



The Planning Inspectorate
Yr Arolygiaeth Gynllunio

REPORT on the IMPLICATIONS for EUROPEAN SITES

Proposed Immingham Green Energy Terminal

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

Planning Inspectorate Reference: TR030008

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1 INTRODUCTION

1.1 Background

- 1.1.1 Associated British Ports (the Applicant) has applied for a development consent order (DCO) under section 37 of the Planning Act 2008 (PA2008) for the proposed Immingham Green Energy Terminal (IGET) ('the Proposed Development'). On behalf of the Secretary of State for Housing Communities and Local Government an Examining Authority (ExA) has been appointed to conduct an Examination of the application. The ExA will report its findings and conclusions and make a recommendation to the relevant Secretary of State (SoS) as to the decision to be made on the application.
- 1.1.2 The relevant SoS is the competent authority for the purposes of the Habitats Regulations¹ for applications submitted under the PA2008 regime. The findings and conclusions on nature conservation issues reported by the ExA will assist the SoS 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 Sites² that was provided within the DCO application and submitted during the Examination by the Applicant and Interested Parties (IPs), up to Deadline 5 (DL5) of the Examination (11 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/TR030008-000385>
- 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

¹ The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

² 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 SoS.

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

1.2 Documents used to inform this RIES

- 1.2.1 The Applicant's Habitats Regulations Assessment (HRA) comprised the following documents:

- Shadow Habitats Regulations Assessment (sHRA) [APP-238], updated at DL1 [REP1-012], DL3 [REP3-032], DL4 [REP4-014] and DL5 [REP5-021]; and
- Without Prejudice Report to inform Habitats Regulations Assessment (HRA) Derogation ('the Derogations Report') [APP-235], updated at DL1 [REP1-008] and DL3 [REP3-030].

- 1.2.2 The HRA concluded that adverse effects on the integrity (AEoI) of all European sites could be excluded. However, the Applicant also provided a 'without prejudice' case on the derogations under the Habitats Regulations and proposals for compensatory measures. An overview of these matters is provided in Sections 4 and 5 of this report.

- 1.2.3 In addition to the HRA, 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 a series of proposed changes to the application. The first Change Application [REP2-027][REP2-024] was dated 26 March 2024 and comprised four proposed changes:

- **Proposed Change 1:** Increase in the number of monopiles forming part of the IGET jetty berth (from two to four).
- **Proposed Change 2:** Increase in pile diameter (from 1.2m to 1.575m) and increase in approach jetty width (from 14m to 16m).
- **Proposed Change 3:** Change to the red line boundary in the vicinity of Work No. 7 to include additional land for temporary construction purposes, and minor changes to the northern access from the A1173 to Work No. 7.
- **Proposed Change 4:** Addition of visual detail to Work No. 1a in the Works Plans [AS-002].

- 1.3.2 The second Change Application [AS-047][AS-144] was dated 26 June 2024 and comprised a further five changes:

- **Proposed Change 5 (a, b and c):** Minor adjustments to highway works.
- **Proposed Change 6:** New area of permanent stopping up in the vicinity of an access from Kings Road to Work No. 7.
- **Proposed Change 7:** Reduction in the Order Limits in the area proposed for temporary construction purposes.
- **Proposed Change 8:** Change to the ground protection methodology (installation of a geotextile layer).
- **Proposed Change 9:** Change to the terrestrial piling methodology to include the potential use of driven piling.

1.3.3 Proposed Changes 1 to 4 were accepted by the ExA on 14 May 2024 [PD-013] and Proposed Changes 5 to 9 were accepted on 12 July 2024 [PD-016].

HRA Implications

1.3.4 The HRA implications of these changes are discussed in the Applicant's Change Application Reports [REP3-079][AS-144].

1.3.5 As a result of Proposed Changes 1 and 2 there is an increase in the direct loss of intertidal habitat (0.0021ha as compared to 0.00158ha within the original Application) and subtidal habitat (0.059ha as compared to 0.051ha within the original Application) [REP3-079]. There is also the potential for an increased indirect loss of intertidal habitat because of Proposed Changes 1 and 2 (0.04ha (compared to 0.03ha as assessed in the original Application)). In combination with the Immingham Eastern Ro-Ro Terminal (IERRT) project, the total loss of intertidal habitat (both direct and indirect) will become 0.054ha (compared to 0.044ha as reported in the sHRA updated at DL1 [REP1-012]). The total in-combination direct loss of subtidal habitat becomes 0.091ha (compared to 0.083ha as reported in the sHRA updated at DL1 [REP1-012]). The Applicant therefore updated the sHRA to reflect these new habitat loss figures.

1.3.6 The relevant Proposed Change Application Report [REP3-079] concludes that due to the scale of these changes, Proposed Changes 1 and 2 do not result in any new impact pathways, nor do they change the significance outcome of any of the impact pathways that were considered within the original assessments.

1.3.7 As reported in [AS-144], Proposed Change 9 does not comprise any changes to the locations of terrestrial piling activities and as a result the assessment parameters assumptions remain as described in Chapter 10: Ornithology of the ES [APP-052] and the sHRA [REP4-014]. Due to the intervening distance between the terrestrial piling and the foreshore, SPA and Ramsar waterbird features on the foreshore are predicted to be out of the zone of potential disturbance effects arising from terrestrial piling noise during construction [AS-144].

1.3.8 To date, no HRA matters relevant to these change requests were raised by IPs in the Examination.

1.4 RIES questions

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

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, please refer to the ID number.

- 1.4.2 In responding to the questions in the Tables, please refer to the ID number in the first column.

- 1.4.3 Comments on the RIES are timetabled for DL7 (15 August 2024).

1.5 HRA Matters Considered During the Examination

- 1.5.1 The Examination to date has focussed on the following matters disputed by IPs:

- The adequacy of the methodologies used, in relation to disturbance impacts to birds, underwater noise impacts to marine mammals, impacts to air quality.
- The adequacy of mitigation was disputed in relation to disturbance to birds, underwater noise impacts to marine mammals and qualifying fish species, and introduction of non-native species.
- IPs disputed the Applicant's conclusion in relation to AEoI on qualifying features of the Humber Estuary SAC and Ramsar site, disagreeing with the justification for conclusions relating to the loss of intertidal and subtidal habitat.
- IPs disputed the Applicant's conclusion in relation to AEoI on qualifying features of the Humber Estuary SPA and Ramsar site, disagreeing with the justification for conclusions relating to changes to waterbird foraging and roosting habitat.
- IPs disputed the Applicant's approach to assessing in-combination effects at screening and the AEoI stage.

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 Applicant submitted a sHRA [APP-238], which identifies the sites within the UK National Site Network that could be affected by the Proposed Development.
- 2.1.3 Section 3.1 of the sHRA [APP-238] explains that the Applicant scoped sites for consideration in consultation with NE, but the rationale for how sites have been identified is unclear.

Sites within the UK National Site Network (NSN)

- 2.1.4 The Applicant's original sHRA [APP-238] identified five European sites within the UK National Site Network for inclusion within the assessment. These are listed in Table 2 of the sHRA 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-238]

Name of European site	Distance from Proposed Development (km)
Humber Estuary SAC	Within the Order Limits
Humber Estuary SPA	Within the Order Limits
Humber Estuary Ramsar	Within the Order Limits
Greater Wash SPA	20
The Wash and North Norfolk Coast SAC	75

- 2.1.5 The locations of these sites relative to the Proposed Development are depicted on Plate 2 of the sHRA [APP-238]. Table 2 of the sHRA lists the qualifying features of the European sites and identifies which are relevant to the screening for likely significant effects (LSE).

