KEEPING BRITAIN TRADING

IMMINGHAM EASTERN RO-RO TERMINAL

Response to Relevant Representations
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Contents

1 Executive Summary and Purpose of this document

1.1 This document provides the Applicant's comments on the Relevant Representations (RRs) submitted by the Interested Parties between the 9th March 2023 and the 19th April 2023 in relation to the proposed development.

1.2 The comments on each of the RRs have been divided into the Examining Authority's (ExA) Initial Assessment of the Principal Issues. It should be noted that a number of issues raised within the RRs have the potential to overlap with more than one Principal Issue and that is reflected separately in each of the sections.

1.3 The Applicant considers the following Principal Issue topics are relevant to the RRs:

Interested Party	Principal Issues represented
Able	Cumulative and In-combination Effects; Landside Transportation – road and rail; Navigation and Shipping
APT	Navigation and Shipping
British Steel	Landside Transportation – road and rail; Navigation and Shipping
CLdN	Need, Alternatives and Policy matters; Biodiversity, Ecology and Natural Environment; Cumulative and In-combination Effects; Water and Flooding; Additional Responses
DFDS	Biodiversity, Ecology and Natural Environment; Cumulative and In-combination Effects; Landside Transportation – road and rail; Navigation and Shipping; Additional Responses
Environment Agency	Biodiversity, Ecology and Natural Environment; Cumulative and In-combination Effects; Water and Flooding; Additional Responses
Lincolnshire Wildlife Trust	Biodiversity, Ecology and Natural Environment; Cumulative and In-combination Effects
Maritime and Coast Guard Agency	Navigation and Shipping
MMO	Biodiversity, Ecology and Natural Environment; Cumulative and In-combination Effects; Navigation and Shipping
Natural England	Biodiversity, Ecology and Natural Environment; Cumulative and In-combination Effects.
National Highways	Landside Transportation – road and rail.
Royal Mail	Landside Transportation – road and rail.
Ulceby Road Safety Group	Landside Transportation – road and rail.

1.4 It is noted that some of RRs have raised comments regarding the draft Development Consent Order (dDCO) (including the draft Protective Provisions) and accompanying Explanatory Memorandum. Where the Applicant considers it necessary, these have been addressed in the updated versions of these documents submitted at Deadline 1.

2 Need, Alternatives and Policy Matters

2.1 The comments of the Applicant on the Relevant Representations (RR) submitted by the Interested Parties on the issue specific topic of **Need, Alternatives and Policy Matters** are set out below.

2.2 The Representations relating to needs and alternatives are found within the representations submitted by –

i. CLdN Ports Killingholme Limited (CLdN) [RR-007].

2.3 The comments raised in the relevant representation by CLdN and the Applicant's comments in relation to them are presented in the following table:

- Table 2.1 CLdN (RR-007)

Table 2.1: CLdN (RR-007)

Reference	Relevant Representation	Applicant's Comment
CLdN RR Overview		
Overview	N/A	The CLdN RRs contains a number of general statements which are not supported by any evidence. In addition, certain statements which are made referencing ABP's application information incorrectly reflect the information which ABP has produced. Furthermore, it is noted that, in a number of respects, CLdN do not actually identify that there is a concern, rather they simply appear to have thrown in a potential issue with the hope that there is a point to be made in due course as the examination progresses.

Reference	Relevant Representation	Applicant's Comment
		The general nature of the CLdN RR was highlighted by ABP at the various ISH2 sessions, and CLdN's oral presentation at the ISH2 sessions very much reflected this approach. It was noticeable, for example, that even though ABP's application has been available since early March 2023, CLdN's relevant technical specialists had apparently not (as at the time of the ISH2 hearing) undertaken a sufficiently detailed review of the information provided and were also incorrectly referring to aspects of ABP's application documentation. Due to the general nature of the CLdN RR and the lack of detail provided within it, it is clearly not possible for ABP to provide much in the way of detailed comments in this document. Finally, by way of introductory overview, it is clear to ABP that CLdN's RR – and its developing case – is, at its core, a competitor objection. As ABP highlighted at the ISH2 session considering the need for the IERRT project, by questioning the need in this way in terms of the competition it might bring, CLdN themselves are actually highlighting one of the very things about the IERRT development that Government strongly seeks to encourage. This is a matter further explained in ABP's written summary of its oral presentation made in respect of the need topic at ISH2 – submitted at deadline 1.

Reference	Relevant Representation	Applicant's Comment
Section 1 Introduction		
Section 1	Section 1 of the RR provides, amongst other things, introductory information about CLdN, the Killingholme facility and some factual information about the contact made between ABP and CLdN during the pre-application and pre-examination periods.	The Applicant would agree with CLdN that its Killingholme facility is one of the UK's major north-sea Ro-Ro terminals. However, the Killingholme facility is also a major facility for the import of trade cars and vehicles and is not simply a Ro-Ro freight facility. The Applicant notes the statement made by CLdN (in paragraph 1.2 of the RR) that its facility at Killingholme services an average of 5.5 scheduled Ro-Ro sailings a day. The Applicant queries whether this is consistent with the berth utilisation information set out in later parts of the CLdN RR. For the reasons set out in detail in its application documentation, the Applicant does not consider that the IERRT proposal will adversely affect access to CLdN's statutory undertaking at Killingholme in any significant way (CLdN concern raised in paragraph 1.3 of the RR). Furthermore, the Applicant notes that the CLdN RR does not then appear to expand on this alleged concern. In setting out the detail of some of the contact made between the parties, the Applicant notes that CLdN do not refer to the attempts which the Applicant made during the pre-application stage to try and agree factual information about the CLdN Killingholme facility. For example, the Applicant's written invitation to CLdN in October 2022 to confirm the Applicant's understanding as to the Port of Killingholme's operations which were summarised by the

Reference	Relevant Representation	Applicant's Comment
		Applicant in its correspondence – but to which no response was received.
Section 2 The Policy Basis		
2.1	It is a legal requirement that the Secretary of State (SoS) must decide a DCO application for port infrastructure in accordance with the National Policy Statement for Ports (Ports NPS) subject to certain exceptions. In this regard CLdN makes the following observations:	The Applicant notes this statement and would simply comment that it is important to fully understand the content and requirements of the National Policy Statement for Ports (NPSfP).
2.1.1	The "fundamental policy" of government under the NPS is to encourage "…sustainable port development to cater for long-term forecast growth in volumes of imports and exports by sea". In assessing the need for new port infrastructure, the NPS directs that the Secretary of State must examine the long-term forecast growth in volumes of imports and exports by sea for all commodities indicated by demand forecast figures, taking into account capacity already consented. From the documentation that is available, ABP has not adequately explained how the Proposed Development constitutes "sustainable port development" that addresses an identified "need". It follows that it is not clear that the Proposed Development is in accordance with the NPS for Ports.	The first sentence of this paragraph sets out only a partial summary of the 'fundamental policy' set out within paragraph 3.3.1 of the NPSfP. For example, the policy references to a competitive and efficient port industry capable of meeting the needs of importers and exporters cost effectively and in a timely manner, are not referred to. The approach within this paragraph of the RR – where CLdN appear to be trying to narrow need considerations down to simply a consideration of overall demand for capacity to meet forecast growth – then appears to be reflected throughout the RR. Need matters are much broader than this. In the second sentence of the paragraph, CLdN set out what they think paragraph 3.5.1 of the NPSfP requires the decision maker to do. The NPSfP at paragraph 3.5.1 (found under the heading 'Guidance to the decision-maker on assessing the need for

Reference	Relevant Representation	Applicant's Comment
		additional capacity) actually states that *"…., the decision-maker <u>should accept the need for future capacity</u> to"* (emphasis added) meet five different matters which are then listed. CLdN are, therefore, in paragraph 2.1.1 of its RR fundamentally misrepresenting what the NPSfP says the decision maker needs to do. Furthermore, CLdN only partially refer to one of the five matters which the policy makes clear the decision-maker should accept the need for future capacity for – namely growth in volumes of imports and exports. The Applicant's evidence contained within its application documentation demonstrates that the IERRT proposal provides for four of the five matters specified within paragraph 3.5.1 of the NPSfP – the exception being that the IERRT facility will not directly support the development of offshore energy, although it does nothing to hinder such port capacity coming forward elsewhere. Other than a brief reference to resilience matters – which is considered further below - the remainder of the CLdN RR fails to consider these other matters identified within the NPSfP. Furthermore, even in respect of the 'long-term forecast growth' matter which is referred to, CLdN do not appear to have had any regard in its RR to the Government's latest port freight traffic forecasts. Titled 'UK Port Freight Traffic 2019 Forecasts" and superseding the previous set of forecasts that were produced by MDS Transmodal for DfT in May 2006 and which are referred to in the NPSfP, these forecasts predict considerable growth in Ro-Ro freight in the period to 2050.

Reference	Relevant Representation	Applicant's Comment
		Finally in respect of this paragraph of the RR, CLdN provide no evidence to substantiate the statements made in the final sentences. Noting that CLdN are not actually saying in this paragraph that the IERRT proposal is not sustainable development or that it is not in accordance with the NPSfP, it is simply highlighted that the Applicant has provided considerable evidence to demonstrate that the proposed development is sustainable development and in accordance with the NPSfP – found within the Planning Statement [**APP-019].**
2.1.2	Where the SoS reaches the view that a proposal for port infrastructure is in accordance with this NPS they will "… then have to weigh the suggested benefits, including the contribution that the scheme would make to the national, regional or more local need for the infrastructure, against anticipated adverse impacts, including cumulative impacts". Even if the SoS were ultimately to be satisfied that the Proposed Development is in accordance with the Ports NPS, CLdN has serious concerns as to whether the alleged benefits of the Proposed Development (including with respect to addressing a perceived "need") outweigh its significant adverse impacts.	This paragraph of the RR quotes from paragraph 4.2.2 of the NPSfP, and in this instance CLdN correctly quote the NPSfP. This part of the NPSfP effectively replicates the relevant requirements of section 104 of the Planning Act 2008. The Applicant's extensive evidence demonstrates that the adverse effects of the IERRT proposed development – none of which are considered to be significant in EIA terms – do not outweigh the benefits of the proposed development. The CLdN representation does not provide evidence to substantiate the claims made.
2.1.3	The primary basis for undertaking the balancing exercise set out in the preceding paragraph will be by considering the likely significant effects of the Proposed Development (both beneficial and adverse) as set out in the Environmental Statement	The CLdN claim in this paragraph that *'The ES submitted with the DCO Application identifies that the Proposed Development will have significant adverse effects on the environment'* is simply not true. The submitted IERRT ES does not identify any such effects.

Reference	Relevant Representation	Applicant's Comment
	(ES). The ES submitted with the DCO Application identifies that the Proposed Development will have significant adverse effects on the environment. The case has not been made out as to how the alleged benefits of the Proposed Development outweigh those adverse effects. In addition, CLdN has identified a number of potentially serious defects in the ES which require further environmental information and clarification before the SoS could be in a position to properly weigh the benefits of the Proposed Development against its adverse effects.	Furthermore, the CLdN claim that they have, in addition, identified a number of potentially serious defects in the ES which require further information and clarification is not substantiated by any evidence. The Applicant strongly disagrees with the suggestion that the ES has serious defects. On this point, the Applicant would note that during the ISH2 sessions (occurring after the submission of the RR) it became clear that – by their own admission – CLdN's environmental advisors had not undertaken a detailed review of the IERRT ES. The Applicant is, therefore, unclear as to what evidence the view expressed in the RR is based upon. On the basis of the available evidence, the benefits of the IERRT proposal clearly outweigh any adverse effects.
2.1.4	The DCO Application must be determined in accordance with all statutory requirements including the Conservation of Habitats and Species Regulations 2017. The Proposed Development will be located in and adjacent to the Humber Estuary Special Area of Conservation, Special Protection Area and Ramsar Site. Given the scale and nature of the Proposed Development and noting the conclusions of previous HRA assessments for major port development, including within the Humber Estuary, the conclusion of the Shadow HRA (that the	This paragraph of the CLdN RR largely contains statements of fact. The reference to 'previous HRA assessments' for major port developments is further expanded upon in later paragraphs of the CLdN RR (see section 5 of the RR), which the Applicant responds to elsewhere. For the purpose of this response, however, two points are specifically noted in this regard, namely:

Reference	Relevant Representation	Applicant's Comment
	Proposed Development will have "no adverse effect on the integrity" of protected habitats) must be robustly tested and scrutinised.	1. The IERRT facility will not result in the loss of up to 1.65 hectares of intertidal habitat as stated by CLdN later in paragraph 5.4.2(a) of the RR. This is the amount of intertidal habitat which the previous PEIR stage iteration of the scheme would have removed. The scheme the subject of the DCO application now only results in the loss of 0.022ha (direct and indirect loss) of intertidal. It is notable that during ISH2, CLdN's relevant environmental consultant accepted that 0.022ha was the correct figure, demonstrating CLdN's limited understanding of the application when preparing this RR. 2. It is incorrect and misleading to describe the IERRT proposal – as CLdN do at paragraph 5.4.3 of its RR – as 'of a similar nature and scale' to the Able Marine Energy Park, Bathside Bay Container Terminal and the proposed Dibden Bay Container Terminal scheme. All of these other schemes will remove, or would have removed, tens of hectares of designated intertidal habitat as a result of extensive reclamation needed for the creation of a straight line quay. Finally in this respect, it is also noted that throughout its RR CLdN do not actually indicate that they disagree with the HRA conclusion which the Applicant's experts have reached. All CLdN indicate in their RR is that the matter should be tested and scrutinised.
2.2	In addition to the Ports NPS, the Planning Act 2008 states that the Secretary of State must also have regard to the appropriate marine policy documents, determined in accordance with section 59 of the	This paragraph is one further example of CLdN making a statement and not substantiating it in any way with any evidence. The content of the other policy documents that

Reference	Relevant Representation	Applicant's Comment
	Marine and Coastal Access Act 2009, in making their determination. Compliance with marine policy is accordingly an important legal consideration that must be afforded due weight in the decision-making process. The Secretary of State must also have regard to other important and relevant matters including national and local planning policy. CLdN is not satisfied that ABP has demonstrated that the Proposed Development is compliant with the UK Marine Policy Statement, East Inshore and East Offshore Marine Plans or that it is compliant with other planning policy including the National Planning Policy Framework and policies contained in the North East Lincolnshire Local Plan.	are referred to by CLdN have been appropriately considered in the IERRT Planning Statement [**APP-019].** Furthermore, it is noted that the authors of some of these other policy documents referred to by CLdN (namely the Marine Management Organisation (MMO) and North-East Lincolnshire Council (NELC)) have not raised concerns about policy compliance within their RR. In fact, within the NELC RR [**RR-018]** it is indicated that the principle of the IERRT development is supported because it contributes to the growth on which the North-East Lincolnshire Local Plan is based.
Section 3 The Need Case		
3.1	The key pillar of ABP's case for the Proposed Development is that it would address an "imperative need" to provide additional Ro-Ro freight capacity within the Humber Estuary. In this regard, addressing a perceived "need" is not just one of many potential benefits that ABP presents in support of its proposals. Rather, it is absolutely fundamental to ABP's case. It is also notable that ABP asserts that the Proposed Development is the only solution to meeting that perceived "need".	This paragraph is a selective summary of the need which the Applicant has identified. In particular, it is noted that CLdN do not refer in any way to various of the reasons which the Applicant has identified as to why additional capacity is needed, matters which, for example, are clearly set out in the Applicant's overall statement of need and the various identified objectives which emerge from it (see ES Chapter 4, paragraphs 4.2.79 and 4.2.80 [**APP-040**].
3.2	As outlined in Part 2, the "need case" lies at the heart of government policy. In turn, establishing whether the Proposed Development does indeed address that	Whilst the Applicant is confident in the need case which it has put forward for the IERRT development, as earlier explained, under the policy set out within the NPSfP there

Reference	Relevant Representation	Applicant's Comment
	need is imperative to understanding the perceived benefits of the Proposed Development and, crucially, weighing those benefits up against its adverse effects. For those reasons, assessing the merits of ABP's "need case" must be a principal issue and fully tested and explored through the Examination.	is actually no requirement for the Applicant to demonstrate a need for the proposed development (even though it has) because an urgent need for the type of infrastructure that would be provided by the IERRT development is already established in the NPSfP – see NPSfP sections 3.4 and 3.5.
3.3 / 3.3.1	We make the following initial observations with respect to need: Demonstrating "need" appears to be integral to a number of ES chapters and the Planning Statement, where the assessments and analysis appear to be geared towards demonstrating an alleged shortfall in capacity and based on optimistic assumptions of ever growing (and changing) demand.	This is, again, a paragraph containing statements with no evidence provided to support the assertions made. ABP's need case is more than just meeting a shortfall in capacity. However, it is noted that CLdN do not seem to actually be saying that there will not be growing demand, rather that they consider the Applicant to be optimistic in this regard.
3.3 / 3.3.2(a)	We make the following initial observations with respect to need: CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (a) The assessment gives the impression that the six Ro-Ro river berths at the Killingholme terminal are already in use. However, CLdN would point out that	The information set out by the Applicant in its application concerning berth usage at Killingholme (see ES Chapter 4, paragraph 4.3.70 [APP-040]) does not appear to be materially different to the information provided by CLdN in this paragraph of its RR. It is, however, noted that CLdN do not provide any comments on the landside capacity of its Killingholme facility. Furthermore, the Applicant notes that in its RR CLdN use phrases 'free almost all of the time' and 'generally free at all times'. This wording implies that these berths would not be free all of the time, which is an important consideration for the purposes of timetabled Ro-Ro freight sailings and services.

Reference	Relevant Representation	Applicant's Comment
	only three of the Ro-Ro river berths are in use: 2 berths are in use for CLdN services and one for Stena Line's Hoek van Holland service. Of the remaining three, one is not in service (berth 6) but could be brought into service if required (by dredging), and two are generally free at all times. If Stena were to leave the Killingholme terminal today, four out of six berths would be free almost all of the time. Accordingly, the conclusion that *"…the active berths at the facility are extensively used with apparent limited ability for substantial additional use"* is simply not correct. There is in fact substantial additional capacity that is already available in the Humber and which can cater for credible market need projections.	In addition, the Applicant notes that at the end of this paragraph CLdN make a jump in logic. Following on from a discussion solely about berth capacity at the Killingholme facility the conclusion is then reached that there is substantial additional capacity available in the Humber.
3.3 / 3.3.2(b)	We make the following initial observations with respect to need: CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (b) The assumptions on changes in market demand towards unaccompanied freight over existing Ro-Ro passenger services appear to be overly optimistic and fail to take into account a continuing market preference for certain types of goods to use: a) the	The Applicant's evidence is not that the short straits corridor will stop being an important freight corridor. Neither is it the Applicant's position that accompanied Ro-Ro freight will not continue to be important. The evidence presented by the Applicant demonstrates that the proportion of unaccompanied Ro-Ro cargo versus accompanied cargo has increased over time and that this is a trend which will continue. Interestingly, the Applicant notes from a review of press releases available on the CLdN website that certain actions and steps which are being taken by CLdN would appear to support the position on this matter which is set out in the application information. For instance:

Reference	Relevant Representation	Applicant's Comment
	short straits and other Channel routes depending on origination; and b) the driver-accompanied model (including the Channel Tunnel).	i. 14 March 2023 – CLdN announce an increase in capacity on its Purfleet (London) services. The press release states that *'CLdN has invested heavily in recent years to grow its fleet with larger and more efficient RoRo vessels. CLdN's extensive and modern fleet is ideally positioned to respond to the increase demand for unaccompanied freight across the North Sea and to do so with lower CO2 emissions than any of its competitors'.* ii. 9 February 2023 – CLdN announce increased capacity on North Sea routes to and from eastern England through the charter of an additional Ro-Ro vessel and the introduction of a service between Zeebrugge and the Port of Tilbury. The press release indicates that the Zeebrugge / Tilbury service is being introduced *'In response to increasing customer demand for unaccompanied freight to and from the UK, …'*
3.3 / 3.3.2(c)	We make the following initial observations with respect to need: CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (c) The assessment that trade increases in line with GDP growth cumulatively year-on-year is at odds	The Applicant does not agree with CLdN on the points being made in this paragraph. The use of GDP in the way it has been used is considered to be an appropriate element of forecasting future growth as explained within ES Appendix 4.1 [APP-079]. As already indicated, the CLdN RR is quiet on the national forecasts which are referred to in the NPSfP. The national forecasts make it clear that in terms of its Ro-Ro forecasts the key driver is GDP and explains why the use of GDP is considered to be an appropriate measure for forecasting.

Reference	Relevant Representation	Applicant's Comment
	with actual downward and operators' expected trends in freight volumes. It is unreliable as a basis for establishing need, certainly the need for a wholly new terminal for one operator over the alternatives, and conflates market need with the demands of a single operator (see (f) below). Accordingly it must be given limited weight.	It is also highlighted that the forecasts provided in ES Appendix 4.1 are not the only basis for establishing need. They are used as part of the evidence to assist in understanding the overall demand element of the need that has been identified – itself just one element of the total need case.
3.3 / 3.3.2(d)	We make the following initial observations with respect to need: 3.3.2 CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (d) Calculations by ABP on space requirements for Stena are based on average freight dwell times of around 2.25 days. This is well in excess of the "real world" dwell times for freight including Stena Line's own cargoes at Killingholme (and elsewhere in CLdN's experience) and entirely at odds with the commercial incentives that underpin the transportation of unaccompanied freight (and indeed such dwell times are not reported or recognised at all from CLdN's experience), particularly for "just in time" cargos. It follows that ABP's submissions and assertions around a lack of space at Killingholme require much greater scrutiny.	This paragraph misunderstands the approach which has been taken within ES Appendix 4.1 [**APP-079**]. Whilst a dwell time of 2.25 days has been used, a sensitivity analysis has also been undertaken which has looked at the changes in likely capacity if dwell times of 1.75, 2, 2.25, 2.5, 3 and 3.5 days are used. A range which was supported by comments made by others during ISH2. Furthermore, the analysis in ES Appendix 4.1 highlights that the issue of dwell time – which is influenced by a number of different factors – makes it difficult to determine the precise capacity of a Ro-Ro facility. In addition, the 2.25 day dwell time has not, as is suggested by CLdN, been used to calculate the 'space requirements for Stena'. It has been used to assist in identify issues with current Ro-Ro capacity across the Humber Estuary. Furthermore, the Applicant notes CLdN's reference to the 2.25 day dwell time figure being particularly at odds with the 'real world' position that occurs in respect of 'just in time' cargoes. By definition, 'just in time' cargo will clearly not dwell for very long within a port, but in general terms it is understood by the Applicant that such cargoes do not make

Reference	Relevant Representation	Applicant's Comment
		up a high proportion of overall Ro-Ro freight volumes – particularly unaccompanied freight volumes. Reliance upon low dwell times can lead to inefficient operations and over capacity issues, especially in busy periods such as the lead up to Christmas, bank holidays and even weekends where there is cargo still arriving with little activity in terms of units being removed from the terminal. Reliance upon low dwell times, limits the resilience and efficiency of a facility.
3.3 / 3.3.2(e)	We make the following initial observations with respect to need: CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (e) There is no evidence provided of the contribution that Stena Line (or other customers of the new facility) would actually make towards this assumed growth, based on historic volume growth (or decline). Furthermore there is no evidence, for example in the form of business plans, of how Stena Line (or other operators) would serve any potential growth. Put simply, a general assertion by ABP as to growth in the unaccompanied freight market is inadequate. In formulating a credible need case, ABP must	It is not clear what the basis is for this aspect of CLdN's case. There is no specific policy or legislative requirement for the Applicant or its customer to demonstrate that the new facility would actually capture growth. The NPSfP makes it clear – when it is discussing competition matters - that the Government believes that the port industry and port developers are best placed to assess their ability to obtain new business and the level of any new capacity that will be commercially viable (NPSfP 3.4.13). Both the Applicant and its customer Stena Line consider that the facility being promoted is commercially viable and will capture new business. It is again highlighted that, under the policy set out within the NPSfP there is actually no requirement for the Applicant to demonstrate a need for the proposed development (even though it has) because a compelling and urgent need for the type of infrastructure that would be provided by the IERRT development is already established in the NPSfP – see NPSfP sections 3.4 and 3.5.

Reference	Relevant Representation	Applicant's Comment
	demonstrate that the new facility would actually capture that growth.	CLdN's suggestion in this paragraph, therefore, is contrary to the position set out in the NPSfP.
3.3 / 3.3.2(f)	We make the following initial observations with respect to need: CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (f) Crucially ABP's assessment conflates a market need for Ro-Ro capacity with the commercial preferences of a single operator (namely Stena). ABP appears to be seeking to demonstrate that the expected growth of Stena drives the need for the Proposed Development. Yet it is not at all certain that Stena itself will grow, or that Stena will have the commercial incentive to service growth specifically at the Proposed Development (for example by investing in new, larger, unaccompanied specialist ships). To this end, CLdN considers that the commercial arrangements between ABP and Stena must be properly scrutinised during the Examination, and the "real world" factors that drive the market need for new	This paragraph misunderstands the information which the Applicant has provided in its application. The need for the IEERT facility is more than simply meeting Stena Line's particular needs. Again, there is no policy or legislative requirement that requires the approach which CLdN set out in this paragraph, and in this regard it is noted that the approach which the Applicant has taken in respect of the IERRT application is not dissimilar to the approach successfully adopted by other promoters of port infrastructure projects.

Reference	Relevant Representation	Applicant's Comment
	capacity must be properly tested and taken into account.	
3.3 / 3.3.2(g)	We make the following initial observations with respect to need: CLdN fully intends to elaborate on these concerns during the Examination. However, in summary, CLdN has serious concerns regarding the accuracy of the information on capacity constraints and market demand that is presented in Chapter 4 of the ES (Need and Alternatives) and Appendix 4.1 (Market Forecast Study Report): (g) The need for the Proposed Development on resilience grounds appears to be overstated and does not address need in accordance with the Ports NPS. There are already Ro-Ro facilities in river berths at Killingholme, Immingham and Hull. More importantly from a resilience perspective, there are four Ro-Ro operators from northern Europe (CLdN, Stena, DFDS and P&O). It follows that a freight unit can still readily be transported to Humberside if a river berth is out of operation (or otherwise go via another destination, which is borne out by experience when routes such as the short straits have been disrupted). To this end, in formulating its case that the Proposed Development improves resilience, ABP again appears to have conflated market need with the commercial preferences of a single operator (namely Stena).	It is noted that the reference to resilience in this paragraph of the RR is the only reference within the CLdN RR to another aspect of the total need considerations other than the overall demand element. However, even in respect of this resilience matter, CLdN set out a very simplistic and partial view. Furthermore, the Applicant considers that the CLdN comments actual make a resilience point in that if a river berth were, for whatever reason, out of operation, then it would not simply be an issue for one single freight unit, but an issue for hundreds of units per day. The overall concept of resilience within the Ro-Ro sector can helpfully be explained by having regard to the policy on this matter contained within the NPSfP. In summary, seeking resilience in respect of the Ro-Ro trade means seeking to contribute to sufficient appropriate port capacity – including spare capacity – at a variety of locations to enable the sector to meet short term peaks in demand, the impact of adverse weather conditions, accidents, deliberate disruptive acts and other operational difficulties, without causing economic disruption through impediments to the flow of imports and exports (NPSfP, paragraph 3.4.15). As already referred to, the NPSfP makes clear that the decision maker should accept the need for future capacity

Reference	Relevant Representation	Applicant's Comment
		to, amongst other things, provide resilience in the national infrastructure (NPSfP, paragraph 3.5.1). Within the NPSfP there is no specific quantification of the level of resilience that is required or which needs to be achieved. The Applicant agrees with the analysis contained within the NPSfP on this matter, namely that resilience is provided most effectively as a by-product of a competitive ports sector (NPSfP paragraph 3.4.15).
Section 4 The Environmental Effects		
4.3 / 4.3.1	CLdN has undertaken an initial review of the ES and makes the following initial observations: 4.3.1 Chapter 4 (Need and Alternatives): The alternatives assessment appears to have been based solely on the specific vessel design requirements for Stena based on the largest vessels (operated by CLdN Shipping (part of the CLdN Links group) – the Delphine and Celine) currently calling at the Humber. In turn, this has been used to rule out the alternative locations for additional RoRo capacity. No consideration has been given to the use of an alternative size of vessel and whether the existing alternative locations could be utilised to provide additional capacity. No consideration has been given to the possibility of adapting existing berths to accept larger vessels. Furthermore, no comparison of the environmental effects has been provided on the basis that none of the alternatives is suitable. CLdN considers that the assumption of market preference	Before commenting on the points raised by CLdN it is highlighted that, as a matter of policy set out within the NPSfP, there is no requirement to demonstrate that there is an absence of any alternatives to what the Applicant is proposing. Such a requirement only arises if the law requires it. Broadly speaking, in that respect, there is only a requirement to consider alternatives if a proposal causes significant planning harm, there is a specific topic related policy requirement or the proposal causes adverse effects to the integrity of a designated site as part of the process under the Habitats Regulations. None of these situations arises or are an issue in respect of the IERRT proposal. The duty relating to alternatives in respect of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 is a more procedural duty which relates to setting out what alternatives have been considered – something which has been adequately provided within the IERRT application documentation.

Reference	Relevant Representation	Applicant's Comment
	for larger vessels which would require the longest/widest berths is fundamentally flawed and not supported by recent history of fleet commissioning and mix in registered vessels and industry communication on new vessel orders (or indeed orders for new vessels by CLdN Shipping), which indicate a continuing mixed fleet approach to serve the needs of the market. Whilst it is not disputed that there are benefits on some routes for larger vessels, operators typically deploy fleets of mixed sizes and increases in vessel size does not mean vessels are longer or wider. Typically they will have more decks, meaning that they are able to be handled at existing facilities without (or with only minimal) adaptation. As set out at Part 3, ABP's assumptions in this regard are geared solely towards the preferences of a single operator for its own terminal (who may or may not ultimately fulfil this perceived demand). It is therefore unclear how the application assumptions cater for long-term forecast growth in volumes of imports and exports by sea for all commodities indicated by the demand forecast figures set out in the MDST forecasting report accepted by government, taking into account capacity already consented.	Turning to the specific points raised by CLdN, the need case which the Applicant has presented highlights the need to provide, for various reasons, additional 'appropriate' Ro-Ro freight capacity. Within the background analysis out of which the statement of need is identified, it is explained why the large Ro-Ro vessels are the appropriate ones to consider in terms of the provision of future capacity. In simple terms, therefore, additional capacity that cannot accommodate the large Ro-Ro vessels identified (even if such capacity could be found) does not meet the need which has been identified, and would not, therefore, be an alternative. Whilst Stena Line's requirements have fed into the need, the size of vessels being designed for takes account of wider market requirements as well, and in this regard, it is highlighted that it is important that the provision of new Ro-Ro infrastructure – which, along with port infrastructure generally, will have a significant operational life – should be designed to be resilient, flexible and efficient. In this regard the Applicant notes the contradictory nature of the comments made by CLdN whereby they identify the fact that they already operate such large Ro-Ro vessels (the Delphine and Celine) before then suggesting that the Applicant's analysis about the size of vessels is based 'solely towards' the preference of a single operator. CLdN again, within the final sentences of this paragraph, appear to misunderstand policy on the need for port

Reference	Relevant Representation	Applicant's Comment
		infrastructure contained within sections 3.4 and 3.5 of the NPSfP.

3 Biodiversity

3.1 The comments of the Applicant on the Relevant Representations (RR) submitted by the Interested Parties on the issue specific topic of **Biodiversity** are set out below.

3.2 The Representations relating to Biodiversity are found within the representations submitted by –

i. Natural England [RR-015];

ii. the Marine Management Organisation [RR-014];

iii. BDB Pitmans LLP on behalf of DFDS Seaways [RR-008];

iv. The Environment Agency [RR-009];

v. Lincolnshire Wildlife Trust [RR-012]; and

vi. CLdN Ports Killingholme Limited (CLdN) [RR-007].

3.2 The comments raised in the relevant representation by each interested party, and the Applicant's responses to them, are presented in the following tables:

- Table 3.1 – Natural England;
- Table 3.2 – the Marine Management Organisation;
- Table 3.3 – BDB Pitmans LLP on behalf of DFDS Seaways;
- Table 3.4 – Environment Agency;

- Table 3.5 – Lincolnshire Wildlife Trust; and
- Table 3.6 – CLdN Ports Killingholme Limited (CLdN).

Table 3.1 Natural England (RR-015)

Reference	Relevant Representation	Applicant's Response
Key Issue 1 – air quality	Assessment of potential air quality impacts from construction and operational phase traffic should be undertaken in-line with our guidance noted NEA001. The assessment should clearly define the plans and/or projects that have been scoped in, and the same screening thresholds (see Step 4 of NEA001) should be used as for impacts of the project alone, in-line with the Wealden Judgement for any projects which will not be reflected in the background level. For any process contributions (PC) that exceed 1% of the critical load or level of the relevant environmental benchmark alone or in-combination, the results will need to be considered in the context of the predicted environmental concentration (PEC), which also takes into account background levels. Please see Step 4b of guidance note NEA001 for further details.	The guidance referred to is Natural England's 'Approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations'. Step 2 of the guidance requires the identification of sensitive features within 200 m of a road. In terms of the SAC/SPA, the only habitat within 200 m of a road affected by the Project (i.e., the new jetty and the new internal approach road to and from the jetty) is Mudflat. The only traffic using the jetty and approach road to and from the jetty will be traffic associated with the Project. Emissions from these roads have been quantified to inform the air quality assessment as set out in Chapter 13 of the ES (APP-049). Review of the Air Pollution Information System (APIS) shows that Mudflat habitat has no established available critical load estimate. On this basis, coupled with the unvegetated and intertidal nature of that habitat, it is considered that the approach undertaken in the ES is robust.
	It is currently unclear as to why the receptor points in the SAC detailed in Table 20 have been chosen, or on what basis nearer habitat types have been excluded. The justification provided is that these are "predominantly water based", however, even where this is the case, the impact of pollutants on these habitat types should be considered in the appropriate assessment if a PC of more than 1% either alone or in combination is predicted. Additionally, Table 2 of the HRA appears to suggest there could be sensitive habitat types, including H1130 'Estuaries', H1110	The approach undertaken and reported in the ES is considered appropriate. The saltmarsh locations selected for assessment were the closest estuary habitat to the IERRT project within the SAC that could be sensitive to pollutants and for which a suitable Critical Load is available, as opposed to intertidal and subtidal unvegetated habitats. Review of habitat mapping showed that whilst there were instances of Mudflat and Sandflat habitat closer to the IERRT Project than the closest Saltmarsh habitat, APIS indicates that Mudflat and Sandflat habitat[1] have no established available critical load

Reference	Relevant Representation	Applicant's Response
	'Sandbanks which are slightly covered by seawater all the time' and H1140 'Mudflats and sandflats not covered by seawater at low tide', in or closer to the footprint of the project. Therefore, these should also be considered.	estimate. It was also noted that APIS suggests that Sandbank habitat[2] and Estuaries habitat are not sensitive to eutrophication. On this basis – the lack of sensitivity and critical load estimate, coupled with the intertidal nature of the environment – the approach undertaken in the ES is considered robust. The saltmarsh is the most sensitive habitat present within this part of the European site.
	At present, the identification of the critical levels (CLe) and critical loads (CLo) for relevant habitat types is unclear, and these are currently referred to as "air quality standards". Although the nitrogen oxides (NOx) CLe is currently correct at 30ug/m3, the CLe for ammonia (NH3) is given as a range rather than stating if either 1 or 3 has been used depending on whether bryophytes and/or lichens are integral to the habitat. The CLe used for ammonia should therefore be more clearly stated. Chapter 13 also does not clearly define the CLo used for nitrogen (N) deposition, with Table 13.4 indicating that the relevant habitat at the SAC is saltmarsh with a critical load of 20-30kgN/ha/yr, whereas Table 13.11 indicates a range of "Air Quality Standards" with the footnote for the SAC linking to a range of 10-20kgN/ha/yr. Further clarification is therefore required around the N deposition CLo used.	The phrase "Air Quality Standards" was used as a collective term to cover air quality objectives, Critical Loads, Critical Levels and other Environmental Assessment Levels. All tables that show pollutant concentrations and deposition rates with a range in their air quality standards illustrate exceedances of the lower range value in Bold font. Subsequent text relating to these tables, including in paragraphs 13.7.5 and 13.8.58 of Chapter 13 of the ES (APP-049), describe the concentration and deposition rate against the lower part of the Critical Load/Level range in air quality standard. Regarding the point on the Critical Load for N deposition on the Saltmarsh habitat, the appropriate Critical Load range at the time of the assessment was 20-30 kgN/ha/yr. The correct footnote had been applied to Table 13.15 and Table 13.16. An incorrect footnote (4) was applied to Table 13.11. It is noted that on 25th May 2023, the nitrogen deposition Critical Load for saltmarsh habitat was updated. This has no implications for the assessment which has been undertaken.
	At present, there appears to only be an assessment of onsite traffic NH3 emissions, with no consideration of NH3 for either construction or operational traffic. Please provide further assessment in relation to this.	There are no public roads that will be used by construction or operational traffic that are within 200 m of an SAC/SPA. The nearest public road is Queens Road leading to the East Gate entrance to the Port, which is approximately

Reference	Relevant Representation	Applicant's Response
		500 m from the SAC/SPA. The nearest air quality sensitive habitat within the SAC to a public road used by IERRT project construction traffic and operational traffic is saltmarsh habitat 1.2 km away from access to and from the West Gate. As a consequence, in line with guidance NEA001, consideration of NH3 for either construction or operational traffic is not required.
	The current assessment of marine vessels (construction and operational phases) uses the same guidance as for road traffic emissions and assumes that impacts of these emissions should only be considered 200m from the route. Please provide further reference to evidence and/or guidance that this is a reasonable distance to use.	The ES refers to 200 m from a marine vessel route in response to a previous stakeholder comment raised by Natural England, as presented in Table 13.3 of the ES (APP-049). That stated that - 'It is not clear whether vessels will pass within 200 m of sensitive habitats when moving through the estuary. This should be clarified in the ES and HRA'. Table 13.3 and Paragraph 13.8.46 of the ES simply confirms that vessels will not pass within 200 m of a sensitive habitat. On this basis, it is concluded that 200 m is the most appropriate distance to use in the assessment.
	Alongside consideration of potential impacts of NOx, NH3 and N deposition, assessment is also required of acid deposition impacts to relevant designated sites.	Review of APIS showed that within the Humber Estuary SAC, only dune habitats were sensitive to acid deposition. The nearest such habitat is 12.5 km away at Cleethorpes. There is no requirement for the assessment in the ES to quantify impacts at such a distance.
Key Issue 2 – air quality	The HRA screening assessment (Table 3, page 43) rules out likely significant effects (LSE) for potential air quality impacts from construction phase traffic. However, we advise further assessment of these impacts are required as detailed below. Section 13.3.12 currently indicates that site plant emissions will emit NO2, PM10, and PM2.5, however, these also emit and contribute to NOx and	Paragraph 13.3.12 of Chapter 13 of the ES (APP-049) states that non-road mobile machinery (NRMM) and site plant has the potential to increase concentrations of the pollutants listed. It is agreed that NOx emissions will increase concentrations of NOx, including NO2, which in turn will increase nitrogen deposition rates. The qualitative assessment described in the ES is considered to be proportionate, not only because of the intermittent and transient nature of emissions, but also because of the

Reference	Relevant Representation	Applicant's Response
	NH3 emissions, and N deposition. Additionally, site plant emissions are not quantified but are instead noted as "transient and intermittent". As the plant that will be used has been quantified and an indication of the days of usage provided in Table 13.13 of Chapter 13, we would consider that more robust approach would be to include this in the overall model. This is as the site plant emissions could potentially have substantial effects, even if this is only for a limited time.	distance between the construction site and the nearest air quality sensitive habitats. The saltmarsh locations selected for assessment were the closest estuary habitat within the SAC that are sensitive to pollutants where those habitats are not subject to tidal inundation. The nearest such saltmarsh habitat is over 3 km from the construction site. Site plant and NRMM would have near ground level emission exhausts, meaning that like road traffic emissions, this source of emissions will likely impact on locations within a few hundred metres of the source. Review of habitat mapping showed that whilst there were instances of Mudflat and Sandflat habitat closer to the Project than the closest Saltmarsh habitat, APIS indicated that Mudflat and Sandflat habitat had no established critical load estimate available. It was also noted that APIS suggested that Sandbank habitat and Estuaries habitat was not sensitive to eutrophication. The nature of site emissions and the distance between those emissions, and the sensitive receptors where pollutants are not affected by the intertidal nature of the environment, confirms the robustness of the approach undertaken in the ES.
	Construction traffic is currently excluded with the reasoning that on average there will be fewer than 100 HGVs per day. However, there will be peaks where 200 HGVs per day is exceeded, therefore we advise a precautionary approach is used and further assessment of construction traffic is provided.	Air quality assessment guidance is primarily based on annual average daily traffic flows, not peak daily flows. The reason for this being that the majority of air quality standards relating to road traffic emissions are based on an annual average concentration or deposition rate. Therefore, average values are more appropriate for comparison with these metrics than peak values. Given the distance between the nearest sections of the SAC/SPA and the construction traffic routes, and the greater distance between the sensitive Saltmarsh habitats and the

Reference	Relevant Representation	Applicant's Response
		construction routes, the approach in the assessments is considered to be robust.
Key Issue 3 – air quality	Natural England requires further information to determine whether we concur with the HRA conclusion in 4.7.12 of no adverse effect on integrity (AEOI) on the Humber Estuary designated sites as a result of the deposition of airborne pollutants during the operational phase. Further detail around the additional information required is provided below. Table 20 of the HRA states that the Process Contributions (PC) of the development exceed the critical level for annual mean nitrogen oxides (NOx) at three sections of saltmarsh (SAC3: 1.6%, SAC4: 1.7% and SAC5: 1.0%) within the Humber Estuary designated site. To justify ruling out AEOI due to these exceedances, the following is stated in 4.7.9: "…annual mean NOx concentrations remain below 70% of the air quality standard and therefore the effect of emissions on coastal saltmarsh with the Humber Estuary SAC is considered negligible." It is currently unclear as to what value the 'air quality standard' refers to in this statement. Natural England advise that the predicted environmental concentration (PEC) should be provided, and the percentage of the PEC to the environmental benchmark should be calculated and included in the report. The environmental benchmark should be the critical level for NOx.	Natural England have commented that - *"Table 20 of the HRA states that the Process Contributions (PC) of the development exceed the critical level for annual mean nitrogen oxides (NOx) at three sections of saltmarsh (SAC3: 1.6%, SAC4: 1.7% and SAC5: 1.0%) within the Humber Estuary designated site".* This is a misinterpretation of what is shown in Table 20 of the HRA. The process contribution does not exceed the Critical Level for NOx, which is the air quality objective of 30 µg/m3 as an annual mean (see Table 13.15 of the ES). Table 20 and the text in the paragraph that follows it (4.7.8) shows that the change in annual mean NOx concentrations due to the proposed development (the Process Contribution) exceeds the screening criteria of 1% of the Critical Level (i.e., is greater than 1%) at SAC3, SAC4 and SAC5. However, if total NOx concentrations (i.e., the Predicted Environmental Concentration (PEC)) are not forecast to exceed the 30 µg/m³ Critical Level, even with the development factored into modelling, then no adverse effect is forecast to arise irrespective of whether the impact of the scheme exceeds 1% of the Critical Level[3]. Paragraph 4.7.9 of the HRA then confirms that where the change in annual mean concentration does exceed 1% of the Critical Level, total NOx concentrations (the PEC) account for less than 70% of that standard. In line with Environment Agency guidance, a Process Contribution of >1% can be screened as insignificant where the Predicted Environmental Concentration is less than 70% of the relevant air quality

