolation Valve is required.</p> <p>In their response [REP1-044], the Applicant signposted to where the HRA had considered the dune isolation valve works and gave some additional details of the anticipated works required including frequency and duration, and context of existing disturbance from activities in the wider area.</p> <p>NE have stated [REP1-079] that there is still a possibility that works will be undertaken in proximity to nests and have the potential to cause disturbance and nest abandonment and advised that further assessment should be made on the suitability of habitat near to the dune valve.</p> <p>Additional information was added on this matter by the Applicant at the DL2 submission [REP2-024] at 6.3.15.</p> <p>The Applicant [REP2-029] confirmed that they have committed to undertaking routine maintenance work outside of the bird breeding season, and the commitment is included in ES Appendix 3-6 Operational Phase Mitigation [REP2-014] as commitment OP21.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at paragraph 6.3.14 to confirm routine maintenance would be undertaken outside of the nesting bird season.</p> <p>NE confirmed [REP4-093] agreement that it is unlikely the works would create a disturbance greater than the baseline, and no further information was required.</p>	
<p><b>2.2.8 / NE10</b></p>	<p>Noise and visual disturbance to non-breeding birds within functionally linked land</p>	<p>NE [RR-073, reference NE10] noted that further assessment was required to non-breeding birds at the Viking fields during dune valve maintenance works. The Applicant gave the same response in [REP1-044] as 2.2.7 above.</p>	<p>N/A</p>



	during operation – Dune valve / Vikings fields	NE have stated [REP1-079] its agreement to the Applicant’s explanation in relation to non-breeding birds only, and additional information was added on this matter by the Applicant at the DL2 submission [REP2-024] at 6.3.14.  The Applicant provided a further update to the HRA [REP4-017] at paragraph 6.3.14 to confirm routine maintenance would be undertaken outside of the nesting bird season.	
<b>2.2.9 / NE8</b>	Lighting disturbance to breeding and non-breeding birds within functionally linked land during all phases	NE [RR-073] advised that further details should be provided on LSE, and where required AEOI, from the proposed lighting across the project area.  In their response [REP1-044], the Applicant indicated that detailed information on lighting requirements for the Proposed Development were included within ES Chapter 3: Description of the Proposed Development [APP-045]. The Applicant considered that impacts from this lighting design were discussed in the HRA report, however, further detail has been added to throughout the HRA report submitted at DL2 to provide further clarity on potential impacts during construction, operation, and decommissioning, with particular reference to existing conditions associated with industrial and vehicle lighting.  NE confirmed [REP4-093] that details of the proposed lighting have been provided and considered in the screening of impacts in the updated HRA, confirmed agreement with the assessment conclusions, and that no further information was required.	N/A
<b>Humber Estuary Ramsar</b>			
<b>2.2.10 / NE30 / EXQ 1.12.7</b>	Natterjack toads - Works at the Dune Valve Station	The ExA [PD-010, 1.12.7] sought clarity from NE as to whether they considered pathways other than encroachment of machinery into the habitat of natterjack toads were required to be taken forwards to appropriate assessment.  NE [REP1-079] considered that natterjack toads are not known to be present in the location of the Dune Valve Station or access route. NE considered the	This matter is currently considered to be outstanding and is an “amber”

		<p>key sensitivities of the species to be loss and damage to suitable habitat. As a result, other possible disturbance effects of the works at the Dune Valve Station are considered minor, and unlikely to cause a significant effect.</p> <p>NE also confirmed in its Relevant Representation [RR-073, Ref NE23] that they were content that this species has been considered and appropriately followed correct guidelines and appropriate mitigation measures put forward.</p> <p>The Applicant also confirmed that if natterjack toads were encountered during construction, a mitigation licence would be applied for [REP2-030].</p> <p>The Applicant has updated the HRA [REP4-017] at paragraph 6.2.98 to provide additional information on natterjack toads. However, in its DL4 submission [REP4-093], NE stated that it has been made aware that Natterjack Toad have been identified within 'Viking Fields', in proximity to the Dune Valve Station, and noted that this requires reconsideration within the HRA.</p>	<p>category concern to NE.</p> <p><b><u><a href="#">RIESQ4 - To NE and the Applicant - Please provide an updated assessment and a conclusion on whether there is the potential for LSE when mitigation is not taken into account. Where an LSE cannot be excluded please provide the information needed to support an appropriate assessment including an assessment</a></u></b></p>
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			<u><i>of effects, any mitigation that is required and how this is to be secured</i></u>
<b>2.2.11 / EXQ 1.12.21</b>	Lamprey - Dust and particulates	<p>The ExA [PD-010, 1.12.21] noted a discrepancy between the information provided in Appendix G Table 2, and the accompanying footnotes, and therefore it was not clear whether dust and particulate impacts to lamprey was intended to be carried forwards to stage 2.</p> <p>The Applicant confirmed [REP1-045] that this pathway was intended to be included in the appropriate assessment and provided updated matrices in the DL2 submission [REP2-024].</p> <p>NE confirmed [RR-073, Ref NE20] that the relevant watercourses appear to fall outside the Humber Estuary lamprey migration routes. Therefore no further assessment is required to assess potential impacts to lamprey associated with the Humber Estuary SAC/ Ramsar.</p> <p>The East Lindsey District Council Local Impact Report [REP1-053] indicated that the HRA provides the required information, however there are comments which may require addressing with regard to the mitigation measures recommended for lamprey. No further comments on this matter have been received to date.</p>	<u><i>RIESQ5 - East Lindsey District Council is invited to comment on any outstanding concerns in relation to the assessment of Lamprey (including matters raised in EXQ 1.12.22 and 1.12.26).</i></u>
<b>Greater Wash SPA with Marine Components</b>			
<b>2.2.12 / EXQ 1.12.11</b>	Venting and presence of venting stack during operation	The ExA [PD-010, 1.12.11] requested information from the Applicant in relation to the requirement for operational venting of the system, and the permanent 25m high or temporary 50m high emissions stack proposed, in	N/A