Non-UK European sites

- 2.1.6 The Applicant has not identified any potential impacts on European sites in European Economic Area (EEA) States. However, Section 3.2 of the sHRA [APP-238] sets out information relating to the Transboundary Screening. Section 3.2 observes that the EEA States of Iceland and Denmark were notified by the Inspectorate in relation to species within the Humber Estuary SPA and Humber Estuary Ramsar. The following species are of interest in the Humber Estuary SPA:

- red knot (*Calidris canutus*) comprising 6.3% of the Northeastern Canada/Greenland/Iceland/North western Europe populations; and
- black-tailed godwit (*Limosa limosa*) comprising 2.6 to 3.2% of the Icelandic breeding population.

2.1.7 The following species are of interest in the Humber Estuary Ramsar site:

- golden plover (*Pluvialis apricaria*) representing 2.2% of the Iceland and Faroes/East Atlantic population; and
- black-tailed godwit (*Limosa limosa*) comprising 2.6 to 3.2% of the Iceland/West Europe populations.

2.1.8 Paragraphs 3.2.7 and 3.2.9 set out why red knot and golden plover are considered to have no potential for LSE either alone or in-combination with other plans and projects. However, paragraph 3.2.8 explains that black-tailed godwit has been addressed within stage 2 of the sHRA.

2.1.9 Only Ramsar sites and sites which form part of the UK National Site Network are addressed in this RIES.

2.2 Potential impact pathways

2.2.1 Tables 3, 4 and 5 of the sHRA [APP-238] describe the potential impacts from the Proposed Development, along with the potential geographical extent of effects. The potential impact pathways assessed by the Applicant include:

- direct loss of habitat;
- direct changes to habitats and species; including as a result of the removal of seabed material during capital and maintenance dredging and sediment deposition during dredge disposal;
- indirect loss or changes to habitats and species as a result of changes to hydrodynamic and sedimentary processes (including marine works and capital dredge disposal);
- introduction and spread of non-native species;
- physical change to habitats resulting from the deposition of airborne pollutants;
- changes in water and sediment quality on migratory fish species and marine mammals;
- underwater noise and vibration effects on migratory fish species and marine mammals;
- lighting effects on migratory fish and seals;
- collision risk to marine mammals; and
- visual disturbance.

2.2.2 At submission, the sHRA assessed the potential impacts during construction and operation and maintenance; it did not assess impacts during the decommissioning phase. Additional information was provided at DL1 [REP1-012] to explain that no impacts during the decommissioning

phase of the jetty, jetty head, jetty access ramp and the jetty access road were assessed as the IGET dDCO does not make provision for the decommissioning of these elements of the Proposed Development, as the infrastructure is intended to become part of the fabric of the Port of Immingham and will continue to be maintained in the long-term.

- 2.2.3 In response to Question 1.6.2.4 from the ExA [PD-010] regarding decommissioning of the hydrogen production facility, paragraph 1.2.11 of the updated sHRA [REP1-012] explains that the majority of the landside decommissioning works are proposed to be in excess of 200m from the foreshore and there are no areas of terrestrial habitat within or adjacent to the Proposed Development boundary that are considered functionally linked land. However, the removal of pipe racks within Work Area 2 and plant and equipment on the approach jetty topside associated with hydrogen production (within Work Area 1) are within 200m of the foreshore and have therefore been considered in the revised sHRA [REP1-012].
- 2.2.4 Additionally, NE raised two further impact pathways for inclusion within the assessment:
- Potential mortality or injury to coastal waterbirds as a result of flare stack operation (see ID NE2 [RR-019]); and
 - Physical changes to habitats resulting from accidental releases of ammonia (see ID NE54 [REP3-112]).
- 2.2.5 The examination of these pathways is discussed in more detail in Tables 2.2 and 3.1 below.

2.3 In-combination effects

- 2.3.1 Information relating to the in-combination assessment is provided for the assessment of AEoI in Section 4.14 of the sHRA [APP-238].
- 2.3.2 The projects and impact pathways relevant to the in-combination assessment were detailed in Table 33 of the sHRA [APP-238]. No figure is provided in the sHRA to illustrate the location of the projects included in the in-combination assessment.
- 2.3.3 Paragraph 4.14.3 explains that these projects are based on the cumulative assessment provided in ES Chapter 25: Cumulative and In-Combination Effects [APP-067]. The plans or projects identified within the ES which also overlap with the zone of influence of potential effects on marine ecology receptors have been taken forward into the sHRA. No additional plans or projects have been highlighted by IPs in the Examination to date.
- 2.3.4 Consideration of in-combination effects at the screening stage was not explicit in the original sHRA. This was raised by NE (ID NE3 [REP-019]) who requested that consideration of in-combination effects should be presented at the screening stage and that Tables 3 to 5 in the original sHRA should be updated to show whether an effect will be 'alone and/ or in combination. The Applicant agreed [REP1-021] to update Tables 3 to 5 in the sHRA [REP1-012] to consider projects alone and in-combination.

- 2.3.5 NE [REP3-112] welcomed the updated sHRA [REP1-012] to include in-combination effects in Tables 3 to 5 but requested further clarification regarding how this assessment had been undertaken and highlighted the need to distinguish between small effects and where there is no effect at all. The ExA requested (ExQ2 HRA 2.5 [PD-014]) that NE highlight any specific impact pathways where it is concerned that the absence of this information is likely to make a material difference in the screening conclusion.
- 2.3.6 Following further clarification regarding how the in-combination assessment was undertaken by the Applicant in the updated sHRA [REP3-032], NE [REP4-054] agreed that that the impact pathways screened out at this stage are unlikely to have a significant effect on any European site, either alone or in-combination with other plans and projects.

2.4 The Applicant's assessment

- 2.4.1 The Applicant's conclusions in respect of screening are presented in Section 3.3 of the updated sHRA [REP5-021]. They are summarised in the Applicant's screening and integrity matrices in Appendix D of the sHRA [REP5-021].

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 following European site:
- Greater Wash SPA.
- 2.4.3 NE confirmed it agreed with the Applicant's conclusion of no LSEs in respect of the above European site [RR-019].

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 SAC;
 - Humber Estuary SPA;
 - Humber Estuary Ramsar; and
 - The Wash and North Norfolk Coast SAC.
- 2.4.5 The qualifying features and LSE pathways screened in by the Applicant are detailed in Tables 3 to 5 and Table B.1 of the sHRA [APP-238].
- 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.

2.5 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.

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	Details of issue	ExA observation/ question
Humber Estuary SPA and Humber Estuary Ramsar			
2.1	Construction and operation Lighting effects on coastal waterbirds	<p>The original sHRA [APP-238] concluded that lighting impacts during construction and operation would not lead to LSE on coastal waterbirds on the grounds that the jetty will only be lit for safety and operational purposes. NE advised (ID NE2 [RR-019]) that the justification provided by the Applicant is insufficient to rule out LSE and further information should be provided in relation to lighting impacts on birds. In response the Applicant updated the sHRA [REP1-012] with additional information to justify screening out lighting effects on coastal birds. NE agreed [REP3-112] that the additional information provided has addressed the point in relation to lighting effects on coastal waterbirds.</p> <p>The ExA requested (ExQ2 HRA 2.3 [PD-014]) that the Applicant explain how the use of mitigation to justify no LSE is consistent with the People Over Wind and Sweetman v Coillte Teoranta (Case C-323/17) judgement. In response, the Applicant updated the shadow HRA [REP4-014] to show that LSE would arise as a result of lighting effects on coastal waterbirds during construction, however explained that this amendment would not alter the ultimate conclusion that lighting effects would not result in AEoI.</p>	N/A – matter resolved.