Reference	Relevant Representation	Applicant's Response
		standard. As such, the PEC does not exceed the Critical Level at any of these three locations.
	Additionally, it is currently unclear whether the above exceedances for NOx are associated with road traffic or marine vessels. Natural England therefore require further details around the emission source(s) associated with these exceedances.	There is no requirement to provide a breakdown of impacts by source. It is confirmed, however, that the contribution of Project emissions to concentrations and deposition rates at the SAC habitats were predominantly due to the vessel emissions. The nearest section of Saltmarsh habitat to the nearest road used by Project traffic (internal road within the Port of Immingham, on the approach to and from the West Gate) is 1.2 km. Over such a distance, the contribution of road traffic emissions is negligible.
	The mitigation currently proposed is generic and unquantified. Although it is currently stated that there is no requirement for mitigation in the HRA, this is not clearly set out at present. For example operational onsite emissions currently appear to lead to an exceedance of NH3 and NOx at several SAC receptors, so mitigation should be considered within the HRA.	Natural England have commented that - "operational onsite emissions currently appear to lead to an exceedance of NH3 and NOx at several SAC receptors, so mitigation should be considered within the HRA". This is a misinterpretation of what is presented in Table 20 of the HRA and text in the paragraphs that follow it. As noted above, there is no reported exceedance of the NOx air quality standard – the air quality objective of 30 µg/m³ as an annual mean is not forecast to be exceeded even with the scheme in operation (see Table 13.15 in Chapter 13 of the ES). Table 20 of the HRA does show an exceedance of the lower extent of the air quality standard for nitrogen deposition, which is the 20–30 kgN/ha/yr Critical Load relevant to Saltmarsh habitat, at receptor SAC1. However, the exceedance only occurs at a location where the change/impact in deposition rate due to the proposed development is less than 1% of the air quality standard (the Critical Load) and is therefore imperceptible. Paragraph 4.7.10 of the HRA refers to Table 13.16 of the ES for NH3 and NH3 derived nitrogen deposition predictions. Table

Reference	Relevant Representation	Applicant's Response
		13.16 of the ES does show an exceedance of the lower extents of the relevant air quality standard for NH3, which is the 1–3 µg/m3 Critical Level as an annual mean, and nitrogen deposition, which is the 20-30 kgN/ha/yr Critical Load deposition rate, at all or some of the SAC receptors considered. However again, these exceedances occur at locations where the change in NH3 concentrations and nitrogen deposition rates due to the proposed development is less than 1% of the Critical Level and Critical Load respectively. Furthermore, it should also be noted that comparison to the lower value of the Critical Level range for NH3 is precautionary, because bryophytes are unlikely to be present at the habitats considered.
Key Issue 4 – air quality	Table 3 of the HRA states that LSE on the Humber Estuary can be ruled out for potential air quality impacts of construction dust. The reasoning given for this is as follows: "*The majority of the SAC habitats closest to the construction site are marine habitats and are therefore not sensitive to changes in air quality due to dust smothering*". Section 13.8.20 of Chapter 13 of the ES also states the following "...*the areas of the SAC/SPA that are within 20m of the construction site boundary are tidal mudflats and such habitat is not considered sensitive to air quality or construction dust impacts, because the tidal nature of the estuary will regularly wash deposited dust away*." We advise that although it is reasonable to highlight this, such further assessment should be provided in the appropriate assessment, where further descriptions of the habitats should be made. For instance, Table 2 of the HRA indicates that the	Mudflat habitat is covered by seawater at high tide, which will occur twice per day. The sediment loading in the tidal water column will cause large amounts of sediment to be mobilised (both deposited and washed away) on every tide due to natural processes. The assessment identified a suite of mitigation measures that would control dust emissions to the extent that a significant effect would not occur. Including reference to the mudflat/sandflat habitat in Chapter 13 would not change the list of measures already included in the ES and CEMP. The reference to the presence of mudflats and sandflats habitat within the footprint of the IERRT project within Table 2 of the HRA identifies that this feature has been taken forward to LSE screening, where it has been identified that potential pathways exist. In the case of dust smothering during construction, there is no identified pathway by which an effect could occur as the habitat is not susceptible to the effects of dust smothering, and, therefore, the habitat

Reference	Relevant Representation	Applicant's Response
	SAC feature H1140 'Mudflats and sandflats not covered by seawater at low tide' are within the footprint of the project, but this habitat type does not appear to be recognised in the assessment.	feature is not included in Table 3 for this impact pathway. Even if a more precautionary approach had been taken within the HRA, and the habitat feature had been included in Table 3 for LSE screening against this impact pathway, the lack of pathway for LSE would have been stated and, therefore, the conclusions of the HRA would not change. As a consequence, further information on the habitat feature is not required to inform this conclusion within either the ES chapter or the HRA.
Key Issue 5 – coastal waterbirds	Table 2 of the HRA uses phrases such as 'low numbers' to describe numbers of SPA/Ramsar bird species found. We consider terms such as 'low/lower numbers' to be comparative and open to interpretation. We advise that bird numbers should be quantified through specific references to the data. For example, through referring to the numbers of birds in relation to their estuary population, with phrases such as 'numbers [less/more than] 1% of the estuary population (five year mean)'.	Table 2 in the HRA (APP-115) screened in the following SPA/Ramsar qualifying species due to their regular occurrence in Sector B (between Marsh Lane (Immingham) Western Jetty and the Immingham Oil Terminal Jetty (IOT)) on the foreshore: ▪ Black-tailed Godwit; ▪ Shelduck; ▪ Dunlin; ▪ Redshank; ▪ Bar-tailed Godwit, and ▪ Knot. The information relating to bird numbers suggested by Natural England in its Relevant Representation is provided in Table 9.19 and Table 9.20 of Chapter 9 (APP-045) of the ES, as well as Table 28 of the HRA. The following clarification is provided: ▪ Black-tailed Godwit have been recorded in nationally or internationally important numbers in Sector B as well regionally important numbers

Reference	Relevant Representation	Applicant's Response
		(i.e., in abundances representing > 10% of the estuary wide population (based on the WeBS 5-year mean peak1 ▪ Shelduck, Dunlin and Common Redshank have all been regularly recorded in Sector B in locally important numbers with Bar-tailed Godwit recorded in locally important numbers in some years (i.e., in abundances representing > 1% of the estuary wide population (based on the WeBS 5-year mean peak)) ▪ The numbers of Knot recorded in Sector B are lower than 1% of the estuary wide population (based on the WeBS 5-year mean peak). However, this qualifying feature was screened in on a precautionary basis as they have been regularly recorded on the foreshore in small flocks in some years.
	Table 4 of the HRA details potential impacts that could result in LSE on features of the Humber Estuary SPA. We would advise that bird data should be presented prior to this table, in particular tables 9.19 and 9.20 from the ES. Additionally, combining the wintering and passage data for 2022 would provide a clearer picture of bird usage across the year. At present, all wintering data is summarised to give peak counts in each year, with key months identified. Presenting bird usage data by month would provide a more useful summary of this information.	Table 9.19 and Table 9.20 of Chapter 9 of the ES presents bird species recorded within Sector B during the last five winters (peak counts per winter), and during the passage months in 2021/22 (peak counts per month), respectively. This same bird survey data collected between October 2021 and September 2022 has also been provided by month (peak counts) to Natural England separately.

Reference	Relevant Representation	Applicant's Response
	In the justification section of Table 4 of the HRA, we would prefer to see a list of which species have been recorded in internationally, nationally and regionally important numbers. As described for Table 2, we consider terms such as 'low/lower numbers' to be comparative and open to interpretation. For example, turnstone are described as being in 'relatively low' numbers, but are present in regionally important numbers at the application site. Additionally, Table 4 describes black-tailed godwit as being 'regularly recorded', however, this species occurs in internationally important numbers at the application site, and this should be considered as highly significant.	The species highlighted above along with waterbird assemblage species (see row below) were all screened into the assessment. The terminology used in Table 4 of the HRA (i.e., the use of words such as low/lower etc.) does not change the outcome of the assessment (i.e., a potential LSE was not ruled out for all of these species with respect to the pathways and they were as a consequence taken forward into Stage 2 (Appropriate Assessment) of the HRA).
	In section 3.3.2, page 120 of the HRA, a list of features screened in for further assessment is included. We would advise that for the 'Waterbird assemblage' section, the species that occur in numbers over 1% of the estuary population are listed.	To provide clarity on the SPA waterbird assemblage species screened into the assessment, in addition to the qualifying features listed above, the following waterbird assemblage species were also considered in the assessment in Stage 2 (Appropriate Assessment) of the HRA (APP-115): ▪ Turnstone; ▪ Curlew; ▪ Oystercatcher; ▪ Mallard; ▪ Teal; and ▪ Ringed Plover. These species are all listed as SPA assemblage species in the Natural England SPA citation. As identified in Table 9.19 and Table 9.20 of Chapter 9 of the ES (APP-045) and

Reference	Relevant Representation	Applicant's Response
		Table 28 of the HRA, Turnstone have been recorded in Sector B in regionally important numbers (i.e., in abundances representing > 10% of the estuary wide population (based on the WeBS 5-year mean peak)). Ringed Plover has been occasionally recorded in locally important numbers in some years (i.e., in abundances representing > 1% of the estuary wide population (based on the WeBS 5-year mean peak)). The other species were considered in Stage 2 (Appropriate Assessment) as they have occurred on the foreshore in some years but in numbers < 1% of the estuary wide population (based on the WeBS 5-year mean peak). No other SPA assemblage species occurs in numbers over 1% of the estuary population, with the exception of Greenshank where only one single bird observation represents > 1% of the estuary population (based on the data for Sector B) and was, therefore, not considered further in the assessment.
	Currently the bird data referenced is mainly sector B of the long-term data set collected by ABP for the Immingham frontage. It would also be useful to provide some context for bird usage in Immingham Sectors A and C as well as across the frontage between Goxhill and Pyewipe by referencing the Wetland birds Survey data. This will be particularly helpful in identifying whether the mitigation measures proposed will be effective.	A summary of bird usage on the Humber Estuary is provided in paragraphs 9.6.70 to 9.6.79 in Chapter 9 of the ES (APP-045). Bird survey data for count Sector A (between North Killingholme Haven to Marsh Lane (Immingham) Western Jetty) and count Sector C (IOT Jetty to Oldfleet Drain), as well as WeBS data covering Goxhill and Pyewipe, has been provided separately to Natural England.
Key Issue 6 – coastal waterbirds	We advise that Table 10 (4.3.9, page 139) provides a more detailed assessment of the impacts on key species, particularly black-tailed godwit that occurs in	Paragraph 4.3.36 of the HRA (APP-115) provides information on waterbird behaviour around existing jetties. In terms of bird usage, the analysis of bird distribution

Reference	Relevant Representation	Applicant's Response
	internationally important numbers at the application site. This could include an assessment of whether key species feed around port infrastructure at present. An assessment should also be made of whether the same bird species are likely to utilise the area during the operational phase, and whether the numbers are likely to be comparable to present. Evidence from other construction activities that have taken place in the port could be provided to demonstrate typical bird usage before and after construction has been completed. This should then be used to assess potential effects of the project on the conservation objectives for these bird species.	mapping for Sector B for the last five years' worth of data suggests similar densities of foraging bird species (including Black-tailed Godwit, Curlew, Dunlin, Turnstone and Shelduck) occur in the vicinity of jetty structures (<50-100 m) compared with greater distances away. This suggests that numbers of birds within a sector / area of foreshore are highly unlikely to be affected by the presence of structures, supporting the conclusion of the HRA.
	The HRA also states that some species will approach structures 'relatively closely', therefore, additional information around observed approach distances is required. The assessment should consider whether avoidance of structures will result in loss of supporting habitat for SPA/ Ramsar birds, for those species that have been recorded as approaching structures 'relatively closely'.	Surveys in the Immingham area confirm that Curlew, Shelduck and Black-tailed Godwit (where it was stated they approach 'relatively closely' in paragraph 4.3.36 of the HRA) are seen regularly feeding within <10-20 m of existing jetties in the Immingham area. This is similarly the case for other species regularly recorded in the area which were not listed in paragraph 4.3.36 (i.e., Bar-tailed Godwit and Oystercatcher). Paragraphs 4.3.29 to 4.3.39 and Table 10 of the HRA (APP-115) provide an assessment of changes to waterbird foraging and roosting habitat as a result of the presence of the proposed marine infrastructure and includes consideration of potential effects against conservation objectives. It is concluded that there is no potential for an AEOI on the qualifying interest features. To provide further clarity, based on the information provided above, the same key species which are currently recorded on the foreshore in the local area (i.e., those listed in Table

Reference	Relevant Representation	Applicant's Response
		10 of the HRA) would be expected to utilise the mudflat in comparable numbers once the IERRT infrastructure is operational compared with predevelopment baseline conditions. Any change to functional use of supporting mudflat habitat for SPA species as a result of the presence of the proposed marine infrastructure during operation is considered to be negligible.
Key Issue 7 – coastal waterbirds	Section 4.10 of the HRA provides an assessment of airborne noise and visual disturbance during construction on qualifying bird species. Natural England does not support the use of IECS 2013 'Waterbird disturbance mitigation toolkit' as we do not consider the evidence to have been collected in a rigorous way, and the results have not been peer reviewed. Therefore, any assessment that relies on the toolkit may be inaccurate. Table 27 makes frequent reference to the IECS 2013 toolkit. We advocate a precautionary approach to assessing disturbance to waterbirds on mudflats, using a 300m as an initial disturbance zone and then reducing this where mitigation measures allow.	It is noted that Natural England does not endorse the IECS (2013) *'Waterbird disturbance mitigation toolkit'*. The toolkit has, however, only been used to provide contextual information for the assessment. Typically, this comprises findings from direct observations and monitoring of bird species in respect of flood defence works (including piling and use of plant/machinery) which is considered analogous to port related construction activity. It is acknowledged that caution should be used with respect to the very specific thresholds stated for individual species in the toolkit. For this reason, the IERRT ES and HRA do not apply the toolkit thresholds in the assessment(s) and instead take a broader approach by considering the evidence base as a whole. In addition, a wide range of literature and evidence sources have been taken int account within the assessments to help understand the relative sensitivity of different species and the responses they might have to disturbance stimuli. Taken together, this information represents a robust evidence base to underpin the respective assessments and the conclusions drawn from those assessments. Based on the comprehensive assessment detailed in the IERRT HRA and ES, a 200 m disturbance zone around

Reference	Relevant Representation	Applicant's Response
		marine construction activity is considered appropriate as the evidence indicates that the response of waterbirds to disturbance stimuli is limited at distances over 200 m, particularly in areas subject to already high levels of existing anthropogenic activity (as found at the foreshore at the Port of Immingham where the IERRT development is proposed). This detailed review has considered an extensive amount of research and reviews on flight initiation distance (FID) – the distance at which a bird takes flight in response to disturbance stimuli – as well as studies that have investigated the distance that birds respond to construction activity (or other analogous activities undertaken on the foreshore such as the construction of flood defence works). The conclusions reached are supported by actual observations of construction type activity occurring within the area of the proposed IERRT. Recent (January to March 2023) IERRT Ground Investigation (GI) works confirm that disturbance responses of waterbirds at distances of more than 200 m are limited, specifically for waterbirds on the Immingham foreshore. These birds appear to be tolerant of disturbance stimuli. A jack-up barge was used during the GI works which will also be used for the IERRT project; therefore, the construction plant will be similar in terms of visual presence. Coastal waterbird species (Dunlin, Redshank, Turnstone, Black tailed Godwit, Mallard, Shelduck, Herring Gull, Common Gull and Black-headed Gull) were all recorded actively feeding within 60 m of the jack-up-barge and closer

Reference	Relevant Representation	Applicant's Response
		on occasion. In addition, bird numbers and distribution in the eastern section of Sector B (i.e., the foreshore fronting Immingham Docks, from the lock gate towards the IOT Jetty) – where the IEERT development is proposed – over this period when GI works were undertaken were also broadly comparable to what has been recorded in ongoing waterbird surveys in this area over the last five years. Therefore, in summary, coastal waterbirds tolerated the noise and visual stimuli associated with the GI works with only very limited disturbance observed and birds continued to utilise the foreshore in Sector B in similar numbers to previous years. In this context generally, it should be noted that the HRA has also had regard to Natural England advice given in their consultation response (letter dated 03 October 2022) which stated that - '*peak levels below 55 dBA can be regarded as not significant, while peak noise levels approaching 70 dBA and greater are most likely to cause an adverse effect. Therefore, levels over 65.5 dBA may cause disturbance to SPA birds. Birds may habituate to regular noise below 70 dBA, but irregular above 50 dBA should be avoided*'. Noise modelling of IERRT piling activity predicts that noise levels will be lower than 70 dB LAmax at distances of 200 m and more with the use of a noise suppression system – which will be used during construction.
	In addition, Table 27 should identify the bird species that occur in significant numbers in the proposed construction area. For example, limited data was	Table 27 of the HRA (APP-115) provides a review of the sensitivity of key waterbirds recorded on the foreshore to disturbance stimuli. This includes all the qualifying species

Reference	Relevant Representation	Applicant's Response
	identified for black tailed godwit, therefore a precautionary approach should be taken. Additionally, the section on shelduck in Table 20 currently contains several contradictions that should be addressed. As requested for issue reference 5, provision of a summary of bird usage across the wintering and passage months for 2022, with peak counts for each month for each species, would help to inform mitigation measures.	of the Humber Estuary SPA/Ramsar that were screened into the HRA assessment (Shelduck, Black-tailed Godwit, Bar-tailed Godwit, Redshank, Knot) as well as SPA assemblage species (Turnstone, Curlew, Mallard, Oystercatcher, Ringed Plover). Data on the abundance of these species is then provided in Table 28 of the HRA in the context of estuary wide populations. With respect to Black-tailed Godwit, a precautionary approach in Table 27 has been taken (as advised by Natural England). This is evidenced by this species being assigned the same sensitivity level as other species which are known to be more sensitive to disturbance such as Shelduck or Curlew. It is unclear with respect to Shelduck what the contradictions are which Natural England indicate need to be addressed. The judgment on the sensitivity of each species made within the assessments takes into account the range of literature reviewed and is based on a weight of evidence approach. In the specific context of Shelduck the evidence consistently points to a moderate to high level of sensitivity. A summary of bird usage across the wintering and passage months for 2021/22, with peak counts for each month for each species has been provided separately to Natural England.
	We also that advise that Footnote 21 of 4.10.16 is important to the assessment and should be given more prominence. We advise that reference is made	Figure 9.10 of the ES (APP-065) shows the main areas used by roosting and feeding birds. On the mudflat in the 'feeding' area (shown as a blue hatched line) the entire

Reference	Relevant Representation	Applicant's Response
	to Figure 9.10, with the areas marked which are most important for roosting and feeding SPA / Ramsar birds from the data collected (Sector B). Additionally, an assessment should be made of the potential reasons why Sector B is important for SPA / Ramsar birds. Factors contributing to this could be a lack of existing disturbance from recreation, available intertidal mud, or could relate to invertebrate loads in this area. The HRA should assess whether this is likely to change when the development is operational.	area is used for feeding with SPA qualifying species (such as Black-tailed Godwit, Shelduck, Redshank and Dunlin) moving between different patches in this area. Waterbirds will use the foreshore in Sector B for a variety of reasons – for example the extent of available mudflat and feeding resources on the mudflat in the area. Potential effects relating to habitat loss and changes to foraging and roosting habitat have been assessed in the HRA and this was concluded not to result in an AEOI.
	We also request that the expected noise levels during piling and other construction activities at 200m and 300m from the source are provided. At present, only noise levels at 600m and 1.8km are provided in 4.10.19.	Airborne noise modelling (undertaken by AECOM Ltd was used to inform the assessments in the IERRT ES and HRA. Paragraph 9.8.189 of Chapter 9 of the ES (APP-045) and paragraph 4.10.19 of the HRA (APP-115) sets out expected noise levels during percussive piling, and paragraph 4.10.35 of Chapter 9 of the ES and paragraph 9.9.5 of the HRA sets out the expected noise levels with mitigation in place in the form of the noise suppression system. Beyond 200 m from the piling works, noise levels are predicted to be below 70 dB LAmax with the use of the noise suppression system.
	The HRA should indicate the expected number of passage and wintering seasons for SPA birds that will be affected by the construction period. It would be helpful if the HRA could set out the expected period of each of the main construction activities (e.g. capital dredge, construction of jetties etc.).	The construction programme is set out in Chapter 3 of the ES (APP-039), specifically paragraphs 3.1.16 to 3.1.65. Capital dredging works will be undertaken 24 hours a day, 7 days a week, and will take around 80 days. It is estimated that piling works would be undertaken for approximately 24 weeks in total. With a sequenced construction programme, construction of the northern finger pier would commence first. The intended timescale being that the northern finger pier and

Reference	Relevant Representation	Applicant's Response
		approach jetty will become operational around mid-2025. Following this, the innermost southern finger pier (accommodating the third berth) would be constructed. The capital dredging works outlined above will be undertaken in a single stage in the case of either construction scenario. With a sequential construction, piling works for the northern finger pier, approach jetty, and pontoons would be scheduled to be carried out for an approximate 24-week period, with an approximate 13-week period for the southern finger pier. In any case, the assessment has been based on the precautionary assumption that the works could occur at any time of year as a worst case.
	Section 4.10.23 (page 221) states that "The near shore environment in the Port of Immingham area is already subject to large numbers of vessel movements…". We require further definition around the term 'large numbers' here, and further information around how this project might add to that figure.	The Port of Immingham itself currently has over 118,000 transiting movements of vessels per year – the majority moving in close proximity to the site of the IERRT development. Operational vessel movements resulting from the proposed development will add only a very small increase in vessel traffic in the area on a typical day (six additional Ro-Ro vessel movements per day at the Port of Immingham, as well as tugs) which represents an approximate 3% annual increase in vessel traffic in the local area (as noted in Table 25 of Chapter 9 of the ES (APP-045), and in Table 3 and Table 5 of the HRA (APP-115)). There will also be maintenance dredger movements but that is estimated to only be necessary approximately three to four times a year.
	Section 4.10.24 (page 221) mentions that there will be less than one week where noise levels are likely to be disturbing. However, detail has not been	Capital dredging works will be undertaken 24 hours a day, 7 days a week, and will take around 80 days. As noted in paragraph 4.10.24 of the HRA (APP-115), however, only a

Reference	Relevant Representation	Applicant's Response
	provided around when this is expected to occur, and whether this is occurring outside of the most sensitive period.	small amount of dredging will be required within 50-100 m of the intertidal area, and this will take less than one week to complete. The assessment has nevertheless been based on the precautionary assumption that the works could occur at any time of year as a worst case.
	Section 4.10.29 states that birds that are disturbed from intertidal areas by construction works can use other areas beyond 200m of works (Figure 9.10 of the ES), or could feed at night around the construction zone (once work has stopped). If birds are already feeding at night, this does not represent an additional feeding period to make up for the effects of construction disturbance. Further assessment is required around the potential energetic costs to birds as a result of this level of disturbance.	It should be noted that disturbance during construction will not be continuous as there will be long periods of down time during the works (see 4.11.22 of the HRA (APP-115), and 9.8.162 of Chapter 9 of the ES (APP-045) for further detail). This includes at night when construction will be limited, thereby allowing birds to forage nocturnally with limited disturbance – save for the continuous 24-hour operations of the Port. Research (as summarised in paragraphs 4.10.11 and 4.10.12 of the HRA, and paragraphs 9.8.230 and 9.8.231 of Chapter 9 of the ES) suggests that wading birds need to be disturbed relatively frequently (involving repeated, regular daily disturbance) before adverse effects (in terms of energetic costs or reduction in fitness) are likely to occur. For example, Collop *et al.* (2016) examined the likely consequences of different frequencies of disturbance on various wading birds, using their data on mean flight time and mean total time lost. The authors found that a 5% reduction in birds' daily available feeding time would be expected to result from responding to between 38 and 162 separate disturbance events (depending on species and tidal stage). The mean cost per individual flight response represented less than a tenth of a percent of each species' daily energy requirements. The study concluded that the energetic costs of individual disturbance events were low relative to daily requirements

Reference	Relevant Representation	Applicant's Response
		and unlikely to be frequent enough to seriously limit foraging time.
	Section 4.10.30 identifies the percentage of intertidal mudflat affected by the development (within 200m) compared to the estuary resource. Natural England consider that the area of habitat relevant to the estuary resource is not as relevant as the number of birds, and if an area supports important numbers of any SPA / Ramsar bird species, it should be considered of high importance. In this section, shelduck are missing from off the important species list, despite approximately 2% of the Humber Estuary population having been recorded. It should also be recognised that areas of mudflat vary in terms of prey availability and disturbance levels, and therefore vary in their importance as SPA bird feeding areas. Birds disturbed from important feeding areas are not necessarily able to find alternative mudflats with additional feeding capacity at the relevant times.	It is acknowledged that Shelduck were erroneously omitted from the sentence describing which species occur in greater proportions of the Humber Estuary population in paragraph 4.10.30. That omission, however, does not affect the assessment in that Shelduck were screened into Stage 2 (Appropriate Assessment) and effects with respect to construction related disturbance have been assessed on this receptor.
	Natural England supports the following statement in section 4.10.31: "…there is a degree of uncertainty as to whether such areas could accommodate displaced birds".	Noted. This has been taken into account in the assessment.
	The HRA should also assess impacts on feeding birds and roosting birds separately. In particular, there should be an assessment of the impact on birds roosting on structures in the intertidal zone identified in Fig 9.10. This should include consideration of whether there are other suitable structures for the	With respect to the roosting structures identified in Figure 9.10 (i.e., the outfall pipe, derelict concrete structures on the foreshore and the toe of the seawall), they are not used by qualifying SPA/Ramsar species screened into Stage 2 (Appropriate Assessment) (i.e., Shelduck, Redshank, Dunlin, Knot, Black-tailed Godwit and Bar-tailed Godwit) with Turnstone the only listed SPA assemblage species

Reference	Relevant Representation	Applicant's Response
	birds to use, and whether additional mitigation measures are required.	screened in which has been recorded using these structures. Turnstone are considered to be very tolerant to potential disturbance and would be expected to continue using these structures during construction. In addition, as stated in paragraph 9.6.89 of Chapter 9 of the ES (APP-045), Turnstone are also recorded using other structures in the area such as beams on jetty structures and the bottom of the seawall. Such structures are used for both feeding and roosting by Turnstone. There is, therefore, considered to be a wide variety of alternative structures available in the nearby area for this species to utilise. In addition, as stated in paragraph 4.3.35 of the HRA (APP-115) - *'marine infrastructure associated with the proposed development (raised jetty structure, linkspan etc.) will not prevent any direct access to established roosting habitat used by coastal waterbirds in the area. This includes the outfall pipe which is used by roosting cormorants and gulls and the derelict concrete structures present on the mudflat used by Turnstone and gulls.'*
	Section 4.10.35 states that mitigation measures have been discussed with Natural England. Although this is correct, mitigation measures have not been fully agreed with us at this stage.	Noted, but the proposed mitigation measures are considered appropriate to address the impacts associated with the IERRT project.
	Comments on proposed mitigation measures for construction disturbance In general, Natural England would expect to see a greater focus on the SPA / Ramsar species that occur in very high numbers on this site (including black tailed godwit, turnstone, redshank, shelduck and dunlin), and how effective the mitigation measures	Table 29 of the HRA (APP-115) provides an assessment of potential effects on individual SPA qualifying species (including those species highlighted by Natural England in the response i.e., Black-tailed Godwit, Turnstone, Redshank, Shelduck and Dunlin). This assessment considered potential mitigation and assessed potential effects against site conservation objectives to provide a judgment on the potential for an AEOI. With the proposed

Reference	Relevant Representation	Applicant's Response
	will be in addressing the potential impact on these species in particular.	measures in place, any disturbance responses are considered to be infrequent and not of a magnitude that will cause an AEOI to any qualifying waterbird features of the SPA.
	A cold weather construction restriction has been proposed which involves the temporary cessation of all construction activity following seven days of freezing weather. This is based on JNCC wildfowling restrictions. Natural England advise that work should stop after three days of freezing weather. However, long periods of freezing weather on the Humber Estuary are uncommon, so it is unlikely this restriction will be needed.	The proposed cold weather construction restriction is based on the JNCC's scheme to reduce disturbance to waterfowl due to shooting activity in severe winter weather. This scheme applies a restriction to the activity after freezing conditions (determined from minimum air and grass temperatures) for seven consecutive days. The proposed restriction in the ES and HRA is, therefore, considered appropriate and based on established working practices.
	We note that winter marine construction is proposed to be restricted from 01 October to 31 March for construction activities within 200m of SPA/Ramsar bird feeding areas, unless screens/acoustic barriers have been installed. We advise that the dates of restricted winter working should be related to the dates that significant numbers of birds are present on the mudflats. Winter working restrictions should also be focused on the activities that are most likely to be disturbing to birds, such as piling. Additionally, the winter bird data is currently only presented as an annual summary (Table 9.19 of the ES). Data for each month will be required to support the winter restriction proposal. For the passage period (Table 9.20 of the ES) several species are shown occurring in significant numbers, including black tailed godwit, redshank and turnstone, the assessment should	*Proposed winter marine construction restriction – temporal extent* Data shows that this restriction period (October to March inclusive) correlates with the months where the largest number of the most SPA qualifying species occur (i.e., Black-tailed Godwit, Dunlin and Shelduck – all of which have been recorded in numbers exceeding 1% of estuary-wide populations and with specific respect to Black-tailed Godwit in nationally or internationally important numbers in some years). For example, based on monthly peak counts for the 12-month period from October 2021 to September 2022 in Sector B (data tables have been provided to Natural England separately), it should be noted that: ▪ Black-tailed Godwit: Four of the five largest monthly counts occur in winter period (1 October to 31 March) with internationally, nationally or

Reference	Relevant Representation	Applicant's Response
	state how impacts on these species will be addressed.	locally important numbers recorded over this period; ▪ Dunlin: Larger numbers were recorded during all the months of the winter period (1 October to 31 March) compared to months outwith this period; and ▪ Shelduck: Four of the five largest monthly counts occur in winter period (1 October to 31 March). It is recognised that during the colder winter months, coastal waterbirds are more susceptible to effects of disturbance due to higher energetic costs and greater feeding requirements for thermoregulation along with a range of other factors highlighted in paragraph 4.10.32 of the HRA (APP-115). In addition, wintering waterbirds typically show a high level of site fidelity and utilise relatively small home ranges (as discussed in paragraph 4.10.31 of the HRA). This can also make them vulnerable to the effects of disturbance (as discussed in paragraph 4.10.31 of the HRA). The shoulder months to the winter restriction period (such as August, September, April and May) typically support waterbirds on passage where migrating birds stop over to feed and rest on migration to and from breeding areas[4]. It is noted that that nationally important numbers of Black tailed Godwit were recorded in April and numbers considered locally important in May, June and September in Sector B. Redshank were recorded in broadly

Reference	Relevant Representation	Applicant's Response
		comparable numbers that are considered locally important in most months. Evidence with respect to Black-tailed Godwit (which has been subject to a wide range of individual and population studies) suggests that this species typically uses the same stop-over sites each year with peak spring passage period for birds typically occurring in March and April on the East coast of England (Gill *et al*., 2019; Gunnarsson *et al.,* 2005; Keeble, 2018; Alves *et al.,* 2012). During this period there is a high seasonal turnover of birds at stop over sites (with birds typically staying anything from a week to several months at these sites before moving on) (Keeble, 2018). Visiting passage birds typically stop over at sites for short durations of time and therefore will only be exposed to potential disturbance at any given stop over for a relatively short period (compared to winter birds which typically utilise a localised winter home range for typically 5-6 months or more). This makes individual passage birds less susceptible to disturbance effects at individual stop over locations (due to relatively limited temporal exposure) with conditions at wintering and breeding sites often considered more important in terms of adverse effects on survival or breeding success due to environmental pressures. Nevertheless, it is acknowledged that waterbirds are still considered vulnerable to disturbance during passage periods at stop-over sites given the need for birds to intensively feed (to accumulate body reserves ready for the energetic demands associated with long distance migratory flights) (Newton, 2006).

Reference	Relevant Representation	Applicant's Response
		It should be noted that use of a noise suppression system during piling and acoustic barriers / screening on barges year-round is proposed as mitigation, as well as soft start procedures during piling, to help minimise the effects of noise disturbance on these species. The effectiveness of these measures is described in the rows below. With the use of the measures, potential noise and visual disturbance responses are generally expected to be restricted to a relatively localised area of foreshore which will only represent a small proportion of intertidal mudflat habitat in the Immingham area and therefore extensive alternative feeding habitat is available for passage birds to accumulate body reserves for onward migratory flight (see paragraph 9.8.248 of Chapter 9 of the ES (APP-045)). Furthermore, construction work will be temporary and not continuous, with significant periods during a 24-hour period when no work will be undertaken (e.g., see paragraph 9.8.195 of Chapter 9 of the ES and paragraph 4.11.34 of the HRA). Given that data suggests that birds are relatively site faithful in terms of utilising the same passage stopover sites each year, passage birds would also be expected to have some pre-existing habituation to port related disturbance stimuli. Potential effects are therefore considered to be relatively minor, localised and not of a magnitude that will compromise relevant site conservation objectives in terms of distribution or population changes. Therefore, the conclusions reached in the HRA remain in that there is considered no potential AEOI on the qualifying interest features as a result of construction related disturbance during passage months.

Reference	Relevant Representation	Applicant's Response
		Turnstone (an SPA assemblage species) typically occurs year-round in locally or regionally important numbers (peak counts of approximately 20-30 birds in most months). However, this species is considered highly tolerant to disturbance (as highlighted in Table 27 of the HRA) with the measures described above also benefiting this species. *Proposed winter marine construction restriction – spatial extent and activities* The mitigation measures apply a 200 m disturbance buffer, with no construction activity being undertaken within 200 m of exposed mudflat over the winter period (1 October to 31 March inclusive) until an acoustic barrier/visual screen has been installed on both sides of the semi-completed jetty structure. As highlighted above and in paragraph 4.10.17 of the HRA and paragraph 9.8.236 of the ES, evidence suggests that the response of waterbirds to disturbance stimuli is limited at distances over 200 m (see paragraphs 4.10.3 to 4.10.16 of the HRA, and paragraphs 9.8.222 to 9.8.234), particularly in areas subject to already high levels of existing anthropogenic activity (as found in the Port of Immingham area). The restriction will mean that piling cannot be undertaken within this zone over the winter. Piling is considered to have a high potential for disturbance (due to the high noise levels associated with this activity). In light of this, it is important to note that a noise suppression system will be used for piling undertaken out of the 200 m restriction zone. The noise suppression

Reference	Relevant Representation	Applicant's Response
		system is predicted to reduce noise levels to <70 dB LAmax at distances greater than approximately 200 m from the piling. Based on Natural England guidance *'peak levels below 55 dBA can be regarded as not significant, while peak noise levels approaching 70dBA and greater are most likely to cause an adverse effect'.* On this basis, the noise suppression system will limit noise levels at distances of 200 m or more below this 70 dB level.
	Natural England agrees that the proposed noise suppression system for piling on outer finger pier would be helpful, but the effectiveness of this measure should be assessed in further detail.	The noise suppression system is expected to offer a 10 dB reduction in the unmitigated LAmax sound power level associated with piling. The levels of airborne noise associated with piling, with the use of the noise suppression system in place, is predicted to be <70 dB LAmax at distances greater than approximately 200 m from the piling.
	Natural England agrees that the proposed acoustic barrier/ screening on marine construction barges would be helpful, but the effectiveness of this measure should be assessed in further detail.	Screens and other barriers are a widely used measure to help reduce potential disturbance to coastal waterbirds (Ikuta and Blumstein, 2003; Liley and Tyldesley, 2013; Hockin *et al.,* 1992) and have been successfully applied as mitigation to reduce disturbance at a number of port locations located near intertidal waterbird populations (GoBe Consultants Ltd, 2011, ABPmer, 2014; MMO, 2018).
	We note that a soft start for any piling required has been stated as a mitigation measure to address the impacts on SPA/Ramsar birds. Further evidence should be presented that this is effective mitigation for birds (as well as fish and marine mammals).	The application of soft start procedures for piling activities is a widely established measure to help reduce disturbance to waterbirds. It is acknowledged that initial sudden noise associated with an activity elicits a greater response than further subsequent noise (due to increasing tolerance of the birds to the stimuli) (Collop *et al*., 2017; IECS, 2009;

Reference	Relevant Representation	Applicant's Response
		Hockin *et al*., 1992). On this basis, soft starts will allow the more gradual increase in noise levels which would help reduce potential 'startling' effects to waterbird associated with the first sudden bangs of piling (during periods which are not subject to seasonal restrictions). The use of soft starts is also an established mitigation measure to help reduce potential underwater noise effects on marine mammals and fish (Tougaard *et al.,* 2012).
	The section on mitigation measures should also assess the certainty that the mitigation measures proposed will be effective with reference to the SPA/Ramsar bird species that occur in significant numbers within the working area. This should identify whether mitigation measures will address all expected impacts throughout the period that birds occur in significant numbers in the construction area, across both winter and passage periods.	Section 9.11 of Chapter 9 of the ES (APP-045) provides the assessment of the residual impacts associated with the IERRT project taking into account the proposed mitigation measures.
	Natural England advise replacing phrases such as 'occur in relatively large numbers' in Table 29 with statements derived from the data. This could include phrasing such as "occurs in numbers over 10% of the estuary population which is nationally significant".	Please refer to the response provided above for key issue ref 5.
	Natural England also expect that Table 29 will be amended once our advice has been considered, so we will provide further comments at that stage.	Noted. It is assumed that the Secretary of State's HRA will take account of the information in the HRA, ES and this document. However, the Applicant has agreed that an updated version of the HRA report **[APP-115]** will be provided in due course once the issues raised by Natural England have been agreed.

Reference	Relevant Representation	Applicant's Response
Key Issue 8 – coastal waterbirds	Section 4.10.46 (page 237) of the HRA notes that "Birds are regularly recorded feeding nearby or below port structures such as jetties or pontoons and appear to be relatively tolerant to normal day-to-day port operational activities". Further information should be provided around which bird species this is referring to.	As stated in Paragraph 4.10.38 of the HRA (APP-115), no disturbance has been recorded as a result of vessel movements or operational activity at or near berths or jetties in the Immingham area during the ongoing Immingham Outer Harbour (IOH) monitoring in the Port of Immingham area since winter 2005/06. This includes any potential disturbance due to operational activities on various jetties (such as the Immingham Oil Terminal (which includes vehicle activity), Western Jetty, Eastern Jetty and Immingham Bulk Terminal). Discussions with the ornithologists undertaking the bird monitoring has confirmed that all key bird species recorded in the area (Redshank, Dunlin, Turnstone, Curlew, Shelduck and Black-tailed Godwit, Bar-tailed Godwit and Oystercatcher) are regularly recorded foraging <10-20 m of existing jetties in the Immingham area and appear tolerant to activities associated with these jetties.
	Section 4.10.49 details mitigation measures proposed during operation, including screening on the foreshore, phased removal of screens after 2 years, and screening for the linkspan and approach jetty. NE agrees that this mitigation will be helpful in reducing bird disturbance of birds that continue to use the site, however, further information is required around the reasons that the screening cannot be permanent. Permanent screening would make it more likely that birds might habituate and lessen the uncertainty detailed in section 4.10.48. Further detailed assessment of proposed mitigation	As noted in paragraph 9.9.7 of the ES (APP-045) and paragraph 4.10.49 of the HRA (APP-115), the effects of disturbance during the operation of the Terminal have been assessed as minor. The Terminal will be constructed within an already busy, 24/hour, 365 days a year operational port. On a precautionary basis, however, in order to reduce potential visual disturbance stimuli to waterbirds on the foreshore, screening will be installed for two years so that movements of workers or vehicles will not be as visible from the foreshore. This measure has been proposed simply to assist in habituation to the new infrastructure, but in the context of the location of the new berths within the port, it is not actually considered necessary.