	<p>- red-throated diver</p>	<p>particular at Theddlethorpe, as the red-throated diver qualifying feature of the Greater Wash SPA is known to demonstrate high levels of avoidance and is therefore subject to displacement.</p> <p>The Applicant considered [REP1-045] that displacement of red-throated diver is only considered a concern from structures or ships in the marine environment in which they forage and roost outside of the breeding season. There is no evidence of red-throated diver being displaced due to structures on land or being displaced while on the wing over land.</p> <p>Additional information on venting was also provided in the written summaries of oral submissions [REP1-048] and [REP1-045] in response to EXQ 1.2.1 and 1.4.5. The ExA also issued [PD-015] to request the Applicant provide further details on the venting process, to include ecological receptors. A technical note was provided as [REP3-029], which concluded that any potential adverse effects ecological receptors from venting would be avoided.</p> <p>No IP's raised concerns over the Applicant's approach to venting in relation to HRA matters, and NE provided additional information [REP1-079] to include commentary on the likely locations of red throated diver (offshore) and agreed with the Applicant's position.</p>	
<p><b>Matters applicable to all sites / General HRA reporting matters</b></p>			
<p><b>2.2.13 / EXQ 1.12.3</b></p>	<p>Assessment of water quality – Bentonite breakout</p>	<p>The ExA [PD-010, 1.12.3] queried the approach for the screening of potential impacts to water quality from bentonite breakout.</p> <p>The Applicant confirmed [REP1-045] that the assessment undertaken did include consideration of bentonite breakout, and that the draft Construction Environmental management Plan (CEMP) was also updated [REP1-013] to include requirement E34 in relation to the control of bentonite breakout.</p> <p>NE confirmed in its relevant representation [RR-073, NE22] that they were in agreement with the assessment of water quality for the Saltfleetby–Theddlethorpe Dunes and Gibraltar Point SAC, and in its DL1 response</p>	<p>N/A</p>

		[REP1-079] that they were in agreement with the Applicant's overall position on water quality (in response to EXQ 1.12.5).	
<b>2.2.14 / EXQ 1.12.5</b>	Assessment of water quality - Dilution of potential pollution effects	<p>The ExA [PD-010, 1.12.5] queried the approach of relying on dilution of pollution in watercourses by the time of reaching the European Sites to conclude no LSE, and whether the assessment had omitted impacts to functionally linked land upstream, closer to pollution sources.</p> <p>The Applicant confirmed [REP1-045] that their conclusions of no LSE on functionally linked land was not solely based on dilution of pollution. NE confirmed in its Relevant Representation [RR-073, NE22] that they were in agreement with the assessment of water quality for the Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC, and in its DL1 response [REP1-079] that they were in agreement with the Applicant's overall position on water quality (in response to EXQ 1.12.5).</p>	N/A
<b>2.2.15 / EXQ 1.12.4</b>	Assessment of venting	<p>The ExA noted [PD-010, 1.12.4] that venting, and the resulting noise and visual disturbance did not appear as a potential disturbance pathway. The Applicant confirmed [REP1-045] that the venting of CO<sub>2</sub> will be undertaken at a rate whereby the noise at the nearest noise sensitive receptor will be no greater than 10 dB above daytime background levels.</p> <p>The Applicant also provided additional information to the Examination in the updated HRA [REP2-024] at paragraphs 6.3.17 – 6.3.18.</p> <p>Additional information on venting was also provided in [REP1-045], [REP1-048] and [REP3-029] as detailed above.</p>	N/A
<b>2.2.16 / EXQ 1.12.14</b>	Applicant's HRA methodology - Assessment spatial coverage	<p>The ExA noted [PD-010, 1.12.14] that the assessment of the permanent loss of functionally linked land at the Theddlethorpe facility discussed recorded bird species within the red line boundary only and sought clarity that functionally linked land in the wider area had been considered.</p> <p>The Applicant [REP1-045] clarified that habitats adjacent to and contiguous with the Order Limits were considered within the assessment and gave a</p>	N/A

		summary assessment of the relevant baseline data collected in this geographic area.	
<p><b>2.2.17 / EXQ 1.12.15</b></p>	<p>Applicant's HRA methodology - Holistic approach to onshore and offshore consents</p>	<p>The ExA noted [PD-010, 1.12.15] that NE [RR-073] recommended that a "holistic approach" was taken to the assessment of the onshore and offshore elements, as the scheme as a whole is dependent on both being granted.</p> <p>The Applicant [REP1-045] considered that the onshore scheme does not include any works in the intertidal zone or wider marine environment, and as such there is no potential for marine-based receptors to be affected by the onshore works cumulatively with the offshore works which are being consented separately. It is the view of the project ornithologist that there is no potential that bird species/ populations impacted by the onshore scheme could also be impacted by works 118km offshore. Therefore it is the Applicant's view that there are no implications for the HRA carried out to date and that it is not necessary for the competent authority to consider such matters when undertaking the appropriate assessment.</p> <p>The Applicant has provided further information on this matter in relation to the wider examination in their responses to EXQ 1.1.10 and 1.9.6, and written summary of Oral Submissions [REP1-048].</p> <p>NE [REP2-041] provided an update to its position including an alternative approach to the Secretary of State to completing a holistic HRA when all the relevant marine information is available at a later date. This would require a planning condition restricting the commencement of the terrestrial elements, until such time that the holistic HRA had been completed and the marine elements have been consented on the basis that AEOI could be excluded for the whole project or suitably compensated for. NE advised on this basis that the HRA for the Viking CCS onshore elements should consider the impacts of the terrestrial element alone, then consider the impacts in-combination/ cumulatively with the marine element and other plans and projects based on best available evidence at that time.</p> <p>The Applicant reiterated the position of DL1 [REP3-030] and added that they would not commence construction without confirmation of the consent for</p>	<p><b><u>RIESQ6 - To NE and the Applicant - Please provide any further comments in relation to this matter.</u></b></p>

