

Date: 04 December 2023  
Our ref: 455050  
Your ref: TR030008



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**BY EMAIL ONLY**

Dear Inspector,

**NSIP Reference Name / Code: TR030008**

**Title: Natural England's comments in respect of the Immingham Green Energy Terminal Project, promoted by Associated British Ports.**

**Examining authority's submission deadline 04 December 2023**

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

For any further advice on this consultation please contact the case officer Alice Megaw [REDACTED] [@naturalengland.org.uk](mailto:[REDACTED]@naturalengland.org.uk) and copy to [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Yours faithfully,

Alice Megaw

Senior Adviser

Yorkshire and Northern Lincolnshire Area Team

## **Natural England's Relevant Representations Version**

PART I: Summary and Conclusions of Natural England's advice.

PART II: Natural England's detailed advice (starting on page 10).

## Part I: Summary and Conclusions of Natural England's advice

### Summary of Natural England's Advice

Natural England considers that the applicant has provided insufficient evidence and is not yet satisfied that the following issues have been addressed:

- **Internationally designated sites**
  - Lighting effects on coastal waterbirds
  - In-combination assessment at screening stage
  - Direct loss of qualifying intertidal habitat
  - Direct loss of qualifying subtidal habitat
  - Assessment of SPA qualifying features
  - Changes to waterbird foraging and roosting habitat as a result of the presence of marine infrastructure during operation
  - Effects of airborne noise and visual disturbance to birds during construction
  - Airborne noise and visual disturbance to birds during construction – Programming of works
  - Airborne noise and visual disturbance to birds – Proposed mitigation
  - Effects of airborne noise and visual disturbance to birds during operation
  - Underwater noise and vibration during marine piling on qualifying species of fish
  - Air quality impacts from traffic
  - Air quality impacts from marine vessels during construction
  - Air quality impacts – saltmarsh critical load
  - Air quality impacts from marine vessels during operation
  - Consideration of combined effects - noise and visual disturbance to birds during construction
  - In-combination assessment at appropriate assessment stage
  - Cumulative underwater noise disturbance and barrier effects to grey seal
  - Air quality – in combination assessment
  - HRA – conclusions
  - HRA – cumulative assessment
- **Nationally designated sites**
  - In-combination air quality impacts from traffic for Hatfield Chase Ditches SSSI
- **Soils and agricultural land**
  - Approach to sustainable soil management

- 1.1. Our comments are set out against the following sub-headings which represent our key areas of remit:
- Internationally designated sites
  - Nationally designated sites
  - Biodiversity net gain
  - Protected species
- 1.2. Throughout our advice we will be using colour coding to denote the level of potential risk or significance of impact associated with our comments. They are as follows:
- **Red** are those where there are fundamental concerns which it may not be possible to overcome in their current form.
  - **Amber** are those where further information is required to determine the impacts of the project and allow the Examining Authority to properly undertake its task and/or where further information is required on mitigation/compensation proposals in order to provide a sufficient degree of confidence as to their efficacy.
  - **Yellow** are those where Natural England does not agree with the Applicant's position or approach. We would ideally like this to be addressed but are satisfied that for this particular project it is unlikely to make a material difference to our advice or the outcome of the decision-making process. However, we reserve the right to revise our opinion should further evidence be presented. It should be noted by interested parties that whilst these issues/comments are not raised as significant concerns in this instance, it should not be understood or inferred that Natural England would be of the same view in other cases or circumstances.
  - **Green** are those which have been successfully resolved (subject always to the appropriate requirements being adequately secured).
  - **Grey** are notes for Examiners and/or competent authority.

Natural England has been working with Associated British Ports (ABP) to provide advice and guidance on the Immingham Green Energy Terminal (IGET) project since 2022 through Natural England's Discretionary Advice Service. Natural England has agreed to attend meetings with the Developer with a view to progressing Statements of Common Ground as part of the Examination process and to try to resolve outstanding issues ahead of the Examination.

Part I of these representations provides an overview of the issues and a summary of Natural England's advice. Section 2 identifies the designated sites and natural features for which there may be impact pathways for this application.

Part II of these representations sets out all the significant issues which remain outstanding, and which Natural England advises should be addressed by ABP and the Examining Authority as part of the Examination process. These are primarily issues on which further information would be required in order to allow the Examining Authority to properly undertake its task or where further work is required to determine the effects of the project and to develop mitigation proposals and to potentially consider compensation proposals to provide a sufficient degree of confidence as to their efficacy.

Natural England will continue discussions with ABP to seek to resolve these concerns and agree outstanding matters in a Statement of Common Ground. Failing satisfactory agreement, Natural England advises that the matters set out in Section 4 will require consideration by the Examining Authority as part of the Examination process.

The Examining Authority may wish to ensure that the matters set out in these relevant representations are addressed as part of the Examining Authority's first set of questions to ensure the provision of information early in the examination process.

Due to the extensive documentation submitted for review within the consultation period, in addition to resource constraints within the team, Natural England has prioritised detailed review of key documents and associated figures, including 7.6 Shadow Habitats Regulations Assessment (dated September 2023) (hereafter 'the shadow HRA'). Therefore, we may have additional comments to make in our Written Representations, for example if relevant information has not been included in the shadow HRA document.

Natural England will provide comments on the draft Development Consent Order (DCO) and Deemed Marine Licence (DML) and associated documents in our Written Representations. At this stage, we advise that further information (outlined in Part II) is required to determine our comments on these documents.

## **2. The natural features potentially affected by this application**

### **Internationally designated sites**

In relation to SPAs and SACs, the assessment provisions of the Conservation of Habitats and Species Regulations 2017 (and the Offshore Habitat Regulations) require that a competent authority may only agree to a plan or project of this nature after having ascertained, on the basis of an appropriate assessment, that it will not affect the integrity of the site(s). By this it is meant that such a plan or project may be granted authorisation only on the condition that the competent authority is certain, beyond reasonable scientific doubt, that it will not adversely affect the integrity of the site(s) concerned<sup>1</sup>. On the basis of the information submitted, Natural England is not yet satisfied for 'amber' issues identified in the text below that it can be ascertained beyond reasonable scientific doubt that the project would not have an adverse effect alone or in-combination on the integrity of the following internationally designated sites:

- Humber Estuary Special Area of Conservation (SAC)
- Humber Estuary Special Protection Area (SPA)
- Humber Estuary Ramsar

Further information is required to assess the following impact pathways for the Humber Estuary designated sites:

- Lighting effects on coastal waterbirds ('amber') (NE2)
- In-combination assessment at screening stage ('amber') (NE3)
- Direct loss of qualifying intertidal habitat ('amber') (NE4)
- Direct loss of qualifying subtidal habitat ('amber') (NE6)
- Assessment of SPA qualifying features ('amber') (NE7)
- Changes to waterbird foraging and roosting habitat as a result of the presence of marine infrastructure during operation ('amber') (NE8)

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<sup>1</sup> CJEU Case no. C-127/02. Landelijke Vereniging tot Behoud van de Waddenzee & Nederlandse Vereniging tot Bescherming van Vogels –v- Staatssecretaris van andbouw, Natuurbeheer en Visserij [2004].

- Changes to qualifying habitats as result of the removal of seabed material during maintenance dredging ('amber') (NE13)
- Effects of airborne noise and visual disturbance to birds during construction ('amber') (NE19)
- Airborne noise and visual disturbance to birds during construction – Programming of works ('amber') (NE20)
- Airborne noise and visual disturbance to birds during construction– Proposed mitigation ('amber') (NE21)
- Effects of airborne noise and visual disturbance to birds during operation ('amber') (NE22)
- Underwater noise and vibration during marine piling on qualifying species of marine mammals ('amber') (NE23)
- Underwater noise and vibration during marine piling on qualifying species of fish ('amber') (NE25)
- Air quality impacts from traffic - ('amber') (NE30)
- Air quality impacts from marine vessels during construction ('amber') (NE31)
- Air quality impacts – saltmarsh critical load ('amber') (NE32)
- Air quality impacts from marine vessels during operation ('amber') (NE33)
- Consideration of combined effects - noise and visual disturbance to birds during construction ('amber') (NE35)
- In-combination assessment at appropriate assessment stage ('amber') (NE36)
- In-combination assessment - Underwater noise and vibration during marine piling on qualifying species of marine mammals ('amber') (NE37)
- Cumulative underwater noise disturbance and barrier effects to grey seal ('amber') (NE38)
- In-combination assessment – air quality ('amber') (NE39)
- HRA – conclusions ('amber') (NE40)
- HRA – Cumulative assessment (C and O) ('amber') (NE52)

Natural England has also noted a number of 'yellow' issues in relation to the Humber Estuary designated sites. As stated in section 1, we would ideally like these to be addressed, but we are satisfied that for this particular project it is unlikely to make a material difference to our advice or the outcome of the decision-making process. Please find a summary of each 'yellow' issue below, and refer to Table 1 for further details:

- General comment on benthic assessment ('yellow') (NE12)
- Introduction of non-native species during operation ('yellow') (NE29)
- Air quality impacts – overall comments ('yellow') (NE34)
- Sensitivity of ornithology receptors ('yellow') (NE42).

