

**Application by Vattenfall Wind Power Ltd for the Thanet Extension Offshore Wind Farm Development Consent Order**  
**The Examining Authority's third written questions and requests for information (ExQ3)**  
**Issued on 16 May 2019**

The following table sets out the Examining Authority's (ExA's) third written questions and requests for information – ExQ3. An additional information request pursuant to Rule 17 of the Examination Procedure Rules (EPR) may also be made but will only be issued if important and relevant issues are not fully addressed. In this respect the ExA is grateful to all parties for efforts to provide the most complete responses to the questions set out here.

Questions are set out using an issues-based framework derived from the Initial Assessment of Principal Issues provided as Annexe B to the Rule 6 letter of 9 November 2018. Questions have been added to the framework of issues set out there as they have arisen from representations and to address the assessment of the application against relevant policies.

Column 2 of the table indicates which Interested Parties (IPs) and Other Persons each question is directed to. The ExA would be grateful if all persons named could answer all questions directed to them, providing a substantive response, or indicating that the question is not relevant to them for a reason. This does not prevent an answer being provided to a question by a person to whom it is not directed, should the question be relevant to their interests.

Each question has a unique reference number which starts with 3 (indicating that it is from ExQ3) and then has an issue number and a question number. For example, the first question on biodiversity issues is identified as Q3.1.1. When you are answering a question, please start your answer by quoting the unique reference number.

If you are responding to a small number of questions, answers in a letter will suffice. If you are answering a larger number of questions, it will assist the ExA if you use a table based on this one to set out your responses. An editable version of this table in Microsoft Word is available on request from the case team. Please contact:

[ThanetExtension@planninginspectorate.gov.uk](mailto:ThanetExtension@planninginspectorate.gov.uk)

and include 'Thanet Extension ExQ3' in the subject line of your email.

Responses are due by **Deadline 6: Tuesday 28 May 2019**.

## Abbreviations used

<b>PA2008</b>	<i>The Planning Act 2008</i>	<b>NPS</b>	<i>National Policy Statement</i>
<b>Art</b>	<i>Article</i>	<b>NRA</b>	<i>Navigation Risk Assessment</i>
<b>ALARP</b>	<i>As Low As Reasonably Practicable</i>	<b>NRAA</b>	<i>Navigation Risk Assessment Addendum</i>
<b>BoR</b>	<i>Book of Reference</i>	<b>NSIP</b>	<i>Nationally Significant Infrastructure Project</i>
<b>CA</b>	<i>Compulsory Acquisition</i>	<b>R</b>	<i>Requirement</i>
<b>dDCO</b>	<i>Draft DCO</i>	<b>SI</b>	<i>Statutory Instrument</i>
<b>EM</b>	<i>Explanatory Memorandum</i>	<b>SoS</b>	<i>Secretary of State</i>
<b>ES</b>	<i>Environmental Statement</i>	<b>TOWF</b>	<i>Thanet Offshore Wind Farm (operational)</i>
<b>ExA</b>	<i>Examining authority</i>	<b>TEOWF</b>	<i>Thanet Extension Offshore Wind Farm</i>
<b>HSE</b>	<i>Health and Safety Executive</i>	<b>TP</b>	<i>Temporary Possession</i>
<b>ISH(n)</b>	<i>Issue Specific Hearing (with an identifying number)</i>	<b>UXO</b>	<i>Unexploded Ordnance</i>

## The Examination Library

References in these questions set out in square brackets (eg [APP-010]) are to documents catalogued in the Examination Library. The Examination Library can be obtained from the following link:

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010084/EN010084-000737-Internal%20Examination%20Library%20PDF%20Version.pdf>

It is updated as the examination progresses.

## Citation of Questions

Questions in this table should be cited as follows:

Question reference: issue reference: question number, eg ExQ3.1.1 – refers to the first biodiversity question in this table.

ExQ3	Question to:	Question:
3.0	<b>General and Cross-topic Questions</b>	
3.0.1	The Applicant, BritNed Development Ltd, Southern Water, Steve Willey for Mario Campion.	<p><b>Audit of and final responses to Additional Submissions (AS)</b>                      The Applicant's is asked to review the Additional Submissions in the Examination Library (documents under the reference AS). Particular attention is drawn to AS documents submitted by persons who have joined the Examination after its commencement and particularly to:</p> <ul style="list-style-type: none"> <li>• [AS-012] BritNed Development Ltd;</li> <li>• [AS-015] Southern Water; and</li> <li>• [AS-016] Steve Willey for Mario Campion.</li> </ul> <p>a) Can the Applicant please ensure that its written submissions in response to these submissions are made at Deadline 6.</p> <p>b) Where relevant, can the Applicant please address the following matters:</p> <ol style="list-style-type: none"> <li>i. Whether any discussions have been held with the submitter and if so a summary of the progress that has been made;</li> <li>ii. Whether the submitter is a statutory undertaker and, if so, whether the submission is or is likely to be unwithdrawn</li> <li>iii. Whether the submitter occupies land affected a request for CA or TP powers</li> </ol> <p>c) The makers of these Additional Submissions are invited to make their responses to the Applicant's submission at Deadline 7.</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
<b>3.1.</b>	<b>Biodiversity, Ecology and Natural Environment</b> (including Habitats Regulations Assessment (HRA))	
3.1.1.	The Applicant	<p><b>Outline Site Integrity Plan</b>            The dDCO [REP5-019] includes as a certified document an 'Outline Site Integrity Plan' with which a subsequent 'Site Integrity Plan' (SIP) (to be approved by the MMO in consultation with Natural England) must accord. The draft SIP documents submitted into the examination [REP2-033] and [REP4-022] do not refer to themselves as 'Outline' documents although the content would suggest that this is what they are intended to be, as would the application document number assigned in Schedule 13 of [REP5-019]. Footnote 22 of [PD-018] outlines the approach taken to this matter in respect of the Report on the Implications for European Sites.</p> <p>a) Could the Applicant please confirm that the draft SIP documents referenced above are indeed draft versions of the 'Outline SIP' named in Schedule 13 of the dDCO?            b) If so, please could the final version of the Outline SIP be titled as such, to ensure clear read across with the dDCO.</p>
3.1.2.	Natural England	<p><b>Site Integrity Plan: Security</b>            In para. 13.1 of [REP5-064], Natural England states that the commitments to mitigation methods described in section 4 of the SIP "<i>should be secured in the DCO/DML to ensure they are enforceable</i>". This is presented as a condition of Natural England's agreement with the Applicant's HRA conclusions in relation to the harbour porpoise feature of the Southern North Sea SAC.</p>

ExQ3	Question to:	Question:
		a) Could Natural England please confirm whether or not it considers the dDCO/DMLs, as drafted [REP5-019], provide adequate security for the mitigation commitments of the SIP? b) If not, please outline fully the changes sought to the dDCO/DMLs.
3.1.3.	The Applicant	<p><b>Site Integrity Plan: Pre-Construction Approval</b>                      The MMO has highlighted [REP5-062] that the current drafting of the DMLs [REP5-019] provides for the approval of the SIP "<i>prior to the commencement of the operation of the licensed activities</i>" which would appear to be an error. The ExA understands that the appropriate time for the approval is prior to commencement of construction.</p> <p>Could the Applicant please review DML conditions 13(1)(k)(Schedule 11) and 11(1)(l)(Schedule 12) and reword to reflect the need for the SIP to be approved prior to commencement of the licensed activities.</p>
3.1.4.	The Applicant and Natural England	<p><b>Goodwin Sands Proposed Marine Conservation Zone (pMCZ)</b>                      The SoCG with Natural England [REP5-076] identifies a number of areas that are not yet agreed in relation to the assessment of impacts on the Goodwin Sands pMCZ. In addition, section 4 of [REP5-064] sets out some specific requests for inclusion in the MCZ assessment. The notes within the SoCG indicate that actions agreed at a meeting on 2 May 19 may be capable of bringing the Applicant and Natural England to agreement, but full details of those actions have not been provided.</p> <p>a) At Deadline 6, could the parties please provide an updated position on agreement with regards to the pMCZ.</p>

ExQ3	Question to:	Question:
		<p>b) If disagreement remains on any matters pertaining to the protection of the pMCZ at that stage, please provide a statement, agreed by both parties, setting out the remaining areas of disagreement and the extent to which resolution is being sought within the timescales of the examination.</p> <p>c) A concluding statement should be provided at Deadline 7.</p>
3.1.5.	Marine Management Organisation and the Applicant	<p><b>Potential Construction Noise Effects on Fish</b></p> <p>At Deadline 5, the Applicant provided additional material [REP5-003] to clarify its approach to assessing the construction noise effects on fish species. Table 8 of [REP5-049] indicates that considerable disagreement remains in respect of fish impacts and section 2 of the Marine Management Organisation’s subsequent [REP5A-003] sets out a number of comments in relation to the potential construction noise effects on herring and sole spawning grounds.</p> <p>The ExA is mindful that these are weighty matters and that the examination is now in its final stages. With a view to moving matters forward as far as possible within the remaining time available, the ExA requests the following steps be taken:</p> <p>a) The MMO and the Applicant should work together to address each of the matters raised in section 2 of [REP5A-003] with a focus on identifying mutually acceptable solutions where at all possible.</p> <p>b) At Deadline 6, the Applicant should submit an updated version of Table 8 of the SoCG reflecting the latest position of discussions.</p>

ExQ3	Question to:	Question:
		c) Where any amendments to the dDCO/DMLs are proposed further to (a) and (b), the Applicant should provide full drafting. d) For any areas in which disagreement remains, both parties should provide an evidence-based justification for their position. e) The MMO should provide a copy of the Marine Licence condition(s) that imposed a temporal piling restriction for the construction of the Thanet Offshore Wind Farm as referred to in para. 2.2.6 of [REP5A-003]. f) If it is the Applicant's position that such a restriction would not be appropriate in this case, it should set out the reasons for this view. g) If necessary, the parties may comment on one another's positions at Deadline 7.
3.2.	<b>Construction</b>	
3.2.1.	The Applicant	<p><b>Unexploded ordnance (UXO) assumptions for Spoil Ground/ Mine Disposal Area overlapping Order limits</b></p> <p>The Applicant's [REP5-002] para 2.5.2 answers ExQ2.1.4 as follows. "This assessment considered a realistic maximum design scenario for UXO associated with the application, inclusive of the risks associated with the mine disposal site. The assessment was undertaken on the basis of an understanding of the area and previous experiences for the existing Thanet OWF, section 42 advice from the MMO, and advice provided by UXO specialists all of which lead to the definition of the likely maximum design scenario... defined in Application ref 6.2.1."</p> <p>[APP-042] Project Description para 1.4.115 states the assumption of a maximum UXO charge weight of 130kg has been used for the purposes of</p>