2.2	Operation Potential mortality or injury to coastal waterbirds as a result of flare stacks	NE (ID NE2 [RR-019]) requested that the potential impacts of the flare stacks on birds should be assessed in the sHRA. The sHRA [REP1-012] was updated to provide an assessment of the potential impact of flare stacks on birds and concluded no LSE. In response to the additional information provided in the revised sHRA [REP1-012], NE agreed [REP3-112] that the impact of flare stacks had been addressed and is content with the conclusion reached.	N/A – matter resolved.
Humber Estuary SAC, Humber Estuary SPA and Humber Estuary Ramsar			
2.3	Construction and operation Air quality impacts from traffic	NE (ID NE30 [RR-019][REP1-087][REP3-112]) requested clarification on whether the NE guidance had been followed when undertaking the assessment of road traffic impacts, and whether the access off Kings Road onto the A1173 had been considered during screening of operational traffic impacts. The Applicant [REP1-012][REP2-013] confirmed this was the case, and that there are no European sites within 200m of any road used by project-related traffic. The sHRA was updated DL3 to reflect this (Table 3) [REP3-032]. In light of these updates, NE now considers this matter resolved [REP3-112].	N/A – matter resolved.
2.4	Construction and operation Air quality impact from traffic in combination	NE (ID NE40 [RR-019]) advised that in-combination road traffic emissions should be assessed, and potential impacts considered at relevant sensitive habitat receptors, considering the calculated change in Annual Average Daily Traffic from cumulative developments identified within the ES Traffic and Transport Cumulative Assessment. The Applicant [REP1-021] provided further justification explaining that there are no European sites within 200m of any road used by project-related traffic so the impact of traffic-derived air pollution (alone or in combination with other projects) does not need to be	N/A – matter resolved

		considered in the HRA. In light of this information, NE considered this matter resolved [REP3-112].	
Humber Estuary SAC			
2.5	Construction Air quality impacts from marine vessels	<p>NE (ID NE31 [RR-019]) sought clarification as to how a 3km distance between vessels and sensitive features of the Humber Estuary SAC is sufficient for impacts to be considered insignificant and recommended that a 10km zone of influence is used to understand the extent of impacts from construction vessels.</p> <p>The Applicant [REP1-012], explained how a 3km zone of influence was appropriate for emissions from vessel exhaust stacks with reference to Local Air Quality Management Technical Guidance published by Defra (LAQM TG(22)). The sHRA was updated at DL3 [REP3-032] to include reference to LAQM TG(22).</p> <p>In light of the explanation provided, NE agreed that the 3km screening distance is suitable and considers this matter resolved [REP 3-112].</p>	N/A – matter resolved.

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 above.
- 2.6.2 Of the matters detailed in Table 2.2 of this RIES, the Applicant has agreed during the Examination that an LSE should also be screened in for:
- Lighting effects on coastal waterbirds during construction (relevant to qualifying features of the Humber Estuary SPA and Ramsar site).

3 ADVERSE EFFECTS ON INTEGRITY

3.1 Conservation Objectives

- 3.1.1 The conservation objectives for all the European sites for which an LSE was identified by the Applicant at the point of the DCO application were included within the sHRA (Table 6) [APP-238].
- 3.1.2 ExQ1.6.2.2 [PD-008] requested that the Applicant confirm the conservation status of the Humber Estuary European sites. The Applicant [REP1-027] confirmed that it had been agreed with NE that the condition assessment for the Humber Estuary Site of Special Scientific Interest (SSSI) should be used where the SSSI features are the same as the European site features. On this basis, [REP1-027] provided the conservation status of the features, with certain waterbird features (curlew, redshank, turnstone and dunlin) in unfavourable status, and harbour (common) seal feature of The Wash and North Norfolk Coast SAC considered to being “*Unfavourable-Inadequate*” condition at a UK-wide scale.

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, in Section 4 of the sHRA [APP-238]. The outcomes of the Applicant’s assessment of effects on integrity were summarised in Appendix C (Summary Table of Sites, Features and Effects) of the sHRA [APP-238] (Appendix D in the latest iteration [REP5-021]).

Mitigation measures

- 3.2.2 The assessment of effects presented in Sections 4.2 to 4.13 of the sHRA [REP5-021] sets out where mitigation measures are required to avoid or minimise the effects from each impact pathway included in the assessment. Where mitigation measures are considered necessary, these have been described in the sHRA, and Table 39 provides a summary of proposed mitigation measures. These were taken into account in the Applicant’s assessment of effects on integrity. Appendix E also summarises information on the potential effectiveness of proposed mitigation measures in reducing potential effects on waterbird features.

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 Despite this conclusion, due to a lack of agreement with NE over the justification for this conclusion during the pre-application stage, the DCO application included a ‘without prejudice’ derogation case and information

on proposed compensatory measures [REP3-030] for the following sites and features:

- Humber Estuary SAC - Estuaries (H1130) and Mudflats and sandflats not covered by seawater at low tide (H1140).
- Humber Estuary Ramsar - Criterion 1 – natural wetland habitats that are of international importance: The site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.

3.2.5 This RIES provides an overview of the derogations and compensatory measures in Sections 4 and 5.

3.2.6 Although NE confirmed in their RR [RR-019] agreement with the Applicant's conclusions of no AEOI for some impact pathways, NE explained it would be unable to agree with the Applicant's conclusion across the board, until further information is provided. These matters are discussed in Table 3.1 below.

3.3 Examination matters

3.3.1 Matters raised in the Examination to date, or for which the ExA seeks clarity, in relation to AEOIs are summarised in Table 3.1 below.

3.3.2 NE confirmed [RR-019] at the start of the Examination its agreement with the Applicant's conclusions of no AEOI for the following impact pathways:

- Construction - direct loss of supporting intertidal habitat on qualifying species (NE5)
- Construction - changes to qualifying habitats as a result of the removal of seabed material during capital dredging (NE9)
- Construction - changes to qualifying habitats as a result of sediment deposition during capital dredging (NE10)
- Construction - changes to qualifying habitats as a result of sediment deposition during capital dredge disposal (NE11)
- Construction - indirect loss or change to qualifying habitats and species as a result of changes to hydrodynamic and sedimentary processes as a result of the marine works (NE14)
- Construction - indirect changes to qualifying habitats of changes to hydrodynamic and sedimentary processes during capital dredge disposal (NE15)
- Operation - direct changes to qualifying habitats beneath marine infrastructure due to shading (NE16)

- Construction - elevated suspended sediment concentrations during capital dredging and capital dredging disposal on qualifying habitats and species (NE17)
- Construction - release of contaminants during capital dredging and capital dredging disposal on qualifying habitats and species (NE18)
- Construction and operation - underwater noise effects on marine mammals (NE24)
- Construction - underwater noise and vibration during capital dredge and dredge disposal on qualifying fish (NE26)
- Construction - underwater noise and vibration during capital dredge and dredge disposal on qualifying marine mammals (NE27)
- Construction - introduction of non-native species during construction (NE28)
- Operation - potential effects of maintenance dredging on water quality (NE50).

