



# Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

## The Applicant's Comments on Trinity House's Deadline 5 Submission

**Revision A**

Deadline 7

July 2023

Document Reference: 21.20

Title:	
<b>Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects Examination submission The Applicant's Comments on Trinity House Deadline 5 Submission</b>	
PINS document no.: 21.20	
Document no.: C282-EQ-Z-GA-00060	
Date:	Classification
July 2023	<b>Final</b>
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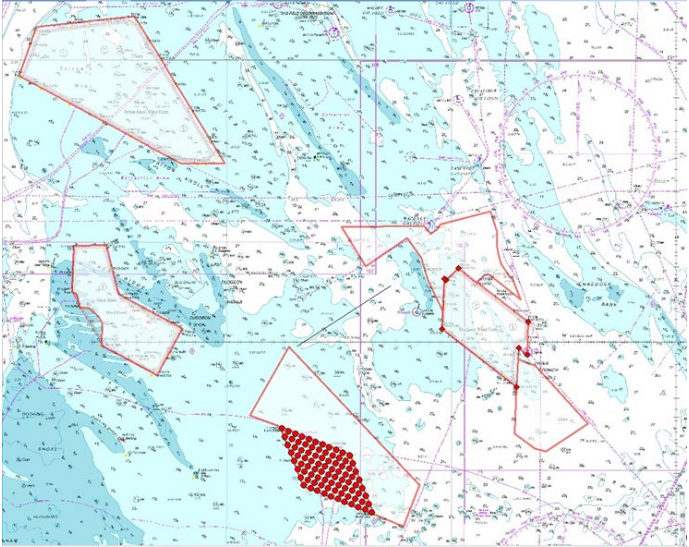
## 1 The Applicant's Comments on Trinity House Deadline 5 Submission

1. The Applicant noted at Deadline 6 in The **Applicant's Comments on Responses to the Examining Authority's Third Written Questions** [REP6-013] that Trinity House's Deadline 5 submission [REP5-096] would be addressed in further detail (if required) at Deadline 7.
2. This document presents the Applicant's updated comments on Trinity House Deadline 5 submission [REP5-096], which was deferred from Deadline 6.

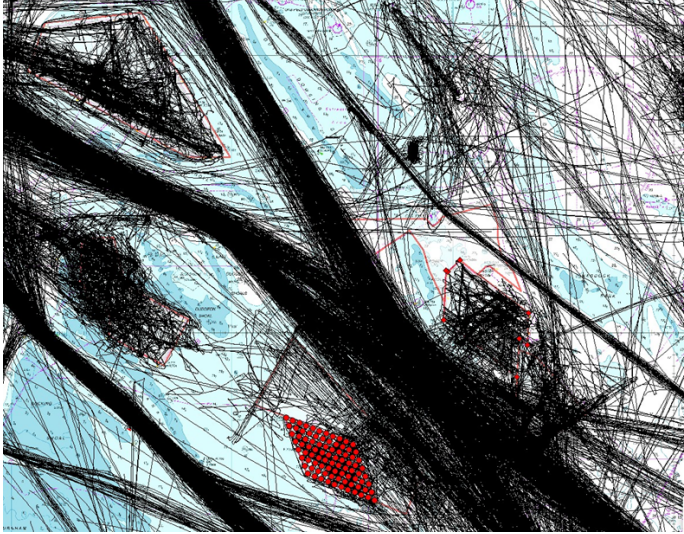
**Table 1 The Applicant's comments on Trinity House's responses to the Examining Authority's Third Written Questions**