ExQ3	Question to:	Question:
		<p>EIA and that if any UXO larger than this is discovered “these will be assessed through a separate Marine Licence”.</p> <p>Would the Applicant provide:</p> <ul style="list-style-type: none"> <li>a) more detail of the “previous experiences for the existing Thanet OWF, section 42 advice from the MMO, and advice provided by UXO specialists” in regard to this mine disposal area; and</li> <li>b) whether any consultation with MoD has taken place specifically in regard to this Spoil Ground/Mine Disposal Area and if so what answer was obtained; and</li> <li>c) an explanation of how the eventuality of discovery of UXO larger than 130kg charge weight is covered by the dDCO or if it is not, a view on whether a process should be secured.</li> </ul>
3.3.	<b>Compulsory Acquisition, Temporary Possession and other Land or Rights Considerations</b>	
3.3.1.	The Applicant	<p><b>Cable route options in Richborough Energy Park: permanent acquisition of new rights</b></p> <p>The ExA is conscious of the underlying reasons why three route options for cables through the Richborough Energy Park to the proposed grid connection location [REP2-011] (Onshore Land Plan, Rev D, Sheet 2 – green hatched notation) were applied for and is also conscious that this proposal is not objected to. However, such a position typically does not persist through to a decision being made on an application.</p> <p>Where a DCO applicant has provided for optionality for the CA of land or rights, either:</p>



<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
		<ul style="list-style-type: none"><li>• the need for optionality is addressed before the SoS decision on the Order, because a final route preference emerges during Examination (enabling other less preferred options to fall away); or</li><li>• provisions are drafted for inclusion in the dDCO, ensuring that as soon as a final route preference becomes clear, CA powers over the land and route(s) that are no longer required will automatically fall away at that time.</li></ul> <p>(For an example of the latter in a made Order, see The Wrexham Gas Fired Generating Station Order 2017 (SI 2017 No. 766), Schedule 9, Part 7, paragraph 76 (Compulsory acquisition and temporary use)).</p> <p>The underlying principle is that land that is not 'required for the development to which the development consent relates' because it relates to an option that is no longer required once another option has become preferred and can be exercised, should not be subject to enduring CA powers. This emerges from PA2008 s122 and DCLG CA Guidance paragraph 11<sup>1</sup>, which includes advice that the 'Secretary of State will need to be satisfied that the land to be acquired is no more than is reasonably required for the purposes of the development'. Once an option has become concrete to the point that it is both preferred and deliverable, the land subject to other options in principle becomes 'more than is reasonably required for the purposes of the development' and so arguably should be released from the burden of CA.</p>

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<sup>1</sup> [Planning Act 2008: procedures for the compulsory acquisition of land](#), DCLG, 3 September 2013

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
		<p>The Applicant is asked to provide an update at Deadline 6 on the status of the optional cable corridors at that time. In that update the Applicant should either:</p> <ul style="list-style-type: none"><li>a) Make clear that over the Examination period, one of the three options has become preferred and deliverable, in which case an amended Onshore Land Plan and BoR containing only the preferred option should be submitted; or, if that is not the case and two or more options are still deemed to be necessary,</li><li>b) Provide an update on the progress of discussions about cable routing within the Richborough Energy Park site, making clear why it is necessary to sustain more than one option beyond the closure of the Examination and identifying which options need to be sustained.</li></ul> <p>If (b) is the case, the Applicant is requested to submit a draft provision for inclusion in the dDCO (and also to include this in its consolidated dDCO submitted at Deadline 6) that would have the effect of removing the burden of CA provisions from options that are no longer required, as soon as one option has become preferred and deliverable.</p> <p>The Applicant should note that a response to part (b) of this question may usefully be supported by the submission of an updated Onshore Land Plan on which separate notations are used to distinguish between the options to be sustained, in turn supporting reference to those options in a dDCO provision.</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.4.	<b>Draft Development Consent Order (DCO)</b>	The ExA directed questions to the Applicant at ISH9 on 18 April 2019 and in the <a href="#">ExA's DCO Commentary</a> [PD-017] published on 7 May 2019. The following questions relate to additional matters.
3.4.1.	The Applicant	<p><b>Amended provisions</b></p> <p>If it is the intention to make further amendments to the dDCO arising from responses to these or other outstanding questions, these amendments should be made in the form of an 'Applicant's preferred' dDCO submitted at Deadline 6, which should contain all amendments necessary to address these questions, the <a href="#">ExA's DCO Commentary</a> [PD-017] and any other changes that have emerged since Deadline 5. This version of the dDCO should be provided in consolidated and tracked changes form and be accompanied by a table of changes and any necessary amendments to the EM.</p>
3.4.2.	The Applicant	<p><b>Certified documents</b></p> <p>If it is the intention to make further amendments to the record of certified documents in Schedule 13 arising from responses to these or other outstanding questions, then these amendments should be made in the 'Applicant's preferred' dDCO at Deadline 6 in response to ExQ3.4.1. The ExA requests that the content of Schedule 13 should be reviewed and if necessary be updated at each subsequent deadline (7 and 8), if there are any subsequent changes. Any document versions that have not yet been provided to the ExA must be provided.</p>

ExQ3	Question to:	Question:
3.4.3.	The Applicant, Historic England and MMO	<p><b>Changes to drafting regarding archaeological investigation</b>                      Would Historic England please confirm if the dDCO [REP5-019] submitted at Deadline 5 has now been amended to their satisfaction as follows:</p> <ul style="list-style-type: none"> <li>a) Changes to Schedule 11 and Schedule 12 (DMLs) to 'enable the interrelationships between onshore and offshore [Written Schemes of Investigation] WSIs to work as clearly and effectively as possible where the export cable meets landfall, whereby a strategic overlap is captured...'</li> <li>b) clarification regarding inclusion in the DCO of a condition on dredge disposal (Schedule 11 condition 22, Schedule 12 condition 24) and the relationship between these and the Offshore WSI.</li> <li>c) definition of 'commence' in relation to works seaward of MHWS to include both pre-construction monitoring surveys and site preparation works.</li> </ul> <p>If Historic England request any changes to drafting at Deadline 6, the Applicant is requested to engage with the MMO on the appropriateness of this drafting and the Applicant and MMO are requested to make submissions on this point at Deadline 7.</p> <p>In responding to c) above, attention is also drawn to the <a href="#">ExA's dDCO Commentary</a> [PD-017], Comment 5 at Deadline 6 which raises broader questions about the definition of 'commence'. If c) cannot be answered positively, Historic England are requested to provide their preferred approach in response to the dDCO commentary.</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.5.	<b>Debris, Waste and Contamination</b>	
	The ExA has no questions to raise in relation to this issue.	
3.6.	<b>Electric and Magnetic Fields (EMFs)</b>	
	The ExA has no questions to raise in relation to this issue.	
3.7.	<b>Electricity Connections and Other Utility Infrastructure</b>	
	The ExA has no questions to raise in relation to this issue.	
3.8.	<b>Environmental Statement General</b>	
3.8.1.	The Applicant	<p><b>Certified Documents: the Certified Environmental Statement</b>          ExQ2.4.6 asked the Applicant to take steps to define all of the documents which it considers should form part of the Environmental Statement to be certified, for reasons set out at that time. The Applicant responded to this point on page 43 of [REP5-002]. Whilst the changes to Schedule 13 and Art 35 are noted, a comprehensive list of documents now forming the ES has not been provided. This task has been made all the more important by the material change process for the introduction of the Structures Exclusion Zone (SEZ).</p> <p>a) Could the Applicant please revisit the ExA’s previous question and provide a full response at Deadline 6, taking full account of documents up to the time of drafting, including the SEZ material change proposal. At Deadline 6, the ExA requires absolute clarity as to which examination documents are intended to form part of the certified Environmental Statement.</p>

ExQ3	Question to:	Question:
		b) If it is the intention to make further amendments to Schedule 13, as would appear to be implied in the Applicant's response, then please could these amendments also be made at Deadline 6. c) The ExA requests that the position should be updated at each subsequent deadline (7 and 8) if there are any subsequent changes.
3.9.	<b>Fishing and Fisheries</b>	
3.9.1.	The Applicant	<p><b>Fisheries Liaison and Co-existence Plan (FLCP): extent of consultation</b></p> <p>With reference to item 9.1 of the Schedule of Mitigation [REP5-007] would the Applicant please confirm if the FLCP (whether in the version of June 2018 noted as a draft [APP-143] or the more recent version submitted at Deadline 3 [REP3-060]) has been disseminated for consultation with international fishing and fisheries interests?</p> <p>a) If the FLCP has been consulted with international fishing and fisheries interests, please confirm the names and countries of the bodies that have been consulted.</p> <p>b) If such a consultation has occurred, the ExA would wish to be provided with a copy of it.</p>
3.9.2.	The Applicant	<p><b>FLCP: definition and certified document</b></p> <p>The dDCO at paragraph 1 of Schedules 11 and 12 respectively (the DMLs) contain different definitions of the FLCP. Schedule 11 defines what the ExA takes to be the FLCP as 'the document certified as the Fisheries Coexistence Plan strategy by the Secretary of State for the purposes of this Order', whereas Schedule 12 defines it as 'the document certified as</p>

ExQ3	Question to:	Question:
		<p>the fisheries liaison and co-existence plan by the Secretary of State for the purposes of this Order'. Neither definition is consistent one with the other and neither are consistent with Schedule 13, which lists the 'Fishing LCP' as a document to be certified.</p> <p>The Schedule of Mitigation refers to the 'Fisheries Coexistence Plan' [REP5-007] at item 9.1.</p> <p>a) Are these references to documents one and the same? Are they references to the FLCP as submitted at Deadline 3 [REP3-060]? If it is, can Schedule 11 and 12 paragraph 1 definitions and Schedule 13 all be updated with consistent definitions and references for Deadline 6 (see ExQ3.4.2).</p> <p>b) If these are references to different documents, can those documents be submitted at Deadline 6 with an explanation of their difference, and references to them included in Schedule 13 to the dDCO.</p>
3.10.	<b>Historic Environment</b>	
3.10.1.	The Applicant	<p><b>Responsibilities under Offshore and Onshore Written Schemes of Investigation (WSIs) for Military Remains</b></p> <p>The Applicant's [REP5-002] D5 response to ExQ2.10.3 is incomplete regarding Offshore draft WSI obligations under the Protection of Military Remains Act 1986.</p> <p>Would the Applicant please confirm:</p>