		<p>the offshore elements [REP3-007, with reference to the bridging document APP-128].</p> <p>This matter was addressed in ISH3, with responses submitted as a position statement on the benefits of the Proposed Development [REP4-032] and summary of oral submissions [REP4-052].</p> <p>The Applicant reiterated the position that a requirement to link the onshore and offshore works is not necessary due to the Proposed Development not being able to function without both consents, and referred to previous Development Consent Orders which addressed this matter and the award of carbon storage licences as indicators of progress of the offshore scheme.</p> <p>The Applicant also confirmed at ISH 3 that Work No 48A (electrical connection) would not be installed through the intertidal area, and therefore there would be no works directly within the marine area of the European sites. The Applicant also noted that the electrical cable would be installed via a mole plough, which is already considered in the report to inform the HRA.</p> <p>It is noted that NE have not provided any further comments on this matter since [REP2-041].</p>	
<p><b>2.2.18 / EXQ 1.12.20</b></p>	<p>Noise and vibration - Use of varying terminology</p>	<p>The ExA requested [PD-010, 1.12.20] that the Applicant provide further information on the pathways related to noise, vibration and visual disturbance screened into the assessment, as the terms were used inconsistently and as such it was not clear whether all of these were considered as a pathway.</p> <p>The Applicant confirmed [REP1-045] that 'noise and vibration' and 'visual disturbance' were given separate columns in Table 3 (Humber Estuary SAC) because some interest features are susceptible to underwater noise/vibration but not to visual impacts. In tables 1 and 2 (Humber Estuary SPA and Ramsar) 'noise and visual' disturbance is given as a single column because for birds these are similar pathways. Vibration was not explicitly mentioned in the heading of Tables 1 and 2 because this was considered</p>	<p>N/A</p>

		<p>more of an issue for species such as fish rather than for birds where vibration and noise are intertwined.</p> <p>The Applicant provided updated matrices and explanation throughout the DL2 submission [REP2-024] to provide further clarity.</p>	
<p><b>2.2.19 / EXQ 1.12.29</b></p>	<p>Differing Assessment of effects on qualifying features where sites overlap</p>	<p>The ExA noted [PD-010, 1.12.29] that whilst the Humber Estuary SPA, Ramsar and Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC are overlapping designations, there are inconsistencies in relation to potential LSE and therefore AEOI between these sites. The Applicant and IPs were invited to provide additional information on the following where LSE was noted to one site but not the other:</p> <ul style="list-style-type: none"> <li>• Noise and visual disturbance to golden plover and redshank in the Humber Estuary SPA/ Ramsar.</li> <li>• Permanent loss of functionally linked land (FLL) to redshank in the Humber Estuary SPA.</li> <li>• Habitat loss in the Saltfleetby SAC and Humber Estuary Ramsar</li> <li>• Water quality in the Saltfleetby SAC and Humber Estuary Ramsar/ SPA.</li> </ul> <p>The Applicant responded [REP1-045] that whilst these were overlapping designations, the boundaries differ. There will be no direct habitat loss within any of the European designated sites at Theddlethorpe, as the onshore pipeline will connect to the existing (below ground) Lincolnshire Offshore Gas Gathering System (LOGGS) pipeline west of the sand dunes at Theddlethorpe. Localised works (which may result in noise and visual disturbance or water quality issues) will be required to replace the Dune Isolation Valve which is adjacent to the designated site boundaries. As the Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC is designated for its dune habitat, the potential for habitat loss as a result of encroachment of machinery was taken forward to Appropriate Assessment. This was based upon a precautionary approach to allow mitigation to be applied, namely adjacent habitats to be fenced off during works.</p>	<p>N/A</p>



		No other Interested Parties have raised concerns over this matter.	
<b>2.2.20</b>	General methodological queries	The ExA requested some minor clarifications on the HRA report and accompanying matrices ([PD-010], 1.12.16, 1.12.17, 1.12.18, 1.12.19, 1.12.22, 1.12.23, 1.12.25, 1,12.26, 1.12.28, 1.12.30, 1.12.33). These are considered to have been provided in the DL2 submission [REP2-024].	N/A

## 2.6 Summary of Examination outcomes in relation to screening

- 2.6.1 The ExA's understanding of the Applicant's and NE's current positions in relation to LSEs is set out in Annex 1 Tables A1.1 – A1.5 of this RIES.

## 3 ADVERSE EFFECTS ON INTEGRITY

### 3.1 Conservation Objectives

- 3.1.1 The conservation objectives for all of the European sites for which an LSE was identified by the Applicant at the point of the DCO application were included within the HRA Report [APP-118] within the main text and in Appendix C.
- 3.1.2 The conservation objectives for the Humber Estuary SPA do not refer to condition (favourable or unfavourable), but state that the objectives are to *“ensure that the integrity of the site is maintained or restored as appropriate and ensure that the site contributes to achieving the aims of the Wild Birds Directive”*.
- 3.1.3 The conservation objectives for the Humber Estuary SAC and Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC refer to ensuring that the integrity of the site is maintained or restored as appropriate, and ensuring that the site contributes to achieving the ‘favourable’ conservation status.

### 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. The outcomes of the Applicant’s assessment of effects on integrity are summarised in Sections 7.3, 7.4 (in-combination) and Appendix H of the HRA Report [APP-118].

#### **Mitigation measures**

- 3.2.2 The Applicant’s HRA Report identified mitigation measures in Section 6.2 (embedded mitigation only) and 7.3 [APP-118]. These were taken into account in the Applicant’s assessment of effects on integrity.

#### **Sites for which the Applicant concluded no AEOI**

- 3.2.3 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.
- 3.2.4 In response to the ExA’s first written question to summarise its overall position [PD-010, 1.12.13], NE confirmed that whilst it was in broad agreed with the Applicant’s conclusion of no AEOI in respect of the above European sites [RR-073], the matrices in Appendix H cannot be considered complete until ‘amber’ issues were resolved, as detailed in Table 3.1 below.
- 3.2.5 Clarifications were sought in relation to the Applicant’s conclusions by the ExA during the course of the Examination. See Section 3.3 of this RIES for further details.

### 3.3 Examination matters

- 3.3.1 Matters raised in the Examination to date, or for which the ExA seeks clarity, in relation to AEOI are summarised in Table 3.1 below.
- 3.3.2 The table below has been drafted, where possible, to reflect the issue identity and title as given in responses by NE [RR-073] (as requested by the ExA in first written question 1.12.1 [PD-010]). Where matters have been raised by other parties or the ExA's questions during the examination, these have been included under the same subheadings where possible.