Reference	Relevant Representation	Applicant's Response
	measures will identify whether permanent screens are likely to be needed.	It should also be noted that (as set out in paragraphs 9.8.295 and 9.8.296 of Chapter 9 of the ES, and paragraphs 4.10.43 and 4.10.44 of the HRA), outside the periods of vessel mooring and disembarkation, movements of pedestrians will be minimal with almost all access to the vessels using motorised vehicles (HGVs and Ro-Ro tractors/trailers). Vehicle movements will be undertaken at slow speeds (typically <12 miles per hour) and also in a predictable and consistent manner (i.e., producing the same type of visual/noise stimuli each time). These are all attributes which support habituation and will, therefore, limit disturbance responses. It should also be noted that many of the existing approach jetties in the Port of Immingham have some vehicular access. The IOT approach jetty in particular has regular vehicle movements with no disturbance associated with this activity recorded during the IOH bird surveys. As such, permanent screening is not considered necessary.
	The monitoring and annual report proposed in 4.10.52 (page 238) is welcomed, but Natural England do not consider this a mitigation measure in itself. Additionally, it is unclear as to the next steps that would be taken if the monitoring showed a significant decrease in bird numbers to the point where a species would no longer be considered to be in numbers that are locally, regionally, nationally, or internationally important.	Adaptive monitoring was advised against by NE at PEIR stage. This was therefore removed from the ES as mitigation. Monitoring will be undertaken to provide general data and as a continuation of the existing monitoring along the Humber south bank. As noted in Chapter 9 of the ES and in the HRA (APP-115) (and repeated above), significant effects relating to bird disturbance during operation are not anticipated. Nevertheless, erection of screening on the approach jetty

Reference	Relevant Representation	Applicant's Response
		and linkspan during operation is proposed on a pre-cautionary basis (noting that this is not necessarily required based on the assessment outcomes). A phased removal of the screens is proposed after 2 years.
	Further information is also required on the route that vessels are likely to take in and out of the dock, and whether this is within 300m of birds that roost on the water, especially shelduck. Additional information should also be provided around how this compares with the current and forecasted numbers of vessels utilising the area.	Vessels using the Eastern Jetty and approaching and leaving the Inner Dock regularly approach within 300 m of areas used by qualifying SPA/ Ramsar bird species, including Shelduck. The Port of Immingham currently has over 118,000 transiting movements of vessels per year. Additional operational vessel movements resulting from the proposed development will only constitute a small increase in vessel traffic in the area on a typical day (six additional Ro-Ro vessel movements per day at the Port of Immingham, as well as tugs) which represents an approximate 3% annual increase in vessel traffic in the local area (as noted in Table 25 of Chapter 9 of the ES (APP-045), and in Table 3 and Table 5 of the HRA (APP-115)). There will also be maintenance dredger movements but that is estimated to only be necessary approximately three to four times a year.
Key Issue 9 – general HRA comment	Section 4.2.1 - It would be clearer to organise the assessment: all construction effects, then all operational effects as per PINS advice note 10 quoted in 4.1.4.	Noted. The HRA (APP-115) took an impact pathway approach and it is considered it is clear which relate to construction and which relate to operation. Natural England note this is a minor point for the Examining Authority (colour coded grey).
Key Issue 10 – general HRA screening comments	Table 3 does not include the potential for LSE for the impact pathway 'Direct loss or changes to migratory fish habitat', with regard to the project activity 'Dredge disposal' on sea and river lamprey.	It is noted that confirmation on the potential for LSE was omitted from the 'Potential for LSE' column of Table 3 of the HRA (APP-115) with respect to the 'Direct loss or changes to migratory fish habitat' pathway for sea lamprey and river lamprey features. However, to clarify, there is considered to be no potential for LSE on these features as

Reference	Relevant Representation	Applicant's Response
		a result of this pathway during dredge disposal based on the justification provided in the 'justification' column of Table 3.
	Table 3 screens out underwater noise impacts from vessel operations including maintenance dredging and dredge disposal for sea lamprey, river lamprey and marine mammals, stating that "only mild behavioural responses in close proximity to the Ro-Ro or dredging vessels are anticipated with noise levels unlikely to be discernible above ambient levels in the wider Humber Estuary area". Natural England advise that this is not sufficient justification for screening out this impact pathway for lamprey and grey seal as ambient noise levels have not been provided. We advise that this impact pathway should be screened in and ambient noise levels should be provided to be assessed further in the AA.	A detailed review of existing ambient noise sources and measured levels in the Humber Estuary is provided in Section 5 of the Underwater Noise Assessment (see Appendix 9.2 of Volume 3 of the ES (APP-088)). In this context maintenance dredging and associated vessel movements are already ongoing activities in the main navigation channel and berths at the Port of Immingham and form part of the baseline soundscape of the estuary. Underwater noise impacts associated with vessel operations including maintenance dredging and dredge disposal as a result of the proposed development are therefore within the range of existing ambient levels in this part of the Humber Estuary. Furthermore, as stated in paragraph 4.11.5 of the HRA (APP-115) and paragraph 9.8.153 of Chapter 9 of the ES (APP-045), sea lamprey and river lamprey features form part of the least sensitive noise hearing fish group according to the Popper *et al.* (2014) guidelines. As described within the IERRT HRA there is, as a consequence, considered to be no potential for an LSE on these features as a result of this pathway. This is also consistent with the information provided to inform the Appropriate Assessment that was prepared in support of the Humber Estuary Maintenance Dredge Protocol which was reviewed by Natural England and accepted by the MMO (ABPmer, 2014).
	Table 4 - It is not clear why the impact of capital dredge disposal on SPA features has not been included and assessed, when it is assessed against	All qualifying SPA features with the exception of Little Tern (which was screened out as rare in the proposed development area – including dredge disposal sites) occur

Reference	Relevant Representation	Applicant's Response
	Ramsar features in Table 5. This pathway could have the ability to impact on the supporting habitats of SPA waterbirds. Therefore, capital dredge disposal should be included and assessed against SPA features in Table 4.	on or near intertidal habitat (or functionally linked coastal land). Therefore, given the distance of the dredge disposal site offshore, no potential effects on supporting habitat for SPA species will occur.
	Table 4 - See above for the impact pathway "Indirect loss or change to seabed habitats and species as a result of changes to hydrodynamic and sedimentary processes".	This pathway is termed 'Loss or change to coastal waterbird habitat' in Table 4 HRA (APP-115). It is considered separately in the Appropriate Assessment in the HRA (see Section 4.5).
	Table 4 - The impact pathway "Changes in water and sediment quality" should be included and assessed against SPA features.	All SPA features screened into the HRA (APP-115) (Section 3) are waterbirds that feed on intertidal invertebrates by using the beak to capture prey on intertidal habitats (either when exposed to air or when covered in very shallow water). Therefore, they are not considered sensitive to the direct effects of elevated suspended sediment plumes (unlike diving birds which use pursuit or plunge diving to capture prey underwater). Estuarine benthic communities recorded on mudflats and the shallow mud in the region are considered tolerant to this highly turbid environment, and the predicted SSCs are within the range that can frequently occur naturally and also as a result of ongoing dredge and disposal activity (as summarised in paragraphs 9.8.83 to 9.8.84 of the ES (APP-045)). On this basis, it is concluded that there is no possibility that SPA features could be affected through indirect effects because no change to intertidal benthic habitats and species due to suspended sediment concentrations (i.e., changes to invertebrate prey resources on supporting mudflat) is predicted. On this

Reference	Relevant Representation	Applicant's Response
		basis, an LSE on SPA features as a result of elevated suspended sediment concentrations can be excluded. With respect to sediment contamination during construction, potential effects on intertidal benthic habitats and species are considered to be insignificant (see paragraphs 9.8.86 to 9.8.88 of the ES). On this basis, it is concluded that there is no possibility that SPA features could be affected as a result of bioaccumulation through consuming prey (i.e., intertidal benthos) and there is considered to be no potential for LSE on SPA features.
	Table 4 - The supporting habitats (both intertidal and subtidal) have been omitted from the LSE screening table for impacts to the SPA yet have been included and assessed for the potential impacts to Ramsar features in Table 5. Furthermore, it is not clear why the supporting habitats have then been taken through to AA (section 4.2.1) which are assessed in terms of the Humber Estuary SPA. The effects on supporting habitat need to be included and assessed within Table 4.	Supporting habitats (both intertidal and subtidal) are not features of the Humber Estuary SPA in their own right. However, in Table 4 of the HRA (APP-115), the potential for an LSE on supporting habitat is considered within impact pathways on 'loss or change to coastal waterbird habitat' during construction and 'direct changes to coastal waterbird habitat foraging and roosting habitat as a result of marine infrastructure' during operation. Within the Appropriate Assessment, supporting habitat is considered within the context of the conservation objectives relating to the supporting habitat of the qualifying interest features (i.e., 'structure and function of the habitats of the qualifying features' and 'extent and distribution of the habitats of the qualifying features').
	Artificial lighting has not been considered in the assessment for impacts, during construction and operation, on designated site features. This impact	Table 9.25 in Chapter 9 of the ES (APP-045) considered potential effects of lighting associated with the IERRT project. This was not assessed in detail in light of the already high levels of permanent night-time lighting within

Reference	Relevant Representation	Applicant's Response
	pathway should be included and assessed for LSE in Tables 3, 4 and 5.	the port environment, as further elaborated below. It was also considered in paragraph 3.55 of the Preliminary Ecological Appraisal (APP-082). With respect to potential lighting effects during construction, equipment and plant such as jack-up barges, piling rigs, cranes etc. will be lit for safety reasons. During operation, the approach jetty, pontoons and finger piers will also be lit for safety purposes. Potential effects on qualifying SAC/SPA and Ramsar features are summarised below. **River lamprey and sea lamprey** Beams of light from construction and operational lighting will essentially be restricted to surface waters as light is unlikely to penetrate far into the water column given the high turbidity of the Humber Estuary. Furthermore, evidence suggests that lamprey are not particularly sensitive to lighting and will often be attracted to lighting rather than causing a barrier to movements (Stamplecoskie *et al.,* 2012 and Zielinski *et al*., 2019). As a consequence, it is not considered that such localised changes will cause disruption or blocking of migratory routes for these species. **Grey seals** Beams of light from construction and operational lighting will essentially be restricted to the surface waters as light is unlikely to penetrate far into the water column given the high turbidity of the Humber Estuary. Seals are also known to forage in areas with artificial lighting (such as harbours,

Reference	Relevant Representation	Applicant's Response
		offshore wind farms and fish farms) where lighting does cause adverse effects on this species. Rather than disrupting any foraging movements, lighting may also have some minor and localised beneficial effects given that lighting has been shown to aggregate fish shoals and will also potentially improve foraging efficiency through enhancing vision of this predator near the surface. **Qualifying SPA/Ramsar waterbird interest features** Waders and other waterbirds feeding on intertidal mudflats are known to feed nocturnally. Evidence suggests that artificial illumination can improve foraging (through increasing prey intake rate) and, therefore, lighting can have a positive effect on the nocturnal foraging of waterbirds (Santos *et al*., 2010). There is considered to be no potential for an LSE on these features as a result of artificial lighting and, as such, the above clarifications do not alter the conclusions of the HRA.
	Section 3.3.2 states "Considering all impact pathways as detailed in Table 3 the proposed development has the potential to result in an LSE on the following European/Ramsar sites and features, and these have been taken forward into the Appropriate Assessment stage". Natural England advises that this section should be revised as all of the features listed are detailed in Tables 3, 4 and 5, not just Table 3 as stated. We advise that the features taken through to AA should be set out in a table format which clearly identifies the designated feature	Cross references to Table 4 and 5 were erroneously omitted – this is considered a minor typographical issue. To confirm, the features listed are relevant to all tables and confirm what has been taken through to Appropriate Assessment stage. Table 2 lists the designated sites and the interest features of those sites.

Reference	Relevant Representation	Applicant's Response
	and its corresponding European site they are a part of.	
	Section 3.3.3 - Natural England notes that the maintenance dredging activity for this project will be carried out under the existing marine licence for the disposal of dredged material from the Port of Immingham (U2014/00429/2). However, we advise that an updated Maintenance Dredging Protocol should be provided to ensure all information on maintenance dredging is captured and the activity across the estuary is robustly assessed.	An updated Maintenance Dredging Baseline Document will be produced in due course to reflect the addition of IERRT infrastructure to the operational maintenance dredged envelope of the port. ABP's current Marine Licence for the disposal of maintenance dredged arisings expires at the end of 2025 so any renewal will reflect all operational areas of the port, including IERRT.
Key Issue 12 – underwater noise	NE are aware that CEFAS have raised comments/concerns regarding some technical aspects of the noise modelling presented in the ES. As this modelling underpins the information presented in the HRA we are unable to comment in detail on any conclusions derived from the modelling information. However, we have the following comments.	Noted. A separate dialogue with Cefas is also ongoing.
	4.11.39 - We note that, in line with Industry Best Practice vibro-piling will be used where possible, and that soft start procedure will be deployed to allow lamprey to move away from the affected area. We also note that percussive piling will be restricted within the waterbody between 1 March to 31 March, 1 June to 30 June and 1 August to 31 October inclusive after sunset and before sunrise on any day. It is unclear why these dates have been identified as	The periods developed for the night-time piling restriction, set out in paragraph 4.11.39 of the HRA (APP-115), and paragraph 9.9.3 of the ES (APP-045), were based on sensitive periods for both glass eel and river lamprey. With specific respect to river lamprey, the restriction covering the period 1 August to 31 October will specifically benefit the nocturnal migratory periods of this species. This is based on the information provided by the Environment Agency (2013) which states that 'in the Humber basin, river

Reference	Relevant Representation	Applicant's Response
	important for migratory lamprey species (please refer to conservation advice for lamprey seasonality tables). The HRA should clearly identify how the proposed mitigations, in this case piling restrictions, demonstrate a reduced impact on the feature for which it is intended.	lamprey mainly enter the rivers from the estuary in autumn and then spawn in April'. The Environment Agency (2013) report also stated that during Humber Estuary fish surveys, most river lamprey were caught in summer and autumn. Natural England's Conservation Advice provided on the Designated Site Viewer, states that migration into rivers of the Humber basin occurs 'between November and March, although they have been recorded as early as October' (Hopkins, 2008; Environment Agency, 2013). However, this relates to the Humber basin rivers more generally as opposed to the specific location of the proposed IERRT scheme. A more detailed review of the information provided by the Environment Agency (2013) and the Humber Estuary fish surveys, as undertaken for the ES and described above, demonstrates that migrating lamprey would have moved passed the IERRT project site by the end of October when the proposed restriction ends.
	If the values change as a result of CEFAS advice the HRA should re-assess using the updated information to determine if the proposed mitigation remains sufficient.	Noted. There is currently no suggestion that the outputs of the underwater noise assessment will change based on the Cefas advice that has been provided to date.
	We note that vibro-piling may occur overnight and therefore may have an impact on migratory Lamprey. This should also be considered within the HRA.	Vibro-piling and potential impacts on migratory lamprey species are considered in detail within the HRA (APP-115). Please refer specifically to Table 3 and Table 5 in Section 3 (Screening), and Section 4.11 of the Appropriate Assessment in the HRA. The assessment has been

Reference	Relevant Representation	Applicant's Response
		undertaken on the basis that the works could take place at any time of year (including overnight) as a worst case. Therefore, piling during the sensitive migratory periods of lamprey in the Humber Estuary has been assessed.
Key Issue 16 – vessel movements during operation and associated shipwash	Potential ship wash and vessel propulsion impacts (to local flow speeds) would be limited in extent to the deeper offshore areas on the estuary-side of the proposed project area. Vessels approaching the floating pontoons will be approaching at very slow speeds in order to allow berthing, which is anticipated to keep any shipwash to a minimum. Natural England is satisfied that vessel movements during operation is unlikely to cause an adverse effect on integrity of the Humber SPA/SAC.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 17 – sediment deposition	Natural England notes that deposition in the wider area surrounding the disposal ground is expected to be in the order of millimetres based on the Physical Processes assessment set out in Chapter 7 of the ES (Application Document Reference number 8.2.7). Sedimentation of this scale is unlikely to result in significant smothering effects to most faunal species with recoverability expected to be high. It is acknowledged in 4.4.15 that full recolonisation is expected to take 1-2 years and for some species a few months. 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	Natural England's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
	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. We also note that ongoing monitoring of depths within the disposal site (an activity already undertaken to assess bed level changes as a result of existing dredge disposal activities) will continue into the future. Natural England agree that the impacts will be small scale or short lived and is not likely to cause an adverse effect on integrity of the Humber SPA/ SAC.	
Key Issue 18 – hydrodynamic and sedimentary processes	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. 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.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 19 – benthic habitat recovery - maintenance dredging	Natural England is satisfied that the impact of disturbance from the action of maintenance dredging on the extent and distribution of qualifying habitats is unlikely to cause an adverse effect on integrity of the Humber SPA/SAC.	Natural England's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
Key Issue 20 – water quality	Natural England previously advised that water quality impacts derived from dredging/dredge disposal activities and operational berth vessel movements on marine mammals should be assessed and included in the ES. This issue has not been addressed either in the ES or the HRA.	Water quality impacts associated with capital dredge/dredge disposal on marine mammals have been considered in the ES in Table 9.21 (APP-045). In addition, the potential for LSE due to water quality impacts associated with capital dredge/dredge disposal on marine mammals was considered in Table 3 of the HRA (APP-115). The effect of elevated SSCs and the potential for an increase in contamination levels is considered to be insignificant, and it is concluded that there is no potential for an adverse effect on integrity on qualifying interest features. Further, with respect to operational vessel movements and water quality, accidental spillages will also be negligible during all phases through the application of standard operational practices and protocols.
Key Issue 21 – invasive non-native species	Natural England notes that a Biosecurity plan will be prepared and implemented to minimise the risk of introducing non-native species during construction. The measures will be included within the CEMP. We would encourage that an overall biosecurity management plan including the operational facility is produced and we welcome further discussion.	ABP's existing biosecurity management procedures will apply to the operational facility. ABP is happy to have further discussion with Natural England on this point.
Key Issue 22 – marine mammals	4.11.39 - Natural England is supportive in principle of the mitigation outlined here to reduce the risk of injury to marine mammals during piling. We welcome continued engagement on the mitigation protocol.	The Applicant welcomes Natural England's continued engagement on the mitigation protocol.

Reference	Relevant Representation	Applicant's Response
Key Issue 23 – marine mammals	Table 31 - Natural England agree with the Applicant's justification for no AEoI to the grey seal feature of the Humber Estuary SAC from the project 'alone', considering the short-term, temporary nature of the barrier effects from this project. This is also applicable to the grey seal feature of the Humber Estuary Ramsar site.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 24 – marine mammals	Table 32 - Whilst the likelihood of injury may be marginally higher than presented by the Applicant (see Cefas' response), we agree with the conclusion of no AEoI on the grey seal feature of the Humber Estuary SAC and Rasmar due to underwater noise during dredging. We agree that no mitigation is needed for this pathway specifically.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 26 – marine mammals	Table 9.1 - Natural England does not agree that marine mammal sensitivity to all levels of impact from underwater noise pathways is moderate. Specifically, we consider that sensitivity to Permanent Threshold Shift (PTS) is High. If marine mammals are exposed to noise levels that are high enough to cause PTS, then they are not likely to tolerate or resist it and PTS will occur. Furthermore, PTS is an unrecoverable injury. We do not consider it appropriate to take into account the size of the PTS zone when determining an individual's sensitivity to it (as mentioned in Footnote 26). This should be considered in the magnitude.	The greater scale of effect associated with PTS is already taken account of in the 'magnitude' and 'exposure to change' elements of the EIA methodology (see Section 9.3 in Chapter 9 of the ES (APP-045)). Therefore, considering it also in the 'sensitivity' part of the assessment methodology would be a form of double counting. It is agreed that the size of the PTS zone should be considered in respect of the magnitude of the impact and not the sensitivity of the receptor to it and this is the approach that has been used within the assessments. However, it is also necessary to consider the sensitivity of a receptor to a defined level of environmental change and exposure (which is defined by the magnitude of change and

Reference	Relevant Representation	Applicant's Response
		probability of occurrence). This methodology is described in Section 9.3 of Chapter 9 of the ES (APP-045). Based on the literature review of the responses of marine mammals to different underwater noise activities (e.g., pile driving, seismic surveys, dredging etc.) in Section 7.4 of the Underwater Noise Assessment appendix (see Appendix 9.2 in Volume 3 of the ES (APP-088)), the overall sensitivity of marine mammals to underwater noise from piling is considered to be moderate and for dredging/vessels it is considered to be low.
Key Issue 27 – Conservation of Seals Act 1970	9.5.24 - Please note that the Conservation of Seals Act 1970 was amended in 2021. The killing of seals is now prohibited.	Natural England's position is noted, and on that basis, no further response is required.
Key Issue 28 – marine mammals and underwater noise	9.8.199 - The Applicant has assessed underwater noise effects as a single impact. As raised at the PEIR stage, we consider that injury and disturbance should be assessed as separate pathways. These pathways may have different probabilities of occurrence, magnitudes, and marine mammals have different levels of sensitivity to them. To illustrate, we consider that marine mammal sensitivity to injury should be High, whereas sensitivity to disturbance is Medium. In addition, industry-standard mitigation is available for injury, but not disturbance, so there is a difference in the options to reduce residual risk of the two pathways.	As outlined in the underwater noise assessment (see Appendix 9.2 in Volume 3 of the ES (APP-088)) underwater noise can result in a range of responses in marine mammals (from mortality/injury, behavioural avoidance/responses and/or masking of biological signals e.g., echolocation). The respective impact assessment has been undertaken to identify the project activities that have the potential to result in adverse effects on receptors and to identify suitable mitigation to avoid or minimise those effects to acceptable levels. Within the assessment (Section 4.11 of the HRA (APP-115) and paragraphs 9.8.175 to 9.8.204 of the Chapter 9

Reference	Relevant Representation	Applicant's Response
		of the ES (APP-045)), underwater noise effects on marine mammals are considered under one impact pathway. However, the ranges at which injury effects (permanent/temporary) are predicted (using an agreed underwater noise propagation model and recognised published thresholds), as well as the ranges at which behavioural responses are anticipated (based on a detailed desk-based review of the available scientific literature) are clearly presented. Both of these outcomes are considered in the assessment, along with the potential significance of effects or the level of mitigation that is required. Please also see the Applicant's response to NE key issue ref 26 as set out above with respect to marine mammal sensitivity.
	Whilst Natural England does not agree with the sensitivity to PTS, the availability of industry-standard mitigation to reduce the risk of this pathway should be sufficient to conclude no significant residual risk.	Natural England's position is noted, and, on that basis, no further response is required.
	The assessment of disturbance itself is limited. The Applicant acknowledges that it is not possible to provide a conclusion assessment of the significance of potential disturbance effects (Table 9.7). As the Immingham area is not a key area for harbour porpoise and harbour seal, disturbance/displacement from this area is not likely to be significant. However, the site is of greater importance for grey seals as it lies within the Humber Estuary SAC, of which grey seal is a feature. Changes in seal behaviour have	A detailed assessment of disturbance itself has been provided in Chapter 9 of the ES (APP-045) and within the HRA (APP-115). In terms of the concerns regarding displacement of grey seal at Donna Nook, the existing constraints of the estuary are such that elevated underwater noise levels generated during piling for IERRT are physically unable to directly reach the breeding site. The Spurn on the Outer Humber Estuary and promontory of Grimsby Docks means that

Reference	Relevant Representation	Applicant's Response
	been observed (from larger piles) up to 33-36 km away; this is greater than the distance to Donna Nook, the key grey seal breeding site of the SAC. It is of concern that displacement effects could occur in the waters immediately adjacent to the breeding site, during the breeding season. Also, that grey seals could be displaced from the majority of the SAC during piling activity. The Applicant should consider whether more detail could be included in the assessment to determine the possibility of significant effects occurring; or they could consider further mitigation and/or monitoring.	much of the underwater noise will be limited by these hard constraints and will not propagate to the outer part of the estuary and beyond. In addition, the upstream bend in the estuary at Salt End will mean that elevated underwater noise levels will not be able to propagate beyond this point. In other words, potential behavioural responses and/or displacement effects are primarily limited to the section of the estuary between Salt End (upstream) and Grimsby to Spurn Bight (downstream). Furthermore, as noted in paragraph 9.8.195 of Chapter 9 of the ES and paragraph 4.11.34 of the HRA, any barrier to movements caused by the noise during piling would be temporary with significant periods during a 24-hour period when no piling will be undertaken (the actual proportion of piling is estimated to be at worst around 14% based on 180 minutes of impact piling per day and 20 minutes of vibro piling per day). This of itself will allow the unconstrained movements of marine mammals through the Humber Estuary. Piling noise will take place for a very small amount of time each day over a period of approximately 24 or 37 weeks (depending on whether a sequenced construction is employed or not). Piling will also not take place continuously as there will be periods of downtime, pile positioning and set up. As stated in paragraph 9.6.63 of Chapter 9 of the ES, grey seals can undertake wide ranging seasonal movements over several thousand kilometres (McConnell *et al.,* 1999; Carter *et al.,* 2020; Russel, 2016). Seals tagged at Donna Nook were recorded undertaking wide ranging movements

Reference	Relevant Representation	Applicant's Response
		in the outer Humber Estuary and approaches as well as more widely in the North Sea (Russel, 2016). Therefore, seals are likely to be able to exploit a much wider area for foraging during any piling activity. On the basis of the above, the assessment and proposed mitigation measures presented in the ES are considered appropriate.
Key Issue 29 – marine mammals and underwater noise	9.9.3 - For clarity, on the mitigation procedures outlined: ▪ Any individual undertaking the role of Marine Mammal Observer (MMO) must have received training through a JNCC-approved MMO course. ▪ A break in piling of 10 minutes should lead to the mitigation process being implemented. ▪ 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. The above will ensure compliance with the JNCC Guidance. 9.9.3 - The Applicant has proposed that marine mammal observations will continue during percussive piling and that piling will cease whilst any marine mammals are within the mitigation zone. This [ceasing operations] is not a standard measure in the	Natural England's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
	JNCC Guidance but provides an additional level of mitigation which we welcome. It is important that this additional commitment is relayed to those undertaken the construction activities. This could be in a project-specific Marine Mammal Mitigation Protocol (MMMP) or similar.	
Key Issue 32 – marine mammals – underwater noise	General comment: Natural England defers to Cefas' response on technical and specialist matters related to underwater noise modelling. However, we may provide comments where underwater noise affects nature conservation features.	Natural England's position is noted, and, on that basis, no further response is required.
	Natural England has received Cefas' response and we note the below, which are of particular importance to marine mammal receptors: ▪ The use of multiple piling rigs (up to 4) may lead to increased SELcum over a 24 hour period compared to that presented by the Applicant. ▪ The simple modelling approach taken can only provide an indication of the order of magnitude of the potential effects, rather than definitive ranges and percentages. ▪ The predictions of noise impacts from dredging and vessel movements look smaller than expected, and that TTS effect ranges for harbour porpoise, based on a 24-hour exposure period, should be larger (over part of the estuary).	Noted, no further underwater noise modelling is considered necessary in view of Cefas' comments that have been highlighted. Further clarification in response to each of these comments is provided below. Within the assessment it has been assumed that four piling rigs as a worst case may be in operation concurrently, but it is not anticipated and indeed is highly unlikely that the piling hammers will strike in unison to create a cumulative effect. Simultaneous piling from multiple rigs is unlikely to increase the received peak pressure levels or the single strike SEL, as the individual pulses (and their peaks) originating from distinct rigs are highly unlikely to overlap (due to the distinct timing of the strikes and the propagation paths). That said, it could be possible for two of the hammers to strike at the same time and, therefore, the modelled source level has taken account of two piling sources as a reasonable worst case. The total number of

Reference	Relevant Representation	Applicant's Response
	Natural England agrees with Cefas on the above points and consider that these should be addressed by the Applicant where Cefas recommend. We may review our comments in light of any such revisions of the underwater noise modelling.	strikes incorporated in the model has taken account of the maximum number of piles that might be installed each day by four piling rigs and is as a consequence considered already to represent piling from multiple rigs. In terms of the second bullet, where the ranges and percentages are rounded to the nearest order of magnitude, as suggested by Cefas, this does not change any of the assessment conclusions or proposed mitigation measures as documented in Chapter 9 of the ES (APP-045) or Section 4.11 of the HRA (APP-115). In terms of the third bullet, it is unclear why Cefas would anticipate the effects of dredging (and vessel movements) to take place over greater distances. The assumptions and model input values are set out in Sections 4 and 6.3 and the thresholds that were applied are set out in Table 3 of ES Appendix 9.2 (APP-088). As explained in paragraph 9.2.25 in ES Appendix 9.2, NOAA's user spreadsheet tool, which is a freely available online tool, has been used to predict the range which the weighted NOAA cumulative SEL acoustic thresholds for PTS and TTS are reached during the proposed dredging and vessel movements associated with the construction and operation of the proposed development. The assumptions and input values to this spreadsheet are clearly set out in Table 15 of ES Appendix 9.2. The outputs remain unchanged from those reported in the ES.
Key Issue 33 – schedule of	Natural England welcomes the Applicant's commitment to undertake vibro piling where possible.	As described in paragraphs 3.1.11 to 3.1.13 of the Chapter 3 of the ES (APP-039), vibro-piling will be used to drive the

Reference	Relevant Representation	Applicant's Response
mitigation – marine mammals	We note that, at present, vibro piling is only proposed to occur for up to 20 minutes in day, compared to 180 minutes of percussive piling in a day, therefore only comprising 10% of total piling time. Natural England would welcome further detail on how much of the piling could be achieved using vibro-piling, thereby understanding how much this mitigation measure could be applied across the piling campaign.	piles until the pile cannot be driven further into the ground using this technique (i.e., until the point of refusal). At that point, percussive piling will need to be used to complete the pile driving to the required depth. The estimated amount of vibro-piling that will take place during the piling activities is based on expert judgement from engineers, taking account of their experience in the field, pile size and depth, as well as the anticipated ground conditions the piles will be driven into. In any case, vibro-piling techniques will be used as much as is feasibly possible during construction (not only to reduce underwater noise, but also because it is a simpler and more practical method of piling from an engineering perspective) in loose to medium-dense soils. The assumptions used in the underwater noise assessment (Appendix 9.2 in Volume 3 of the ES (APP-088) are considered a realistic worst case with respect to percussive piling.
Key Issue 34 – HRA screening	Section 3.3.2 - Natural England considers that the harbour seal feature of the Wash and North Norfolk Coast SAC should be screened in for Likely Significant Effect (LSE). There is the potential for harbour seal from the Wash and North Norfolk Coast SAC to be present within the zones of impact of the project. The project is within the known foraging range of harbour seals from this SAC (Sharples et al. 2012). Indeed, harbour seals is listed by the Applicant as a species that could be found in the study area, and it is highly likely that any harbour seals in the	In line with previous Natural England advice, the harbour seal feature of the Wash and North Norfolk Coast SAC was not considered in the HRA. It is acknowledged, however, that there potentially could be connectivity between the Wash and North Norfolk Coast SAC and the Humber Estuary with respect to common seal movements. Common seals have been recorded foraging over 200 km from haul out sites including from sites in the Wash (Tollit *et al.,* 1998; Sharples *et al*., 2008; Sharples *et al.,* 2012). The Wash and North Norfolk Coast SAC is located over 75 km from the proposed development. However, evidence

Reference	Relevant Representation	Applicant's Response
	study area would be connected to the Wash and North Norfolk Coast SAC, as this key haul-out site supports most harbour seals in the Southeast England Seal Management Unit. Whilst the project does not directly overlap with the SAC, the harbour seal feature should be considered throughout its range, as detailed in the Supplementary Advice on Conservation Objectives (SACOs) for the site. We acknowledge that the inclusion of the North Norfolk Coast SAC has not been raised previously however on further review, we advise that it should be included in the HRA for assessment.	suggests that harbour seals typically forage within 40-50 km of their haul out sites (SCOS, 2022) which is reflected in the high predicted at-sea densities of common seals in the Wash and along the North Norfolk and Lincolnshire coasts, and much lower predicted densities in the Humber Estuary or north of Spurn Point (Carter *et al*., 2020). On this basis, the Immingham area is not considered to be key foraging habitat for common seals of the Wash and North Norfolk Coast SAC. Nevertheless, the potential underwater noise effects during construction have been assessed for completeness: The potential behavioural zone of influence associated with underwater noise will not be in an area considered part of the core range of common seals of the Wash and North Norfolk Coast SAC. Therefore, the 'distribution of qualifying species within the site' conservation objective will not be compromised. Potential injury or lethal effects to seals is also expected to be restricted to a very localised area in the direct vicinity of piling operations. However, based on information provided above and in paragraphs 9.8.175 to 9.8.204 of the ES (APP-045) and with the proposed mitigation in place (set out in Section 9.9 of Chapter 9 of the ES), the potential for injury effects on seals is considered to be both limited and low. On this basis, underwater noise effects on common seals during piling is considered unlikely to causes changes to 'the populations of qualifying species' conservation objective. On this basis and in the context of the site's conservation objectives, there is considered to be no potential AEOI on the qualifying interest feature.

Reference	Relevant Representation	Applicant's Response
Key Issue 35 – Greater Wash SPA	Natural England agrees that this can be screened out.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 36 – Humber Estuary SSSI	Our advice regarding impacts on the Humber Estuary SSSI coincide with our advice regarding the potential impacts upon the Humber Estuary SAC/SPA/Ramsar, as detailed above. For features which do not overlap please see details below.	The IERRT project has been assessed in the context of all features of the Humber Estuary SSSI where applicable. For clarity, a signposting document on SSSIs has been provided to Natural England separately, a copy of which has been submitted by the Applicant to the Examination at Deadline 1. This outlines all of the features cited in the Humber Estuary SSSI and how and where they have been assessed within the IERRT application.
Key Issue 37 – Humber Estuary SSSI	Following submission of the signposting documents (12.06.23), and further assessment of the information, we are satisfied that there will be no impacts on the Humber Estuary SSSI invertebrate assemblage feature.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 38 – Humber Estuary SSSI	Following submission of the signposting documents (12.06.23), and further assessment of the information, we are satisfied that there will be no impacts on the aspects of the Humber Estuary SSSI bird assemblage feature that do not overlap with the SPA / Ramsar. Please see all relevant impact pathways above for aspects of the feature that do overlap.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 39 – North Killingholme Haven Pits SSSI	Chapter 9 (Table 9.7) of the ES states that direct impacts on North Killingholme Haven Pits SSSI are unlikely.	Table 9.7 of the ES (APP-045) considers both direct and indirect effects on the North Killingholme Haven Pits SSSI. Indirect impacts on the SSSI are expected to be negligible.

Reference	Relevant Representation	Applicant's Response
	However, black-tailed godwit are a non-breeding feature of this SSSI, and if the project is determined to have an overall negative impact on this species for the Humber Estuary SPA/ Ramsar, indirect impacts to this SSSI should also be considered in the assessment.	
Key Issue 40 – The Lagoons SSSI	Natural England agree that impacts on The Lagoons SSSI can be screened out. The features of this SSSI are breeding little tern, sand dunes and saline lagoons, and none of these features are currently anticipated to be impacted by this application.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 41 – air quality	Natural England consider that further assessment is required of construction and operational traffic impacts on all relevant terrestrial SSSIs. In the current assessment, construction traffic has not been considered as on average there will be less than 200HGV movements per day. However, as there are predicted to be peaks of over 200HGV movements per day, we advise that a precautionary approach is taken in the assessment of this for any relevant terrestrial SSSIs.	As noted in the response to NE key issue ref 2 above, air quality assessment guidance is primarily based on annual average daily traffic flows, not peak daily flows. The reason for this being that the majority of air quality standards relating to road traffic emissions are based on an annual average concentration. Therefore, average values are more appropriate for comparison with these metrics than peak values. Basing an assessment on peak daily flows is typically done when there is uncertainty in the average flow data. That is not the case in this instance.
	Their current operational traffic assessment does not appear to have included assessment of certain SSSIs. For example, Hatfield Chase Ditches SSSI. Additionally, an in- combination exceedance is noted at identified SSSIs such as Edlington Wood SSSI, where the predicted in- combination NOx change	APIS does not provide any information on the Hatfield Chase Ditches SSSI; there is a lack of Critical Load information and habitat type. Most freshwater bodies are not sensitive to nitrogen because they are often phosphorus limited and thus phosphorus is the most significant growth limiting nutrient rather than nitrogen. It is

Reference	Relevant Representation	Applicant's Response
	(16.9ug/m3) is an addition of over 50% of the NOx critical level, and causes the site to exceed its critical level (Table 13.19 in the Chapter 13 of the ES). This is currently dismissed as insignificant for unclear reasons.	not, therefore, considered that this SSSI is sensitive to air pollution.
Key Issue 42 – protected species	Natural England has produced standing advice to help competent authorities and developers better understand the impact of development on protected or BAP species. We note that an Extended Phase 1 habitat survey has been undertaken as part of the Preliminary Ecological Appraisal (PEA), (Appendix 6.1 of the PEIR) and that no further protected species surveys are proposed. Whilst lower quality habitats are proposed to be impacted, they could still provide potential ecological habitat opportunities for protected species. On-site conditions can change over time and as such the site could become more suitable for Protected Species. It is recommended that surveys are regularly updated to ensure certainty in proceeding in the absence of a licensable solution. We welcome the proposed avoidance/ mitigation measures and pre-construction checks set out in Section 4 of the PEA. Mitigation measures should be agreed and implemented before construction work begins.	Natural England's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
Key Issue 43 – Biodiversity Net Gain	It is stated within Table 9.7 of the ES (APP-045) that "The ecological improvements do not constitute compensation, neither do they constitute formal BNG provision" in reference to the proposed ecological enhancements delivered by the project. Natural England broadly welcomes the principle of the "Environmental enhancement" outlined within the ES (APP- 038), however notes that our previous advice in the scoping opinion (Dated 13 October 2021) regarding a commitment to a 10% biodiversity net gain (BNG) measured utilising the Biodiversity Metric has not been taken into account. Although it is acknowledged that NSIP applications are not yet subject to mandatory Biodiversity Net Gain as required by the Environment Act 2021, as per the Government response to the consultation on biodiversity net gain regulations and implementation (updated 21 February 2023) it is anticipated that this requirement will be "in place no later than Nov 2025." In accordance with our previous response, the project should incorporate BNG and adhere to BNG Good Practice Principles and BS 8683 (Process for designing and implementing biodiversity net gain) to demonstrate the proposed enhancement measures (at Long Wood and Outstrays to Skeffling) are suitable and sufficient to achieve a target of 10% net gain for all habitat types identified across the DCO limits.	As Natural England notes, Biodiversity Net Gain does not yet apply to NSIPs. However, the Applicant will allocate the environmental benefits of one ha of intertidal habitat at the consented Skeffling managed realignment site (which is currently being constructed) to the IERRT scheme via a separate legal agreement. A suite of terrestrial enhancements will also be delivered within an existing area of woodland, owned by ABP, south of Laporte Road named Long Wood.

Reference	Relevant Representation	Applicant's Response
	Further assessment utilising the Biodiversity Metric 4.0 should be undertaken. The Biodiversity Metric has been developed as a tool for 'Biodiversity accounting' and should be used to assess the biodiversity value of all habitats (up to mean low water) pre -and post-development in order to demonstrate a biodiversity net gain has been achieved. In addition, it is stated within Table 9.7 of the ES (APP-045) that "the Detra metric (used to calculate net gain) should not be used to assess impacts and calculate compensation for habitat damage or loss in designated sites or irreplaceable habitat" which is agreed. Natural England highlight that a net gain for all habitats within the DCO boundary, including those which are part of a designated site are still subject to achieving the biodiversity net gain objective. This approach is confirmed with Government response to the consultation on biodiversity net gain regulations and implementation (updated 21 February 2023).	
Key Issue 44 – Biodiversity Net Gain	It is noted that the Applicant intends to provide off-site enhancements "generated by an area of one hectare of intertidal habitat that is being created through an already approved (and currently under construction) realignment scheme known as the Outstrays to Skeffling Managed Realignment	

Reference	Relevant Representation	Applicant's Response
	Scheme (OtSMRS)". Whilst this may be acceptable, Natural England recommends this should be subject to the same assessment outlined above utilising the Biodiversity Metric to clearly demonstrate the proposed enhancement. Natural England understands that the sections of Outstrays to Skeffling Managed Realignment Scheme owned by ABP will be used as a 'habitat bank' of intertidal habitat that can be used as compensation/ mitigation/ BNG as required for port developments. Most of the managed realignment site is owned by the Environment Agency and this organisation is leading on site construction. Any habitat enhancement contributing towards an overall biodiversity net gain in relation to the Immingham Eastern Ro-Ro Terminal should be clearly outlined, including details on the future management, monitoring and remedial measures required. In addition, it is not clear from the information submitted whether the proposed enhancements are additional to those which would be occurring as part of the already consented OtSMRS works. Any habitat enhancement contributing towards an overall biodiversity net gain in relation to the Immingham Eastern Ro-Ro Terminal should be clearly outlined, including details on the future management, monitoring and remedial measures required.	

Reference	Relevant Representation	Applicant's Response
Key Issue 45 – HRA assessment – benthic habitats and species	The HRA frequently refers to impoverished benthic communities being present at both the dredge and disposal sites i.e., 4.4.47, 4.6.5 and Table 15. 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 RoRo 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.	Natural England's position is noted, and, on that basis, no further response is required.
Key Issue 46 – HRA assessment - benthic habitats and species – sediment deposition during maintenance dredging	The HRA screening assessment (Table 3, Page 56 & 57) rules out LSE for 'Changes to seabed habitats and species as a result of sediment deposition' with regard to maintenance dredging. However, it is Natural England's opinion that likely significant effect cannot be ruled out and we advise that further assessment of these impacts are required as detailed below in the Appropriate Assessment. Although the amount of smothering from the maintenance dredging is considered low, it is still an estimation and there is still a potential pathway for the maintenance dredging to cause changes for some species as a result of sediment deposition. Furthermore, the use of the phrase "some deposition" has been used to describe the amount of sediment deposition benthic organisms present in that area can	It is noted that in NE key issue ref 17, Natural England agree that the impacts relating to sedimentation from capital dredging/disposal will be small scale or short lived and is not likely to cause an adverse effect on integrity of the Humber SPA/ SAC. As stated in Table 9.25 of the ES (APP-045) and Table 3 and 5 of the HRA (APP-115), as a result of a less intensive dredge programme (and an overall lower predicted dredge volume), future maintenance dredging will result in smaller changes in SSC and sedimentation (within the dredge plumes and at the disposal site) as compared to the capital dredge. Deposition of sediment as a result of dredging will be highly localised and similar to background variability with the predicted millimetric changes in deposition considered unlikely to cause smothering effects. On this

Reference	Relevant Representation	Applicant's Response
	tolerate. We consider this term to be open to interpretation and advise that sedimentation tolerance levels for benthic organisms typically found in the area should be quantified through specific references to the data.	basis, it was concluded that there was no potential for LSE. To provide further clarity, based on evidence provided in relevant Marine Evidence based Sensitivity Assessment (MarESA) assessments, the species characterising the subtidal and intertidal benthic samples collected as part of the project-specific intertidal survey (Section 9.6 of Chapter 9 of the ES (APP-045) and Appendix 9.1 of the ES (APP-087)) are considered tolerant to deposition of at least 50 mm with many species considered capable of burrowing through much greater levels of sediment deposition. On this basis they are not considered to be sensitive to the levels of deposition predicted. Furthermore, the species recorded in the benthic invertebrate surveys are fast growing and/or have rapid reproductive rates which allow populations to typically rapidly recolonise disturbed habitats, many within a few months following any disturbance events.
Key Issue 47 – HRA assessment – shading beneath marine infrastructure	Natural England is satisfied that due to the Humber estuary being naturally turbid with high levels of suspended sediment, this means that there is already reduced amounts of light naturally reaching the benthos and there are no benthic species present which rely on direct sunlight to survive. Therefore, shading due to infrastructure is unlikely to cause an adverse effect on integrity of the Humber SPA/SAC.	Natural England's position is noted, and, on that basis, no further response is required.

Table 3.2 Marine Management Organisation (RR-014)

Reference	Relevant Representation	Applicant's Response
4.1.1 – benthic ecology	The MMO broadly agree with the conclusions reached by the Applicant relating to this section of the ES. Regarding the scoping out of impacts to the benthic assemblage associated with the effects of piling we agree that the impact of temporary sediment suspension is extremely localised and of such a small scale that is unlikely to have significant negative effects on any benthic receptors present within the area.	The MMO's position is noted, and, on that basis, no further response is required.
4.1.3 – benthic ecology	The MMO agree with the proposed mitigation measures which include following biosecurity management procedures to reduce the risk of introduction of Invasive Non-Native Species (INNS), environmental management best practice (to reduce the risk and consequences of accidental spillages) and the targeted disposal of dredged material (to avoid depth reductions). Regarding impacts to Benthic Ecology, the MMO has no further comments to offer on this mitigation.	The MMO's position is noted, and, on that basis, no further response is required.
4.2.2 – fish and shellfish ecology	It is the MMO's view that the potential impacts to fish from piling, capital dredging and dredge/disposal activities have been appropriately characterised in Table 9.21 of Section 9.8, and the Applicant has identified the following impact pathways which the MMO consider to be appropriate:	The MMO's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
	▪ Direct loss or changes to fish populations and habitat as a direct result of dredging and dredge disposal ▪ Changes in water and sediment quality as a result of dredging and dredge disposal ▪ Underwater noise and vibration during piling, capital dredging and dredge disposal	
4.2.3 – fish and shellfish ecology	However, it is noted that the Applicant is yet to assess the potential impacts to fish 'during operation' (i.e., changes to fish populations and fish habitat, changes in water and sediment quality and underwater noise and vibration) as these impacts are considered to be equivalent or lower in magnitude than those from the construction phase and existing maintenance dredging and vessel movements in the river. In reviewing previous advice given for this case it was recommended that "habitat loss and disturbance as well as underwater noise impacts on fish during operation should be further assessed within the ES, taking into account other developments in the area (cumulative effects)". This recommendation was made during the initial review of the Preliminary Environmental Information Report (PEIR), and in a further, additional review of the PEIR. The Applicant should acknowledge that even maintenance dredging activities, although arguably less impactful than the construction-phase dredging campaign, still have the potential to cause habitat loss and disturbance to fish, as well as generate additional noise within the river.	Operational impacts on fish have been assessed in Table 9.25 of Chapter 9 of the ES (APP-045). The following impact pathways associated with maintenance dredging/disposal and vessel movements were considered: ▪ Changes to fish populations and habitat; ▪ Changes in water and sediment quality; ▪ Underwater noise; and ▪ Lighting. Potential effects associated with these impact pathways have been assessed as insignificant and the justification to support this conclusion has been provided. It should be noted, as stated in paragraph 9.8.254 of Chapter 9 of the ES, that maintenance dredging required for the IERRT project already falls within the consent granted by the current marine licence for the disposal of maintenance dredge material from the Port of Immingham (L/2014/00429/2). Maintenance dredging is a near constant activity at Port of Immingham and Humber Estuary. The changes brought about as a result of the

Reference	Relevant Representation	Applicant's Response
		maintenance dredge and disposal of maintenance dredge material during operation of the IERRT will be comparable to that which already arises from the ongoing maintenance of the existing Immingham berths. Furthermore, as stated in Table 9.25 of Chapter 9 of the ES, the additional operational vessel movements resulting from the proposed development will only constitute a small increase in vessel traffic in the area on a typical day. The vessel movements constitute up to six additional Ro-Ro vessel movements per day at the Port of Immingham, as well as tugs, which represents an approximately 3% increase in vessel traffic to the Port of Immingham (and even less in comparison to shipping movements in the Humber Estuary). There will also be maintenance dredger movements but that is estimated to only be necessary approximately three to four times a year.
4.2.4 – fish and shellfish ecology	The Applicant has recognised that salmonids and migratory fish species can be sensitive to elevated SSCs, however, they state that "*Atlantic salmon and sea trout are both known to migrate through estuaries with high SSC to get to spawning areas (including the Humber Estuary which is considered one of the estuaries in the UK with the highest levels of SSCs)".* Whilst salmonids, and migratory species which inhabit estuarine environments, do have some tolerance to moderately elevated levels of SSC, given the natural fluctuations in SSC expected within estuarine	The text set out in ES paragraph 9.8.134 "*Atlantic salmon and sea trout are both known to migrate through estuaries with high SSC to get to spawning areas (including the Humber Estuary which is considered one of the estuaries in the UK with the highest levels of SSCs)"* is a statement of fact. It does not preclude the assessment of impacts on migratory fish and the impact pathway has been assessed in Chapter 9 of the ES **[APP-045]** and the HRA report **[APP-115]**. No update is considered necessary.