ExQ3	Question to:	Question:
		a) if consultations will have taken place before Deadline 6 with the relevant executive agency of the Ministry of Defence (MoD) in regard to both offshore and onshore elements of the project; and if so b) whether specific obligations under the Act will be added to the Onshore and Offshore WSI's.
3.10.2.	The Applicant	<p><b>Special attention to certain Archaeological Exclusion Zones (AEZs) in the cable export corridor</b></p> <p>Would the Applicant confirm how, in developing and applying the Offshore WSI, they propose specifically to address issues raised in relation to construction in the vicinity of AEZs in [REP5-059] Historic England's responses to ExQ2 at Deadline 5, in the following locations:</p> <p>a) Features 70210 (A3 recorded wreck not yet identified within geophysical data); and 70220 (A1 debris) immediately east of North Foreland; that may give rise to the need for 'more focused investigations, to understand their extent and significance'.</p> <p>b) Feature 70366 (A1 wreck possibly SS Harcaro) centrally located in the export cable corridor off Ramsgate; and 70346 (A1 debris/wreck of submarine and/or B-24 bomber) where after further survey work has been assessed, 'the AEZ may need to be modified, or the site investigated by ROV or diver'...'as directed by the offshore WSI where necessary'.</p>



<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.10.3.	Historic England and Kent County Council	<p><b>Draft Onshore WSI</b>            Would Historic England and Kent County Council please confirm if they are satisfied with the [REP5-006] revised Draft Onshore WSI submitted at Deadline 5, in particular:</p> <ul style="list-style-type: none"> <li>a) the approach to investigations in general as now described in para 1.1.3 onwards and detailed in Section 6, dividing strategy and investigative works into phases and/or zones;</li> <li>b) in relation to (a), whether Historic England's concerns regarding the need for 'a more detailed and targeted approach' are now resolved;</li> <li>c) the evaluation of assessment to inform the final design;</li> <li>d) clarification of responsibilities previously contradicted in the earlier draft paras 3.5.2 and 3.5.3;</li> <li>e) the WSI to include the scope of works in the intertidal zone and how the method of mitigating impacts will be selected;</li> <li>f) the objectives stated in 2.2.1 as now expanded to include specific mention of the Boarded Groins and WWII defences;</li> <li>g) the introduction of pre-construction investigation as recommended by Historic England; and</li> <li>h) clarification on outputs from the 'watching brief' as distinct from outputs from specific archaeological works.</li> </ul>
3.10.4.	The Applicant	<p><b>Draft Onshore WSI: Previously undisturbed land parcels</b>            The Draft Onshore WSI [REP5-006] submitted at D5 para 4.4.11 refers to previously undisturbed areas and now draws attention to the parcels of land within the red line boundary considered to be previously undisturbed or at least less disturbed areas. It refers to Parcels 3, 4, 5, 8, 13 and 14.</p>

ExQ3	Question to:	Question:
		<p>Would the Applicant please check and clarify these references to undisturbed areas, because from [APP-063] Figure 7.1 "Heritage Assets Potentially Subject to Direct Effects": 3 is the grid connection site, 4 the Ramac land, 5 is outside the red line boundary, 8 is partially in Stonelees, 13 is the golf course and appears to be outside the red line boundary and 14 is Pegwell Bay Country Park. Whether these are indeed the areas of land intended to be described as undisturbed, or alternatively the text is meant to refer to Works Areas or other areas, greater definition and precision is needed and should be indicated on an updated version of the Heritage Assets set of plans.</p>
3.11.	<b>Marine and Coastal Physical Processes</b>	
	The ExA has no questions to raise in relation to this issue.	
3.12.	<p><b>Navigation: Maritime and Air</b></p> <p>The Applicant has proposed and the ExA has supported consultation on a material change request to enable the inclusion of a Structures Exclusion Zone (SEZ) within the proposed wind turbine generator array area. Consultation on this change process is ongoing, with a Consultation Report, responses from IPs and Other Persons (and any related requests to become an IP or Other Person) due at Deadline 6. In this respect, it is important to be clear that this set of questions is seeking to maximise clarity around the existing evidence in support of the Application plus the material change request, in order to support the ExA's recommendation to the SoS. These questions do not seek additional material changes to the Application and (in that respect), advice in the Planning Inspectorate's <a href="#">Advice Note 16</a>, that there comes a point in an Examination where a material change is unlikely to be accepted by the ExA, should be noted.</p>	

ExQ3	Question to:	Question:
		<p>The purpose of these questions therefore is to provide the ExA with a better understanding of the Application in relation to the PA2008 section 104 tests; inputs to the Navigation Risk Assessment (NRA) and Addendum (NRAA); and the computation and methods applied, in order be able to satisfy the SoS whether the conclusions are robust and consistent with the position set out in the Applicant’s planning statement [APP-134] that “effects on shipping and navigation should not weigh against the substantial benefits of Thanet Extension when considering the planning balance”.</p>
3.12.1.	The Applicant	<p><b>Applicant’s shipping and navigation expert credentials: curricula vitae</b>                      In [REP5-012] D5 Appendix 7 point 4, the credentials of the Applicant’s experts are elaborated.</p> <p>Would the Applicant please clarify:</p> <ul style="list-style-type: none"> <li>a) Para 11: between what dates and for what geographical area was Capt. Moore a Class One unrestricted pilot?</li> <li>b) Para 11: what in more detail is Capt. Moore’s experience of undertaking navigation risk assessment referred to in this para.?</li> <li>c) Para 21: between what dates was Capt. Moore employed as a Class 4 pilot by the PLA restricted to ships of 120m length, and were there any offshore windfarms in the sea area in which he operated at that time?</li> <li>d) Para 24: is the ‘project area’ referred to the general area of the Thanet windfarm and how does Capt. Moore’s current role as Senior Master on a Dover to Calais ferry give “strong and current knowledge of the project area”?</li> <li>e) Para 30: between what dates and where was Commander Brown a Class 1 pilot?</li> </ul>

ExQ3	Question to:	Question:
		f) Para 31: Has Commander Brown managed, commissioned or directed navigational risk assessments or navigational risk workshops? g) Para 44: did Commander Brown's experience of sailing up the river Thames in military vessels involve boarding or landing a pilot and/or navigating in close proximity to a windfarm? h) Has Commander Brown piloted, navigated or commanded commercial vessels in the vicinity of windfarms in the Thames Estuary and approaches and if so, of what types and sizes?
3.12.2.	The Applicant	<p><b>Applicant's shipping and navigation expert credentials: quality assurance processes</b></p> Can the Applicant clarify whether and if so by what means Marico carries out a quality assurance (QA) audit process on NRAs prepared by it for clients? Has Marico carried out a QA on this NRA and NRAA?
3.12.3.	The Applicant	<p><b>Applicant's shipping and navigation expert credentials: accountability and supervision</b></p> Can the Applicant please clarify the current status of the following expert witnesses' relationship with Marico [REP4C-003]:

ExQ3	Question to:	Question:
		b) Mr Jamie Holmes is characterised as an Associate Consultant of Marico. <ol style="list-style-type: none"> <li>i. Is Mr Holmes employed by Marico?</li> <li>ii. Is Mr Holmes working to Dr Rogers and if so, how does that relationship operate within any QA process used by Marico?</li> </ol>
3.12.4.	The Applicant	<p><b>Reduction of sea room for pilot boarding and landing at NE Spit</b>                      In [REP1-017] Applicant's Response to [RR-051] SUNK VTS User group SUG-2 it is stated that <i>"The assessments presented within the NRA and ES chapter do not [sic] conclude there is sufficient sea room at North East Spit for continuation of pilot transfer operations."</i></p> <ul style="list-style-type: none"> <li>• Would the Applicant please review and clarify this statement?</li> </ul>
3.12.5.	Maritime and Coastguard Agency (MCA); Trinity House (THLS)	<p><b>Status of the "inshore route" and route to the north of the existing Thanet Offshore Wind Farm (TOWF)</b>                      The Applicant has argued strongly that the current route between the TOWF and the Kent coast is not designated as a 'sea lane' in the meaning attributed by NPS EN-3. Further in [REP5-18] at point 43, the Applicant makes the case that being outside harbour limits, the area of routes surrounding the TOWF <i>"is better described as an area of open sea."</i></p> <p>In its D5 submission, MCA [REP5-063] argues that the <i>"...area of sea to the west of the existing Thanet windfarm...is not an IMO designated routing measure"</i> but goes on to state <i>"...in an operational sense, the area of sea should be treated as a recognized sea lane"</i> and that <i>" there is no formally designated or charted inshore route or route immediately to the</i></p>

ExQ3	Question to:	Question:
		<p><i>north of the project. There is nothing in the Pilot Books to indicate that (either) is an important route to be followed when route planning..."</i></p> <p>In the [REP4-034] PLA D4 submission Appendix 1: Anatec Review of Evidence Figures 8.3 and 8.4, this inshore route is clearly shown as one of the 3 primary approaches to the Thames Estuary prior to and after any WF construction in the estuary.</p> <p>Would the IPs please clarify for the avoidance of doubt:</p> <ul style="list-style-type: none"> <li>a) whether MCA intends "the area of sea" in its [REP5-063] submission referred above in both instances to mean the space used for general navigation, transit by commercial vessels and pilot transfer between the southerly extent of VTS control as shown on charts and the NE Spit Racon buoy; and</li> <li>b) whether THLS agrees with the Applicant that being outside the controls exercised within the limits of Port of London Authority, the area of sea including around the TOWF should be described as "an area of open sea" as argued by the Applicant in the [REP5-018] submission; and</li> <li>c) whether THLS agrees with the Applicant's case at [REP5-018] as referred above that:             <ul style="list-style-type: none"> <li>i. there <i>"is no formally designated or charted inshore route..."</i> or</li> <li>ii. <i>"there "is no formally designated ...route immediately to the north of the project" or</i></li> <li>iii. <i>"there is nothing in the Pilot Books to indicate that (the route around the TOWF) is an important route to be followed when route planning"</i>.</li> </ul> </li> </ul>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.12.6.	London Pilot Council (LPC); Port of London Authority / Estuary Services Ltd (PLA), Port of Tilbury London Ltd, London Gateway Port Ltd (PoTL/LGPL), UK Chamber of Shipping (UKCoS); Trinity House (THLS)	<p><b>Sea Room at NE Spit Racon buoy</b>                      Would the IPs comment on the following:</p> <ul style="list-style-type: none"> <li>a) Do they consider that the distance of 2.5nm (effectively 1.5nm plus 1nm buffer at the narrowest point) between NE Spit Racon buoy and the proposed TEOW as currently proposed by the Applicant would be a <i>"distance that is acceptable for continued safe pilot transfer operations"</i> in the context of the uses of this sea space.</li> <li>b) Would the embedded risk control of the SEZ as proposed be sufficient in combination with other risk controls proposed by the Applicant to reduce all of the perceived risks to shipping and navigation to As Low As Reasonably Practicable (ALARP) in their opinion.</li> <li>c) Is it appropriate for the 1nm safety buffer to be reduced for short durations by the net effect of a 500m "rolling" safety zone.</li> <li>d) Can relevant sea space between NE Spit Racon buoy and the proposed TEOW reasonably be defined as the zone between the inner limit of an amended Structures Exclusion Zone in an arc around the NW sector of the windfarm, extending from a line due west of the SW corner of the SEZ to the currently charted no-anchorage line and from the line of the North Foreland sector light as extended through the NE Spit Racon buoy?</li> </ul>
3.12.7.	The Applicant, Port of London Authority / Estuary Services Ltd (PLA), London Pilots Council (LPC).	<p><b>Relocation of Tongue DW pilot diamond</b>                      In [REP5-039] the NRAA (revised) at para 168 the Applicant notes: <i>'The TEOW, depending on final turbine layout may require the relocation of the Tongue Pilot Diamond slightly further north (noting ESL pilot boarding locations as presented in Section 2)'</i>.</p>

