NE Key Issue Ref	Issue summary (C) - Construction Phase, (O) Operation PhaseParagra no.	ph Natural England commentary and advice on the further information required to enable assessment	Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO/ deemed marine licence	signposting docs received 12.06.23?		Do NE consider that this point is now fully addressed / resolved?	Additional note (s)	NE Additional Advice (sent to ABP 30 June 2023)	Comments made by ABP during meeting 03 July 2023	Additional note(s) from ABP 10 July 2023	NE Additional Advice (sent to ABP 03 August 2023)		RAG rating for key issue
1	International designated site •Eumber Estuary SAC •Eumber Estuary SPA •Eumber Estuary Ramsar International designated site •Eumber Estuary SPA •Bumber Estuary Ramsar International seessment methodology for air quality impacts from construction and operational phase traffic and/or marine vessel emissions (O) and (C)	Natural England recommends that the assessment of potential air quality impacts from construction and operational phase traffic is undertaken in-line with our guidance note 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.	N/a: Further information required	Yes	Air Quality - Key Issue 1 · Point 1)	Yes	Requires assessment in AA but agree that could determine no adverse effect of the integrity of the designated site.	We assume that the mudflat habitat referred to within 200m of the project, is the SAC feature H1140 " <i>Mudflats and sandflats not covered by seawater at low</i> <i>tide</i> ". This is recorded on APIS as being sensitive to nitrogen. It is correct that there is no established available critical load estimate, however, this is because this is dependent on site-specific details. These details include the plant and animal communities present, which vary according to the type of sediment, its stability, and the salinity of the water. Although the signposting document notes the habitat is unvegetated, please provide further information (such as an NVC survey of this part of the SAC), to further define the habitat type present. Additionally, there is no assessment of the H1130 "Estuaries" feature, which does have a critical load defined on APIS (10-20kgN/ha/yr). We therefore advise it would be precautionary to apply this critical load. We advise that the critical levels for NOx and ammonia would apply to all habitats in the SAC (including H1130 and H1140). Please identify receptor points within the SAC that would represent the "worst case" impact within the SAC for all pollutants.	NE requested information on the level of vegetation cover on the mudflat	 > The critical load for 'estuaries' provided on APIS is simply that for saltmarsh, as this represents the most sensitive estuarine habitat. APIS states that the Critical Load for estuary habitat "Applies to the saltmarsh component of the feature", which is what is reported in the ES. > There are no critical loads which are based upon the effects of nitrogen deposition on sediment infaunal communities. Therefore there is no appropriate proxy critical load for unvegetated mudflat. > The critical levels for NOx and ammonia are based on studies into the effects of these chemicals on rooted macrophytes and are therefore not appropriate to entirely unvegetated habitats - i.e areas of the estuary that are not saltmarsh. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarifi that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.		Green
1	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary SPA Ramsar A General comments and further information required in relation to the assessment methodology for air quality impacts from construction and operational phase traffic and/or marine vessel emissions (O) and (C)	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 '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.	N/a: Further information required	Yes	Air Quality - Key Issue 1 - Point 2)	Yes	Requires assessment in AA but agree that could determine no adverse effect of the integrity of the designated site.	As noted for issue 1.1, please provide assessment of impacts on the H1130 and H1140 features. However, Natural England concur that is reasonable to exclude the habitat H1110 <i>"Sandbanks which are slightly covered by sea water all the</i> <i>time"</i> from further assessment of nitrogen deposition/ concentration, as this habitat is not considered sensitive to nitrogen/eutrophication (or NOx/ammonia/acidity).		As above	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.	ed	Green
1	International designated site •Eumber Estuary SAC •Eumber Estuary SPA •Eumber Estuary Ramsar 3 General comments and further information required in relation to the assessment methodology for air quality impacts from construction and operational phase traffic and/or marine vessel emissions (O) and (C)	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 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.	N/a: Further information required	Yes	Air Quality - Key Issue 1 - Point 3)	Yes	Requires assessment in AA but agree that could determine no adverse effect	Thank you for providing clarification on terminology (use of a collective term "air quality standards"). We would advise that the terms "critical loads" (for nitrogen and acid deposition) and "critical levels" (for NOx and ammonia) are used alternatively. This is because they do differ, and impact ecosystems in different ways. We agree that application of the lower value of critical load ranges, as stated, is the correct approach. We also note that critical loads have been updated on APIS in May 2023 following a Europe-wide review of the ranges, reflecting changed and improved knowledge around impacts of air pollution on ecosystems. We do not require application of these new critical loads to planning applications at an advanced stage of determination (i.e., where our advice has already been based on the 2011 critical loads). However, any new assessment (including further information within examinations) should use the new critical loads.		Noted	Accepted - Ideally this would be changed in the documentation to use the standard terminology (Critical Load (Clo), Critical Level (CLe)). However, this is not essential now we have received confirmation that the term "air quality standards" are being used as a catch-all term for the relevant CL/CLe.		Green
1	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary RamsarGeneral comments and further information required in relation to the assessment methodology for air quality impacts from construction and operational phase traffic and/or marine vessel emissions (O) and (C)4	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.	N/a: Further information required	Yes	Air Quality - Key Issue 1 - Point 4)	Yes	Requires assessment in AA but agree that could determine no adverse effect of the integrity of the designated site.	Point 1.1 of the signposting document indicates that there is one road affected by the project within 200m of the Humber Estuary SAC. Ammonia arising from this road should be considered, alongside any other ammonia-emitting sources (including non-road traffic) within the site boundary.	Action: NE (LF) to obtain advice from Air Quality advisor.	 > There is no defined saltmarsh habitat within 200m of any roads used by IERRT traffic. > The assessment does include NH3 emissions from any road within 200m of the SAC - the jetty and the jetty approach road used by IERRT traffic. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the appropriate assessment. As the applicant has clarifie that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.		Green
1	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary Ramsar •Bumber Estuary Construction and operational phase traffic and/or marine vessel emissions (O) and (C)	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.	-	Yes	Air Quality - Key Issue 1 - Point 5)	Yes	Requires assessment in AA but agree that could determine no adverse effect of the integrity of the designated site.	We advise that a precautionary approach is taken to model emissions from vessels across the route taken through the SAC, including predicted concentration/deposition at the nearest emergent sensitive habitat.	Action: NE (LF) to obtain advice from Air Quality advisor.	 > IEERT will accommodate 3 vessel movements through the estuary per day. 2 of those movements are associated with vessels that already travel through the estuary, but berth elsewhere. So, in reality, IERRT will generate 1 additional vessel movement through the estuary per day. > To model the emissions of a single vessel movement per day would be overly precautionary, given the fact that the emissions source will be tranisent and will only impact on any one sensitive location for a matter of minutes/day. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.	ed Green	Green
1	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary RamsarGeneral comments and further information required in relation to the assessment methodology for air quality impacts from construction and operational phase traffic and/or marine vessel emissions (O) and (C)6	Alongside consideration of potential impacts of NOx, NH3 and N deposition, assessment is also required of acid deposition impacts to relevant designated sites	N/a: Further information required	Yes	Air Quality - Key Issue 1 - Point 6)	Yes		Although the noted acid-sensitive habitats are located at distance to the development, marine vessel routes could pass closer to these. Please provide further assessment of this. Please also assess impacts of acid-deposition on the broad habitat types for any faunal qualifying features (i.e. lamprey and seal) of the SAC. We acknowledge that the habitats of the bird species associated with the SPA are unlikely to be impacted by acid deposition.	Action: NE (LF) to obtain advice from Air Quality advisor.	 > As per the point above, IERRT will generate 1 additional vessel movement per day. The transient emission source will only impact on any one sensitive location for a matter of minutes/day > There are no acidity critical loads applicable to the habitats of either seals or lamprey. > It would be inappropriate to apply the acidity critical loads for other estuary sensitive habitat as these are based on the effects of acid deposition on rooted macrophytes, which are not relevant to either faunal group. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.		Green