Natural England is satisfied that 'green' issues are unlikely to result in adverse effects on the integrity (AEoI) of the Humber Estuary designated sites, subject always to the appropriate mitigation / compensation as outlined in the application documents being secured adequately. Please find a summary of each 'green' issue below, and refer to Table 1 for further details:

- General screening approach ('green') (NE1)
- Direct loss of supporting intertidal habitat on qualifying species ('green') (NE5)
- Changes to qualifying habitats as a result of the removal of seabed material during capital dredging ('green') (NE9)

- Changes to qualifying habitats as a result of sediment deposition during capital dredging ('green') (NE10)
- Changes to qualifying habitats as a result of sediment deposition during capital dredge disposal ('green') (NE11)
- 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 ('green') (NE14)
- Indirect changes to qualifying habitats of changes to hydrodynamic and sedimentary processes during capital dredge disposal ('green') (NE15)
- Direct changes to qualifying habitats beneath marine infrastructure due to shading ('green') (NE16)
- Potential effects of elevated SSC during capital dredging on qualifying habitats and species ('green') (NE17)
- Potential effects of the release of contaminants during capital dredging on qualifying habitats and species ('green') (NE18)
- Effects of underwater noise and vibration during capital dredge and dredge disposal on qualifying fish during construction ('green') (NE26)
- Effects of underwater noise and vibration during capital dredge and dredge disposal on qualifying marine mammals during construction ('green') (NE27)
- Introduction of non-native species during construction ('green') (NE28)
- Potential effects of maintenance dredging on water quality ('green') (NE50).

Natural England has also included a 'grey' issue, which includes notes for Examiners and/or competent authority. Please find a summary of each 'grey' issue below, and refer to Table 1 for further details:

- South Humber Gateway Mitigation Strategy ('grey') (NE43).

Natural England is satisfied that the following 'green' issue is unlikely to result in adverse effects on the integrity (AEoI) of The Wash and Norfolk Coast SAC designated site, subject always to the appropriate mitigation / compensation as outlined in the application documents being secured adequately. Please find a summary of each 'green' issue below, and refer to Table 1 for further details:

- Underwater noise effects on marine mammals ('green') (NE24).

## **Nationally designated sites**

Natural England's position regarding nationally designated sites is summarised below. Further detail on our reasoning for this is given against each impact pathway in Part II.

On the basis of the information submitted in relation to these sites, Natural England is not yet satisfied that the project is not likely to damage features of interest of the following nationally designated sites:

- Humber Estuary SSSI
- North Killingholme Haven Pits SSSI
- Hatfield Chase Ditches SSSI

We note that the Humber Estuary SSSI nationally designated site features that are affected by this proposal are broadly the same as the internationally designated site features. Please refer to the points in the 'Internationally designated sites' section above for all 'amber', 'yellow' and 'grey' issues, that also apply to the Humber Estuary SSSI.

Further information is required to assess the following impact pathways for other nationally designated sites:

- Air Quality impacts from traffic for Hatfield Chase Ditches SSSI ('amber') (NE44).

Please refer to 'Internationally designated sites' section above and Table 1, for 'green' issues that Natural England consider are unlikely to damage or destroy the interest features for which the relevant nationally designated sites have been notified, subject to the appropriate mitigation as outlined in the application documents being secured adequately.

In addition, Natural England is satisfied that the following 'green' issue is unlikely to damage or destroy the interest features of The Lagoons SSSI, subject always to the appropriate mitigation / compensation as outlined in the application documents being secured adequately. Please find a summary of this 'green' issue below, and refer to Table 1 for further details:

- SSSI assessment – The Lagoons SSSI little tern ('green') (NE45).

## **Protected species**

Natural England is not providing bespoke advice on the protected species information provided in the Environmental Statement (ES) for this project. Please refer to Table 1 for a summary of our standing advice ('grey') (NE49).

## **Biodiversity Net Gain**

Natural England's position regarding provision of Biodiversity Net Gain (BNG) is summarised below. Further detail on our reasoning for this is given in Part II:

- Although BNG is not yet a mandatory requirement for NSIPs, we strongly recommend that BNG provision is secured through this development ('grey') (NE51).

## **Soils and Agricultural Land**

Natural England's position regarding soils and agricultural land is summarised below. Further detail on our reasoning for this is given in Part II.

One the basis of the information submitted, Natural England is not yet satisfied with the following soils and best and most versatile agricultural land issues:

- Approach to sustainable soil management ('amber') (NE48).

Natural England has also noted a number of 'yellow' issues in relation to the Soils and Agricultural Land. As stated in section 1, we would ideally like these to be addressed, but we are satisfied that for this particular project it is unlikely to make a material difference to our advice or the outcome of the decision-making process. Please find a summary of each 'yellow' issue below, and refer to Table 1 for further details:

- The Agricultural Land Classification (ALC) survey coverage ('yellow') (NE46)
- Other ALC survey report comments ('yellow') (NE47).

## **3. Natural England's overall conclusions**

Natural England's advice is that there are a number of matters which have not been resolved satisfactorily as part of the pre-application process that must be addressed by Associated British Ports and the Examining Authority as part of the Examination and consenting process before development consent can be granted, as summarised in Section 2 above and outlined in further detail in Part II below.



Some of these matters are important enough to mean that if they are not satisfactorily addressed it would not be lawful to permit the project due to its impacts on SAC, SPA, Ramsar and SSSI interests. The specific concerns in relation to each are detailed in Part II.

## Natural England's Relevant Representations

### 4. Part II: Natural England's detailed advice

4.1 Part II, Table 1 of these representations expands upon the detail of all the significant issues ('amber' issues) which remain outstanding, and includes our advice on pathways to their resolution where possible. Table 1 also shows 'yellow', 'grey' and 'green' issues. Please refer to Part I for definitions of these.

4.1.1 Natural England will continue engaging with the Applicant to seek to resolve outstanding concerns throughout the Examination. Natural England advises that the matters indicated as 'amber' will require consideration by the Examining Authority during the Examination.

#### Natural England's (NE) Relevant Representations, Part II, Table 1

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE1	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – general screening approach (C and O)	Natural England agrees with the information provided in Table 2 of the shadow HRA regarding the qualifying features relevant to the screening assessment. We broadly agree with the conclusions in Tables 3 – 5 regarding the potential for likely significant effects on the relevant designated sites, except where detailed comments are provided below (key issue ref NE2 and NE3).	No further information required.	<b>'Green'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>• Greater Wash SPA</li> <li>• The Wash and North Norfolk Coast SAC</li> </ul>				
NE2	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – screening comments - Lighting effects on coastal waterbirds (C and O)	Natural England agrees that there is evidence to suggest that there can be benefits of lighting during hours of darkness for wintering wading birds in increasing the amount of foraging time available. However, it is a complex situation and it is not yet known how artificial lighting during hours of darkness might affect the survival of wintering waders ( <a href="#">Jolkkonen et al., 2023</a> ). Therefore, we advise that this justification provided in Table 4 of the shadow HRA is not sufficient to rule out likely significant effects on SPA birds from lighting during construction and operation, particularly as the proposed development will introduce additional lighting into previously unlit areas of the Humber Estuary designated sites. Therefore, further assessment should be provided on potential impacts of lighting on SPA birds.	Further information required to determine requirement for mitigation.	‘Amber’