ExQ3	Question to:	Question:
		<p>In [REP5-069] D5 comments on the Applicant's Deadline 4C Appendix 2 para 114-115, PLA express their concerns that the relocation of the Tongue boarding diamond and consequent costs of so doing have not been considered in the application or evidence to the Examination. In [REP5-070] response to Action Point 17 from ISH8, PLA states '<i>ESL and PLA therefore believe there will be an increase in traffic at the existing Tongue DWD</i>' and that '<i>[t]he reduction in sea room between the Tongue DWD and SEZ (by approx. 0.7nm) would require the Tongue DWD to be relocated (even if there is no increase in usage)...ESL would suggest a relocated Tongue DWD should be approximately 2.4nm North-North-East of its current location.</i>'</p> <p>a) Would the Applicant clarify whether their proposals require the relocation of the Tongue pilot diamond in order for pilot boarding or landing at that location to be at a safe distance from the proposed extension, taking into account the need for the North Thanet cardinal buoy to be displaced as a consequence of the proposed extension and the density of traffic between the TOWF and the Tongue anchorage.</p> <p>b) If any relocation is proposed:</p> <ol style="list-style-type: none"> <li>i. to the extent that this is known, to where would relocation occur;</li> <li>ii. what if any capital costs are incurred;</li> <li>iii. what if any additional running costs (revenue costs) are incurred by pilot services;</li> <li>iv. who will meet these costs;</li> <li>v. is there any basis for a commercial agreement or other secured provision for contribution by the Applicant to these costs; and</li> </ol>



ExQ3	Question to:	Question:
		<p>vi. have the navigation effects of any relocation been taken sufficient account of in the NRA/NRAA?</p> <p>If b) and specifically b) v are responded to, a form of security should be outlined at Deadline 6 and final drafts / confirmation provided at Deadline 7.</p>
3.12.8.	London Pilots Council (LPC)	<p><b>Alternative pilot transfer locations for deep-draught and ULCS vessels</b></p> <p>[REP5-061] para 2.4 LPC states <i>'the pressures of multiple large vessel boardings at the Sunk pilot station, has created an immediate demand for deep draft Class1 and Ultra large (ULCS) vessels to transit the North Edinburgh Channel to and from the NESP at drafts up to 13.5 meters, having boarded or landed a Pilot at the NESP. This is a major factor in the future growth of business in the Port of London.'</i> At para 2.7 it says <i>'[i]t is not possible tonserve [sic] Ultra Large vessels transiting the North Edinburgh Channel in a position directly to the North of the NESP Racon Buoy as this area comprises the busiest East/West Traffic route.'</i></p> <p>Would LPC please comment on the spatial and economic implications of alternative pilot transfer to and from deep draft Class 1 and UCLS vessels if dipping down to the NE Spit pilot station is deemed unsafe? In commenting, if an alternative location is to be used, which should it be, what are the effects of the change and has it been sufficiently assessed?</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.12.9.	The Applicant	<p><b>Implications of pilot station relocation if needed</b></p> <p>In [REP3-004] response to point 4 of [REP2-048] from Sunk User Group the Applicant refers back to [REP2-011] Appendix 4 to D2 responses which states <i>"The Applicant, at the Pilotage Study Report undertook analysis of the time, distance and cost involved for launches servicing the various stations and this should be used in understanding the commercial impact"</i>.</p> <p>Would the Applicant please clarify with additional detail how this answer and the Pilotage Study report addresses the [REP2-048] point 4?</p>
3.12.10.	The Applicant	<p><b>Unadopted risk control: NE Spit pilot boarding operations</b></p> <p>In [REP5-039] the NRAA (revised) at para 172 the Applicant states: <i>'A risk control, identified within the original NRA (Table 22, unadopted risk control No.2) which has not been adopted, is the relocation of the NE Spit Pilot Boarding operations. The Applicant does not consider that the scheme would require any such relocation, as the hazard risk scores assessed in this Addendum NRA demonstrate navigation risk to be acceptable... The Applicant considers that this is confirmed by the introduction of the SEZ, which ensures that the required sea room for pilot transfer would be available. However, if IPs consider that there is a residual concern with pilotage operations, specifically in relation to large vessels dipping the full distance from the north to the NE Spit pilot diamond, it would be feasible for vessels to be the subject of pilot transfers further to the north of that pilot diamond, within the current area of pilot operations.'</i></p> <p>a) The Applicant is asked to confirm that there are no circumstances in which it considers that a relocation of NE Spit pilot boarding operations</p>

ExQ3	Question to:	Question:
		<p>might be argued as a relevant mitigation in respect of the provision of adequate sea room and navigation safety in the NE Spit area.</p> <p>b) If such a confirmation cannot be provided:</p> <ul style="list-style-type: none"> <li>i. to the extent that this is known, to where would relocation occur;</li> <li>ii. what if any capital costs are incurred;</li> <li>iii. what if any additional running costs (revenue costs) are incurred by pilot services;</li> <li>iv. who will meet these costs;</li> <li>v. is there any basis for a commercial agreement or other secured provision for contribution by the Applicant to these costs; and</li> <li>vi. have the navigation effects of any relocation been taken sufficient account of in the NRA/NRAA?</li> </ul> <p>If b) and specifically b) v are responded to, a form of security should be outlined at Deadline 6 and final drafts / confirmation provided at Deadline 7.</p>
3.12.11.	The Applicant	<p><b>Trend for larger vessels accessing Thames and Medway ports</b></p> <p>In [REP5-012] D5 Appendix 7 para 95 the Applicant presents evidence of a trend towards larger vessels carrying more cargo.</p> <p>POTL/LGPL and other IPs presented evidence including at ISH 5 and ISH8 to the effect that larger vessels up to and including 333m LOA are already using the NE Spit PBD and that this use is likely to continue (particularly for outbound unladen vessels) due to the volume of vessel traffic at the Sunk pilot station and in northerly channels of the Thames.</p>

ExQ3	Question to:	Question:
		<p>Would the Applicant please clarify:</p> <ul style="list-style-type: none"> <li>a) What does the Applicant consider to be the threshold for “larger vessels” in regard to draught, LOA and/or handling characteristics in restricted amounts of sea space; and</li> <li>b) para 94: how and to what extent the 10% growth in larger vessels in particular of Class 1 and 2 vessels has been reflected in the NRA Addendum amendments to the application NRA in the assessment of likelihood and consequence of hazard occurrence involving large commercial vessels in the vicinity of the proposed TEOW?</li> </ul>
3.12.12.	The Applicant	<p><b>Allowances for traffic growth in collision risk modelling</b>            In [REP5-071] POTL/LGPL submission, the HR Wallingford report asserts that collision modelling (on which the NRA relies) is deficient due to inadequate predictions of traffic growth. The Applicant has defended the figure of 10% traffic growth used for risk assessment generally, but would the Applicant also confirm in what way the collision risk modelling:</p> <ul style="list-style-type: none"> <li>a) allowed for overall growth of traffic; and</li> <li>b) allowed for predicted relatively larger growth of larger vessel traffic as accepted in other evidence.</li> </ul>
3.12.13.	The Applicant (the engagement of other IPs and Other Persons in the subject matter of this question is noted and comments	<p><b>Allowances for traffic growth in collision risk modelling: NPS Ports policy compatibility</b>            The Thames Estuary contains existing ports that meet the NSIP scale criteria for ports set out in s24 PA2008. NPS Ports envisages the location</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
	<p>on the Applicant's response at Deadline 6 can be provided at Deadline 7)</p>	<p>of new ports being determined by the market, but the fact that the Thames Estuary is a current and prospective location for future NSIP scale port development is demonstrated by the relatively recent development of London Gateway Port (which NPS Ports at paragraph 3.4.8 identifies as the largest capacity addition to UK container handling capacity in a single consent between 2005 and 2012) and more recently by the granting of development consent for the Tilbury 2 NSIP (which is now beyond its judicial challenge period and can be considered a concrete addition to consented capacity). London Gateway Port has been developed to support the potential addition of 4 further berths (a greater than doubling of current capacity). It is also possible to envisage additional NSIP-scale port development in the Thames beyond these two locations.</p> <p>NPS Ports paragraph 3.4.11 identifies that port '[c]apacity must be in the right place if it is to effectively and efficiently serve the needs of import and export markets. The location of ports in England and Wales has changed over time, in response to changes in global markets, in the size and nature of ships, and in the transport networks which support them. Currently, the largest container and ro-ro terminals are in the South East...'. Paragraph 3.4.12 identifies that it is in the national interest for there to be competition between ports, which drives efficiency and lowers costs. This means that port development 'requires sufficient spare capacity to ensure real choices for port users. It also requires ports to operate at efficient levels, which is not the same as operating at full physical capacity.' Spare ports capacity is viewed as a desirable contribution towards the decongestion of land transport routes through coastal shipping</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
		<p>(paragraph 3.4.14) and the provision of national logistics resilience (3.4.16).</p> <p>Drawing these factors together, NPS Ports (paragraph 3.4.16) concludes as follows: '[e]xcluding the possibility of providing additional capacity for the movement of goods and commodities through new port development would be to accept limits on economic growth and on the price, choice and availability of goods imported into the UK and available to consumers. It would also limit the local and regional economic benefits that new developments might bring. Such an outcome would be strongly against the public interest.' Paragraph 3.5 urges NSIP decision-makers to accept what amounts to an urgent need for new ports capacity and normally to presume in favour of its development.</p> <p>The port capacity demand forecast used in NPS Ports (paragraph 3.4.3) (MDS Transmodal central forecast for Great Britain 2007: 2005 to 2030) is acknowledged not to have factored in the growth effects of the post-2008 economic downturn. Equally however, it is acknowledged not to take into account other new drivers for additional port capacity, including offshore wind farm development and servicing. NPS Ports suggests that the net effect of the economic downturn on this forecast should be considered to be a delay but not ultimately a reduction in the eventual levels of demand for port capacity, in particular for unitised goods (paragraphs 3.4.4, 3.4.5).</p>

