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20 June 2023

Your ref: EN010109

Dear Sir/Madam

Application by Equinor for an Order Granting Development Consent for the Sheringham and Dudgeon Extension Projects.

Planning Act 2008 – Section 89 and The Infrastructure Planning (Examination Procedure) Rules 2010

Examination Timetable – Deadline 6

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 windfarm extension projects. We would like to submit the following response to the Examining Authority at Deadline 6 which provides MCA comments on the Applicant's submission to the Examining Authority Questions 3.

ExA Question	Applicant Response	MCA Comments
Q3.19.1.1 Safety Zones The MCA has raised the issue of the temporary potential effect of safety zones of sea room for traffic [REP3-134]. How could safety zones on a temporary basis effect	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	The safety zone radius area is measured from the turbine structure at sea level and 500m is the standard distance during the construction, major maintenance and decommissioning phases. It is recognised that some or all the safety zone will fall inside the buoyed construction

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<p>navigation safety, particularly west of DEP-North?</p>	<p>can be maximum of 500 metres measured from the 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 A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions [document reference 19.2.1]) shows the safety zone extents relative to the modelled future case traffic.</p> <p>Therefore, the Applicant (as per the Navigation Risk Assessment [APP-198]) where the presence of safety zones are assessed) concludes there is no effect on navigational safety.</p>	<p>area during the construction phase, which itself reduces available sea room for passing traffic. It will not be known what the additional reduced sea room will be until the positions of the construction buoys have been agreed with Trinity House. Therefore, MCA does not agree with the Applicant at this stage that "there will be no effect on navigation safety".</p>
<p>Q3.19.1.2 Navigational Risk The Applicant, in the Navigational Safety Technical Note [REP3-031] has provided additional modelling of the northwest extent of DEP-North on collision risk of or traffic within the Outer Dowsing Channel. This modelling showed a collision risk post windfarm development of 1 in 8.7 years.</p> <p>A) If you disagree with the Applicant's calculations, provide MCA calculations to show what the current collision rate would be compared to if DEP-North was built out as proposed?</p>	<p>Whilst this question is addressed to the Maritime and Coastguard Agency (MCA) the Applicant highlights that the NRA and Environmental Impact Assessment Methodology are 'Agreed' within the Draft Statement of Common Ground Maritime and Coastguard Agency (Revision B) [REP3-079].</p>	<p>In the draft Statement of Common Ground, MCA has agreed that 'the assessment has been undertaken in line with relevant shipping and navigation legislation and guidance including being compliant with MGN 654 requirements'. It is important to note that this refers to the risk assessment <u>process</u> the Applicant has followed, not the results and conclusions. The disagreement on the risks concerning the DEP-North boundary is based on MCA's qualitative assessment which must be considered in addition to somewhat purely quantitative assessment and statistical analysis presented by the Applicant.</p>

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<p>B) Provide your version of the Applicant's Figure 7.2 of the submitted Navigational Safety Technical Note [REP3- 031], showing anticipated remaining sea room for ships, including safety buffers necessary.</p> <p>C) the Navigational Risk Assessment [APP-198] assumed potential increases of 10 and 20% within the commercial traffic allision and collision modelling. Provide calculations for scenarios with and without DEP-North for this Outer Dowsing Channel incorporating a 10% and 20% increase in shipping traffic.</p> <p>D) With respect to NPS EN-3, Paragraph 2.6.165, please confirm whether you would consider any increased risk of vessel collision as an unacceptable risk, based on both the Applicants and the MCA figures.</p>		
<p>Q3.19.1.4 Mitigation against risk If the route past DEP-North would pose an unacceptable risk post windfarm development then is there other mitigation or measures available to address this, other than the omission of turbines close to this route to keep the sea room as existing? For example, could this route be avoided or recommended against for vessels traversing this area, using an alternative route instead?</p>	<p>Whilst this question is addressed to the Maritime and Coastguard Agency (MCA) the Applicant notes that the NRA [APP-198] states that risks are considered to As Low As Reasonably Practicable with mitigation (embedded and additional) in place. At the time of submission of the NRA in the DCO application no further mitigation than those listed and addressed within the NRA had been requested by other stakeholders, including the regular operators consulted during the pre-application phase.</p>	<p>The navigation risk assessment methodology guidance, published by the MCA, is clear that developers should achieve agreement with navigation stakeholders that the risks are ALARP which includes agreement of risk controls for managing the risk. A statement within an NRA to say the risks are ALARP must not be accepted by default as being agreed with navigation stakeholders.</p> <p>It is noted there are no additional mitigation measures proposed by the Applicant (other than the Navigation Management Plan for commercial impacts), only embedded mitigation which are standard for all offshore wind farms. The MCA is requesting the mitigation measure of reducing the red line boundary.</p>
<p>Q3.19.1.6 Disruption or Economic Loss Would the Proposed Development location avoid or minimise disruption or adverse transit time changes, including economic loss to the shipping and navigation</p>	<p>As per Environmental Statement Appendix 13.1 - Navigation Risk Assessment [APP-198] (Section 21.1.1) based upon the post wind farm routeing, it was predicted that six of the 14 main commercial routes identified would deviate as a result of the SEP and DEP, with a maximum proportional increase of 4% in</p>	<p>MCA's assessment of the likely deviations is that vessel journeys will increase by as much as one hour. When extrapolated over any period of time, the increase can have significant impacts to commercial disruption and costs through increased fuel consumption, increased</p>