Reference	Relevant Representation	Applicant's Response
	environments, this does not preclude a significant impact and should be amended by the Applicant.	
4.2.5 – fish and shellfish ecology	The MMO also has some concerns with regard to the UWN assessment. We note that the Applicant has provided an assessment which appears to have modelled a worst case-scenario based on two piling rigs installing 4 piles per day. They consider that each pile will require 5 minutes of vibro-piling and 45 minutes of percussive piling (20 minutes of vibro-piling and 180 minutes of impact piling per day in a 12-hour shift) to be successfully installed. The likely maximum impact piling scenario is for four tubular piles to be installed each day using up to four piling rigs. However, it is unclear whether all four rigs will be in operation concurrently. Conversely, the Applicants also state that 'Piling will be undertaken simultaneously using piling rigs. Adding two identical sources (i.e., doubling the signal).' It is therefore not clear why concurrent piling using two rigs has been modelled, if four rigs are going to be in operation concurrently. The Applicant should be specific in this regard.	Four piling rigs may be in operation concurrently but as noted by MMO/Cefas in MMO RR reference 4.4.11, it is highly unlikely that the piling hammers will strike in unison to create a cumulative effect. There is a slight possibility that two of the hammers may strike at the exact time in unison, and therefore the modelled source level has taken account of two piling sources as a reasonable worst case.
	The Applicant also makes references to using 'land and water-based approaches' to piling, however it is unclear whether the 'land-based approach' refers to piling above MHWS, or refers to a land-based crane being used to pile into the water. If this is the case, land-based rigs which are piling into the water are still likely to have an effect and the Applicant will need to	The land-based approach refers to a land-based rig being used to pile into the water and these piles have been considered in the underwater noise assessment. The location of piles has been taken into consideration in the underwater noise assessment approach. The noise propagation modelling results have been applied to the

Reference	Relevant Representation	Applicant's Response
	take these into account in the noise assessment. If four piling rigs are to be operating concurrently then this should be modelled as the worst-case scenario. It would also be helpful if the locations of the rigs used in the modelling were mapped/described to ascertain whether the worst-case scenario, in terms of impact range from concurrent piling, has been suitably modelled.	most seaward point of the proposed development (and piling) to determine the furthest most point across the estuary that would be affected.
4.2.6 – fish and shellfish ecology	The range of effect for mortal injury, recoverable injury and behavioural effects are presented in Tables 6 and 7 for percussive and vibro-piling, respectively, but the range of effect for Temporary Threshold Shift (TTS) has not been included. TTS should be modelled and presented for percussive and vibro- piling so that a range of effect can be determined.	The upper and lower boundary of effects (i.e., injury and behavioural thresholds) have been modelled and assessed in Appendix 9.2 of the ES (APP-088). The TTS threshold falls within the middle of those ranges. As the worst case has already been assessed, it is not considered necessary to model TTS, as this will not change the outcome of the significance assessment presented in ES. This was discussed with the MMO/Cefas in a meeting on 30 June 2023 and they were in agreement with the above points.
4.2.7 – fish and shellfish ecology	The Applicant has also provided tables detailing the approximate distances (in metres) for fish response criteria during concurrent impact piling (Table 7) and concurrent vibro-piling (Table 8) based on two operational rigs. For impact piling, behavioural reactions are anticipated to occur across 67% width of the estuary at low water and 46% of the estuary at high water. For vibro-piling, behavioural reactions are anticipated to occur across 48% width of the estuary at low water and 33% of the estuary at high water.	The limitations of the modelling approach are set out in Appendix 9.2 in the ES (APP-088). We recognise that the simple logarithmic spreading modelling approach that was agreed to be used at the scoping stage may not always provide definitive ranges. Rounding the predicted ranges to the nearest order of magnitude will not, however, change the outcome of the significance assessment presented in ES. Although it is recognised that simple models in complex environments can underestimate sound levels close to the source (i.e., within tens of metres), they can

Reference	Relevant Representation	Applicant's Response
	Initially, it appears that a sufficient portion of the estuary would remain available as an area in which fish could migrate past the site relatively undisturbed, however, it is our understanding that the modelling approach used in the ES assessment can only be used to predict magnitude of risk, rather than to determine range of impact. In addition, the MMO understands that the range of impact may be considerably higher.	also substantially overestimate levels further from the source (i.e., beyond a few kilometres) (Farcas *et al*., 2016). The distance of behavioural impacts presented in ES (*circa* 1-2 km) fall within these two ranges and are therefore considered a reasonable representation of the impact range.
4.2.8 and 4.2.9 – fish and shellfish ecology	The MMO note that the Applicant has proposed a series of 'best practice' mitigation measures in a bid to reduce the risk of significant impacts to fish receptors, and we agree that these are appropriate. i. 20-minute soft-start on commencement of piling, as per JNCC guidelines (JNCC 2010), which will allow marine receptors (e.g., marine mammals and fishes) to move away from the source of impact before full hammer levels are reached. ii. Vibro-piling will be used (where possible) to reduce the noise levels and thus exposure to marine receptors, when compared to percussive piling which typically uses a higher hammer energy. Furthermore, the following seasonal piling restrictions are also proposed:	Following previous advice from the MMO/Cefas, a similar approach to that taken by the Able Marine Energy Park (AMEP) development has been followed to the development of piling restrictions for IERRT. The rationale for the 140-hour and 196-hour periods of piling proposed for IERRT is based on the rationalisation and adaptation of the AMEP restrictions to take account of the specific location, nature and scale of effects associated with IERRT. IERRT will involve the use of smaller piles for a much shorter period of time, IERRT will only result in a partial acoustic barrier across the estuary compared to AMEP which will result in a complete barrier, and the fact that IERRT is located further downstream and in a slightly wider part of the outer estuary. Given these differences, it was not considered reasonable or proportionate to apply the AMEP restrictions in their entirety. Furthermore, the AMEP restrictions provide a precedent of what was considered acceptable by all relevant stakeholders, including the MMO, based on the evidence

Reference	Relevant Representation	Applicant's Response
	iii. No percussive piling is to take place within the waterbody between 1 April and 31 May inclusive in any calendar year. This restriction does not apply to percussive piling that can be undertaken outside the waterbody at periods of low water. iv. The duration of percussive piling is to be restricted within the waterbody from 1 June to 30 June and 1 August to 31 October inclusive in any year to minimise the impacts on fish migrating through Humber Estuary during this period such as silver eels, river lamprey and returning adult Atlantic salmon. The maximum amount of percussive piling permitted within any 4-week period must not exceed 140 hours where a single piling rig is in operation or a total of 196 hours where two or more rigs are in operation. v. No percussive piling within the waterbody will be undertaken at night between 1 March to 31 March, 1 June to 30 June and 1 August to 31 October, inclusive, after sunset and before sunrise on any day. This will provide a quiet 'window' which is likely to be of benefit to those species that undertaken nocturnal migrations e.g., European eel. The MMO is generally content that the periods covered by restrictions on percussive piling activity	available at that time for that project. The Statement of Common Ground (SoCG) on the Shadow Habitats Regulations Assessment between Able Humber Ports Ltd (The Applicant for AMEP) and the MMO and Natural England states that the mitigation proposed for AMEP was considered sufficient to avoid an Adverse Effect on Integrity (AEOI) with respect to piling activities. No specific evidence or rationale was provided in support of this statement. Similarly, the Environment Agency's oral representation at the Issue Specific Hearings held on 11-13 September 2012 for the AMEP examination stated that the piling conditions "*are appropriate for this application*". There has been no new evidence since the restrictions for AMEP were agreed and, therefore, these restrictions are still considered to be acceptable. The restriction would not mean that there would be 11 consecutive days of piling for 12 hours each day during the migratory period of fecund salmon (in June and August to October). As explained in the ES, there would be significant periods of downtime, pile positioning and set up each day. The underwater noise assessment is based on the likely timeframes for piling that are anticipated to be required. Each tubular pile is anticipated to require approximately 5 minutes of vibro-piling and approximately 45 minutes of impact piling. The maximum impact piling scenario is for four tubular piles to be installed each day, therefore, the maximum impact pile driving scenario would involve approximately 20 minutes of vibro-piling and 180 minutes of impact piling per day in a 12-hour shift.

Reference	Relevant Representation	Applicant's Response
	cover the greatest number of different migratory fish in the Humber Estuary. However, we have concerns regarding the restriction described in 4.2.10 iv, as justification for the 140-hour and 196-hour timeframes has not been provided, the MMO consider that this restriction is very flexible and somewhat vague. Firstly, it remains unclear how the Applicant has determined that 140 hours of piling from a single rig, or 196 hours of piling by two or more rigs is a suitable period of activity. It has been previously highlighted that, within every 4 week-period, a 140-hour operational timeframe (taking into account daytime-only working) "could mean potentially allowing up to 11 consecutive days of piling to occur during the migratory period of fecund salmon looking to migrate upstream to spawn". We note that justification for these time periods has been requested in prior advice. Limited justification has been provided in Table 9.7, which bases the rationale for this restriction on similar restrictions in place at the Able Marine Energy Park (AMEP), however, as far as we can reasonably determine, justification of how the 140-hour and 196-hour timeframes were decided has not been provided.	It is important to understand that the proposed restrictions for migratory fish sit within a much wider package of mitigation measures for other receptors, including overwintering coastal waterbirds that are located near to the proposed development and are sensitive to noise and visual disturbance. To address this issue, the Applicant has committed to avoiding construction activities on or close (within approximately 200 m) to the intertidal mudflats where the overwintering bird features are located for six months of the year (October to March inclusive). This restriction applies until an acoustic barrier/visual screen has been installed on both sides of the approach jetty – construction activity can then be undertaken on the approach jetty itself, behind the screens. Together with the restrictions that are currently proposed for fish, the construction of IERRT is already highly constrained. Any further seasonal or timing restrictions could extend the overall construction period for the project. Given the complex and comprehensive nature of the overall mitigation measures, the addition of further restrictions is likely to have a disproportionate effect on the overall construction programme. Overall, therefore, the proposed hourly piling restrictions are considered appropriate and acceptable for the IERRT project.

Reference	Relevant Representation	Applicant's Response
	It is also not clear within the wording of the restriction how the 196 operational hours will be divided between what number of rigs. For example, will two rigs operating for a total 196-hours, be operating for 98-hours each? The Applicant should seek to amend this and provide the MMO with clarity on this matter.	The proposed restriction would mean that over every 4-week period (in June and August to October), up to 196 hours of piling could be undertaken by either 2 rigs, 3 rigs or 4 rigs. In other words, the limit and temporal exposure over these periods would always remain 196 hours, independent of the number of rigs that are used.
4.2.10 – fish and shellfish ecology	Secondly, and on this point, the use of "two or more" percussive piling rigs is very vague and creates too much flexibility for the Applicant to operate as many rigs as they see necessary, which would undermine the purpose of this restriction. The Applicant should commit to a defined number of rigs in operation at once and set an appropriate defined number of operational hours per rig, in order to make this restriction meaningful and enforceable. The Applicant should provide transparent justification and supporting calculations for the defined number of operational hours per rig.	These proposed restrictions are considered meaningful as they would limit the total hours of piling, and thus the temporal exposure of migratory fish, over certain periods of the year when there is considered to be a moderate level of risk to migratory fish in the Humber Estuary (in June and August to October). If two piling rigs are used, the limit will be 196 hours over every 4-week period, if three piling rigs are used the limit will still be 196 hours and if four piling rigs are used the limit will again still be 196 hours so there will be no increased temporal effect to fish by increasing the number of piling rigs. The restrictions are considered clear and straight forward for contractors to implement and therefore will be enforceable.
4.2.11 – fish and shellfish ecology	In addition, the restriction stating that no percussive piling will take place "after sunset and before sunrise on any day", leaves considerable flexibility given that point of sunrise and sunset is somewhat subjective and dependent upon season (i.e., longer hours of daylight in the summer months). As such, we recommend that the restriction be amended to state that No percussive piling within the waterbody will be undertaken between 1900 and 0700 on any day, between 1 March to 31 March, 1 June to 30 June and 1 August to 31 October, inclusive.	We recognise that the specific timings of sunrise and sunset will vary depending on the season, but these are not subjective and can be set out in advance using recognised data sources (e.g., UK Hydrographic Office (HO) tide tables). The application of the proposed night-time restriction will mean that fish that undertake nocturnal migrations are less exposed compared to a set daily timing restriction. The proposed restriction is therefore considered reasonable and appropriate for IERRT.

Reference	Relevant Representation	Applicant's Response
	Finally, in our most recent advice, the MMO stated that "it is unclear why the proposed restriction periods are only applied to percussive piling and not vibro piling, and why restrictions are only applicable at night". It was requested that the Applicant provide clear justification for the proposed dates of each restriction, together with an explanation of why the piling restrictions should only be applied at night and why only applied to percussive piling in respect of each species they are intended to protect. This information has not been provided within the ES and we recommend the required information be presented for review by the MMO before the ES is accepted. Without this justification, it will be necessary to recommend a precautionary approach and avoid all forms of piling (i.e., vibro and percussive) for the period of 1 April and 31 May, inclusive, and for the period of 1 June to 30 June and 1 August to 31 October, inclusive. This is consistent with recommendations made in previous advice based on remaining uncertainties.	The rationale for the piling restrictions are based on the outcomes of the underwater noise assessment presented in Appendix 9.2 of the ES (APP-088), there is a risk of a behavioural response in fish within around 1 km from the source of vibro piling which equates to less than half the width of the Humber Estuary at both low water and high water. In other words, more than half the width of the estuary will be undisturbed and available for fish to continue their migration during periods of vibro piling. Furthermore, as noted above, the vibro piling will only take place up to 20 minutes each day (5 minutes per pile) which equates to up to 1% of the time and is therefore only taking place intermittently for very short periods each day. Overall, therefore, the effects of vibro-piling from IEERT on migratory fish are not considered to be significant and do not need to be mitigated. Furthermore, it is worth noting that the AMEP piling restrictions only applied to percussive piling and there is no known precedent on the Humber Estuary for setting a blanket seasonal restriction on all forms of piling. In fact, the use of vibro-piling as much as possible has previously been accepted by the MMO and the Environment Agency as a form of mitigation on marine projects elsewhere in the UK, for example, the Lowestoft Eastern Energy Facility (LEEF) Project, and Thunderer Jetty Refurbishment at Stolthaven in Dagenham. ABPmer are not aware of any new evidence to support a deviation from the proposed approach to mitigation which has been applied to date for other projects on the Humber Estuary.

Reference	Relevant Representation	Applicant's Response
		Based on the available evidence, the proposed restrictions are only considered necessary or reasonable to apply to the percussive piling activities (and not the vibro piling activities).
4.2.15 – fish and shellfish ecology	In its review of the PEIR in February 2022, the MMO noted that all potential impacts during operation (i.e., changes to fish populations and fish habitat, changes in water and sediment quality and underwater noise and vibration) have been scoped out for further assessment as these impacts are considered to be equivalent or lower in magnitude than those from the existing maintenance dredging and vessel movements. We maintain our recommendation that habitat loss and disturbance as well as underwater noise impacts on fish during operation should be further assessed within the ES, taking into account other developments in the area (cumulative effects).	See above response to MMO reference 4.2.3.
4.2.16 – fish and shellfish ecology	The Applicant states in Chapter 3 of the ES, that piles will initially be driven into the ground using vibro-piling and when resistance is reached, percussive piling will be used to reach the required depth. It seems then, that for a pile to be safely and completely installed, both vibro- and percussive piling is needed. The piling restrictions provided by the Applicant in Chapter 9 have been worded to apply to percussive piling only, however, it seems impractical to carry out 5 minutes of vibro-piling during periods when percussive piling	The Applicant considers that vibro piling will still be possible in the absence of percussive piling. This will be dependent on ground conditions, penetration and pile stability.

Reference	Relevant Representation	Applicant's Response
	is not permitted (i.e., between 1 April and 31 May, inclusive, and at night between 1 March to 31 March, 1 June to 30 June and 1 August to 31 October, inclusive). It therefore seems somewhat redundant to exclude vibro-piling from these restrictions. It would be helpful to understand what works the Applicant hopes to achieve using vibro-piling only during these restricted periods.	
4.2.17 – fish and shellfish ecology	The Applicant has scoped out commercial shellfish species and insufficient evidence has been provided to support this decision. The MMO are satisfied with the evidence provided showing there are no commercial shellfish bivalve beds in the Humber Estuary, however, would expect to see a reference to support the statement that the IERRT and the disposal site do not support other shellfish (crab, lobster, or whelk).	As reported by Environmental Resources Management (2011) as part of the Able Marine Energy Park DCO application, a small fishery exists which targets lobster, brown (edible) crabs and whelk on the north bank in the outer estuary. A small-scale seasonal winter fishery also targets brown shrimp which extends along the Lincolnshire coast and down to the Wash, typically not taking place in the Humber Estuary (Environmental Resources Management, 2011; Walmsley and Pawson, 2007). These fisheries are not known to operate in or around the Port of Immingham area or in the vicinity of the proposed disposal sites. This would be expected given the navigational safety issues of operating fishing vessels in these areas and likely limited catch potential as a result of sub-optimal habitat conditions for these species compared to other fishing grounds in the region.
4.3.1 – coastal processes	Paragraph 7.1.2 of Chapter 7 identifies receptors as Hydrodynamics, Sediment transport, Plume dispersion and Waves. It is not strictly clear what 'plume dispersion' means when defined as a receptor, but this is not a significant concern - in general the approach is one the MMO supports as the Applicant	Plume dispersion would generally be more accurately described as an impact pathway – i.e., a mechanism by which impacts could be passed on to other receptors (i.e., beaches and other sedimentary features within the physical processes chapter or within other topic assessments, such as benthic ecology, water and sediment quality etc.).

Reference	Relevant Representation	Applicant's Response
	does not define a specific geomorphic entity and so the assessment is broad enough to capture all impacts i.e., as stated in paragraph 7.1.3, consequent impacts to specific features (e.g., port infrastructure, drainage outfalls and the adjacent foreshore) are then also considered.	It is listed in paragraph 7.1.2 Chapter 7 (APP-043) mainly to highlight that sediment plumes from proposed dredging and disposal activities have been assessed.
4.4.1 – underwater noise	The MMO notes fish and marine mammal receptors have been considered as part of the assessment. It is appropriate that the potential impact pathway of underwater noise during piling operations, and capital dredging has been considered in the assessment for marine invertebrates, fish and marine mammals – see Table 9.21 in Chapter 9. Maintenance dredge and dredge disposal, and vessel operations (during the operational phase) have been scoped out from further assessment.	The MMO's position is noted, and, on that basis, no further response is required.
4.4.2 – underwater noise	Table 9.1 in Chapter 9: Nature Conservation and Marine Ecology states that the marine mammal species in the study area are considered to have a moderate sensitivity to the anticipated level of underwater noise generated by the IERRT project from piling and a low sensitivity to noise due to dredging activities, although the MMO do not believe this 'low sensitivity' is justified.	An evidence-based approach to the application of sensitivity levels has been applied and presented in the ES. Based on the literature review of the observed responses of marine mammals to different underwater noise activities (e.g., pile driving, seismic surveys, dredging etc.) in Section 7.4 of the underwater noise assessment (Appendix 9.2 of the ES – APP-088), the overall sensitivity of marine mammals to underwater noise from dredging activities is considered to be low. There is no known evidence to suggest that they have a greater sensitivity to dredging than has been assigned.

Reference	Relevant Representation	Applicant's Response
4.4.3 – underwater noise	Table 1 in Appendix 9.2 Underwater Noise Assessment helpfully provides the consultee responses to date, and how comments (raised at PEIR) have been addressed in the ES. The MMO thanks the applicant for their responses, however, does have some further comments specifically on Appendix 9.2 which can be seen in later in this section.	The MMO's position is noted, and, on that basis, no further response is required.
4.4.5 – underwater noise	The MMO is aware that the proposed mitigation is set out in section 10.1.3 of Appendix 9.2 and welcome that soft start procedures will be employed. Such measures may help to reduce the total number of dangerous exposures in terms of auditory injury. As previously advised, agreement on the proposed restrictions and way forward (especially in terms of what would be an acceptable limit of percussive piling and vibro-piling per day during the sensitive seasons if piling is allowed) will need to be sought. We welcome the proposed restriction that no percussive piling is to take place within the waterbody between 1 April and 31 May inclusive to reduce the risk of potential impact on migratory fish species within the Humber Estuary. The table submitted highlights the migratory periods of key fish species in the Humber.	The MMO's position is noted, and, on that basis, no further response is required.
4.4.6 – underwater noise	The MMO notes the Applicant also proposes that percussive piling is to be restricted within the waterbody from 1 June to 30 June and 1 August to 31 October inclusive in any year. 'The maximum amount of percussive piling permitted within any 4-week	See above response to MMO reference 4.2.8 and 4.2.9.

Reference	Relevant Representation	Applicant's Response
	period must not exceed 140 hours where a single piling rig is in operation; or a total of 196 hours where two or more rigs are in operation'. The MMO would again reiterate that it is unsure as to where the '140' and '196 hours' have been derived from, and it would be helpful if the Applicant could please provide clarification on this point.	
4.4.7 – underwater noise	The species potentially affected during August – October are Atlantic salmon (adults), river lamprey and Silver eel. The MMO noted in previous advice that the Humber is a recovering salmon river and two of the main tributaries for the Humber, the rivers Ouse and Trent are also recovering salmon rivers, and it is recognised that protecting migrating salmon smolts is fundamental to conserving salmon stock. In summer/early autumn adult salmonids are known to aggregate within estuaries, especially during periods of low flow and high temperatures. It is during these months of aggregation when the adult salmonids are most fecund, that they are most exposed to anthropogenic impacts for longer durations. Assuming piling operations take place between 0700 and 1900 (acknowledging that piling will not be continuous for 12 hours), this equates to over 11 days per 4- week period of percussive piling. Thus, we are not content that the risks to migratory species have been appropriately mitigated during the summer and autumn months.	See above response to MMO reference 4.2.8 and 4.2.9.

Reference	Relevant Representation	Applicant's Response
4.4.8 – underwater noise	Further, it is proposed that no percussive piling is to take place within the waterbody between 1 March to 31 March, 1 June to 30 June and 1 August to 31 October inclusive after sunset and before sunrise on any day. The MMO considers that no percussive piling at night will be of benefit to those species that generally undergo nocturnal migration, such as river lamprey, (notwithstanding the fact that presumably there may still be some vibro-piling during the hours of darkness; therefore, the implications of this need to be considered). If there are some species that generally migrate during the day, then it is a question of what the potential risks and implications are, of allowing up to 3 hours 20 minutes of piling (3 hours of percussive and 20 minutes of vibro-piling; worst case assumption) per day during these months.	As set out in Appendix 9.2 of the ES (APP-088) and Chapter 9 of the ES (APP-045) (see paragraph 9.8.162), the potential risks to fish that migrate during the day will be temporary and intermittent. They will be exposed a maximum of up to 13% of the time during percussive piling (and up to 1% of the time during vibro piling), based on four piles a day being driven. It should also be noted that in terms of potential disturbance, four piles a day is very much a worst-case scenario.
4.4.9 – underwater noise	The MMO further note that the Applicant is proposing to use vibro-piling as much as possible (recognising that impact piling may still be required to drive the piles to the required design level) throughout these works. Assuming that only part of the estuary (width) is affected by the vibro-piling operations, it is not known for certain how fish species will respond and whether receptors would be able to continue moving past the site during piling operations utilising certain (i.e., lesser disturbed) parts of the estuary, or whether they would be affected. A significant impact would be if noise from piling operations causes fish to change their migratory behaviour. The MMO does acknowledge however that vibro-piling will be	It will be possible to pile approximately four pile bents (groups of piles) within the intertidal area at the top of the foreshore in the dry.

Reference	Relevant Representation	Applicant's Response
	undertaken for limited periods only (20 minutes of vibro-piling per 24 hours). Piling in the dry will greatly minimise the risk of impact on local receptors, and we would encourage ABP to undertake as much piling in the dry as possible and it should be confirmed which areas will be possible to pile in the dry.	
Appendix 9.2: Underwater Noise Assessment		
4.4.10 – underwater noise	Section 6.2.8: "*The SL for the impact driving of tubular piles as part of the proposed development is assumed based on the loudest near-source (10 m from the source) sound pressure measurements (SEL, peak SPL and RMS) for the percussive piling installation of the nearest-sized 1.52 m Cast-in-Steel- Shell (CISS) steel pipe piles in a shallow water environment (Illinworth & Rodkin, Pommerenck, 2014). Back-calculating the sound pressure measurements to 1 m using the simple logarithmic spreading model (equation 1) provides an estimated SL of 203 dB re 1 µPa2 s (SEL metric), 228 dB re 1 µPa m (peak SPL metric) and 213 dB re 1 µPa m (RMS metric)*". The 'SEL metric' should be clarified as it is not clear what this is. For impact piling, this should be the single strike sound exposure level (SELss). Furthermore, it is not clear why the RMS source level is 10 dB higher than the SEL source level. In any case, the RMS metric is generally not appropriate for assessing impulsive sources such as impact piling, so the MMO would recommend removing this. The relevant metrics for assessing the impacts of impulsive	The peak, SEL and RMS levels are those that were measured directly in the field and published in the literature that is referenced in Appendix 9.2 of the ES (i.e., Illingworth & Rodkin, 2007; ICF Jones & Stokes and Illingworth and Rodkin, 2009; Rodkin and Pommerenck, 2014). The SEL that is quoted is the single strike SEL (SELss). The RMS value was quoted in the ES because it was from a published study that had provided measurements across all metrics (SEL, peak SPL and RMS). This value has not, however, specifically been used in the modelling. Only the SEL and peak SPL values were modelled against the cumulative SEL and peak SPL thresholds for impulsive sources to estimate the potential effects of impact piling on fish.

Reference	Relevant Representation	Applicant's Response
	activities are SELcum (calculated by the aggregation of SELss) and SPLpeak.	
4.4.11 – underwater noise	Section 6.2.9: *"Piling will be undertaken simultaneously using piling rigs. Adding two identical sources (i.e. doubling the signal) will increase the received level by 3 dB. In other words, the unweighted peak SL of concurrent impact piling by more than one piling rig is assumed to be 206 dB re 1 µPa2 s (SEL metric), 231 dB re 1 µPa m (peak SPL metric) and 216 dB re 1 µPa m (RMS metric)*". It is not clear why the Applicant is adding two identical sources when they confirm earlier in the assessment (see section 6.2.2) that a total of four piling rigs may be used: *"The approach jetty will be built in the same way as above where there is sufficient water depth to enable barge access where barge access cannot be achieved due to shallow water depths, a land- based crane positioned on completed sections of the jetty will be used. The piling equipment and process will be the same as described above. Piling works will be undertaken simultaneously on two fronts (i.e., the land and water based approached described above) using up to four piling rigs and may result in cumulative piling noise*". Furthermore, simultaneous piling from multiple rigs, would likely not increase the received peak pressure levels or the single strike SEL, as the individual pulses (and their peaks) originating from distinct rigs do not generally overlap (due to the distinct timing of the strikes and the propagation paths). However, piling from multiple rigs would	As noted in the response to MMO reference 4.2.5, we agree that simultaneous piling is unlikely. The maximum number of pile strikes per day and cumulative SEL predictions have taken account of maximum number of piles that would be installed each day by up to four rigs and is therefore considered to already represent piling from multiple rigs.

Reference	Relevant Representation	Applicant's Response
	increase the total number of strikes and thus the cumulative sound exposure level (SELcum) over 24 hours.	
4.4.12 – underwater noise	Table 3: 'Fish response criteria applied in this assessment': It is appropriate that the assessment refers to noise exposure criteria from Popper *et al.* (2014) for fish species. However, TTS is missing from this table for piling and the MMO would expect this to be included (in addition to mortality and potential mortal injury, and recoverable injury). Popper *et al.* provide a TTS threshold (based in the cumulative sound exposure level, SELcum) of 186 dB re 1 µPa2.s for piling, for all fish species.	See above response to MMO reference 4.2.6.
4.4.13 – underwater noise	Table 7 provides the modelled predictions for fish and impact piling. Having conducted an internal sense check of these predictions and based on the modelling assumptions provided in Table 6, the MMO believe that the predictions look plausible / reasonable for mortality and recoverable injury. We note that for behaviour, the predicted effect range is 1,554 m. The report states "behavioural reactions are anticipated to occur across 67 % width of the Humber Estuary at low water and 46 % of the estuary width at high water, therefore, potentially creating a partial temporary barrier to fish movements". The simple modelling approach can only provide approximations (i.e., an indication of the order of magnitude) of the potential effects, rather than definitive ranges and percentages. Furthermore, using the propagation	The assumptions and model input values are set out in Table 6 in Appendix 9.2 of the ES (APP-088). When applying the simple model, which includes an absorption coefficient (α) to the behavioural threshold of 135 dB SELss and a source level of 203 dB, effects are predicted out to ~ 2 km. When applying the simple model without the absorption coefficient term (+ αR) effects are predicted out to ~ 6 km. The inclusion of an absorption coefficient is considered more appropriate in constrained, shallow, and turbid water environments such as the Humber Estuary (NPL, 2014), and therefore the predictions presented in the IERRT ES are considered to be representative of the potential effects.

Reference	Relevant Representation	Applicant's Response
	assumptions detailed in the report (i.e., TL = 17.91 + αR), a behavioural threshold of 135 dB SELss (a conservative assumption from Hawkins *et al.,* 2014) and a source level of 203 dB (assuming that this is SELss), then we may expect effects out to ~ 6 km. Thus, it can be concluded that there is the risk of a temporary barrier effect across part or all of the estuary.	
4.4.14 – underwater noise	As for percussive piling, 3 dB (assuming two identical sources) has been added to the estimated source levels for vibro-piling (which are 198 dB re 1 µPa2 s (SEL metric), 213 dB re 1 µPa m (peak SPL metric) and 198 dB re 1 µPa m (RMS metric)). This therefore provides source level values of 201 dB re 1 µPa2 s (SEL metric), 216 dB re 1 µPa m (peak SPL metric) and 201 dB re 1 µPa m (RMS metric). The SPLrms is the most relevant/appropriate metric for continuous sources. The SPLrms is additive when there are two or more continuous sources. Thus, given the piling rigs should be relatively close together (within the estuary), it is reasonable to add 3dB as Applicant has been done here, for two piling rigs. Nevertheless, the Applicant should confirm that there will only be two piling rigs operating simultaneously.	See above response to MMO reference 4.2.5.
4.4.15 – underwater noise	Section 9.1.10: "*The calculator developed by NMFS (2021) has been used to calculate the range at which the instantaneous peak and cumulative SEL thresholds for vibro driving (Popper et al., 2014) are reached. The model input values and associated*	The Popper *et al.* thresholds for impulsive noise have been used in the assessment of vibro-piling as set out in Appendix 9.2 (APP-088). It is agreed that the instantaneous peak threshold is not necessarily relevant for continuous sources and can be disregarded from the

Reference	Relevant Representation	Applicant's Response
	assumptions for vibro piling are included in Table 8". Presumably, the Popper *et al.* thresholds for impulsive noise have been used in this assessment of vibro-piling for fish. Pulse sounds such as percussive pile driving are likely to have a greater effect on fish than continuous sources at the same level (Neo et al., 2014). Thus, it is reasonable that the Popper thresholds for percussive/impact piling have been applied in the assessment of sound exposure from continuous sources (this is a precautionary approach). However, please note that the instantaneous peak is not relevant for continuous sources.	assessment results. This does not modify the outcome of the significance assessment presented in ES.
4.4.16 – underwater noise	Section 9.1.13: "*Behavioural reactions are anticipated to occur across 48% of the width of the Humber Estuary at low water and 33% of the estuary width at high water*". A simple modelling approach can only provide an order of magnitude of the potential effects, rather than definitive ranges and percentages.	See above response to MMO reference 4.2.7.
4.4.17 – underwater noise	The Popper criteria only provide limited quantitative thresholds for continuous sources of noise, such as dredging and vessel noise (i.e., recoverable injury: 170 dB rms for 48 hours and TTS: 158 dB rms for 12 hours). These thresholds are reached at 10 m and 46 m for recoverable injury and TTS respectively, as per Table 10 in Appendix 9.2. We agree with the Applicant that instantaneous effects are unlikely.	The MMO's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
4.4.18 – underwater noise	As noted above, dredging operations will be undertaken for 24 hours and therefore, the cumulative sound exposure (over 24 hours) should be considered, although the MMO appreciate that there are no defined SELcum thresholds at present for continuous sources and fish. As noted above, given that pulse sounds such as percussive piling noise are likely to have a greater effect on fish than continuous sources at the same level (Neo *et al.,* 2014), the Popper thresholds for impact piling could be applied in the assessment of cumulative sound exposure from continuous sources as a precautionary approach (as has presumably been done within this assessment for vibro- piling). The MMO agrees with the Applicant that the level of exposure will depend on the position of the fish with respect to the source, the propagation conditions and the individual's behaviour over time. Nevertheless, given the 240 hour dredging operations, we would expect larger effects than what has been presented.	All the assumptions, model input values and published thresholds that have been used are set out in Section 6 and Table 3 in Appendix 9.2 of the ES (APP-088). It is worth noting that the source level that was applied for dredging is considered very much a worst case as it is based on the published levels for a large trailing suction hopper dredger (TSHD) undertaking aggregate dredging of coarser (sand/gravel) material which is likely to generate higher RMS SPLs than a backhoe dredger or a TSHD removing softer siltier material as is the case on the Humber Estuary. It is not considered appropriate to apply impulsive noise thresholds to the continuous source as the thresholds were not developed for this purpose and are therefore unlikely to be realistic. The Popper *et al.* (2014) qualitative guidelines for continuous noise sources that were applied and presented in the ES to assess the effects of dredging activities consider that the relative risk of mortality and potential mortal injury in all fish is low in the near, intermediate and far-field. Applying the Popper *et al.* (2014) SEL_{cum} thresholds for piling to the model and assumptions set out in the ES, as has been suggested by the MMO/Cefas, indicate that there is a risk of mortality/ potential mortal injury within 50 m in fish with a swim bladder involved in hearing, within approximately 30 m in fish with a swim bladder that is not involved in hearing and approximately 10 m for fish with no swim bladder. These results align with the qualitative guidelines for continuous noise sources

Reference	Relevant Representation	Applicant's Response
		whereby effects are limited to within tens of metres from the source. According to the Popper *et al.* (2014) qualitative guidelines presented in the ES, the relative risk of recoverable injury is also considered to be low in the near, intermediate and far-field for fish with no swim bladder and fish with a swim bladder that is not involved in hearing, and slightly greater for fish where the swim bladder is involved in hearing (e.g., herring). Applying the SEL_{cum} thresholds for piling as advised by MMO/Cefas, indicate that there is a risk of recoverable injury within approximately 80 m in fish with a swim bladder and approximately 20 m for fish with no swim bladder. These results again align with qualitative guidelines already presented in the ES which consider effects are primarily limited to within tens of metres from the source. The qualitative guidelines presented in the ES consider there to be a moderate risk of a TTS occurring in the nearfield in fish with no swim bladder and fish with a swim bladder that is not involved in hearing and a low risk in the intermediate and far-field. There is a slightly greater risk of TTS in fish where the swim bladder is involved in hearing (e.g., herring). Applying the SEL_{cum} thresholds for piling, as recommended by the MMO/Cefas, indicate that there is a risk of TTS occurring within approximately 700 m in all fish, which broadly correlates with the qualitative guidelines. Overall, the use of the Popper *et al.* (2014) quantitative guidelines for piling does not change the conclusions of the

Reference	Relevant Representation	Applicant's Response
		assessment presented in the ES. There is still considered to be a low risk of any injury in fish as a result of the underwater noise generated by dredging. TTS and behavioural responses are anticipated to be relatively localised in scale and, in the context of the estuary width and the unconstrained nature of the location, fish will be able to move away and avoid the source of the noise as required. In summary, the impacts of dredging on fish are still not considered to be significant.
4.4.19 – underwater noise	As noted, the MMO has no major concerns with the predictions for marine mammals for percussive/impact and vibro-piling. In general, the predictions appear to be relatively conservative in most cases. However, the predictions in Table 16 for dredging and vessel movements look smaller than expected and we recommend checking whether the SELcum over 24 hours has been appropriately assessed. Even if we assume a fleeing receptor then we would still expect larger TTS effect rangers (over part of the estuary) for harbour porpoise, based on a 24-hour exposure period.	As explained in paragraph 9.2.25 in ES Appendix 9.2 (APP-088), the freely available online spreadsheet tool developed by the United States' regulatory body, the National Oceanic and Atmospheric Administration (NOAA), has been used to predict the range which the weighted NOAA (2018) cumulative SEL acoustic thresholds for PTS and TTS (which are considered the industry standard in the UK) are reached during the proposed dredging and vessel movements associated with the construction and operation of the proposed development. In accordance with the guidance provided in NOAA's user manual (NOAA, 2021) and the instructions included within the user spreadsheet, 'Tab C: Mobile source, non-impulsive, continuous ("safe distance" methodology)' was selected as the most appropriate method to apply for the dredging and vessel activity associated with IERRT. The assumptions and input values to this spreadsheet are set out in Table 15 of Appendix 9.2 of the ES. These have been revisited and checked and the outputs that are reported in the ES are considered to be correct.

Reference	Relevant Representation	Applicant's Response
4.5.1 – dredge and disposal	A range of conclusions are made in Chapter 8 Water and Sediment Quality. Of the impact pathways identified, all are assessed as either insignificant or minor adverse, due to the Applicant's conclusion that levels of contaminants within the material to be dredged are sufficiently low. The argument is largely logical, and based on bespoke sediment sampling, though the Applicant could have used the effects-range approach from Gorham-Test *et al.* (1999; also in Long *et al.* 1995; 1998) to obtain a better understanding of the levels of polycyclic aromatic hydrocarbons (PAHs) within the sediment. The Gorham-Test approach is also part of the proposed Action Levels (pALs) for PAHs as detailed in Mason *et al.,* (2020) to allow interpretation of PAH concentrations in sediments. As such, this approach is not an agreed AL.	The MMO's position is noted, and, on that basis, no further response is required.
4.5.2 – dredge and disposal	The ES refers to contaminants as being "relatively low" with samples being below or marginally exceeding their respective action level 1 (AL1) values. The MMO disagree that the levels of PAH are either low or marginally exceed AL1, with various PAH congeners being up to ten times over the AL1. Whilst the applicant has, as previously requested, provided the results in the MMO Results Template, this only comprises a picture copy of each tab of the template pasted into a PDF document. As such, the data must be manually transcribed to be extracted, which is laborious and increases the chance of human error. Due to time constraints for this review, it has not been	In Chapter 8 of the Environmental Statement (ES) (APP-044), sediment sample concentrations were compared to established Cefas Guideline Action Levels (ALs). However, there is no defined Cefas AL2 for Polycyclic Aromatic Hydrocarbons (PAHs). In accordance with the MMO's comment in their relevant representation, the Gorham-Test has been applied to all sediment samples to analyse PAHs, the results of which are explained below. However, it is important to note that the Gorham-Test is not an established Cefas AL. For the sum of High Molecular Weight (HMW) PAHs, no samples exceed the Effects Range Median (ERM), and

Reference	Relevant Representation	Applicant's Response
	possible to transcribe all of the PAH data, but, for sample 1, which has been transcribed, see the following results of the Gorham-Test approach in Table 1.	most samples (70%) are below the Effects Range Low (ERL). In considering the sum of Low Molecular Weight (LMW) PAHs, only Sample 1 (at 3 m, 4 m and 4.7 m depth), Sample 6 (2 m depth) and Sample 7 (2 m depth) exceed the ERM. All other samples are below the ERM (90% of samples), and 41% of samples are also below the ERL. It should also be noted that Sample 1, Sample 6 and Sample 7 are located outside of the indicative dredge area[5]. Sediment at these sampling locations will not be dredged and disposed of. Therefore, whilst some isolated areas of sediment contain elevated concentrations of PAHs, this sediment will not be disturbed by the proposed development. Sediment samples within the dredge area contain relatively low concentrations of PAHs with samples being below or marginally exceeding the ERL concentrations.
4.5.3 – dredge and disposal	In the absence of an agreed AL2 value for PAHs, the Gorham-Test approach has been used, which calculates the sum total of low- (LMW) and high-molecular weight (HMW) PAH content in each sample, then compares these values to observed effect-ranges. If a sum total value is below or around the effects-range low (ERL), then the risk is likely low, whilst if a sum total value is above the effects-range medium (ERM), then the risk is higher. These can, to an extent, be interpreted similarly to Cefas Action levels, but these are not officially agreed ALs.	
4.5.4 – dredge and disposal	Table 1 shows that all but one sample (1m) exceed the ERL for both LMW and HMW PAHs. The results depict a fairly consistent increasing trend as the depth of the samples increases, with sample 3m, 4m and 4.7m exceeding the ERM for LMW PAHs, and becoming closer to the ERM than the ERL for HMW PAHs. This indicates that the deeper material to be dredged (not including the geological material which the corer is unable to penetrate) may hold unacceptable levels of PAHs for disposal at sea. As per previous comments, we have not been able to manually transcribe all of the PAH data for this assessment, however, would be happy to if the Applicant can provide the data in an extractable excel	

Reference	Relevant Representation	Applicant's Response
	format. Without the ability to conduct this assessment, the MMO are unable to agree with the Applicant's conclusions that the levels observed are "low".	
4.5.5 – dredge and disposal	For the other contaminants, the MMO do not hold the same level of concern, and broadly agree that levels of trace metals, organotins, polychlorinated biphenyls, polybrominated diphenyl eithers and organochlorine pesticides are either below or marginally above the AL1 (or, where there is no existing AL1 (such as for PBDEs) that they are below or marginally above their respective pAL1).	The MMO's position is noted, and, on that basis, no further response is required.
4.7.1 – marine archaeology	The MMO defers to the Historic England on matters of shipping and navigation. The MMO will continue to be part of the discussions relating to securing any mitigation, monitoring or other conditions.	The MMO's position is noted, and, on that basis, no further response is required.
4.8.1 – seascape, landscape and visual resources	The MMO defers to Natural England as the SNCB on matters of Seascape, Landscape and Visual Resources. The MMO will continue to be part of the discussions relating to securing any mitigation and monitoring or development of any plans/conditions on this matter. The MMO would also remind the Applicant that the National Association for Areas of Outstanding Natural Beauty should be included in conversations regarding potential impacts to Areas of Outstanding Natural Beauty (AONBs) as they are the Non-Governmental Organisation responsible for them.	The MMO's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
4.9.1 – commercial fisheries	The MMO defers to IFCA as the principle contact on matters related to commercial fishing operation. The MMO will continue to be part of the discussions relating to securing any mitigation related to this field.	The MMO's position is noted, and, on that basis, no further response is required.
5 – summary	We strongly recommend that the Applicant engage with the MMO throughout the process in order to ensure the assessment is as smooth as possible and agreements can be reached through a Statement of Common Ground.	The Applicant and the MMO continue to engage closely on a Statement of Common Ground.