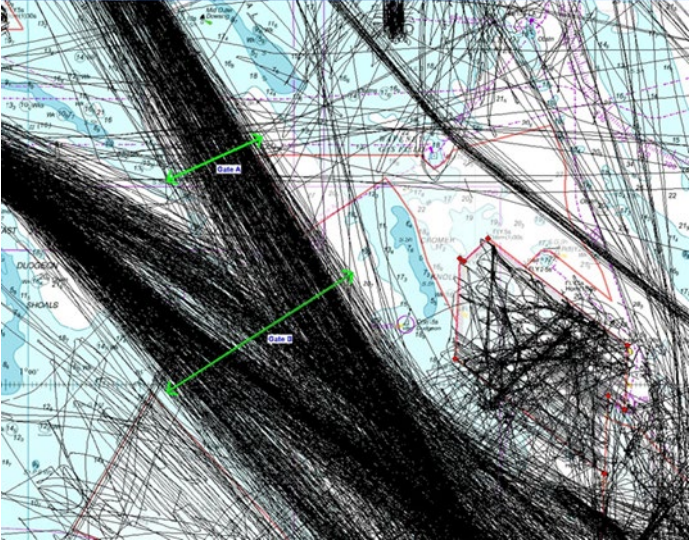
ID	Stakeholder Comment	Applicant's Updated Position at D7		
1	<p>Accordingly, Trinity House requests to submit a written response to the Examining Authority (ExA) for Deadline 5 in respect of its Third Written Questions (WQ3) as follows:-</p> <table border="1" data-bbox="248 517 1099 1042"> <tr> <td data-bbox="248 517 383 1042"> <p><b>Q3.19.1.5</b> UK Chamber of Shipping Trinity House</p> </td> <td data-bbox="383 517 1099 1042"> <p><b>Assessment of Navigational Risk and Safety</b> With regards to the concerns raised relating to navigational safety from the MCA [REP1-117] [REP1-118] [REP3-134] [REP4-047], together with the Applicant's submissions (including the NRA [APP-198] and the Navigational Safety Technical Note [REP3-031]) comment on whether you would consider the remaining sea room past the proposed windfarms, particularly west of the DEP north boundary, as representing an unacceptable risk to navigational safety or have an acceptable and safe width of sea room? Explain with reasons and with reference to these submissions from MCA and the Applicant.</p> </td> </tr> </table>	<p><b>Q3.19.1.5</b> UK Chamber of Shipping Trinity House</p>	<p><b>Assessment of Navigational Risk and Safety</b> With regards to the concerns raised relating to navigational safety from the MCA [REP1-117] [REP1-118] [REP3-134] [REP4-047], together with the Applicant's submissions (including the NRA [APP-198] and the Navigational Safety Technical Note [REP3-031]) comment on whether you would consider the remaining sea room past the proposed windfarms, particularly west of the DEP north boundary, as representing an unacceptable risk to navigational safety or have an acceptable and safe width of sea room? Explain with reasons and with reference to these submissions from MCA and the Applicant.</p>	<p>The Applicant has noted the response provided by Trinity House in their Deadline 5 submission [REP5-096] and welcomes their contribution both within the response and at the Issue Specific Hearing 7 (ISH7).</p> <p>The Applicant is in agreement with Trinity House that the '<i>proposed DEP North west boundary will cause shipping to navigate in a more compressed area increasing the risk of collision between vessels</i>', this has been made clear within the <b>Navigation Risk Assessment (NRA)</b> [APP-198]. The Applicant also notes that whilst there is an increased risk of collision, as with any offshore wind farm development, the increase in risk is within As Low as Reasonably Practicable (ALARP) parameters based on the <b>NRA</b> [APP-198]. Trinity Houses alignment with this position is evidenced by the Applicant's final signed <b>Statement of Comment Ground (SoCG) with Trinity House (Revision B)</b> [document reference 12.19]. Within this SoCG Trinity House have agreed that the:</p> <ul style="list-style-type: none"> <li>• NRA baseline environmental data is suitable for assessment;</li> <li>• The NRA has followed the appropriate methodology and guidance;</li> <li>• The assessment has considered a worst case; and</li> <li>• That 'it is agreed that in isolation (and cumulative) hazards (impacts), including main route deviations caused by the project and impacts on search &amp; rescue, are unlikely to be significant with the mitigation measure and monitoring detailed in place'.</li> </ul> <p>Those monitoring and mitigation measure include commitment to adherence with the requirements of Trinity House, secured in the DCO, - <i>Aids to Navigation 8(1) The undertaker must during the whole of the period from commencement of construction of the authorised project to completion of decommissioning of the authorised project exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct – (draft Development Consent Order (Revision J) (Clean)</i> [document reference 3.1]).</p>
<p><b>Q3.19.1.5</b> UK Chamber of Shipping Trinity House</p>	<p><b>Assessment of Navigational Risk and Safety</b> With regards to the concerns raised relating to navigational safety from the MCA [REP1-117] [REP1-118] [REP3-134] [REP4-047], together with the Applicant's submissions (including the NRA [APP-198] and the Navigational Safety Technical Note [REP3-031]) comment on whether you would consider the remaining sea room past the proposed windfarms, particularly west of the DEP north boundary, as representing an unacceptable risk to navigational safety or have an acceptable and safe width of sea room? Explain with reasons and with reference to these submissions from MCA and the Applicant.</p>			

