

# **Vattenfall Wind Power Ltd**

## **Thanet Extension Offshore Wind Farm**

Appendix 5 to Deadline 2 Submission: Applicant's  
Response to Written Representation – Navigation  
Risk Assessment Methodology and Consultation

Relevant Examination Deadline: 2

Submitted by Vattenfall Wind Power Ltd

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## **Annexes/Appendices referred to in this document**

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Appendix 2	Applicant's response to ISH2 Action Point 8 – Proposed amendment to the Red Line Boundary
Appendix 3	Applicant's Response to Written Representations on the theme of Ports/Shipping Routes
Appendix 4	Applicant's Response to Written Representation - Pilotage
Appendix 5	Applicant's Response to Written Representation – Navigation Risk Assessment Methodology and Consultation
Annex A to Appendix 3	Point by Point Responses to Shipping and Navigation Consultee Written Representations

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# 1 Responses to Written Representations

## 1.1 Introduction

- 1 Following submission of Written Representations by Interested Parties at Deadline 1, the Applicant has taken the opportunity to review the Written Representations received by the Planning Inspectorate.
- 2 The following sections provide a record of the Applicant's responses to Written Representations (WRs) received on the matter of the Navigation Risk Assessment methodology and consultation. Each section provides a summary of the representation received, with stakeholders identified, and a response to the themes emerging from the representations.
- 3 Due to the nature of the WRs made and the fact that many of them make very similar points or contain the same content, the Applicant has set out its comments in sections that address specific themes.
- 4 This document (Appendix 5) should be read in parallel with Appendices 2, 3, and 4 which address the other dominant shipping and navigation themes:
  - Appendix 2 – RLB Changes
  - Appendix 3 –Shipping Routes
  - Appendix 4 – Pilotage

## 1.2 Summary

- 5 The stakeholders' primary concerns relate to:
  - Risk Assessment Methodology and compliance with guidance
  - Application of the Risk Assessment Methodology
    - Assessment of ALARP Level Hazards
- 6 A response to the received WRs that refer to the NRA and consultation is documented below.

## 2 Risk Assessment Methodology

Interested Party	Topic summary
MCA	No concerns were raised on the risk assessment methodology employed, with the MCA's relevant representation confirming the NRA to be compliant with MGN 543
Port of London Authority / ESL	Concerns were raised on compliance with MGN 543
Chamber of Shipping	No concerns were raised by the Chamber of Shipping within a WR on the risk assessment methodology employed
Trinity House	No concerns were raised on the risk assessment methodology employed
London Pilots Council	Concerns were raised on compliance with MGN 543
POTLL / DPWLG	Concerns were raised on the methodology employed

7 This section responds to Interested Parties' concerns on the risk assessment methodology. The risk assessment methodology is documented within the NRA report, with further detail provided in answers to the ExA questions from the Preliminary Hearing, the answers from the ExA actions from the Preliminary Hearing, the Applicant's Speaking Note from the Preliminary Hearing, and the Deadline 1 Supplementary Note at Appendix 25, Annex P which details the build-up of hazard risk scores.

8 The Applicant wishes to state that:

- The risk assessment methodology is based on the International Maritime Organisation (IOM) Formal Safety Assessment (FSA) methodology;
- The Maritime and Coastguard Agency provide guidance specifying the use of the IMO FSA process for the assessment of navigation risk for Offshore Renewable Energy Installations in their Guidance Note 543 (M+F): Safety of Navigation: Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response.;

- NRA

- The Maritime and Coastguard Agency, as Statutory Consultee and Navigation Safety Authority for the Thanet Extension Offshore Wind Farm (TEOWF) NRA study area, confirmed that the methodology employed by the Applicant was sound and is compliant in regards of the MGN 543 (M+F) guidance requirements, and have stated this in their response to ExA Action 10: that “there are no allegations of MGN 543 non-compliance from the MCA”.
  - The methodology employed is used by the Port of London Authority in their management of navigation risk, required under the direction of the United Kingdom Port Marine Safety Code.
  - The methodology is widely used for NRAs in support of planning for OREIs.
  - It has completed the MGN 543 Checklist for Developers, which is designed to ensure that NRAs are carried out in compliance with the guidance in MGN543 (see Annex A to the NRA).
  - The Applicant has used the best available evidence in the form of the historical incident data, though notes that the MCA have identified limitations in it. The Applicant notes that this concern does not appear to be a concern in the way the data have been applied in the NRA.
- 9 The Applicant also wishes to note that, in line with best practice, the NRA was supplemented by additional quantitative and qualitative studies where necessary to improve accuracy of results – see the Applicant’s response to ExA Question 1.12.5 to the Maritime and Coastguard Agency (Appendix 10 of this Deadline 2 submission).
- 10 It is therefore evident to the Applicant that the risk assessment methodology employed is fit for purpose, meets the guidance requirements of the MCA (responsible organisation for upholding navigation risk in the study area) and represents current practice in determination of navigation risk for OREIs and maritime safety in ports and harbours.
- 11 The London Pilot Council raise concerns in response to ExA Action 10 over sea room which the Applicant has responded to in Appendix 3 and 4 of this submission, providing summary calculations drawing on the same method applied by the LPC.
- 12 The concerns raised by the POTL / DPWLG are high level in nature and do not appear to relate to the risk assessment methodology itself, and so to the Applicant is not in a position to respond on specific points, however it is understood that POTL / DPWLG are continuing to scrutinise the NRA.