**Table 3.1: 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	Details of issue	ExA observation/question
<b>Humber Estuary SPA and Ramsar</b>			
<b>3.1.1 / NE12</b>	Assessment of non-breeding bird assemblage - Temporary loss of functionally linked land for non-breeding birds during construction	<p>NE [RR-073] did not agree that the assessment (Section 7.3.8) of the HRA in relation to the temporary loss of functionally linked land due to the location of Proposed works and number of birds recorded within/ adjacent to the construction area, in particular curlew.</p> <p>NE highlighted that loss of habitat may result in an increase in local bird densities and have consequences for individual bird fitness (increased energy expenditure for flight, competition for food, and lack of knowledge of foraging resources in other areas). Consequently, this may lead to effects on breeding productivity and population size. Curlews are particularly vulnerable to these effects as individuals are faithful to specific sites and forage within a short distance of these.</p> <p>NE considered that further assessment was required on the sequence / timing of works and the availability of roost and feeding sites to provide information on the proportion of suitable habitat that would be affected at any one time and determine whether additional mitigation measures may be required.</p> <p>The Applicant [REP1-044] responded to confirm that they would undertake a review of the baseline data in order to provide further clarification, particularly regarding potential effects upon curlew.</p> <p>The Applicant provided an updated HRA at DL2 [REP2-024] to include further information on FLL (paragraph 7.3.9).</p>	<p><a href="#"><u><b>RIESQ7 - To NE and the Applicant - The ExA notes that paragraph 7.3.11 refers to pipe laying works taking place between April and July, which appears to be within the nesting bird season and contrary to commitments in the CEMP [REP4-027] and Operational Phase Mitigation [REP2-014] in relation to avoiding</b></u></a></p>

		<p>The Applicant provided a further update to the HRA [REP4-017] at paragraphs 7.3.6 – 7.3.17 to provide further assessment of the potential for temporary loss of FLL, with specific reference to curlew, pink-footed goose, golden plover, lapwing.</p> <p>In its DL4 submission, [REP4-093] NE advised that whilst it would have been beneficial to have further justification around alternative land availability for curlew and potential impacts from displacement from known foraging areas, the Applicant has provided further information on timing and duration of works and that it agreed with assessment conclusion.</p> <p>This matter is noted to currently be yellow (from amber at [RR-073]), which NE consider is unlikely to make a material difference to its advice or the outcome of the decision-making process.</p>	<p><u><i>nesting bird season for some elements of the Proposed Development. Can the Applicant and NE provide further information on this matter, in particular in relation to whether any restrictions on timings of works are required for the pipe laying where these are in proximity to functionally linked land.</i></u></p>
<p><b>3.1.2 / EXQ 1.12.9 / 1.12.10</b></p>	<p>Noise and disturbance mitigation</p>	<p>The ExA queried [PD-010, 1.12.9] with NE whether the use of close-boarded fencing would sufficiently reduce noise and disturbance to a level whereby an AEoI can be ruled out.</p> <p>The ExA also sought to clarify with NE [PD-010, 1.12.10] whether the mitigations proposed by the Applicant are sufficient to rule out an AEoI to the pink footed goose qualifying feature.</p>	<p>N/A as per NE3 and NE12</p>

		<p>NE considered [REP1-079] that as per NE3 and NE12 above, further assessment is required.</p> <p>The Applicant added further details on the location of close boarded fencing to the DL2 submission [REP2-024, Appendix I] and specific references to pink footed geese (throughout the HRA) to the DL2 submission [REP2-024].</p> <p>The Applicant provided a further update to the HRA [REP4-017] at paragraph 6.3.14 to confirm that routine maintenance would be undertaken outside of the nesting bird season.</p> <p>Additional information was also provided in relation to fencing at ISH3 [REP4-093]. The Applicant's assumption (at the hearing) was that the height would be similar to the height of fencing used to reduce noise for residential properties. The fencing will break line of sight between the noise source and receptor (in this case foraging birds) and so it would likely be a similar height to a Heras fence. The Applicant confirmed post hearing that the height of the proposed fencing is 2.4m which is the same as proposed for reducing noise effects on residential properties.</p>	
<p><b>3.1.3 / NE14 / EXQ 1.12.6</b></p>	<p>Noise and visual disturbance to breeding birds within functionally linked land during construction - Restriction on works timings</p>	<p>As per matter NE9 and NE10 in Table 2.2 above, NE [RR-073, reference NE14] requested further clarification on the construction works at the dune isolation valve and confirmation that works would avoid the breeding bird season. The ExA also noted [PD-010, 1.12.6] that restrictions were required on the timings of works around the dune valve and questioned where this mitigation as secured.</p> <p>The Applicant [REP1-044] signposted to this information, and further provided confirmation that the works timings would be undertaken outside of the bird breeding season (1st March - 31st August inclusive) in the DL2 submission [REP2-024, 7.3.14].</p>	<p>N/A</p> <p>Specifically in relation to avocet, this was also agreed in the relevant representation [RR-073, NE11]</p>

		<p>The Applicant also confirmed that the measures were added into the Draft CEMP [REP1-013] as commitment B38, and the Operational Phase Mitigation [REP2-014] as OP21.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at paragraphs 7.3.21 and 7.3.23 to provide further information on mitigation measures. The Applicant also provided an outline precautionary working method statement [REP4-093] which provides details of the proposed mitigation checks to breeding birds.</p>	
<p><b>3.1.4 / NE15</b></p>	<p>Noise and visual disturbance to breeding birds within functionally linked land during construction – Viking fields</p>	<p>NE [RR-073] indicated that no assessment was provided regarding potential noise and visual disturbance impacts to breeding birds using Viking Fields from works associated with the Theddlethorpe Facility and Southern Compound.</p> <p>The Applicant [REP1-044] confirmed that existing woodland to the east of the proposed Southern Compound location provides screening between the works and Viking Fields, therefore effects from noise, lighting and visual disturbance at this location will not be significant.</p> <p>The Applicant provided further details of this screening of the compound in the DL2 submission [REP2-024] at 7.3.15 and 7.3.16.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at Paragraphs 7.3.21 and 7.3.23 to provide further information on mitigation measures and paragraphs 7.3.29 - 7.3.35 to provide further information on the screening thresholds used and proposed mitigation in relation to the Theddlethorpe facility construction works.</p> <p>The Applicant also provided an outline precautionary working method statement [REP4-011] which provide details of the proposed mitigation checks to breeding birds.</p> <p>In its DL4 submission [REP4-093] NE confirmed that the Applicant had provided further information regarding existing screening of the</p>	<p>N/A</p>