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		this requirement includes the relocation or further deployment of buoys to mark the Outer Dowsing Channel
<b>1. INTRODUCTION</b>		
2	Trinity House is the General Lighthouse Authority for England, Wales, the Channel Islands and Gibraltar with powers principally derived from the Merchant Shipping Act, 1995, as amended. The role of Trinity House as a General Lighthouse Authority (GLA) under the Act includes the superintendence and management of all lighthouses, buoys and beacons within its area of jurisdiction.	No response required.
3	<p>Trinity House recognises the Maritime and Coastguard Agency's (MCA) remit in regard to Offshore Renewable Energy Installations (OREIs) is to ensure that the safety of navigation is preserved, and the UK's Search and Rescue (SAR) capability is maintained. As such Trinity House respect the MCA recommendations and advice in relation to ship routing.</p> <p>When assessing the proposed DEP north boundary, 28 days AIS data supplied by the MCA and processed for Trinity House by Anatec has been used. This dataset related to the period mid- July to mid-August 2022. The dataset for a wider area has been viewed to try and assess the routeing of the vessels and possible changes if the windfarm were to be consented with the current red line boundary / order limits.</p>	<p>The Applicant welcomes the consideration by Trinity House of Automatic Identification System (AIS) data in support of the questions raised given that it provides information of vessels of interest to the assessment of DEP North.</p> <p>The Applicant also takes this opportunity to note the NRA process has considered:</p> <ul style="list-style-type: none"> <li>• 12 months of AIS data covering the entirety of 2019;</li> <li>• 14 days of vessel traffic survey data covering AIS, radar, and visual observation data collected during July /August 2020; and</li> <li>• 14 days of vessel traffic survey data AIS, radar, and visual observation data collected during Jan / Feb 2021.</li> </ul> <p>AIS transmission is not mandatory for vessels less than 300 Gross Tonnage (GT) or fishing vessels under 15m length overall; but as it does provide detail on commercial vessel routeing that which Applicant included a full 12 months of data for to ensure a detailed baseline. The 28 days of vessel traffic survey data only provides information on small craft vessels not mandatorily carrying AIS therefore as per ISH 7 [EV-095, EV-096] the 12 months AIS data is a more useful and comprehensive data set when considering DEP North and navigational safety.</p> <p>The Applicant has every confidence in the data sets relied upon for the purpose of completing a robust NRA, this position is supported by Trinity House as confirmed in IDs 2, 3 and 4 of the <b>Statement of Common Ground with Trinity House (Revision B)</b> [document reference 12.19].</p>

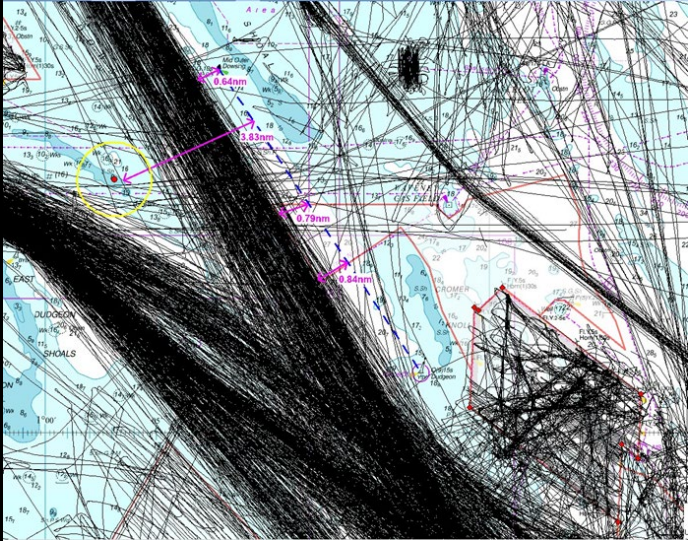
ID	Stakeholder Comment	Applicant's Updated Position at D7
4	<p>As stated at the first issue specific hearing and as set out in Trinity House's submissions at Deadline 1 [REP1-163], Trinity House do consider that the compression of marine traffic would increase the risk of collision, and from reading the submissions listed in the ExA's question and from the submissions that point is agreed by all parties, albeit to differing levels.</p>  <p>Figure 1: Overview of area</p>	<p>As per ID 1 the Applicant is in agreement with Trinity House that the <i>'proposed DEP North west boundary will cause shipping to navigate in a more compressed area increasing the risk of collision between vessels'</i>, this has been made clear within the NRA [APP-198]. The Applicant also notes that whilst there is an increased risk of collision, as with any offshore wind farm development, the increase in risk is within As Low as Reasonably Practicable (ALARP) parameters. Trinity Houses alignment with this position is evidenced by the final signed <b>Statement of Comment Ground with Trinity House (Revision B)</b> [document reference 12.19].</p>