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
Humber Estuary SAC and Humber Estuary Ramsar			
3.1	Construction Direct loss of qualifying intertidal habitat	<p>NE disagreed with the Applicant's conclusion of no AEOI and requested further information in Table 7 of [APP-238]. NE argued (ID NE4 [RR-019][REP1-087][REP3-112]) that the loss of habitat would be small but appreciable and the assessment should provide detail on the biological communities and characteristic components (how the affected area contributes to the structure and function of the wider intertidal habitat feature) instead of relying on the relative size of the loss alone to rule out AEOI.</p> <p>The Applicant updated the sHRA [REP1-012][REP3-032] to provide further justification.</p> <p>In light of these updates, NE considered this matter resolved at DL4 [REP4-054].</p>	N/A – matter resolved
3.2	Construction Direct loss of qualifying subtidal habitat	<p>NE disagreed with the Applicant's conclusion of no AEOI for the loss of subtidal habitat for the same reasons it disagreed with the loss of intertidal habitat (see NE4) (ID NE6 [RR-019]).</p> <p>The Applicant updated the sHRA [REP1-012] to provide further justification.</p> <p>In light of these updates, NE considered this matter resolved at DL1 [REP1-087].</p>	N/A – matter resolved

3.3	<p>Operation</p> <p>Changes to qualifying habitats as a result of the removal of seabed material during maintenance dredging</p>	<p>NE disagreed with the Applicant’s conclusion of no AEoI (ID NE13 [RR-019]), requiring additional information relating to the frequency and location of the maintenance dredging.</p> <p>The Applicant provided further explanation in [REP1-021]. In light of this information, NE considered this matter resolved at DL1 [REP1-087].</p>	N/A – matter resolved
3.4	<p>Construction</p> <p>Underwater noise and vibration during marine piling on qualifying species of marine mammals</p>	<p>NE expressed (ID NE23 [RR-019][REP1-012][REP5-058]) a preference for the underwater noise pathways (injury and behavioural disturbance) to be assessed separately, and for a project-specific Marine Mammal Mitigation Plan (MMMP) to be created, to capture the proposed mitigation measures in a standalone document (as some measures are not standard, such as ceasing piling if marine mammals are observed in the mitigation zone).</p> <p>The Applicant argued that underwater noise effects on marine mammals are considered under one impact pathway within the sHRA (paragraphs 4.11.6 to 4.11.13, 4.11.29 to 4.11.42) [APP-238], but that both injury and behavioural responses are considered, and that mitigation is captured in the outline Construction Environmental Management Plan (CEMP) and Deemed Marine Licence (DML), so the Applicant doesn’t see the need for a project-specific plan.</p> <p>NE [REP5-058] remains of the opinion that the production of an MMMP would be useful, however, it concedes this would not result in a material difference to the assessment outcome.</p>	N/A

3.5	<p>Construction</p> <p>Underwater noise and vibration during marine piling on qualifying species of fish</p>	<p>NE advised (ID NE25 [RR-019]) that the night-time restrictions that had been applied to percussive piling should be extended to include vibro-piling, to mitigate impacts to migratory lamprey.</p> <p>The Applicant amended Section 4.11.43 of and Table 30 of the sHRA [REP1-012] to include this additional mitigation and updated the DML to secure this change (Part 2, Condition 16(9) [REP4-004]).</p> <p>Following these updates, NE considered this matter resolved at DL1 [REP1-087].</p>	N/A – matter resolved
3.6	<p>Operation</p> <p>Introduction of non-native species during operation</p>	<p>NE agreed (ID NE29 [RR-019][REP1-087][REP3-112][REP5-058]) with the conclusion of no AEoI from the potential introduction and spread of non-native species during operation, subject to securing and implementation of ABP’s existing biosecurity management procedures but encouraged an overall biosecurity management plan for the operational facility be produced.</p> <p>The Applicant argues [REP1-012][REP5-050] that its existing biosecurity management procedures will apply to the operational facility.</p>	N/A
3.7	<p>Construction</p> <p>Underwater noise and vibration during marine piling on qualifying species of marine mammals</p>	<p>NE (ID NE37 [RR-019]) considered the screening distance used for the in-combination assessment of effects from underwater noise on marine mammals is smaller than they would normally advise for marine mammals and should cover all projects that can contribute to in-combination effects within the boundary of the Humber Estuary SAC.</p>	N/A – matter resolved

		<p>The Applicant [REP1-021] provided further justification based on the propagation of sound and physical constraints in the project location.</p> <p>In light of this explanation, NE was satisfied with the screening distance used in this context [REP1-087].</p>	
3.8	<p>Construction and operation</p> <p>In-combination underwater noise disturbance and barrier effects to grey seal</p>	<p>NE (ID NE38 [RR-019][REP1-087][REP3-112][REP4-054]) disagreed with the Applicant's conclusion of no AEoI from cumulative underwater noise disturbance and barrier effects to the grey seal feature of the Humber Estuary SAC and Ramsar site. NE requested more detail on the nature of the combined impact (with all other cumulative projects) to demonstrate the worst case for disturbance and barrier effects to justify the conclusion.</p> <p>The Applicant responded to these concerns at DL1 [REP1-021], and, at DL5 [REP5-021], provided additional information on the combined impact of several relevant projects (due to dredging or piling) in Tables 36 and 38 of the sHRA.</p> <p>NE [REP5-058] maintain that more detail should be provided on the nature of the combined effects for all the projects together, and that the Applicant should confirm whether any of the piling campaigns are scheduled to occur simultaneously in a month/year and to assess what the combined effects will be. Despite these methodological limitations, based on the information provided, overall, NE concurs that cumulative underwater noise disturbance and barrier effects to seal will not have an AEoI of any European site, alone or in-combination.</p>	N/A
Humber Estuary SPA			

3.9	<p>Construction and operation</p> <p>Various pathways relevant to SPA qualifying features</p>	<p>NE (ID NE7 [RR-019]) advised that the list of component species of the Humber Estuary SPA waterbird assemblage should be referred to in determining the relevant features and should explain why certain species (shelduck, redshank, black-tailed godwit, teal, turnstone, oystercatcher and curlew) have been selected. NE recommended that relevant bird survey results are collated and presented by month to demonstrate the pattern of usage across the year and that the Applicant should consider data from bird survey Sector B of Immingham frontage.</p> <p>The Applicant [REP1-021] explained that all other assemblage species were screened out as they are considered rare or only occur infrequently and in low numbers in this area (representing <1% of the estuary-wide Wetland Bird Survey (WeBS) five-year mean peak). The Applicant also explained that Sector B is located 400m away from the construction zone and any birds in this area are out of the zone of influence of potential effects; however, to provided wider contextual data, Annex A.2 of the sHRA [REP1-012] was updated to provide data for Sector B. Table 1 of Annex A.1 sHRA [REP1-012] was updated to present survey results by month.</p> <p>The sHRA [REP1-012] was also amended to include the screening rational for SPA assemblage species in Appendix B. Following these updates, NE considered this matter resolved at DL1 [REP1-087].</p>	N/A – matter resolved
Humber Estuary SPA and Humber Estuary Ramsar			