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>Natural England also notes that the flare stacks mentioned within Section 2.2.1 of Appendix 2.B: Lighting Assessment Report are not addressed within Chapter 10 Ornithology or the HRA. There is evidence that birds can be affected by such structures, sometimes with extreme consequences where large numbers are drawn to the flame and get incinerated. Therefore, Natural England advises that the potential impacts of the flare stacks on SPA birds are assessed in the HRA.</p>		
NE3	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> <li>• Greater Wash SPA</li> <li>• The Wash and North Norfolk Coast SAC</li> </ul>	<p>HRA screening comments – In-combination assessment at screening stage (C and O)</p>	<p>Natural England highlights that the shadow HRA does not appear to include an in-combination assessment following the screening stage of the HRA. Tables 3 to 5 in the shadow HRA identify whether there will be a significant effect. The tables do not identify whether this effect will be 'alone and/ or in combination'. The in-combination requirement makes sure that the effects of numerous proposals, which alone would not result in a significant effect, are assessed to determine whether their combined effect would be significant enough to require more detailed assessment.</p> <p>Therefore, where there are small effects which are not significant alone, these should be assessed alongside small effects of other projects which were not significant alone. Relevant information from other chapters, such as the Chapter 25: Cumulative and In-Combination Effects, should be incorporated into this assessment.</p>	<p>Further information required to determine requirement for mitigation.</p>	<p><b>'Amber'</b></p>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			In particular, we advise that an ‘in combination’ assessment should be carried out with the Immingham Eastern RORO Terminal NSIP for the relevant impact pathways.		
NE4	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - The potential for an AEol due to the direct loss of qualifying intertidal habitat (C)	Natural England advise that further information is required to determine whether a conclusion of no AEol from direct loss of intertidal habitat can be reached (Table 7 in the shadow HRA). The loss of habitat may be considered small, however it will nonetheless still represent an appreciable but minor effect on the habitat. We advise that the appropriate assessment should consider ecological impacts of the habitat loss in more detail and refer to targets for the relevant features of the SAC, rather than relying on the relative size of the loss alone to determine whether adverse effect on integrity can be ruled out. Further information may be found in the <a href="#">Supplementary Advice for the Humber Estuary SAC</a> .	Further information required.	<b>‘Amber’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
<b>NE5</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - The potential for an AEol due to the direct loss of supporting intertidal habitat on qualifying species  (C)	Table 8 of the shadow HRA identifies that there will be no adverse effect on integrity (AEol) on bird species which are SPA/ Ramsar site features. Natural England agrees with this conclusion, based on the information provided.	No further information required.	<b>'Green'</b>
<b>NE6</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - The potential effects of the direct loss of qualifying subtidal habitat  (C)	Natural England advise that it is not possible to agree with the conclusion of no AEol for this impact pathway on subtidal habitat (Table 9 in the shadow HRA). The loss of habitat may be considered small, however it will nonetheless still represent an appreciable but minor effect on the habitat. We advise that the appropriate assessment should consider ecological impacts of the habitat loss in more detail and refer to targets for the relevant features of the SAC, rather than relying on the relative size of the loss alone to determine whether adverse effect on integrity can be ruled out. Further information may be found in the <a href="#">Supplementary Advice for the Humber Estuary SAC</a> .	Further information required.	<b>'Amber'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE7	<b>International designated sites</b> <ul style="list-style-type: none"> <li>Humber Estuary SPA</li> </ul>	HRA – SPA qualifying features (C and O)	<p>Natural England advises that the most recent list of component species of the Humber Estuary SPA waterbird assemblage (Appendix A) should be referred to in determining the relevant features, with justification provided where impacts on a more limited list of species are assessed.</p> <p>We note that the species identified for assessment in the HRA include shelduck, redshank, black tailed godwit, teal, turnstone, oystercatcher and curlew. However, we advise that clarity should be provided on why these species have been selected. Natural England considers that all relevant species recorded within the sector should be scoped in.</p> <p>We also highlight that consideration may also need to be given to Sector B bird survey data as this is approximately 280m from the terminal construction zone. Therefore, the assessment should be refined once the exact location of the new jetty is known.</p> <p>Natural England recommends that the relevant bird survey results are collated and presented by month to demonstrate the pattern of usage across the year.</p>	Further information required.	‘Amber’
NE8	<b>International designated sites</b> <ul style="list-style-type: none"> <li>Humber Estuary SPA</li> </ul>	HRA - The potential effects due to changes to waterbird foraging and roosting	Table 10 of the shadow HRA identifies that there will be no adverse effect on bird species which are SPA/ Ramsar site features. Natural England recognises that the red line boundary of	Further information required to determine	‘Amber’

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> </ul>	<p>habitat as a result of the presence of marine infrastructure during operation on qualifying species</p> <p>(O)</p>	<p>the project includes a small proportion of the mudflat habitat available in bird survey sector C.</p> <p>However, bird surveys have identified that turnstone and black tailed godwit use the Immingham Oil Terminal to North Black Drain mudflat for roosting and feeding. Therefore, we advise that further information is needed, particularly on the locations of these roosts and whether the function of these areas as roost sites will be affected by the development. Consideration should be given to potential changes to the foraging and roosting habitat within and outside the red line boundary.</p>	<p>requirement for mitigation.</p>	
<b>NE9</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> <li>Humber Estuary Ramsar</li> </ul>	<p>HRA - The potential effects of changes to qualifying habitats as a result of the removal of seabed material during capital dredging</p> <p>(C)</p>	<p>Natural England advises that although we agree with the conclusions reached in Table 11 within the shadow HRA of no AEol for this impact pathway, the dredging and subsequent deposition should be timed with the tide and circulation timings following the guidelines of safe disposal in the site. We recommended utilising a staggered approach for disposal of the seabed material with respect to the information provided in section 9.8.36 regarding the sensitivity of the organisms to sediment deposition which are present at the dredge site.</p>	<p>No further information required.</p>	<b>'Green'</b>



NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
<b>NE10</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – The potential effects of changes to qualifying habitats as a result of sediment deposition during capital dredging  (C)	Natural England notes that based on evidence provided in relevant MarESA assessments, the characterising benthic organisms recorded within the dredge area are considered tolerant to sediment deposition of at least 50 mm and agrees with the conclusion detailed in Table 12 the shadow HRA of no AEol for this impact pathway.	No further information required.	<b>‘Green’</b>
<b>NE11</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - Changes to qualifying habitats as a result of sediment deposition during capital dredge disposal  (C)	Natural England notes that the sediment deposition changes which are to occur in the capital dredge disposal ground is predicted to be in the range of 1 to 2 mm at distances of up to 1km from the disposal sites.  As referenced in section 4.4.14, the faunal community at the disposal site can tolerate sediment deposition in the region of 5 cm. Sedimentation at this scale is unlikely to result in significant smothering effects to most faunal species with recoverability expected to be high. It is acknowledged that full recolonisation is expected to take somewhere in the region of 6 months to 1-2 years, depending on the species.	No further information required.	<b>‘Green’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>Local changes to the bathymetry (as a result of material disposal to the bed) within the disposal site will be small in the context of the existing depths. As is currently the practice, disposal activity will be targeted to the deeper areas within the site, ensuring that bed level changes are not excessive in any one area, thus minimising the overall change.</p> <p>Natural England agree that with the assessment provided in Table 13 of the shadow HRA that the impacts will be small scale or short lived and is not likely to cause an adverse effect on integrity of the Humber SAC/Ramsar.</p>		
NE12	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> </ul>	HRA – comment on benthic assessment (C)	<p>The shadow HRA frequently refers to impoverished benthic communities being present at both the dredge and disposal sites i.e., 4.4.35, 4.4.47 and 4.5.19.</p> <p>Natural England agrees that the disposal site is impoverished, however we disagree with the dredge site being classified as impoverished. Although less diverse in nature, the intertidal and subtidal benthic communities at the Immingham Green Energy Terminal dredge site are of low to moderate ecological value, which is consistent with other similar biotopes previously sampled by the Institute of Estuarine and Coastal Studies (IECS) in 2015 and Environment Agency (EA) in 2016 within the Humber Estuary SAC.</p>	Further information welcomed.	'Yellow'