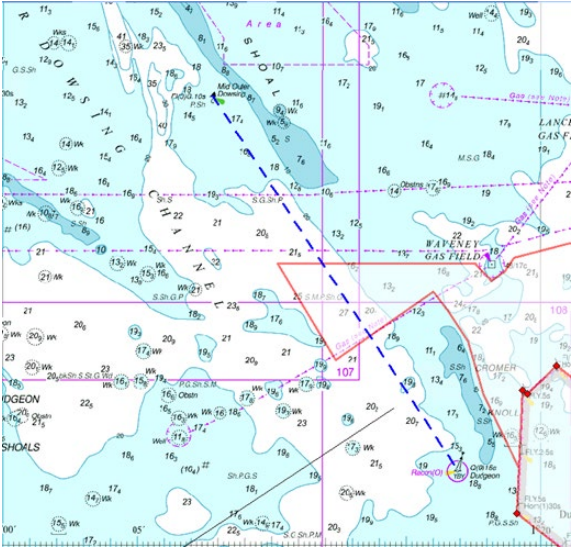


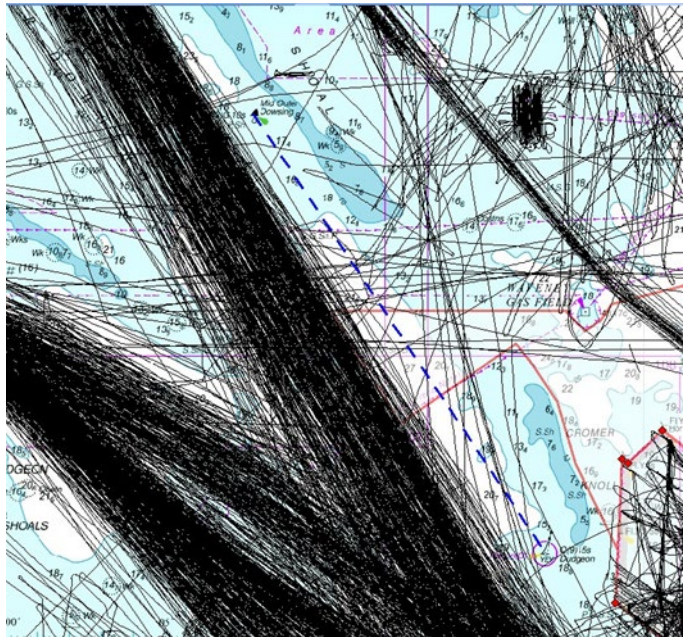
ID	Stakeholder Comment	Applicant's Updated Position at D7
	 <p data-bbox="248 900 846 927">Figure 2 : Overview of area with 28 days AIS traffic</p>	
<p data-bbox="165 951 483 975"><b>2. AIS DATA ANALYSIS</b></p>		
<p data-bbox="165 983 188 1007">5</p>	<p data-bbox="248 983 1106 1134">When assessing our data we generated similar results to the Applicant's, which are reported in the Navigation Risk Assessment [APP-198]. These showed an average of 33 vessels a day passing between the existing windfarms through Gate B shown in figure 3 and 13 a day passing the proposed DEP northwest boundary (Gate A in figure 3).</p> <p data-bbox="248 1150 1048 1238">The traffic patterns show that the majority of traffic passing the DEP boundary is bound between the northerly British ports and mainland European ports as laid out in APP-198 by the Applicant.</p>	<p data-bbox="1173 983 2074 1166">The Applicant agrees that there is broad alignment between the datasets considered by Trinity House and those assessed within the NRA [APP-198]. In particular, the value of 13 vessels per day passing DEP North aligns with the value estimated by the Applicant in the <b>Navigational Safety Technical Note</b> [REP3-031]. As per the response to ID 3, the <b>NRA</b> [APP-198] has considered a large period of data capturing both AIS and non AIS traffic.</p> <p data-bbox="1173 1182 2074 1270">The Applicant also agrees that Figure 4 of Trinity House's Deadline 5 submission [REP5-096] shows an accurate reflection of the western extent of the currently available sea room.</p> <p data-bbox="1173 1286 2074 1374">The Applicant's <b>Navigational Safety Technical Note</b> [REP3-031] provides additional context in relation to how vessels' navigate relative to local navigational features.</p>