3.10	<p>Operation</p> <p>Changes to waterbird foraging and roosting habitat as a result of the presence of marine infrastructure during operation on qualifying species</p>	<p>NE disagreed with the Applicant's conclusion of no AEoI (ID NE8 [RR-019]), noting that survey results indicate turnstone and black-tailed godwit using the area for roosting and feeding, requesting further information on the locations of the roosts and whether the function of these areas as roost sites will be affected by the development.</p> <p>The Applicant provided further explanation in [REP1-021] and Table 10 of the sHRA [REP1-012].</p> <p>In light of these updates, NE considered this matter resolved at DL1 [REP1-087].</p>	N/A – matter resolved
3.11	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds</p>	<p>NE (ID NE 19/19A [RR-019][REP3-112]) recommended that relevant bird survey results are collated and presented by month to demonstrate the pattern of usage across the year. Table 1 of Annex A.1 sHRA [REP1-012] was updated by the Applicant to present survey results by month.</p>	N/A – matter resolved
3.12	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds</p>	<p>NE (ID NE 19/19B [RR-019][REP3-112]) advised that the information to inform the appropriate assessment should provide further consideration of the potential impacts on black-tailed godwit and turnstone as they have been recorded in numbers over 1% of the estuary population in the area of intertidal mudflat between Immingham Oil Terminal (IOT) and the North Beck Drain.</p> <p>The Applicant [REP1-021] referred to paragraph 1.4.28, Figure A-7 and Table A-8 of Appendix A of the sHRA [APP-238] to explain that the foreshore between the IOT Jetty and the mudflat fronting North Beck Drain is only known to typically support very low numbers of</p>	N/A – matter resolved

		<p>SPA species roosting. The only species known to roost in this area in numbers exceeding 1% of estuary-wide populations is turnstone.</p> <p>Based on the information provided by the Applicant, NE [REP3-112] agreed that this matter in relation to the location of roosting areas for black-tailed godwit and turnstone had been addressed.</p>	
3.13	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds</p>	<p>NE (ID NE 19/19C [RR-019][REP3-112]) considered that one of the noise level measurements used is not representative of ambient noise levels in the relevant areas of the Humber Estuary for the Proposed Development and advised that noise levels are monitored at an additional location in closer proximity to the proposed works. The Applicant [REP1-021] confirmed that an additional project-specific ambient noise measurement would be collected within the Order Limits. Paragraph 4.10.23 of the sHRA [REP3-032] has been updated to include the project-specific background noise levels.</p> <p>In light of the additional noise level measurements provided in the sHRA [REP3-032], NE considered this matter resolved [REP4-054].</p>	N/A – matter resolved
3.14	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds</p>	<p>NE (ID NE 19/19D [RR-019][REP3-112]) considered that the 200m potential noise disturbance distance does not represent a precautionary approach and advised that the noise disturbance zone should be larger, such as 300m from a noise source.</p> <p>The Applicant [REP1-021] explained that the assessment of piling effects for the Proposed Development was specifically undertaken in the context</p>	N/A – matter resolved

		<p>of background noise levels in the Port of Immingham area, where noise levels in the range of 55 to 70dB are known to regularly occur on a daily basis. The Applicant [REP1-021] considered that local waterbird populations are therefore subjected to noise levels of between 55dB and 70dB repeatedly, with observations from ongoing ornithology surveys in the area suggesting that birds continue to feed in important numbers on the mudflats and are habituated to noise at these levels. In addition to known habituation of bird species to existing port-related activity and noise, the Applicant [REP1-021] argued that that construction restrictions based on a 200m zone rather than 300m zone are proportionate, given the proposed winter marine construction restriction and noise suppression system.</p> <p>NE [REP3-112] acknowledged that the use of a 200m disturbance buffer may be suitable in this instance as part of the suite of construction disturbance mitigation measures. However, NE [REP3-112] requested that the Applicant provide information relating to how the buffer will be implemented and monitored to ensure that the proposed suite of mitigation measures are effective.</p> <p>Following discussions with NE [REP4-054], the Applicant updated the sHRA [REP4-014] with agreed wording to ensure the approach is sufficiently precautionary. NE [REP4-054] agreed that the proposed approach is suitable provided these updates were added to the sHRA.</p>	
3.15	Construction	NE (ID NE19/19E [REP-019][REP3-112]) advised that the behavioural studies cited in the ES should not be relied upon in the assessment of potential impacts on	N/A

	Airborne Noise and Visual Disturbance to birds	<p>SPA birds from disturbance events and the assessment should consider sub-dispersive responses in more detail. However, NE [REP3-112][REP4-054][REP5-058] agreed that the impact of sub-dispersive responses would be adequately minimised through the provision of suitable mitigation measures, and therefore do not object to the conclusion on no AEOI.</p> <p>The Applicant [REP5-050] argued the evidence collated to inform the HRA is robust and includes a wide range of literature. The Applicant [REP5-050] also notes that sub-dispersive responses (without mitigation) were considered in detail in paragraph 4.10.27 of the sHRA [REP4-014] and both dispersive and sub-dispersive responses would be very limited with the implementation of the proposed mitigation.</p>	
3.16	Construction Airborne Noise and Visual Disturbance to birds	<p>NE (ID NE19/19F [REP-019][REP3-112]) advised that potential limitations for birds to relocate within the surrounding area due to development pressures in the area and limited availability of alternative feeding sites should be considered in the assessment. The Applicant [REP1-021] provided additional information to show that extensive areas of mudflat would be available and explained why potential effects on alternative feeding sites are predicted to be limited.</p> <p>In light of the additional information provided by the Applicant [REP1-021], NE considered this matter resolved [REP3-112].</p>	N/A – matter resolved
3.17	Construction	<p>NE (ID NE19/19G [REP-019][REP3-112]) requested that the Applicant clarify whether the noise assessment includes the combined effects of noise from terrestrial</p>	N/A – matter resolved

	Airborne Noise and Visual Disturbance to birds	<p>and marine works. The Applicant [REP1-021] explained that combined effects resulting from terrestrial and marine piling will be negligible and not considered to compromise any of the conservation objectives and concluded that there is no potential for AEOI on qualifying features. Paragraph 4.13.7 of the updated sHRA [REP1-012] was revised to include this information.</p> <p>Following these updates, NE considered this matter resolved [REP3-112].</p>	
3.18	Construction Airborne Noise and Visual Disturbance to birds	<p>NE (ID NE20 [RR-019] advised that programming of the marine construction works should be considered so that the most disturbing works are carried out in the summer and early autumn, with works that are less disturbing to the SPA birds taking place during the coldest months. The Applicant [REP1-021] explained that the construction programme has been designed around the proposed mitigation measures, a winter marine construction restriction will be put in place between 1 October and 31 March (for the approach jetty) to ensure that disturbing activities including piling, as well as all other construction activity on or near the foreshore will not take place during the winter months. However, less disturbing works may still be undertaken during these months.</p> <p>Paragraph 4.10.30 of the sHRA [REP1-012] was amended to extend the winter restriction to works taking place on the sea wall and landside jetty ramp instead of solely the approach jetty.</p> <p>NE [REP3-112][REP4-054][REP5-058] maintain their advice regarding programming of marine construction</p>	N/A

		<p>works but agree that potential impacts will be adequately minimised through the provision of suitable mitigation measures.</p> <p>The Applicant [REP5-050] maintained that the mitigation measures proposed are in line with NE's advice and the most potentially disturbing construction works (including piling) within 200m of the mean low water springs (MLWS) mark will be avoided between October and March inclusive.</p>	
3.19	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds- proposed mitigation</p>	<p>NE (ID NE21/21A [REP-019][REP3-112]) advised that the assessment of proposed mitigation measures should be revised in line with a more precautionary approach to assessing disturbance impacts from piling.</p> <p>The Applicant argued [REP1-021] (with reference to the information provided in response to ID NE 19) that the assessment of proposed mitigation is robust and has been based on established guidance and is precautionary in the context of the Proposed Development being located in close proximity to an existing operational port area.</p> <p>Following the provision of project-specific noise level measurements in the sHRA [REP3-032], NE [REP4-054] agreed that the assessment of proposed mitigation measures did not need to be revised.</p>	N/A – matter resolved
3.20	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds- proposed mitigation</p>	<p>NE (ID NE21/21B [REP-019][REP3-112]) explained that there is no robust evidence to suggest that soft start piling prevents disturbance caused by the noise and it is not generally used as a mitigation measure to reduce the impacts on SPA waterbirds.</p>	N/A