1	International designated site •Eumber Estuary SAC •Eumber Estuary SPA •Bumber Estuary Ramsar Ramsar General comments and further information required in relation to the assessment methodology for air quality impacts from construction and operational phase traffic and/or marine vessel emissions (O) and (C)	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. It is generally well-established that the scope of an in-combination assessment is restricted to plans and projects which are 'live' at the same time as the assessment being undertaken. These can potentially include: •The incomplete or non-implemented parts of plans or projects that have already commenced •Elans or projects given consent or given effect but not yet started •Elans or projects given consent or given effect but not yet started •Elans or projects currently subject to an application for consent or proposed to be given effect •Erojects that are the subject of an outstanding appeal •Ongoing plans or projects that are the subject of regular review •Any draft plans being prepared by any public body •Any proposed plans or projects published for consultation prior to application		Yes	Air Quality - Key Issue 1 - Point 7)	Yes		clear if the two additional projects (Border Control Post located on Queens Road and an industrial / commercial scheme off the West Gate roundabout within the Port Estate) are included. Any additional allocations within local plans should also		 > NE guidance suggests a "sequential approach can be taken to quickly filter out those proposals posing no credible risk". Application of NE guidance is technically screened out at Step 2 - "Are the qualifying features of sites within 200m of a road sensitive to air pollution"? > The impact of the IERRT project on N deposition rates at sensitive locations in the SAC was <0.3% of the relevant CL at the time of the assessment. > The impact of the IERRT project on NH3 concentrations at sensitive locations in the SAC was <0.2% of the relevant 1 ug/m3 CL and <1% of the 3 ug/m3 CL. > The impact of the IERRT project on NOx concentrations at senstive locations in the SAC was >1% of the relevant CL. Where this occurred, total concrtations with the project were <58% of the CL. > Given the limited impact of the IERRT scheme on nature conservation receptors within the SAC, it was considered that in-combination effects would not alter the conclusion of the assessment. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.		Green
1	International designated site •Eumber Estuary SAC •Eumber Estuary SPA •Eumber Estuary Ramsar Bumber Estuary Construction and operational phase traffic and/or marine vessel emissions (O) and (C)	See 4.4 of NEA001 for our guidance on what should be considered as part of the in-combination assessment.	N/a: Further information required	Yes	Air Quality - Key Issue 1 - Point 8)	Yes	Requires assessment in AA but agree that could determine no adverse effect of the integrity of the designated site.	Additional information about in-combination assessment has been provided above for key issue 1.7.		As above	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.	ed	Green
2	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary Ramsar I and Gesignated features (C)	 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 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 a more robust appproach 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. 	N/a: Further information required	Yes	Air Quality - Key Issue 2 - Point 1)	Yes	but agree that could	Please provide assessment against the critical levels for NOx and ammonia, as well as against the critical loads for nitrogen (N) deposition. As outlined at point KI1.1, if the closest habitat is H1140, this has a NOx critical level of 30µg/m ³ (so further consideration within an appropriate assessment would be required if the process contribution alone or in combination exceeded 0.3µg/m ³ – i.e. 1%). As bryophytes and lichens are not integral to estuarine ecosystems, ammonia would be assessed in relation to the higher plant critical level which is 3µg/m ³ so an increase of 0.03µg/m ³ would require consideration in the appropriate assessment. The impact of construction emissions would also contribute to N deposition which, as previously stated, cannot be excluded for the N sensitive mudflat/estuarine habitat.			As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.		Green
2	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary RamsarPotential air quality impacts from construction traffic and/or marine vessel emissions on Humber Estuary SAC/SPA/Ramsar designated features (C)3	Construction traffic is currently excluded with the reasoning that on average there will be fewer than 200HDVs per day. However, there will be peaks where 200HDVs per day is exceeded, therefore we advise an precautionary approach is used and further assessment of construction traffic is provided.	N/a: Further information	Yes	Air Quality - Key Issue 2 · Point 2)	Yes		The 200AADT HDV threshold is a proxy for the 1% of the critical level for NOx/critical load for N dep, which is an annual figure. It is acknowledged that annual emissions (whether from traffic or other sources) are likely to be most relevant to ecosystem impacts. Therefore, although peak emissions can in some cases be relevant, in this case, given the marginal level of construction traffic above the 200AADT HGV data, on only a few days, there is no requirement to undertake further assessment of construction traffic impacts, as it is considered that breaching the threshold (in-combination) on only a few days will have minimal impact.		Noted	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Green
3	International designated site •Eumber Estuary SAC •Eumber Estuary SPA •Elumber Estuary Ramsar (O)	 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 airbourne 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 benchmark should be calculated and included in the report. The environmental benchmark should be the critical level for NOx. 	N/a: Further information required	Yes	Air Quality - Key Issue 3 - Point 1)	Yes	but agree that could determine no adverse effect	If the NOx critical level itself is not exceeded (including the process contributions (PC)), further justification / assessment should still be made in the appropriate assessment rather than at screening stage, wherever the PC exceeds 1% of the critical level. This is also outlined in our NEA001 guidance. It is likely that were the (in combination) Predicted Environmental Concentration (PEC) predicted to be in the region of 16 μg/m3 at the SAC then Natural England would agree that there would be no adverse effect as a result of NOx. However, it does not always follow that a PEC below the critical level would not result in an adverse impact, dependent on the trends of pollution in the area, any incombination projects, and the extent to which the PEC is below the critical level. It is also reiterated that had closer receptors been identified, they would be anticipated to have experienced higher NOx levels arising as a result of the project.		 > Where airborne Nox impacts are >1% of the CL, total Nox concentrations are <58% of the CL. > Airborne Nox concentrations are falling year on year across most areas of the UK (with the exception of some urban centres), primarilty because of improved emissions technology. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.	ed	Green
3	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary SPA RamsarPotential air quality impacts from operational traffic and/or marine vessel emissions to air on Humber Estuary SAC/SPA/Ramsar designated features3(O)	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.	N/a: Further information required	Yes	Air Quality - Key Issue 3 - Point 2)	Yes	Requires assessment in AA but agree that could determine no adverse effect of the integrity of the designated site.	This clarification is welcomed. However, as the vessels may pass closer to sensitive habitats (see earlier points in relation to features H1130 and H1140) than the currently identified receptors, please provide further assessment of this aspect.	Action: NE (LF) to obtain advice from Air Quality advisor.	 > IERRT will generate 1 additional vessel movement through the estuary per day. > Emissions from that vessel will transient as it passes through the estuary and will only impact on a specific sensitive location for a period of minutes per day. > Given the Humber Navigational Channel, the transient emissions source will never be closer than 1.5km of an air quality senstive habitat. 	As there is a pathway of impact and the 1% screening threshold is exceeded then AQ cannot be screened out at the Likely Significant Effect stage and must be considered under the Appropriate Assessment. As the applicant has clarific that the habitat to be within the zone of influence of any AQ impacts is unvegetated mud only, and all or partially tidally inundated, then we can agree that the Appropriate Assessment could determine no adverse effect of the integrity of the designated site.	ed	Green