ID	Stakeholder Comment	Applicant's Updated Position at D7
	 <p data-bbox="248 882 640 911">Figure 3: Gate analysis positions.</p> <p data-bbox="248 970 1144 1091">The traffic analysis also shows that the majority of the traffic is maintaining a distance of between 0.6nm and 0.8nm clear of a line between the Mid Outer Dowsing Buoy and the Dudgeon Buoy which are Trinity House assets placed to delineate the banks in that area (Figure 4).</p> <p data-bbox="248 1150 1137 1241">Figure 4 also shows that the vast majority of vessels are clearly maintaining a distance of 1.0nm from the shallow patch at the south eastern point of Triton Knoll.</p> <p data-bbox="248 1257 1133 1348">The major shipping appears to be maintaining a distance of 1.0nm from the boundaries of all the windfarms in the area, which aligns with the views expressed by the MCA in its submission [REP1-117].</p>	




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6	 <p>Figure 4: Buoy to Buoy Line and distances maintained</p>	<p>The Applicant notes that Trinity House calculate the existing sea room as 3.83nm, measured from the controlling depth of 10m on the Triton Knoll bank to the buoy to buoy line on the eastern side and the reduction in sea room is between 0.79nm and 0.84nm assuming full build out of DEP North western boundary (~22%).</p>
<p><b>3. LENGTH OF PERCEIVED CORRIDOR</b></p>		
7	<p>The MCA's position that the corridor should be measured up to the East Dudgeon Buoy [REP1- 117], instead of to the end of the proposed Sheringham Extension, could be the preferred solution when assessing the compression of the traffic given the DEP North Westerly boundary encroaches on the shipping lane. However, in this instance, as can be seen in figures 2 and 3, the traffic appears to already have moved to the sides of the available sea room to progress up the Outer Dowsing Channel or west of Triton Knoll windfarm. Trinity House would suggest that the additional length of the channel when considered in calculations would not bring additional mitigation to this area.</p>	<p>The Applicant agrees, and notes that this particular point is now agreed between the MCA and the Applicant as per the latest <b>draft SOCG with the MCA (Revision B)</b> [REP3-079].</p>
<p><b>4. NORTH WEST DEP BOUNDARY CONSIDERATION</b></p>		

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8	<p>When viewed alongside the existing buoy to buoy line which marks the extremities of the current shipping route (figure 5), the proposed boundary of the windfarm encroaches into the shipping route by around 0.84nm. As a percentage of the existing Outer Dowsing channel this is approximately a 22% reduction in available sea space.</p>  <p>Figure 5: Proposed DEP Boundary and buoy to buoy line.</p> <p>However when viewed with the current traffic pattern (figure 6) the proposed boundary goes right up to the current limits of the shipping. If shipping routes were to be adjusted to stay 1.0nm clear of the windfarm this would reduce the usable sea space by around 50%.</p>	<p><b>Interaction with Shipping</b></p> <p>This comment views the traffic width within the Outer Dowsing Channel as something definitive however vessels do have flexibility to move from existing routes and courses and they are not defined within specific lanes. This movement is something that happens with every offshore wind farm development including both direct displacement of routes but also, as with SEP and DEP, compression of existing routes. To define the edge of where vessels currently route (available sea room) requires data (noting the consideration of 12 months within the NRA) and that edge can vary daily hence the importance of considering the 90th percentile of traffic as per Marine Guidance Note (MGN) 654. Therefore, to say DEP North encroaches into the shipping route is not strictly correct; vessels will judge the sea area based on traffic, conditions and navigational features with or without DEP North in situ. As per the NRA, the 90th percentile of traffic using the area would have reduced sea room in which to navigate. When an NRA identifies either the need to displace or constrict a route the first question is what type of route it is and as demonstrated by the Applicant's response to Q2.19.1.4 (see <a href="#">The Applicant's Responses to the Examining Authority's Second Written</a> [REP3-101]), the shipping routes passing DEP North (or between SEP and DEP) do not constitute sea lanes essential to international navigation in line with the policy requirements of NPS-EN3 (Paragraph 2.6.161) nor does the route contain any 'lifeline routes'.</p> <p>Following on from the NRA, the Applicant then undertook a process of consultation and quantification to identify if the sea room could be reduced with vessels able to safely navigate in a future case environment with emphasis on the low number of vessels likely (most likely less than 1) to be using this area at any given time (see the <a href="#">Evidence to support the Applicant's response to ISH7 Agenda Item 4.ii</a> [REP6-024]). The NRA [APP-198] clearly demonstrates this is the case and that navigational safety in a future case environment is within ALARP parameters. Again, it is important to highlight the conservative modelling undertaken to demonstrate this (see the <a href="#">Evidence to support the Applicant's response to ISH7 Agenda Item 4.ii</a> [REP6-024]) and that NRAs are as per MGN 654</p>