		<p>The Applicant [REP1-021][REP5-050] provided justification for the use of soft starts as part of an overall mitigation strategy rather than one of the primary mitigation measures in place, such as the construction restriction.</p> <p>NE [REP3-112][REP4-054][REP5-058] maintain their advice regarding soft start piling but agree that potential impacts will be adequately minimised through the provision of other suitable mitigation measures.</p>	
3.21	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds– proposed mitigation</p>	<p>NE (ID NE21/21C [REP-019][REP3-112]) advised that a precautionary approach should be taken to setting the timing of works to ensure that there is sufficient distance between the piling site and exposed mudflats (being used by SPA birds) when piling starts. NE [REP-019] recommended the use of Global Positioning System (GPS) or markers to identify the location of piles and therefore distance from the foreshore.</p> <p>The Applicant [REP1-021] and NE [REP3-112] explored the option of using GPS as a potential method that could be used to improve certainty about piling distances. At DL4, the Applicant updated the sHRA [REP4-014] with the commitment to use a digital GPS boundary to control restriction distances. Following this update, NE considered this matter resolved [REP4-054].</p>	<p>Paragraph 4.10.31 [REP4-014] states that restriction distances will be controlled through a digital Global Positioning System (GPS) boundary to monitor compliance. The Applicant is requested to signpost to where this is secured in the dDML?</p>
3.22	<p>Construction</p> <p>Airborne Noise and Visual Disturbance to birds– proposed mitigation</p>	<p>NE (ID NE21/21D [REP-019][REP3-112]) advised that that the cold weather restrictions should apply to all marine construction works, not just those located within 200m of the exposed intertidal foreshore. The Applicant [REP1-021] argued that it would not be necessary to stop all marine construction activity as part of the cold</p>	N/A

		<p>weather construction restriction as a lot of the work would be located well outside the zone of potential disturbance effects. However, the sHRA [REP1-012] was updated for the winter construction restriction to include the sea wall and landside jetty ramp.</p> <p>In their latest responses, NE [REP3-112][REP4-054][REP5-058] recommend that a more precautionary 300m buffer distance should be used during very severe weather, but do not consider this will have a material effect on the outcome of the assessment.</p> <p>The Applicant [REP5-050] remains of the opinion that the proposed package of mitigation measures would mitigate noise and visual disturbance impacts on SPA birds during construction to a level that would not be considered AEoI.</p>	
3.23	<p>Construction Airborne Noise and Visual Disturbance to birds– proposed mitigation</p>	<p>NE (ID NE21/21E [REP-019][REP3-112]) recommended that the cold weather construction restriction should be implemented after three days of consecutive freezing weather conditions (although it does not consider this will have a material effect on the outcome of the assessment).</p> <p>The Applicant argued [REP1-021] that the proposed cold weather construction restriction is based on the JNCC guidance for a seven day stop.</p> <p>NE [REP3-112][REP4-054][REP5-058] continue to recommend a shorter period and request that working restrictions should be triggered by data from local weather stations.</p>	<p><i>The Applicant [REP5-050] confirmed that the cold weather construction restriction would be based on records from a local weather station. How is this to be secured?</i></p>

		The Applicant [REP5-050] confirmed that the cold weather construction restriction would be based on records from a local weather station.	
3.24	Construction Airborne Noise and Visual Disturbance to birds– proposed mitigation	NE (ID NE21/21F/NE42 [REP-019][REP3-112][REP5-050]) recommended the use of a suitably qualified Ecological Clerk of Works (ECoW) during the construction period. The sHRA [REP3-032][REP4-014] was updated by the Applicant to confirm that an ECoW will be present on site during the construction period to ensure that agreed mitigation measures are adhered to. In their latest responses, NE [REP3-112][REP4-054][REP5-058] recommended that further details should be provided regarding the role of the ECoW, such as how they will monitor and implement any required measures.	<i>The sHRA confirms that a suitably qualified Ecological Clerk of Works will be present on site during the construction period. The Applicant is requested to signpost to where this is secured in the dDML?</i>
3.25	Operation Effects of airborne noise and visual disturbance to birds	NE (ID NE22 [RR-019]) advised that further assessment is required regarding operational noise and visual disturbance impacts on SPA birds during operation. NE also requested that the Applicant provide clarification regarding the disturbance terminology used in ES Chapter 10 [APP-052] to inform the sHRA [APP-238]. The Applicant [REP1-021] provided additional information regarding roosting, feeding and loafing birds on the intertidal area as well as information relating to diving birds offshore around vessel berths. This information was added to Table 28 of the updated sHRA [REP1-021]. The Applicant [REP1-021] also provided clarification about the disturbance terminology that had been used.	N/A – matter resolved

		In light of the additional information provided by the Applicant [REP1-021], NE considered this matter resolved [REP1-087].	
3.26	Construction Consideration of combined effects	NE (ID NE35 [RR-019]) advised that the assessment should provide more detail about whether the terrestrial construction noise will have combined effects with the marine construction noise and lead to increased levels of disturbance to SPA birds. The Applicant provided further detail in paragraph 4.13.7 of sHRA [REP1-012] to explain the potential for combined effects from terrestrial and marine construction noise to increase levels of disturbance to SPA birds. In light of the additional information provided, NE considered this matter resolved at DL3 [REP3-112].	N/A – matter resolved
3.27	Construction In-combination visual and noise disturbance to SPA birds	NE (ID NE39 [RR-019]) advised that the in-combination assessment should consider whether construction works, and piling works in particular, could be carried out at the same/ similar time as works associated with other relevant projects in the area, including IERRT. The sHRA [REP3-032] was updated to include additional information regarding in-combination visual and noise disturbance to SPA birds. Following these updates, NE considered this matter resolved [REP4-054].	N/A – matter resolved
Humber Estuary SAC			
3.28	Operation Changes to qualifying habitats as result of the	NE (ID NE12 [RR-019]) disagreed with the Applicant’s characterisation of the dredge site being classified as “impoverished” (paragraph 4.4.35 and 4.5.19 of [APP-238]). NE considered that although less diverse in nature, the intertidal and subtidal benthic communities	N/A – matter resolved

	<p>removal of seabed material during maintenance dredging</p> <p>Construction</p> <p>Indirect changes to qualifying habitats as a result of changes to hydrodynamic and sedimentary processes during capital dredge disposal</p>	<p>at the IGET dredge site are of low to moderate ecological value.</p> <p>The Applicant provided further explanation in [REP1-021]. Based on this information NE considered this matter resolved [REP1-087].</p>	
Humber Estuary SAC, Humber Estuary SPA, Humber Estuary Ramsar			
3.29	<p>Operation</p> <p>Air quality impacts – saltmarsh critical load</p>	<p>NE (ID NE32 [RR-019][REP3-112]) sought further information to determine whether the 20 kg/ha/yr critical load is the most appropriate critical load to assess air quality impacts on saltmarsh.</p> <p>The Applicant [REP1-021] referred to the results of a survey of saltmarsh in the Humber Estuary SSSI contained within an unpublished 2019 document ('Humber Estuary SSSI: NFEU Saltmarsh Surveys 2018') provided by NE to show that the saltmarsh habitat present is nitrogen-tolerant, and the use of a higher critical load is appropriate. Paragraph 4.7.19 of the sHRA was updated DL3 to include this additional information [REP3-032].</p>	N/A – matter resolved

