



# Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

The Applicant's comments on the Maritime and  
Coastguard Agency's Deadline 4 Submission

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## **1 The Applicant's comments on Maritime and Coastguard Agency Deadline 4 Submission**

1. This document presents the Applicant's response to the Maritime and Coastguard Agency's Deadline 4 submission [REP4-047].

**Table 1 MCA General Comments**

ID	Stakeholder Comment	Applicant Response
1	Thank you for inviting the Maritime and Coastguard Agency (MCA) to provide additional information to the Secretary of State as part of its assessment of the proposed Sheringham and Dudgeon offshore wind farm extension projects. We would like to submit the following response to the Examining Authority at Deadline 4.	No response.
2	The Applicant provided a Navigation Safety Technical Note (document reference 6.3.13.2) in response to the Examiner's Questions 2 on issues highlighted during the Issue Specific Hearing (ISH) 6 and we would like to respond to specific points as follows:	No response.
3	There remains disagreement on the risks west of the DEP North boundary. The applicant maintains that navigational risk will not increase significantly and that there will be little change to the safe sea room. It is the MCA's opinion that navigational risk will increase in this area due to the reduced safe sea room and that mariners' ability to avoid a collision or allision as a result will be compromised.	No response.

**Table 2 MCA Comments on the Navigation Safety Technical Note**

ID	Applicant's Comment	MCA Responses	Applicant's Comment
<b>1.3.3 Navigational Safety Para 22 (second bullet point)</b>			
4	Reliance upon mitigation in granting consent: as set out in NPS policy above, the MCA will use the NRA to determine its advice on the application, therefore it can be concluded that since the results of the NRA are that navigational safety risk is ALARP, in line with NPS policy, the application with mitigation measures in place consent can safely be granted under paragraph 2.6.167 inter alia;	<p>This implies that since the NRA concludes risks are ALARP then there is no need for MCA to review it and provide advice to the Examining Authority. If a statement is made to say the risks are Tolerable (if ALARP) it does not automatically mean that it has been agreed with navigation stakeholders.</p> <p>The NPS EN-3 Para 2.6.167 states: The MCA will use the NRA as described in para 2.6.156 above when advising the IPS on any mitigation measures proposed.</p>	<p>As per the Draft SoCG with the MCA there is agreement that the NRA has been undertaken in line with relevant shipping and navigation legislation and guidance including being compliant with MGN 654 requirements [REP3-134].</p> <p>The MCA received a copy of the NRA at PEIR in June 2021. Then an updated NRA with full survey data in July 2022 and the final NRA [APP-198] was published at acceptance. The MCA have reviewed the ALARP statements each time, which have not changed, and did not make comment.</p>
<b>1.3.3 Navigational Safety Para 23</b>			
5	Since the conclusion of the NRA is that the navigational risk posed by the application is ALARP, of the ES is that the effects on shipping are not significant in EIA terms and since any obstruction that would arise as a result of the development is minimal in nature, the application is fully in accordance with NPS policy on navigational risk as set out above.	MCA has a concern on one safety aspect in particular where the obstruction is not minimal. We are unable to agree the application complies with the NPS, nor could we agree it complies with the shipping and navigation policies in the Marine and Coastal Access Act 2009, Marine Policy Statement and East Offshore Marine Plan.	This statement was made in relation to NPS EN-3 policy. Mean route deviations are minimal (see Table 18.1 of the <a href="#">NRA [APP-198]</a> ). Disruption and economic loss are minimised, and transit times are not appreciably longer.
<b>1.3.4 Consultation Draft National Policy Statements Para 25</b>			
6	Following careful consideration of the March 2023 consultation draft NPS for Renewable Energy Infrastructure EN-3 and draft policy tests it contains for offshore windfarms in relation to navigation and shipping, no substantive	MCA has identified substantive changes to the draft NPS EN-3 policies for shipping and navigation and we will be providing a representation on our concerns to the Department for Energy Security and Net Zero in due course. It	Sections 1.3.1, 1.3.2 and 1.3.3 of the <a href="#">Navigational Safety Technical Notes [REP3-031]</a> review agreement with existing NPS. In addition, section 1.3.4 considers draft NPS for Renewable Energy Infrastructure EN-3 whilst