Table 3.3 BDB Pitmans LLP on behalf of DFDS Seaways (RR-008)

Reference	Relevant Representation	Applicant's Response
6.20	In the marine ecology chapter of the Environmental Statement [APP-045] paragraphs 9.8.96, 9.8.98 and 9.8.102 appear to contradict each other on whether there is scientific knowledge about the effect of underwater noise and vibration on marine invertebrates. Paragraph 9.9.5 proposes that construction activity between October and March is prohibited until an acoustic barrier has been installed, but no evidence is offered as to whether this will sufficiently reduce noise impacts.	To clarify, the first part of this comment relates to underwater noise effects on benthic invertebrates. The second part of this comment relates to a very different subject on coastal waterbirds and proposed mitigation to reduce construction related disturbance. In relation to the first part of the comment, the text at paragraph 9.8.96 within Chapter 9 of the ES **[APP-045]** presents the evidence available on underwater noise effects on marine invertebrates. The text highlights the disparate results between studies which seem to be due to differences in sound exposure levels and duration. Paragraph 9.8.98 states that, based on the evidence provided in the review scientific literature, potential effects of underwater noise are considered unlikely to result in population level changes and mortality in benthic invertebrates. Paragraph 9.8.102 states

Reference	Relevant Representation	Applicant's Response
		that, given that the proposed capital dredge and disposal activities will produce low levels of noise and be short term and temporary, any effect on marine invertebrates in the vicinity of the dredging would be limited to short term behavioural responses. Therefore, these paragraphs within Chapter 9 of the ES are not considered to contradict each other. With specific reference to the point on mitigation for coastal waterbirds, airborne noise modelling (undertaken by AECOM Ltd.) was used to inform the assessments in Chapter 9 of the ES (as well as the Habitats Regulations Assessment (HRA) **[APP-115]**). Paragraph 9.9.5 confirms that with the addition of acoustic barriers, noise levels on the intertidal mudflat will be less than 65 dB(A).
8.1	Aspects of Chapter 9 of the Environmental Statement - Nature Conservation and Marine Ecology [APP-045] do not adequately describe the situation for some species, especially waterbirds, associated with the Humber Estuary European Marine Site ("EMS") and underestimates the potential scale of the effects of the project.	As stated in Section 9.3 of Chapter 9 of the ES [APP-045], marine ecological data for the Humber Estuary has been collected and analysed by ABPmer for over 20 years. This has been used to provide a robust baseline description of the area as well as providing an understanding of potential impacts. Overwintering bird surveys have been undertaken since 1997/98 which cover the IERRT project. In addition, the 2021/22 survey season started in August rather than October to capture year-round data. The surveys have been continued on a monthly basis throughout 2022. A detailed assessment of the loss of intertidal and subtidal habitat (including a quantification of the amount of direct and indirect loss) and impacts on Black-tailed Godwit has been undertaken (see Section 9.8 of Chapter 9 of the ES (APP-045)). The loss of habitat is considered to be insignificant.
8.2	Loss of the intertidal habitat has a particular effect of the very localised feeding area of the Black-tailed Godwit ("BTG") This effect on the BTG and other foraging waterbirds has not fully been taken into account in the ES. The loss of intertidal habitat may be small in relation to the wider Humber area, but the BTG has a very localised roosting area in North Killingholme.	

Reference	Relevant Representation	Applicant's Response
8.3	Direct loss or loss through damage of intertidal and subtidal habitats such as through piles and pile scour have not been accurately quantified.	
8.4	There is no mention of shadowing impacts from the linkspan and jetties, which would restrict utilisation by fish and birds underneath them and along an adjacent corridor. Where the intertidal habitat delivers an important invertebrate resource for foraging waterbirds, the issue can be intensified for a species such as Black-tailed Godwit which has both a relatively niche prey requirement and a local foraging range in relation to its roost.	Paragraph 9.8.281 onwards of Chapter 9 of the ES [APP-045] considers direct changes to waterbird foraging and roosting habitat as a result of the presence of infrastructure – including shadowing. The overall impact is assessed as minor significance
8.5	Proposed construction mitigation for the Black-tailed Godwit is insufficient BTG are in peak numbers late summer/early autumn (i.e. before October), but works are to be restricted October – March and restriction of works need to be more nuanced and take into account effect of different tides (spring and neap) on feeding patterns, rather than set months.	Table 9.19 and 9.20 of Chapter 9 of the ES [APP-045] present bird monitoring survey data for the study area. It shows a larger number of Black-tailed Godwit in this area of foreshore in winter compared to summer and autumn months. The proposed winter marine construction restriction from 1 October to 31 March correlates with the months where the largest number of the most SPA qualifying species occur (i.e., Black-tailed Godwit, as well as other species such as Dunlin and Shelduck). Black-tailed Godwit feed through the tide and feed during spring and neap tides – spring and neap tides are not considered to affect how birds feed (other than how far down the foreshore they are able to access).
8.6	Operational mitigation is very poor for waterbirds Currently, screening is suggested which is a default measure. However, it will not remove issues relating to over-sailing and shadowing and the associated	Paragraph 9.8.281 onwards of Chapter 9 of the ES [APP-045] considers direct changes to waterbird foraging and roosting habitat as a result of the presence of infrastructure. Based on the evidence provided in the

Reference	Relevant Representation	Applicant's Response
	potential loss of habitat, as well as noise generation such as from container movement. The assessment conclusion is minor, but there is insufficient consideration to the impacts to utilisation/availability of the area for BTG, an impact which would be over the lifespan of the facility.	assessment, birds would be expected to feed below or very close to the IERRT approach jetty and indeed other infrastructure on the foreshore – none of which will prevent direct access to established roosting habitat. As a consequence, any avoidance of marine infrastructure is expected to be limited (and highly localised) and is unlikely to change the overall distribution of waterbird assemblages more widely on the foreshore in the local area. On this basis, the potential effects of disturbance during operation have been assessed as minor. Therefore, no mitigation is considered necessary. On a precautionary basis, however, in order to reduce potential visual disturbance stimuli to waterbirds on the foreshore, screening will be installed either side of the linkspan and approach jetty so that movements of workers or vehicles will not be as visible from the foreshore. Over time as the birds are expected to become habituated to such disturbance events and as such a phased removal of the screens is proposed after 2 years.
8.7	Bird monitoring is noted to be undertaken, but without any outcome or proposed actions stated as a result of the monitoring. The precautionary approach given the uncertainty of impact and remedial measures suggests the provision of compensatory measures at the consenting stage are necessary. Although uncertain, the impact will be greater than minor, so cannot be discounted. As such, compensatory provisions are expected.	Chapter 9 of the ES [APP-045] and the Habitats Regulations Assessment [APP-115] conclude that the proposed IERRT project will not result in an adverse effect on integrity of the Humber Estuary European Marine Site (EMS) and no compensation is required. As part of their Section 42 advice, Natural England advised that adaptive monitoring should not be used as mitigation. However, monitoring will still be undertaken to provide general data and as a continuation of the existing monitoring along the Humber south bank. Erection of screening on approach jetty and linkspan during operation is now proposed on a pre-cautionary basis (noting that this is not necessarily required based on the assessment outcomes).

Table 3.4 Environment Agency (RR-009)

Reference	Relevant Representation	Applicant's Response
4.1	We have reviewed Chapter 7, together with the relevant figures and Appendices and we are satisfied that the appropriate methods and data sources have been applied to the assessment.	The Environment Agency's position is noted, and, on that basis, no further response is required.
4.2	The scale of changes for the development is considered to be small whereas natural ongoing change within the estuary is considered to be large. This view is justified in sections 7.8-7.11, where likely impacts/effects of dredging activities (capital and maintenance) and disposal of dredge spoil, and mitigation (such as there is), are considered. Only activities involving the more dispersible sediments, e.g. alluvium, superficial estuarine sediments, are reviewed – any excavated boulder clay is considered too consolidated to be easily eroded/transported under extant conditions. The analysis of the dispersion plume and sedimentation modelling indicates that the plumes from the dredging/disposal activities disperse to the background quite quickly and that any effects are similar to those that already occur due to existing maintenance dredging, therefore the conclusion is that these activities will result in a low exposure to change.	The Environment Agency's position is noted, and, on that basis, no further response is required.
4.3	As the Humber is a large estuary, is naturally a very turbid environment and has a large tidal range, we	The Environment Agency's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
	concur with the view that the potential effects from the development will be small.	
4.4	We noted that there were problems regarding the recent sub-bottom profiling, with evidence of "multiples" and "ringing" in the profile traces due to signal attenuation. The report authors attribute this attenuation to the presence of a semi-continuous "organic sediment" layer, which is reasonable. Despite these data collection issues, we are satisfied with the interpretation/site characterisation outlined within.	The Environment Agency's position is noted, and, on that basis, no further response is required.
4.5	Appendix 7.2 bathymetry plots (Figures 4 & 9): there appears to be an issue with the shading, resulting in inverted topography, i.e. low areas look like they are high areas – the channels look as if they are above the sea-floor as opposed to being incised into it.	The shading on these figures appears to show inverted topography. This is a result of a switch between depth-negative and depth-positive scale bars. This was not our intention and is a direct result of the different image processing software. Nevertheless, the scale bar on the figures in Appendix 7.2 (APP-085) are accurate and should be used to interpret the information. It is hoped and presumed that the relative bed level differences could still be interpolated.
4.6	Also, regarding figures in general, not just this report – there appear to be some labelling issues as there are instances where cross sections are labelled, but the associated lines on the map are not; for example, Figure 14 - map and Figures 15-17 – cross sections. Scale bars and place names to allow easy identification of features and assist with orientation are also missing from some of the figures.	To assist with interpretation, Profile line A-A' (Figure 15; Appendix 7.2 (APP-085)) and Profile line B-B' (Figure 16; Appendix 7.2) both run approximately northwest to southeast; and Profile line C-C' (Figure 17; Appendix 7.2) runs approximately south-southwest to north-northeast.

Reference	Relevant Representation	Applicant's Response
4.7	(Volume 2) Figure 7.19 shows the difference in bed thickness against the baseline, it appears to suggest a difference at the base of the existing defences, but it states it is an undefined value. Could the applicant please clarify why it is undefined.	Within Figure 7.19 (Volume 2 (APP-063)), there is no evidence to indicate that the IERRT project has the potential to cause any meaningful change to bed thickness at the base of the existing defences. Where the 'undefined value' is shown on this figure, this represents a region of the model that is exposed at the tidal state shown (i.e., there is no water in the model at this location at this timestep). Regardless of tidal state, there is only predicted to be changes to bed thickness within the coloured regions shown on Figure 7.19.
5.1	We have reviewed the assessment contained in this Chapter, together with the relevant figures and Appendix, for issues within our remit and consider this to be appropriate. We support the conclusion of the Water Framework Directive (WFD) assessment, on the basis that Natural England does not raise any issue in respect of the Habitat Regulations Assessment (HRA) conclusions.	The Environment Agency's position is noted, and, on that basis, no further response is required.
6.1	We have reviewed the assessment contained in this Chapter, together with the relevant figures and Appendix 9.1 (we have not reviewed Volume 3, Appendix 9.2 – please see paragraph 6.4 comments below), for issues within our remit (marine ecology and fish receptors) and consider this appropriate.	The Environment Agency's position is noted, and, on that basis, no further response is required.
6.2	The Humber estuary acts as the sole gateway for migratory fish into the Humber system, allowing fish to travel upstream from the sea, to spawn in rivers such as the Don, Aire, Ouse, Trent, Wharfe and Derwent; the last of which has SSSI and SAC status. The	The Environment Agency's position is noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
	success of these populations relies wholly on their ability to gain safe passage through the Humber in order for them to complete their life- cycle. As such, any activity taking place in the Humber that hinders the ability of fish to make this journey has the potential to threaten populations throughout the river catchment.	
6.3	In addition to the above, many fish populations, particularly Atlantic Salmon, are in a fragile, recovering state, following the almost total annihilation of the species within the Humber as a result of the poor water quality and physical barriers introduced by the industrial revolution. Recent work to address some of these issues has seen salmon returning to upstream rivers for the first time in decades.	The Environment Agency's position is noted, and, on that basis, no further response is required.
6.4	Please note that due to resource issues we have not been able to review the assessment in respect of noise impacts on migratory fish and defer to any views provided by the Marine Management Organisation (MMO) on this topic. We understand that the MMO is to provide comments in respect of the proposed time restrictions included in the deemed Marine Licence (dML) for percussive piling, which are relevant for the protection of salmon.	It is recognised that this requirement was requested for construction works at Green Port Hull and the Able Marine Energy Park, although it is noted that the estuary is much narrower in those areas. At Immingham, the wider width of the estuary would allow greater opportunities for the passage of fish. The data collected from this monitoring protocol for the Green Port Hull development, upstream of Immingham, is summarised below: The data covers the period from 08/09/2015 to 08/09/2016 (there is a gap between 02/11/2015 and 18/01/2016)
6.5	When salmon are disturbed, they are prone to swim at speed in an attempt to avoid the perceived danger. In order to 'sprint' away the animal can build up an oxygen debt in its tissues that can take some time or even be impossible to repay in waters with low	

Reference	Relevant Representation	Applicant's Response
	dissolved oxygen. These fish may then become easy prey or just die from this physiological stress. Water has less ability to dissolve oxygen as the temperature rises and salmon have a greater requirement for oxygen at higher water temperatures. Where other pollution is present, such as ammonia from foul water discharges, the effect on oxygen demand combined with high water temperature further adds to the stress on salmon. These factors combine to increase stress on salmon as they pass through estuaries in the summer months to the point where many do not succeed in entering freshwater.	• There is a negative correlation between temperature and dissolved oxygen ○ This is because the solubility of oxygen increases as water temperature decreases (i.e., cold water can hold more dissolved oxygen than warm water) • No temperature measurements exceeded 21.5°C (the threshold above which the Environment Agency suggest percussive piling should cease if monitoring was to be undertaken) ○ The maximum recorded temperature was 21.17°C ○ The average recorded temperature was 12.5°C • No measurements of dissolved oxygen fall below 5 mg/l (the threshold below which the EA suggest percussive piling should cease) ○ The minimum dissolved oxygen concentration was 6.23 mg/l ○ The average dissolved oxygen concentration was 8.79 mg/l It is worth stating that this data set represents a conservative view in the context of the IERRT Project in the sense that Immingham is much closer to the mouth of the estuary than Hull and therefore is the recipient of greater tidal mixing opportunities with colder, oxygenated water from the North Sea.
6.6	The Environment Agency is of the opinion that there are certain periods when water conditions will make fish more vulnerable to disturbance. To reduce the risk of this other schemes have proposed real-time monitoring of water quality parameters to limit operations during periods of adverse water quality. The way that this works is that work stops when the water quality falls below certain thresholds measured at agreed locations and does not re-commence until the water quality improves.	
6.7	Accordingly, we request that the applicant is required to deploy an active monitoring scheme (which may also require a condition in the dML) and a similar restrictive condition is included in the dML to read: **Condition** No percussive piling is to take place while the data from the relevant active monitoring scheme shows	

Reference	Relevant Representation	Applicant's Response
	either the temperature to be above 21.5 degrees Celsius or dissolved oxygen to be below 5 milligrams per litre, or both.	Whilst the Applicant has no objection in principle to installing a monitoring buoy during the time that IERRT marine works are ongoing, based on the data described above, it is considered unlikely to represent value for money or indeed a proportionate condition. The data from the monitoring buoy at Hull – further away from the mouth of the estuary and therefore further along the salinity gradient – shows there were no issues over the summer period and so it is reasonable to predict that conditions at Immingham will be even more benign.

Table 3.5 Lincolnshire Wildlife Trust (RR-012)

Reference	Relevant Representation	Applicant's Response
N/A	In brief, Lincolnshire Wildlife Trust consider the main issues and impacts of this development to be those affecting the habitats and species both on site and within the surrounding area, and how negative effects felt here will degrade the integrity of the ecological networks of the wider region. A brief overview of our main points of concern: ▪ The impacts of capital dredging to the protected features of the Humber Estuary SAC, SPA, Ramsar and SSSI ▪ Alternative use or safe disposal of dredged material	Each of the points of concern raised by Lincolnshire Wildlife Trust have been assessed in detail in the ES and HRA. Taking each point in turn: • Impacts of capital dredging to the protected features of the Humber Estuary SAC, SPA, Ramsar and SSSI are assessed in Chapter 9 of the ES (APP-045) and in the HRA (APP-115). • Alternative uses of dredge material is considered in Appendix 2.1 of the ES – Waste Hierarchy Assessment (APP-076). The suitability of the dredge material to be disposed of at sea is considered in Chapter 8 of the ES (APP-044).

	▪ Impacts of pile-driving noise within the Humber Estuary ▪ Impacts of increased sediment suspension from construction-related activities ▪ Achieving a minimum of 10% Biodiversity Net Gain as a result of this development which would be supported by an appropriate post-intervention habitat monitoring and management plan for a minimum period of 40 years to match the scheme lifetime	• Impacts of pile-driving noise within the Humber Estuary is assessed in Chapter 9 of the ES (APP-045) and in the HRA (APP-115). • Impacts of increased sediment suspension from construction-related activities is assessed in the physical processes assessment in Chapter 7 of the ES (APP-043). The findings from this assessment are used to assess impacts on water quality in Chapter 8 of the ES (APP-044) and on marine ecological receptors in Chapter 9 of the ES (APP-045) (as well as the HRA (APP-115)). Taking into account the proposed mitigation measures, the assessment concludes that environmental effects will not be significant. Biodiversity Net Gain does not yet apply to NSIPs. However, the Applicant will allocate the environmental benefits of one ha of intertidal habitat at the consented Skeffling managed realignment site (which is currently being constructed) to the IERRT scheme via a separate legal agreement. A suite of terrestrial enhancements will also be delivered within an existing area of woodland, owned by ABP, south of Laporte Road named Long Wood.

Table 3.6 CLdN (RR-007)

Reference	Relevant Representation	Applicant's Response
5.1 to 5.4	CLdN notes that ABP's Habitats Regulations Assessment concluded that Likely Significant Effects	CLdN's points are noted, and, on that basis, no further response is required.

Reference	Relevant Representation	Applicant's Response
	could not be discounted with respect to three European sites, all with coincident boundaries: Humber Estuary SAC; Humber Estuary SPA; and Humber Estuary Ramsar site. These were accordingly "screened in" to the Stage 2 assessment. CLdN notes that the Stage 2 assessment has concluded that: ▪ for the majority of impact pathways that have been identified, there is no potential for an adverse effect on site integrity or any potential for the predicted effects to compromise any of the conservation objectives; and ▪ for two potential impact pathways (airborne noise and visual disturbance during construction and operation, and underwater noise and vibration during piling on qualifying species) mitigation has been identified. The conclusion of the HRA is that "…based on scientific information and professional judgement, it is considered that the construction and consequent operation will create no adverse effects on the integrity of any European designated sites". CLdN would comment as follows: ▪ The tests under the Habitats Regulations are prescriptive and operate in a way that places a legal obligation on the decision-maker to refuse	

Reference	Relevant Representation	Applicant's Response
	any applications where the tests cannot be complied with. To this end the requirements under the Habitats Regulations are not simply a procedural requirement or a relevant and material consideration in the determination of any forthcoming application. Rather they are 'stop / go' requirements and so can be a decisive factor. ▪ The decision as to whether the integrity of the site is adversely affected will ultimately be a matter for the Secretary of State for Transport as Competent Authority, in consultation with Natural England (NE).	
5.4.2 (a)	However, CLdN makes the following observations: a) That the Proposed Development will result in a loss of up to 1.65 ha of intertidal habitat as a result of the proposed capital dredge and jetty. b) That NE (the government's statutory adviser on HRA) has advised that "…a lasting and irreparable loss of European Site habitat would prevent a conclusion of no adverse effect on site integrity being reached, unless an Appropriate Assessment could ascertain otherwise". c) That NE considers that any credible risk of a measurable loss of marine or terrestrial habitat, "no matter how small" from within a European site, is a 'likely significant effect' and the full significance of its impact on site integrity should be screened-in and further tested.	CLdN are incorrect in stating that the "*Proposed Development will result in a loss of up to 1.65 ha of intertidal habitat as a result of the proposed capital dredge and jetty*". This is the amount of habitat which the IERRT proposal at the stage of the Preliminary Environmental Information Report (PEIR) would have removed. As reported in paragraph 9.8.209 of Chapter 9 of the ES (APP-045) the IERRT Project will result in the loss of 0.022 ha of intertidal habitat from both direct (capital dredging and piling) and indirect (erosion caused by changes in currents) effects. This is also reported in the Appropriate Assessment in Section 4 of the Habitats Regulations Assessment (HRA) Report (APP-115). It should also be noted that the amount of habitat loss report in the ES and HRA is considered a worst case.

Reference	Relevant Representation	Applicant's Response
	d) That NE has identified that the impact of loss of intertidal and subtidal habitats, and the associated impact on a number of fish and coastal waterbirds species, must be robustly assessed. e) That NE expressed concern during pre-application consultation with respect to the justification for scoping out certain impact pathways.	The Appropriate Assessment considers the loss of intertidal and subtidal habitat in detail, and the associated impact on fish and coastal waterbird intertest features and concludes the construction and consequent operation of the IERRT Project will create no adverse effects on the integrity of any European designated sites.
5.4.3 and 5.4.4	CLdN notes an HRA "derogation case" has usually been required for port infrastructure projects of a similar nature and scale, and which directly result in loss of protected habitat. That includes the Able Marine Energy Park DCO which required reclamation of land within the Humber Estuary and where only the benefits of that project associated with renewable energy production were sufficient for it to be consented (and with associated restrictions on use linked to that need secured in the DCO). CLdN is also aware of a number of other large scale port infrastructure projects where an HRA "derogation case" has been required. For the foregoing reasons, CLdN considers that the conclusions of the Shadow HRA, and in particular that the loss of protected habitat would not have an "adverse effect on integrity" of the designated sites, must be the subject of robust evidence and tested fully in Examination.	Given the conclusion that the construction and consequent operation of the IERRT Project will create no adverse effects on the integrity of any European designated sites, a derogation is not required. It is noted that CLdN have misunderstood the scale and nature of effects on European designated sites associated with the IERRT Project. It is incorrect to describe the IERRT proposal – as CLdN do at paragraph 5.4.3 – as '*of a similar nature and scale'* to the Able Marine Energy Park, Bathside Bay Container Terminal and the proposed Dibden Bay Container Terminal schemes. All of these other schemes would remove tens of hectares of designated intertidal habitat as a result of extensive reclamation needed for the creation of a straight-line quay. The loss of intertidal habitat associated with the IERRT Project is, however, considered to be negligible, totalling just 0.022 ha which is approximately 0.00006% of both the SAC and SPA/Ramsar site. Piling will also result in a direct loss of 0.027 ha of subtidal seabed habitat which constitutes approximately 0.000074% of the Humber Estuary SAC.

4 Cumulative and In-combination Effects

4.1 The comments of the Applicant on the Relevant Representations (RR) submitted by the Interested Parties on the issue specific topic of **Cumulative and In-combination Effects** are set out below.

4.2 The Representations relating to cumulative effects are found within the representations submitted by –

i. Natural England [RR-015];

ii. the Marine Management Organisation [RR-014];

iii. BDB Pitmans LLP on behalf of Able (UK) Ltd (RR-001)

vii. BDB Pitmans LLP on behalf of DFDS Seaways [RR-008];

viii. The Environment Agency [RR-009];

ix. Lincolnshire Wildlife Trust [RR-012]; and

x. CLdN Ports Killingholme Limited (CLdN) [RR-007].

4.3 The comments raised in the relevant representation by each interested party, and the Applicant's responses to them, are presented in the following tables:

- Table 4.1 – Natural England;
- Table 4.2 – MMO;

- Table 4.3 – Able (UK) Ltd;
- Table 4.4 – DFDS Seaways;
- Table 4.5 – Environment Agency;
- Table 4.6 – Lincolnshire Wildlife Trust; and
- Table 4.7 – CLdN.

Table 4.7 Natural England (RR-015)

Reference	Relevant Representation	Applicant's Response
Key Issue 1 – air quality	It is also currently unclear how in-combination impacts on designated sites have been assessed. Chapter 20 ('Cumulative and In-combination Effects') states the following: 'It should be noted that the assessment provided in the Traffic and Transport chapter (Chapter 17 of this ES) is inherently a cumulative assessment.' The assessment does not currently specify which plans and/or projects have been considered in the "future baseline" for traffic, or whether any other emitting projects have been included, such as industrial or energy sites. Therefore, it is unclear in the current assessment as to which sources have been scoped in, and in-line with the HRA process, the effects on European sites should be considered alone and in combination.	A list of other developments included in the inherently cumulative traffic data is provided in Section 6.1 of the Transport Assessment (Appendix 17.1 of Volume of the ES (APP-108)). The traffic data for the development year assessments has been adjusted for traffic growth in line with standard practice. This data has then been readjusted for the other development traffic flows. No section of the public road network affected by the Project passes within 200 m of the SAC/SPA. The only roads with 200 m of the SAC/SPA are the jetty and jetty approach road, neither of which will accommodate traffic flows from other developments. Existing sources of non-road emissions to air are captured in the background pollutant concentrations used to inform the assessment.

Reference	Relevant Representation	Applicant's Response
	Please also see 4.4 of NEA001 for our guidance on what should be considered as part of the in-combination assessment.	Noted. The assessment undertaken is compatible with this guidance.
Key issue 11 – cumulative and in-combination / intra-project effects	Table 3 (consideration of in combination effects) appears to be missing from this table. Natural England would expect consideration of likely significant effects alone and then for effects that are small but not significant alone these should be considered in combination with other relevant plans or projects. A list of projects that are relevant for consideration in combination at the screening stage should be provided. Section 4.13 (Consideration of combined effects) - We note that information relating to the in-combination assessment is provided for the appropriate assessment stage. However, an in-combination assessment at the HRA screening stage has not yet been completed (as described above).	The impact pathways identified in Table 3 (as well as Table 4 and Table 5) of the Habitats Regulations Assessment (HRA) **(APP-115)** have been considered both from the project alone and in combination with other plans and projects. To clarify, the conclusions reached on likely significant effects (LSE), and the impact pathways or potential effects that have been screened into the appropriate assessment stage, take account of effects that are small but not significant alone, but which may be significant in-combination with other relevant plans and projects.
	Section 4.13.1 (Intra-project effects) states that intra-project effects would be negligible with mitigation measures. However, as more information is required on the appropriate assessment and mitigation, we may wish to comment further on this aspect. Additionally, we request that this section is separated into construction effects and operation effects for ease of reference.	Natural England's position is noted, and, on that basis, no further response is required.
	Tables 36 and 37 frequently refer to 'in-combination' and 'cumulative' impacts. However, we advise that each of these should be covered in separate assessments. This is because an in-combination	As set out in Section 20.1 of Chapter 20 of the ES (APP-056), the Infrastructure Planning (EIA) Regulations specifically reference 'cumulative' effects, while the Habitats Regulations refer to 'in-combination' effects. In practice,

Reference	Relevant Representation	Applicant's Response
	assessment is to assess whether any effects which are not adverse alone could act in-combination with other plans or projects to result in an adverse effect, whereas cumulative impacts are the effects of the same types of impacts against the baseline environment. For example, this could include the cumulative build-up of contaminants, where a threshold for adverse effect is identified.	however, this is interpreted as referring to both cumulative and in-combination effects because the assessments, whether for Environmental Impact Assessment (EIA) or for a Habitats Regulations Assessment (HRA), need to take into account the combined influence of all of the environmental pressures acting upon the relevant receptors in assessing the significance of environmental effects. On this basis, it is considered that there is no meaningful difference in the terms 'cumulative' or 'in-combination' effects in the requirements stipulated under EIA and Habitats Regulations. The principal difference between the cumulative assessment for EIA and the in-combination assessment for HRA is considered to be the range of receptors included in the assessment. For the purposes of EIA, the range of features to be assessed needs to cover both environmental receptors (including protected interest features) and other human activities and interests that might be affected. On the other hand, the HRA focusses solely on the relevant interest features potentially affected within the internationally designated sites that have been screened into the assessment. To avoid confusion between these terms from an EIA and HRA perspective, the ES and HRA define the effects as either 'inter-project' effects, or 'intra-project' effects. The former refers to effects resulting from the proposed development and other plans, projects, and activities, and the latter refers to effects from the proposed development alone and considering whether, and to what degree, they might have the potential to act on the same receptor.

Reference	Relevant Representation	Applicant's Response
Key Issue 13 – in-combination effects – intertidal habitat loss	Section 4.3.3 - Natural England notes that due to project design changes the total loss of intertidal habitat has been reduced from 0.35 ha to 0.012 ha. It is stated that 0.006 ha of intertidal habitat will become subtidal habitat due to the capital dredging and 0.006 ha of intertidal habitat will be lost due to piling. Natural England advises that it is not possible to agree with the conclusion of no AEOI for this impact pathway on intertidal habitat. However, it is likely that the conclusion of no AEOI may be drawn for the small loss of SAC habitat at the 'alone' stage of the assessment, nonetheless this still represents an appreciable but minor effect on the habitat. Such an effect would need to be considered in-combination with the effects likely to arise from other plans or projects also being proposed and considered simultaneously. The current HRA does not provide a sufficient in-combination assessment and requires further additional work to address the outstanding issues. Once the in-combination assessment is sufficiently revised, it will provide Natural England with the necessary information required in order to come to a reliable conclusion. Please note that the conservation objective for the feature 'mudflats and sandflats not covered by seawater at low tide is set to 'restore' and this should be considered in the assessment. Please refer to Supplementary Advice on Conservation Objectives.	Section 4.14 of the HRA **(APP-115)**, as well as Chapter 20 of the ES **(APP-056)**, includes a comprehensive cumulative and in-combination assessment. This assessment was based on the information available at the time of submission of the IERRT DCO application. This is consistent with Natural England's advice in its response in the Scoping Opinion which notes "*The following types of projects should be included in such an assessment, (**subject to available information**): […] plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and **for which sufficient information is available** to assess the likelihood of cumulative and in-combination effects".* (emphasis added). In light of the above, the assessment of cumulative and in-combination effects is considered robust and remains as set out in the IERRT DCO application documentation, in that cumulative and in-combination effects are assessed as insignificant and do not require further mitigation.

Reference	Relevant Representation	Applicant's Response
Key Issue 14 – in-combination effects – subtidal habitat loss	Natural England advise that it is not possible to agree with the conclusion of no AEOI for this impact pathway on subtidal habitat. The loss of habitat may be considered small and inconsequential 'alone', however it will nonetheless still represent an appreciable but minor effect on the habitat. Such an effect would need to be considered in-combination with the effects likely to arise from other plans or projects also being proposed and considered simultaneously. The current HRA does not provide a sufficient in-combination assessment, which requires further details to address the outstanding issues. Once the in-combination assessment is sufficiently revised, it will provide Natural England with the necessary information required to come to a reliable conclusion.	See above response to NE key issue ref 13.
Key Issue 15 – in-combination effects – subtidal habitat change	Natural England advise that it is not possible to agree with the conclusion of no AEOI for this impact pathway on subtidal habitat. The loss of habitat may be considered small and inconsequential 'alone' however it will nonetheless still represent an appreciable but minor effect on the habitat. Such an effect would need to be considered in-combination with the effects likely to arise from other plans or projects also being proposed and considered simultaneously. The current HRA does not provide a sufficient in-combination assessment, which requires further detail to address the outstanding issues. Once the in-combination assessment is sufficiently revised, it will provide Natural England with the necessary information required to come to a reliable conclusion.	See above response to NE key issue ref 13.

Reference	Relevant Representation	Applicant's Response
Key Issue 25 – in-combination effects	The following relates to Chapter 20 Cumulative and In- combination effects (Table 20.5). We consider that 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. The mitigation listed is primarily aimed at reducing the risk of injury; it will have limited benefit to reducing barrier effects/disturbance. Therefore, it is not appropriate to rely on mitigation to conclude that the in- combination impact will not be significant. We request that more detail is provided on the nature of this impact from IERRT (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, should be presented. Further mitigation may need to be considered to support a conclusion of no Adverse Effect on Site Integrity.	A detailed assessment of disturbance itself and barrier effects to grey seal features has been provided in Chapter 9 of the ES **(APP-045)** and within the HRA **(APP-115).** As noted in paragraph 9.8.195 of Chapter 9 of the ES and paragraph 4.11.34 of the HRA, any barrier to movements caused by the noise during piling would be temporary with significant periods during a 24-hour period when no piling will be undertaken (the actual proportion of piling is estimated to be at worst around 14% based on 180 minutes of impact piling per day and 20 minutes of vibro piling per day). This of itself will allow the unconstrained movements of marine mammals through the Humber Estuary. Piling noise will take place for a very small amount of time each day over a period of approximately 24 or 37 weeks (depending on whether a sequenced construction is employed or not). Piling will also not take place continuously as there will be periods of downtime, pile positioning and set up. The proposed mitigation measures for underwater noise will further limit the risk of exposure and reduces the residual impact of the IERRT Project on marine mammal features to a minor adverse effect. Section 4.14 of the HRA **(APP-115),** as well as Chapter 20 of the ES **(APP-056),** then assesses underwater noise effects in-combination with other plans and projects. The assessments note that other projects that are likely to results in underwater effects will require similar mitigation to the IERRT Project to help minimise potential adverse effects (such as soft start procedures, timing restrictions to avoid sensitive periods for migratory fish and the use of marine

Reference	Relevant Representation	Applicant's Response
		mammal observers). Therefore, assuming the proposed mitigation measures for the IERRT Project and any other relevant project are implemented, the predicted residual in-combination effects are not considered to compromise any of the conservation objectives, and it is therefore concluded that there is no potential for AEOI on qualifying interest features.
Key Issue 30 – marine mammals – underwater noise and cumulative and in-combination effects	Table 20.2 - The screening distance used for the CEA 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). However, due to the nature of the development, the smaller screening distances are sufficient for highly localised impact pathways (e.g., injury from underwater noise). With regards to disturbance from underwater noise, the Applicant has not provided sufficient evidence to demonstrate that 15k m is sufficient to capture the full extent of the impact range/zone of influence. Indeed, distances of 33-36 km have been listed for disturbance to seals. Therefore, the screening distance should be reviewed in the context of this specific impact pathway.	The zone of influence with respect to potential disturbance effects is constrained by the shape of the estuary and largely limited to between Salt End (upstream) and Grimsby to Spurn Bight (downstream). The existing constraints of the estuary are such that elevated underwater noise levels generated during piling for IERRT are physically unable to extend beyond 15 km. The Spurn on the Outer Humber Estuary and promontory of Grimsby Docks means that much of the underwater noise will be limited by these hard constraints and will not propagate to the outer part of the estuary and beyond. In addition, the upstream bend in the estuary at Salt End will mean that elevated underwater noise levels will not be able to propagate beyond this point. The approximate distance from IERRT to the upstream limit of potential underwater noise effects (Salt End) is 15 km. The downstream limit (Grimsby to Spurn Bight) is also approximately 15 km away. As a consequence, this is considered an appropriate distance to use for screening cumulative and in-combination effects (as stated Table 20.2 of Chapter 20 of the ES (**APP-056)**).

Reference	Relevant Representation	Applicant's Response
Key Issue 31 – marine mammals – underwater noise and cumulative and in-combination effects	The Applicant has identified a suite of projects, within 10km, that could produce underwater noise at levels that could lead to disturbance, and or/injury, of marine mammals. The Applicant has assumed that standard mitigation will be undertaken by other projects which present an injury risk to marine mammals. We agree with this in principle and indeed would advise that such mitigation is undertaken where risk of injury to marine mammals is likely. If each project listed undertakes marine mammal mitigation where needed, we agree with the Applicant's conclusion that there will be no residual cumulative effect from injury. There is no equivalent standard mitigation to reduce the risk of significant disturbance. Indeed, the Applicant identifies 7 projects occurring within 10km that may cause underwater noise disturbance to marine mammals (and indeed, more projects may need consideration in line with our comment above re appropriate screening distances). The implications of this on the possible disturbance and barrier effects to marine mammals have not been considered in detail. For example, insufficient detail has been provided to determine whether the cumulative barrier effects can still be considered short-term and temporary, and so constitute no significant residual cumulative effect.	See above response to NE key issue ref 25.
	When considering cumulative disturbance/barrier effects, the Applicant should consider the intra-project activities of piling, capital dredging and dredge disposal.	Intra-project effects, specifically relating to underwater noise and vibration disturbance during piling, capital dredging and dredge disposal, are considered in paragraph 20.6.19 of Chapter 20 of the ES (**APP-045**) and paragraph 4.13.7 of the HRA (**APP-115**). The potential cumulative/in-

Reference	Relevant Representation	Applicant's Response
		combination effects are assessed as insignificant to minor adverse and not significant. Equally, the predicted combined effects are not considered to compromise any of the conservation objectives, and it is concluded that there is no potential for AEOI on qualifying interest features of the Humber Estuary SAC.

Table 4.8 Marine Management Organisation (RR-014)

Reference	Relevant Representation	Applicant's Response
4.1.2 – benthic ecology	Regarding the potential cumulative and inter-related impacts of the Benthic environment, the MMO considers that chapter 20 of the ES includes an adequate methodology for a cumulative (and in-combination) effects assessment and a comprehensive list of projects, developments and activities scoped in for assessment.	The MMO's position is noted, and, on that basis, no further response is required.
4.2.1 – fish and shellfish ecology	The MMO note from Section 3.1.61 that the Applicant has presented two possible construction programme scenarios but would prefer the first of these two options, where all the marine infrastructure is constructed at the same time. In the second scenario, the Applicant asserts that the dredging schedule will not be changed, but that the construction of the various finger piers will occur in stages. The Applicant states that "Capital dredging works would necessarily be undertaken 24 hours a day, 7 days a week, and would take around 80 days in early to mid-2024. It is estimated that piling works would be undertaken for approximately 24 weeks in total". An approximate	Changes in water quality and impacts on fish have been assessed from paragraph 9.8.125 onwards in Chapter 9 of the ES **(APP-045).** Changes in suspended sediment concentration (SSC) that are predicted to occur as a result of the capital dredge and disposal are considered in the Physical Processes assessment (Chapter 7 of this ES – **APP-043)** and informs the assessment of impacts on fish. In summary, the Humber Estuary is highly turbid, with peak SSCs in excess of 20,000 mg/l in some cases. As noted in Chapter 7 of this ES **(APP-043)**, maximum SSCs are associated with the disposal activities (with relatively small increases in SSC arising from the dredge itself). The dredge

Reference	Relevant Representation	Applicant's Response
	timeframe for the capital dredging campaign has been given as early to mid-2024 which overlaps with the timeframe of piling works (stated as "scheduled to commence in early 2024 on the northern (outer) finger pier" in Section 3.1.61). In both scenarios, the approximate timeframe of the capital dredging campaign overlaps with the timeframe of piling works. The MMO has serious concerns about the impacts to migratory fish from piling and dredging works being undertaken concurrently and note that the multiple stressors to fish (increased suspended sediment concentration (SSC) in the water column and underwater noise (UWN) disturbance and vibration) arising from these simultaneous activities have not been examined in the intra-project effects assessment.	disposal for IERRT is predicted to produce peak SSCs of around 600 to 800 mg/l above background at the disposal site. This is of a magnitude that regularly occurs naturally or as a result of ongoing maintenance dredging/disposal. Due to the existing high SSCs that typically occur in the Humber Estuary, the predicted increase in concentrations resulting from the disposal is likely to become immeasurable (against background) within approximately 1 km of the disposal site. The measurable plume from each disposal operation is also only likely to persist for a single tidal cycle (less than 6 hours from disposal) as after this time the dispersion under the peak flood or ebb tidal flows means concentrations will have reverted to background levels. Fish within the Humber Estuary are also very well adapted to living in an area with variable and typically very high year-round suspended sediment loads. They are not considered sensitive to high SSCs. It is also important to note the assessment presents a worst case in terms of potential increases in SSCs in that it is based on the disposal of unconsolidated material at HU060. This would result in the largest increase in SSCs. However, some of dredge material (*circa* 25%) will be consolidated glacial clay/till which will be removed by backhoe dredger. This will result in a smaller increase in SSCs. On the basis of the above, the overall impact of increased SCCs is assessed as insignificant. As a consequence, increases in SSCs from dredging/disposal activities and elevated levels of underwater noise associated with piling

Reference	Relevant Representation	Applicant's Response
		are not considered to result in a significant cumulative/in-combination effect on fish.
4.2.12 – fish and shellfish ecology	In previous responses, the MMO has recommended that, even taking into account the reduced dredge footprint, mitigation measures for migratory fishes will still be required in relation to capital dredging activities. It was stated that there is "outstanding concerns in relation to the timing of piling and dredging activities which may overlap with the sensitive seasons of migratory fish" and that we expect the EIA to reflect the comments and recommendations made in previous advice and the meeting held on 3rd October 2022. As far as we can determine, these recommendations have not been presented within the ES and no such mitigation has been proposed. It is clear that the Applicant anticipates that capital dredging works will be undertaken 24 hours a day, 7 days a week and last for approximately 80 days in early to mid-2024. This represents a significant dredging campaign during the sensitive seasons of migratory fish, and the MMO reiterate previous recommendations that dredging activities be restricted for the same period as piling.	See above response to MMO reference 4.2.1.
4.2.13 – fish and shellfish ecology	The Applicant has provided a comprehensive long and short list of developments and activities which may have cumulative effects with the Immingham Eastern Ro-Ro Terminal (IERRT), based on a zone of influence for marine ecology receptors of 20km to the west of the development and 15km east of the development. As far as the MMO can reasonably determine, a sufficiently detailed inter-project cumulative impacts assessment has been carried out and we are generally	The MMO's position is noted, and, on that basis, no specific response is required. The proposed mitigation measures for IERRT are considered appropriate and meaningful.

Reference	Relevant Representation	Applicant's Response
	content with this. However, the Applicant has identified several projects within close (< 2.5 km) proximity to IERRT which have potential to interact cumulatively. Among these are several significant developments, including the Humber International Terminal (HIT) berth 2, the Able Marine Energy Park and the Immingham Green Energy Terminal, which are undertaking piling works and dredging campaigns. Similarly, the Applicant has identified potential cumulative effects for a number of developments taking place within the wider area (< 10 km). Given the level of development currently within the Humber Estuary, this places additional importance on applying appropriate and meaningful mitigation to the IERRT.	
4.2.14 – fish and shellfish ecology	Furthermore, the MMO does not consider that the intra-project impacts to fish have been accurately characterised. In the assessment of intra-project effects on fish offered by the Applicants (Section 20.6), they have discussed potential, cumulative underwater noise effects on fish from concurrent piling and dredging. However, the Applicant has not acknowledged that increases in SSC in the water as a result of dredging during the same period in which piling (percussive and vibro) are being undertaken, within a relatively confined estuarine environment, will create multiple concurrent stressors on fish receptors. This was also highlighted in previous consultations following submission of the PEIR. In Chapter 3 of the ES (Section 3.1.61-3.1.63), early to mid-2024 is described as a period in which both piling, and capital dredging works will be undertaken. As far as we can	See above response to MMO reference 4.2.1.