3	International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary Ramsar (O)	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.	N/a: Further information	Yes	Air Quality - Key Issue 3 - Point 3)	No	N/a - Further information required.	As identified for key issue 3.1, although the PEC does not exceed the NOx critical level, this should be considered at the appropriate assessment stage, where the 1% screening criteria is exceeded. The impact at closer receptor points should also be assessed, where NOx concentrations are greatest. In relation to ammonia, Table 13.16 of the ES indicates that the change in ammonia concentration would be "<0.1µg/m3" which is quoted as <1% of the critical level. Assuming at this location, the critical level is 3µg/m3 (as bryophytes and lichens are not integral to estuarine habitats, according to APIS) a value of 0.1µg/m3 represents 3.3% of the critical level. Please provide the actual values (rather than rounded values) before NE can provide further comment.	Action: NE (LF) to obtain advice from Air Quality advisor.	NH3 impacts to 2-deciaml places are as follows: - SAC1 0.09 of the 1ug/m3 and 0.03% of the 3ug/m3 CL. - SAC2 0.03 of the 1ug/m3 and 0.01% of the 3ug/m3 CL. - SAC3 0.15 of the 1ug/m3 and 0.05% of the 3ug/m3 CL. - SAC4 0.15 of the 1ug/m3 and 0.05% of the 3ug/m3 CL. - SAC5 0.11 of the 1ug/m3 and 0.04% of the 3ug/m3 CL.	This aspect to be amended in the document as is currently unclear. Table 13.16 to be amended accordingly in line wi our previous comments.	th Amber	Green
4	International designated sites •Bumber Estuary SAC •Bumber Estuary SPA, SAC and Ramsar from construction dust (C)	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 20 m 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 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.	N/a: Further information required	Yes	Air Quality - Key Issue 4 - Point 1)	Yes	We are now able to move this key issue to 'green'.	The point made by the applicant around inundation of mudflat habitats is reasonable, and it is acknowledged that sediment loading to the habitat will be much greater than that arising with mitigated construction dust. Although Natural England considers there is a pathway for dust to impact on the integrity of the designated site (and therefore a likely significant effect) ultimately it is accepted that the mitigation employed and the general non-susceptibility of the impacted habitat to dust (as a result of inundation) would mean that the conclusion of the appropriate assessment would be that there would be no adverse effect on the integrity of the site as a result of construction dust.		Noted	N/a - Now a 'Green' issue	Green	Green
5	International designated sites •Eumber Estuary SPA •Eumber Estuary Ramsar (C) and (O)	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)'.	N/a: Further information	Yes	Bird Disturbance - Key Issue 5 - Point 1)	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'.	NE satisfied that this point has been covered. Final HRA should cover justification for identification of key species.	It was agreed that the ExA and SoS are responsible for drafting the final HRA. Capture in SoCG. Action: ABP project team to consider if it is possible to update the HRA Report submitted with the DCO application.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
5	International designated sites •Bumber Estuary SPA •Bumber Estuary Ramsar (C) and (O)	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.	required	Yes	Bird Disturbance - Key Issue 5 - Point 2)	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'.	Tables 1 and 2 are very helpful. It would be useful to include a column with the 5 year mean of each species. Identification of SPA assemblage species needs checking, e.g. grey plover is an assemblage species and is not indicated in the table.			N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
5	International designated sites •Eumber Estuary SPA •Elumber Estuary Ramsar (C) and (O)	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.	N/a: Further information required	Yes	Bird Disturbance - Key Issue 5 - Point 3)	N/a	Awaiting advice from NE Specialists. Advice to follow	Awaiting advice from NE Specialists. Advice to follow			Difficult to check this in detail, but we would expect more specific wording to be used in the final HRA.	Green	Amber
5	International designated sites •Eumber Estuary SPA •Eumber Estuary Ramsar (C) and (O)	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.	N/a: Further information required	Yes	Bird Disturbance - Key Issue 5 - Point 4)	yes	N/a	It would be useful to have a table showing all the SPA assemblage species (we can provide the latest list) and indicate which species occur in significant numbers. See comments on table 1 and 2, some SPA assemblage species have been missed.	Action : ABP project team to provide table.	Table 9.19 and Table 9.20 in Chapter 9 of the ES present data for the species that occur in Sector B, and those that form part of the SPA assemblages species are indicated. SPA assemblage species have also been clarified in the signposting document on 'Bird Disturbance'. The 'SSSI' signposting document also provides further information on SPA assemblage species.	This <u>aspect</u> of the key issue is now 'green'. <u>25 July 2023:</u> ABP provided a paper clarifying which species fall within the SPA assemblage. This information needs to be included in the final HRA, otherwise no further comment.	Green	Amber

designa 5 ●Bumber ●Bumbe	mational ated sites Estuary SPA er Estuary imsar (C) and (O)	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.	Yes	Bird Disturbance - Key Issue 5 - Point 5)	yes	N/a Noted that there is a commitment to provide bird survey data for sectors A and C and WeBS data separately, which is welcomed.	Action: ABP project team to provide table. Chapter 9 of ES provides overview of wider Humber Estuary. Noted that NE are familiar and have access to data.	This <u>aspect</u> of the key issue is now 'green'. <u>25 July 2023:</u> ABP have provided bird data for Immigham survey sectors A and C. This information needs to be included in the final HRA, otherwise no further comment.	Green	Amber
designa 6 ●∎umber ●∎umbe	national ated sites Estuary SPA er Estuary imsar (O)	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 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 numbers 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.	Yes	Bird Disturbance - Key Issue 6 - Point 1)	N/a	Awaiting advice from NE Specialists. Advice to follow Awaiting advice from NE Specialists. Advice to follow		Comment from NE ornithologist on sign posting document: NE welcomes the evidence that suggests that birds forage in similar densities in the vicinity of existing jetties (<50-100m). It would be easier to draw robust conclusions if it was possible to determine the numbers of birds of each species and the time of year (for example is this in late winter when birds are hungry and food in other areas is depleted and birds are pushed to feed in less preferential areas). Birds that have the most to lose from a reduction in feeding time showed the least behavioural response (Beale et al., 2004) and may take greater risks when hungry and limited response to disturbance may not always be evidence of habituation. It is noted that in section 2 it is mentioned that birds will forage within 10-20m of existing jetties but does not mention if this is in similar densities compared to birds feeding at greater distances. The construction of the new jetty will bring it over the top of and within 10 to 20m of known bird foraging areas and will then almost surround the small gully where birds aggregate in port infrastructure including a 'bottle neck' where the proposed jetty appears to be less than 40m from an existing jetty. We are concerned that birds will be displaced from the area (approximately 3ha) between the jetties and for 20m beyond the new jetty during construction. It is recognised that the jetty will be on pillars, but there are still concerns that this area will be more enclosed during the operational phase than it does now, which may displace birds from the creek. It also seems possible that the location of pillars may result in significant changes to the creek itself, making it unusable during the construction phase and the area in a proving the angel to the creek itself. The area to the construction phase and the area to the construction phase	Amber	Amber
designa 6 ●∎umber ●∎umbe	national ated sites Estuary SPA er Estuary msar (O)	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'. N/a: Further information required	Yes	Bird Disturbance - Key Issue 6 - Point 2)	N/a	Awaiting advice from NE Specialists. Advice to follow Awaiting advice from NE Specialists. Advice to follow	NE asked where information on approach distances was obtained. ABPmer confirmed that information was obtained from the bird surveyors. It was also confirmed that birds are frequently recorded at the distances specified.	and less valuable during the operational phase. It is stated in the signposting document that birds feed within 10/20m of existing jetties so this then quantifies what 'relatively closely' means. Please provide evidence of observations as discussed in meeting on 3 July. Ornithlogist advice set out in row 22 above (Key issue 6, Point 1)		Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	Note: Paragraph 1 not added as this just states where the noise/visual disturbance assessment is in the documents. 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.	Yes	Bird Disturbance - Key Issue 7 - Point 1)	N/a	Awaiting advice from NE Specialists. Advice to follow		For EA works on the Humber we have agreed an initial disturbance distance of 300m which can then be reduced with mitigation measures (e.g., screening). We advise using 300m at the LSE stage, and then to reduce at the AA stage if this can be justified through consideration of bird data.		Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	"We advocate a precautionary approach to assessing disturbance to waterbirds on mudflats" - I think this is the comment they're addressing with this point. They have entitled their response "Summary of evidence of the sensitivity for different key species to noise and visual disturbance stimuli (Table 27 of HRA)"	Yes	Bird Disturbance - Key Issue 7 - Point 2)	N/a	Awaiting advice from NE Specialists. Advice to follow		<u>Update 25 July 2023:</u> ABP have acknowledged our point about not using specific disturbance distances for each species and using the same disturbance distance for all species using the precautionary approach. We advise that the precautionary distance should be 300m. This information needs to be included in the updated HRA.	