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<p>industries, with particular regard to approaches to ports and to strategic routes essential to regional, national and international trade, lifeline Ferries, or recreational users of the sea?</p>	<p>journey distance. There are pre-established routeing options available within the area, and these are defined primarily by the shallow banks present within the vicinity.</p> <p>During consultation regular operators of the area also raised concern over long term impacts associated with deviations to avoid project vessels in the area. As discussed in Section 18.5, these concerns were not safety related and were instead related to impacts on transit times and distances. The operator feedback was that the implementation of project vessel procedures (Navigation Management Plan) would mitigate this impact. Whilst deviations would be frequent (daily) based on the small increase (worst case) in route length and the feedback from operators in the area deviations / displacement are shown to be within ALARP parameters. For other users (small craft) as required under the Development Consent Order, promulgation via all the usual means (e.g., Notice to Mariners, Kingfisher Bulletin) will be undertaken to ensure third party vessels are aware of the SEP and DEP. This will facilitate advanced passing planning to ensure any deviations are minimised.</p> <p>SEP and DEP are not located in proximity to port approaches or lifeline ferry routes.</p>	<p>emissions, and pressures on meeting port and harbour scheduling.</p> <p>The Navigation Management Plan is described in the NRA as necessary to manage crew transfer vessels during construction and operation. It is not understood what is meant by “passing planning”, however the plan will aid passage planning for the crew transfer vessels.</p>
<p>Q3.19.1.10 Details of Obstacle/Turbine Free Areas If the MCA considers that the only solution to address the concern about navigational safety to the west of the proposed DEP-N windfarm site is to have a turbine/obstacle free area, can this be clearly shown on a map/chart of the area within the DEP-N boundary that this would need to relate to.</p>	<p>As per Q3.19.1.4.</p>	<p>As per Q.19.1.4. The MCA recommends the risk control measure of reducing the DEP-North boundary.</p>
<p>Q3.19.1.11 Implications of MCA position</p>	<p>NPS EN-3 policy at paragraph 2.6.165 is that: <i>The IPC should not consent applications which pose unacceptable risks to navigational safety after all possible mitigation measures have been considered.</i></p>	<p>MCA responded at Deadline 5 to say that the navigational risk created by the DEP-North site is unacceptable.</p>

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<p>In line with NPS EN-3, particularly Paragraph 2.6.165, what is the implication of the MCA current position for the recommendation that can be made to the SoS?</p>	<p>The Applicant fully recognises that the MCA has made a representation at Deadline 4: Submission - Comments on any other information and submissions received at D3 [REP4-047] that <i>“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”</i> and the Applicant continues to meet with the MCA to seek to understand and resolve the objection.</p> <p>However, if agreement on the minimal route deviation and consequent navigational risk increase cannot be reached, it is important to note that the above MCA representation does not represent a conclusion that, in NPS EN-3 paragraph 2.6.165 terms, SEP and DEP is an application the SoS “should not consent ... which pose unacceptable risks to navigational safety after all possible mitigation measures have been considered”. In contrast the facts of the development of the NRA are that, as per the Draft Statement of Common Ground 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]. 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 (Environmental Statement Appendix 13.1 - Navigation Risk Assessment [APP-198]) was published at acceptance. The MCA have reviewed the ALARP statements each time, which have not changed, and did not make comment. Therefore, the MCA accepts the detailed methodology and has accepted each stage of the preparation of the NRA. Furthermore, it follows that the conclusion of said NRA that risks are ALARP must stand, except to the extent that an alternative assessment of navigational risk, meeting the same required standards of NRA preparation has been made and concluded to</p>	<p>The MCA reviewed the NRA at PEIR and noted that the traffic survey was incomplete, the HAZID workshop had yet to be conducted, and that the NRA would be updated when MCA would provide further comments. MCA provided comments on the final NRA after acceptance at Deadline 1.</p> <p>The MCA has accepted the NRA process, not the conclusions on the risks being ALARP for the DEP-North site. To assume MCA accepts the conclusion because comments were not made on the ALARP statements at the PEIR stage is incorrect. We stated at the PEIR stage that we would provide further comments when the final NRA was submitted where our concerns were raised.</p>