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	<p>proposed policy changes to those applying by virtue of the designated NPS EN-3 set out above, can be identified. The conclusion of ALARP in the NRA would therefore remain sufficient, under the draft NPS EN-3 for the project to be fully in accordance with NPS policy on navigation and shipping.</p>	<p>is not appropriate to infer the risks to navigation comply with the draft policies since they are still in draft format, and they have not been agreed with the appropriate Government Departments and navigation stakeholders.</p>	<p>noting "<i>the draft NPSs now in their second iteration, with extensive consultation and Parliamentary scrutiny to follow, these draft policies could change. Whilst any consultation draft NPS may be considered an important and relevant matter, the Planning Act 2008 requirement is that decisions must be made in accordance with the designated NPSs in force at the time</i>". The Applicant has referred to the draft NPS in addition to the designated NPSs as despite their draft status they may still be considered an important and relevant matter (pursuant to s104 of the Planning Act 2008).</p>
<b>2 NRA Summary Para 35</b>			
7	<p>The collision modelling aspects of the NRA remained unchanged throughout the iterations detailed above (including the draft NRA submitted at PEIR). The MCA did not indicate any specific concern on DEP-North or any other particular aspect of SEP and DEP at any point of the NRA process prior to formal submission. The Applicant therefore understood there to be no material concerns remaining (as was stated by the Applicant at ISH1) until those points raised in February 2023, post commencement of examination.</p>	<p>Prior to submission at the PEIR stage the baseline survey data was incomplete and the full dataset was not seen until the final draft NRA was subsequently completed.</p>	<p>The PEIR NRA included 12 months of AIS data to supplement the marine traffic survey data and allow stakeholders the best possible information at PEIR. This approach was agreed at a virtual meeting with Trinity House and the MCA on the 15/06/2020 (see <a href="#">Table 4.2</a> of the <a href="#">NRA</a> [APP-198]).</p> <p>Post PEIR the MCA attended a hazard workshop and were subsequently consulted on the hazard log. A complete draft final NRA was provided to the MCA by the Applicant in July 2022 including complete survey data and hazard logs.</p> <p>The MCA did not indicate any specific concern on DEP-North or any other particular aspect of SEP and DEP at any point of the NRA process prior to formal submission. The Applicant therefore understood there to be no material</p>

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			concerns remaining (as was stated by the Applicant at ISH1) until those points raised in February 2023, post commencement of examination.
<b>6 Passing Distance Para 51</b>			
8	Given the local features present (see Figure 6.1), and local evidence of vessels passing closer than 1nm to existing wind turbine generators in the area (see Figure 6.2), it is considered likely that the 1.5nm value referenced by the MCA is not resultant of a deliberate choice by vessels to avoid wind turbine generators by a set distance. It is instead reflective of prudent mariners accounting for other features in the surrounding sea area.	It is agreed that prudent mariners transit 1.5nm from Triton Knoll OWF (as shown in the NRA) due to other navigational features in the area and this will include the avoidance of shallow water. If the DEP North boundary is not reduced mariners will not transit further west to provide more safe sea room due to the Triton Knoll shallow water and waypoint reference in Figure 6.1. Mariners will provide a safety buffer from the DEP North boundary and therefore they will be constricted into a narrower channel.	<p>NRA modelling does not assume that traffic would move further west. The assumed traffic distributions used in the collision risk modelling are narrower than that proposed as worst case in the MCA submission to ISH6 [page 1 of AS-044].</p> <p>The NRA does consider a 1nm separation from the route median line and therefore a 0.5nm separation between the nearest shipping 90% traffic level and the project boundary (Modelling Visualisation figure within <b>A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions</b> [document reference 19.2.1]). This assumption is standard practice in collision risk modelling and in this case is considered as modelling a worst case compression of traffic while still maintaining proximity of traffic to the structures to ensure collision risk is captured. This assumption is also supported by practice observed at the existing Dudgeon Offshore Wind Farm and other sites from around the UK (<b>Vessel Passing Distances from UK Wind Farms Note</b> within <b>A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions</b> [document reference 19.2.1]).</p>