Amber	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	In addition, Table 27 should identify the bird species that occur in significant numbers in the proposed construction area. For example, limited data was identified for black tailed godwit, therefore a precautionary approach should be taken.	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	Action: NE to review document. This is addressed in the 'Bird Disturbance' signposting document (page 8).	Agree precautionary approach is expected.	Amber	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 2)	N/a	Awaiting advice from NE Specialists. Advice to follow		Some bird species are more sensitive to disturbance. Table 27 identifies that some species have a FID over 200m. It is not clear why a 300m disturbance distance is not being used.	amber	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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 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).	No	N/a	No	N/a - Further information Information should be included within final HRA. If there is a commitment to this, required. then this point can be 'signed off'.	Final HRA is to be produced by SoS.	No further information supplied, this point should be captured for inclusion in the final HRA.	Amber	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 3)	N/a	Awaiting advice from NE Specialists. Advice to follow		No further comment at this stage, but this point needs to be covered in the final HRA.	Amber	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 4)	No	N/a - Further information required. The HRA refers to noise levels at 600m and 1.8km. The figures 1 and 2 are useful, but the 200m radius is not marked on the plan. This issue can be addressed if 200m radius is marked on figures 1 and 2.	Action: ABP project team to provide updated figure with 200m radius marked. Noise levels at 600m to 1.8km refer to noise levels without the noise suppression system.	This <u>aspect</u> of the key issue is now 'green'. <u>Note:</u> This issue has now been addressed as 200m radius is marked on Fig 1 and 2.	Green	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.)	Yes	Bird Disturbance - Key Issue 7 - Point 5)	Yes	We are now able to move this aspect of the key issue to 'green'. The final HRA should reflect the construction programme, for example making it clear if the works will extend over more than one year.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 6)	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'. Point addressed, but please ensure that increase in vessel movements is included in the HRA.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 •Eumber •Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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 provided around when this is expected to occur, and whether this is occurring outside of the most sensitive period.	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	Action: NE to review document. This is addressed in 'Bird Disturbance' signposting document (page 10). The capital dredging is assessed to occur at any time of year (including sensitive periods) as a worst case.	This <u>aspect</u> of the key issue is now 'green'. <u>Note/update 25 July 2023:</u> This comment only relates to capital dredge works and ABP have confirmed that the works could take place at any time of year in line with maintenance dredging. No further comment.		Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 8)	N/a	Awaiting advice from NE Specialists. Advice to follow Awaiting advice from NE Specialists. Advice to follow		 Further assessment will be required around this element. With regard to energy budgets it is important to note that one of the key species we are concerned with is black-tailed godwit, which is on the edge of its range around the humber and can be particularly tight on its energy budget, especially if food is scarce and weather is harsh. Further advice from ornithologist on signposting document which refers to Collop et al. (2016): The Collop et al. (2016) paper does not consider one of the key species of concern which would be black-tailed godwit. Alves et al. (2013) found that the black-tailed godwit population that winters on the East coast of England are energetically stressed with the energy demand in January-March exceeding the energy input in their studies. Godwits wintering in this location must feed during both low tides. <u>References:</u> C. M. Beale and P. Monaghan. 2004. Behavioural responses to human disturbance: a matter of choice?, Animal Behaviour, Volume 68, Issue 5. WeBS Low Tide Count Data suggests that black-tailed godwit are more restricted than other species in where they will feed at low tide. Alkborough Flats, Reads Island Flats and the Sectors from Halton Marshes to Pyewipe (including Immingham) appear to be of key importance to this species. It is recommended then that the loudest/most disturbing elements of construction take place during the summer months when godwit are absent or lower in numbers. 	Amber	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	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	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents N/a - Not addressed in signposting documents	Action: NE to check and review whether this point can be turned 'green'. NE has been provided with detail on numbers of birds occuring in the area, and whether the area supports important numbers of SPA / Ramsar bird species. It is not clear what specific point needs addressing.	The advice from NE ornithologist given in row 22 (key issue 6, point 1), addresses this point.	Amber	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	In this section <i>[Section 4.10.30]</i> , shelduck are missing from off the important species list, despite approximately 2% of the Humber Estuary population having been recorded.	Yes	Bird Disturbance - Key Issue 7 - Point 9)	Yes	We are now able to move this aspect of the key issue to green'.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents N/a - Not addressed in signposting documents	Action: NE to check and review whether this point can be turned 'green'. NE and the ABP project team are in agreement on this point, and this has been taken account of in the ES and HRA. It is not clear what specific point needs addressing.	This <u>aspect</u> of the key issue is now 'green'. <u>Note/update 25 July 2023:</u> The draft HRA states that it is expected that if birds are disturbed (after mitigation measures are applied) they will relocate to other mudflats. Final HRA should consider the likelihood that birds will relocate and whether there is additional capacity in those areas.	Green	Amber
designa 7 ●Đumber ●Đumbe	national ated sites Estuary SPA er Estuary msar (C)	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".	Yes	Bird Disturbance - Key Issue 7 - Point 10)	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'.		N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	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 birds to use, and whether additional mitigation measures are required.	Yes	Bird Disturbance - Key Issue 7 - Point 11)	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'. Satisfied that this issue has been addressed, but the information needs to be included within the final HRA.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 12)	Yes	We are now able to move this Response noted, but does not change our comment that mitigation measures have not been fully agreed with NE. 'green'. 'green'.	NE are yet to review Table 29 in detail and would prefer Table 29 to be	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	Note: The following paragraphs are in the: "Comments on proposed mitigation measures for construction disturbance" section of key issue 7. 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 will be in addressing the potential impact on these species in particular.	Yes	Bird Disturbance - Key Issue 7 - Point 13)	No	N/a - Further information required. NE was not able to comment in detail on Table 29 until we had the wintering and passage bird data together. Therefore we will comment further on this aspect in the final HRA.	updated. NE do not consider it their role to extrapolate conclusions based on the information requested in the signposting documents (and the information in the HRA/ES). The ABP project team explained that the conclusions reached in Table 29 are not changed by the clarifications provided in the signposting documents. Action: ABP project team to consider if it is possible to update the HRA Report submitted with the DCO application. Action: NE to check what is usually done in these circumstances and for other projects - and what key information is needed in the HRA itself to enable NE to	NE have reviewed Table 29 (Construction disturbance to SPA birds) which states that there will be no adverse effect with mitigation measures in place. The mitigation measures to avoid construction disturbance have been reviewed by NE and additional queries sent to ABP on 19 July. Further information provided to NE on 28 July. NE still has concerns about construction disturbance and the effectiveness of mitigation measures, and this should be addressed in further detail in the final HRA. In particular we are concerned that piling will take place during the winter when significant numbers of birds are using sector B, and that this is likely to lead to displacement of birds to other areas of the estuary.	Amber	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 14)	N/a		reach a conclusion. NE to advise on next steps. NE to provide extra information on this point. NE highlighted that birds would be affected by long periods of cold weather which could be exacerbated by strong winds and storm conditions. NE asked whether storm conditions are likely to stop work.	Where EA is undertaking works on the Humber Estuary SPA they use a 3 day precautionary stop for periods of freezing weather. Although the JNCC 7 day stop was developed in relation to wildfowling, wildfowling clubs often choose to stop much earlier than 7 days in very harsh weather. As a precautionary measure we would advocate taking a precautionary approach of 3 days at this location, especially where freezing conditions are accompanied by high winds and poor visibility.	Amber	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	 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 state how impacts on these species will be addressed. 	Yes	Bird Disturbance - Key Issue 7 - Point 15)	N/a	Awaiting advice from NE Specialists. Advice to follow		Update 25 July 2023: NE has reviewed the mitigation measures in more detail and how they relate to the different work areas (capital dredge, jetty construction etc). ABP was asked for further clarification in an email on 19 July. Response provided on 28 July. See issue 7, point 13, we still have concerns about impacts of construction disturbance on birds during the winter.	Amber	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	Natural England agrees that the proposed noise suppression system for piling on outer finger pier would be N/a: Further information helpful, but the effectiveness of this measure should be required assessed in further detail.	Yes	Bird Disturbance - Key Issue 7 - Point 16)	Yes	We are now able to move this aspect of the key issue to 'green'.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Eumber ●Eumbe	national ated sites Estuary SPA er Estuary msar (C)	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.	Yes	Bird Disturbance - Key Issue 7 - Point 17)	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'.	Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