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	<p>demonstrate otherwise.</p> <p>Since no such alternative NRA assessment has been provided by any party, the submitted NRA remains before the ExA and the SoS as approved and continues to demonstrate that risks are ALARP despite an increase in collision risk which was deemed tolerable and of the kind that arise from all and any development in the offshore environment. TH, CoS and MCA have all agreed the methodology and consultation within the NRA process [REP1-049, REP2-047and REP3-079] as well as regular operators who participated in the hazard workshops and agreed hazard logs. The Applicant highlights that it reminded these operators of the Examination process once the DCO application has been accepted, and of how to make a representation, however none either registered as an interested party for the purpose of the Examination, nor made representations.</p> <p>While the Applicant remains in discussion with the MCA to understand and seek to resolve its objection, the ExA can confidently make a recommendation to the SoS that development consent should be granted for the proposed SEP and DEP application, even without agreement with the MCA on the minimal route deviation and increase in navigational safety risk, because:</p> <ul style="list-style-type: none"> • the objection raised about increased navigational risk does not constitute an “unacceptable risk” to navigational safety of the kind set out in NPS EN-3 paragraph 2.6.165 that would justify not granting consent; the NRA [APP-198] was developed in consultation with the MCA which accepted every stage of its preparation, which concludes that accounting for the reduction in sea space at DEP North (the subject of the MCA’s objection), the risks posed are ALARP; 	<p>The requirement is for the Applicant to complete a Navigational Risk Assessment and the conclusions have not been agreed by the MCA. MCA has raised concerns on the perceived risks of DEP-North site with justification.</p> <p>The MCA recommends that development consent should not be granted for the DEP-North site boundary.</p> <p>MCA responded at Deadline 5 to say that the navigational risk created by the DEP-North site is unacceptable.</p>

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	<ul style="list-style-type: none"> • the NRA remains valid and appropriate as a basis for MCA and SoS decision making since no alternative assessment of navigational risk (meeting the same required standards of NRA preparation) has been made and demonstrated an alternative conclusion; and • the Applicant has agreed to mitigation measures that are in proportion to the finding in the NRA [APP-198] and the ES [APP-099] that the extent and nature of impact, including in cumulative terms, has been reduced to be not significant. The Applicant remains in discussion with the MCA but to date has not been presented with a mitigation option which demonstrably reduce return periods for vessel-to-vessel collision over the project life span (as evaluated in the sensitivity analysis of the Navigational Safety Technical Note [REP3-031]). <p>Furthermore, NPS EN-3 policy is very clear that consent may granted despite effects of navigation, where it states at paragraph 2.6.167 that: <i>“Providing proposed schemes have been carefully designed by the applicants, and that the necessary consultation with the MCA and the other navigation stakeholders listed above has been undertaken at an early stage, mitigation measures may be possible to negate or reduce effects on navigation to a level sufficient to enable the IPC to grant consent. The MCA will use the NRA as described in paragraph 2.6.156 above when advising the IPC on any mitigation measures proposed.”</i></p> <p>The Applicant has in its application proposed proportionate and appropriate mitigation measures on which the SoS can rely, including: lighting and marking, safety zones, layout approval, application of MGN 654, promulgation of information, guard vessel where appropriate, display on navigation charts, cable burial risk assessments, marine co-ordination, ERCoP, and,</p>	<p>The requirement is for the Applicant to complete a Navigational Risk Assessment which has not been approved by the MCA. MCA has raised concerns on the perceived risk of DEP-North array with justification.</p> <p>There are no additional mitigation measures proposed by the Applicant other than for reducing commercial impacts, only standard embedded mitigation. The MCA is requesting the mitigation measure of reducing the red line boundary.</p> <p>MCA does not agree that paragraph 2.6.167 of NPS EN-3 allows for development consent since the agreement on the risk level and ALARP has not been reached.</p> <p>It should be noted that while this list of embedded mitigation is appropriate for reducing marine safety risks and are standard for all offshore wind farms. Some are not applicable for reducing navigation risk in the area of sea off DEP-North e.g. application of MGN654 applies to an applicant’s EIA submission, layout applies to vessels and Search and Rescue craft transiting through an</p>