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<b>7.3 Additional Modelling Figure 7.2</b>											
9	Sensitivity Scenario Illustration	The Figure would benefit from showing the future extent of traffic with DEP North in place, showing the safety buffer from the boundary and the navigational squeeze of the constricted traffic.	The Applicant has produced a figure illustrating the conservative assumptions that were made in the NRA in terms of safety buffers and route width (Modelling Visualisation figure within <b>A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions</b> [document reference 19.2.1]).								
<b>7.3 Additional Modelling Table 7.2 and Para 61</b>											
10	<p>Additional Sensitivity Modelling Summary</p> <p>The sensitivity analysis shows that removal of the northwestern extent of DEP-North results in a reduction of approximately 3% of the collision risk return period from the NRA scenario, which does not increase the expected number of collisions over the operational lifespan of SEP and DEP4. On this basis it is considered that removal of the northwestern extent of DEP-North has no material impact on changes in collision risk, and therefore, as found through the NRA process, the hazard is considered as being ALARP.</p>	<p>Table 7.1 provides the collision modelling assessment for the entire 10nm study area which concludes that collision risk will change by more than 11%:</p> <table border="1" data-bbox="875 850 1458 959"> <thead> <tr> <th>Scenario</th> <th>Change in collision risk</th> </tr> </thead> <tbody> <tr> <td>Base Case (0% traffic increase)</td> <td>11.5%</td> </tr> <tr> <td>10% traffic increase</td> <td>11.4%</td> </tr> <tr> <td>20% traffic increase</td> <td>11.9%</td> </tr> </tbody> </table> <p>Table 7.2 concludes the collision risk will only change by 3% with the removal of the western boundary of DEP North. However, MCA does not believe this is a reasonable conclusion as the future extent of the traffic (future channel width) has not been represented with both safety buffers and more condensed traffic, and we are testing it against qualitative factors of good seamanship and compliance with COLREG i.e. collision avoidance in head on and converging traffic situations. The narrowing of the channel limits mariners' options for taking early and substantial avoiding action if a collision scenario is identified. Collision risk change for the entire area is more</p>	Scenario	Change in collision risk	Base Case (0% traffic increase)	11.5%	10% traffic increase	11.4%	20% traffic increase	11.9%	<p>The NRA modelling has assumed a 0.5nm safety buffer from the nearest shipping 90% traffic level, and a traffic 90% shipping traffic level width of 1nm. The compression of traffic to a 1nm width is a greater "squeeze" than the MCA have predicted [page 1 of AS-044]. This is illustrated in the comparison figure included in <b>A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions</b> [document reference 19.2.1]. which shows the NRA modelling assumptions made.</p> <p>The 11% value is the overall change in collision risk between the pre and post wind farm scenarios in the study area as a whole based on the original NRA modelling process undertaken.</p> <p>The 3% value is again for the study area as a whole, and is the difference between the post wind farm NRA modelling and the sensitivity analysis undertaken in the Navigational Safety Technical Note [REP3-031].</p>
Scenario	Change in collision risk										
Base Case (0% traffic increase)	11.5%										
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20% traffic increase	11.9%										