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE13	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - The potential effects of changes to qualifying habitats as a result of the removal of seabed material during maintenance dredging  (O)	Natural England requires further information to determine whether the maintenance dredging operation has the potential to result in an AEoI. The following information relating to the maintenance dredge regime needs to be provided: <ul style="list-style-type: none"> <li>• Number of times per year maintenance dredging will be carried out at the site</li> <li>• Total maintenance dredge area and its location in relation to the project site.</li> </ul> Furthermore, in section 4.4.35, we do not agree with the statement that the seabed in the project area is of limited ecological value. The seabed at the Port of Immingham is part of a designated feature of the Humber Estuary SAC (Subtidal muddy sand), which primarily constitutes the project area and is a sub-type of the Annex I notified feature “H1110 Sandbanks which are slightly covered by sea water all the time” and is part of the Humber Estuary SAC.	Further information required.  A map of the location of the anticipated maintenance dredging and more information on the dredge regime should be provided.	<b>‘Amber’</b>
NE14	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> </ul>	HRA - Indirect loss or change to qualifying habitats and species as a result of changes to hydrodynamic and sedimentary	Natural England is satisfied that the effects of the project works on the hydrodynamic and sedimentary processes will be small in scale and are not likely to cause an adverse effect on integrity of the Humber SAC (Table 15 of the shadow HRA).	No further information required.	<b>‘Green’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	processes as a result of the marine works (C)			
<b>NE15</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - Indirect changes to qualifying habitats of changes to hydrodynamic and sedimentary processes during capital dredge disposal  (C)	<p>The disposal of capital dredge material will be evenly deposited at the most central and deepest areas at the dredge disposal sites (HU060 and HU056). This will minimise the initial reduction in water depth and any environmental changes at these disposal sites. Local changes to the bathymetry (as a result of material disposal to the bed) within the disposal site will be small in the context of the existing depths.</p> <p>Natural England agrees that changes to bathymetry at the dredge disposal site will be small and is not likely cause an adverse effect on integrity of the Humber SPA/ SAC (Table 16 of the shadow HRA).</p>	No further information required.	<b>‘Green’</b>
<b>NE16</b>	<b>International designated sites</b>	HRA - Direct changes to qualifying habitats beneath marine	Natural England is satisfied that shading will not cause any direct changes to qualifying habitats beneath the marine infrastructure and is not likely to cause an adverse effect on integrity of the Humber SAC (Table 15 of the shadow HRA).	No further information required.	<b>‘Green’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	infrastructure due to shading	<p>There are unlikely to be any negative effects on benthos as no seagrass or limited macroalgae species occur in the project area.</p> <p>(Table 17 in shadow HRA)</p>		
<b>NE17</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	<p>HRA – The potential effects of elevated SSC during capital dredging and capital dredging disposal on qualifying habitats and species</p> <p>(C)</p>	<p>Natural England agree with the Applicant’s conclusion of no AEol for this impact pathway (Table 21 and 22 of the shadow HRA).</p>	<p>No further information required</p>	<b>‘Green’</b>
<b>NE18</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> </ul>	<p>HRA – The potential effects of the release of contaminants during capital dredging and</p>	<p>Natural England notes the results of the sediment contaminant analysis at the project site and agrees with the conclusions of no AEol for these impact pathways (Table 23 and 24 of the shadow HRA).</p>	<p>No further information required.</p>	<b>‘Green’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> </ul>	<p>capital dredging disposal on qualifying habitats and species</p> <p>(C)</p>			
<b>NE19</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SPA</li> <li>Humber Estuary Ramsar</li> </ul>	<p>Airborne Noise and Visual Disturbance to birds during construction</p> <p>(C)</p>	<p>Natural England recommends that the relevant bird survey results are collated and presented by month to demonstrate the pattern of usage across the year.</p> <p>Section 4.10.16 of the shadow HRA identifies that black tailed godwit (2%) and turnstone (10%) are recorded in numbers over 1% of the estuary population in the area of intertidal mudflat between Immingham Oil Terminal and the North Beck Drain. Therefore, we advise that the appropriate assessment should provide further assessment on the potential impacts on these species. In particular, the appropriate assessment should identify any key areas that these species are using for roosting and whether these are likely to be affected by construction activities.</p> <p>Section 4.10.23 states that ambient noise levels collected for the IERRT project on the foreshore around the Port of Immingham have been used in this assessment. However, we note that the measurement location (M6) Northern Boundary of IERRT project site is adjacent to a road and not within the red line boundary for the IGET project. Natural England advises that this measurement</p>	<p>Further information required to determine requirement for further mitigation.</p>	<b>'Amber'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>location is not considered to be representative of the ambient noise levels in the relevant areas of the Humber Estuary for this project. The IGET project in effect extends the Port of Immingham into an area which is likely to be less disturbed (with port infrastructure currently limited to the north west side) and consideration should be given to the potential for the ambient noise level to be lower than within the Port frontage. Therefore, Natural England advises that noise measurements are monitored at an additional location in closer proximity to the proposed works.</p> <p>Natural England notes that a 200m potential disturbance distance is relied upon in the assessment of noise and visual disturbance impacts. Natural England acknowledges that 200m is generally considered an acceptable disturbance distance for most construction activities within a port environment where birds will show some habituation to human activity. However, Natural England advise that a precautionary approach is taken to noise disturbance distances for piling. We recognise that birds are highly likely to be disturbed where noise levels exceed 70 dB L<sub>Amax</sub>. However, there may also be effects on birds between 55 and 70 dB, we therefore consider that 200m does not represent a precautionary approach and advise that the noise disturbance zone should be larger, such as 300m from noise source. Therefore, we advise that the assessment is revised.</p> <p>With regards to the justification provided in ES 10.8.38 of Chapter 10 Ornithology, it is important note that preventing disturbance is</p>		

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>not just about avoiding starvation for individuals, it is also about ensuring that a bird is fit enough to migrate to breeding grounds and reproduce and maintain the population. In addition, a study in France does not necessarily translate to the conditions that may be experienced on the Humber; Alves et al., 2013<sup>2</sup> shows a difference in thermoregulation costs between three sites (Portugal, South Ireland and the East of England). A flight response is considered the most extreme disturbance event. Before birds are driven to fly away, disturbance events may still increase the stress response in a bird, for example by reducing the amount of time spent foraging or roosting or increasing the time spent scanning for threats or moving slowly away. In addition, it is difficult to know if birds are not moving away because they are habituated or if they are in poor condition. Therefore, Natural England advises that the behavioural studies cited in the ES should not be relied upon in the assessment of potential impacts on SPA birds from disturbance events.</p> <p>In addition, 10.8.54 states <i>“birds would be expected to redistribute to nearby foreshore in the Immingham/Grimsby area and continue to feed and roost in these alternative locations following dispersal.”</i> However, Natural England advises that this assumption should not be relied upon, due to development pressures in these areas, and potential limitations for relocation within the surrounding area</p>		

<sup>2</sup> Alves, J. et al., 2013. Costs, benefits, and fitness consequences of different migratory strategies. *Ecology*, 94(1) 11-17.



NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>should be considered in the assessment. In particular, the Environment Agency Stallingborough 3 flood risk management scheme and Immingham Eastern RORO NSIP may be taking place at the same time as IGET and limit the availability of alternative feeding sites.</p> <p>Please also clarify whether the noise assessment includes combined effect of noise from terrestrial and marine works. Further advice regarding the combined effect of noise from terrestrial and marine works is provided below (key issue ref NE35).</p>		
NE20	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	Airborne Noise and Visual Disturbance to birds during construction – Programming of works  (C)	Natural England advise that programming of the marine construction works should be considered so that the most disturbing works (including approach jetty) 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 (December to February inclusive). This measure is advised to ensure that black tailed godwit, which are at the northern edge of their wintering range on the Humber, can continue to feed across both tides each day during the coldest months, to maintain body condition.	Further information required to determine requirement for further mitigation.	<b>‘Amber’</b>
NE21	<b>International designated sites</b>	Airborne Noise and Visual Disturbance to	Natural England has a number of concerns with respect to the proposed mitigation measures for impacts of noise on non-breeding birds (Table 27 of the shadow HRA). The assessments of	Further information required to	<b>‘Amber’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	<p>birds during construction – Proposed mitigation</p> <p>(C)</p>	<p>effectiveness of the proposed mitigation measures rely upon the 200m disturbance distance and 70dB threshold. As outlined above, Natural England advises that a more precautionary approach should be taken to assessing disturbance impacts from piling. Therefore, the assessment of proposed mitigation measures should be revised in line with this advice.</p> <p>Soft start piling may reduce the ‘startle effect’ on birds when piling starts, but it is not generally used as a mitigation measure to reduce the impacts on SPA waterbirds. We advise that there is no robust evidence to suggest that soft start piling prevents disturbance caused by the noise.</p> <p>Natural England advises 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. The winter marine construction restriction states that marine construction associated with the approach jetty can only be undertaken more than 200m from the foreshore. More information is needed about how this will be achieved, for example through the use GPS to identify the location of piles and therefore distance from the foreshore. It may be possible to add markers on the mudflat to improve certainty about distances.</p> <p>We note that the cold weather construction restriction refers to the implementation of <i>“temporary cessation of all construction activity</i></p>	<p>determine requirement for further mitigation.</p>	