designa 7 ●Bumber ●Bumbe	national ated sites Estuary SPA er Estuary msar (C)	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) .	Yes	Bird Disturbance - Key Issue 7 - Point 18)	N/a	Awaiting advice from NE Specialists. Advice to follow Awaiting advice from NE Specialists. Advice to follow		There is no robust evidence to suggest that soft start piling prevents disturbance caused by the noise. Birds are still likely to move away, but it does reduce a 'startle' impact so that birds perhaps use less energy as they move away. NE advice is not to rely on soft start piling as a mitigation measure for SPA birds.		Amber

7International designated sites •Bumber Estuary RamsarPotential noise and visual disturbance during construction on qualifying SPA / Ramsar bird species.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.N/a: Further infor required	ation Yes	Bird Disturbance - Key Issue 7 - Point 19)	y _{No}	N/a - Further information required.		ABPmer explained that the proposed mitigation measures are based on standard practice for other similar developments, supporting scientific evidence, as well as project specific airborne noise modelling. This is described in the ES, HRA and the 'Bird Disturbance' signposting document. On this basis, it is considered that the proposed mitigation measures will be effective in reducing any potential disturbance.	Filial HKA is to be produced by 505.	<u>Update 25 July 2023</u> : NE has considered the mitigation measures for each of the proposed work areas (capital dredge, jetty construction etc.) in more detail and we sent queries to ABP on 19 July. ABP provided advice on 28 July. See key issue 7, point 13, as we still have concerns about the impact of construction disturbance during the winter on SPA birds.	Amber	Amber
7 International designated sites •Bumber Estuary SPA •Bumber Estuary Ramsar Potential noise and visual disturbance during construction on qualifying SPA / Ramsar bird species. 23 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". N/a: Further inform required	otion Yes	Bird Disturbance - Key Issue 7 - Point 20)	y Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'.	s The final HRA should refer to bird numbers in relation to bird data.		Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
7 International designated sites •Bumber Estuary SPA •Bumber Estuary Ramsar Potential noise and visual disturbance during construction on qualifying SPA / Ramsar bird species. 24 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. N/a: Further information required 0	ation Yes	Bird Disturbance - Key Issue 7 - Point 21)	y _{Yes}	We are now able to move this <u>aspect</u> of the key issue to 'green'.	s ABP expects that final HRA will include all relevant information.		Final HRA is to be produced by SoS.	N/a - This <u>aspect</u> of the key issue is now 'green'.	Green	Amber
8International designated sites •Bumber Estuary SPA •Bumber Estuary RamsarPotential noise and visual disturbance during operation on qualifying SPA / Ramsar bird species.1Section 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.N/a: Further information required	ation Yes	Bird Disturbance - Key Issue 8 - Point 1	y N/a	Awaiting advice from NE Specialists. Advice to follow.				If there is evidence to show birds feeding nearby and below port structures then that would be very useful to illustrate (for shelduck, curlew and black-tailed godwit especially) / aid robust assessment of habituation and potential impacts of both construction and operational phases.		Amber
8International designated sites •Bumber Estuary RamsarPotential noise and visual disturbance during operation on qualifying SPA / Ramsar bird species.2Section 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. 	ation Yes	Bird Disturbance - Key Issue 8 - Point 2	y _{N/a}	Awaiting advice from NE Specialists. Advice to follow.	Awaiting advice from NE Specialists. Advice to follow			This <u>aspect</u> of the key issue is now 'green'. <u>Note:</u> We are satisfied that that if there is evidence to show that birds are feeding within 10-20m of exisiting busy jetties at this location, it is likely that the birds will do so next to the proposed jetty after a period of time. Moreover, maintenance of permenant screening would need to be a regular event and would be disturbing in itself and so removal of screening after a period of time is a sensible approach.	Green	Amber
8 International designated sites Potential noise and visual disturbance during operation on qualifying SPA / Ramsar bird species. 3 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. N/a: Further infon required	ation Yes	Bird Disturbance - Key Issue 8 - Point 3	y _{No}	N/a - Further information required.	This point has not been addressed fully. Monitoring is proposed, but this need to be related to additional mitigation measures should numbers decline as a result of the project.	Action: NE to check comment.	This was advised against by NE at PEIR stage. Adaptive monitoring was therefore removed from ES as mitigation. Monitoring will 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).	This <u>aspect</u> of the key issue is now 'green'. <u>Note:</u> ABP have clarified that monitoring will be used to provide data for future projects, not to trigger additional mitigation measures. NE supports this approach	Green	Amber
8 International designated sites •Eumber Estuary SPA •Eumber Estuary Ramsar Potential noise and visual disturbance during operation on qualifying SPA / Ramsar bird species. 4 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. N/a: Further information is also required on the route that	ation Yes	Bird Disturbance - Key Issue 8 - Point 4	y N/a	Awaiting advice from NE Specialists. Advice to follow.	Awaiting advice from NE Specialists. Advice to follow.			This <u>aspect</u> of the key issue is now 'green'. NE is satisfied that the additional vessel movements will not have an adverse effect on the SPA birds using the port area.	Green	Amber
9 International designated sites 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. N/a - Commen examining auth 9 •Bumber Estuary SPA comment 1 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. N/a - Commen examining auth 9 •Bumber Estuary Ramsar (C) and (O) 1 Section 4.2.1 - It would be clearer to organise the assessment: all construction effects, then all operational examining auth N/a - Commen examining auth	N/a	N/a	N/a	N/a	Comment to be considered in production of final HRA.		Final HRA is to be produced by SoS.	Comment to be considered in production of final HRA.	Grey	Grey
10International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary SPA •Bumber Estuary RamsarGeneral HRA screening commentsTable 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.N/a: Further inform required	ntion No	N/a	N/a - Not addressed in signposting documents	d N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	This will be captured in the SoCG document.	Not considered to result in LSE (minor omission in Table 3). Justification provided in final column of Table 3 confirms no LSE.	This <u>aspect</u> of the key issue is now 'green'. <u>Note:</u> This is a minor omission by ABP and will be captured in the SoCG document and can be turned green.	Green	Amber
10International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary SPA •Bumber Estuary SPA •Bumber Estuary SPA •Bumber Estuary SPA •Bumber Estuary SPA •Bumber Estuary SPA 	ation Yes	Underwater Noise - Key Issue 10 - Point 1	₽ y N/a	Awaiting advice from NE Specialists. Advice to follow.		Action: NE to provide feedback on this point.	robust understanding of the background/ambient noise environment and compliments the underwater	part of the group of fish being the least sensitive to hearing, we advise that this impact pathway is taken through to AA under the precautionary approach. NE is of the opinion, that with this impact pathway taken through to AA, coupled with the justifications given already along with the additional information about the comparable provy used, we would	Amper	Amber
International designated sites •Bumber Estuary RamsarGeneral HRA screeningTable 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 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.N/a: Further inform required	ation Yes	Bird Disturbance - Key Issue 10 - Point 1	y N/a	Awaiting advice from NE Specialists. Advice to follow		NE indicated that this issue could potentially be resolved based on the information provided. Action : NE to confirm.		Agree with the explanation provided, but this needs to be included in the final HRA.	Amber	Amber