Reference	Relevant Representation	Applicant's Response
	reasonably determine, further justification for scoping out effects from piling, dredging and disposal on fish receptors of the further assessment in the ES, has not been provided. In reviewing the ES, the MMO considers that intra-project effects on fish from concurrent piling and dredging activities should be assessed within Chapter 20 and we expect the Applicant to provide this when possible.	
4.3.2 – coastal processes	The cumulative assessments consider each development pairwise with the IERRT and there is no consideration of the whole system with every development acting together as an ensemble. Entry 1 in Table 20.5 of Chapter 20 identifies the impact of the development on frequency of excess SSC - "requirements for the IERRT indicates an increase of 3-6% on the existing average annual maintenance dredge (between 2004 and 2020) rate across the existing Immingham berths (or a 2-4% increase on the average annual disposal volume at the HU060 site since 2004)" – but the cumulative assessment simply considers that, since these dredge campaigns are unlikely to be simultaneous with other developments, there is no cumulative impact. The MMO also note that only entry 1 in Table 20.5 appears to discuss the dredge e.g., though a dredge requirement is detailed for the Able Marine Energy Park, the assessment of this development in Table 20.5 does not consider SSC, only the hydrodynamics impact.	As detailed in their application, disposal of capital and maintenance material from Able Marine Energy Park (AMEP) is proposed to use the HU080, HU081, HU082 and HU083 disposal sites, which are around 9-12 km down-estuary from the HU056 and HU060 disposal sites planned for IERRT. The modelling undertaken for the IERRT development (Chapter 7 of the Environmental Statement (ES) (**APP-043**)) shows that any disposal plume from IERRT is not predicted to overlap with any of these other disposal sites, although there is a potential for disposal plumes from each site to overlap, particularly if disposals are undertaken on alternate flood/ebb tides at each site. However, the distance between the sites means that peak SSC increases (associated with the initial disposal activity) would not increase from either of the individually assessed schemes and, whilst some plume overlap could occur, in theory, the dispersal of the plume from the point of release means that the cumulative impact on excess SSC would likely remain below the peak values assessed.
4.3.3 – coastal processes	Additionally, consideration of the marine process impacts of multiple development sites on hydrodynamics and sediment transport generally	

Reference	Relevant Representation	Applicant's Response
	considers that that lack of direct overlap of impact zones indicates no potential for cumulative effects, but this neglects the systemic nature of the estuary and the temporal implication of 'cumulative'.	Furthermore, any in-combination impact would be short-lived (occurring only during concurrent disposal activities) highly temporary in nature (persisting for only a matter of hours until the peak of the subsequent tidal phase) and significantly smaller in magnitude than the peak SSC concentrations observed in the baseline (in excess of 20,000 mg/l in some cases).
4.3.4 – coastal processes	Figure 7.6 of Chapter 7 shows both sedimentation and SSC impacts extending several kilometres up and downstream, over and across the (implied) zone of influence of multiple other developments listed in Table 20.5. The overall estuary net sediment budget is estimated in the background information (Table 7.5) but this information is not used in the assessment - no assessment is made of how this budget is affected by the 3-6% increase in maintenance dredge due to this scheme; nor of the relative contribution of this change to the overall (i.e., cumulative) changes effected by the multitude of developments affecting the Humber. The applicant has not presented background data on typical exceedance of mean background suspended sediment concentrations within the estuary.	As noted in the comments, the sediment budget of the estuary is discussed in Section 7.6 of Chapter 7 of the ES (**APP-043**) on the baseline characterisation. The assessment of impacts arising from the proposed dredge and disposal operations then identifies that '*the in-estuary disposal of capital and maintenance dredge material (at the HU056 and HU060 sites) thus maintains the sediment as part of the wider estuary sediment* budget' (para. 7.8.63 and 7.8.88). In this way, the overall sediment budget is unaffected by the proposed dredge and disposal, which essentially recycles material within the wider estuary system (i.e., no permanent removal of material or long-term loss from the wider system is predicted. A high-level summary of the background variation in SSC is provided in the baseline characterisation (para. 7.6.25). Further detail (in the form of a timeseries plot of measured SSC values from the project survey campaign) is also provided in the model calibration report Appendix 7.1, which shows the frequency of 'spikes' in the baseline

Reference	Relevant Representation	Applicant's Response
		concentrations in relation to the more general 'average' trend across the spring/neap period. It is also noted that there remains more than sufficient headroom in the existing (permitted) tonnages stipulated within the present maintenance dredge disposal licence (L/2014/00429/1).
4.3.5 – coastal processes	The MMO considers that cumulative assessment requires the resulting gradual increase in temporal mean SSC of the estuary to be discussed and quantified. A version of Figure 20.1 should be produced indicating the extent of dredge disposal impacts, with an estimation of the temporal increase in SSC arising from the increased future dredge needs. This may be accompanied by an estimation of the possible sediment sinks arising from the proposed realignment schemes on the opposite bank.	Longer-terms trends in SSC across the wider estuary are uncertain, at best, and will be influenced over a range of temporal scales by a host of factors (including tidal forcing, meteorological effects, future sea-level rise, extreme storm conditions, etc.). The predicted impacts of dredging and disposal of capital and maintenance material at the HU056 and HU060 sites is shown (maximum change in SSC and sedimentation) in Figure 7.6 (of the ES). The excess material in suspension is generally held within a plume in the central channel of the estuary by the dominant ebb and flood flow vectors. As a result, the increased SSC plume remains around 2 km from the proposed Cherry Cobb Regulated Tidal Exchange (RTE) site and around 4 km from the Outstrays to Skeffling Managed Realignment Scheme (OtSMRS); given the anticipated localised hydrodynamic changes arising from each of these schemes, it is considered unlikely that any material deposited at HU056 or HU060 would end up stored in sediment sinks in either of these realignment / RTE sites. Consequently, the proposed dredging and disposal activities from IERRT would have no impact on the wider estuary sediment budget.

Reference	Relevant Representation	Applicant's Response
		Placed in the wider estuary context, the combined MR / RTE schemes will not significantly increase the overall estuary tidal prism (<0.1%) with on-site accretion predicted to keep pace with future increases in sea level.
4.3.6 – coastal processes	As outlined by the Applicant in paragraph 7.6.6 of Chapter 7, estuary processes are very dynamic and interconnected so the estuary is subject to natural morphological change – and a corollary of this is that any changes that might be due to the relatively minor physical process impacts will be very difficult to identify. By the same token, however, systemic change can be precipitated by minor changes amplified by systemic feedbacks. Thus, we consider it necessary for cumulative assessments to map and quantify the extent and magnitudes of impacts over time, as a record of potential impacted zones.	Predicting future change over even relatively short (5-10 years) periods is highly uncertain. As described in Chapter 20 of the ES (**APP-056**), overall, the predicted impacts from each of the proposed cumulative schemes (in isolation) are small in magnitude and extent. Associated changes to far-field sediment transport pathways are also predicted to be negligible. When considered in-combination, the small-scale, localised impacts predicted from each scheme are still significantly smaller than those arising from the inter-annual and medium- to longer-term natural morphological changes across the wider estuary (i.e., those associated with natural migration of banks and channels, the 18.6-yr lunar nodal cycle, climate change-induced sea level rise and the impact of extreme storm and surge events). The estuary is continuing to respond to the changes since the last glaciation, with the associated equilibrium point not yet reached. These are anticipated to be the drivers of change across the wider estuary over future periods. There is no evidence to suggest the proposed scheme (either alone or in combination with others) has the ability to change the wider morphology or function of the estuary as a whole.

Reference	Relevant Representation	Applicant's Response
		For added context to the predicted impacts, tidal exchange on a mean spring tide is in excess of 1.7 billion m^3, whilst freshwater input is also significant at around 250 m^3/s (average) up to >1,500 m^3/s during extreme flood events (equating to 22 to 134 million m^3/day).
4.4.4 – underwater noise	It is recognised that Chapter 20 Cumulative and In-combination Effects, provides an assessment of the potential cumulative effects. There is a lot of other development occurring in the Humber including Immingham Green Energy Terminal development, which is in close spatial proximity to this Project, and there is the potential for the two construction programmes to overlap. The MMO encourages the Applicant to ensure any potential cumulative impacts are assessed and submitted when possible as the project continues.	Chapter 20 of the ES **[APP-056]** includes a comprehensive cumulative and in-combination assessment. This assessment was based on the information available at the time of submission of the IERRT DCO application, including in respect of the IGET project. At the time of writing, the IGET project DCO application is yet to be submitted, meaning that key information in relation to that project is still at an inchoate stage. Cumulative and in-combination effects will also be assessed (with mitigation proposed if necessary) in the IGET DCO application documentation for which all information will be available. On this basis, the assessment of cumulative and in-combination effects is considered robust and remains as set out in the IERRT DCO application documentation, in that cumulative and in-combination effects between IERRT and IGET are assessed as insignificant and do not require further mitigation.

Table 4.9 BDB Pitmans LLP on behalf of Able (UK) Ltd (RR-001)

Reference	Relevant Representation	Applicant's Response
4.1	The Applicant is proposing as an option to overlap its construction and operational phases by up to 15 months, but the Environmental Statement does not consistently assess these happening simultaneously. This should either be added as a supplement to the Environmental Statement or the option for simultaneous construction and operation removed.	Within sub-section 8 of each topic assessment chapter of the ES, the impact of constructing the IERRT project in a single stage, or the impact of a sequenced construction such that construction of the southernmost pier takes place at the same time as operation of the northernmost pier (as described in Chapter 3 of the ES [**APP-039]**) is considered. The assessment that then follows is based on the worst-case environmental impact. Therefore, simultaneous construction and operation of the IERRT project has been comprehensively assessed, and with mitigation all impacts are not considered significant. Chapter 10 of the ES [**APP-046**] and NRA [APP-089] specifically considers construction and operation together as this introduces new and different impact pathways.
4.2	The Applicant's other proposed DCO application, the Immingham Green Energy Terminal, is acknowledged as being only 100 metres away from the present application and are expected to overlap in terms of construction and operation. Although the cumulative impacts of the two projects are considered at item 57 in Table 20.5 in chapter 20 of the Environmental Statement [APP-056], no additional mitigation is proposed for the current application due to the existence of IGET. Able wish to be reassured that there will be no impact from the two projects' construction and operation on the local road network and on river traffic that might impact upon them.	Chapter 20 of the ES **[APP-056]** includes a comprehensive cumulative and in-combination assessment. This assessment was based on the information available at the time of submission of the IERRT DCO application, including in respect of the IGET project. At the time of writing, the IGET DCO application is yet to be submitted meaning that key information in relation to that project is still at an inchoate stage. Cumulative and in-combination effects will also be assessed (with mitigation proposed if necessary) in the IGET DCO application documentation for which all information will be available. On this basis, the assessment of cumulative and in-combination effects remains as set out in the IERRT DCO

Reference	Relevant Representation	Applicant's Response
		application documentation, in that cumulative and in-combination effects between IERRT and IGET are assessed as insignificant and do not require further mitigation. This applies to potential cumulative effects on traffic and transport, navigation, and socio-economic impacts from vessel congestion that Able cite in their comment.

Table 4.10 BDB Pitmans LLP on behalf of DFDS Seaways (RR-008)

Reference	Relevant Representation	Applicant's Response
4.1	At paragraphs 3.1.61-2 of the Environmental Statement (Chapter 3) [APP-039] it states that although the preferred option is to complete construction before commencing operation, construction and operation may overlap between mid-2025 and late 2026. However, apart from in the commercial and recreational navigation chapter, the effects of simultaneous construction and operation have not been assessed, when they could be significant.	Within sub-section 8 of each topic assessment chapter of the ES, the impact of constructing the IERRT project in a single stage, or the impact of a sequenced construction such that construction of the southernmost pier takes place at the same time as operation of the northernmost pier (as described in Chapter 3 of the ES **[APP-039])** is considered. The assessment that then follows is based on the worst-case environmental impact. Therefore, simultaneous construction and operation of the IERRT project has been comprehensively assessed, and with mitigation all impacts are not considered significant. Chapter 10 of the ES **[APP-046]** and NRA **[APP-089]** specifically considers construction and operation together as this introduces new and different impact pathways.
4.2	Furthermore, the Applicant is proposing another project that would be the subject of an application for development consent, the Immingham Green Energy Terminal (IGET) (PINS reference TR030008). This underwent statutory consultation earlier this year. At	Chapter 20 of the ES [**APP-056**] includes a comprehensive cumulative and in-combination assessment. This assessment was based on the information available at the time of submission of the IERRT DCO application, including in respect of the IGET project.

Reference	Relevant Representation	Applicant's Response
	paragraph 2.5.1 of that project's Preliminary Environmental Information Report, it states that construction of the project is likely to start in early 2025, and phase 1 would take 3 years to construct. It would be brought into operation at that point and further phases may be constructed depending on market demand.	At the time of writing, the IGET project DCO application is yet to be submitted, meaning that key information in relation to that project is still at an inchoate stage. Nevertheless, the potential overlap in construction and operation of both projects has been assessed. Cumulative and in-combination effects will also be assessed (with mitigation proposed if necessary) in the IGET DCO application documentation for which all information will be available. On this basis, the assessment of cumulative and in-combination effects remains as set out in the IERRT DCO application documentation, in that cumulative and in-combination effects between IERRT and IGET are assessed as insignificant and do not require further mitigation. This applies to potential cumulative effects on traffic and transport and navigation that DFDS cite in their comment.
4.3	IGET is acknowledged as being only 100 metres away from the present application, and although the cumulative impacts of the two projects are considered at item 57 in Table 20.5 in chapter 20 of the Environmental Statement [APP-056], no additional mitigation is proposed for the current application due to the existence of IGET and the only additional mitigation proposed for IGET due to the existence of this project is in relation to noise and vibration on properties in Queens Road. The Applicant should properly assess both projects being constructed and operated at the same time by rerunning the transport and navigational assessments with the cumulative totals of vessels and vehicles from both projects if they are to be constructed at the same time and similarly for other impacts.	

Table 4.11 Environment Agency (RR-009)

Reference	Relevant Representation	Applicant's Response
9.1 – Chapter 20 Cumulative	We are satisfied that this Chapter includes references to other projects known to us that have been considered alongside the proposed development. We	The Environment Agency's position is noted, and, on that basis, no specific response is required.

Reference	Relevant Representation	Applicant's Response
effects [APP-056]	are satisfied, from the evidence presented, that the assessment of cumulative and in- combination effects appears to be reasonable.	

Table 4.12 Lincolnshire Wildlife Trust (RR-012)

Reference	Relevant Representation	Applicant's Response
N/A	We have been in communication with ABP during the pre-application process regarding this project and will request further correspondence to ensure our views are understood and that any questions are answered. Additionally, we have responded to the statutory consultation period for the Immingham Green Energy Terminal (IGET), which is an adjacent NSIP application also submitted by the Applicant (ABP). We have specific concerns for the cumulative impact of these projects and how they may affect local ecosystems and regional environmental health. Therefore, Lincolnshire Wildlife Trust would appreciate the opportunity to express our concerns through the examination process. A brief overview of our main points of concern: ▪ Cumulative impacts of maintenance dredging within the Humber Estuary ▪ Long-term cumulative impacts of shipping noise and emissions as a result of the project	Chapter 20 of the ES **[APP-056]** includes a comprehensive cumulative and in-combination assessment. This assessment was based on the information available at the time of submission of the IERRT DCO application, including in respect of the IGET project. At the time of writing, the IGET DCO application is yet to be submitted meaning that key information in relation to that project is still at an inchoate stage. Cumulative and in-combination effects will also be assessed (with mitigation proposed if necessary) in the IGET DCO application documentation for which all information will be available. On this basis, the assessment of cumulative and in-combination effects remains as set out in the IERRT DCO application documentation, in that cumulative and in-combination effects between IERRT and IGET are assessed as insignificant and do not require further mitigation. Cumulative impacts of maintenance dredging within the Humber Estuary are assessed in Table 20.5 (ID 1) in Chapter 20 of the ES **[APP-056].**

Reference	Relevant Representation	Applicant's Response
	▪ The cumulative impact of this application and the Immingham Green Energy Terminal project on the TPO protected Long Strip Wood	With respect to shipping noise and emissions, the Port of Immingham itself currently has over 118,000 transiting movements of vessels per year – the majority moving in close proximity to the site of the IERRT development. Operational vessel movements resulting from the proposed development will add only a very small increase in vessel traffic in the area on a typical day (six additional Ro-Ro vessel movements per day at the Port of Immingham, as well as tugs) which represents an approximate 3% annual increase in vessel traffic in the local area (as noted in Table 25 of Chapter 9 of the ES **(APP-045),** and in Table 3 and Table 5 of the HRA **(APP-115)**). There will also be maintenance dredger movements but that is estimated to only be necessary approximately three to four times a year. As a consequence, long-term cumulative impacts from shipping are not anticipated. The cumulative impact of this application and the IGET project is assessed in Table 20.5 (ID 57) in Chapter 20 of the ES **[APP-056].** The IERRT Project involves undertaking biodiversity enhancements to Long Strip Wood and therefore will have a positive effect on this habitat. As such, no adverse cumulative effects will occur.

Table 4.13 CLdN (RR-007)

Reference	Relevant Representation	Applicant's Response
4.3.5	CLdN has undertaken an initial review of the ES and makes the following initial observations:	Chapter 20 of the ES [**APP-056**] includes a comprehensive cumulative and in-combination assessment.

Reference	Relevant Representation	Applicant's Response
	Chapter 20 (Cumulative and In-combination Effects): CLdN has concerns regarding the criteria set for selecting the short list of cumulative developments. The impacts resulting from a single scheme which may not be significant on their own but when combined with impacts resulting from other schemes, could potentially become significant, and have not been considered adequately. In addition, the assessment of cumulative impacts is on a project-by-project basis and there is no judgement of the cumulative impact of all the cumulative projects on a single receptor. It is also unclear how the Zone of Influence and the search areas relate to one another and whether the search area as recommended by Natural England with regards to designated sites has been appropriately considered.	The criteria for selecting the short list of cumulative developments are described in paragraphs 20.4.21 to 20.4.25 of Chapter 20 and follows the approach set out in the Planning Inspectorate's Advice Note 17. The resultant short list includes other developments considered to potentially give rise to significant cumulative effects. It is noted that the Environment Agency and the MMO have indicated that in their view the approach taken in the cumulative and in-combination assessment is reasonable and a comprehensive list of projects, developments and activities have been scoped in for assessment (see Table 2 and Table 5). The final row in Table 20.5 (which provides the assessment of potential significant cumulative effects) provides a consideration of the potential for inter-project effects on each receptor as a result of all other projects / developments / activities. As set out in paragraph 20.4.17 to 20.4.19 of Chapter 20 of the ES, in order to identify the areas of search for the inter-project effects assessment for each development type, the Zone of Influence for each environmental topic was reviewed, and consideration was also given to the scale and nature of the IERRT Project and the findings of the assessments undertaken in the ES. Based on the expert professional judgement of the project team (informed by the wealth of experience in undertaking cumulative/in-combination assessments), the identified areas of search are considered to be suitably wide to ensure that other developments which could result in potentially significant

Reference	Relevant Representation	Applicant's Response
		cumulative effects with the proposed development are identified. Any other developments that consultees suggested should be included in the inter-project effects assessment during the statutory consultation process have also been considered on a case-by-case basis. This included those outside the areas of search, but which fall within a wider ZoI for a specific topic or topics.

5 Transportation – Road and Rail

5.1 The comments of the Applicant on the Relevant Representations (RR) submitted by the Interested Parties on the issue specific topic of **Transport – Road and Rail** are set out below.

5.2 The Representations relating to transport are found within the representations submitted by –

i. Ulceby Road Safety Group [RR-023]

ii. British Steel [RR-004]

iii. National Highways [RR-016]

iv. BDB Pitmans LLP on behalf of DFDS Seaways [RR-008];

v. Royal Mail Group [RR-020]

vi. BDB Pitmans LLP on behalf of Able (UK) Ltd [RR-001]

vii. CLdN Ports Killingholme Limited (CLdN) [RR-007]

5.3 The comments raised in the relevant representation by each interested party, and the Applicant's responses to them, are presented in the following tables:

- Table 5.1 – Ulceby Road Safety Group;
- Table 5.2 – British Steel

- Table 5.3 - National Highways
- Table 5.4 - DFDS
- Table 5.5 - Royal Mail Group Ltd
- Table 5.6 - Able Ports Ltd
- Table 5.7 - CLdN Ports Killingholme Limited (CLdN)

Table 5.14 Ulceby Road Safety Group [RR-023]

Reference	Relevant Representation	Applicant's Response
N/A	The number of extra HGV traffic generated by this project will have an extremely huge impact on village life. The infrastructure for this project outside of the docks area needs huge investment to upgrade the road system to motorway standard (A180) which is not the case at the moment. The docks expansion will cause even more problems the road network is nearing capacity and more accidents are already happening any incidents on the A180 and local villages get all the traffic, causing chaos driving on pavements 44000 vehicles use this road network daily government figures and the people of our village have had enough of money before safety large companies like ABP.	The impact of the development has been fully assessed in the Transport Assessment **[AS-008]** and shown to be acceptable in terms of traffic impact. No change in traffic flows is expected or forecast through the settlement of Ulceby. The concerns alleged are, therefore, not supported by any evidence. The existing network and connections to the A180 are operating within capacity at present and are forecast to remain within capacity in the future year assessments within the development. This is fully set out in Section 6 of the Transport Assessment **[AS-008]**.

Table 5.15 British Steel (RR-004)

Reference	Relevant Representation	Applicant's Response
N/A	The development may redirect traffic to the West entrance, which could slow the flow or coal/coke lorries to and from IBT.	The distribution of traffic from the site as a result of the IERRT development is explained in Section 5.5 of the Transport Assessment **[AS-008]**. It explains that the majority of traffic will use East Gate, but a proportion (15%, considered to be a realistic scenario) has been assessed as using West Gate to specifically make allowance for the fact that some traffic would use West Gate. The impact of that traffic has been tested and found to be acceptable. The Applicant's position in respect of West Gate is set out in the response to ISH2 Action Point 16 (see document 10.2.8 submitted at Deadline 1) and will be further considered as necessary once the outcomes of ISH2 Action Points 14 and 15 are complete.

Table 5.3 National Highways (RR-016)

Reference	Relevant Representation	Applicant's Response
	National Highways requests to be an Interested Party on this application. This is because there is potential for the proposals to impact upon the safe and efficient operation of the Strategic Road Network. We have already begun reviewing the application documents	National Highways have now signed a Statement of Common Ground confirming all matters are agreed.

	and will provide our detailed comments on the application at the examination stage.	

Table 5.4 DFDS (RR-008)

Reference	Relevant Representation	Applicant's Response
6.1	The submissions below refer to the updated Transport Assessment [AS-008] that was submitted part-way through the representation period, but DFDS reserve the right to make further points on it given the limited time available to consider it.	DFDS's position is noted, and, on that basis, no further response is required.
6.2	Surveys of existing traffic flows on the network were undertaken between 27 September 2021 and 22 November 2021, during a period when the conditions on both the highway network and freight and logistics operations were still being affected by the Covid-19 pandemic. The baseline traffic flows require validation to ensure they are representative of typical network conditions and port operations. It must be demonstrated that the baseline traffic flows are robust and that the assessments based on these do not overstate the existing capacity of the highway network.	This point is covered in the Applicants response to ISH2 Action Point 10 – see document [10.2.8] submitted at Deadline 1. It will be further considered following receipt of DFDS's actions under ISH2 Action points 11, 12 14 and 15. In summary, the Applicant considers that the baseline traffic flows used are robust because the additional data that was collected shows that 2023 flows are comparable or lower than the 2021 flows used in the TA.
6.3	In both the Transport Assessment [AS-008] and the Traffic and Transport chapter of the Environmental Statement [APP-053], the Applicant has used Automatic Traffic Counts (ATC) undertaken in 2021 to calculate traffic volumes through the east and west gates, and to establish the Port of Immingham profile,	The data collection exercise followed a methodology that was agreed with the relevant highway authorities and is robust. All junction assessments and impact assessments are based on manual surveys and are properly validated.

Reference	Relevant Representation	Applicant's Response
	when activity at the port was likely to have been affected by the Covid-19 pandemic. The use of ATC's for recording classified traffic volumes on the approaches to gates is known to be an unreliable method of data collection due to the high proportion of HGV's and the presence of queuing vehicles resulting in inaccurate measurement of both total traffic volumes and HGV's. The lack of validation of this data is a concern and evidence should be provided to demonstrate that the data collected is both accurate and representative of typical operating conditions at the Port of Immingham.	The query raised in relation to the date of the data collection (and interaction with the Covid-19 Pandemic) is provided in the Applicant's response to ISH2 Action Point 10. That response confirms the data adopted in the Transport Assessment is robust and appropriate.
6.4	DFDS' consultants have carried out visual surveys that show that more than the assumed 10% ([APP-053] paragraph 17.8.39) of trips are solo units, meaning that the total volume of vehicles is underestimated.	The Applicant awaits data required from DFDS under ISH2 Action Point 12.
6.5	There is insufficient evidence of analysis of the impact of additional vehicles within the port estate – with 1,430 additional parking bays for vehicles this could well cause additional congestion and hence impacts on existing port users.	DFDS' position is noted, and, further information on this point will be provided by the Applicant in response to ExAQ1 TT.1.1 by Deadline 2.
6.6	The Environmental Statement says (paragraph 17.9.7, [APP-053]) that the site layout has been designed to accommodate peak inbound traffic but does not provide any evidence to demonstrate this. A new pedestrian route has also been provided but there is no assessment as to whether this would require	The capacity of the access and local internal port roads is assessed at Appendix M of the TA. **[AS-008].** This demonstrates that there is no material impact on internal junction operation as a result of the proposals. . The layout of internal walking and cycling routes within the site are provided at Appendix E of the TA [AS-

Reference	Relevant Representation	Applicant's Response
	crossing facilities across Laporte Road in response to the increased traffic.	008]. Dropped kerb crossing facilities will be provided across Laporte Road (an improvement on the situation at present in that there is no walking route to the bus stop).
6.7	Further evidence is required to identify the impact of the IERRT in terms of additional congestion and queueing at the entry gates and demonstrate that the mitigation provided is appropriate to address these impacts.	The Applicant's position is as set out in the response to ISH2 Action Point 16 – see document [10.2.8] submitted at Deadline 1.
6.8 (and sub paragraphs)	Comments made relate to the assumed 15% assignment of traffic to West Gate.	The Applicant's position in respect of West Gate is set out in the response to ISH2 Action Point 16 (see document [10.2.8] submitted at Deadline 1) and will be further considered as necessary once the outcomes of ISH2 Action Points 14 and 15 are complete.
6.10	There is also a concern that should existing West Gate traffic divert to the East Gate due to the signage / behavioural shifts associated with mitigation measure, this would further increase the East Gate demand and generate further queuing. Assessments to consider the impact of diverted traffic along the A1173 corridor and at the East Gate are omitted from the application and should be provided.	The TA **[AS-008]** has assessed the majority of traffic using the East Gate because it is the most direct and quickest route to access the IERRT. There are no proposals to change strategic signage within the IERRT DCO and therefore the assessment suggested is not necessary or relevant.
6.11	Impacts on the A1173	These are fully assessed in the TA **[AS-008]** (Tables 15, 16 and Annex K). The impact on the A1173 to the north of King Street is minimal. As shown in the traffic assignment diagrams (Figures 6 and 7 of the TA), only 22 two-way light vehicles are expected to use the Kings Road/ Pelham Road roundabout in each peak. Over half of these vehicles come from within Immingham and so are likely to already be using this junction to get to work. Due to this, both the percentage

Reference	Relevant Representation	Applicant's Response
		and absolute increase in traffic does not require further assessment on this section of road.
6.12	The assessments provided by the Applicant are considered to materially under-state future congestion on the highway network. DFDS consider that the capacity of at least five junctions on the highway network would operate over capacity by 2032 and would therefore require mitigation to ensure that journey times and access to the Port of Immingham are not materially worsened. Further scrutiny of the traffic flow scenarios and distribution of IERRT trips across the network is therefore required.	The Transport Assessment [**AS-008]** has been agreed with all three relevant highway authorities and is robust. However, the Applicant awaits the information requested from DFDS under Action Points 11 and 17 before responding further as necessary to this point.

Table 5.5 Royal Mail Group Ltd (RR-020)

Reference	Relevant Representation	Applicant's Response
N/A	Request for consideration of cumulative impact of other developments.	The cumulative assessments considered in the TA **[AS-008**], as agreed with the relevant highway authorities, is set out in Annex I of the TA. It includes all the sites suggested by Royal Mail with the exception of IGET which is not a committed development.
N/A	In order to protect Royal Mail's position, it is requested that wording is added to the future Construction Transport Management Plan (CTMP) to secure the various mitigations with particular regard to Royal Mail's Delivery Office at Immingham.	The provision of such additional wording relating to specific mitigation measures numbered 1 and 2 by Royal Mail in its RR is acceptable to the Applicant.

Table 5.6 Able Humber Ports Ltd (RR-001)

Reference	Relevant Representation	Applicant's Response
Section 5	The Applicant assessed baseline traffic during autumn 2021 when it was supressed due to the Covid-19 pandemic. This results in a misleadingly low assessment of the impact of the construction and operation of this project on the local road network.	This point is covered in the Applicants response to ISH2 Action Point 10 – see document [10.2.8] submitted at Deadline 1. It will be further considered as necessary following receipt of DFDS's actions under ISH2 Action points 11, 12 14 and 15. In summary, the Applicant considers that the baseline traffic flows used are robust because the additional data that was collected shows that 2023 flows are comparable or lower than the 2021 flows used in the TA.
	The Applicant assumes a 15%/85% split between HGVs using the Immingham West and East gates respectively, but does not appear to have any control over this – if more vehicles use the West gate than this assumption then there is likely to be a greater impact on the roads near Able's developments to the west of Immingham.	The Applicant's position in respect of West Gate is set out in the response to ISH2 Action Point 16 (see document [10.2.8] submitted at Deadline 1) and will be further considered as necessary once the outcomes of ISH2 Action Points 14 and 15 are complete.

Table 5.7 CLdN (RR-007)

Reference	Relevant Representation	Applicant's Response
4.3.4	CLdN has concerns regarding the assumptions that underpin the assessment. Specifically, it is unclear whether a "realistic worst case scenario" has been assessed that allows for market and/or operator	The IERRT facility – through the DCO – is proposed to be limited in terms of overall throughput to 660,000 Ro-Ro units per year.

	assumptions to change with regards to the ratio of accompanied to unaccompanied trailers and the proportion of trailer units arriving or departing without a trailer. If only accompanied cargo volumes increased over time (and not unaccompanied) the traffic impacts would be materially different (and potentially worse than assessed) given that such units enter/leave the terminal almost immediately on arrival/prior to departure. This is a fundamental point: if ABP is simply assessing the traffic impact associated with Stena's commercial preferences, the draft DCO must constrain ABP (and its users) operations accordingly.	In addition, the assessment of impacts is based on both end user profiles (Table 8) and overall port profiles (Table 9) included in the Transport Assessment **[AS-008].** If all freight was accompanied, the overall daily traffic would be reduced to 1,813 vehicles (against 1,944 vehicles assessed in the TA). All vehicles being accompanied would also change the profile of arrivals and departures, with the traffic generated during the peak hours being much lower, so the assessment is robust. This is further explained in the Applicant's response to ISH2 Action Point 13 – see document [10.2.8] submitted at Deadline 1
	Furthermore, the assessment of entry gate capacity and contributory factors related to collision risk do not appear to have been properly assessed within the Transport Assessment.	The gate capacity element of this is addressed in the Applicant's response to Action Point 16 – see document [10.2.8] submitted at Deadline 1. The accident assessment has been provided in the TA[AS-008] (Section 3.5) to a level of detail appropriate for the scale and impact of the development.

6 Water and Flooding

6.1 The comments of the Applicant on the Relevant Representations (RR) submitted by the Interested Parties on the issue specific topic of **Water and Flooding** are set out below.

6.2 The Representations relating to water and flooding are found within the representations submitted by –

i. Environment Agency [RR-009]; and
ii. Table 7.2 – CLdN Ports Killingholme Limited [RR-007].

6.3 The comments raised in the relevant representation by each interested party, and the Applicant's comments to them, are presented in the following tables:

- Table 6.1 – Environment Agency; and
- Table 6.2 – CLdN Ports Killingholme Limited.

Table 6.16 Evironment Agency [RR-009]

Reference	Relevant Representation	Applicant's Comment
Chapter 11: Coastal Protection, Flood Defence and Drainage [APP-047]		
7.1.1	We note the information within the 'changes to tidal regime' section of this chapter: paragraph 11.8.14 states that the project *"has the potential to change wave heights, tidal water levels and rates of erosion or accretion on the foreshore in proximity to the flood defences during the construction phase".* Paragraph 11.8.15 states that there will be *"no change"* to these	Chapter 7: Physical Processes **[APP-043]** has assessed the impacts of the proposed development in detail. This concludes that activities associated with both the construction and operation phases of the IERRT development (for example dredging, vessel movements, resultant changes to flow / wave characteristics etc.) will result in an overall low exposure to change. Consequently,

Reference	Relevant Representation	Applicant's Comment
	factors above natural variations as the local hydrodynamics will remain comparable to the baseline scenario. Paragraph 11.8.16 states that "the magnitude of any changes in tidal regime is considered to be negligible" concluding that any changes will be *"neutral and therefore not significant".* The Flood Risk Assessment, paragraph 7.2.3 also states that there is *"unlikely"* to be an impact on the integrity of the flood defences. Therefore, we request additional explanation/clarification on whether there is going to be an impact on the integrity of the flood defences.	any resultant changes to the tidal regime (current flows, water levels), the local wave climate, and the associated local and regional sediment transport pathways are assessed as minimal. This means that there will be no change to the integrity of the flood defences, either locally or across the wider study area, as a result of the proposed development. This, together with the ongoing inspection and maintenance regime of the flood defences, and the raising of the flood defences over the lifetime of the development results in no overall impact on the integrity of the flood defences. Further clarification on this matter has been separately provided to the EA who have subsequently acknowledged the confirmation of the position. The outcome of this subsequent ongoing dialogue will be reported in the next version of the SoCG between the EA and the Applicant.
7.1.2	The comments in paragraph 10.1 below *[of the EA RR]* are also true of the summary of potential impact, mitigation measures and residual impacts in Table 11.10 in Chapter 11.	For the avoidance of doubt, the summary statements on mitigation contained within the various tables listed in the EA RR relate to the fact that, although ABP are responsible for the flood defence infrastructure along the Port of Immingham frontage, these defences are inspected annually by the EA who then inform ABP of any actions that need to be taken.
Appendix 11.1 Flood Risk Assessment [APP-093]		
7.2.1	We note the comments in paragraph 6.2.3 that the applicant intends to raise the finished floor levels (FFLs) of the IERRT buildings by 300mm above the surrounding ground level but has not specified why it is not practicable to raise them any further. Although the Environment Agency recommends the use of	The finished floor level of the various buildings is stated to be 30 cm (300mm) above the surrounding ground level. It would not be practicable to raise this level any further, principally because a number of these structures require vehicular access and/or rapid, unfettered personnel access. To incorporate long ramps or staircases in order to reach the

Reference	Relevant Representation	Applicant's Comment
	suitable flood resistance/resilience measures where FFLs remain below the 'design flood' level these should only be used where it is not practicable to raise them further. Also, see comments in paragraph 12.4 *[of the EA RR]* below regarding flood resilience measures.	ground floor could impede the running of a busy unit load facility where rapid processing of paperwork, cargo and vehicles is required. The EA has subsequently confirmed that it is content with this aspect of the proposed development. .
7.2.2	We note that paragraph 7.3.14 refers to the standard of protection afforded by the existing flood defences under the applicant's jurisdiction being kept under consideration and reviewed as appropriate for climate change. We are aware (as stated in paragraph 7.3.6 of the Flood Risk Assessment) that there is an agreement that the applicant will raise the flood defences along the Port of Immingham frontage to a crest height of 6.1m AOD (Above Ordnance Datum). This upgrade to the existing defences will reduce the likelihood of overtopping in the future and is therefore key to the future management of flood risk for this location.	This is a statement of fact which the Applicant agrees with, and reference to which is included in the submitted documents.
7.2.3	Paragraph 8.2.1 states that "the tidal flood defences are inspected twice a year by the Environment Agency". This is incorrect as the defences are only inspected annually.	The clarification provided by the EA is noted and this has no implications for the conclusion of the assessment provided in Chapter 11 of the Environmental Statement **[APP-047]**.
Chapter 12: Ground Conditions Including Land Quality [APP-048]		
8.1	It is understood that the ground investigations undertaken to date have identified potential contamination concerns that require further investigation and assessment. A confirmatory ground investigation has been undertaken and is expected to be completed soon after the submission of the DCO application. It is understood that this confirmatory	The Environment Agency's position is noted and, on that basis, requires no further response.

Reference	Relevant Representation	Applicant's Comment
	ground investigation will provide further groundwater monitoring, sampling and testing to support the controlled waters risk assessment. The final remediation strategy will also be revised based on the findings of the confirmatory ground investigation. Furthermore, piling risk assessments are to be undertaken to detail mitigation measures to protect controlled waters from potential pollution associated with piling operations.	
8.2	Based on the above, we are satisfied that the approach to assessing the risks posed to controlled waters from contamination is appropriate and is following the Environment Agency's land contamination risk management framework provided in Land Contamination: Risk Management. Schedule 2, Part 1, Requirement 16 in the draft DCO is considered sufficient to ensure that the risks to controlled waters from the proposed development are managed/controlled.	The Environment Agency's position is noted and, on that basis, requires no further response.
Chapter 21: Impact Assessment Summary [APP-057]		
10.1	Table 21.1: Coastal protection, flood defence and drainage – Construction and Operational Phase - The mitigation measures for flood defences (on and off-site): Changes in tidal regime e.g. wave heights, water levels, erosion/ deposition due to dredging/ construction activities, are not representative. This is because the Environment Agency has no maintenance programme for the assets on site and only maintains assets that it has responsibility for off-site. Mitigation measures proposed should be	Mitigation measures for flood defences have been set out in Chapter 11: Coastal Protection **[APP-047]**. We note the EA's comments that it has no maintenance programme for flood defence assets on the site and only maintains assets immediately off-site, in other words upstream and downstream of the Port of Immingham. As made clear in other comments provided in this table, the summary statements on mitigation in the ES documentation relate to the fact that, although ABP are responsible for the

Reference	Relevant Representation	Applicant's Comment
	regarding ABP's maintenance programme on-site rather than the Environment Agency's. Also, see comments in paragraph 13.2 below in respect of updating the Schedule of Mitigation to reflect this.	flood defence infrastructure along the Port of Immingham frontage, these defences are inspected annually by the EA who then inform ABP of any actions that need to be taken.
13.2	This table should also be updated in line with our comments in paragraph 10.1 above regarding inspection and maintenance responsibility for flood defences.	For the avoidance of doubt, the summary statements on mitigation contained within the various tables listed in the EA RR relate to the fact that, although ABP are responsible for the flood defence infrastructure along the Port of Immingham frontage, these defences are inspected annually by the EA who then inform ABP of any actions that need to be taken.

Table 6.2 CLdN (RR-007)

Reference	Relevant Representation Comment	Applicant's Comments
Para 4.3.2	CLdN have concerns that the flood risk and surface water calculations have not been undertaken correctly. CLdN also suggest that a superseded Sequential Test definition has been relied upon.	This is a general statement for which no information is provided to explain or substantiate the alleged concerns. It is, therefore, difficult for the Applicant to provide comment. However, the following is made clear: (1) The flood risk and surface water drainage calculations presented within the Flood Risk Assessment (FRA) **[APP-093]** and the Drainage Strategy **[Annex B of APP-093]** for the Project have been undertaken in line with the appropriate guidance. (2) Matters relating to both the Sequential and Exception tests are explained within Appendix 5 of the Planning Statement **[APP-019]**.

7 Navigation and Shipping

7.1 The comments of the Applicant on the Relevant Representations (RRs) submitted by the Interested Parties on the issue specific topic of **Navigation and Shipping** are set out below.

7.2 The Representations relating to navigation and shipping are found within the representations submitted by –

i. Burges Salmon LLP on behalf of APT (Immingham) Ltd / HOTT Ltd – (IOT Operators) [RR-003];

ii. the Marine Management Organisation [RR-014];

iii. the Maritime Coastguard Agency [RR-013];

iv. BDB Pitmans LLP on behalf of DFDS Seaways [RR-008];

v. British Steel Ltd. [RR-004]; and

vi. BDB Pitmans LLP on behalf of Able (UK) Ltd (RR-001)

7.3 The comments raised in the relevant representation by each interested party, and the Applicant's responses to them, are presented in the following tables:

- Table 7.1 – APT (Immingham) Ltd / HOTT Ltd
- Table 7.2 – the Marine Management Organisation
- Table 7.3 – the Maritime Coastguard Agency

- Table 7.4 – DFDS Seaways
- Table 7.5 – British Steel Ltd.
- Table 7.6 –Able (UK) Ltd

Table 7.17 Burges Salmon LLP on behalf of APT (Immingham) Ltd / HOTT Ltd [RR-003] (referred to as 'IOT Operators')

Reference	Relevant Representation Comment	Applicant's Comments
1.1	This relevant representation is submitted on behalf of Associated Petroleum Terminals (Immingham) Limited ("APT") and Humber Oil Terminals Trustee Limited ("HOTT") in relation to Associated British Ports' ("ABP") application for a development consent order ("DCO") for a new Roll-on/Roll-off cargo facility at the Port of Immingham, North East Lincolnshire known as the Immingham Eastern Ro-Ro Terminal Development (the "IERRT Development").	The IOT Operators' position is noted.
1.2	HOTT is the licensee (from ABP) of the Immingham Oil Terminal Jetty ("IOT") and lessee (from ABP) of the associated oil terminal and tank farm ("Oil Depot"). The IOT is immediately adjacent to the site of the proposed IERRT Development. APT operates the IOT and the associated Oil Depot on behalf of HOTT (HOTT and APT are referred to together in this representation as "the IOT Operators").	The IOT Operators' position is noted.
1.3	The IOT Operators are joint venture companies owned equally by Phillips 66 Limited ("Phillips 66") and Prax Lindsey Oil Refinery Limited ("Prax"). Phillips 66 is the owner of the Humber Refinery and Prax is the owner of the Lindsey Oil Refinery.	The IOT Operators' position is noted.

Reference	Relevant Representation Comment	Applicant's Comments
1.4	The Humber Refinery is a nationally significant piece of infrastructure and is one of the most complex refineries in Europe. It provides highly skilled and high value roles for 1,100 employees and contractors and injects over £200 million on an annual basis into the region's economy. The Lindsey Oil Refinery is one of the most advanced refining and conversion processes in Europe and is highly valuable to the region's economy and employs approximately 400 staff and another 400 contractors.	The IOT Operators' position is noted.
1.5	Together, the Humber Refinery and Lindsey Oil Refinery make up approximately 27% of the UK's refining capacity. The importance of the refineries to the region and wider country's economy is expressly acknowledged in a wide range of economic and development plan policy documents. Any prejudice to the continuing operation of Humber Refinery or the Lindsey Oil Refinery would be contrary to the public interest.	The IOT Operators' position is noted.
1.6	The activity of the IOT Operators is almost entirely in response to the requirements of Phillips 66 and Prax for marine movements of feedstock and products to and from the two refineries. The IOT Operators operate marine terminals and much of the pipeline system between the IOT and the refineries.	The IOT Operators' position is noted.
1.7	Vessel movements to and from the IOT are critical to the operation of the Humber Refinery and the Lindsey Oil Refinery. The IOT Operators have significant concerns about the IERRT Development from a safety and operational perspective. The IOT Operators are concerned that, as currently designed,	The Applicant is well aware of the nature, number and type of vessel movements to the IOT as IOT Operators operate within the Applicant's area of jurisdiction. The relevant Statutory Harbour Authorities, namely the Port of Immingham SHA and the Humber SHA are responsible for safety of navigation and operations and have a

Reference	Relevant Representation Comment	Applicant's Comments
	the IERRT Development would be prejudicial to the IOT which could prejudice the continuing operations of the refineries.	comprehensive working knowledge of the existing operations. Following the conduct of a comprehensive navigational risk assessment exercise, which included a number of HAZID Workshops and various navigation simulations – which were attended by representatives of IOT Operators – both Harbour Authorities are entirely satisfied that vessel movements to/from the IOT will not be adversely impacted by the construction and operation of the IERRT whether from a safety or an operational perspective. Indeed, neither Statutory Harbour Authority will permit the IERRT Development to be constructed nor operated other than in an entirely safe manner for the IOT and other users of the Humber and the Port of Immingham.
1.8	The IOT Operators are primarily concerned with shipping and navigation effects of the IERRT Development which are listed in detail in their statutory consultation response dated 22 February 2022 and the supplementary consultation response dated 25 November 2022. These responses are summarised in Appendix L of the Consultation Report submitted with the DCO application (APP-034). The Applicant does not consider that these concerns have been adequately addressed by ABP.	The safety of navigation is a matter that falls squarely within the statutory remit of the Statutory Harbour Authorities which in this case consist of the Port of Immingham SHA and the Humber SHA. The Maritime and Coastguard Agency (MCA) has also confirmed that this is the case [RR-013]. The SHAs are entirely satisfied that all of the concerns raised by IOT Operators have been satisfactorily addressed through the navigational risk assessment process that has been undertaken.
1.9	The IOT Operators' primary concerns relate to the adequacy of ABP's Navigational Risk Assessment (NRA) and the actual effects on the IOT during both the construction and operational phases of the IERRT Development.	The Statutory Harbour Authorities are entirely satisfied that the NRA (**APP-089**) is comprehensive and robust both in terms of best practice and in line with relevant guidance contained within the Port Marine Safety Code (PMSC), which, amongst other things, sets out the national standard for every aspect of port marine safety.