		<p>compounds, confirmed agreement with the assessment conclusions and that no further information required.</p>	
<p><b>3.1.5 / NE16</b></p>	<p>Noise and visual disturbance to non-breeding birds within functionally linked land during construction and decommissioning – Noise mitigation</p>	<p>NE [RR-073] noted that Section 7.3.16 of the HRA [APP-118] states that, with mitigation, average construction noise would be below the baseline, and Section 7.3.19 states that noise fencing will be included for works within 500m of the relevant survey fields. As such, it advised that further detail should be provided regarding the locations at which noise mitigation is required, taking into consideration the advice on functionally linked land (NE12).</p> <p>The Applicant confirmed [REP1-044] that the final locations of fencing etc will be confirmed once the exact route of the pipeline (within the DCO site boundary) is confirmed and following a pre-construction check by an ornithologist, and locations may need to move in relation to works.</p> <p>The Applicant provided information in the DL2 submission [REP2-024, Appendix I] to indicate the currently anticipated mitigation locations.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at Paragraphs 7.3.29 - 7.3.35 to provide further information on the screening thresholds used and proposed mitigation, and at paragraph 6.3.14 to confirm that routine maintenance would be undertaken outside of the nesting bird season. Additional information was also provided in relation to fencing at ISH3 [REP4-052]. The Applicant’s assumption (at the hearing) was that the height would be similar to the height of fencing used to reduce noise for residential properties. The fencing will break line of sight between the noise source and receptor (in this case foraging birds) and so it would likely be a similar height to a Heras fence. The Applicant confirmed post hearing that the height of the proposed fencing is 2.4m which is the same as proposed for reducing noise effects on residential properties.</p>	<p>This matter is currently considered to be outstanding and is an “amber” category concern to NE.</p> <p><b><u><a href="#">RIESQ8 - To NE and the Applicant – Please provide any further comments on this matter.</a></u></b></p> <p><b><u><a href="#">RIESQ9 - To NE – Please confirm what information is required in relation to mitigation measures and triggers for implementation</a></u></b></p> <p>±</p>

		In its DL4 submission [REP4-093] NE confirmed that whilst the Applicant had provided further information on noise fencing, clarity is still required on the suite of mitigation measures proposed, and triggers for implementation.	
<b>3.1.6 / NE18</b>	Noise and visual disturbance to non-breeding birds within functionally linked land during construction and decommissioning – Viking fields	<p>NE [RR-073] noted that no assessment was provided regarding potential disturbance impacts to non-breeding birds using 'Viking Fields' from works associated with the Theddlethorpe Facility and Southern Compound (as per NE15 above for breeding birds).</p> <p>The Applicant confirmed [REP1-044] existing woodland to the east of the proposed Southern Compound location provides screening between the works and Viking Fields, therefore effects from noise, lighting and visual disturbance at this location will not be significant.</p> <p>The Applicant provided further details of this screening in the DL2 submission [REP2-024] at 7.3.15 and 7.3.16.</p> <p>The Applicant provided a further update to the HRA [REP4-017] at Paragraphs 7.3.29 - 7.3.35 to provide further information on the screening thresholds used and proposed mitigation.</p> <p>In its DL4 submission [REP4-093] NE confirmed that the Applicant had provided further information regarding existing screening of the compounds, confirmed agreement with the assessment conclusions and that no further information required.</p>	N/A
<b>3.1.7 / NE17 and NE24</b>	Residual in-combination impacts	NE [RR-073, reference NE17] noted that whilst it was in agreement that close-board fencing would result in construction noise levels at Rosper Road Pools being below the baseline, and therefore agreed with the conclusion of no adverse effects on the Humber Estuary SPA/ Ramsar from of the project alone, there is no detailed in-combination assessment for noise and visual disturbance effecting Rosper Road Pools, as per NE24 detailed below.	<a href="#"><u><b>RIESQ10 - The Local Authorities attention is drawn to question RIESQ1 at paragraph 2.5.6</b></u></a>

	<p>The Applicant [REP1-044] stated that if noise levels from the Proposed Development with mitigation are within an acceptable threshold, the contribution of Proposed Development to any cumulative or in-combination effects will be resolved since the disturbing noise threshold is not exceeded and noise sources do not cumulatively build upon each other.</p> <p>The Applicant also provided an updated HRA at DL2 [REP2-024] with Table 7-2 containing more information on the assessment.</p> <p>NE confirmed [REP1-079] that it agreed that there will be no adverse effects on integrity to species at Rosper Road Pools, subject to securing and adequate implementation of these mitigation measures.</p> <p>This matter was also raised with in the North Lincolnshire Council LIR [REP1-062], with the Applicant responding at [REP2-031] that the draft CEMP includes commitment B26 in Table 3: Draft Mitigation Register (Construction Phase) for the use of noise abatement fencing/ reduction measures such as acoustic fencing or other barriers in areas such as Rosper Road Pools.</p> <p>NE [RR-073, reference NE24] also noted, in relation to in-combination effects, that Table 7-2 of the HRA should identify where impacts have been fully avoided through mitigation and where there is still a residual impact that could act in-combination. The Applicant considered that the accompanying text at 7.4.4 and 7.4.5 [APP-118] of the HRA discusses residual effects and whether overlapping impact areas or similar impact pathways exist.</p> <p>The Applicant confirmed [REP1-044] that Table 7-2 of the HRA report will be reviewed with specific reference to the use of the identified wording. The table was intended to refer to residual effects, since if there are no residual effects for a given impact pathway there are no in combination effects that require discussion and should be read in conjunction with</p>	<p><u><a href="#">above in relation to this matter.</a></u></p>
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		<p>paragraphs 7.4.4 and 7.4.5 which discuss residual effects and whether overlapping impact areas or similar impact pathways exist.</p> <p>The Applicant also provided an updated HRA at DL2 [REP2-024] with Table 7-2 containing more information on the assessment.</p> <p>In its DL4 submission [REP4-093], NE confirmed that the residual effects have been assessed appropriately.</p> <p>The matter of agreement with the methodology in relation to cumulative/ in-combination effects was also noted within the East Lindsey District Council Local Impact Report [REP1-053], North Lincolnshire Council SoCG [REP1-020, entries NLC10 and NLC11] and Lincolnshire County Council SoCG [REP1-021, entry LCC12].</p> <p>Lincolnshire County Council indicated agreement with the findings of the HRA [REP3-035], and the Applicant provided further details to East Lindsey District Council [REP2-031], however no further comment has been provided on these matters.</p>	
<p><b>3.1.8 / NE25</b></p>	<p>Requirement for cumulative assessment</p>	<p>NE [RR-073, reference NE25] considered that a cumulative effects assessment was required, as well as the in-combination effects assessment. Potential cumulative effects were in relation to the existing influences on the site which have affected and/ or are continuing to affect the condition of relevant designated site features. NE considered that these influences constitute the “<i>current environmental baseline</i>”, and that a cumulative effect might arise when individual impacts, which have each been previously assessed in isolation as being trivial or insignificant, accumulate over time to reach an incremental scale of loss which becomes adverse.</p> <p>In their response [REP1-044], the Applicant confirmed that the HRA methodology and baseline data had accounted for the current environmental baseline. A separate cumulative effects assessment section was not considered to be required as the current condition of the SPA</p>	<p><b><u><a href="#">RIESQ11 - The Local Authorities attention is drawn to question RIESQ1 at paragraph 2.5.6 above in relation to this matter.</a></u></b></p>