		Based on the information provided, NE agreed that the critical loads used in the assessment are appropriate and considered this matter resolved [REP3-112].	
3.30	Operation Air quality impacts from marine vessels	NE (ID NE33/NE33A [RR-019] [REP3-112]) requested that further justification be provided to clarify how the assumptions used in the operational phase marine vessel assessment are representative of a realistic worst-case scenario. The Applicant [REP1-21][REP3-052] explained that the 292 vessels used in the modelling is a maximum number of vessel calls to the jetty per year and takes into account a number of factors, including the likely size of vessels accessing the jetty, tidal constraints for access to the berth and the amount of time a vessel is expected to be on berth to offload cargo. In light of this information, NE considered this matter resolved at DL4 [REP4-054].	N/A – matter resolved
3.31	Operation Air quality impacts from marine vessels	NE (ID NE33B [REP1-087]) sought to confirm the requirement to secure the maximum number of vessel movements in the dDCO. The Applicant [REP3-052][REP5-050] argued that it is not necessary to impose such a restriction and that whether or not the assumed maximum number of vessel calls is secured is not necessary to determine the robustness of sHRA. NE [REP4-054] advised that it is the role of the Inspectorate to determine whether the maximum number of vessel movements is adequately secured, as these values are relied upon in the HRA conclusions. NE [REP5-058] would welcome a Vessel Management and	N/A

		Monitoring Plan, to ensure that vessel movements remain within the assessed limits.	
3.32	Construction and operation Air quality impacts	<p>NE (ID NE34 [RR-019]) raised various comments and clarifications in relation to the assessment of air quality impacts (although they are satisfied that for this particular project it is unlikely to make a material difference to the outcome). The Applicant [REP1-012][REP5-050] proposed to submit a Technical Note to set out the source apportionment of site and vessel emissions to Project pollutant contributions. A Technical Note has not yet been submitted.</p> <p>The Applicant [REP1-012] provided justification for how it modelled the location of the flare stacks. Additional information regarding the potential emissions from flare stacks was also provided in paragraph 4.7.24 of the updated sHRA [REP4-014].</p> <p>NE [REP3-112][REP5-058] notes and accepts this justification but considers this should be incorporated into the sHRA.</p>	<p><i>The Applicant [REP1-012][REP5-050] proposed to provide Natural England with a Technical Note to set out the source apportionment of site and vessel emissions to Project pollutant contributions. The Applicant is requested to submit this to the Examination.</i></p>
3.33	Construction and operation In-combination assessment at appropriate assessment stage general comments	<p>NE (ID NE36 [RR-019][REP3-112]) considered that Tables 34, 35 and 36 of the sHRA, relating to in-combination effects at the AEoI stage, did not provide sufficient detail. NE considered the tables should identify where impacts have been fully avoided through mitigation and where there is still a residual impact that could act in combination, and where these exist, consider the residual effects of developments together.</p> <p>The Applicant provided updates to the sHRA [REP4-014] and [REP5-021], adding information on the combination of residual effects of all relevant projects.</p>	N/A

		At DL5, NE [REP5-058] confirmed that based on the updated assessments provided by the Applicant to NE, it agrees with the conclusions of the in-combination assessment for physical loss of (or change to) habitat, subject to agreed updates to the sHRA.	
3.34	Construction and operation Various pathways	NE (ID NE41 [RR-019]) advised that it would be useful to provide a summary of each of the European sites affected, including information relating to relevant mitigation measures. NE [REP-017] also recommended that the Applicant provide a schedule of mitigation measures that describes how mitigation measures would be implemented over the calendar year. The Applicant [REP-012][REP-021] updated Section 5 of the sHRA to include a summary of mitigation and whether the measures will completely avoid or reduce impacts to an acceptable level, and also provides a judgement on the confidence in mitigation effectiveness. A Waterbird Mitigation Effectiveness Summary was added to Appendix E of the updated sHRA [REP1-012] and included a schedule of the proposed seasonal restrictions on construction activity in Table E.2. NE [REP3-112] welcomed the additional information and considered this matter resolved.	N/A – matter resolved
3.35	Construction and operation Cumulative assessment	NE (ID NE52 [RR-019]) advised that an assessment of cumulative effects should also be provided in the HRA in relation to loss and fragmentation of SAC habitats; impacts of operational vessel traffic on marine mammals; increase in dredging.	N/A – matter resolved

		The Applicant provided additional information in response [REP1-021]. In light of this information, NE considered this matter resolved at DL3 [REP3-112].	
3.36	Operation Air quality – accidental releases of ammonia	NE (ID NE54 [REP3-112] advised that the Applicant address the accidental release of ammonia from an ecological perspective as a new impact pathway. The Applicant revised the sHRA to address this pathway (paragraph 4.7.24 [REP3-033]). In light of this information, NE considered this matter resolved at DL4 [REP4-054].	N/A – matter resolved

4 DEROGATIONS FROM THE REGULATIONS

4.1 Overview

4.1.1 The Applicant submitted a 'without prejudice' derogation case with its application [APP-236] due to a lack of agreement with NE with the conclusion of no AEoI during the pre-application stage, which relates to the following sites and features:

- Humber Estuary SAC - Estuaries (H1130) and Mudflats and sandflats not covered by seawater at low tide (H1140).
- Humber Estuary Ramsar - Criterion 1 – natural wetland habitats that are of international importance: The site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.

4.1.2 This document was updated at DL1 [REP1-008] and DL3 [REP3-030].

4.2 Alternative solutions

4.2.1 The Applicant provided its 'no alternative solutions' case in Section 2 [APP-236].

4.2.2 Section 2.2 sets out the need for the project, with reference to the National Policy Statement for Ports and Government's net zero obligations, and the objectives of the Proposed Development.

4.2.3 Section 2.4 provides information on alternative solutions, including a Do-nothing scenario, alternative locations outside and inside the Humber Estuary and the Port of Immingham, and alternative jetty designs. The feasibility of the alternatives and their ability to meet the objectives of the Proposed Development are discussed, and all options are discounted for not meeting the project objectives, with the exception of the alternative jetty design options.

4.2.4 Section 2.5 discusses the legal, technical and financial feasibility of the alternative jetty design options, presented in Table 1. Table 1 compares the Proposed Development to numbered design options in relation to their potential effects on the European site(s) and feature(s).

4.2.5 Section 2.6 provides the justification for the conclusion that there are no alternative solutions with lesser environmental effects.

Examination

- 4.2.6 ExQ1.6.5.1 [PD-008] requested further explanation of what the alternative jetty pile layout and orientation options in Table 1 of the Derogations Report [APP-236] comprised, and how they compared.
- 4.2.7 The Applicant revised the Derogations Report at DL1 [REP1-008] adding more information about the evolution of the jetty design, the features of the different alternatives, clarifying how they compare to the submitted design.
- 4.2.8 Since the application was submitted, the Applicant undertook further design work and concluded that the proposed design for the jetty (namely the diameter and spacing of the piles and the number of monopiles) was not technically feasible. Consequently, the Applicant submitted a Change Request [REP2-027] to make a change to the jetty design.
- 4.2.9 The Derogation Report was therefore updated further to take into account this change in jetty design as part of the change notification application [REP3-030].
- 4.2.10 As of DL5, no comments have been received from any IP on this matter.