International designated sites •Elumber Estuary SPA •Elumber Estuary RamsarGeneral HRA screeningTable 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".N/a: Further infor required	ntion No	N/a	N/a - Not addressed in signposting documents	d N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	NE indicated that this issue could potentially be resolved based on the information provided. Action: NE to confirm.	This pathway is termed 'Loss or change to coastal waterbird habitat' in Table 4 HRA. It is considered separately in the AA (see Section 4.5).	Awaiting specialist advice	Amber	Amber
International designated sites •Bumber Estuary SPA •Bumber Estuary RamsarGeneral HRA screening commentsTable 4 - The impact pathway "Changes in water and sediment quality" should be included and assessed against SPA features.N/a: Further infor required	ation No	N/a	N/a - Not addressed in signposting documents	d N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	NE indicated that this issue could potentially be resolved based on the information provided. Action: NE to confirm.	All SPA features screened into the HRA (Section 3) are coastal waterbirds that feed on intertidal invertebrates by using the beak to capture prey on intertidal habitats (either when exposed to air or wher covered in very shallow water). Therefore, they are not considered sensitive to the directs effects of elevated suspended sediment plumes (unlike diving birds which use pursuit or plunge diving to capture prey underwater). It is considered possible that SPA features could be sensitive to indirect effects resulting from changes to intertidal benthic habitats and species due to suspended sediment concentrations (i.e. changes to invertebrate prey resources on supporting mudflat). However, 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). On this basis, such effects are anticipated to be negligible and there is considered to be no potential for a LSE on SPA features as a result of elevated suspended sediment concentrations with respect to sediment contamination during construction, potential effects on intertidal benthic habitats and species are considered to be insignificant (paragraphs 9.8.86 to 9.8.88 of the ES). On this basis, potential effects on waterbirds as a result of bioaccumulation through consuming prey (i.e intertida benthos) will be negligible and there is considered to be no potential for LSE on SPA features.	This <u>aspect</u> of the key issue is now 'green'. <u>Note:</u> This information should be included within the final HRA.	Green	Amber
10International designated sites •Bumber Estuary SPA RamsarGeneral HRA screening comments6Table 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.N/a: Further inform required	ation Yes	Bird Disturbance - Key Issue 10 - Point 2	y N/a	N/a	Awaiting advice from NE Specialists. Advice to follow			This <u>aspect</u> of the key issue is now 'yellow'. <u>Note</u> : Consistent approach to assessment of supporting habitats for SPA birds needed in the final HRA.	Yellow	Amber
10International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary RamsarGeneral HRA screening 	ation Yes	Artificial Lighting - Key Issue 10 - Point 1	y N/a	N/a	Awaiting advice from NE Specialists. Advice to follow			This <u>aspect</u> of the key issue is now 'green'. <u>Note/update 25 July 2023</u> : We accept that the port is already lit for safety reasons and the additional construction lighting will not significantly impact SPA features. However this aspect should be included in the LSE test in the final HRA.		Amber
10International designated site •Bumber Estuary SPA •Bumber Estuary RamsarGeneral HRA 	ntion No	N/a	N/a - Not addressed in signposting documents	d N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	Suggest capture in SoCG.	Very minor typo in HRA (cross reference to Table 4 and 5 omitted). However the features listed are relevant to all tables and confirm what has been taken through to AA stage. Table 2 lists the deisgnated sites and the interest features of those sites.	This <u>aspect</u> of the key issue is now 'green'. <u>Note:</u> ABP acknowledges that this is a typo and will be captured in the SoCG.	Green	Amber
10 International designated site General HRA Section 3.3.3 - Natural England notes that the maintenance N/a: Further information of the disposal of dredged 10 •Bumber Estuary SAC screening comments 9 dredging activity for this project will be carried out under the existing marine licence for the disposal of dredged N/a: Further information of the existing marine licence for the disposal of dredged 10 •Bumber Estuary SPA comments 9 dredging activity for this project will be carried out under the existing marine licence for the disposal of dredged N/a: Further information of the existing marine licence for the disposal of dredged 10 •Bumber Estuary Ramsar Ramsar 9 Marine disposal of dredged N/a: Further information of the disposal of dredged	ation No	N/a	N/a - Not addressed in signposting documents	d N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	NE indicated that this issue can be changed to 'yellow'.	This point refers to the MDP and can be captured in the SoCG. 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.	MDP.	Yellow	Yellow
11International designated site •Bumber Estuary SAC •Bumber Estuary SRA •Bumber Estuary RamsarGeneral HRA in⊠combination / intra-project effects / cumulative assessment information required (C) and (O)General HRA in⊠combination / intra-project effects / cumulative assessment information required (C) and (O)N/a: Further information required	ation No	N/a	N/a - Not addressed in signposting documents	d N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents		IGET assessment ongoing - the outputs of the assessment will be discussed in due course.		Amber	Amber
12HRA assessment - The potential effects of underpins the information 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 	ation Yes	Underwater Noise - Key Issue 12 - Point 1	₽ y N/a	Awaiting advice from NE Specialists. Advice to follow			A separate dialogue with Cefas is ongoing. The ABP project team are providing clarifications via a similar process.	No further information is required. Natural England will be deferring to CEFAS' advice.	Amber	Amber
12HRA assessment - The potential effects of underwater noise and vibraning 	ation Yes	Underwater Noise - Key Issue 12 - Point 2	y N/a	Awaiting advice from NE Specialists. Advice to follow				Awaiting further input from fish migratory specialist	Amber	Amber
12 International designated site •Bumber Estuary SAC •Bumber Estuary SAC •Bumber Estuary SAC •Bumber Estuary Ramsar HRA assessment - The potential effects of underwater noise and vibration during piling on qualifying species 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. N/a: Further information to required	ation Yes	Underwater Noise - Key Issue 12 - Point 3	y N/a	Awaiting advice from NE Specialists. Advice to follow				No further information is required. Natural England will be deferring to CEFAS' advice.	Amber	Amber

12International designated site •Elumber Estuary SAC •Elumber Estuary SPA •Elumber Estuary RamsarHRA assessment - The potential effects of underwater noise and vibration during piling on qualifying speciesWe note that vibro-piling may occur overnight and therefore may have an impact on migratory Lamprey. This should also be considered within the HRA.	N/a: Further information required	Yes	Underwater Noise - Key Issue 12 - Point 4	N/a	Awaiting advice from NE Specialists. Advice to follow	Awaiting advice from NE Specialists. Advice to follow Awaiting dvice from NE Specialists. Advice to follow Awaiting further specialist input	Amber	Amber
Image: International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary RamsarHRA assessment - Potential effects of direct loss of qualifying intertidal habitat (C)Image: Image:	N/a: Further information required	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents IGET assessment ongoing - the outputs of the assessment will be discussed in due course.	Amber	Amber
14 International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary Ramsar HRA assessment - Potential effects of direct loss of ulifying subtidal habitat (C) 1 As none yet addressed - See RR response for full paragraphs	N/a: Further information required	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	Amber	Amber
Image: International designated siteHRA assessment - The potential effects of changes to qualifying habitats as 1As none yet addressed - See RR response for full paragraphs15International designated site •Bumber Estuary SAC •Bumber Estuary RamsarImage: Image:	N/a: Further information required	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	Image: N/a - Not addressed in signposting documents Image: Comparison of the comparison of t	Amber	Amber
16International designated site •Elumber Estuary SAC •Elumber Estuary RamsarHRA assessment - The potential effects of changes to qualifying intertidal habitats as a result of the movement of Ro-Ro vessels during operation (O)1 and 2	N/a	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue	Green	Green
17HRA assessment – The potential effects of changes to qualifying habitats as a result of sediment deposition during capital (C)1, 2, 3 and 4N/a - Green issue	N/a	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue N/a - This is a green issue	Green	Green
18HRA assessment - Indirect changes to qualifying habitats as a result of eBumber Estuary SPA eBumber Estuary RamsarHRA assessment - Indirect changes to qualifying habitats as a result of changes to hydrodynamic and sedimentary processes during capital dredge disposal1 and 2N/a - Green issue	N/a	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue	Green	Green
19HRA assessment - The potential effects of changes to qualifying +Bumber Estuary SAC +Bumber Estuary RamsarHRA assessment - The potential effects of changes to qualifying habitats as result of the removal of seabed material during maintenance dredging (O)N/a - Green issue	N/a	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue N/a - This is a green issue	Green	Green