		<p>features is part of determining whether an adverse effect on integrity will arise, even from the project alone.</p> <p>The Applicant also provided further clarity on where the HRA had considered cumulative effects at the DL2 submission [REP2-024], in particular within Section 7.3, 7.4 and Appendix A. The updated HRA also included further references to the conservation objectives of the European sites as requested by NE25.</p> <p>NE [REP1-079] confirmed that they agree that there is not a requirement for a separate cumulative assessment section and consider that the assessment and additional information adequately addressed this point.</p> <p>The matter of agreement with the methodology in relation to cumulative / in combination effects was also noted by the local authorities as per paragraph 2.5.6 above.</p>	
<b>Humber Estuary SAC</b>			
<b>3.1.9 / EXQ 1.12.8</b>	Grey seals - Seal haul sites	<p>The ExA requested that NE confirm the Applicants assessment of potential AEOI on grey seals [PD-010, 1.12.8] in relation to an absence of seal haul out sites or known foraging sites, and for the applicant to provide any other supporting information related to this assessment.</p> <p>Both the Applicant [REP1-045] and NE [REP1-079] provided confirmation of the findings of the initial assessment presented in the HRA [APP-118], and that no further assessment or information was required on this matter.</p>	None, this matter is considered to be resolved.
<b>Saltfleetby – Theddlethorpe Dunes and Gibraltar Point SAC</b>			
<b>3.1.10 / NE21</b>	Direct habitat loss or degradation (construction and decommissioning)	NE requested clarification [RR-073, reference NE21], that no works, fencing or vehicle access will take place directly within the SAC. In the updated HRA provided at DL2 [REP2-024], the Applicant confirmed this was the case (paragraph 7.3.36).	N/A
<b>Matters applicable to all sites / General HRA reporting matters</b>			

<p><b>3.1.11 / EXQ 1.12.34</b></p>	<p>Applicants approach and methodology of HRA - Embedded mitigation and reliance on mitigation at screening</p>	<p>The ExA queried [PD-010, 1.12.34] where the HRA [APP-118] had relied upon embedded mitigation to conclude either no LSE at the stage 1 screening or no AEOI at the stage 2 appropriate assessment, and that the embedded mitigation referred to, only appeared to cover water quality issues. The Applicant was also requested to provide confirmation that no additional mitigation was considered within the stage 1 screening assessment (as per paragraph 3.2.5 of the HRA).</p> <p>In their response [REP1-045], the Applicant confirmed that the embedded mitigation referred to in the HRA only related to water quality, as these measures would have to be applied regardless of HRA requirements.</p> <p>The Applicant also confirmed that no other mitigation was assumed to be embedded mitigation or taken into account at stage 1.</p>	<p>N/A</p>
<p><b>3.1.12</b></p>	<p>General methodological queries</p>	<p>The ExA requested some minor clarifications on the HRA Report and accompanying matrices ([PD-010], 1.12.12, 1.12.27, 1.12.31, 1.12.32). These are considered to have been provided in the DL2 submission [REP2-024].</p>	<p>N/A</p>

## **4 CONCLUDING REMARKS**

- 4.0.1 This RIES is based on information submitted throughout the Examination by the Applicants and IPs, up to DL4 (29 July 2024), in relation to potential effects on European sites. It should be read in conjunction with the Examination documents referred to throughout.
- 4.0.2 The RIES has identified gaps in the ExA's understanding of IPs' positions on Habitats Regulations and comments on the RIES will be of great value to the ExA in order to support a robust and thorough recommendation to the Secretary of State. In particular, the ExA seeks:
- Responses to the questions identified in Sections 1 to 5 of this RIES (in particular Tables 2.2 and 3.1).
  - Confirmation whether the ExA's understanding of screening and adverse effects conclusions at point of RIES publication (Tables (A1.1 – A1.5) in Annex 1) is correct.
- 4.0.3 Comments on the RIES must be submitted for DL5 (02 September 2024).

## **ANNEX 1 EXA'S UNDERSTANDING OF POSITION AT POINT OF RIES PUBLICATION**

4.0.4 The tables in this Annex summarise the ExA's understanding of the Applicant's screening exercise and assessment of effects on integrity, and agreement with the relevant ANCB(s)/IPs at time of publication of this RIES.

**Key to tables:**

C = Construction

O = Operation

D = Decommissioning

✓ = LSE or AEoI cannot be excluded

X = LSE or AEoI can be excluded

Y = Yes

N = No

? = Unclear

n/a = not applicable



**Table A1.1: Humber Estuary Special Protection Area (HRA Appendix G Table 1, Appendix H Table 6)**

Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>ror! Bookmark not defined.</small>	Agreement with NE ? <small>Error! Bookmark not defined.</small>
Avocet (breeding)	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Permanent loss of functionally linked land	C	✓	Y [RR-073]	X	Y [RR-073, NE11]
	Temporary loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and visual disturbance	C and D	✓	Y [RR-073]	X	Y [REP1-079 NE14] [REP4-093 NE8, NE15]
		O	X	Y [REP4-093, NE8, NE9]	n/a	Y [REP4-093, NE8, NE9]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C and D	✓	[REP1-079] Cumulative	X	Y

<sup>3</sup> Applies to impacts from the Proposed Development alone and in combination, unless otherwise stated.