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			<p><i>within 200m of exposed intertidal foreshore following seven consecutive days of freezing (zero or sub-zero temperature) weather conditions.”</i> However, Natural England advises that the cold weather restrictions should apply to all marine construction works, not just those located within 200m of the exposed intertidal foreshore.</p> <p>We recommend that the cold weather construction restriction should be implemented after three consecutive days of freezing weather conditions. Although the JNCC seven day stop was developed in relation to wildfowling, wildfowling clubs often choose to stop much earlier than seven days in very harsh weather. As a precautionary measure we would advocate taking a precautionary approach of three days at this location, especially where freezing conditions are accompanied by high winds and poor visibility. Where an alternative approach is proposed, further justification should be provided.</p> <p>Natural England also recommends the use of a suitably qualified Ecological Clerk of Works (ECoW) during the construction period. An ECoW will be able to guide the works, ensure that agreed mitigation measures are adhered to and therefore avoid disturbance to large flocks of SPA birds.</p>		
<b>NE22</b>	<b>International designated sites</b>	Effects of airborne noise and visual disturbance to	Natural England advises that further assessment is required regarding operational noise and visual disturbance impacts on SPA birds during operation, including turnstone and black tailed	Further information required to	<b>‘Amber’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	<p>birds during operation</p> <p>(O)</p>	<p>godwit (Table 28 in shadow HRA). As outlined above for construction, the appropriate assessment should identify any key areas that these species are using for roosting and assess whether these are likely to be affected by operational activities.</p> <p>Consideration should be given to the fact that the proposed development will introduce additional disturbance into previously undeveloped areas of the Humber Estuary designated sites.</p> <p>We note that 10.9.70 of Chapter 10 Ornithology states <i>“the berth during spring tide periods will be located approximately 1km from intertidal mudflat used by coastal waterbirds. On this basis, disturbance responses are considered highly unlikely due to vessel movements and berthing operations.”</i> However, we advise that further information is required to inform the assessment of operational impacts in the HRA, including whether any SPA waterbirds have been recorded using the water in this area.</p> <p>ES 10.8.71-10.8.76 of Chapter 10 Ornithology provides some assessment of disturbance impacts from vessels; however, we advise that details of the species which may be affected should be provided. In addition, disturbance events are described as typically occurring within 100m of the activity; however, some species are disturbed at greater distances. As detailed above, it is important to note that a bird flying away is the most significant impact of</p>	<p>determine requirement for mitigation.</p>	

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			<p>disturbance; causing birds to feed or roost less, have increased vigilance or more slowly move away is still a disturbance impact.</p> <p>Further information should be provided regarding the definition and assessment of <i>'Mild and localised'</i> disturbance events and what is considered <i>'rarely'</i> in the context of occurrence of more significant disturbance events. We note that 10.8.69 refers to <i>'Consistent evidence of changes (reductions) in waterbird abundance in the local area which could be linked to operational activities was not recorded'</i>. However, clarity should be provided on whether any changes in abundance were recorded, but not considered <i>'consistent'</i>.</p> <p>Natural England advises that the increase in vessel traffic should be compared against the existing vessel traffic for the estuary to inform the assessment of impacts on SPA birds, including details of any effect on the between vessel intervals.</p>		
NE23	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> </ul>	<p>HRA - Underwater noise and vibration during marine piling on qualifying species of marine mammals</p> <p>(C)</p>	<p>It would be Natural England's preference for the underwater noise pathways (injury and behavioural disturbance) to be assessed separately.</p> <p>Natural England is supportive in principle of the mitigation outlined here to reduce the risk of injury to marine mammals during piling (Table 29 of the shadow HRA).</p>	Further information required.	'Amber'

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> </ul>		<p>We suggest that a project-specific Marine Mammal Mitigation Plan is created, to capture the proposed mitigation measures in a standalone document, particularly as some measures are not standard (e.g. cease piling if marine mammals observed in the mitigation zone).</p> <p>The mitigation should include the following for full adherence to the JNCC Guidelines:</p> <ul style="list-style-type: none"> <li>Any individual undertaking the role of MMO must have received training through a JNCC-approved MMO course.</li> <li>A break in piling of 10 minutes should lead to the mitigation process being implemented.</li> <li>Start-up of piling should not occur if the mitigation zone is not fully visible (e.g. fog, dusk). In this case piling should be delayed until conditions are conducive for marine mammal observations.</li> </ul>		
<b>NE24</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>The Wash and Norfolk Coast SAC</li> </ul>	<p>HRA – underwater noise effects on marine mammals (C and O)</p>	<p>Natural England agree with the Applicant’s conclusions (Table 29 of the shadow HRA) that adverse effect on integrity can be ruled out for The Wash and Norfolk Coast SAC from the project alone, based on the information provided.</p>	<p>No further information required.</p>	<b>‘Green’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE25	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA - Underwater noise and vibration during marine piling on qualifying species of fish  (C)	Natural England notes that vibro-piling may occur overnight and therefore may have an impact on migrating lamprey (Table 29 of shadow HRA). As a result, we advise that the night-time restrictions that have been applied to percussive piling should be extended to include vibro-piling to mitigate impacts to migratory lamprey. If this is not committed to, impacts from night-time vibro-piling on lamprey will need to be assessed and included in the HRA.	Further information required to determine requirement for mitigation.	<b>'Amber'</b>
NE26	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – Effects of underwater noise and vibration during capital dredge and dredge disposal on qualifying fish  (C)	Natural England agrees with the conclusion of no AEoI for these impact pathways on lamprey (Table 30 of shadow HRA).	No further information required.	<b>'Green'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
<b>NE27</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – Effects of underwater noise and vibration during capital dredge and dredge disposal on qualifying marine mammals  (C)	Natural England agrees with the conclusion of no AEoI for these impact pathways on marine mammals.	No further information required.	
<b>NE28</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – Introduction of non-native species during construction (C)	Natural England agree with the Applicant’s conclusions that there will be no adverse effect on integrity from the potential introduction and spread of non-native species during construction, subject to securing and implementation of the biosecurity measures included in 6.5 Outline Construction Environmental Management Plan (Table 31 of the shadow HRA).	No further information required.	<b>‘Green’</b>
<b>NE29</b>	<b>International designated sites</b>	HRA – introduction of non-native species during operation (O)	Natural England agree with the Applicant’s conclusions that there will be no adverse effect on integrity from the potential introduction and spread of non-native species during operation, subject to	Further information welcomed.	<b>‘Yellow’</b>



NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary SAC</li> <li>Humber Estuary Ramsar</li> </ul>		<p>securing and implementation of ABP's existing biosecurity management procedures (Table 32 of the shadow HRA).</p> <p>However, we would encourage that an overall biosecurity management plan including the operational facility is produced and we welcome further discussion.</p>		
NE30	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> <li>Humber Estuary SPA</li> <li>Humber Estuary Ramsar</li> </ul>	HRA - Air quality impacts from traffic - (C and O)	<p>Clarification should be provided on whether the methodology outlined in Natural England guidance <a href="#">NEA001</a> has been followed when undertaking the assessment of road traffic impacts.</p> <p>Chapter 2 of the ES notes that there will be new access off Kings Road and onto the A1173. It is not confirmed if this has been considered during the screening of the operational traffic impacts.</p>	Further information required.	'Amber'
NE31	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> </ul>	Air quality impacts from marine vessels (C)	Natural England notes that potential air quality impact of emissions from marine vessels used during construction have been screened out based on: a 3km distance between vessels and sensitive features of the Humber Estuary SAC; the number of vessels; and the operational duration. There are not any widely recognised screening distance thresholds of material impacts from marine vessels and therefore there is uncertainty as to whether the 3km	Further information required.	'Amber'

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>		<p>distance is sufficient for impacts to be insignificant. As phase 1 of the construction period may have a two year duration, there is the potential for impacts from construction vessels to be sustained for two years. Dispersion modelling of vessels used during construction is therefore considered necessary to establish whether there could be a significant impact on habitats. It is recommended that a modelled grid over 10km is modelled with discrete receptors to represent the nearest sensitive ecological receptors and to understand the extent of impacts from construction vessels.</p>		
<b>NE32</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	<p>Air quality impacts – saltmarsh critical load (O)</p>	<p>Natural England notes from 4.7.15 to 4.7.22 of the HRA that nitrogen deposition impacts are insignificant within Humber Estuary saltmarsh habitats against the critical load of 20kg/ha/yr, which is at the higher scale of the Critical Load range provided for this habitat by APIS (10-20kg/ha/yr). Whereas, when comparing to the lower critical load of 10kg/ha/yr (6.8.61 and 6.8.62 of ES chapter 6), the vessel project contribution to nitrogen deposition is over 1% and the total concentration over 100% of the CL at two receptors (O_E1, O_E2) within the saltmarsh habitats.</p> <p>The report cites the importance of frequency and duration of inundation by seawater as the reasoning for the selection of the critical load of 20 kg/ha/yr for saltmarsh areas of the lower estuary. Many areas of the Humber Estuary are regularly</p>	<p>Further information required to determine requirement for mitigation.</p>	<b>‘Amber’</b>