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	 <p>Figure 6: Proposed DEP Boundary and buoy to buoy line with traffic</p> <p>As can be seen from Figure 6 this does present an enhanced risk of collision by compressing the traffic into a channel which could be approximately only 2 miles wide when passing the end of the Triton Knoll. Vessels are currently allowing a safe passing distance of 1nm from the bank so it could be argued the effective sea space is now only about 1nm. If consideration is then given to fishing activity in the area, and to additional vessels servicing the windfarm, then the enhanced risk of collision could become significant.</p>	<p>considered on a case-by-case basis requiring intelligent application of guidance and setbacks to structures.</p> <p><b>Passing Distances</b></p> <p>A passing distance of 0.5nm was assumed for the 90th percentile of traffic within the <b>NRA</b> [APP-198] modelling [EV-095, EV-096], which aligns with the data studied in the <b>NRA</b> and accords with the supplementary evidence within <b>Appendix A.2</b> of the <b>Applicant's Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions</b> [REP5-050] which shows vessels in this area and across the UK pass closer than 1nm to operational wind farm structures on a daily basis. The assumption is considered conservative on the basis that this passing distance means the full area of sea room available is considered and captures the worst case for allision risk when combined with the modelled compression of traffic to a width of 1nm.</p> <p>As the MCA note in their response at Deadline 5 [REP5-081], MGN 654 Annex 2 notes that 0.5nm is the recommended minimum distance, however the annex also notes that distances above that are Tolerable if ALARP. There is no rule to state how close a vessel can pass an array outside of temporary 500m safety zones (or 50m in operation).</p> <p>At ISH7 the MCA, Trinity House and Chamber of Shipping all agreed, when presented with the visualisation of NRA modelling (see Appendix A.2 of the Applicant's Supporting Documents for the <b>Applicant's Responses to the Examining Authority's Third Written Questions</b> [REP5-050]) that the assumptions which modelling was based upon represented a worst case scenario with Captain Harris of Trinity House stating:</p> <p><i>"the darker shaded area is, I would consider and if I was doing the modelling acceptable (as a realistic worst case)"</i> (Timestamp 49:32 [EV-095])</p>