4.3 IROPI case

- 4.3.1 The Applicant provided its IROPI case in Section 3 [APP-236]. The public interest benefits are described in section 3.2 and summarised as follows:
 - a. The national need to provide port capacity.
 - b. The need for port capacity to serve the energy sector in the Humber.
 - c. The need to achieve energy security through a diversity of technologies.
 - d. The urgent need to scale-up hydrogen production capability.
 - e. The urgent need for carbon capture and storage technologies.
- 4.3.2 Section 3.3 sets out the Applicant's case for how the benefits outweigh and override the harm to the European sites.

Examination

- 4.3.3 ExQ1.6.1.3 [PD-008] requested further evidence from the Applicant to demonstrate how the Proposed Development would meet its stated green credentials into order to satisfy the IROPI tests.
- 4.3.4 The Applicant [REP1-027][EV5-006][EV5-007] argued that the public interest benefits go beyond the green credentials or matters relating to net zero and include the need for additional port capacity. The Applicant also contends that the potential benefits of a project do not need to be legally secured in order to be treated as material considerations by the decision-maker (with reference to (Substation Action Save East Suffolk Ltd) v Secretary of State For Business, Energy And Industrial Strategy

[2022] EWHC 3177) (Appendix D of Appendix 2 of [REP1-023]). An amended Derogations Case was submitted at DL1 [REP1-010] which provides further justification on the green credentials of the Proposed Development.

- 4.3.5 As of DL5, no comments have been received from any IPs with respect to this aspect of the application.

4.4 Compensatory measures

- 4.4.1 The details of the compensatory measures proposed by the Applicant were provided in Section 4 [APP-236]. The Applicant is proposing compensatory habitat at the Outstrays to Skeffling Managed Realignment Scheme (OtSMRS), 13.5km east of the Proposed Development and immediately adjacent to the Humber Estuary European sites. Plate 1 denotes the location of the compensation site, in relation to the Proposed Development and the European sites.
- 4.4.2 The OtSMRS (as a whole) aims to create approximately 175ha of intertidal habitat (mudflats and saltmarsh) and 75ha wet grassland. Paragraph 4.3.8 explains that the permanent loss of intertidal habitats (0.0541ha, direct and indirect, from the Proposed Development in combination with IERRT) associated with the Proposed Development would be compensated through habitat creation at a 3:1 ratio (comprising a habitat parcel of 1ha in size).
- 4.4.3 Paragraph 4.3.10 explains that the physical delivery of the compensation scheme does not form part of the Proposed Development as this is occurring under a separate process which has already been consented.
- 4.4.4 Section 4.6 explains how the compensatory measures would be secured. It states that the purchase of the land has been completed, and future monitoring requirements for the site have been budgeted for and agreed between the delivery partners (ABP and the Environment Agency). Paragraph 4.6.3 states that the area identified is intended to be allocated to the Proposed Development and secured through a separate legal agreement (a section 106 unilateral undertaking from the Applicant to the relevant planning authority (East Riding of Yorkshire Authority) covenanting to allocate 1 hectare of intertidal habitat at the OtSMRS site to the Proposed Development, identifying its location and providing for its ongoing monitoring and management). Paragraph 4.9.1 states that (if they are required) the delivery of the compensatory measures will be a Requirement of the DCO.
- 4.4.5 Section 4.5 describes the programme of works. The compensatory scheme was granted consent in August 2019, construction commenced in 2021, and breaching of the site is proposed for 2024 allowing seawater to inundate the site, expecting transition towards full intertidal habitats in 2026.

Examination

- 4.4.6 Additional documents relating to the OtMRS were submitted during the Examination:
- The Applicant explained that it was unable to provide a Management Plan for OtMRS [REP1-027], however in response to ExQ1.6.4.2 and Hearing Action Point 4 [EV6-008] a copy of the OtMRS Environmental Statement (Parts 1 and 2) (Appendix 2 [REP1-027]) and the Environmental Action Plan (Appendix 1 [REP3-064]) were submitted.
 - The Applicant also provided (in response to ExQ.HRA2.1 [PD-014]) a copy of the planning permission decision notice (Appendix 2 [REP4-047]) and approvals in respect of the pre-commencement conditions discharged by the Environment Agency with the local authority – East Riding of Yorkshire Council (Appendices 3 and 4 [REP4-047]).
 - Following discussion at ISH4 [REP3-070] on the means of securing the compensation, the Applicant submitted a draft Section 106 Unilateral Undertaking to secure the delivery of the measures [REP3-078].
- 4.4.7 ExQ1.6.4.1 [PD-008] asked the Applicant to explain (a) how the compensatory measures would provide additional habitat (as they have previously been consented); and b) confirm that there is no double counting of compensatory habitat from other developments.
- 4.4.8 The Applicant argued [REP1-027][EV6-002] that:
- The OtSMRS is an ongoing project.
 - 1Ha is “earmarked” for IGET and will either be provided as compensatory habitat should the SoS find it cannot exclude AEOI, or as enhancement if the SoS finds no AEOI.
 - It considers its ownership of part of the OtSMRS as a “Habitat Bank” to deliver compensation/enhancement against future projects.
 - It is “additional” because it was their objective from inception to draw down on this habitat resource in relation to future port projects. Furthermore, it is more ecologically effective to manage compensatory measures this way because it means that the habitat is already in place before any works start, thereby creating the continuous habitat.
- 4.4.9 To elaborate on these points, the Applicant provided a note on enhancement and compensation and the principle of habitat banking (Appendix 1 [REP3-070]), referring to where similar practice has been incorporated in other projects. The Applicant also confirmed (in response

to ExQ.HRA2.2 [PD-014]) that both the IERRT and IGET projects have been allocated a separate 1ha plot within the OtSMRS [REP4-047].

- 4.4.10 ExQ1.6.4.2 [PD-008] asked the Applicant to explain how the coherence of the National Site Network would be maintained if the compensatory habitat at OtMRS would not be fully functional until a year after the start of construction (see programme of works described above).
- 4.4.11 The Applicant argued that the peak of marine construction works for the Project is expected to occur in 2025 to 2026 (Years 1–2). Habitat loss associated with the footprint of the piles is likely to occur over a 13-month period with peak losses occurring in 2026, once piling is complete. The Applicant also provided evidence that other habitat creation schemes in the area were quick to establish.
- 4.4.12 ExQ1.6.4.3 [PD-008] asked NE whether it considered the Applicant's proposed compensatory measures would be sufficient to deal with the scale of potential harm to European Sites. NE stated that it regarded the proposed ratio to be appropriate in this case [REP1-087] and that it considered it would be appropriate for the Applicant to be required to submit confirmation demonstrating compensation delivery once the habitat has been established.
- 4.4.13 ExQ.HRA2.2 requested the Applicant to confirm a discrepancy between the quantity of compensatory habitat provided in the Derogations Report [REP3-030] compared to the draft Unilateral Undertaking [REP3-078]. In response, the draft Unilateral Undertaking was updated [REP4-041] to refer to a figure of 0.1623ha of intertidal mudflat to be allocated as compensatory habitat at OtSMRS (bringing it in line with the Derogation Report).
- 4.4.14 As of DL5, no comments have been received from any IPs with respect to this aspect of the application.

5 CONCLUDING REMARKS

- 5.0.1 This RIES is based on information submitted throughout the Examination by the Applicants and IPs, up to DL5 (11 July 2024), in relation to potential effects on European sites. It should be read in conjunction with the Examination documents referred to throughout.
- 5.0.2 The RIES has identified gaps in the ExA's understanding related to 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 Table 3.1.
 - Confirmation whether the ExA's understanding of screening and adverse effects conclusions at point of RIES publication.
- 5.0.3 Comments on the RIES must be submitted for D7 (15 August 2024).