Reference	Relevant Representation Comment	Applicant's Comments
		The concerns that have been articulated about the NRA are not well-founded and are based upon misapprehensions or misrepresentations as to the nature of the NRA that has been carried out which has exhaustively tested the safe operation of the Humber and Port of Immingham during both the construction and operation of the IERRT.
1.10	The IOT Operators' concerns on the NRA relate to: (i) presentation of baseline and future navigation activities (during both construction and operation of IERRT); (ii) determination of safety thresholds / acceptability; (iii) risk assessment methodology (including risk matrix); (iv) identification and implementation of risk control / mitigation measures; and (v) results and outputs of the assessment.	Again, both the Statutory Harbour Authorities are entirely satisfied and confident that the NRA (**APP-089**) is comprehensive and robust both in terms of best practice and in line with relevant guidance contained within the PMSC. It has appropriately examined the baseline of existing operations and future navigation during construction and operation of the IERRT in a wide range of scenarios to determine safety thresholds and acceptability. The risk assessment methodology has followed established practice and has identified as necessary risk control and mitigation measures and set out the details of the assessment.
1.11	The expected effects on the IOT during both the construction and operational phases of the IERRT Development include: (i) allision / contact between dredger / construction vessels / Ro-Ro and IOT infrastructure; (ii) collision between dredger / construction vessels / Ro-Ro and tanker vessels; (iii) impact on the IOT Operators' Control of Major	The Applicant disputes the word ""expected" in that each of the scenarios listed by the IOT Operators risks of potential allision/collision and any other impacts on IOT operations and the IOT safety case have been fully assessed so as to prevent any such risk occurring in practice.

Reference	Relevant Representation Comment	Applicant's Comments
	Accident Hazards safety case; and (iv) impact on upstream barge mooring buoy.	
1.12	In response to these concerns, the IOT Operators have requested that specific mitigation measures must be delivered as part of the IERRT Development to address the shipping and navigation concerns raised. These are: (a) The relocation of the IOT finger pier or a solution requiring the IERRT Development's outer-most berth (the northern berth of the northern pier) to be unused until such a time as alternative adequate arrangements have been put in place to reduce impacts on (safe) use by the IOT Operators of the finger pier; (b) The provision of adequate vessel impact protection during the construction and operational phase of the IERRT Development; and (c) A detailed marine liaison plan to be developed in conjunction with IOT Operators.	The Applicant notes that the IOT Operators are requesting additional mitigation measures such as the relocation of the IOT finger pier and vessel impact protection measures. Following a comprehensive risk assessment exercise, which culminated in the NRA (APP-089), the Statutory Harbour Authorities have satisfied themselves that such additional mitigation measures (which in themselves would represent a material betterment for IOT Operator's existing use of its own facility) are not required as part of the proposed development to ensure the safe continued operations of the IOT. Moreover, whilst the Statutory Harbour Authorities have satisfied themselves that impact protection measures are not required, the provision of such measures has been assessed and the potential to include them provided for in the draft DCO should at some future time the Humber Harbour Master recommend to the Applicant that it should consider such provision. This provides some additional flexibility in the range of measures that could be introduced beyond those which are an inevitable feature of the existing controls over the use of the IERRT which the Statutory Harbour Authorities will continue to exercise in any event. If circumstances were to arise where it was considered desirable to introduce those additional measures, the

Reference	Relevant Representation Comment	Applicant's Comments
		position will be discussed in detail with IOT Operators before any steps are taken. Following the completion of the navigational risk assessment exercise which assessed a wide range of scenarios and specifically tested the potential limits of operations, the Humber Harbour Master remains satisfied that neither the relocation of the finger pier nor the provision of impact protection measures is required. The NRA **(APP-089)** identified the need for a Marine Liaison Plan within the Hazard Logs as 'Port Liaison Officer'. The function of this role will be to ensure that there is a suitable marine liaison plan and that it is followed.
1.13	Without these measures, the IOT Operators will continue to have concerns regarding the impacts of the IERRT Development on the IOT.	See response to paragraph 1.12 above. Whilst the IOT Operators state that they will continue to have such concerns, those concerns are not justified in light of the extensive and comprehensive NRA that has been undertaken and the fact that the safe construction and operation of the IERRT will be controlled by the Statutory Harbour Authorities throughout the future.
1.14	The IOT Operators note that impact protection measures have been included as part of the application which will be controlled by Requirement 19 of the draft DCO. However, no technical detail on the extent or specification of these measures have been provided and ABP state that such measures are unnecessary.	As explained above and as was made very clear at ISH1 by Mr Greenwood on behalf of ABP, the Applicant and the Statutory Harbour Authorities have already satisfied themselves that impact protection measures will not be required. Notwithstanding that, provision has been made in the draft DCO for their provision should circumstances so demand. If the IOT Operators have concerns regarding the wording of the relevant Requirement, the Applicant would be

Reference	Relevant Representation Comment	Applicant's Comments
		prepared to consider any additional wording – although nothing has been suggested by the IOT Operators as yet. In any case, the criticism of the design and specification of the protection measure is not justified given the details provided in Chapter 2 of the ES **(APP-038)** and the application plans. The IOT Operators have not provided any further information to support this criticism - although the Applicant would be happy to engage in discussions with IOT Operators in this respect.
1.16	Due to the concerns identified in the methodology employed for the IERRT NRA (as noted above and which have previously been communicated to ABP), and as the IOT Operators' proposed mitigation measures (also as identified above) have been discounted by ABP, the IOT Operators have no other option, but to commission a detailed and independent NRA, completed in line with relevant guidance requirements, to ascertain the actual level of risk posed by the IERRT Development proposals to their operations, and clearly determine the mandate for future controls necessary to ensure navigation safety is maintained at acceptable levels and impacts to the IOT's operations, infrastructure and vessels are tolerable. This will be submitted as part of the IOT Operators' written representation during the examination of the application.	As the IOT Operators are aware, and has been stated on a number of occasions, the Applicant is confident that the NRA has been undertaken fully in accordance with Government guidance and best practice and the criticisms of the methodology that have been articulated have been considered but are not considered to be well-founded. The Applicant has commissioned a very detailed NRA which accords with best practice and further amplification of the full extent of the NRA process can be provided as necessary. It is noted that IOT Operators intend to commission their own NRA although the Applicant does not consider that there is any basis for it doing so and at this early stage – sight unseen – the Applicant does question its utility and its impartiality bearing in mind the motivation and circumstances of its preparation and given that any NRA should involve the Statutory Harbour Authorities in the way that the Applicant has done.

Reference	Relevant Representation Comment	Applicant's Comments
		The Applicant does question, therefore, whether IOT Operators are even in a position to undertake a comprehensive NRA and reserves its position whatever material is produced. Nonetheless, the Applicant recognises that it is open for the IOT Operators to commission their own NRA – to be delivered by Deadline 2. The Applicant maintains its willingness to provide such further information about the NRA that has been produced and the inputs that went into testing various scenarios from experienced, professional experts as will assist the Examining Authority.
1.17	The IOT Operators reserve the right to make further representations as part of the examination process but in the meantime will continue to work with ABP with a view to reaching an agreed position on these matters, if possible.	The IOT Operators' position is noted and it is welcomed. The Applicant will indeed endeavour to reach a solution with the IOT Operators, an important tenant within the Port and will seek to reach an agreed position on such matters if possible.

Table 7.2 Marine Management Organisation [RR-014]

Reference	Relevant Representation	Applicant's Response
4.6.1	The MMO defers to the Maritime and Coastguard Agency and Trinity House on matters of shipping and navigation. The MMO will continue to be part of the discussions relating to securing any mitigation, monitoring or other conditions.	The Maritime and Coastguard Agency has stated that they are content with the approach taken by the Applicant in the NRA. Accordingly, the MMO's position is noted, and no further response is required. The position of the Maritime and Coastguard Agency is consistent with the fact that the NRA that has been produced follows best practice and properly considers and test relevant navigation risk for the IERRT and properly involves the relevant Statutory Harbour Authorities.

Table 7.18 Maritime and Coastguard Agency [RR-013]

Reference	Relevant Representation	Applicant's Response
1.1	The Maritime and Coastguard Agency (MCA) has an interest in any works undertaken below the Mean High Water Level and their impact on shipping, the safety of navigation and emergency response in the UK. We note all of the works that are required to be undertaken in the marine environment as part of the proposed Immingham Eastern Ro-Ro Terminal (IERRT) development fall entirely within the statutory harbour area managed by ABP Port of Immingham. The Competent Harbour Authority for the Humber Estuary is HES with respect to pilotage. They are therefore responsible for maintaining the safety of navigation within their area of jurisdiction. The MCA would point the developers in the direction of the Port Marine Safety Code (PMSC) and its Guide to Good Practice, they should liaise and consult with the Statutory Harbour Authority to develop a robust Safety Management System (SMS) for the project under this code. We note the developer has prepared a Navigation Risk Assessment in consultation with both ABP and HES.	The MCA have stated that they are satisfied that the Applicant, in undertaking their navigational risk exercise, have followed the correct procedures as set out in Guidance. The Applicant can confirm that the relevant SHA and the CHA have each been consulted and both participated in the NRA process. Both the Humber SHA and the CHA are content with the Applicant's NRA process and methodology employed and the SHA and CHA have been consulted and involved as required.

Table 7.19 BDB Pitmans LLP on behalf of DFDS Seaways [RR-008]

Reference	Relevant Representation	Applicant's Response
3.2 - 3.4	**Proximity of other facilities** 3.2 The Applicant proposes the construction of a three berth Ro-Ro facility within the Immingham area. This area constitutes one of the UK's busiest port locations and is host to a number of key port infrastructure facilities, many of which are of	As a statement of fact, this is agreed. These matters, however, are well-known to the Applicant as it is the operator of the Port of Immingham within which DFDS has its facilities. If DFDS are implying that the Applicant has failed to take these matters into consideration as part of its scheme

Reference	Relevant Representation	Applicant's Response
	national significance. The proposed development is set to lie close to the Immingham Oil Terminal, Immingham East Jetty, Immingham Bellmouth and inner dock area, Immingham West Jetty, Immingham Outer Harbour and the Immingham Bulk Terminal. 3.3 DFDS are of the opinion that the Applicant's proposed location is wholly inappropriate given its already high traffic density, proximity to other key port infrastructure and the danger inherent to the types of cargo operations taking place at these locations (many of which are recognised as upper tier COMAH sites), combined with an area of strong and complex tidal flow. 3.4 The proposed terminal lies less than 100m from the IOT Finger Pier and 300m from the Immingham Eastern Jetty. As previously explained these terminals serve vessels carrying dangerous goods in bulk. The terminal also lies in close proximity to the cargo pipeline for both the IOT and IOT Finger Pier. The location of the proposed terminal will require the vessels utilising these berths to conduct complex and risky manoeuvres in a highly dynamic environment with fast flowing tides and frequent high winds. The lack of space within the manoeuvring area combined with the Applicant's lack of adequate protection for these facilities poses a serious pollution risk in the event of a collision and the associated environmental,	evolution and consequent NRA process, then such a suggestion is unfounded and DFDS would have failed to understand the application as submitted. DFDS is a direct commercial competitor to the proposed development's potential operator and the Applicant is concerned that DFDS's criticisms are affected by that given the nature of the criticisms that are made. The criticisms made by DFDS do not reflect an objective and impartial assessment of the comprehensive assessments that have been carried out by the NRA. It should also be noted (and will be addressed in further detail) that DFDS itself operates ships under control of the same Statutory Harbour Authorities that have satisfied themselves as to the safety of the proposed IERRT. DFDS uses the same part of the Humber and conducts manoeuvres which are required to be carried out safely through the control by the Statutory Harbour Authorities. The Applicant will refer to those such manoeuvres as necessary in relation to the unjustified criticisms of what has been tested in the NRA for the IERRT. The IERRT NRA [APP-089] has assessed the risks associated with vessel movements in the area particularly considering the proximity of the IOT to the IERRT.

Reference	Relevant Representation	Applicant's Response
	commercial (including impacts to DFDS' operations at the port) and reputational damage.	In addition, the Statutory Harbour Authority for the Humber concurs with the anticipated risk outcomes and does not have an issue with the increase in vessel traffic which is very small indeed compared with the total number of movements already occurring on the estuary. As the MCA, in its capacity as a statutory consultee, has stated [RR-013], it is for the Statutory Harbour Authorities to determine whether an adequate risk assessment has been conducted – and they have done that.
3.5 -3.6	**Previous Major Incidents** 3.5 The Immingham area is a complex and challenging waterway in which to navigate. There have been multiple marine incidents in the area and it continues to be an area in which vessel accidents are frequent. Since the turn of the century there have been several notable incidents. The most serious incidents involving fatalities, potential widescale pollution, and/or serious marine casualties are investigated by the Marine Investigation Branch ("MAIB"). The MAIB usually investigates around 30 cases each year, their role being to prevent further avoidable accidents from occurring. 3.6 In addition to these incidents there have been multiple smaller incidents that have not warranted a full MAIB investigation. The above demonstrates that Immingham continues to be a difficult area in which to navigate; the addition of the Applicant's proposed berths will add to the complexity and	The Applicant does not consider the less than measured language used by DFDS to be appropriate, nor does it project an accurate picture of River Humber and its operations. It is simply not correct, and patently misleading to allege that there have been "multiple" incidents on the Humber. Navigation on any busy waterway such as the Humber will inevitably carry with it a degree of risk (as is the case with DFDS's own existing operations which it presumably does not suggest are unsafe). It would be wrong for any SHA in the country to claim otherwise. Such risks are, however, necessarily managed by appropriate controls. As it is, historic allisions and collisions have been assessed and considered as part of the NRA exercise. There is no merit in this criticism. Further, both Humber Statutory Harbour Authorities agree with the conclusions of the NRA and the level of risk anticipated and how the IERRT can be safety constructed and operated.

Reference	Relevant Representation	Applicant's Response
	challenges posed and increase the likelihood of further incidents. Given the proximity of the berths to the Immingham Oil Terminal and the Immingham East Jetty the consequence of an incident is potentially catastrophic	
3.7 – 3.10	**Wind** 3.7 The wind data used as part of the Navigational Risk Assessment [APP-089] is clearly flawed and its presentation downplays the risk. 3.8 Despite the Applicant having access to wind data from anemometers at Immingham Dock Marine Control Centre ("MCC") (53º37.82' N, 0º11.25' W) and the Stone Creek Radar Mast (53º 39.25' N 0º 08.20' W), the Applicant has instead chosen to use data from the runway anemometer at Humberside Airport (53.567º N 0.350º W) [see APP-089 p12]. Humberside Airport is located at Kirmington, some 15km southwest of the intended development and wholly unsuitable as an indication of the wind speeds found at the proposed development location. Additionally, Kirmington is located within a geographical basin being surrounded on all sides by more elevated land mass which serves to shelter the airport from strong winds. DFDS are also disappointed that the Applicant failed to be transparent about where their wind data was derived by quoting merely a latitude and longitude rather than location name.	Existing MetOcean (meteorological and oceanographic) conditions described in Section 3.3 of the NRA **[APP-089]** are informed by available relevant measured and modelled datasets. CAA CAP 670 regulatory framework as well as requirements and guidance for Air Traffic Services, Communication, Navigation, Surveillance, Meteorological and Information and Alerting Systems Section MET01: Use of Meteorological Information in ATS Units, sets out the requirements for Surface Winds Data collection and recording. There is no requirement for an LPS to have wind recoding capability. Immingham is an LPS, MGN 401 (Amend 3) sets out LPS equipment requirements and does not specify wind sensor or met recording as requirement for sub VTS (LPS) level. For quality and consistency, the best source of data should come from certified, calibrated equipment which is set and measured against a regulated standard which is what has taken place. This is common practice. For example, the environmental statement and NRA submitted as part of the Tilbury 2 DCO

Reference	Relevant Representation	Applicant's Response
	3.9 The Applicant has chosen to use mean wind speed and ignored wind gusts. Wind gusts are periods in which the wind is 10mph faster than the mean wind speed but have a duration of less than 2 minutes. Wind gusts are significant in that they are difficult to anticipate or compensate for and therefore responsible for a greater proportion of incidents. Given the significance wind gusts will have during the berthing operation, DFDS is of the opinion gust should be included as part of the Navigational Risk Assessment (NRA). 3.10 Furthermore, the Applicant has chosen to represent the durations of wind speeds encountered at this sheltered location as percentages of one month rather than as hours and minutes – see the extract from the NRA below. This conceals the fact that the data is inconsistent with that experienced on a day-to-day basis by professional mariners familiar with the area.	application used wind data taken from London City Airport – some 14 miles west of the proposed Tilbury 2 development. Further wind data in the subsequent NRA was taken from Gravesend on the South Bank of the River Thames (Port of London Port Control (VTS) Centre) and not from Tilbury Docks. The criticisms by DFDS are, therefore, simply not put on a correct basis and are strongly refuted.
3.13 - 3.16	**Tide** 3.13 The tidal flow in the port of Immingham is renowned for both its ferocity and direction which make the area highly complex and challenging for the navigator. The tidal flow in Immingham is semidiurnal experiencing two high and two low tides of approximately equal size every lunar day. Due to the fact that the Humber Estuary drains approximately 1/5 of England's fresh water, the ebb tide tends to be stronger than the flood tide.	Again, there is no substance to this criticism. Existing MetOcean conditions (meteorological and oceanographic) described in Section 3.3 of the NRA **[APP-089]** are informed by available relevant measured and modelled datasets. This is further supplemented in the simulation studies [APP-090-092]. Two independent tidal current flow monitoring surveys have been conducted in relation to the IERRT project.

Reference	Relevant Representation	Applicant's Response
	On spring tides, when the tides are at their strongest it is common to find tidal flows in excess of 4 knots. 3.14 The flow of the tide in Immingham area is generally accepted to be in the 135º/315º orientation. Due to the tidal flow not being aligned with much of the port infrastructure there have been multiple accidents in the area and Humber Estuary Services (as the Competent Harbour Authority ("CHA")) has issued multiple notices warning mariners of the dangers of the tide in this area. 3.15 The tide is so strong in this area that the CHA has mandated the provision of 'standby pilots' and 'standby tugs' for large deep draught vessels whilst discharging cargo at the Immingham Oil Terminal for fear they could break free of their moorings during a spring flood tide. It is common for such vessels to sit 2m off the berth during the flood tide due to its strength and direction. 3.16 Despite this, the Applicant has not provided data regarding the tidal flow in the Immingham area, choosing instead to document purely the tidal levels and wave direction data. Furthermore, the Applicant used incorrect and more beneficial directions for tidal flows during the navigation simulations.	Firstly, a seabed deployed Acoustic Wave and Current (AWAC) device was installed for a six-month period between 15 November 2019 and 5 June 2020. Secondly, a mobile, vessel based ADCP (Acoustic Doppler Current Profiler) survey was conducted along multiple transects within the vicinity of the proposed IERRT marine infrastructure. As a consequence, there is a high degree of confidence in the tidal flow data used to support the assessments and navigation simulations. It should be noted that further information in this regard is provided as a response to ISH2 Action Points 26 and 27).

Reference	Relevant Representation	Applicant's Response
3.17 - 3.18	**Simulations** 3.17 Supporting the application, the Applicant has submitted a series of documents about navigation simulation studies, APP-090, APP-091 and APP-092. Each document begins with the following disclaimer: 'This report has been prepared for HR Wallingford's client and not for any other person. Only our client should rely upon the contents of this report and any methods or results which are contained within it and then only for the purposes for which the report was originally prepared. We accept no liability for any loss or damage suffered by any person who has relied on the contents of this report, other than our client.' 3.18 Since stakeholders and the Inspectorate are being asked to rely upon these simulations, can the Applicant confirm that they stand by the contents of the reports?	This sort of criticism of the NRA is again misconceived. Such a disclaimer is a standard one that any firm practising in this area would be expected to produce. It is simply to protect HR Wallingford from the consequences of the use of its report by a third party for a purpose other than that for which it was originally intended. In this case ABP (the client) has submitted the report as part of the DCO application process and it obviously can be relied upon for the purposes of that process and is intended to be relied on that for that purpose. It follows, however, that should the report be provided to a third party and used by that third party for other than the purposes commissioned, then the normal protections afforded would not be available to that third party. This is clearly not a point that merits further consideration.
3.19 - 3.25	**The Simulation Process** 3.19 In conducting the simulation runs, the Applicant's simulation consultants graded the results into four categories (Successful, Marginal, Fail and Aborted) [APP-90 p27-28]. DFDS are concerned that in carrying out these simulations the ability to 'abort' the simulation and re-run the same simulation several times, rather than declaring it a fail is poor practice and is not consistent with the reality that pilots and those with Pilot Exemption Certificates (PECs) will face on a daily basis in operating at this terminal – they	The Applicant records considerable surprise at the unjustified criticisms made by DFDS of the approach adopted towards simulation runs which follow expected practice in this area. This is given that the greater complexities that DFDS vessels face when manoeuvring in to and within the Immingham Outer Harbour – and the Applicant's understanding that DFDS are themselves very familiar with the use and practice of simulation studies in this way. It is standard practice to test the boundaries of operations by identifying what sort of operations will work effectively.

Reference	Relevant Representation	Applicant's Response
	cannot 'abort'. DFDS is concerned that the simulations that were classed as 'Aborted' would have been classed as 'Fail' if they had continued, and some runs that took more than one attempt to berth (16, 17, 19 and 59) should have been classed as 'Fail'. If these and 'Aborted' results are added to 'Fail' this represents 26% of runs, which is an unacceptable level of unsuccessful simulations. Additionally, this classification of the simulation process removes the element of reality and creates a process of 'normalisation of deviance' in which participants become immune to the risks involved and become goal driven. Furthermore, simulations classed as 'Successful' employed bow thrusters to such a significant degree that they should have been classed as 'Fail' (see below). 3.20 Simulation is a key component of modern terminal development. However, the simulations are only as good as the models used both in terms of the hydrographic model and the ship models used within this environment. 3.21 The tidal model used in the simulations was created by HR Wallingford purportedly through computer modelling and AWAC data from the proposed development site [APP90 p11]. It is critical that this data is correct as the strength, direction and peculiarities of the tide are essential to the validity of the simulations carried out	The suggestions made by DFDS are, it is suggested, clearly misleading bearing in mind their own familiarity with the simulation process. If DFDS use a different company to HR Wallingford who undertook the simulations for the proposed development, it should disclose what different practice for that other simulation company is used. Moreover, the results of the simulation exercise are being mischaracterised and presented in a misleading fashion. To select a single simulation which failed as somehow representing a problem is to misunderstand or misrepresent the whole purpose of such simulation. The purpose of simulation is properly to test what works and what operations would not in order to provide a robust NRA. Precisely the same process would be followed (and indeed could be replicated) for DFDS's own existing operations for the Port of Immingham. Simulation runs where, for example, a vessel is turned in a way which is not suitable would result in similar "fails" for DFDS operations. All of this is simply designed to test the limits of the way the operations should be conducted. It is very concerning that the simulation process is being misrepresented in such a way and that this then featured in DFDS's presentation of matters at ISH2 when it was suggested that a single testing simulation run is somehow

Reference	Relevant Representation	Applicant's Response
	thereafter. When compiling tidal data for a project of this size it would be standard practice for the AWAC (acoustic wave and current) data buoy to be deployed in multiple locations over a substantial period in order to obtain reliable, comprehensive data. ABPmer have not shared the AWAC report and therefore DFDS is unable to assess the quality of the data gathering exercise. 3.22 When the Applicant shared the first simulation report DFDS was concerned about the tidal flow direction depicted, which seems at odds with what DFDS' experienced Captains encounter on a daily basis, what pilots tell us when embarked on our vessels and what Humber Estuary Services ("HES") has published with regard to the tidal flow in the vicinity of IOT and the Immingham Bellmouth. 3.23 The accepted direction of tidal flow in the Immingham area is around 310º-315º and 130º135º on the flood and ebb tides respectively. This is confirmed by the tidal data published for the area by the UK Hydrographic Office (UKHO) [Admiralty Chart 3496]. This direction of tide does not correspond to the orientation of the IOT which is aligned 112º/292º. This 18-23 degree difference causes the flood tide to set vessels strongly off the berth and the ebb tide to set vessels strongly onto the berth. The tide in this area is notoriously dangerous due to this combined with the high flow	indicative of the NRA not doing what it is intended to do or that some sort of conclusion could be drawn to the effect that the NRA does not show that the IERRT can be operated safely. The whole purpose of such simulations undertaken as part of the NRA process is to identify how operations can be conducted safely and reliably and what sort of operational measures should be used in the most challenging conditions and tested in the simulation and what sort of operational measures should not be used. DFDS in their comments disappointingly seem to be ignoring the reality and purpose of simulation studies. Simulation studies are not designed just to select the easiest course – quite the contrary. The whole purpose of navigational simulations is to establish the limits which would prevent "real" navigation in challenging conditions so as to test in advance where those limits exist. As DFDS are fully aware, the simulations used accurate and reliable AWAC buoy data taken from the area immediately adjacent to the proposed site of the IERRT terminal to inform the simulations. The AWAC buoy deployment verified the expected currents at the berth location. In addition, the subsequent survey with Acoustic Doppler Current Profiler (ADCP) equipment, in Autumn 2022, supported the AWAC data.

Reference	Relevant Representation	Applicant's Response
	rates which can be in excess of 4 knots on a spring tide, making it one of the fastest-flowing estuaries in the UK. 3.24 The tide has been a major contributory factor in a number of serious incidents in the IOT and Immingham Bellmouth areas as previously documented. 3.25 However upon consulting the simulation reports [APP-90, APP-091] the professional mariners at DFDS were concerned that the direction of the tidal flow as indicated on the simulation imagery were not consistent with this. In the simulations the tidal flow indicated shows the tide running largely parallel to the berth both on flood and ebb tides.	It has already been noted that the flows in the Humber are complex and variable. This is hardly surprising as estuarine movements, as opposed to open sea movement, inevitably carry with them a degree of complexity – the Solent Estuary being another typical example. The flows in the vicinity of the bell mouth and adjacent to IOT were taken fully into account throughout the simulation and the flow model adjusted to achieve the optimal spatial match. Moreover, DFDS have ignored the basic point that it was considered appropriate to optimise the model for testing the flows at the proposed IERRT berth for this study for a very good and simple reason. That is because the issues regarding manoeuvring across the flow towards the bell mouth and Immingham Outer Harbour are already well understood and it is already known that such manoeuvres can be regularly completed by similar sized vessels, based on existing operations which already occur on a daily basis. The modelled flows at the berth were closely matched in terms of the speed and direction with the extensive data in the area collected by (AWAC/ADCP) in preparation for this study.
3.30 - 3.33	**Simulated Ship Models** 3.30 It is good practice and common sense when designing a new terminal to simulate the vessels that will actually run to the berth in order to adequately gauge its viability. This will normally require the commissioning of a simulated ship model that exactly replicates the handling	As DFDS are fully aware, vessels selected for use within the simulation studies provided at application documents APP-090, APP-091, APP-092, were specifically selected as being the most representative models available for simulation.

Reference	Relevant Representation	Applicant's Response
	characteristics of the ship and the effect of wind and tide will have upon the vessel. In previous simulator trials for their Humber operations, in conjunction with the Applicant, DFDS has commissioned such models of their vessels to give as accurate as possible representation of how their vessels will perform in real life. The Applicant has also commissioned such models for other major projects, most notably the Siemens Gamesa development in Hull for which the Applicant commissioned a ship model for the wind turbine installation vessels that were due to operate to the berth. 3.31 However in simulating this development the Applicant chose to use a more manoeuvrable DFDS model (the 'Jinling Class' vessel) for the bulk of the simulations rather than the Stena E-Flex class vessel that will be used at this facility, as '…there was not sufficient data, or ship master experience available at the time of the study, for an adequate ship manoeuvring model verification process to be completed.' [APP-90 p21]. 3.32 The DFDS Jinling Class vessel is a comprehensively equipped and highly manoeuvrable ship engineered for the complexities and restricted space of the port of Vlaardingen, Netherlands rather than the Humber. The use of this model rather than commissioning their own representative model renders the simulations	HR Wallingford are one of the country's leading specialist consultancies – with clients across the world – in producing such simulations. The Company is fully experienced at assessing the reliability of their simulations compared with reality. The Simulation Team ensure that the assessment being made regarding the use of power during manoeuvres is appropriate. In this case the manoeuvres were being conducted at the operational limit for the berths and it would obviously be expected that high power is required to achieve the manoeuvre. Again, the criticism simply ignores the basic point of the simulation which is to test the more challenging conditions. In other words, simulations are designed to test for limiting conditions to help inform guidelines for future operations. This is common – indeed best - practice and inevitably and quite properly results in a high proportion of runs being aborted or failed. If it did not, the simulations would not be doing their job of establishing those limiting conditions. It is clearly misleading and certainly a misrepresentation of the purpose of the simulation to suggest that the existence of runs which are aborted or failed is somehow indicative of an inherent problem. The existence of such runs demonstrates that the simulation exercise was appropriately robust in seeking to explore those limiting conditions. Exactly the same sort of exercise (with runs which would be shown as fails or aborts) would be

Reference	Relevant Representation	Applicant's Response
	unrepresentative of the vessels that will visit the terminal (and unduly favourable) and therefore the anticipated viability of the terminal design. 3.33 DFDS acknowledges that in later simulations 'Stakeholder Demonstrations' [APP-91] the Applicant used a model of a Stena T class vessel. However these are smaller vessels than the design specifications of the terminal and therefore DFDS considers they are still unrepresentative of the types and design of vessels that will visit the terminal. It is also a concern that these simulations [APP-91] were exclusively carried out in relation to Berth 1 which is unquestionably the least challenging of the three proposed berths in terms of manoeuvring so is again not an adequate representative of the complexities of the full terminal.	carried out for any simulation of DFDS's own operations at the Port of Immingham to establish the appropriate limiting conditions and methods of control for ships using the facilities which they operate in the Inner Dock and Outer Harbour.
3.34 - 3.37	**Unrealistic use of vessel machinery** 3.34 In reviewing the simulations runs for Part 1 of the study [APP-90] experienced DFDS Captains have expressed serious concerns over the unrealistic use of machinery required to achieve the desired manoeuvre. 3.35 Bow thrusters are transverse power units used on vessels to help control the positioning of the vessels bow. These electrically powered units are designed for 'fine control' and as such are designed for intermittent use in order to control the manoeuvring of the vessel in the final stages of	The concerns of the DFDS Captains are simply unjustified and completely at odds not only with the Stena Masters that were involved in the simulation exercises, but also the relevant Statutory Harbour Authorities. Moreover, a Competent Harbour Authority Senior Pilot conducted the simulations - which were attended by the Applicant's Head of Marine, Humber - and confirmed that the utilisation of the vessels was within reasonable operating parameters. Additionally, the Harbour Master for the Humber SHA attended the simulations and was fully aware of the vessels

Reference	Relevant Representation	Applicant's Response
	berthing or the initial stages of departure. On the Jinling Class vessels these units are highly powerful developing over 65 tonnes of thrust at full capacity, having been developed for the unique challenges of the port of Vlaardingen in the Netherlands. 3.36 In consulting the simulation reports the experienced Captains within DFDS were extremely concerned about the use of the vessels bow thruster. In many of the simulation runs the thruster is running at full power for extended periods of up to 15 minutes [APP90 p116]. This would be both irresponsible given the wash effect it would have on the tug attempting to assist the vessel and potentially damaging to the thruster unit. This level of thruster use is also indicative of a highly dangerous manoeuvre where the vessel is on the edge of losing control. Despite this the runs are categorised as 'Successful'. In simulations carried out by DFDS with Rotterdam pilots at the world renowned Maritime Research Institute Netherlands (MARIN), full power bow thruster use in excess of 30 seconds deems any simulation a failure, as are thrusters at 80% power for longer periods. Similar thruster limitations are observed at the Force Technology marine simulator in Denmark. 3.37 The issues surrounding the simulations were raised at a meeting on 13 October 2022 with DFDS representatives in Copenhagen attended by	selected to be used and those which are intended to be used on the berths. As representatives of DFDS who attended the simulations are aware, the Port of Immingham Statutory Harbour Authority and CHA are confident that the correct and entirely appropriate vessel machinery was used in the simulations.

Reference	Relevant Representation	Applicant's Response
	Head of Marine Paul Bristowe, Harbour Master (Humber) Andrew Firman and other representatives of the Applicant and representatives of DFDS. At the meeting the Harbour Master admitted he had failed to read the simulation reports and his only knowledge of the trials had come from conversations at a later date with the participants	
3.38 - 3.40	**Towage** 3.38 In Simulation Study 1 [APP-090 p22] the towage support for the Jinling Class of vessels makes use of the 'SUPERMAN' a high power, compact tug. This allows the tug to provide high levels of push and pull assistance and is small enough to render towage assistance in the limited space available between berths 2 & 3. However such tugs are rare within the Humber fleet. According to the tug list on the HES website10 only two such tugs are servicing the Humber (Svitzer Valiant and SMS Superman). These two tugs operate for different companies and these companies do not operate together to assist a single vessel. Despite this two such tugs were made available to the vessels for the purpose of the simulation. This is not consistent with the current level of towage available on the Humber and there is no evidence that sufficient high power, compact tugs will be made available. 3.39 Furthermore, the amount of power exercised	Again, the Applicant is surprised at the tenor of this representation in that DFDS, as a tenant at the port's Outer Harbour and indeed within the closed Dock, is fully aware of the practicalities and realities of towage facilities at the Port. The Statutory Harbour Authority is completely satisfied with the use of tugs as demonstrated in the simulations. The value of the simulations and the NRA is to identify the need for appropriate towage to be available. The HRW simulations were conducted, by necessity, at the limits of environmental condition. The Humber Pilots and Stena Masters were confident of the berthing manoeuvre as conducted in the simulator. Data collected will be used to inform decisions around the future operating limits of the IERRT with regard to wind, tidal stream and tug requirements. The commercial and practical reality – with which DFDS are fully aware – is that, as is always the case in such circumstances, the tug companies on the Humber have been consulted and they will grow and expand their offering to meet

Reference	Relevant Representation	Applicant's Response
	by the tugs during the simulations was higher than would normally be expected, and the simulations did not properly account for the effect of bow thrusters on tugs when both were being used. Such high thruster output not only limits the effectiveness of the tug but significantly increases the potential danger to the tug and her crew. 3.40 It is also the opinion of DFDS that the level of towage support required for the Applicants development combined with the additional towage that will be required for IOT is unsustainable given the current size of the tug fleet on the Humber. Delays in tug availability are common and the towage requirements for the Applicants new terminal will only exacerbate this situation to the detriment of other port users.	conditions as required so as to facilitate their role in berthing and departure procedures.
3.41 - 3.44	**Pilotage** 3.41 DFDS do not believe the Applicant has given sufficient consideration to a third element of navigational safety, namely the level of pilotage required for the berth. The simulation consultants state in their report [APP-090 p4] that It should be noted that manoeuvring to and from the new infrastructure will be challenging particularly at the limiting conditions. Overall manoeuvres will require precise positioning of the vessel, tugs and their attitude to the tidal flow and the wind. Mitigating the inherent risks in these manoeuvring operations will require a robust training solution.	The Applicant refutes the allegation that the Applicant has not given sufficient consideration to the level of pilotage required for the berth. As DFDS must be aware, bearing in mind that they attended the simulations, CHA Senior Pilots conducted the simulations and confirmed that the manoeuvring of the vessels onto the proposed berths is safe in a wide variety of wind and sea conditions. Moreover, the Applicant is not aware of any views to the contrary being expressed by the representatives of DFDS during or at the close of the simulations.

Reference	Relevant Representation	Applicant's Response
	3.42 However the Applicant has failed to identify what robust training solution will be put in place. 3.43 It is highly likely that the day-to-day pilotage operation of vessels visiting the berth will be undertaken by the vessel's Captain or Chief Officer with a valid Pilotage Exemption Certificate (PEC) with pilots being required when such an exemption holder is not on board. The vessels operating to and from the IOT finger pier are piloted with a mix of PEC holders and pilots. 3.44 If tugs and pilots are not available this will lead to delays in berthing and unberthing of vessels, adding to congestion to the detriment of other port users.	As far as pilot training is concerned, it is standard practice when introducing a new operation to adopt a measured approach. In brief, a cohort of pilots conduct operational simulations and tabletop training to understand procedures/limits. They undertake live pilotage arrivals/departures - feedback is collated. There then follows an iterative process through to full capability for all pilots/PECs. The assertions made with regard to delays due to the availability of tugs and pilots is an operational issue which is dealt with by the Port's SHA.
3.45 - 3.48	**IOT Trunkway Protection** 3.45 The cargo pipelines carrying oil and oil products to and from vessels discharging and loading on the IOT run down a trunkway along the jetty stem. This makes this area particularly vulnerable to impact from a vessel with the associated pollution event that would occur following such an incident. 3.46 In APP-089 p81 the Applicant's consultant recognises that trunk way impact protection is a key mitigation: "This control is therefore detective as it is considered to have very substantial	This representation from DFDS fails to recognise and acknowledge the very comprehensive exercise that has been undertaken by the Applicant in assessing such risks as may exist during both construction and operation of the proposed development. Moreover, reference to the 'very substantial' category for perceived mitigation is being mispresented. This was simply a view expressed during the comprehensive stakeholder feedback during the HAZID and risk analysis process – and which, quite properly, was noted. It is not the view of the Applicant or the Statutory Harbour Authorities.

Reference	Relevant Representation	Applicant's Response
	mitigation effect on both frequency and consequence." 3.47 (A 'detective' control is one that reduces both the frequency and consequence of a risk). Despite this, and the proximity of the proposed terminal to these exposed pipelines the Applicant has failed to positively commit to any protection for this area. [APP-89 p96] and would only be implemented at the harbour master's discretion according to the DCO [APP-010], requirement 18 (see further below). "IOT trunk way protection has not been ruled out (as an adaptive control during operation) however and may form part of the operational 'adaptive procedures' control of which the specific details will be determined on a progressive basis and managed by the Humber Estuary Services." 3.48 The Applicant has not indicated what would trigger the harbour master to request such protection mitigation, but it is the opinion of DFDS that if this trigger is a collision or near miss that this constitutes a wholly inappropriate approach to navigational safety and risk assessment and the protection should be provided from the outset	As the ExA is aware, extensive and detailed HAZID Workshops and simulations were undertaken as part of the navigational risk assessment process and it would have been entirely wrong for the Applicant to exclude comments made during those exercises by those who attended even if those views are not shared by the authors of the NRA, the Applicant or the Statutory Harbour Authorities. As DFDS is aware, following the completion of the NRA exercise, the Applicant was entirely satisfied that impact protection measures are not required. If, however, it is recommended in the future that such measures should be provided, the Applicant has taken the precautionary approach of including the provision of impact protection measures in its application so that they can readily be provided should they be required. If the circumstances were indeed to change from those currently anticipated and predicted by the Applicant's risk assessment, then the Applicant will, of course, discuss the measures required with HOTT. It should be recognised that entry to the Outer Harbour by DFDS vessels requires careful manoeuvring close to the Port's Western Jetty – which does not have impact protection measures. Finally, the Applicant would note, as referenced at ISH1, that the wording of the Requirement in terms of the role to be fulfilled by the Humber Harbour Master has been amended.

Reference	Relevant Representation	Applicant's Response
3.49 - 3.51.3	**Dredging** 3.49 Due to the nature of its hydrography the Humber is an area that experiences high levels of siltation. The Immingham/Killingholme area is particularly affected due to its location and the requirement for multiple deep water 'dredge boxes' at berths in this area. Dredging is important to maintain water depths and stop vessels running aground. 3.50 In order to remove silt in this area there is already a constant need for maintenance dredging which is carried out through a combination of suction dredging, grab dredging and bed levelling carried out by UK Dredging ("UKD") which is a subsidiary of the Applicant's company. 3.51 The Applicant proposes that 190,000m3 of dredge material is removed from the development site (150,000m3 of silt and 40,000m3 of boulder clay) to be disposed of in sites HU056 (Holme Channel) and HU060 (Clay Huts) (APP-089, p44 4.2.10). It is obviously beneficial to the Applicant to use these two sites given their proximity to the development site. However DFDS believe these sites to be unsuitable to receive this material for the following reasons: 3.51.1 The proposed dumping sites are relatively small and are already commonly used for the disposal of material from maintenance dredging campaigns for the Immingham and Killingholme	The physical processes assessment (ES Chapter 07 **[APP-043]**) fully assesses the potential impact of the capital dredge campaign and associated disposal. It concludes that the capacity of the proposed disposal sites (HU060 and HU056), the maintenance dredge requirements at existing berths at the Port of Immingham, and the bathymetry of the wider Humber Estuary will not be adversely affected by the Proposed Development for the reasons identified. The concerns being expressed by DFDS are simply not justified. It is important to note that HU060 is a dispersive disposal site, meaning that material deposited here will be rapidly dispersed within the wider Humber Estuary rather than accumulate on the seabed. Therefore, the capacity of this disposal site will not be affected by the IERRT project during construction or operation. The disposal site is already licensed to dispose of up to 7,500,000 wet tonnes of maintenance dredge material per year from the Port of Immingham. There remains more than sufficient headroom in the existing (permitted) tonnages stipulated within the present maintenance dredge disposal licence. This is also true for the retentive HU056 disposal site. Placement of material here will be guided to the deeper areas of the disposal site (as is the current accepted practice), in order that the site is not overfilled and associated changes to

Reference	Relevant Representation	Applicant's Response
	areas. DFDS is concerned that the disposal of this quantity of material in these two deposit grounds could seriously reduce the capacity to accept material from the continual maintenance dredging campaigns forcing the dredgers carrying out such maintenance dredging campaigns to use other deposit grounds therefore reducing their efficiency and availability. 3.51.2 DFDS has operations in the inner dock at Immingham and in the Immingham Outer Harbour ("IOH") both of which are highly prone to siltation and require constant dredging. DFDS are concerned that the disposal of such a vast quantity of dredge material so close to the Immingham area is likely to find its way back into the IOH and Immingham bellmouth areas on the ebb tide which could pose a danger to the safe operation of vessels in these areas. It is of note that when the IOH was constructed the associated capital dredge material was deposited at Hawkins Point some 3.5nm down river of the development rather than in the Applicant's proposed deposit areas. 3.51.3 The dredge deposit areas also lie close to 'Halton Middle', which is a shallower area of the Humber river bed, where the addition of further silt would add to navigational risk for vessels proceeding further up river, e.g. to Hull and Saltend.	bathymetry remain within the conditions of the existing disposal licence.

Reference	Relevant Representation	Applicant's Response
3.52 - 3.54	**Navigational Risk Assessment ("NRA") Methodology** 3.52 An NRA is an exercise which is completed to assess and measure the hazards associated with an activity within an area of high vessel navigation. This to ensure that the activity being conducted does not pose an unacceptable level of risk to persons, the environment, trade, the business reputation or property. 3.53 The process for assessing risk starts by identifying hazards associated with the assessed activity. Once the hazards are known they are given a score (a numerical value based on a potential outcome description) for the damage they potentially could cause to all four categories (people, environment, infrastructure and reputation). They are also given a score for the likelihood of that event occurring. These scores are then processed by risk assessment software using a complex algorithm which takes account of other pieces of data (such as type and effectiveness of embedded control measures). The output of that calculation provides a risk score for most likely and worst credible event outcomes. That score is compared against a 'risk score / actions to take' table (See Table 1) which informs if the risk is acceptable or not. 3.54 It is common practice that when conducting NRAs for proposed terminal developments to	The PMSC is based on the IMO FSA. It is common practice – indeed it is suggested, best practice - to follow the methodology in the PMSC. Significantly, the MCA, as a consultee have approved the approach adopted by the Applicant in terms of the NRA and have agreed that it is for the Statutory Harbour Authority for the Port to take the lead in determining if the development is appropriate. It should be noted that Section 4 of the Guide to Good Practice on Port Marine Operations (GtGP) provides risk assessment guidance in the context of supporting the port's Marine Safety Management System (MSMS). The GtGP suggests the use of staged risk assessment and provides an example of a five-stage risk assessment, similar to, but not completely the same as, the five-step process outlined in International Maritime Organization (IMO) Revised Guidelines for Formal Safety Assessment (FSA). The GtGP states - 'Risk assessment techniques are fundamentally the same for large and small ports, but the execution and detail will differ considerably' and 'a risk assessment will typically involve five stages'. The assertions at 3.53 of the DFDS RR in fact indicate an approach to risk assessment that is largely synonymous with the approach taken in the NRA for this development. The key difference is that a 'score' is not required and can often create a false sense of security by distilling a complex risk situation

Reference	Relevant Representation	Applicant's Response
	follow the International Maritime Organization Formal Safety Assessment ("IMO FSA") guidance since it is the only guidance available which is relevant to marine risk assessments.	down to a single number. Both the Port and the Humber Statutory Harbour Authorities concur with the approach taken to risk assessment in respect of navigation for this project. Para. 3.54 - is incorrect. There are many other forms of guidance for marine risk assessments and the statement made by DfDS is not based on any known guidance or policy relating to proposed 'terminal' developments. In this context, MCA Marine Licencing Policy Lead quote - "*On this occasion the works are being undertaken within a SHA (ABP Humber) who has relevant powers under the Harbour Act 1964 (or other) and therefore has jurisdiction. ABP Humber are responsible for maintaining the safety of navigation during construction and operational phases of the development, and therefore the MCA would not approve the NRA or undertake the prescribed approach above on behalf of a SHA.* The MCA's representation on this occasion was to ensure that an agreed Navigation Risk Assessment would be in place using an appropriate risk assessment methodology and that the works are carried out in accordance with the Port Marine Safety Code.' Please note that the MCA state – works are carried out in accordance with the PMSC and that the agreed NRA using an appropriate risk assessment methodology, it does not state the 'terminal developments' should use the IMO FSA.