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9	<p>If consideration is then given to fishing activity in the area, and to additional vessels servicing the windfarm, then the enhanced risk of collision could become significant.</p>	<p>Both the long term AIS data and the 28 days of vessel traffic survey data (which includes non AIS fishing vessels) studied for the NRA [APP-198] indicates the Outer Dowsing channel is not a busy area for fishing (estimated less than one fishing vessel per day on average in both datasets).</p> <p>As per the <b>NRA</b> [APP-198] project vessels are mitigated by marine coordination and the Navigation Management Plan (secured in 13.(1)(k) <b>draft Development Consent Order (Revision J) (Clean)</b> [document reference 3.1]) (which will ensure they do not become a collision risk to third party vessels).</p>
10	<p>In the NRA [APP-198] Sec 20.1 Safety Zones Para 402 the Applicant lays down its expectation for safety zones during all phases of the project and these include "500m around any structure where construction is ongoing, as denoted by the presence of a construction vessel" and "500m around any structure where major maintenance is ongoing during the operational phase, where major maintenance is as defined within the Electricity Regulations (2007)." If these areas were to extend beyond the proposed redline boundary / order limits this would reduce the available sea space further and would be considered unacceptable around the western side of the DEP Northern boundary.</p>	<p>Safety zones will be applied for post consent in line with industry standard practice (temporary safety zones during the construction and maintenance phases). Section 95 and Schedule 16 of the Energy Act 2004 details the standard dimensions for safety zones which can be maximum of 500m measured from the wind turbine foundation (not the blade tip). When considering this value alongside the minimum rotor diameter (235 metres (m)) and the Offshore Temporary Works Area (OTWA) (Work No 6A, 6B and 6C) [PDA-003] of approximately 200m (equalling approximately 317m i.e., half rotor diameter plus OTWA) there is anticipated to be minimal further reduction on available sea room. Further, it is noted that during the construction phase these safety zones are likely to be within the buoyed construction area that will be agreed with Trinity House.</p> <p>The Safety Zones figure (included in <b>A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions</b> [REP5-050]) shows the safety zone extents relative to the modelled future case traffic.</p> <p>Therefore, the Applicant (as per the <b>NRA</b> [APP-198]) where the presence of safety zones are assessed) concludes there is no effect on navigational safety.</p>
11	<p>During the construction phase any buoyage used to delineate the windfarm area could also have the effect of reducing sea space if not placed within the development zone. This would be the same for all boundaries in the project aligning with the shipping route.</p>	<p>Monitoring and mitigation measure include commitment to adherence with the requirements of the DCO, - <i>Aids to Navigation 8(1) The undertaker must during the whole of the period from commencement of construction of the authorised project to completion of decommissioning of the authorised project exhibit such lights, marks, sounds, signals and other aids to navigation, and</i></p>

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	<p>When considering the proposed boundary in conjunction with the existing NPS EN-3 2.6.168 and 2.6.16 Trinity House would conclude that the effects on the shipping lane could be an obstruction to navigation. We are aware that these are the worst case scenarios and without knowing the final number and layout of turbines in the area we cannot fully assess these impacts.</p>	<p><i>take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct – (draft Development Consent Order (Revision J) [document reference 3.1]).</i> This includes the deployment of construction buoyage around SEP and DEP in consultation with Trinity House.</p> <p>This process will ensure that the buoyage does not constrain sea room noting construction buoys are typically placed within 1,000m of peripheral turbines hence the important of understanding the layout.</p>
<b>5. SOUTHERLY TRAFFIC ROUTES</b>		
12	<p>The traffic pattern shows that vessels using the area from the north are already having to consider their routes for passing the Haisborough Sand and Hewett Gas Fields to the south east. When approaching from the south, vessels will have planned for passing between the windfarms and exiting for the northern ports. As such, the compression of available sea space will be a larger consideration for these vessels.</p> 	<p>The hazard workshop was held following the initial operator outreach, with attendees including key vessel users of the area. The output of the workshop was that the operators had no outstanding navigational safety concerns, with key operators making statements such as that they navigated in more restricted areas than will be the case here, and that they were satisfied that they would not be adversely affected (located in <b>Appendix A.10 of Supporting Documents for the Applicant's Responses to the Examining Authority's Fourth Written Questions</b>, document reference ). Therefore on the evidenced basis that vessel are content to continue to navigate the area and as per the <b>NRA [APP-198]</b> based upon the post wind farm routeing, it was predicted that six of the 14 main commercial routes identified within the study area would be displaced as a result of the SEP and DEP, however with a maximum (worst case) proportional increase of 4% in journey distance which is not considered significant (when compared to overall length/ journey time).</p>