ExQ3	Question to:	Question:																				
		<p>Summarising the implications of the NPS Ports forecast for growth by main cargo type and breaking these figures down into linear annualized growth with no allowance for economic cycles suggests the following:</p> <p><b>Forecast ports capacity growth by cargo type to 2030</b></p> <table border="1"> <thead> <tr> <th></th> <th>25 yrs</th> <th>Annual</th> <th>25 yrs %</th> <th>Annual %</th> </tr> </thead> <tbody> <tr> <td>Containers (million teu)</td> <td>13</td> <td>0.52</td> <td>182</td> <td>7.43</td> </tr> <tr> <td>Ro-Ro (million tonnes)</td> <td>85</td> <td>3.40</td> <td>101</td> <td>4.00</td> </tr> <tr> <td>Non-unitised (million tonnes)</td> <td>18</td> <td>0.72</td> <td>4</td> <td>0.18</td> </tr> </tbody> </table> <p>a) NPS Ports implies that the combination of a geographic shift in demand for port capacity towards the south east together with forecast GB growth rates for ports capacity when taken together suggest that trends extrapolated from historic traffic on the Thames Estuary may not provide a sound basis for forward planning for ports capacity and effects of ports going forward. Please set out your observations on this.</p> <p>b) Are the NPS Ports policy assumptions about port and traffic growth rates (NPS growth rates) relevant to the adoption of growth assumptions for the NRA and NRAA for this Application and if not, why not?</p> <p>c) If the NPS growth rates are relevant, in the policy context around the need for ports development set by NPS Ports, acknowledging the</p>		25 yrs	Annual	25 yrs %	Annual %	Containers (million teu)	13	0.52	182	7.43	Ro-Ro (million tonnes)	85	3.40	101	4.00	Non-unitised (million tonnes)	18	0.72	4	0.18
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Non-unitised (million tonnes)	18	0.72	4	0.18																		

ExQ3	Question to:	Question:
		<p>Thames Estuary to be an existing and a prospective location for NSIP scale port development:</p> <ul style="list-style-type: none"> <li>i. does the 10% traffic growth assumption used for NRA purposes in this application sufficiently address the growth assumptions underpinning NPS Ports as summarized above;</li> <li>ii. if it does not, could it reasonably be concluded that waters around the development would experience higher traffic levels than those included in the NRA and NRAA; and</li> <li>iii. if (ii) is the case, do the NRA and NRAA provide a sound basis on which to assess the effects on navigation risk of the proposed development in a context where NPS Ports compliant use and development continues to occur?</li> </ul> <p>d) Are there circumstances in which the proposed development could form a constraint on shipping traffic capacity that would limit the ability of existing and/ or prospective NSIP scale ports to contribute effectively to meeting the national need for port capacity assessed in NPS Ports?</p>
3.12.14.	Trinity House (THLS)	<p><b>Effects on visual navigation</b>          Please would THLS comment on the following statements in the NRA:</p> <ul style="list-style-type: none"> <li>a) the NRA summary that <i>"the positioning of the wind farm is not considered to have a significant effect on visual navigation..."</i> [APP-089] NRA p129 para 17.</li> <li>b) the conclusions of the NRA that <i>"markings of the arrays may diminish the effectiveness of the major navigational lights adjacent to the site"</i>? [APP-089] NRA p93 para 7.8.2.</li> </ul>



ExQ3	Question to:	Question:
		<p>c) [REP1-012] Applicant's Response to [RR-044] ESL-4 Para. 7.8.2 "...Offshore wind farms provide landmarks for vessels and are used as part of the general navigation toolkit." and Para 7.9.6 "A review of previous studies undertaken and discussions with stakeholders on the impacts of the existing wind farm have not identified any significant adverse impacts which may increase the risk of an accident to [sic] shore based or ship board communications, radar or positioning systems."</p>
3.12.15.	<p>Port of Tilbury London Ltd / London Gateway Port Ltd (POTL/LGPL), Port of London Authority / Estuary Services Ltd (PLA) and London Pilots Council (LPC)</p>	<p><b>Future growth of shipping traffic</b>                      In [REP5-012] D5 Appendix 7 para 81 the Applicant notes that Mr Crockett for POTL/LGPL accepted at ISH8 a figure of 10% growth for the inshore route and at para 92 that an increase in "larger vessels which would necessarily use the ...SUNK pilot boarding ground"; and at para 98 the Applicant states "...as vessel size increases use of SUNK over NE Spit boarding grounds would therefore be apparent...".</p> <p>Would POTL/LGPL, PLA and LPC:</p> <ul style="list-style-type: none"> <li>a) confirm this understanding of 10% growth of use of the inshore route; and</li> <li>b) provide a reasoned estimate for growth of traffic using the NE Spit Pilot Boarding Diamond; and</li> <li>c) with reference to their submissions at D5, confirm whether larger vessels would necessarily use the SUNK approach to the ports; and</li> <li>d) what net difference is likely to be made to the overall traffic movements to and from the Ports of London and Sheerness over the</li> </ul>

ExQ3	Question to:	Question:
		<p>life of the TEOW project due to increase in ship movements to and from the PoT and DPWLG; and</p> <p>e) provide evidence of what difference to the volume and profile of traffic using NE Spit PBD (whether or not via the inshore route) would be likely if a capital dredge were made of North Edinburgh Channel or Fisherman’s Gat (as have been stated in evidence to this Examination as being under consideration although not as yet as firm project proposals), in particular the likely growth in Class 1 and 2 and other large vessels; and</p> <p>f) what might be a likely range of the quantum of economic and commercial effects on the efficient use of tidally constrained berths at the London and Sheerness ports by adding approximately an hour’s inbound steaming time should masters carrying time-critical or time-sensitive cargo decide (based on “dynamic risk assessment”) to divert passage around the east of the Thanet WF and board a pilot at NE Spit instead of otherwise taking the shorter route to the NESP pilot diamond?</p>
3.12.16.	Port of Sheerness Ltd (PSL)	<p><b>Effects on navigation-shipping routes adjacent to the development</b></p> <p>In the Applicant’s Response to [RR-011] Port of Sheerness Ltd PSLM-1, it is stated that:</p> <p>a) <i>“All existing routes remain navigable by existing vessel traffic and potential changes to these routes (in terms of time and distance) that may arise as a result of the proposed project have been identified and assessed. The conclusions are presented in Table 10 of the NRA (PINS</i></p>

ExQ3	Question to:	Question:
		<p><i>Ref APP-089/ Application Re 6.4.10.1) and are that the changes are considered minimal."</i></p> <p>b) <i>"The changes to routing are considered to be minimal with no alteration to shipping lanes/routes beyond a reduction in the route between the Array and land to the south-west; this change is in an area with significantly less traffic than other routes within the immediate area. As such it is not expected that there would be any significant effect on routing of traffic."</i></p> <p>Does Port of Sheerness have any further comments to make on the development proposal in relation to shipping traffic and potential commercial or economic consequences of any effects to shipping and port operations?</p>
3.12.17.	The Applicant	<p><b>Effectiveness of stakeholder consultation on risk assessment</b></p> <p>The D5 submission by MCA [REP5-063], as independent observer at the workshop held on 29 March 2019, notes the very tight time period available for the revised risk assessment and that:</p> <ul style="list-style-type: none"> <li>a) risk control measures were not discussed at this workshop;</li> <li>b) during the teleconference on 2 April none of the scores were discussed but IPs raised concerns on the suitability of the hazard list;</li> <li>c) IPs had only 3 working days after receiving the NRA Addendum to review the document and provide comments;</li> <li>d) Risk scores deemed by the Applicant to be tolerable with mitigation have not been agreed between the Applicant and IPs.</li> </ul> <p>Would the Applicant comment on these points?</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.12.18.	Port of Tilbury London Ltd, London Gateway Port Ltd (PoTL/LGPL)	<p><b>Answers given at ISH8 by POTL/LGPL Expert witness</b></p> <p>In [REP5-018] at para 76, the Applicant states that in questioning of expert witness Mr Vincent Crockett {VC}, "<i>VC accepted that all other input scores had been agreed at the workshop</i>" and "<i>there were no comments on the risk controls</i>".</p> <ul style="list-style-type: none"> <li>• Would PoTL/LGPL comment on this record of answers given?</li> </ul>
3.12.19.	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS)	<p><b>Embedded and additional risk controls in NRA and NRAA</b></p> <p>In [REP5-012] D5 Appendix 7 para 81 the Applicant states that "<i>the embedded and additional risk controls identified as part of the Addendum NRA do not need managing by the PLA</i>" and at paras 82 and 90 commits to 2 lines of orientation that would ordinarily be left to later confirmation with MCA and TH.</p> <p>Would the PLA, MCA and THLS comment on:</p> <ol style="list-style-type: none"> <li>a) whether they agree with this statement; and</li> <li>b) whether it addresses the concerns raised in earlier representations; and</li> <li>c) whether there are other considerations of involvement by IPs in maintaining the effectiveness of such embedded or additional risk controls that should be considered by the ExA; and</li> <li>d) whether the commitment made by the Applicant to 2 lines of orientation (thereby proposed as embedded rather than additional mitigation) changes the IPs' view on the "double-counting" of embedded and additional mitigation?</li> </ol>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
3.12.20.	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS); POTL/LGPL and PLA and London Pilot Council (LPC); Thanet Fisherman’s Association (TFA); UK Chamber of Shipping (UkCoS); Port of Sheerness Ltd (PSL)	<p><b>Textual changes to the NRAA made at deadline 5</b>            Would the IPs comment on the recent textual changes in regard to traffic projections made at Deadline 5 to the NRAA (rev B) [REP5-039] insofar as relevant to this DCO application:</p> <ul style="list-style-type: none"> <li>a) Para 121: “...<i>slightly downward trend in chargeable ship arrivals over recent years...</i>” albeit “...<i>PLA figures do not include other estuary ports...</i>”;</li> <li>b) Para 122: “...<i>precautionary 10% uplift in hazard likelihood has been applied...in line with other OWF NRA assessments...and is reflected in the Tilbury 2 NRA...</i>”;</li> <li>c) Para 123: “...<i>It is important to note ...[that the MMO] future analysis for the region assumed that overall freight tonnage would increase, by between 1% and 2% per [sic] the trend for larger vessels would continue, and that the Thanet Extension OWF would be consented.</i>”</li> <li>d) Para 124: downward or static trend for recreational and fishing activity; and</li> <li>e) Para 125: additional WSV (traffic) associated with the TEOW; “<i>WSV engaged on other projects within the Thames Estuary and transiting through the study area are anticipated to remain largely the same...based on consultation.</i>”</li> </ul>
3.12.21.	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS); POTL/LGPL and PLA and London Pilot Council (LPC); Thanet	<p><b>Additions to the NRAA made at deadline 5</b>            Would the IPs comment on the recent textual changes in regard to risk assessment made at Deadline 5 to the NRAA (rev B) [REP5-039]:</p>