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	<p>at the request of regular operators, a Navigation Management Plan.</p> <p>Site selection was made to The Crown Estate site selection criteria which included avoiding existing shipping lanes and areas of high shipping density. Specifically, the western boundary of DEP-N is define by a shipping lane between the existing SOW and DOW as indicated by Automatic Identification System (AIS) data from 2016 and 2017 [APP 089]. Therefore to the extent that any adverse impacts arise on navigation, these are avoided or otherwise mitigated and need, moreover, be considered in the planning balance along with the benefits of the application.</p> <p>As detailed within section 4 of the Planning Statement (Revision B) [AS-031], benefits of the application include that SEP and DEP directly address the <i>“urgent need for new (and particularly low carbon), energy NSIPs to be brought forward as soon as possible, and certainly in the next 10 to 15 years, given the crucial role of electricity as the UK decarbonises its energy sector”</i> (paragraph 3.3.15 NPS EN-1), meet the UK need for <i>“the types of energy infrastructure covered by ... NPS EN-1 in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions”</i> (paragraph 3.1.1 NPS EN-1) and displace from fossil fuel generating stations and reduce greenhouse gas emissions by approximately 700,000 to 1,500,000 tonnes CO2 per year, contributing to meeting national and international targets on carbon dioxide (CO2) reduction in line with the requirements of the Climate Change Act 2008 (2050 Target Amendment) Order 2019.</p> <p>Important and relevant matters to weigh in the balance also include that SEP and DEP will provide approximately 2.5% of the UK’s current shortfall in meeting the 50 GW target for offshore wind electricity</p>	<p>array, and the Emergency Response Cooperation Plan (ERCoP) acts to reduce emergency response risks.</p> <p>The site selection did not avoid the shipping route in the Outer Dowsing Channel and the DEP-North boundary encroaches into this shipping route.</p> <p>In addition to the policies in NPS EN-3, there are relevant shipping policies in the Marine and Coastal Access Act 2009, the Marine Policy Statement (2011) and the East Marine Plan (2014):</p> <p>Section 69 of the Marine and Coastal Access Act 2009 provides for the determination of applications: <i>(1) In determining an application for a marine licence (including the terms on which it is to be granted and what conditions, if any, are to be attached to it), the appropriate licensing authority must have regard to—</i> <i>(a) the need to protect the environment,</i> <i>(b) the need to protect human health,</i> <i>(c) the need to prevent interference with legitimate uses of the sea,</i> <i>and such other matters as the authority thinks relevant.</i></p> <p>Section 3.4 of the Marine Policy Statement 2011 provides context on the importance of shipping to the UK economy and international trade. Section 3.4.7 states: <i>3.4.7 Increased competition for marine resources may affect the sea space available for the safe navigation of</i></p>