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			<p>inundated; however, Natural England advises that further information is required to determine whether 20 kg//ha/yr is the most appropriate critical load to use in this case.</p> <p>Natural England generally advises that the upper CL is acceptable for areas of pioneer/lower saltmarsh, whereas the lower CL should be used for areas of upper saltmarsh. This is in line with APIS advice and essentially is because of how inundated/vegetated the habitat is. The justification for the selection of the critical load should consider the sensitivity of individual botanical species or assemblage found within the Humber Estuary saltmarsh habitats to impacts from nitrogen deposition. From the assessment, it is unclear whether there are species or the botanical assemblage within saltmarsh that are more sensitive to nitrogen deposition than the 20kg N/ha/yr critical load stated. Therefore, Natural England advises that further information should be provided on the species present in these areas of saltmarsh to inform whether the saltmarsh at the receptor location is likely to be upper or lower saltmarsh.</p> <p>We recommend that the assessment refers to further sources of information, such as aerial photography; the Environment Agency's mapping project of saltmarsh types; and/or vegetation records on NBN Atlas, to determine the extent of vegetation of</p>		

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			these areas and determine whether the appropriate CL has been applied.		
<b>NE33</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	Air quality impacts – marine vessels (O)	Natural England note that an operational phase marine vessel assessment has been provided. However, further justification should be provided to clarify that the assumptions used for the amount of time each vessel could be docked, and the Marpol emissions standards of vessels using IGET, are representative of a realistic worst-case scenario. There may be a requirement to secure the maximum hours each vessel can be docked within the DCO, if these values are relied upon in the HRA conclusions.	Further information required.	<b>‘Amber’</b>
<b>NE34</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> </ul>	Air quality impacts – overall comments	Natural England welcomes that the air quality assessment considers the combined effects from the marine vessel emissions and the landside plant emissions. We also note paragraph 6.8.60 of ES chapter 6 considers impacts from separate sources from the marine vessel emissions and the landside plant emissions. However, for further clarity, we recommend that the values from these sources are reported in a separate table or column of the existing table to fully understand contributions from each of these impact pathways, as this will be useful to inform the effectiveness of any mitigation.	Further information welcomed.	<b>‘Yellow’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> </ul>		<p>We also note that in ES chapter 6, paragraph 6.4.58, flare stacks have been modelled at a specific location within the relevant area, within which there is flexibility in the design for this location to change. Although it is stated that the location of the stack within the relevant area would not change conclusions, it has not been confirmed if this is the representative worst-case location where impacts, especially in combination with other sources, may lead to a higher increase in predicted pollutant concentrations. Information on potential emissions from the flare stacks should also be incorporated into the HRA.</p> <p>Natural England also note that under <i>'Impact pathways: Physical changes to habitats resulting from the deposition of airborne pollutants'</i> Table 3 states: <i>'The nearest saltmarsh habitat (H1330) is approximately 3km north west of the site....'</i> We advise that saltmarsh habitat is found to the south east and north east of the site rather than the north west.</p> <p>Also, under <i>'Impact Pathways: Physical change to habitats resulting from the deposition of airborne pollutants'</i> Table 4 states: <i>'The designated habitats closest to the construction site are marine habitats and are therefore not sensitive to changes in air quality due to dust smothering or marine vessel/ road vehicle emissions during construction.'</i> This is not consistent with information provided in ES Chapter 6, 8 or 9 and APIS. It should</p>		

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			be clarified whether this is meant to state mudflat habitats rather than marine habitats.		
<b>NE35</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – consideration of combined effects (C)	<p>Natural England notes that 4.13.1 of the shadow HRA considers the intra-project effects of the different aspects of the project on the European site features. Natural England advises that this assessment should be revisited once the assessment of impacts and mitigation measures have been agreed, including for the impacts on SPA birds during construction and operation.</p> <p>We advise that the assessment should provide more detail about whether terrestrial construction noise as a result of this proposal will have combined effects with the marine construction noise and lead to increased levels of disturbance to SPA birds. In addition, there should be clarity about whether there will be piling at more than one location each day and if this is the case what effect this will have on bird disturbance.</p>	Further information required to determine requirement for further mitigation.	<b>'Amber'</b>
<b>NE36</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> </ul>	HRA - In-combination assessment at appropriate assessment stage general comments (C and O)	<p>Natural England notes that Tables 34, 35 and 36 consider the 'in combination' effects at the Appropriate Assessment stage. However, the current shadow HRA does not provide a sufficient in-combination assessment, which requires further details to address the outstanding issues.</p> <p>We advise that this table should identify where impacts have been fully avoided through mitigation and where there is still a residual impact that could act in combination. This assessment should</p>	Further information required to determine requirement for further mitigation.	<b>'Amber'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> </ul>		<p>consider the residual effects of developments together. If mitigation or compensation has completely avoided or removed the effect that this would not act in combination with other projects.</p> <p>Natural England will review the assessment in more detail after further information is provided about impacts (and associated mitigation) as detailed above.</p>		
<b>NE37</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> <li>Humber Estuary Ramsar</li> </ul>	<p>HRA – In-combination assessment - Underwater noise and vibration during marine piling on qualifying species of marine mammals (C)</p>	<p>The screening distance used for the in-combination assessment is smaller than we would normally advise for marine mammals (see Natural England’s Best Practice Advice for Offshore Wind Marine Environmental Assessment Phase III report).</p> <p>In a HRA context, we consider it should at least cover all projects that can contribute to in-combination effects within the boundary of the SAC e.g. within the Humber Estuary SAC when considering underwater noise disturbance to the grey seal feature.</p>	<p>Further information required.</p>	<b>‘Amber’</b>
<b>NE38</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary SAC</li> </ul>	<p>HRA – Cumulative underwater noise disturbance and barrier effects to grey seal (C and O)</p>	<p>Cumulative underwater noise disturbance and barrier effects to grey seal feature of the Humber Estuary SAC and Ramsar site have not been considered in sufficient detail.</p> <p>The mitigation listed is primarily aimed at reducing the risk of injury and will have limited benefit to reducing barrier effects/disturbance. There is no equivalent standard mitigation to reduce the risk of significant disturbance. Therefore, it is not appropriate to rely on</p>	<p>Further information required to determine requirement for further mitigation.</p>	<b>‘Amber’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> </ul>		<p>mitigation to conclude that the in-combination disturbance impact will not be significant residually. The assessment itself must demonstrate no AEoI.</p> <p>More detail should be provided on the nature of this combined impact from IGET (piling, dredging and dredge disposal combined) plus the 7 (or more) projects which may cause disturbance through underwater noise and vibration. The worst-case for disturbance and barrier effects, on a temporal and spatial basis across projects, should be presented. When considering the disturbance from all the separate projects together, the Applicant must provide evidence to support their claim that it is still short-term and temporary (at a biologically relevant scale). In this the Applicant should factor in that there may be a delay between the cessation of noise and seals showing no disturbance response.</p> <p>Further mitigation may need to be considered to conclude no AEoI. This would be best co-ordinated at a strategic level, across the planned overlapping projects in the Humber. This would likely involve minimising the temporal overlap of the noisiest activities in the respective projects i.e. by coordinating breaks in the noise to ensure barrier effects from multiple projects do not act cumulatively to create a single, long-term barrier effect. Furthermore, monitoring of the seal response to the in-combination effects is also advised, to validate the conclusion.</p>		



NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
<b>NE39</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – In-combination assessment – Visual and noise disturbance to SPA birds (c)	Natural England advises that the in-combination assessment should provide a detailed assessment of disturbance impacts on Humber Estuary SPA birds during construction. Consideration should be given to whether construction works, and in particular piling works, could be carried out at the same/similar time as works associated with other relevant projects in the area, including the IERRT project. As detailed above (ref NE19), potential limitations for relocation of birds within the surrounding area should be considered in the assessment.	Further information required to determine the requirement for further mitigation.	<b>‘Amber’</b>
<b>NE40</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	Air quality – in combination assessment	<p>In-combination road traffic changes should be assessed, and potential impacts considered at relevant sensitive habitat receptors, considering the calculated change in AADT from cumulative developments identified within the Traffic and Transport Cumulative Assessment.</p> <p>Appendix 6B states that air quality sources from IERRT are included in combination with the project. We note that road traffic emissions from IERRT are included in the future baseline and operational traffic data scenarios, however it is not clear whether other IERRT sources of emissions to air have been considered in the assessment. It should be clarified whether there is potential for</p>	Further information required to determine requirement for mitigation.	<b>‘Amber’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>overlap of other emission sources which could act in combination with the emissions from IGET.</p> <p>Table 3, ES Appendix 25.C states that the South Humber Bank Energy Centre’s impact to Nitrogen Deposition within the Humber Estuary salt marsh receptor (O_E5) is around 4% of the critical load, but it also states, “<i>However as the cumulative process contribution of these projects will not result in an exceedance of the 20-30kg/N/ha/yr Critical Load for N deposition at any of the salt marsh receptors, no significant cumulative effects are predicted.</i>” As the Critical Load range for the saltmarsh receptors has been reduced to 10-20kg/ha/yr, there is the potential for this cumulative impact to now exceed this critical load. Therefore, it should be clarified whether the correct critical load value has been used when assessing the potential cumulative and in combination effects associated with air quality.</p>		
<b>NE41</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – conclusions	<p>Natural England will comment on Section 5 after further discussions about adverse effects and mitigation measures.</p> <p>We consider that it would be useful to provide a summary for each of the European sites affected.</p> <p>This section should include a summary of mitigation measures, and whether they will completely avoid or reduce the impact to an</p>	Further information required.	<b>'Amber'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
	<ul style="list-style-type: none"> <li>Humber Estuary SPA</li> </ul>		<p>acceptable level. The level of certainty that mitigation measures will be effective should also be indicated.</p> <p>Where mitigation measures interact, it would be useful to provide a schedule of mitigation measures and how they are implemented over the calendar year (including differentiation between European site features and features which are not European site features). For example, timing of piling to avoid impacts on SPA birds and migrating lamprey. We do not consider that this is covered elsewhere in the document.</p>		
<b>NE42</b>	<p><b>International designated sites</b></p> <ul style="list-style-type: none"> <li>Humber Estuary Ramsar</li> <li>Humber Estuary SPA</li> </ul>	Chapter 10 Ornithology – Assessed sensitivity of ornithology receptors	Natural England would welcome clarity on how the sensitivity levels for coastal waterbirds have been determined, i.e. are they ‘average sensitivity’ levels across all waterbird species? Natural England recommends that consideration should be given to the most sensitive species.	Further information welcomed.	<b>‘Yellow’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE43	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> </ul>	South Humber Gateway Mitigation Strategy	<p>Natural England highlights that the development falls within the South Humber Gateway Mitigation Zone. Policy 9 of the North East Lincolnshire Local Plan states <i>“Development proposals on greenfield land within the Mitigation Zone will be required to make contributions towards the provision and management of the mitigation sites identified on the Policies Map.”</i></p> <p>We note that 1.4.40 of the HRA describes the limited habitat suitability of the West Site area for SPA birds and refers to wintering bird survey results that recorded no SPA birds within this area. However, Natural England considers that the South Humber Gateway Mitigation Strategy is intended to apply to all relevant developments within this zone to address the adverse impacts of development at a strategic level, irrespective of further bird survey results at a site-level. Therefore, the requirement to contribute to the scheme should be determined by the relevant authority.</p>		‘Grey’
NE44	<b>Nationally designated sites</b> <ul style="list-style-type: none"> <li>• Hatfield Chase Ditches SSSI</li> </ul>	Air Quality impacts from traffic – construction phase (C)	Based on the information provided in ES it is demonstrated that IGET alone does not trigger the air quality assessment screening thresholds along the A180 for Hatfield Chase Ditches SSSI. However, it is recommended that the applicant clarifies whether the IGET’s traffic contribution in-combination with other scheme’s triggers the air quality screening thresholds, considering the numbers reported in the Traffic and Transport Cumulative Assessment chapter.	Further information required.	‘Amber’

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE45	<b>Nationally designated sites</b> <ul style="list-style-type: none"> <li>• The Lagoons SSSI</li> </ul>	SSSI assessment – The Lagoons SSSI little tern	Natural England agrees that impacts of the proposal on little tern associated with the Lagoons SSSI can be scoped out, based on the information provided.	No further information required.	<b>‘Green’</b>
NE46	<b>Soils and Best and Most Versatile Agricultural Land</b>	ALC survey coverage	Natural England highlight that the ALC survey should be carried out across the full extent of agricultural land within application site boundary at a detailed level where BMV has been identified, e.g. one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres. A semi detailed survey may be acceptable where the site is clearly expected to be non-BMV (1 auger per 2 ha plus representative pits).	Further information welcomed.	<b>‘Yellow’</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE47	<b>Soils and Best and Most Versatile Agricultural Land</b>	ALC survey report comments	<p>Natural England highlights that ALC surveys require an ALC surveyor with suitable experience and qualification level, with these credentials provided as part of the ALC report. Amounts of surveyed ALC land should be noted in hectares.</p> <p>Natural England recommend that a map of the project boundary be provided alongside the ALC map to allow for identification of the areas of the application site not surveyed.</p> <p>Natural England recommends further clarification regarding the sampling densities used, with justification provided for bespoke sampling densities. Detailed ALC maps can only be produced when detailed ALC surveys have been undertaken. As such, Natural England recommends further information regarding the plotting of the ALC map (reference RAC/10011/2), specifically regarding the south-western part of the site, which is noted as being entirely grade 3b, despite only two borings being undertaken.</p> <p>Additionally, it is noted that 3.1 of Appendix 21.A: Agricultural Land Classification Survey Report states that ‘access was available to only part of the north-eastern parcel’. Natural England consider that further information is provided regarding why the whole area was not accessible.</p>	Further information welcomed.	‘Yellow’

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE48	Soils and Best and Most Versatile Agricultural Land	Sustainable soil management	<p>Natural England advises that additional information is required regarding soil handling methods. Reference should be made to the Defra <a href="#">Construction Code of Practice for the Sustainable Use of Soils on Construction Sites</a>.</p> <p>In order to both retain the long term potential of this land and to safeguard all soil resources as part of the overall sustainability of the whole development, it is important that the soil is able to retain as many of its many important functions and services (ecosystem services) as possible. Sustainable soil management should aim to minimise risks to the ecosystem services which soils provide, through appropriate site design / masterplan / Green Infrastructure etc. All soils should be handled when in a dry and friable condition, below their plastic limit. A field method should be specified for assessing when soils are in a suitable condition for handling.</p> <p>Where topsoil is proposed to be stripped, the soil handling methodology and soil protection proposals should be reviewed to ensure that appropriate mitigation is in place to allow for the restoration of the land to the baseline ALC grade.</p>	Further information required.	‘Amber’

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE49	Protected Species	Protected species - General	<p>Natural England has adopted <a href="#">standing advice</a> for protected species, which includes guidance on survey and mitigation measures. Natural England is not providing bespoke advice on the protected species information provided in the ES for this project.</p> <p>A separate protected species licence from Natural England or Defra may be required. Applicants should refer to the guidance at <a href="#">Wildlife licences: when you need to apply</a> to check to see if a mitigation licence is required. Applicants can also make use of Natural England’s charged service <a href="#">Pre Submission Screening Service</a> for a review of a draft wildlife licence application. Natural England can then review a full draft licence application to issue a Letter of No Impediment (LONI) which explains that based on the information reviewed to date, that it sees no impediment to a licence being granted in the future should the DCO be issued. See <a href="#">Advice Note Eleven, Annex C – Natural England and the Planning Inspectorate   National Infrastructure Planning</a> for details of the LONI process.</p>	Requirement for mitigation not assessed by Natural England.	‘Grey’



NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
NE50	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SAC</li> <li>• Humber Estuary Ramsar</li> </ul>	HRA – Potential effects of maintenance dredging on water quality  (O)	Natural England agrees with the Applicant’s conclusion that maintenance dredging will not impact water quality at the project site and will result in no AEoI for this impact pathway.	No further information required.	‘Green’
NE51	<b>Biodiversity Net Gain (BNG)</b>	Biodiversity Net Gain (BNG) - no BNG provision (c)	<p>The Environment Act 2021 includes NSIPs in the requirement for BNG. The biodiversity gain objective for NSIPs is defined as at least a 10% increase in the pre-development biodiversity value of the on-site habitat.</p> <p>It’s the intention that BNG should apply to all terrestrial NSIPs accepted for examination from November 2025. This includes the intertidal zone but excludes the subtidal zone.</p> <p>Although BNG is not yet a mandatory requirement for NSIPs, we strongly recommend that net gain provision is secured through this development. This will reflect the important role NSIPs must play in delivering the government’s environmental targets.</p>		‘Grey’