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		<p>than 11% and we would expect a higher change of collision risk than 3% off the DEP North area.</p>	<p>All modelling processes have included conservative assumptions on future case traffic behaviour including a compression of traffic as detailed above.</p>
<b>8 Existing Precedent Para 67</b>			
11	<p>The Applicant notes that:</p> <ul style="list-style-type: none"> <li>Based on the vessel traffic survey data, the "Race Bank Channel" is busier than the traffic associated with the routes passing the northwest extent of the DEP windfarm site through the "Outer Dowsing Channel" (19 vessels per day compared to 13 vessels per day);</li> <li>The vessels navigate through the "Race Bank Channel" in an area of searoom that is more restricted (i.e., narrower) than what will be available post wind farm at the northwest extent of the DEP windfarm site within the "Outer Dowsing Channel" (2.3nm vs 2.7nm);</li> <li>The length of the "Race Bank Channel" is longer than the restricted area that will be present at the DEP windfarm site (8nm vs 3nm); and</li> </ul>	<p>The Race Bank channel is constricted by areas of shallow water and it is difficult to compare collision and allision risks to the area west of DEP North since this channel will be bordered by wind turbines where there will be higher allision risk. This in turn will influence seafarer behaviour by having a wider safety buffer which will constrict the traffic into a narrower channel and therefore collision risk will increase.</p>	<p>The "Race Bank Channel" is constricted on both sides by shallows which represent a grounding risk, with the approximate length of the channel when bounded on both sides being 8nm. These shallows are marked by buoys and shown on charts but do not represent visible surface risks. The vessel traffic survey data shows vessels in this channel avoid the banks, leading to a route width of approximately 1nm.</p> <p>The area past DEP North will be bounded on one side by turbines (spaced at a minimum of 990m) which will be lit and marked in agreement with Trinity House to ensure they are visible.</p> <p>The Applicant agrees that the risks posed by shallows (grounding) and turbines (allision) are not identical, however notes that vessels treat both similarly in terms of transit based on the vessel traffic survey data.</p> <p>This comparison demonstrates a real world example where traffic (in greater volume) manages a narrower constriction for a longer length through the appropriate application of COLREGS.</p>

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	<ul style="list-style-type: none"> <li>There is no visible surface piercing hazard in the "Race Bank Channel" i.e., mariners rely on charted locations of the shallows and surface buoyage to safely navigate the area (for DEP-North, the wind turbine generators will be visible hazards).</li> </ul>		
<b>9 Summary Para 72</b>			
12	<p>The key discussion points included in this technical note are summarised as follows:</p> <ul style="list-style-type: none"> <li>The Applicant has consulted with the MCA (and other stakeholders as demonstrated in the NRA [APP-198]) throughout the NRA process creating a robust assessment of navigation safety risk;</li> <li>The NRA found all hazards to be within ALARP parameters with mitigations in place and included a completed MGN 654 checklist to demonstrate MGN 654 compliance;</li> </ul>	<p>The purpose of the MGN checklist is not to demonstrate compliance but to ensure the guidance and advice within MGN654 has been considered in the NRA.</p>	<p>At Section 42 the MCA commented (table 4.4 of the NRA [APP-198]):</p> <p><i>"We appreciate the early opportunity to comment on the draft MGN 543 checklist, and we can discuss the elements further as the project progresses. A new version of the checklist is available following the recent publication of MGN 654 which will need to be used for the NRA update. We are content at this stage with regards to the process you have undertaken in order to comply with MGN 654 and its annexes, and we welcome the work undertaken for addressing the guidance and recommendations so far."</i></p>
<b>9 Summary Para 74</b>			
13	<p>As noted in the NRA [APP-198] and this technical note, none of these routes are significantly impacted by the presence of SEP and DEP noting that safe sea room is maintained, and collision risk values are acceptable. This is supported by the consultation undertaken as part of the NRA process which demonstrates that general consensus was that</p>	<p>Safe sea room will not be maintained in the channel west of DEP North. The safe sea room will be narrower and vessel traffic will be constricted.</p>	<p>The Applicant does not contest that sea room will be reduced and has assessed a compression of traffic including via a conservative modelling process. The Applicant considers, based on the results of the collision risk modelling and feedback from stakeholders that in the post wind farm scenario the resultant sea room is ALARP for the predicted traffic</p>

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	Mariners do not have notable safety concerns about using the area in a future case environment (with SEP and DEP in situ).		scenarios and therefore safe sea room is maintained.