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	<p>generation by 2030, set out in the British Energy Security Strategy (HM Government 2022), equivalent to powering over 785,000 UK homes per annum (3% of UK homes); address the importance “<i>that our supply of energy remains secure, reliable and affordable</i>” set out in NPS EN-1, which considers that “<i>offshore wind is expected to provide the largest single contribution towards the 2020 renewable energy generation targets</i>” (paragraphs 2.1.2 and 3.4.3); contribute to the NPS EN-1 “<i>minimum need of 59 GW of new electricity capacity by 2025</i>”, of which 33GW is needed from renewable energy, in the context of the overall dwindling of UK generation capacity and only 12 additional GW of renewable generation capacity added since 2011 (NPS EN-1 paragraph 3.3.22 and 3.3.23); and contribute to The Promotion of the Use of Energy from Renewable Sources Regulations 2011 and NPS EN-1 (paragraph 3.4.5) requirement for the UK to meet a target of 15% of total energy consumption being from renewables, in the context of only 12.3% of total energy consumption being from renewables in 2022 (BEIS 2022 Table 6.5b).</p> <p>Finally, balancing considerations include that SEP and DEP as an Offshore Transmission Network Review Pathfinder Project advances, as a coordinated application across two wind farms sites, policy in the Energy White Paper: Powering Our Net Zero and Offshore Transmission Network Review to “<i>implement changes to the existing regime to facilitate coordination in the short-medium term</i>” (BEIS 2020b); provide power for the equivalent of 85% of the number of homes in East Anglia; create up to 1,730 and 230 full-time equivalent jobs during the construction and operational phases respectively; yield an estimated overall construction value of £2.14 billion (in current pricing) and operational and maintenance value of around £32.1 million and £800 million Gross Value Added, including £450 million GVA to East Anglia; maximise</p>	<p><i>ships. Marine plan authorities and decision makers should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety and ensure that their decisions are in compliance with international maritime law.</i></p> <p>The East Marine Plan (2014) also recognises the importance of shipping for the “<i>critical to the effective movement of cargo and people, and form an essential part of the United Kingdom and global economies</i>”.</p> <p>Section 344 of the East Marine Plan (2014) states: “<i>In the East marine plan areas there are increasing levels of activity encroaching on navigable space (for example, offshore wind farms), making it ever more important to indicate the area essential for navigation so that this is considered from the outset by public authorities and applicants.</i>”</p> <p>Policy PS2 of the East Marine Plan (2014) is: <i>Proposals that require static sea surface infrastructure that encroaches upon important navigation routes (see figure 18) should not be authorised unless there are exceptional circumstances. Proposals should:</i></p> <ul style="list-style-type: none"> <i>a) be compatible with the need to maintain space for safe navigation, avoiding adverse economic impact</i> <i>b) anticipate and provide for future safe navigational requirements where evidence and/or stakeholder input allows and</i> <i>c) account for impacts upon navigation in-combination with other existing and proposed activities</i>

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	<p>local skills and employment opportunities through the Skills and Employment Plan being developed in consultation with local authorities secured by a Requirement in the draft DCO (Revision H) [document reference 3.1], and deliver Biodiversity Net Gain benefits including additional planting, native species and ecological enhancement as well as contributing to the mitigation of climate change and thus the effects it is having on future biodiversity in the UK.</p>	

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

We would like to take the opportunity to comment on the Applicant's comments to MCA's submission at Deadline 4 as we feel clarification is needed on several points:

ID	Applicant's Comment	MCA Responses	Applicant's Comment	Additional MCA Comments
1.3.3 Navigational Safety Para 22 (second bullet point)				
4	<p>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>	<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</p>	<p>It is important to note that this refers to the risk assessment <u>process</u> the Applicant has followed, not the results and conclusions.</p> <p>The MCA reviewed the NRA at PEIR and noted that the traffic survey was incomplete, the HAZID workshop had yet to be conducted, and that the NRA would be updated when MCA would provide further comments. MCA provided comments on the final NRA after acceptance at Deadline 1.</p>

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			each time, which have not changed, and did not make comment.	
1.3.3 Navigational Safety Para 23				
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 NRA [APP-198]). Disruption and economic loss are minimised, and transit times are not appreciably longer.	MCA's comments were in regard to navigational safety and the appropriate sections of NPS EN-3, not commercial impacts.
1.3.4 Consultation Draft National Policy Statements Para 25				
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 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.	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 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.	Sections 1.3.1, 1.3.2 and 1.3.3 of the Navigational Safety Technical Notes [REP3-031] review agreement with existing NPS. In addition, section 1.3.4 considers draft NPS for Renewable Energy Infrastructure EN-3 whilst 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	MCA's position is that the draft NPS should not be used when making recommendations to the SoS. MCA provided comments and recommendations to DESNZ on the draft policies.