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>Error! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
				[REP4-093] In Combination		[REP1-079] Cumulative [REP4-093] In Combination
		O	X	Y [REP1-079] Cumulative [REP4-093] In Combination	n/a	Y [REP1-079] Cumulative [REP4-093] In Combination
Bittern (breeding)	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Permanent loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Temporary loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and visual disturbance	C and D	X	Y [REP1-079 NE14] [REP4-093 NE8, NE15]	n/a	Y [REP1-079 NE14] [REP4-093 NE8, NE15]
		O	X	Y [REP4-093, NE8, NE9]	n/a	Y [REP4-093, NE8, NE9]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>Error! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Marsh Harrier (Breeding)	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Permanent loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
Little Tern (Breeding)	Temporary loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and visual disturbance	C and D	X	Y [REP1-079 NE14] [REP4-093 NE8, NE15]	n/a	Y [REP1-079 NE14] [REP4-093 NE8, NE15]
		O	X	Y [REP4-093, NE8, NE9]	n/a	Y [REP4-093, NE8, NE9]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>ror! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	Y [RR-073]	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Hen Harrier	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Permanent loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]
	Noise and visual disturbance	C and D	X	Y [REP4-093 NE8, NE18]	n/a	Y [REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>ror! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Golden Plover	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Permanent loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
Bar-tailed Godwit	Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]
	Noise and visual disturbance	C and D	✓	Y [RR-073]	X	Y [REP4-093 NE8, NE18]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>Error! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
						<b>N [REP4-093, NE16]</b>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	Y	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Ruff	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
Shelduck	Permanent loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
Knot	Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]
		C and D	X	Y	n/a	Y

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>ror! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
Dunlin	Noise and visual disturbance			[REP4-093 NE8, NE18]		[REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Redshank	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Permanent loss of functionally linked land	C	✓	Y [RR-073]	X	Y [RR-073]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>ror! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
	Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]
	Noise and visual disturbance	C and D	✓	Y [RR-073]	X	Y [REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>
		O	✓	Y [RR-073]	X	Y [REP1-079, NE10] [REP4-093, NE8]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]



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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>Error! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
Waterbird Assemblage	Permanent loss of functionally linked land (Species listed as per Table 7-1 of HRA)	C	✓ (Avocet, mallard, oystercatcher, redshank)	Y [RR-073]	X	Y [RR-073]
	Temporary loss of functionally linked land (Species listed as per Table 7-1 of HRA)	C	✓ (golden plover, curlew, lapwing, pink footed goose)	Y [RR-073]	X	Y [REP4-093, NE12]
	Noise and visual disturbance (species as per Table 7-1 of HRA)	C and D	✓ (curlew, golden plover, lapwing, mallard, oystercatcher, pink-footed goose, redshank, shelduck, teal, black-tailed godwit, bar-tailed godwit, wigeon)	Y [RR-073]	X	Y [REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEOI?	
			Applicant's conclusion <sup>3</sup>	Agreement with NE? <small>Error! Bookmark not defined.</small>	Applicant's conclusion <sup>Er</sup> <small>ror! Bookmark not defined.</small>	Agreement with NE? <small>Error! Bookmark not defined.</small>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C and D	✓	Y [RR-073]	X	[REP1-079] Cumulative [REP4-093] In Combination
		O	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination

**Table A1.2: Humber Estuary Ramsar – HRA Appendix G Table 2, Appendix H Table 7**

Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
Criterion 1: Near-natural estuary	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	Y [RR-073]	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 3: Grey Seal	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	X	Y [RR-073]	n/a	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and Visual Disturbance	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	Y [RR-073]	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 3:	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]

<sup>4</sup> Applies to impacts from the Proposed Development alone and in combination, unless otherwise stated.

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
Natterjack Toad	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Direct Injury / Mortality	C, D	✓	Y [RR-073]	X	<b>N [REP4-093, NE30]</b>
	Noise and Visual Disturbance	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O and D	X	Y [RR-073]	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 5: Waterbird Assemblage (Nonbreeding)	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR_073, NE19]
	Atmospheric Pollution	C	X	Y [RR-073]	n/a	Y [RR-073]
		D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and Visual Disturbance (species listed as per Table 7-1 of HRA)	C and D	✓ (curlew, golden plover, lapwing, mallard, oystercatcher, pink-footed	Y [RR-073]	X	Y [REP4-093, NE8, NE18]  <b>N [REP4-093, NE16]</b>

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
			goose, redshank, shelduck, teal, wigeon)			
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Permanent Loss of functionally linked land (Species listed as per Table 7-1 of HRA)	C	✓ (avocet, redshank, oystercatcher, mallard)	Y [RR-073]	X	Y [RR-073]
	Temporary loss of functionally linked land (Species listed as per Table 7-1 of HRA)	C	✓ (curlew, lapwing, mallard, pink-footed goose, teal)	Y [RR-073]	X	Y [REP4-093, NE12]
	In-combination	C, O and D	✓	Y [RR-073]	X	[REP1-079] Cumulative

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
						[REP4-093] In Combination
Criterion 6: Shelduck; Red Knot; Dunlin; Bar-tailed Godwit	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and Visual Disturbance	C and D	X	Y [REP4-093 NE8, NE18]	n/a	Y [REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>
	Permanent Loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]	

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 6: Golden Plover	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and Visual Disturbance	C and D	✓	Y [RR-073]	X	Y [REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
	Permanent Loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 6: Black-tailed Godwit	Habitat Loss	C	X	Y [REP1-079]	n/a	Y [REP1-079]
	Dust and Particulates	C and D	✓	Y [REP1-079]	X	Y [REP1-079, NE19]
	Atmospheric Pollution	C and D	X	Y [REP1-079]	n/a	Y [REP1-079]
	Water Quality	C, O and D	X	Y [REP1-079]	n/a	Y [REP1-079]
	Noise and Visual Disturbance	C and D	✓	Y [REP1-079]	X	Y [REP4-093 NE8, NE18]



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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
						<b>N [REP4-093, NE16]</b>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Permanent Loss of functionally linked land	C	X	Y [REP1-079]	n/a	Y [REP1-079]
	Temporary loss of functionally linked land	C	X	Y [REP4-093, NE6]	n/a	Y [REP4-093, NE12]
	In-combination	C, O and D	✓	[REP1-079] Cumulative [REP4-093] In Combination	X	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 6: Redshank	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073, NE19]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and Visual Disturbance	C and D	✓	Y [RR-073]	X	Y