Reference	Relevant Representation	Applicant's Response
		That said, NRA did in fact follow the same approach to the IMO FSA.
3.55 - 3.59	**Navigational Risk Assessment ("NRA") Methodology** 3.55 In completing this NRA, however, the Applicant has chosen to use parts of two methodologies rather than one. The individual methodologies applied separately do comply with the requirements of the IMO FSA guidance. However, the Applicant appears to be using a heterogeneous methodology mix of the Port Marine Safety Code and the Maritime Coastguard's Agency's (the "MCA") MGN 654 and Annex 1 'Methodology for assessing marine navigational safety and emergency response risks of [Offshore Renewable Energy Installations] OREIs'. 3.56 The first paragraph of the MCA publication Methodology for Assessing Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations ("OREIs"), executive summary states: "This revised document has been produced by the Maritime and Coastguard Agency (MCA) with the co-operation of key stakeholders as a methodology for assessing the marine navigational safety & emergency response risks of offshore renewable energy installations." 3.57 In comparison The Port Marine Safety Code	To claim that different risk assessment methodologies have been used in the NRA is simply not correct and it is disappointing that DFDS seem unable to acknowledge this as a fact. 3.57 - noted and agreed. 3.58 - noted and agreed. 3.59 – With regard to this representation, it should be noted that the MCA Port and VTS Policy Advisor commented as follows – *"MGN 654, as stated in its summary, is primarily for the use of OREI developers seeking consent to undertake marine works and in developing post-consent plans and documentation. More specifically it highlights issues that need to be taken into consideration when assessing the impact on navigational safety and emergency response caused by offshore renewable energy installation developments".* MGN 654 contains the same principles of Risk Assessment as the guidance to be found in the PMSC and G2GP, which come from the IMO FSA and HSE methodologies.

Reference	Relevant Representation	Applicant's Response
	("PMSC") establishes a national standard for every aspect of port marine safety aiming to enhance safety for those who use or work within ports and Harbours. 3.58 The area covered by the NRA is part of the port of Immingham. The port's location is described as being: "on the southern bank of the river Humber and is one of four ports on the river owned and operated by ABP. ABP are both the Statutory Harbour Authority (SHA) and a Competent Harbour Authority (CHA)." The study area is clearly not an offshore installation. It is within an SHA and a CHA. 3.59 Therefore, the risk assessment methodology described within the PMSC can be viewed as properly applicable to ports and harbours, whereas the OREI methodology is not.	
3.60 - 3.62	**Navigational Risk Assessment ("NRA") Methodology** 3.60 The Applicant informs in section 6.1.3 of Immingham Eastern Ro-Ro Terminal Preliminary Environmental Information: Appendix 10.1: Preliminary Navigational Risk Assessment Dated December 2022 (APP-089) that the process for carrying out an NRA follows the methodology from MGN 654, Annex 1 'Methodology for assessing marine navigational safety and emergency response risks of OREIs' (MCA, 2021); plus, the	The assertions in paragraphs 3.60-3.62 of DFDS's Relevant Representations are simply not correct. For the avoidance of any doubt – and as already noted in detail above the approach to the NRA (APP-089) has been based on the PMSC and the associated Guide to Good Practice for Port Marine Operations.

Reference	Relevant Representation	Applicant's Response
	process identified in the PMSC 'Guide to Good Practice' (DfT, 2018). 3.61 The two methodologies are designed to produce different outputs: one qualitative and the other quantitative and they use different terminology for what is acceptable risk and what is not. The combination of these two methodologies into a single heterogeneous methodology renders the Applicant's NRA confusing to the reader. Meaning the assessment of risk is also confusing and therefore not credible. 3.62 An acceptable level of risk across both methodology's is considered reached when the risks involved in the activity taking place have been reduced to ALARP' (As Low As Reasonably Practicable). The PMSC methodology adopts and uses the term 'ALARP' within its NRA process (See Table 1) whereas the OREI methodology uses the term 'Tolerable'. ALARP is described in the PMSC as being 'an objective Judgement of risk, without being influenced by the financial position of the authority. The degree of risk in a particular activity or environment can, however, be balanced on the following terms against the time, trouble, cost and physical difficulty of taking measures that avoid that risk. If these are so disproportionate to the risk that it would be unreasonable for the people concerned to incur them, they are not obliged to do so.' The point at	

Reference	Relevant Representation	Applicant's Response
	which ALARP is reached is articulated as a numerical value. That numerical value is compared against the calculated risk score of a given activity to decide if the level of risk associated with that activity is acceptable or not.	
3.63 - 3.68	**Navigational Risk Assessment ("NRA") Methodology** 3.63 The OREI methodology uses the term 'Tolerable' within its NRA process. 3.64 There is no final description of 'Tolerable' within the Methodology for Assessing Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations (OREI) instead section 6 discusses a mechanism for assessing tolerability with guidance provided in section C4. Its then left for the assessor to set an appropriate level to be considered 'Tolerable'. 3.65 Therefore, DFDS are of the opinion that whilst the two methodologies used are individually compliant with the IMO's FSA guidance the use of the OREI model as one part of the heterogeneous mix is not appropriate given that the Applicant's proposed development is not in any way connected to the offshore renewable sector and the description for the term 'Tolerable' is decided by the assessor. 3.66 DFDS believe the utilisation of the OREI methodology in elements of the applicants NRA,	As DFDS and their consultants are fully aware, "Tolerable/Tolerability" are common – and indeed essential/unavoidable - terms used in risk assessment and the concept is adopted and approved in the 'Guide to Good Practice on Port Marine Operations' associated with the PMSC. Whether a given and assessed risk is "tolerable" is for the appropriate SHA/SHAs to determine and in this instance, this process was properly followed with the additional consideration and approval of the Applicant's HASB. The comments around the OREI methodology (MGN 654) are irrelevant as this DCO application is for a project that is clearly not an 'Offshore Renewable Energy Installation' and the regulator (the MCA) has not instructed that this guidance is to be followed. The comments in DFDS's Relevant Representations paragraph 3.66 are not correct as the OREI methodology has not been used in the NRA (APP-089). The risk outcomes were determined by stakeholders at the HAZID meetings, including representatives of DFDS, against the frequency descriptors as they appear within the NRA. The time periods selected do not downplay risk and they are consistent with what was commented on throughout.

Reference	Relevant Representation	Applicant's Response
	apart from being a fundamental error in principle, also serve to downplay the risk of the new terminal in two key areas, namely consequence and frequency. 3.67 In terms of consequence the applicant has elected to use rapidly escalating bandings for the financial consequence of an incident that would be more appropriate to a high value offshore windfarm project. If we compare the financial consequence bandings of the applicant's NRA to that of the Humber Able Marine Energy Park which was granted a DCO in 2013 the differences are stark. 3.68 In terms of frequency the applicant has also chosen to use the lifetime of the project (which the applicant estimates to be 50 years) as their maximum considered scope, which also serves to downplay risk. Once again when compared to the DCO submission NRA for the Able Marine Energy Park the differences in timescale are stark.	
3.69 - 3.72	**Navigational Risk Assessment ("NRA") Methodology** 3.69 It is noteworthy that in the Applicant's pre-submission paperwork for the proposed Immingham Green Energy Terminal (IGET), located approximately 0.5nm east of this proposed development, the PMSC methodology is exclusively followed. 3.70 In producing this NRA the applicant has also	Both development proposals (the IERRT and the IGET The Applicant is confused by this comment which demonstrates a worrying lack of understanding of the NRA process. Both development proposals (the IERRT and the IGET proposals) follow the PMSC methodology – as required. In short, the IGET process has followed the same process as IERRT and can be compared as such – although it should be noted that as at Deadline 1, the IGET DCO application has not yet been submitted.

Reference	Relevant Representation	Applicant's Response
	failed to share the current NRA for the Immingham area. Without this data it is impossible for observers to understand the effectiveness of the current baseline level of risk mitigation and therefore impossible to assess the effectiveness of additional controls proposed in the applicants NRA for this proposed development. 3.71 DFDS are also of the opinion that the effectiveness of proposed future mitigation is overstated and, in some cases, does not constitute 'new' control measures. An example of such being the effectiveness of 'pilot training' as a highly effective new control measure. DFDS would assume that continual pilot training would form part of the current safety regime included in the current NRA for the Immingham area and therefore for the applicant to propose this as an additional control is both incorrect and the effectiveness in reducing risk vastly over inflated. 3.72 DFDS is also of the opinion that given the number of potentially catastrophic incidents that have occurred since the turn of the century (as previously listed at 3.5), averaging one every three years, the applicant is being unrealistic about the frequency with which such events will occur in the future.	What is "current" is described and commented upon in different sections of the DCO application and is also considered in the second appendix to the Shipping and Navigation chapter (simulations) (APP-090; 091 and 092). DFDS' opinions are noted – although it would be appreciated if future representations are provided in more measured terms. Suffice to say the views expressed by DFDS are not shared by either SHA and are not agreed.
3.73 - 3.75	**HAZID Meetings and Outcomes** 3.73 The IMO's Revised Guidelines for FSA for	Paras. 3.73-3.75 – Section 4 of The Guide to Good Practice on Port Marine Operations (GtGP) provides risk assessment

Reference	Relevant Representation	Applicant's Response
	Use in the IMO Rule-Making Process (section 3.3.1) 14 states: "The use of expert judgment is considered to be an important element within the FSA methodology. It not only contributes to the proactive nature of the methodology, but is also essential in cases where there is a lack of historical data." 3.74 The initial two HAZID (hazard identification) workshops were held simultaneously using two groups of stakeholders allocated to a workshop. One workshop considered the construction phase, the second considered the operational phase. 3.75 Although relevant stakeholders had been invited to attend the HAZID workshops the skill sets and workshops were mismatched. For example, Master Mariners were asked about the construction of the terminal and not about how ships might manoeuvre around the terminal when operational.	guidance in the context of supporting the port's Marine Safety Management System (MSMS). The GtGP suggests the use of staged risk assessment and provides an example of a five-stage risk assessment, similar to, but not completely the same as, the five-step process outlined in International Maritime Organization (IMO) Revised Guidelines for Formal Safety Assessment (FSA). The GtGP states - '*Risk assessment techniques are fundamentally the same for large and small ports, but the execution and detail will differ considerably*' and '*A risk assessment will typically involve five stages*'. The IMO FSA is not the primary policy for Port/Marine risk assessment in the UK. The MCA directs applicants to the PMSC (which is based on the IMO FSA) as the guidance and methodology to be used. At HAZID III the attendees were grouped at DFDS's request. This enabled each stakeholder the chance to comment. Further, there was a period of consultation following the workshops which provided an additional opportunity for stakeholders to make their comments. The Statutory Harbour Authority is confident that the correct level of expert judgement was considered in the development of the NRA.

Reference	Relevant Representation	Applicant's Response
3.76 - 3.83	**HAZID Meetings and Outcomes** 3.76 Also, in these meetings: 3.76.1 No explanation of the descriptions that were attached to frequency or consequence was provided to the attending stakeholders; 3.76.2 No explanation of the hazard categories prior to the assessment being conducted was offered; 3.76.3 Although a selection of relevant stakeholders had been invited, the wrong stakeholders attended the wrong workshops leading to non-credible results; and 3.76.4 No representatives from the construction/engineering team were present at the initial or subsequent meetings. 3.77 DFDS are therefore of the opinion that these workshops were not completed in line with the FSA guidance and offered little value to the Hazard identification stage of the NRA. 3.78 The IMO's Revised Guidelines for FSA for Use in the IMO Rule-Making Process (section 3.3.2) states: "In applying expert judgment, different experts may be involved in a particular FSA study. It is unlikely that the experts' opinions will always be in agreement. It might even be the case that the experts have strong disagreements on specific issues. Preferably, a good level of agreement should be reached. It is highly recommended to report the level of agreement	Para. 3.76 - The statement in paragraph 3.76.1 is incorrect in that there were handouts available throughout the day and an initial briefing was provided. Para. 3.76.2 - In respect of the comment made in paragraph 3.76.2, stakeholders were invited to describe any risk they could consider - the subsequent write up then categorised the risks that were identified. Para. 3.76.3 - The Applicant is surprised by this expression of concern in that as far as the HAZID workshops were concerned, the stakeholders were free to select their attendees. Para. 3.76.4 - the statement in paragraph 3.76.4 is simply incorrect. Engineering representatives were in attendance at HAZID III. Para. 3.77 - As has been explained above, the Applicant is confident that there has been full compliance with all necessary procedures and processes in the context of PMSC guidance for risk assessment. As also noted above, this has been confirmed by the MCA. Para. 3.78 - The Applicant is entirely satisfied that there has been full compliance with the PMSC and related guidance/advice. In addition, as also noted above, the MCA has stated they are also content with the NRA process.

Reference	Relevant Representation	Applicant's Response
	between the experts in the results of an FSA study." 3.79 Two further HAZID meetings were held and organised in a more structured way than the previous two with correct stakeholders attending relevant meetings. However, agreement was not always reached in terms of the consequence and severity levels being used to assess risk. 3.80 It was clear that the invited stakeholders all tended to agree with each other in terms of risk assessment severity and consequence levels, and the ABP Harbour Master also agreed with some of the arguments put forward by the subject matter experts. 3.81 Despite this the ABPmer consultant conducting the workshops did not agree with the stakeholders' evaluation of consequence and severity in some areas. 3.82 Although these items are discussed in the NRA report it appears the consultant considered all arguments by discussing with peers (not including stakeholders) then wrote to the stakeholder experts explaining why they disagreed and had chosen to use their own views in the NRA. 3.83 DFDS is therefore of the opinion that Hazard consequence and severity were not accurately	There appears to be a lack of understanding or a degree of confusion in the DFDS representation. The IMO FSA is not an identified requirement that has to be followed as it is not wholly applicable. To avoid repetition, please note the comment already provided to paras. 3.73-3.75 Para. 3.79 - With regard to paragraph 3.79, a difference of opinion in risk assessment considerations is very common and the identified method of resolution was used in all cases. Para. 3.80 - The comments provided in paragraph 3.80 are noted. This is in fact entirely the purpose of such Workshops. As all Stakeholder comments and risk outcome assessments were taken forwards, with full account being taken of any differences of opinion, the Applicant assumes that this comment from DFDS is acknowledgement that the Workshops were in fact correctly undertaken. Para. 3.81 – This comment again shows a lack of understanding as to how the stakeholder workshops were undertaken. The ABPmer consultant simply facilitated the workshop. He did not register, nor should he have registered, a vote or position in the hazard logs. As a facilitation technique for each risk outcome the question put was - 'so do we think this is 'x' or 'y' for frequency; or is it something else'? Para. 3.82 - The assertion made in paragraph 3.82 is groundless. It is not based on fact but instead on perception – and such unsupported allegations do little to further measured debate.

Reference	Relevant Representation	Applicant's Response
	assessed. Nor were the stakeholders sufficiently informed regarding previous incidents in the area to reach reasonable conclusions regarding frequency.	Para. 3.83 – The Applicant is concerned that the representations being made by DFDS are being motivated by their position as a direct commercial competitor to the potential operator of the proposed development as opposed to representation supported by genuine evidence and data. Thus, with regard to paragraph 3.83, DFDS has expressed a view as a stakeholder consultee but has completely failed to substantiate that view. DFDS is not the Statutory Harbour Authority. The stakeholders present at the HAZID workshops were Subject Matter Experts with a wealth of knowledge on operations in the Humber and the history of operations on the Humber. There was no requirement to comment further on unrelated historic incidents that have occurred within the wider study area as the proposed development does not yet exist. In simple terms, there are no specific incidents that are relevant to the proposed development.
3.84 - 3.90	**Duty Holder and Designated Person** 3.91 The Port Marine Safety Code Guide to Good Practice (p33 4.3) states: that 'Risk assessments should be done by competent people, especially when choosing appropriate quantitative risk assessment techniques and interpreting results. 3.92 The Applicant has used the wrong (offshore	The tolerability threshold was discussed at various levels within ABP before being presented to the HASB. At that meeting, the relevant context was explained to enable the HASB to make an informed decision. As far as para. 3.85 is concerned, this representation, like many included by DFDS in their Relevant Representations, is typical of criticism of the Applicant and the processes followed

Reference	Relevant Representation	Applicant's Response
	wind) methodology, which produces qualitative outputs, rather than the Port Marine Safety Code methodology that should have been solely used, which gives quantitative outputs. This in turn requires the Harbour Board (as duty holder) to interpret qualitative outputs, which is not consistent with this guidance given the composition of the Harbour Board, the vast majority of whom are not marine professionals and therefore not qualified or experienced to be making decisions on what constitutes an acceptable risk based on a qualitative marine risk assessment of this high-risk area. 3.93 To compound matters further the board's designated person failed to attend any of the HAZID meetings and is not identified as having participated in any way during the production of the NRA. He is therefore not best equipped to fully appreciate the concerns raised by the stakeholders at any of the meetings and is giving advice based solely upon the NRA and its heterogeneous methodologies. 3.94 A meeting of the Harbour Authority Safety Board ("HASB") was held on Monday 12 December 2022, at which the descriptors for the criteria shown in the likelihood and consequence and were formally approved by the ABP duty holder. 3.95 As previously mentioned, the OREI's methodology produces a tolerable risk level by	– without first confirming the facts. The criticism is fully refuted – and the ExA's attention is drawn to the Governance Note which is being provided by the Applicant at Deadline 1. Comments 3.86 and 3.87 lack factual referencing. They are being misused, taken out of context and contain wording not actually included in the government guidance as given. The correct direct PMSC and GtGP wording has been stated in the responses for ease of cross-reference to DFDS comments and referencing. 3.86 - This is not correct –ABP HASB is chaired by the the Applicant's CEO and is made up of ABP Directors, all of whom perform the 'duty holder' function. Some members of the HASB and indeed the "duty holders" are in fact experienced marine professionals. The role of the Designated Person is to be '*independent*' of the decision-making process – PMSC 1.12 - "*Their [designated person] role does not obscure the accountability of the organisation's duty holder*." 3.87 - The designated person's role is clearly stated in 1.11 of the PMSC - "*Each organisation must appoint an individual as the "designated person" to provide independent assurance directly to the duty holder that the MSMS, for which the duty holder is responsible, is working effectively. Their main responsibility is to determine, through assessment and audit,*

Reference	Relevant Representation	Applicant's Response
	description which is open to the interpretation of the reader. 3.96 It therefore becomes easy for the lay observer to reach the conclusion that the risks' descriptions are tolerable / ALARP, when in fact, if the views of the stakeholders had been properly included it would have been demonstrated that they are not. 3.97 Furthermore, as the Harbour Board is identical to the Board of Directors, the need to decide what constitutes an acceptable risk means that there is an apparent conflict of interest in terms of the development proposers and development risk assessment safety related decision makers being the same persons. 3.98 Given the above, DFDS give notice that they may wish to conduct oral questioning of the duty holder, harbour master or designated person at one or more hearings to ensure adequate testing of the conclusions of the NRA.	*the effectiveness of the MSMS in ensuring compliance with the Code*." In this respect the ExA is again referred to the ABP Governance Note prepared by the Applicant which is being submitted at Deadline 1. Para. 3.87 - The comments made by DFDS in para. 3.87 are stated as being referenced from p 22, para. 2.3.21 of the Guide to Good Practice. This is not correct and as a consequence, worryingly misleading. As a point of fact, the actual wording of p 22, para. 2.3.21 of the Guide to Good Practice is as follows – "*It is important that executive and operational responsibilities should be assigned appropriately by organisations – and to properly trained people. The organisations employees should have training appropriate to the responsibilities for marine operations assigned to them relating to the safety of marine operations. In some small organisations, functions may be combined. It is also important in all cases that there is a proper separation of safety and commercial functions. This is important for organisations of all sizes. Measuring and auditing performance A 'Designated Person' is required to provide independent assurance directly to the 'duty holder' that the safety management system is working effectively. A safety management system should include proper record procedures so that the duty holder and designated person can be satisfied that the system is functioning properly. Incidents*

Reference	Relevant Representation	Applicant's Response
		and complaints about safety should be promptly investigated; and the incident and investigation both properly recorded." Para. 3.87 – the DFDS comment that the - "*designated person is somebody independent from the organisation*" is just not correct and the Applicant finds it difficult to understand why such a comment has been made. Clearly it does not derive from The Port Marine Safety Code Guide to Good Practice (p22, para. 2.3.21). There is no need, nor requirement, for the Applicant's Designated Person to be involved in every stage of risk assessment for a proposed development. Indeed, quite the contrary is the case. It is in fact standard practice for senior members, such as the Designated Person, in light of that person's role as advisor, to be briefed on eventualities rather than attending all meetings during the NRA process. It should finally be noted that "ALARP" is a concept - not a numerical value. Assertions at paragraph 3.88 of DFDS's Relevant Representations describe what would be, if adopted, a fundamental departure from the PMSC's guidance.
3.91 - 3.98	**Duty Holder and Designated Person** 3.91 The Port Marine Safety Code Guide to Good Practice (p33 4.3) states: that 'Risk assessments should be done by competent people, especially when choosing appropriate quantitative risk assessment techniques and interpreting results. 3.92 The Applicant has used the wrong (offshore	In respect of paragraph 3.91, it should be noted that the risk assessments – undertaken in accordance with the PMSC – were undertaken by competent people. Apart from being somewhat repetitive, as already indicated above, these comments are simply not correct and it would have been helpful if DFDS had clarified the actual position with the Applicant before making unsupported statements.

Reference	Relevant Representation	Applicant's Response
	wind) methodology, which produces qualitative outputs, rather than the Port Marine Safety Code methodology that should have been solely used, which gives quantitative outputs. This in turn requires the Harbour Board (as duty holder) to interpret qualitative outputs, which is not consistent with this guidance given the composition of the Harbour Board, the vast majority of whom are not marine professionals and therefore not qualified or experienced to be making decisions on what constitutes an acceptable risk based on a qualitative marine risk assessment of this high-risk area. 3.93 To compound matters further the board's designated person failed to attend any of the HAZID meetings and is not identified as having participated in any way during the production of the NRA. He is therefore not best equipped to fully appreciate the concerns raised by the stakeholders at any of the meetings and is giving advice based solely upon the NRA and its heterogeneous methodologies. 3.94 A meeting of the Harbour Authority Safety Board ("HASB") was held on Monday 12 December 2022, at which the descriptors for the criteria shown in the likelihood and consequence and were formally approved by the ABP duty holder. 3.95 As previously mentioned, the OREI's methodology produces a tolerable risk level by	Again, subject to the need to repeat points already made above, with regard to paragraph 3.93, the designated person is not required to attend the HAZID meetings. The designated person gives advice and if appropriate, assurance to the board in respect of compliance with the PMSC. It is not the primary role of the designated person to deal with everyday operations (prospective or otherwise). Indeed, if the designated person were to be involved in such meetings, it would actually make it difficult for that person to remain impartial when reporting to the board. See previous response to 3.87. With regard to paragraph 3.95, to avoid duplication and repetition, please see response to 3.73-3.75 Para. 3.96 – The representation at paragraph 3.96 demonstrates a fundamental lack of understanding as to the process – which does lead the Applicant to query the credibility of the DFDS representations in general. In very simple terms, DFDS need to understand that the stakeholders are not the Statutory Harbour Authority. As such, it is not for the stakeholders to conclude on tolerability – that is the role for the ultimate decision make, which in accordance with the PMSC is the Duty Holder. That said, however, stakeholder views on the perceived level of risk are and have been fully taken into account.

Reference	Relevant Representation	Applicant's Response
	description which is open to the interpretation of the reader. 3.96 It therefore becomes easy for the lay observer to reach the conclusion that the risks' descriptions are tolerable / ALARP, when in fact, if the views of the stakeholders had been properly included it would have been demonstrated that they are not. 3.97 Furthermore, as the Harbour Board is identical to the Board of Directors, the need to decide what constitutes an acceptable risk means that there is an apparent conflict of interest in terms of the development proposers and development risk assessment safety related decision makers being the same persons. 3.98 Given the above, DFDS give notice that they may wish to conduct oral questioning of the duty holder, harbour master or designated person at one or more hearings to ensure adequate testing of the conclusions of the NRA.	Para. 3.97 – With regard to paragraph 3.97, clearly there can be no conflict of interest in a statutorily liable body determining what level of risk tolerability they are willing to accept and to suggest otherwise does again demonstrate a worrying lack of understanding as to due process. This is especially the case in lieu of firm legislative guidelines which do not exist in the case of risk to navigation. The fact that the applicant is also the statutory authority is inevitable under the current legislative framework for UK Ports and marine development licencing therein. The HASB (as duty holders) are aware of their duties under the requirement of law and the PMSC as a non-regulatory Code. It should be borne in mind that DFDS is a commercial Ro-Ro operator within the Port. The Applicant, as the SHA, is quite properly, the determining body.
5.1 - 5.5	**Impact of vessel congestion** 5.1 Chapter 10 of the Environmental Statement [APP-046] only assesses navigational safety, it does not assess any impacts such as increased access times for vessels using the existing port due to the increase in number of vessels (likely slow-moving due to issues of manoeuvrability) from the construction and operation of this project.	Impacts on existing users of the port associated with vessel Paras. 5.1 to 5.4 - Impacts on existing users of the port associated with vessel congestion is assessed in Chapter 16 of the ES [**APP-052].** Specific impacts on DFDS The Statutory Harbour Authority has considered the increase in vessel movements and has concluded that the increase in vessel traffic is not material to the efficient operation of the

Reference	Relevant Representation	Applicant's Response
	This should have been assessed, just as it has been for vehicles on land. ABP committed to a commercial workshop on this issue but it has not happened. 5.2 The navigational simulations show that the new berths will cause significant interference with the existing agreed vessel waiting areas (stemming). The impact on the two currently agreed areas for stemming will reduce overall capacity and cause delays for existing services and will become a barrier for growth at the port. Notice to mariners SH22 outlines the current agreed areas for stemming. The manoeuvres shown on the navigational simulations will result in the existing stemming areas becoming unusable during every vessel arrival and departure at the new terminal. This means vessels will need to stem 20 nautical miles (nm) east of the current locations, resulting in longer waiting periods, increased fuel consumption and CO2 emissions before reaching their destination. 5.3 Modelling three scheduled daily services arriving between 0500hrs and 0800hrs and departing between 1900hrs and 2100hrs 6 days per week, the simulations show arrivals will take on average 45 minutes and departures around 20 minutes. The additional movements have the potential to cause delays or remove capacity in the lock programme for over three hours per	estuary. This is discussed within the Future Baseline Chapter of the NRA (**APP-089**). Para. 5.4 - Tug companies on the Humber have been consulted and they will grow to meet conditions as required to facilitate their role in berthing and departure procedures. Both SMS and Svitzer have stated their intention to increase or reallocate tugs as required to keep up with demand. This is a common position across the UK port industry and is mostly evident on the River Thames with the increase and upgrade of harbour tug to facilitate the requirements of the introduction of London Gateway and Tilbury Two operations and increase in demand. The towage providers are also committed to improving the environmental credentials of their fleet, including the use of alternative fuels and more efficient engine types/usage.

Reference	Relevant Representation	Applicant's Response
	day. During days when the weather impacts vessel manoeuvring or there are other operational delays, these will be significantly longer. During periods when the shipping programme is particularly busy the additional time required for manoeuvring will cause a significant over-demand and under-capacity for the lock. This will result in further vessel delays which the operating plan has no resilience to recover from causing disruption to scheduled services. 5.4 Delays in tug vessel availability is already common, and the towage requirements for the new terminal will only exacerbate the situation. The challenging manoeuvres required at the new terminal will result in higher tug occupancy resulting in lower tug availability and increased waiting times for other users. This will impact schedule performance, fuel consumption and CO2 emissions. 5.5 Similar considerations apply to the effect of congestion on the roads, which is covered in the next section.	

Table 7.20 British Steel Ltd (RR-044)

Reference	Relevant Representation	Applicant's Response
1.1	The development may redirect traffic to the West entrance, which could slow the flow or coal/coke	The use of the Port's West Gate, as opposed to the East Gate has been considered in the Applicant's Transport Assessment

	lorries to and from IBT. Also the development may impact on pilot/tug availability in the Humber and cause With 3 new berths being available, that is 3 more vessels in the line-up. This could impact our ability to sail vessels to and from IBT in a timely manner.	(ES: Traffic and Transport (Chapter 17, APP-053, Doc. Ref – 8.2.17 and Appendix 17.1 (Traffic Assessment, AS-008, Doc. Ref. 8.4.17(a)) As described in the response above, Tug companies on the Humber have been consulted and they will grow to meet conditions as required to facilitate their role in berthing and departure procedures. The SHA for the Port is fully aware of the position and any issues will be dealt with as part of the ordinary course of business.

Table 7.6: Able Ports Ltd.

Reference	Relevant Representation	Applicant's Response
3.3.1	The proposed deposit sites are relatively small and are already commonly used for the disposal of material from maintenance dredging campaigns for the Immingham and Killingholme areas. Able is concerned that the disposal of this quantity of material in these two deposit grounds could seriously reduce the capacity to accept material from the continual maintenance dredging campaigns forcing the dredgers carrying out such maintenance dredging campaigns to use other deposit grounds therefore reducing their efficiency and availability.	It is important to note that HU060 is a dispersive disposal site, meaning that material deposited here will be rapidly dispersed within the wider Humber Estuary rather than accumulate on the seabed. Therefore, the capacity of this disposal site will not be affected by the IERRT project during construction or operation. The disposal site is already licensed to dispose of up to 7,500,000 m³ of maintenance dredge material per year. There remains more than sufficient headroom in the existing (permitted) tonnages stipulated within the present maintenance dredge disposal licence. This is also true for

		the retentive HU056 disposal site. Placement of material here will be guided to the deeper areas of the disposal site (as is the current accepted practice), in order that the site is not overfilled and associated changes to bathymetry remain within the conditions of the existing disposal licence.
3.3.2	Able is concerned that the disposal of such a quantity of dredge material so close to the Immingham area is likely to find its way back at the south Humber bank and increase siltation there, which could interfere with the construction and subsequent operation of the Able Marine Energy Park. It is of note that the deemed marine licence in Able's own DCO authorises the deposit of dredge arisings at different sites HU080, HU081 and HU082, further downstream towards the mouth of the Humber Estuary, as shown in Map 3 below, extracted from the AMEP Environmental Statement (Chapter 8). Able would wish to see protective provisions whereby any increased dredging requirement at its facility due to this project be paid for by the Applicant.	The physical processes assessment (Chapter 7 of the ES [**APP-043**]) considers the potential impact of the capital dredge campaign and associated disposal and has applied bespoke numerical modelling tools to assess the fate of dredge arisings and deposited material. It concludes that the capacity of the proposed disposal sites (HU060 and HU056), the maintenance dredge requirements at existing berths at the Port of Immingham, and the bathymetry of the wider Humber Estuary will not be significantly affected by the Proposed Development.

8 Additional Responses

8.1 The comments of the Applicant on the Relevant Representations (RR) submitted by the Interested Parties covering additional responses that sit outside Issue Specific Responses are set out below.

8.2 The Representations relating to navigation and shipping are found within the representations submitted by –

i. the Environment Agency [RR-009]
ii. BDB Pitmans LLP on behalf of DFDS Seaways [RR-008]; and
iii. CLdN Ports Killingholme Limited (CLdN) [RR-007].

8.3 The comments raised in the relevant representation by each interested party, and the Applicant's responses to them, are presented in the following tables:

- Table 8.1 – Environment Agency ("EA");
- Table 8.2 – DFDS; and
- Table 8.3 – CLDN.

Table 8.21 Environment Agency [RR-009]

Reference	Relevant Representation	Applicant's Response
Draft Development Consent Order – Schedule 2, Part 1, Requirements [APP-013]		
3.2	Requirement 8 – Construction and Environmental Management Plan. This document appears to secure flood risk mitigation measures, particularly during the construction of the project. We, therefore, request that we are included as a consultee to the agreement of	The Applicant has included the EA as a consultee for any amendments to the CEMP pursuant to Requirement 8 of the draft Development Consent Order in the updated draft DCO submitted at Deadline 1.

Reference	Relevant Representation	Applicant's Response
	any amendments to this document, should they be forthcoming in respect of flood mitigation.	
Environmental Statement Chapter 12: Ground Conditions including Land Quality [APP-048]		
8.1	We have reviewed Chapter 12, together with the relevant Appendices. It is understood that the ground investigations undertaken to date have identified potential contamination concerns that require further investigation and assessment. A confirmatory ground investigation has been undertaken and is expected to be completed soon after the submission of the DCO application. It is understood that this confirmatory ground investigation will provide further groundwater monitoring, sampling and testing to support the controlled waters risk assessment. The final remediation strategy will also be revised based on the findings of the confirmatory ground investigation. Furthermore, piling risk assessments are to be undertaken to detail mitigation measures to protect controlled waters from potential pollution associated with piling operations.	Whilst ground investigations have indeed been undertaken and reviewed in the EIA, the Applicant is pleased that the EA has acknowledged the importance of the further confirmatory ground investigation work. The results of this process will support the controlled waters risk assessment and will also inform the final remediation strategy. Piling risk assessments can also be undertaken which will ensure that appropriate mitigation measures for the protection of controlled waters can be adopted. The Applicant can also confirm that following further direct correspondence, the EA agrees with the Applicant's approach to assessing risks posed to controlled waters and that Requirement 16 within Schedule 2 of the draft DCO is sufficient to ensure that the risks to controlled waters are appropriately controlled. This position will be formalised within a Statement of Common Ground in due course.
8.2	Based on the above, we are satisfied that the approach to assessing the risks posed to controlled waters from contamination is appropriate and is following the Environment Agency's land contamination risk management framework provided in Land Contamination: Risk Management. Schedule 2, Part 1,	The Environment Agency's position has been noted and, on that basis, no further response at this stage is required.

Reference	Relevant Representation	Applicant's Response
	Requirement 16 in the draft DCO is considered sufficient to ensure that the risks to controlled waters from the proposed development are managed/controlled.	
Document 9.2: Construction Environmental Management Plan (CEMP) [APP-011]		
12.1	We have reviewed the Construction Environment Management Plan (CEMP) (alongside the surface water drainage arrangements outlined in Sections 3.1-3.4 of the Drainage Strategy included as Annex B to the flood risk assessment [APP- 093]) for issues within the Environment Agency's remit.	The Environment Agency's position has been noted and, on that basis, no further response is required.
12.2	Paragraph 2.5 states that *"wheel cleaning facilities will be installed at the site from the start of the construction phase"* for all HGVs to wheel wash prior to leaving. As there will be no requirement for wastewater services from Anglian Water and wastewater is to be managed on-site including septic tanks/sewage treatment plants; it is advised that a discharge permit may be required if discharging to the water environment and best practice utilised to prevent pollution.	The Applicant notes these comments. The Construction Environmental Management Plan (CEMP) **[APP-111]** for the Project includes a range of best practice pollution prevention control measures that will be utilised during the construction of the Project. As noted by the EA, wastewater is to be managed on site, however, in the unlikely event a discharge permit is required, the appointed Principal Contractor will be responsible for obtaining any necessary permit prior to the commencement of any relevant activity. This position is as explained in the Consents and Agreements Position Statement **[APP-110]**.
12.3	This is also relevant to wash water from batching plants and wastewater from dust/particulate matter suppression/mitigation, which would require a	See response above.

Reference	Relevant Representation	Applicant's Response
	discharge permit if discharging to the water environment. We can provide further advice on surface water and groundwater environment permits to the applicant if required. We note the Applicant acknowledges (as per our comments in paragraph 11.1 above) that should a water discharge permit be required this will be secured prior to the commencement of relevant works.	
12.4	Table 3.5 states that *"flood resilience measures can be incorporated into the IERRT project to minimise the amount of damage and reduce recovery time….."*. The applicant should note that such measure will be required, particularly where FFLs are not raised above the design flood level – see paragraph 7.2.1 above.	The Environment Agency's position has been noted and, on that basis, no further response is required

Table 8.22 DFDS [RR-008]

Reference	Relevant Representation	Applicant's Response
	Noise	
6.13 - 6.20	Chapter 14 of the Environmental Statement [APP-050] contains the noise assessment. Paragraph 14.8.26 commits to acoustic screening but without committing to reducing noise levels at Noise Sensitive Receptors by 5dB. The assessment of construction noise on noise-sensitive receptors does not account for existing background noise levels (see paragraph 14.8.29).	The concern raised in the first part of this RR paragraph relates to the assessment of noise on the PAM building. The construction noise assessment has included a 5 dB attenuation for temporary acoustic screening either around the construction plant operating near the PAM building or around the PAM building. This is a conservative approach as acoustic screening could provide more than 5 dB attenuation, whereby the 5 dB reduction comes from BS 5228:2009 Code of practice for noise and vibration control

Reference	Relevant Representation	Applicant's Response
		on construction and open site Part 1: Noise, for partial screening of a source. Existing ambient noise levels have been used to determine construction noise thresholds for residential properties as set out in paragraph 14.8.14 of ES Chapter 14 **[APP-050]**, an approach that is in accordance with the guidance contained in BS 5228:2009+A1:2014: Code of practice for noise and vibration control on construction and open site – Part 1: Noise.
6.14	The assessment (paragraphs 14.8.31, 32, 35) assumes not all construction activities will occur at the same time but there is nothing to ensure that this is the case and no mitigation proposed if it does happen.	This statement is incorrect. The construction noise assessment has included all daytime construction activities occurring at the same time, which results in negligible effects on residential receptors (which are all off site). For the on-site noise sensitive receptors, the assessment also demonstrates how relevant internal noise levels are met and no significant effects are likely to be generated.
6.15	'It is understood' that air conditioning or alternative means of ventilation are provided within various buildings (14.3.49, 14,8.32, 14.8.34) but it is not clear upon what this understanding is based. At 14.8.58 it is assumed that fixed plant will not be noisy, but this assumption is not secured anywhere, nor is there any data to justify the statement that it will not be noisy for noise sensitive receptors.	It is noted that these comments of DFDS jump between points on construction noise matters and operational noise matters for non-residential and residential Noise Sensitive Receptors (NSRs). The Applicant has conducted on-site investigations and engaged with the occupants (as listed within paragraph 14.3.48 of Chapter 14: Airborne Noise and Vibration **[APP-050]** of non-residential NSRs, in order to establish the ventilation available. This engagement with the occupiers of

Reference	Relevant Representation	Applicant's Response
		the affected non-residential NSRs has informed the statement '*air conditioning or alternative means of ventilation are provided within these building allowing windows and doors to remain closed*' as stated within paragraph 14.3.49 of Chapter 14: Airborne Noise and Vibration **[APP-050]**. As stated in paragraph 14.8.58 of Chapter 14: Airborne Noise and Vibration **[APP-050]** which deals with matters relating to operational noise at residential NSRs - fixed plant elements of the development (i.e. elements required for heating / cooling and ventilation that are standard elements of most forms of development) will be appropriately specified in terms of product type and operating parameters (with respect to noise emissions) and / or located, in terms of detailed design, away from NSRs. The assessment concludes that significant adverse noise impacts on the NSRs located along Queens Road and Kings Road and on any on-site NSRs are unlikely and therefore they have not been included in the operational assessment.
6.18	Paragraph 14.9.1 acknowledges that some landside construction works may take place outside core hours, but these have not been assessed. Paragraphs 14.9.4 and 14.9.12 state that electrical plant will replace diesel power 'where possible and feasible' but this is not guaranteed and there is no mitigation proposed if it does not happen or until it happens.	Paragraph 14.9.1 of ES Chapter 14 **[APP-050]** states that construction works outside the core working hours would comply with any restrictions agreed with the local authority via a Section 61 application under the Control of Pollution Act (CoPA). The use of electrical plant will help to reduce the noise levels further, however, the assessment has been based on the use of diesel-powered plant and vehicles.
6.19	The noise insulation scheme (mentioned at 14.9.14-15 and requirement 10 of the dDCO) does not oblige any	The Applicant can confirm that noise insultation will be offered at those residential properties between and including

Reference	Relevant Representation	Applicant's Response
	particular reduction in noise and will not be implemented unless the landowner concerned agrees to it, neither is its cost quantified in the Funding Statement [APP-018] – this falls far short of a binding commitment and what an insulation scheme should involve.	Number 1 to Number 31 on Queens Road (identified as Noise Sensitive Receptors (NSRs)). The offer for this form of mitigation is proposed to reduce significant adverse noise levels at these properties to levels considered not significant. This offer for noise insultation has been presented within Chapter 14: Airborne Noise and Vibration **[APP-050]** and within the Schedule of Mitigation **[APP-116]** for the Project. Requirement 10 of Schedule 2 of the dDCO **[APP-013]**, has wording to the effect that mitigation will be offered to the NSR occupants/owners. Its inclusion within both the Schedule of Mitigation **[APP-116]** and Requirement 10 of Schedule 2 of the dDCO **[APP-013]** provides the necessary assurances that the Applicant will offer this mitigation to the NSRs.
6.21	The Environmental Statement Chapter 13 [APP-049] uses Defra background data for NOx, PM10 and PM2.5, supplemented by some diffusion tube data for NO2, scaled down for 2025 on the assumption (without any specifics) that there will be technological changes to vehicles that improve emissions (see e.g. paragraph 13.9.9). This amounts to insufficient data-gathering and unjustified over-optimistic assumptions about trends. SO2 emissions from vehicles are not assessed at all.	Assuming improvements year on year is standard practice and is in accordance with guidance (Defra LAQM guidance (2022) and IAQM guidance (2019). A precautionary approach is included in the ES with the inclusion of a sensitivity analysis, whereby the assumption is that the projected technological improvements aren't fully realised, based on the National Highways approach (2019). SO_2 was not assessed because SO_2 is emitted from vehicle exhausts in negligible quantities (petrol and diesel in the UK is sulphur-free (<10ppm sulphur)).

Table 8.3 CLDN [RR-007]

Reference	Relevant Representation	Applicant's Response
	Terrestrial Heritage	
4.3.3	Chapter 15 (Cultural Heritage and Marine Archaeology): Terrestrial heritage receptors appear to have been erroneously scoped out of the ES. This is contrary to the advice in Historic England's response to the Scoping Opinion Request which highlighted that "….impacts on terrestrial archaeological features should also be considered in order to properly understand the marine archaeological environment". The Heritage Gateway clearly shows a number of terrestrial heritage assets recorded in the onshore area of the application boundary and also identified in North-East Lincolnshire Council's response to the Scoping Opinion Request.	This matter has been raised as a specific question by the ExA in its first round of questions (question LHE.1.3). A full response to this point will be provided in the response to question LHE.1.3 by Deadline 2. In summary, the CLdN comments misunderstand the position and ABP's more detailed answer to be submitted by Deadline 2 will – amongst other things - explain why terrestrial heritage receptors were not erroneously scoped out of the assessment.

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