ExQ3	Question to:	Question:
	<p>Fisherman's Association (TFA);            UK Chamber of Shipping            (UkCoS); Port of Sheerness Ltd            (PSL)</p>	<p>a) Para 135: Additional Risk Control: Enhanced promulgation of information (redrafted); Shipping and Navigation Liaison Group Terms of reference (redrafted); Post-consent Monitoring (redrafted); Enhanced optimisation of TEOW line of orientation etc (redrafted); Aids to Navigation etc (redrafted);</p> <p>b) Paras 141 to 144 and Table 19: New insertion in rev B;</p> <p>c) Para 145: "...the assessment of cost benefit in the original NRA remains valid."</p> <p>d) Para 146: Summary results of the hazard workshop (New Annex C to Deadline 5 submission) "...ID's 4-18 [sic]...were updated based on IP comments...";</p> <p>e) Ranked Hazard list (now Table 20) changed to omit columns for individual baseline and inherent risk scoring with colour grading; the highest inherent risk score now being 4.80 (previously 4.34); residual risk scores added to rev B.</p> <p>f) Para 147: hazards with baseline risk ALARP-rated now seven in number (previously four in number);</p> <p>g) Paras 152-154: New paras on hazard likelihood including a return rate for all commercial vessel collisions of 1 in 10 years to reflect stakeholder concerns;</p> <p>h) Para 157: hazards with inherent risk ALARP-rated now eight in number (previously four in number);</p> <p>i) Paras 158-160: New text on residual risk assessed;</p> <p>j) Paras 169-173: New Text on Risk Control Validation;</p> <p>k) Para 174: Added conclusions text on hazard consequence scores provided by PLA/ESL at D4C "...which has been used to update some hazard consequence scores."</p>

ExQ3	Question to:	Question:
		l) Para 178: Added text on feedback from DPWLG on risk consequence scores; and m) Para 184: New text varying the Recommendations made in the revA NRA Addendum.
3.12.22.	The Applicant	<p><b>Risk scoring detail (NRA ID12 example)</b>            In [REP1-008] Applicant's supplementary note on NRA process, in the Property category of this Hazard ID12 "Collision between two large commercial vessels", with the "Most Likely" outcome of this hazard ("<i>low speed collision, likely to be glancing blow, with limited consequence values...</i>") the HAZMAN algorithm produces a score of 5.24 apparently with a 1 in 15 year return rate likelihood compared with a score of 5.92 when the return rate drops to 1 in 10 years.</p> <ul style="list-style-type: none"> <li>• Would the Applicant please explain how and why this rise in return rate of 50% (10 years instead of 15 years) produces via the algorithm an increase of 12.9% in risk rating.</li> </ul>
3.12.23.	Trinity House (THLS)	<p><b>Decrease of navigational risk since 1997</b>            Would THLS comment on the Applicant's statement in [REP2-014] para 49 "<i>... navigational risk has decreased locally and internationally since 1997 (for instance due to new technology)...</i>"?</p>
3.12.24.	The Applicant	<p><b>Transit past NE Spit of hazardous goods including gas to London and Sheerness ports</b>            In [REP5-012] D5 Appendix 7 para 101 the Applicant appears to confirm that Port of Sheerness (Peel Ports) were not consulted in regard to the 29</p>

ExQ3	Question to:	Question:
		<p>April Hazard workshop (HAZID workshop) or the development of the NRA Addendum.</p> <p>Would the Applicant confirm if and in what way shipping and navigation hazards involving hazardous goods vessels including petroleum or gas carriers have been specifically assessed?</p>
3.12.25.	The Applicant	<p><b>Hazards involving car carrier vessels</b>            Would the Applicant confirm the details of assessment of risk consequence for hazards involving car carriers, as evidence presented by IPs at D5 indicate that due to windage and instability they are vulnerable to capsizing in a collision, even glancing.</p>
3.12.26.	The Applicant	<p><b>Effects on stakeholders of possible additional risk controls</b>            With specific discussion of possible additional risk controls during the operational phase as well as construction and decommissioning phases (considered in the NRA but not put forward at this time), would the Applicant expand on the answer given at [REP1-017] to the RR [SUG-5] from SUNK VTS User Group in respect to concerns (also raised in Minutes of meeting MCA/THLS 23 August 2018 submitted at [REP1-082]) about the effects of the TOWF extension needing changes in operation "<i>putting extra pressure on coordination on the movement of ships and efficiency of operation, which could impact safety...</i>".</p>
3.12.27.	The Applicant	<p><b>Use of space south of NESP diamond in extreme conditions:</b>            In [REP5-069] D5 submission commenting on Applicant's D4C submission of Statement of Evidence paras 117-123, PLA/ESL provides evidence that:</p>



ExQ3	Question to:	Question:
		<ul style="list-style-type: none"> <li>• on five occasions during the surveyed period when SUNK pilot station was off-station due to adverse MetOcean conditions, NE Spit served in the sea space south of the NE Spit diamond vessels that could only use the inshore route to the Thames and would not have been able to pass around the windfarm to board pilot at Tongue or dip-down to board a pilot north of the NE Spit diamond.</li> <li>• in the year between Dec 2017 and Nov 2018 the NE Spit station was “off station on 17 separate days”.</li> </ul> <p>PLA/ESL D5 submission [REP5-070] ISH 8 Action Points item 17 provides evidence that, on days when Sunk was off-station, operations at or south of NE Spit diamond served container ships for DPWLG and PoT and tankers for Grays, Shell, Navigator, West Thurrock and Oikos oil terminals.</p> <p>Would the Applicant comment on:</p> <ol style="list-style-type: none"> <li>a) whether or how the risk assessment has considered and scored the hazard to property, health and safety of pilots and launch crews, stakeholder or commercial interests of pilot boarding or landing operations at or south of the NE Spit diamond in such adverse Met Ocean conditions as the five instances described in the PLA/ESL submission noted above; and</li> <li>b) what effect the proposed reduction to 2.1nm sea space between Elbow buoy and the proposed TEOW would have on the embedded risk and the ability of pilot services to provide continued service to inbound vessels; and</li> <li>c) what commercial effect might result from the inability to provide any pilot service to vessels seeking to enter the Thames in extreme</li> </ol>

ExQ3	Question to:	Question:
		<p>MetOcean conditions such as the five noted in the PLA/ESL evidence above.</p>
3.12.28.	The Applicant	<p><b>Risk Assessment for conflicting vessel encounters between NE Spit Racon buoy and the proposed extension</b></p> <p>In [REP5-012] D5 Appendix 7 par 65 the Applicant maintains that there would be <i>"...no significant interference with visibility...as a result of the extension."</i></p> <p>It continues to state that</p> <ul style="list-style-type: none"> <li>• there would be <i>"ample sea room"</i> for vessels to take a wider turn around the NW corner of the extension than at present and that</li> <li>• the sea room required between NE Spit Racon buoy and the array is determined on a precautionary basis by guidance on spatial needs of <i>"concurrent transits of four 333m LOA vessels and allowing for vessels turning"</i>; and that</li> <li>• a clear line of sight is <i>"desirable but not essential"</i>.</li> </ul> <p>The Applicant has also presented evidence that their calculation of sea space requirement in this location is based on the parallel passage of 4 concurrent vessels plus a buffer <i>"...to allow for other maritime considerations, including crossing vessels..."</i> [REP5-018 para 25].</p> <p>At [REP5-071] POTL/LGPL contends that guidelines for theoretical channel width based on ship beam are not relevant in the locations west of the WF and <i>'do not allow for ships encountering operations such as pilot transfers'</i>.</p>

ExQ3	Question to:	Question:
		<p>In [REP5-061] evidence at D5 Fig 4 LPC has clarified that they strongly recommend 2nm sea room plus 1nm safety buffer between the proposed extension and the NE Spit Racon buoy whereas the sea space allowed by the SEZ proposal is 2.5nm as clarified in Table 2 of Applicant's D5 Appendix 7.</p> <p>The [REP5-067] D5 PLA/ESL submission of oral evidence at ISH8 point 4.8.1 explains danger to navigation as an effect of "<i>reduction in sea room means the same amount of traffic in the smaller area</i>".</p> <p>Vessel Traffic Plots submitted by the Applicant as D4B Appendix 1 Annex D HazInfoPack [REP4B-006] indicates that vessels approaching from the east turn to the south-east at a consistent position north of the TOWF in order to dip down towards NE Spit pilot boarding diamond. If the turn position for these vessels is relocated west as a consequence of the proposed extension, the turn would have to take place closer to the NE Spit Racon buoy, where the use of the sea space appears to be characterised by vessels crossing on multiple headings, evidenced by the Vessel Traffic Plots in [REP4B-006].</p> <p>At para 68 of [REP5-012] D5 Appendix 7 the Applicant refers to the "second ship" (understood to be that passing on a course towards the north-east) and its clearance relationship to the NE Spit buoy. However, this appears to be inconsistent because (as it is understood from other evidence) vessels outbound from London and Sheerness should be taking the starboard side (i.e. southerly part of the sea space) in this location and if encountering vessels approaching from the ENE the outbound vessel</p>

ExQ3	Question to:	Question:
		<p>would be required to take evasive action by turning to starboard towards the wind farm.</p> <p>Would the Applicant clarify:</p> <ul style="list-style-type: none"> <li>a) what additional factor of hazard likelihood has been attributed in the NRA to any reduced visibility (by eye or by instruments) across the corner of the WF as a result of the extension; and</li> <li>b) what is the amount of spatial allowance made in this specific assessment for turning vessel movements north-west of the Windfarm in the immediate vicinity of the NE Spit Racon buoy (such spatial allowance having been referred to in the Applicant's submission [REP5-018] para 25 noted above as supplementary to the MGN543 space for four 333m LOA vessels in concurrent parallel transit); and</li> <li>c) how has that allowance been calculated, taking into account the extension to the north-west of pilot transfer operations if constrained or extended by non-standard circumstances; and</li> <li>d) how has that allowance been calculated taking into account the requirement for outbound vessels to turn to starboard to take (Colregs compliant) evasive action in case of encountering other vessels as or after they make their turn to the east past the northern extremity of the proposed TEOW; and</li> <li>e) what allowance should be made in this location for clearance from the NE Spit Racon buoy itself as the tracks presented in evidence [eg REP4B-006] show that vessels leave clear water clearance from the buoy; and</li> <li>f) to what extent is the hazard scoring altered in construction phase by the reduction of sea space at this pinch point between NE Spit Racon</li> </ul>