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
						[REP4-093 NE8, NE18]  <b>N [REP4-093, NE16]</b>
		O	X	Y [REP1-079, NE10] [REP4-093, NE8]	n/a	Y [REP1-079, NE10] [REP4-093, NE8]
	Permanent Loss of functionally linked land	C	X	Y [RR-073]	n/a	Y [RR-073]
	Temporary loss of functionally linked land	C	✓	Y [RR-073]	n/a	Y [REP4-093, NE12]
	In-combination	C, O and D	X	[REP1-079] Cumulative [REP4-093] In Combination	n/a	[REP1-079] Cumulative [REP4-093] In Combination
Criterion 8:	Dust and Particulates	C	✓	Y [RR-073]	X	Y [RR-073, NE19]
		D	X	Y [RR-073]	n/a	Y [RR-073, NE19]
	Water Quality	C	✓	Y [RR-073]	X	Y [RR-073, NE20]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>	Applicant's conclusion <sup>4</sup>	Agreement with NE? <sup>4</sup>
Lamprey (River and Sea)		O and D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	Noise and Visual Disturbance	C	✓	Y [RR-073]	X	Y [RR-073, NE20]
		D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	Killing or Injury	C	✓	Y [RR-073]	X	Y [RR-073, NE20]
		D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	In-combination	C, O and D	X	Y [RR-073]	n/a	[REP1-079] Cumulative [REP4-093] In Combination

**Table A1.3: Humber Estuary Special Area of Conservation – HRA Appendix G Table 3, Appendix H Table 8**

Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>5</sup>	Agreement with NE? <sup>5</sup>	Applicant's conclusion <sup>5</sup>	Agreement with NE? <sup>5</sup>
Habitats: <ul style="list-style-type: none"> <li>• Atlantic salt meadows</li> <li>• Coastal lagoons;</li> <li>• Dunes with sea buckthorn</li> <li>• Embryonic shifting dunes</li> <li>• Estuaries</li> <li>• Mudflats and sandflats not covered by seawater at low tide;</li> <li>• Fixed dunes with herbaceous vegetation (‘grey dunes’);</li> <li>• Glasswort <i>Salicornia</i> sp. and other annuals colonising mud and sand;</li> <li>• Sandbanks which are slightly covered by sea water all the time; and,</li> <li>• Shifting dunes along the shoreline with (<i>Ammophila arenaria</i>) (‘white dunes’).</li> </ul>	Dust and Particulates	C and D	n/a	Y [RR-073]	n/a	Y [RR-073]
	Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Air Quality	C and D	X	Y [RR-073]	n/a	Y [RR-073]

<sup>5</sup> Applies to impacts from the Proposed Development alone and in combination, unless otherwise stated.

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>5</sup>	Agreement with NE? <sup>5</sup>	Applicant's conclusion <sup>5</sup>	Agreement with NE? <sup>5</sup>
Species: <ul style="list-style-type: none"> <li>Grey Seal</li> </ul>						
Lamprey (River and Sea Lamprey)	Dust and Particulates	C	✓	Y [RR-073]	X	Y [RR-073, NE20]
		D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	Water Quality	C	✓	Y [RR-073]	X	Y [RR-073, NE20]
		O and D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	Air Quality	C and D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	Noise and Vibration	C	✓	Y [RR-073]	X	Y [RR-073, NE20]
		D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	Killing and Injury	C	✓	Y [RR-073]	X	Y [RR-073, NE20]
		D	X	Y [RR-073]	n/a	Y [RR-073, NE20]

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Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>5</sup>	Agreement with NE? <sup>5</sup>	Applicant's conclusion <sup>5</sup>	Agreement with NE? <sup>5</sup>
	Visual Disturbance	C and D	X	Y [RR-073]	n/a	Y [RR-073, NE20]
	In-combination effects	C, O and D	X	Y [RR-073]	n/a	Y [RR-073, NE20]

**Table A1.4: Saltfleetby – Theddlethorpe Dunes and Gibraltar Point SAC – HRA Appendix G Table 4, Appendix H Table 9**

Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>6</sup>	Agreement with NE? <sup>6</sup>	Applicant's conclusion <sup>6</sup>	Agreement with NE? <sup>6</sup>
<ul style="list-style-type: none"> <li>• Dunes with <i>Hippophae rhamnoides</i> (Dunes with sea-buckthorn);</li> <li>• Embryonic shifting dunes;</li> <li>• Fixed dunes with herbaceous vegetation (grey dunes) (Dune grassland);</li> <li>• Humid dune slacks;</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes). (Shifting dunes with marram).</li> </ul>	Habitat loss or degradation	C and D	✓	Y [REP1-079]	X	Y [REP1-079]
	Water Quality	C and D	✓	Y [RR-073]	X	Y [RR-073, NE22]
	Dust and Particulates	C and D	✓	Y [RR-073]	X	Y [RR-073]
	Transport emissions	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination	C, O, D	X	Y [RR-073]	n/a	Y [RR-073]

<sup>6</sup> Applies to impacts from the Proposed Development alone and in combination, unless otherwise stated.

**Table A1.5: Greater Wash SPA with Marine Components – HRA Appendix G, Table 5**

Feature	Potential impact	Stage of Proposed Development	LSE?		AEoI?	
			Applicant's conclusion <sup>7</sup>	Agreement with NE? <sup>7</sup>	Applicant's conclusion <sup>7</sup>	Agreement with NE? <sup>7</sup>
<ul style="list-style-type: none"> <li>• Red Throated Diver</li> <li>• Little Gull</li> <li>• Sandwich Tern</li> <li>• Common Tern;</li> <li>• Common Scoter;</li> <li>• Little tern</li> </ul>	Habitat Loss	C	X	Y [RR-073]	n/a	Y [RR-073]
	Loss of Functionally Linked Land	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	Noise and Visual Disturbance	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Change in Water Quality	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]
	Atmospheric Pollution	C and D	X	Y [RR-073]	n/a	Y [RR-073]
	In-combination effects	C, O and D	X	Y [RR-073]	n/a	Y [RR-073]

<sup>7</sup> Applies to impacts from the Proposed Development alone and in combination, unless otherwise stated.