20 International designated site •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary Ramsar International designated site •Bumber Estuary SPA •Bumber Estuary Ramsar International defects of elevated SSC during capital dredge disposal on qualifying habitats and species (C & O)	N/a: Further information required	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents To be captured in SoCG. Water quality impacts associated with the capital dredge/dredge disposal on marine mammals have been considered in Chapter 9 of the ES in Table 9.21. In addition, the potential for a LSE due to water quality impacts associated with capital dredge/dredge disposal on marine mammals was considered in Table 3 of the HRA. This is a now a green issue. Note: In review of the information provided, Natural England is satisified that water quality impacts associated with capital dredge/dredge disposal on marine mammals was considered in Table 3 of the HRA. This is a now a green issue. Note: In review of the information provided, Natural England is satisified that water quality impacts associated with capital dredge/dredge disposal on marine mammals was considered in Table 3 of the HRA.	Green	Green
21International designated site •Bumber Estuary SAC •Bumber Estuary RamsarHRA assessment - The potential effects of the introduction and spread of nonZhative gecies during construction on qualifying habitats (C)1N/a - Green issue	N/a	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue	Green	Green
22International designated site •Bumber Estuary SAC •Bumber Estuary RamsarHRA assessment – Mitigation measures, risk of injury to marine mammals during piling (C)N/a - Green issue	N/a - To note	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue N/a - This is a green issue	Green	Green
23 International designated site HRA assessment- 23 •Bumber Estuary SAC •Bumber Estuary SPA •Bumber Estuary SPA indication during piling on qualifying species (C) 1	N/a - To note	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue N/a - This is a green issue	Green	Green
24HRA assessment The potential effects of underwater noise and vibration during capital dredge disposal on qualifying species (C)HRA assessment The potential effects of underwater noise and vibration during capital dredge disposal on qualifying species (C)N/a - Green issue	N/a - To note	N/a	N/a	N/a	N/a - This is a green issue	N/a - This is a green issue N/a - This is a green issue	Green	Green
25HRA assessment – The potential for an AEOI on qualifying habitats and species of the Humber Estuary SPA •Bumber Estuary RamsarHRA assessment – The potential for an AEOI on qualifying habitats and species of the Humber Estuary SAC due to inlizombination effects (C)1 and 2	Provide a more detailed assessment of in-combination disturbance/barrier effects to the grey seal feature of the Humber Estuary SAC. If needed, consider further mitigation of this impact.	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents IGET assessment ongoing - the outputs of the assessment will be discussed in due course.	Amber	Amber
26Environmental StatementChapter 9: Nature Conservation and Marine Ecology Marine mammals (C)1 and 2Table 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 Permaner 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.	N/A - Revise the assessment to reflect a High sensitivity to PTS impacts	Yes	Underwater Noise - Key Issue 26, point 1	N/a		The applicant has not provided any new information but maintains their position. We consider this point would not have a material effect on the outcome of the assessment.	Yellow	Yellow
27Environmental StatementChapter 9: Nature Conservation and Marine EcologyN27Environmental StatementImplications of policy legislation and guidance – Conservation of Seals Act 1970 (CoSA) (C & O)1N/a - Grey issue	N/a - To note	N/a	N/a	N/a	N/a - This is a grey issue	N/a - This is a grey issue N/a - This is a grey issue	Grey	Grey
28Environmental StatementChapter 9: Nature Conservation and Marine Ecology9.8.199 - 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.	Undertake separate assessments of injury (PTS and TTS) and disturbance pathways to marine mammals. Consider revising the assessment of disturbance in line with comments, by adding more detail, and/or considering further mitigation or monitoring of this pathway specifically.	Yes	Underwater Noise - Key issue 28, point 1	N/a	Awaiting advice from NE Specialists. Advice to follow	Awaiting advice from NE Specialists. Advice to follow No change to our original advice.	Amber	Amber
28Environmental StatementChapter 9: Nature Conservation and Marine EcologyWhilst 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.28Environmental StatementUnderwater noise and vibration during piling, capital dredging and dredge disposal (C)2	Undertake separate assessments of injury (PTS and TTS) and disturbance pathways to marine mammals. Consider revising the assessment of disturbance in line with comments, by adding more detail, and/or considering further mitigation or monitoring of this pathway specifically.	Yes	Underwater Noise - Key issue 28, point 2	Yes	We are now able to move this <u>aspect</u> of the key issue to 'green'.	No further information needed. N/a - This aspect of the key issue is now 'green'.	Green	Amber
28 Environmental Chapter 9: Nature Chapter 9: Nature Chapter 9: Nature Chapter 9: Conservation Chapter 9: Nature Conclusion assessment of the significance of potential 28 Environmental Conservation and Marine Ecology and Marine Ecology disturbance of 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. Char seal behaviour have 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 season. Also, that grey seals could be displaced from the majority	Undertake separate assessments of injury (PTS and TTS) and disturbance pathways to marine mammals. Consider revising the assessment of disturbance in line with comments, by adding more detail, and/or considering further mitigation or monitoring of this pathway specifically.	Yes	Underwater Noise - Key issue 28, point 3	No		The applicant has not provided any new information but maintains their position. We defer to Cefas on the appropriateness of assuming no elevated noise beyond 15km distance. We maintain our advice of further monitoring to confirm the Applicant's assumptions that elevated underwater noise devels will not the able to propagate beyond 15 km up and and that movements of seals in the estuary are unconstrained during the construction period/no impacts at Donna Nook.	Amber	Amber
29 Environmental Statement Chapter 9: Nature Conservation and Marine Ecology Underwater noise and vibration on fish and marine mammals as a result of construction © 1 and 2 N/a - Yellow issue	Undertake mitigation in accordance with Natural England advice. Consider developing a MMMP to capture all mitigation measures committed to, including the proposal to cease percussive piling operations if marine mammals enter the mitigation zone	N/a	N/a	N/a	N/a - This is a yellow issue	N/a - This is a yellow issue N/a - This is a yellow issue	Yellow	Yellow
30Environmental StatementChapter 20: Cumulative and in-combination effects Table 20.2 - Overview of Zones of Influence (C)1, 2 and 3 (I think this is all the same point)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).30Environmental Statement1, 2 and 3 (I think this is all the same point)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).30Environmental Statement1, 2 and 3 (I think this is all the same point)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 for underwater noise, the Applicant has not provided sufficient evidence to demonstrate that 15km 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.	Review screening distance in the context of underwater noise disturbance.	Yes	Underwater Noise - Key issue 30, point 1	No		The applicant has not provided any new information but maintains their position. We defer to Cafas on the appropriateness of assuming no elevated noise beyond 15km distance. is Statisfied that the 15km distance is statisfied that the 15km distance is sufficient to capture the results of the underwater noise modelling show that elevated noise levels will not travel beyond 15km is valid.	Yellow	Yellow
31 Environmental Statement Chapter 20: Cumulative and in-combination effects Table 20.5 – Review of other projects, developments and activities on the short list (C) 1, 2 and 3 As none yet addressed - See RR response for full paragraphs	Provide a more detailed assessment of in-combination disturbance/barrier effects to the grey seal feature of the Humber Estuary SAC.	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents IGET assessment ongoing - the outputs of the assessment will be discussed in due course.	Amber	Amber

		Volume 3,								
32	Environmental Statement	Chapter 9.2: Underwater noise assessment Marine mammals (C)	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.	N/A – Further information required	Yes	Underwater Noise - Key issue 32, point 1	Yes	We are now able to move this aspect of the key issue to 'green'. No further information required on this point. N/a - This aspect of the key issue is now 'green'.	Green	Amber
32	Environmental Statement	Volume 3, Chapter 9.2: Underwater noise assessment Marine mammals ©	2 (and bullet points), and 3 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). Natural England agrees with Cefas on the above points and consider that these should be addressed by the Applicant where Cefas recomment may review our comments in light of any such revisions of the underwater noise modelling.		Yes	Underwater Noise - Key issue 32, point 2	N/a	Image: Constraint of the speciality. Addree to follow Image: Constraint o	Amber	Amber
33	Environmental Statement	Schedule of Mitigation – Marine mammals ©	 Natural England welcomes the Applicant's commitment to undertake vibro piling where possible. 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 	N/a	Yes	Underwater Noise - Key issue 33, point 1	N/a	N/a - This is a yellow issue N/a - This is a yellow issue N/a - This is a 'yellow' issue	Yellow	Yellow