ExQ3	Question to:	Question:
		buoy and proposed structures and construction activity that would be subject to a 500m exclusion zone taking up part of the safety margin or buffer?
3.12.29.	The Applicant	<p><b>Effects of additional risk to navigation in the vicinity of TOWF</b>                      Would the Applicant re-submit their assessment of the environmental, commercial and economic effects of additional distance travelled due to re-routing around the proposed TEOW of vessels over the size assessed in the PTB Simulation.</p>
3.12.30.	The Applicant	<p><b>Economic consequence of hazards</b>                      In regard to the economic consequence of risk the POTL/LGPL D5 submission [REP5-071] argues that based on the NRA Addendum if the economic consequence of a hazard is over £100,000 it is a Category 3 risk and if the likelihood is more than yearly occurrence then it is above ALARP and therefore not tolerable. If well over a hundred vessels are diverted as a consequence of risk assessed, then an economic consequence of over £100,000 is 'highly likely' and the risk of economic consequence unacceptable.</p> <p>Would the Applicant confirm if and in what way traffic congestion and delay to port operations was considered as a potential consequence of collision involving a large commercial vessel and how it was assessed in the NRA or NRA Addendum?</p>

ExQ3	Question to:	Question:
3.12.31.	The Applicant	<p><b>Potential effects of congestion of approach routes to ports</b>                      [REP1-148] Written Representation within Deadline 1 submission by LGPL/PoTLL section 3.1 states: "The Ports NPS also discusses the need for ... UK ports to be competitive (Para 3.4.13). It also cites the need for resilience to account for <i>'short term demand peaks, the impact of adverse weather conditions, accidents, deliberate disruptive acts and other operational difficulties without causing economic disruption...'</i>"</p> <p>The POTL/LGPL REP5-071 D5 submission argues that inbound vessels over 240m length (above the size range tested in the PTB Simulation) would opt not to use the NESP diamond boarding location due to the proposed TEOW extension westwards and that approximately 113 vessels above this length inbound to DPWLG annually currently using the inshore route, not accounting for <i>'growth in vessel traffic over the reasonable planning horizon'</i> would <i>'be required to re-route'</i> around the WF. The IP argues that effects would include potential delay for time-critical passages depending on a number of circumstances and may include the effect of deterring shipping from using the Thames ports.</p> <p>Would the Applicant comment on what assessment has been made in the NRA and the ES for the effects of congestion of commercial navigation routes into the Thames estuary that might ensue from diversion of ships larger than 240m LOA around the proposed TEOW, taking into account time constraints of tidal height and potential congestion of routes and pilot transfer operations due to displacement of traffic?</p>

ExQ3	Question to:	Question:
3.12.32.	The Applicant	<p><b>Effects of proposed development on navigation passage planning and financial or economic consequences</b></p> <p>In [REP5-012] D5 Appendix 7 the Applicant clarifies at paras 84 and 85 that the bulk of the 11 transits of the inshore route west of the WF take place within a 4.8 hour period and that this is partly to do with tidal "windows" and scheduling of pilot launch operations; and at para 87 that other tidal constraints such as berthing depths at the ports "<i>should be considered relevant</i>".</p> <p>In REP5-071 POTL/LGPL asserts that:</p> <ul style="list-style-type: none"> <li>• [page 5/6]: "<i>...the lack of regard to economic loss to the shipping and navigation industries is contrary to national policy...</i>"; and</li> <li>• [page 10/11] argues that additional steaming time from diversion around the WF would be in the range 47 to 60 minutes not 20 to 40 mins as suggested by the Applicant; and</li> <li>• [page 11] the basis for scoring of consequence at the workshop of 29 March 2019 was not clearly understood by participants and that "<i>...it was agreed that any collision between a Class 1 or 2 vessel and a fishing vessel (including a glancing blow) would result in the sinking of that vessel...</i>" and that the consequence might also result in the detention of the vessel involved pending incident investigation.</li> </ul> <p>Would the Applicant comment in detail on:</p> <p>a) the POTL/LGPL assertion that the application lacks regard to economic loss to the shipping and navigation industry; and</p>

ExQ3	Question to:	Question:
		<p>b) whether it accepts the POTL/LGPL argument for the steaming speed range that relevant vessels would be making during such a diversion; and</p> <p>c) the POTL/LGPL case that that <i>"...the effect (of risk assessment) on vessels required to seek alternative pilot boarding locations..."</i></p> <ul style="list-style-type: none"> <li>i. would be such as to give rise to a consequence of hazard of Category 3 or above (£100k plus); and</li> <li>ii. at the likelihood assessed would <i>"...give rise to a score above ALARP..."</i> (i.e. in the "intolerable" range) and/or</li> <li>iii. that <i>"...economic impacts can be seen to be at an unacceptable level"</i>; and</li> </ul> <p>d) how this tidal effect of traffic compression has been taken into consideration in assessing risk and effects of development in relation to economic and commercial aspects of shipping and port activities, (with reference to the [REP5-071] D5 submission by POTL/LGPL); and</p> <p>e) how in detail the NRA Addendum takes account of potential financial or economic loss to stakeholders or property interests as a consequence of glancing collision causing sinking of a fishing vessel and any resulting delay to shipping and port operations.</p>
3.12.33.	The Applicant	<p><b>Assessment of economic effects</b>                  [REP1-148] by LGPL/PoTLL section 4 maintains that:  <i>"proposals are likely to result in significant impacts on commercial shipping, with resulting impacts on the efficient operation and thus competitiveness of their respective port and logistics facilities, contrary to the objectives of the Ports NPS and EN-3. Such impacts comprise the following components:</i></p>



ExQ3	Question to:	Question:
		<ul style="list-style-type: none"> <li>• <i>Increased journey distance and duration for certain types of vessels, and during certain sea conditions, resulting from a reduction in navigable width of the 'inshore channel'</i></li> <li>• <i>Reduced accessibility to the NE Spit pilot boarding station as a result of the reduction in navigable width of the inshore channel, and thus reliance on alternate routes/pilot boarding stations which may give rise to additional congestion and journey distance/duration (for ships and pilots)</i></li> <li>• <i>Reduced resilience to adverse weather conditions and sea states as a result of the inability to utilise safely the NE Spit pilot boarding station by certain types of vessels."</i></li> </ul> <p>The Written Representation goes on to maintain that <i>"the IPs contend that it is of critical importance that the NRA and PTBSR provide a robust assessment of the potential implications of the proposed development on shipping and that such assessment informs further assessment of economic impacts on shipping and port activities. It is the IPs' view that such an economic assessment should be submitted by the Applicant as additional information to inform the application."</i></p> <p>In [REP5-071] D5 submission POTL/LGPL notes that the Applicant has not produced a quantitative assessment of potential economic effects of the TEOW proposals on port activity in its application documents, arguing that <i>'the lack of regard to economic loss to the shipping and navigation industries is contrary to national policy'</i>. The submission continues to argue that <i>"...unforeseen delays such as those which may occur as a result</i></p>

ExQ3	Question to:	Question:
		<p><i>of loss of resilience of pilot boarding operations ...have the potential to affect the commercial decision-making of suppliers regarding the choice of ports etc."</i> and that the "<i>...Thurrock, and indeed the wider South Essex, economy ... may be highly sensitive to proposals which have a detrimental effect on the efficient operations of ports and shipping."</i> POTL/LGPL make specific representation about time-sensitive shipping such as cruise passenger shipping and perishable cargo shipping.</p> <p>Is the Applicant willing and able to submit such an economic assessment to the Examination at D6?</p>
3.12.34.	The Applicant	<p><b>"Normal" or "Limit" states</b>                      The answers given at ISH8 and recorded by the Applicant in REP5-018 paras 82 <i>et seq</i> do not specifically address the question of how and to what extent the risk assessment has taken into account "limit-state" qualitative scenarios combining worst MetOcean conditions in which pilot transfer operations can take place at NE Spit, including:</p> <ul style="list-style-type: none"> <li>• poor visibility; and</li> <li>• encounters involving vessels most restricted in ability to manoeuvre by reason of draught, windage, fishing, towing, etc.; and</li> <li>• ship's master unfamiliar with the local waters; and</li> <li>• technical or communications problems encountered with pilot transfer.</li> </ul> <p>The notes of the 29 March 2019 Hazard Workshop appear to be silent on assessment of such combination of circumstances in connection with defined hazards. Would the Applicant please provide:</p>

ExQ3	Question to:	Question:
		<ul style="list-style-type: none"> <li>a) written workings (not merely tabulated numbers) of assessment of the most likely consequence of a limit state combination of effects for the top 4 hazards with the proposed TEOW in place subject to SEZ as proposed;</li> <li>b) a reasoned assessment of frequency of occurrence in <b>construction</b> phase in each case 1-4 above;</li> <li>c) clarification of the specific risk controls applied in assessing the inherent and residual risk in each case 1-4 in construction phase;</li> <li>d) explanation for the differential between most likely and worst credible scores for these top 4 hazards 1-4;</li> <li>e) justification why the doubling of likelihood for a class 1 or 2 collision hazard has resulted in a small percentage change in the risk score calculated by the software;</li> <li>f) examples in the top 4 hazard assessments 1-4 where the likelihood and consequence scores are close to the threshold for the next category e.g. category L2 to L3 or C2 to C3; and</li> <li>g) examples in the workshop where a "what-if" feedback loop or iteration took place to test the sensitivity (and thereby robustness) of assessment.</li> </ul>
3.12.35.	The Applicant	<p><b>Tolerability of Risk with catastrophic consequence</b>                      In REP1-024 Response to ExQ1.12.10 the Applicant states that '<i>a catastrophic consequence hazard which occurred more than once in 100 years would be regarded as intolerable, and the lowest risk score a catastrophic consequence hazard could achieve (at a frequency of greater than 1 in 1000 years) would be 5.1/10 and would have to be assessed as</i></p>

ExQ3	Question to:	Question:
		<p><i>ALARP to be acceptable. This is considered to represent an appropriate calibration of the assessment as regards "acceptability" of risks.'</i></p> <p>POTL/LGPL contend [in REP5-071] that the basis for scoring of consequence was not clearly understood during the Hazard workshop on 29 March 2019; although at the workshop it was agreed that a 'glancing blow' collision of a Class 1 or 2 vessel with a fishing vessel would result in a sinking, the consequences for stakeholders/Business or Property were not discussed, expanded in the [REP5-071 Appendix F] email from LGPL to Applicant on 5 Apr 2019) as for example the Class 1 or 2 vessel being held pending incident investigation and loss of value of perishable goods cargo etc.</p> <p>Would the Applicant please:</p> <ul style="list-style-type: none"> <li>a) comment on this [REP5-012] comment on consequence of NRAA Hazard #1; and</li> <li>b) re-explain the answer to ExQ1.1.10 in different terms, giving particular clarity to the meaning used respectively for the terms Tolerability and Acceptability, using the example of Hazard ID #1 from the NRA Addendum assuming collision involving a commercial vessel and a fishing vessel with                         <ul style="list-style-type: none"> <li>i. sinking as the consequence; and</li> <li>ii. crew fatality as the consequence.</li> </ul> </li> </ul>
3.12.36.	The Applicant	<p><b>Societal Concerns and tolerability of societal risk</b></p> <p>When questioned at ISH8 about the consequential implications of the top 4 hazards and how the NRA Addendum deals with combination risks, the</p>