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>Early engagement with Natural England on BNG proposals will help maximise outcomes and reduce risks.</p> <p>The biodiversity baseline should include all land contained within the site’s red line boundary and proposals can be iteratively refined over time and throughout detailed design.</p> <p>We encourage developers to:</p> <ul style="list-style-type: none"> <li>• develop BNG proposals in adherence with well-established BNG principles: <ul style="list-style-type: none"> <li>○ <a href="#">BS 8683:2021 Process for designing and implementing Biodiversity Net Gain</a></li> <li>○ CIEEM/IEMA/CIRIA good practice <a href="#">principles</a> (2016) and <a href="#">guidance</a> (2019).</li> </ul> </li> <li>• use the latest version of the Defra biodiversity metric to calculate BNG (currently <a href="#">version 4.0</a>) and adhere to the rules and principles set out within the metric guidance.</li> </ul> <p>Biodiversity gains should be secured for a minimum of 30 years and be subject to adaptive management and monitoring. BNG</p>		

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			plans should be secured by a suitably worded requirement in the DCO.		
<b>NE52</b>	<b>International designated sites</b> <ul style="list-style-type: none"> <li>• Humber Estuary SPA</li> <li>• Humber Estuary Ramsar</li> <li>• Humber Estuary SAC</li> </ul>	HRA - Cumulative assessment (C and O)	<p>Natural England advises that an assessment of cumulative effects should also be provided in the HRA.</p> <p>In addition to the requirement for an in-combination assessment (outlined above), it is also necessary to consider the existing influences on the site which have affected and are continuing to affect the condition of relevant European site features. These influences constitute what is referred to as the 'current environmental baseline'. A cumulative effect might arise when a succession of 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 (or risks becoming adverse if it continues).</p> <p>The cumulative effects assessment should therefore consider the impact of the additional impacts of the project against the current environmental baseline of the Humber Estuary. In particular, we advise that the cumulative effects assessment should consider</p>	Further information required.	<b>'Amber'</b>

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	Risk (RAG)
			<p>(but not necessarily be limited to) the increase in the area of Port of Immingham; loss and fragmentation of SAC habitats; increase in vessel traffic; and increase in dredging.</p> <p>The cumulative effects assessment should make reference to the Supplementary Advice on Conservation Objectives. Where the Supplementary Advice includes targets to <i>restore</i> an attribute of the site feature (such as habitat area or species population size), consideration should be given to whether cumulative impacts will hinder the restoration of these attributes.</p>		

## Annex B: Humber Estuary Special Protection Area: non-breeding waterbird assemblage (Version 1.2, June 2023)

The Humber Estuary Special Protection Area (SPA) qualifies under article 4.2 of the European Commission Bird Directive (79/409/EEC) in that it supports an internationally important assemblage of waterbirds. Confusion can arise concerning which species to consider when assessing the Humber Estuary SPA non-breeding, waterbird assemblage feature.

Natural England recommends focusing on what are referred to as the 'main component species' of the assemblage. Main component species are defined as:

- a) All species listed individually under the assemblage feature on the SPA citation (i.e. the species that qualified in 2007 when the site was designated).
- b) Species which might not be listed on the SPA citation but occur at site levels of more than 1% of the national population according to the most recent Humber Estuary Wetland Bird Survey (WeBS) 5-year average count (currently 2017/18 - 2021/22).
- c) Species where more than 2000 individuals are present according to the most recent Humber Estuary WeBS count.

The assemblage qualification is therefore subject to change as species' populations change. It should be noted that species listed on the citation under the assemblage features, whose populations have fallen to less than 1% of the national population, retain their status as a main component species and should be considered when assessing the impacts of a project or plan on the Humber Estuary SPA.

Natural England advises that the main component species of the Humber Estuary SPA non-breeding waterbird assemblage include (June 2023):

a) *Species listed individually under the assemblage feature on the SPA citation:*

- Avocet, *Recurvirostra avosetta* (non-breeding)
- Bar-tailed godwit, *Limosa lapponica* (non-breeding)
- Bittern, *Botaurus stellaris* (non-breeding)
- **Black-tailed godwit, *Limosa limosa islandica* (non-breeding)<sup>1</sup>**
- **Brent goose, *Branta bernicla* (non-breeding)<sup>1</sup>**
- **Curlew, *N. arquata* (non-breeding)<sup>1</sup>**
- **Dunlin, *Calidris alpina alpina* (non-breeding)<sup>1</sup>**
- **Golden plover, *Pluvialis apricaria* (non-breeding)<sup>1</sup>**
- Goldeneye, *Bucephala clangula* (non-breeding)
- Greenshank, *T. nebularia* (non-breeding)
- Grey plover, *P. squatarola* (non-breeding)
- Knot, *Calidris canutus* (non-breeding)
- **Lapwing, *Vanellus vanellus* (non-breeding)<sup>1</sup>**
- **Mallard, *Anas platyrhynchos* (non-breeding)<sup>1</sup>**
- Oystercatcher, *Haematopus ostralegus* (non-breeding)
- Pochard, *Aythya farina* (non-breeding)
- **Redshank, *Tringa totanus* (non-breeding)<sup>1</sup>**
- Ringed plover, *Charadrius hiaticula* (non-breeding)
- **Ruff, *Philomachus pugnax* (non-breeding)<sup>1</sup>**
- Sanderling, *Calidris alba* (non-breeding)

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<sup>1</sup> Species known to use off-site supporting habitat / functionally linked land (FLL) in the non-breeding season

- Scaup, *Aythya marila* (non-breeding)
- **Shelduck, *Tadorna tadorna* (non-breeding)<sup>1</sup>**
- **Teal, *Anas crecca* (non-breeding)<sup>1</sup>**
- Turnstone, *Arenaria interpres* (non-breeding)
- **Whimbrel, *Numenius phaeopus* (non-breeding)<sup>1</sup>**
- **Wigeon, *Anas Penelope* (non-breeding)<sup>1</sup>**

And

b) Species which are not listed on the SPA citation but occur at site levels of more than 1% of the national population according to the most recent Humber Estuary Wetland Bird Survey (WeBS) 5-year average count:

- Green sandpiper, *Tringa ochropus* (non-breeding)
- **Greylag goose, *Anser anser* (non-breeding)<sup>1</sup>**
- **Little egret, *Egretta garzetta* (non-breeding)<sup>1</sup>**
- **Pink-footed goose, *Anser brachyrhynchus* (non-breeding)<sup>1</sup>**
- Shoveler, *Anas clypeata* (non-breeding)
- **Crane, *Grus grus* (non-breeding)<sup>1</sup>**

As stated above, the assemblage qualification is subject to change as species' populations change; therefore, the appropriate WeBS data should be considered in any assessment and the above list should be used as a guide only.

Please note, the advice set out above should be considered when assessing potential impacts on the waterbird assemblage feature. You will also need to consider potential impacts on species which are not considered to be non-breeding waterbirds but are listed on the citation qualifying under article 4.1 and 4.2 of the Directive. These include:

- **Hen harrier, *Circus cyaneus* (non-breeding)<sup>1</sup>**
- **Marsh Harrier, *Circus aeruginosus* (breeding)<sup>1</sup>**
- Little tern, *Sterna albifrons* (breeding)
- Avocet, *Recurvirostra avosetta* (breeding)
- Bittern, *Botaurus stellaris* (breeding)

The species marked <sup>1</sup> **in bold text** are known to use off-site supporting habitat / functionally linked land (FLL) (e.g. arable farmland, grassland/pasture, and/or non-estuarine waterbodies) in the non-breeding season and may therefore be the most relevant for assessing potential impacts of a proposed plan/project on birds using FLL associated with the Humber Estuary SPA. However, please note that this list should be used as a guide only; usage may depend on factors such as the habitats available on the site and distance to the Humber Estuary etc. Therefore, assessments of potential impacts on birds using functionally linked land should consider all relevant species and clear justification should be provided if any species are excluded from the assessment.

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<sup>1</sup> Species known to use off-site supporting habitat / functionally linked land (FLL) in the non-breeding season