34	International designated sites • North Norfolk Coast SAC	HRA assessment – Screening conclusion	 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 study area, and it is highly likely that any harbour seals in the study area, and it is 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. 	N/A - Screen the Wash and North Norfolk Coast SAC harbour seal feature into Stage 2 of the HRA.	Yes	Underwater Noise - Key issue 34, point 1	Yes	We are now able to move this bey source to green? We are satisfied that this issue has been addressed through the inclusion of a high tey source to green? Final HRA is to be produced by SoS. N/a - This is now a 'green' issue	Green	Green
35	International designated sites • Greater Wash SPA	Potential impacts on the Greater Wash SPA (C) and (O)	1 N/a - Green issue	N/a	N/a	N/a	N/a	N/3 - This is a green issue N/a - This is a green issue N/a - This is a green issue	Green	Green
36	National designated sites (biodiversity & geodiversity) • Humber Estuary SSSI	Potential impacts on Humber Estuary SSSI designated features (C) and (O)	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.	N/a: Further information required	N/a	SSSI - Key Issue 36, point 1	N/a	N/a As this key issue applies specifically to features of the Humber Estuary SSS I that overlap with the Humber Estuary SAC / SPA / Ramsar, please refer to all relevant SAC/SPA/Ramsar feature, NE's comments regarding set (SPA/Ramsar feature, NE's comments regarding to these sites for further details / any outstanding information.	Amber	Amber
37	National designated sites (biodiversity & geodiversity) • Humber Estuary SSSI	Potential impacts on the Humber Estuary SSSI invertebrate assemblage (C) and (O)	1 Detailed advice from Natural England is to follow in relation to this impact pathway.	N/a: Further information required	Yes	SSSI - Key Issue 36, point 2	Yes	We are now able to move this key issue to 'green'. Following submission of the signposting documents, and further assessment of the information in relation to this feature of the Humber Estuary SSS, we are now able to move this key issue to 'green'. We will servise on of our Relevant Representation response (V1.3) in due course. N/a - This is now a 'green' issue	Green	Green
38	National designated sites (biodiversity & geodiversity) • Humber Estuary SSSI	Potential impacts on the Humber Estuary SSSI bird assemblage feature (C) and (O)	1 Detailed advice from Natural England is to follow in relation to this impact pathway.	N/a: Further information required	Yes	SSSI - Key Issue 36, point 3	Yes	We are now able to move this key issue to 'green'. Following submission of the signposting documents, and further assessment of the information in relation to this feature of the Humber Estuary SSJ, we are now able to move this key issue to 'green'. N/a - This is now a 'green' issue Relevant Representation response (V1.3) in due course.	Green	Green
39	National designated sites (biodiversity & geodiversity) • North Killingholme Haven Pits SSSI	Potential impacts on the SSSI 'Aggregations of non-breeding birds - Black⊡tailed godwit' feature (C) and (O)	Chapter 9 (Table 9.7) of the ES states that direct impacts on North Killingholme Haven Pits SSSI are unlikely. 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.	N/a: Further information required	Yes	N/a	N/a	Awaiting advice from NE Specialists. Advice to follow. Awaiting advice from NE Specialists. Advice to follow. Awaiting specialists. Advice to follow.	Amber	Amber
40	National designated sites (biodiversity & geodiversity) • The Lagoons SSSI	Potential impacts on The Lagoons SSSI (C) and (O)	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.	N/a	N/a	N/a	N/a	N/a - This is a green issue N/a - This is a green issue	Green	Green
41	National designated sites (biodiversity & geodiversity) • Any relevant terrestrial SSSIs	Construction and operational phase traffic impacts on all relevant terrestrial SSSIs (C) and (O)	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 200HDV movements per day. However, as there are predicted to be peaks of over 200HDV movements per day, we advise that a precautionary approach is taken in the assessment of this for any relevant terrestrial SSSIs.	N/a	Yes	Air Quality - Key Issue 41 - Point 1)	Yes	We are now able to move this As outlined under KI2.2, it is acknowledged that annual emissions rather than peaks of emissions are the key emissions of relevance to ecceptems. Therefore, although peak emissions can in some cases be relevant, in this case, given the marginal level of construction traffic above the 200ADT I HGV data, on only a few days, there is no requirement to undertake further assessment of construction traffic impacts, as it is considered that breaching the threshold (in combination) on only a few days will have minimal impact.	Green	Green
41	National designated sites (biodiversity & geodiversity) • Any relevant terrestrial SSSIs	Construction and operational phase traffic impacts on all relevant terrestrial SSSIs (C) and (O)	Their current operational traffic assessment does not appear to have included assessment of certain SSSIs. For example, Hatfield Chase Ditches SSSI.	N/a	Yes	Air Quality - Key Issue 41 - Point 2)	No	Awaiting advice from NE Specialists. Advice to follow. Awaiting advice from NE Specialists. Advice to follow. Awaiting advice from NE Specialists. Advice to follow. Action: NE (LF) to liaise with responsible officer for SSSI - confirm habitat types. NE to confirm sensitivities. NE to confirm sensitivities.	Amber	Amber
41	National designated sites (biodiversity & geodiversity) • Any relevant terrestrial SSSIs	Construction and operational phase traffic impacts on all relevant terrestrial SSSIs (C) and (O)	Additionally, an incombination exceedance is noted at identified SSSIs such as Edlington Wood SSSI, where the predicted in⊡combination NOx change (16.9ug/m3) 3b addition of over 50% of the NOx critical level, and causes the site to exceed its critical (Table 13.19 in the Chapter 13 of the ES). This is currently dismissed as insignificant for unclear reasons.	3) is an	Yes	Air Quality - Key Issue 41 - Point 3)	yes	N/a - Further information - This appears to be about impacts on a SSSI, rather than on a European site (SAC or SPA). - This appears to be about impacts on a SSSI, rather than on a European site (SAC or SPA). - This appears to be about impacts on a SSSI, rather than on a European site (SAC or SPA). - Under Design Manual for Roads and Bridges guidance (LADS) an impact can be dismissed as being insignificant if the effect of the scheme in question fails beiow 1% of the critical load (or 0.4 kgh/a/yr). In this case it appears that the identified insignificant if the effect of the scheme in question fails beiow 1% of the critical load (or 0.4 kgh/a/yr). In this case it appears that the identified is general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution from the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution from the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution from the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution from the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution form the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution form the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution form the proposed development to mitigate for this general "growth" impact, which would more critical load (or 0.4 kgh/a/yr). In this case, the contribution form the proposed development to mitigate for	% Green	Green
42	Protected Species	General approach to further protected species surveys (O) and (C)	1 and 2 N/a - Green issue	N/a	N/a	N/a	N/a	N/a - This is a green issue N/a - This is a green issue N/a - This is a green issue	Green	Green
43	Biodiversity net gain	Information to demonstrate a 10% Biodiversity Net Gain (C)	1 to 6 As none yet addressed - See RR response for full paragraphs	Natural England advise that to address this concern, clarification on the purpose of ecological enhancements (referred to in Table 9.7) is provided.	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents NE agreed with this point and indicated it could potentially be turned green. NSIPs are not legally obliged to provide BNG. This point was agreed in the meeting on 18 May 2023. N/a - This is now a green issue N/a - This is now a green issue	Green	Green
44	Biodiversity net gain	Additionality of Biodiversity Net Gain (C)	1 to 4 As none yet addressed - See RR response for full paragraphs	Natural England s advice regarding the mechanism for securing relevant BNG measures in the DCO coincides with the above advice (Natural England key issue reference 43). It is noted that it is stated within the ES (APP-038) that "Whilst not part of the IERRT DCO application, it should be noted that ABP also intends to	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents N/a - Not addressed in signposting documents N/a - Not addressed in signposting documents N/a - This is now a green issue N/a - This is now a green issue N/a - This is now a green issue	Green	Green
45	International designated sites • Humber Estuary SAC • Humber Estuary SPA • Humber Estuary Ramsar	HRA assessment – general comment	1 and 2 N/a - Yellow issue	N/a	N/a	N/a	N/a	N/a - This is a yellow issue N/a - This is a yellow issue N/a - This is a yellow issue N/a - This is a yellow issue	Yellow	Yellow
46	International designated sites • Humber Estuary SAC • Humber Estuary SPA • Humber Estuary Ramsar	HRA assessment – Table 3 Potential changes to seabed habitats and species as a result of sediment deposition from maintenance dredging (O)	1 to 3 As none yet addressed - See RR response for full paragraphs	N/a: Further information required	No	N/a	N/a - Not addressed in signposting documents	N/a - Not addressed in signposting documents NE indicated there is potential to turn this issue 'green'. Action: NE to check comment and confirm. To provide further classifier interdistal survey of the IRA; as y result of addiment deposition, of the provides quarter to the provide quarter to th	Amber	Amber
47	International designated sites • Humber Estuary SAC • Humber Estuary SPA • Humber Estuary Ramsar	HRA assessment – Physical change of habitat and associated species beneath marine	1 N/a - Green issue	N/a	N/a	N/a	N/a	N/a - This is a green issue N/a - This is a green issue N/a - This is a green issue	Green	Green