ExQ3	Question to:	Question:
		<p>Applicant's expert witness Dr Rogers answered that the NRA had already "<i>considered the issue</i>" [see REP5-018 Applicant's written confirmation of oral representations at ISH8 para 30].</p> <p>In [REP1-024] Response to ExQ1.12.9 the Applicant notes MCA/DECC 2013 Guidance section 6.2:</p> <ul style="list-style-type: none"> <li>• advises that a (Formal Safety) Assessment "should consider societal risk through two mechanisms: an aggregate of all entries in the risk register; and for Major risks such as collision, contact, grounding and stranding"; and</li> <li>• notes that 6.2 does not "give a specific methodology for considering aggregate risk"?</li> </ul> <p>In regard to Tolerability, the Applicant goes on to state in [REP1-024] that the NRA "<i>sought to address this question through Section 8.6.3 as a means of considering overall levels of risk.</i>" In section 8.6.3 of the NRA [APP-089] the Applicant states:</p> <ul style="list-style-type: none"> <li>• "No defined threshold exists for what constitutes an acceptable level of risk in the maritime domain or for wind farm developments."</li> <li>• "<i>Consideration of what is deemed as an acceptable risk have been discussed by ...HSE (see HSE 1999- Reducing Risk, Protecting People)... when the risk relates to the loss of life.</i>"</li> <li>• "<i>Typical values are given for the threshold of acceptability to individuals as <math>1 \times 10^{-3}</math>, approximately a 1 in 1000 chance per year per crew person...</i>".</li> <li>• "<i>...a collision between a fishing vessel and a commercial ship would pose a threat to the fishing boats crew...</i>"</li> </ul>

ExQ3	Question to:	Question:
		<ul style="list-style-type: none"> <li>• <i>"The figures do however demonstrate that the risk does increase above the baseline scenario as a result of the development".</i></li> </ul> <p>It can be seen from the HSE 1999 document, submitted as [REP5-009], that the definition of societal concerns and societal risk is not limited to loss of life. Para 25 to 27 states:</p> <ul style="list-style-type: none"> <li>• <i>"Societal concerns or the risks or threats from hazards which impact on society and which, if realized, could have adverse repercussions for the institutions responsible for putting in place the provisions and arrangements for protecting people...Societal risk is therefore a subset of societal concerns."</i></li> <li>• <i>"Hazards giving rise to societal concerns share a number of common features. They often give rise to risks which could cause multiple fatalities; where it is difficult for people to estimate intuitively the actual threat; where exposure involves vulnerable groups...; where the risks and benefits tend to be unevenly distributed, for example....so that less risk may be borne now and by some future generation. People are more averse to those risks and in such cases are therefore more likely to insist on stringent Government regulation."</i></li> <li>• <i>"In addition...there is also, and importantly, a concern that, in the wake of an event giving rise to such concerns, confidence in the ...institutions responsible for setting out an enforcing (these) provisions and arrangements, would be undermined."</i></li> </ul> <p>Would the Applicant please advise:</p> <p>a) how they consider aggregate risk should be considered; and</p>

ExQ3	Question to:	Question:
		b) whether and how the NRA or NRA Addendum has considered societal concerns as defined by HSE and quoted above, including but not limited to loss of life; and c) whether recreational sea users and fishing boat crews or any other users of the sea space around the Thanet windfarm may be considered as “vulnerable groups”; and d) In the example of collision between fishing vessel and commercial ship, what the assessed inherent risk is of loss of life in relation to occurrence per year per crew person. e) whether and how an incident involving any combination of sinking, grounding, spillage of cargo or fuel, injury or fatality, delay or consequential reputational impact on for London or Sheerness ports has been assessed.
3.12.37.	The Applicant	<p><b>Meaning and threshold of ‘significance’ in regard to impacts on shipping and navigation</b></p> <p>In REP5-018 at para 50 the Applicant argues in relation to impacts to “<i>less strategically important shipping routes</i>” that they do not accept that there would be negative impacts but “<i>if there were, they have been minimized and could not be described as significant.</i>”</p> <p>Would the Applicant please explain what they mean by the term “significant” in this example and specify the threshold of significance in this context. (The term ‘significant’ has been used in the Application and during the Examination in multiple ways in multiple contexts.)</p>

ExQ3	Question to:	Question:
3.12.38.	The Applicant	<p><b>Definition of the ALARP range</b>                      The definition of the ALARP range given in [APP-089] NRA Annex B Methodology is the band of risk scores between "intolerable" and "acceptable" as explained at page B-3: <i>'Every effort should be made to mitigate all risks such that they lie in the "acceptable" range. Where this is not possible, they should be reduced to the level where further reduction is not practicable. This region...is described as the ALARP region...where they can be tolerated, albeit efforts should be made when opportunity presents itself to further reduce their risk score.'</i></p> <p>Would the Applicant please clarify and confirm:</p> <ul style="list-style-type: none"> <li>a) that the purpose of the hazard workshop held on 29 March 2019 was <i>"to understand whether the project would remain within the ALARP range"</i> as stated at para 53 of [REP5-018] is intended to mean that no risks would exceed the ALARP range (i.e. no risks would be in the 'intolerable' range) after risk controls/mitigation have been applied; and</li> <li>b) that 'ALARP' as a term used throughout the Applicant's representations describes a risk or set of risks, tolerable only if mitigated as far as is reasonably practicable; and</li> <li>c) that if an inherent risk is assessed to lie within the ALARP range, every effort should be made to find further mitigation to reduce the risk where reasonably practicable to the "acceptable" range below the "ALARP" range; and</li> <li>d) that mitigating a risk to fall within the ALARP range is <b>necessary but not sufficient</b> if the risk can be further reduced by application of additional reasonably practicable controls/mitigation; and</li> </ul>



ExQ3	Question to:	Question:
		<p>e) in this context of understanding the definition of ALARP as an objective to mitigate risk as low as reasonably practicable rather than as a range of tolerability subject to applied mitigation, what is meant by the Applicant's expert Dr Rogers [in REP5-018 para 113] that "<i>the project was ALARP prior to the introduction of the SEZ</i>"?</p>
3.12.39.	The Applicant	<p><b>Pilot transfer bridge simulation</b>          In the [REP5-071] D5 submission by POTL/LGPL the HR Wallingford report makes the case that a new simulation should be carried out as an essential prerequisite of a revised NRA, and that report includes an outline content for such a simulation.</p> <p>The ExA notes that in section D1 "Appropriate Assessment" in the MCA/DECC 2013 NRA methodology guidelines that are referred to in MGN543, (which includes simulation if justified by the perceived risk profile of proposals) para D1.2 advises that the purpose of such assessment being (in addition to proving feasibility of navigation activities) to</p> <ul style="list-style-type: none"> <li>• quantify risk ("Produce a quantitative or qualitative value, acceptable to Government, of the change in risk caused by the development...");</li> <li>• to "determine the sensitivity of the risk to the conditions and the risk factors...";</li> <li>• "to identify, evaluate and decide on appropriate risk controls"; and</li> <li>• to close the hazard log and to develop the Risk control log.</li> </ul>

ExQ3	Question to:	Question:
		<p>Para D1.5 discusses the use of scenario to set up assessment and D1.6 sets out a hierarchy of appropriate assessment including Traffic Simulation at 2b and Traffic Bridge Control Simulation at 3 out of 4 potential steps.</p> <p>MGN 543 subsection 2d (xvi) refers to assessment of the cumulative and individual effects of multiple factors including "Researched opinion using appropriate computer simulation techniques with respect to the displacement of traffic and, in particular, the creation of 'choke points' in areas of high traffic density..."</p> <p>Would the Applicant please comment specifically on:                      a) the MGN 543 and MCA DECC 2013 requirements for simulation; and                      b) the content proposed by POTL/LGPL for such a simulation to validate the Risk control proposed by introduction of an SEZ?</p>
3.12.40.	Maritime and Coastguard Agency (MCA); Trinity House (THLS)	<p><b>Final recommendation from competent maritime authorities</b>                      MCA's D5 submission [REP5-063] recommends that in order to mitigate risks to as low as reasonably practicable in the ALARP range, the Applicant should consider "<i>increasing the sea room between the NE Spit buoy and the SEZ boundary to a distance that is acceptable for continued safe pilot transfer operations</i>".</p> <p>The ExA wishes to note that there is no longer any time remaining in the Examination timetable for further material change to the application nor for additional mitigation involving alteration of pilot transfer locations (which may need further simulation to demonstrate feasibility of safe</p>

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
		<p>navigation and pilot transfer operations in limit-state conditions and in any case could not be recommended to the Secretary of State as risk mitigation without additional Navigation Risk Assessment).</p> <p>Therefore, the ExA seeks a final recommendation from the MCA and THLS on the overall acceptability of the NRA, the NRAA and the application (subject to the SEZ and other proposed risk controls as they currently stand) from the perspective of shipping and navigation safety in all MetOcean Conditions in which PLA pilot operations are able to operate at present. On the basis of the project as proposed, including the NRA, NRAA and other submitted evidence, what is the final recommendation of the MCA and THLS to the ExA/SoS in respect of the acceptability of the proposed development in navigation safety terms?</p>
<b>3.13.</b>	<b>Noise and other Public Health Effects</b>	
	The ExA has no questions to raise in relation to this issue.	
<b>3.14.</b>	<b>Other Strategic Projects and Proposals</b>	
	The ExA has no questions to raise in relation to this issue.	
<b>3.15.</b>	<b>Socio-economic Effects</b>	
	Matters relevant to socio-economic effects have arisen but for the sake of focus have been grouped together with the individual matters and questions from which they have arisen.	
<b>3.16.</b>	<b>Townscape, Landscape, Seascape and Visual</b>	
	The ExA has no questions to raise in relation to this issue.	

<b>ExQ3</b>	<b>Question to:</b>	<b>Question:</b>
<b>3.17.</b>	<b>Transportation and Traffic</b>	
		The ExA has no questions to raise in relation to this issue.
<b>3.18.</b>	<b>Water Environment</b>	
		The ExA has no questions to raise in relation to this issue.