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			draft status they may still be considered an important and relevant matter (pursuant to s104 of the Planning Act 2008).	
2 NRA Summary Para 35				
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 Table 4.2 of the NRA [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 concerns remaining (as was stated by the Applicant at ISH1) until those points raised in February 2023, post commencement of examination.</p>	<p>As above for ID 4 - It is important to note that this refers to the risk assessment <u>process</u> the Applicant has followed, not the results and conclusions.</p> <p>The MCA reviewed the NRA at PEIR and noted that the traffic survey was incomplete, the HAZID workshop had yet to be conducted, and that the NRA would be updated when MCA would provide further comments. MCA provided comments on the final NRA after acceptance at Deadline 1.</p>

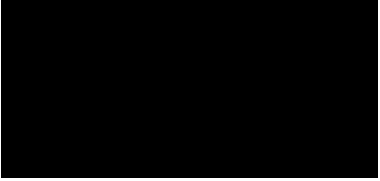
ID	Applicant's Comment	MCA Responses	Applicant's Comment	Additional MCA Comments
6 Passing Distance Para 51				
8	<p>Given the local features present (see Figure 6.1), and local evidence of vessels passing closer than 1nm to existing wind turbine generators in the area (see Figure 6.2), it is considered 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.</p>	<p>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>	<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]. 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 A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions [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 (Vessel Passing Distances from UK Wind Farms Note within A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions [document reference 19.2.1]).</p>	<p>It is agreed that traffic will not move further west, yet the Applicant uses a line extending the 10m contour which increases the navigable width by 1.5nm.</p> <p>MCA's assessment, submitted at Deadline 5, was that traffic would be squeezed into a corridor 1.3nm wide. The western extent of future traffic in the Applicant's Navigation Technical Note [REP3-031] uses a line extending from the 10m contour. The MCA's assessment uses the 15.3m wreck which lies further east of the 10m contour line. As such the traffic distribution of the Applicant's assessment is wider than the MCA's submission at Deadline 5.</p> <p>The 1nm separation should be measured from the edge of the 90% percentile, as per the MCA's Wind Farm Shipping Route Template in MGN654 Annex 2, not the median line.</p> <p>The assumed traffic distribution used in the collision risk modelling is not narrower than in MCA's assessment. The image in the Applicant's A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions shows their assessment of the future 90% traffic level will be in a corridor 1nm wide and 0.5nm from the boundary. It omits the 1.5nm safe sea room to the west. So their actual assessment of the width of safe sea</p>

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				room is 2.5nm, whereas MCA assessed the width of safe sea room to be 1.3nm, as per the image in our Deadline 5 submission.
7.3 Additional Modelling Table 7.2 and Para 61				
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> <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 than 11% and we would expect a higher change of collision risk than 3% off the DEP North area.</p>	<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 A.2 of Supporting Documents for the Applicant's Responses to the Examining Authority's Third Written Questions [document reference 19.2.1]. which shows the NRA modelling assumptions made. 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> <p>All modelling processes have included conservative assumptions on future case traffic behaviour</p>	<p>As above, the MCA's assessment is based on a 1nm safety buffer measured from the edge of the 90% traffic and the applicant's assessment omits the 1.5nm safe sea room to the west. As such the NRA modelling is not narrower than MCA's.</p> <p>Using statistical averaging is not always appropriate as it can disguise an intolerable risk, as is the case for the DEP-North site where the Applicant later assessed the localised risk of collision to be 23%.</p>

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			including a compression of traffic as detailed above.	
8 Existing Precedent Para 67				
11	<p>The Applicant notes that:</p> <ul style="list-style-type: none"> • 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); • 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); • 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 • 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). 	<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>	<p>The Race Bank channel is used by vessels with lesser Length Overall (LOA) and of lesser draughts compared to the vessels using the Outer Dowsing Channel. The LOA and Draught in relation to available depth and width of navigable water determines the manoeuvrability of the vessels, and therefore while comparing these channels MCA believes all facts should be considered.</p> <p>The fact that COLREG can help safely mitigate collision risks if applied correctly does not mean we keep on reducing the available safe sea room to the same level.</p>

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9 Summary Para 72				
12	<p>The key discussion points included in this technical note are summarised as follows:</p> <ul style="list-style-type: none"> • 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; • 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; 	<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]): <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>	<p>As above, this was in regard to the NRA process, not the results and conclusions.</p>
9 Summary Para 74				
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 Mariners do not have notable safety concerns about using the area in a future case environment (with SEP and DEP in situ).</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 scenarios and therefore safe sea room is maintained.</p>	<p>A reduction of sea room and increased navigational risks does not lead to safe sea room being maintained i.e. it is neither kept in the same state nor at the same level.</p>

Yours faithfully,



Nick Salter
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UK Technical Services Navigation