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	Figure 7: Overview of traffic routeing	
<b>6. CONCLUSIONS</b>		
13	The proposed DEP North west boundary will cause shipping to navigate in a more compressed area increasing the risk of collision between vessels.	As per ID 1 the Applicant is in agreement with Trinity House that the <i>'proposed DEP North west boundary will cause shipping to navigate in a more compressed area increasing the risk of collision between vessels'</i> , this has been made clear within the NRA [APP-198]. The Applicant also notes that whilst there is an increased risk of collision, as with any offshore wind farm development, the increase in risk is within As Low as Reasonably Practicable (ALARP) parameters. Trinity Houses alignment with this position is evidenced by the signed <b>Statement of Comment Ground with Trinity House (Revision B)</b> [document reference 12.19].
14	This risk would be increased further when allowing for vessels fishing and servicing the new structures in the area.	As per ID 10, both the long term AIS data and the 28 days of vessel traffic survey data (which includes non AIS fishing vessels) studied for the <b>NRA</b> [APP-198] indicates the Outer Dowsing channel is not a busy area for fishing (estimated less than one fishing vessel per day on average in both datasets).  As per the <b>NRA</b> [APP-198] project vessels are mitigated by marine coordination and the Navigation Management Plan (secured in 13.(1)(k) <b>draft Development Consent Order (Revision J) (Clean)</b> [document reference 3.1]).which will ensure they do not become a collision risk to third party vessels.
15	COLREGS will still need to be followed by vessels and the area available to vessels to alter course will have been reduced.	The International Regulations for the Prevention of Collisions at Sea (COLREGS) 1972 is the law and all vessel proceeding to sea are required to comply with it. The sea room available to the west of DEP North is sufficient to allow vessels to comply with COLREGS and take necessary action to avoid a collision. As per COLREGS Rule 8 action can be <i>'Any alteration of course and/or speed...'</i> and to focus on vessel taking a full 360 degree 'turn out' which is not a frequent occurrence is unreasonable. There is sufficient sea room to take a turn out if required but this is not the only option available to vessels.

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		The Applicant welcomes the confirmation that Captain Harris of Trinity House provided at ISH7 when he stated “ <i>an area the size we are discussing ships should be able to navigate that safely using COLREGS</i> ” (timestamp 1:17:20 [EV-095]).
16	If the project goes ahead with the current boundaries and turbines built to the extremities of the area, the buoy to buoy line between the Mid Outer Dowsing Buoy and the Dudgeon buoy will become irrelevant and Trinity House would need to reassess the requirements for general aids to navigation in the area.	As per ID 12 the Applicant has committed with its embedded mitigations and with the deemed marine licence to deploying Aids to Navigation or relocating aids to navigation on behalf or in support of Trinity House. (Aids to Navigation Management Plan (secured in Condition 8 Aids to Navigation and 13.(1)(g) <b>draft Development Consent Order (Revision J) (Clean)</b> [document reference 3.1])
17	The area at the DEP north west boundary is the area of greatest concern as the reduction in sea space could possibly lead to grounding on the Triton Knoll for some vessels and this would need mitigating if the project is consented and builds out to the red line.	As per ID 12 the Applicant has committed with its embedded mitigations and with the deemed marine licence to deploying Aids to Navigation or relocating aids to navigation on behalf or in support of Trinity House. (Aids to Navigation Management Plan (secured Condition 8 Aids to Navigation and in 13.(1)(g) <b>draft Development Consent Order (Revision J) (Clean)</b> [document reference 3.1])
18	Safety zones and buoyage used during the construction phase and future maintenance could further restrict the sea space outside of the red line boundary.	As per ID 11.
<b>7. SUMMARY</b>		
19	In response to the question, we consider the risks to navigational safety, particularly to the west of the DEP north boundary, to be considerable and complex to mitigate with aids to navigation. These risks could be alleviated if the full area within the redline boundary was not utilised as vessels are currently staying clear of the buoy to buoy line which is why the Applicant has drawn the red line to this point in our opinion.	The Applicant remains confident that that the NRA is robust and the ALARP statement is evidenced. The Applicant also notes that as per ISH 7 [EV-095, EV-096] Trinity House are not in support of a ‘no structures zone’ within DEP North and per ID 20 note that mitigation such as Aids to Navigation, charting and ‘proper watchkeeping’ on vessels (as per COLREGS) confirm that the SEP and DEP are ALARP.
20	Allowing for the volume of marine traffic, and an assumption that fishing activity will continue between the windfarms, the compression of traffic through the rest of the site will increase the risk of collisions as with all sites and will likely be mitigated by aids to navigation, correct charting and proper bridge watchkeeping on the vessels.	As per ID 20

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21	The use of safety zones during construction and maintenance could further restrict available sea space outside of the red line boundary. This is a concern along the main shipping route between the project's and the DEP north westerly boundary.	See answer to ID 11.
22	Finally, despite the assessment made above, Trinity House would defer to the MCA, as the primary navigational safety body, when defining shipping routes/lanes and assessing the appropriate widths of corridors as per MGN654.	The Applicant also notes the remit of the MCA and its requirement to undertake that remit in line with its own guidance (MGN 654) and national policy statements.