### 3 Outcomes from the Navigation Risk Assessment

Interested Party	Topic summary
MCA	<p>Response to Action Point 7: Concern raised</p> <ul style="list-style-type: none"> <li>• that the increase in risk is not acceptable, based on the qualitative assessment made by a range of master mariners and industry experts regarding real life examples of seafarer behaviour, in addition to the quantitative assessment made in the applicants Navigation Risk Assessment.</li> <li>• increase in risk is not suitably mitigated</li> <li>• on limitation of historical incident data (which the Applicant notes does not appear a concern with the application of the data within the NRA)</li> </ul>
Port of London Authority / ESL	PLA / ESL Written Representation - Lack of Stakeholder Engagement
Chamber of Shipping	Adequate detail on mitigation
Trinity House	No specific concerns raised on application of the risk assessment methodology or ALARP level of hazards in written response.
London Pilots Council	No specific concerns raised on application of the risk assessment methodology or ALARP level of hazards in written response.
POTLL / DPWLG	<p>Concerns over:</p> <ul style="list-style-type: none"> <li>• Implementation of mitigation in Written Representations – VTS</li> <li>• Failing to set out viable proposals for the implementation of mitigation.</li> <li>• Lack of NRA consultation with POTLL / DPWLG</li> </ul>

- 13 The Applicant is not able to distil the high level concerns identified by interested parties into the specific outcomes of the risk assessment. As the NRA methodology has generally been agreed as meeting the guidance requirement (see Section 2), the concerns raised by the stakeholders relating to sea room, collision risk and feasibility of pilot boarding are presumed to relate principally to the assessment of risk for individual hazards, their residual risk level classification as being ALARP or lower and the subsequent application of mitigation (i.e. the outcomes of the NRA).



- 14 As no specific concerns have been raised with regards to individual hazard likelihood or consequence scores, it remains difficult for the Applicant to interrogate the concerns in more detail than has already been presented in the NRA – specifically in Section 7 of the NRA on the Impacts of the Thanet Extension, which documents the issues raised by stakeholders and provides an evidence-based response to their assessment. However, it is recognised that there is a continuing disconnect between the results of the NRA and the qualitative views put forward by stakeholders.

### 3.2 Conclusions of ALARP level hazards

- 15 In relation to the conclusion of ALARP level hazards and how this judgement has been reached, the Applicant would draw the attention of the ExA to the presentation of individual hazard likelihood and consequence scores that are documented in the NRA Annex D and E, with summary tables for the top 10 hazards only given in Table 23 and Table 24 of Section 8.6 the NRA (Pg 125).
- 16 The evidence base for the build-up of hazard scores is based on primary data from vessel traffic analysis and historical incident analysis, supplemented by feedback and input from stakeholder consultation.
- 17 Vessel traffic analysis has been undertaken on agreed baseline data as set out in the NRA, including winter and summer radar, AIS and visual surveys, supplemented by an additional AIS survey.
- 18 Historical Incident Analysis provides an important factual basis upon which relative likelihoods can be derived. This includes analysis of incidents occurring within the study area (see NRA Section 5.7) and analysis of national incidents (see NRA Section 5.7.2)
- 19 With regard to stakeholder concerns raised and their influence on the NRA, the Applicant has demonstrated that it has taken these on board and responded to comments as received during formal and informal consultation (see NRA Section 7), and provided evidenced responses based on data, modelling and simulation in the case of pilotage. Whilst the Applicant remains cognisant of the concerns raised by some stakeholders, the issues raised remain at a high level and do not relate to specific aspects of the assessment of risk, and as such the Applicant is not able to respond to these concerns in detail.

- NRA

- 20 The Applicant identified this disconnect 5<sup>th</sup> December 2017 (at NRA Annex C), when it was requested the MCA, as Navigation Authority for the area, attend a workshop to review the risk scoring within the NRA, which is a commonly adopted approach for OREI NRAs, to ensure that it was aligned to their professional judgement on hazard likelihood and consequence based on the evidence provided. This was requested in the form of a hazard review workshop where individual hazards would be reviewed against the evidence base and the hazard likelihood and consequence scores assessed for accuracy. This would be undertaken based on the:
- Baseline level of risk – navigation risk without the extension in place
  - Inherent level of risk – navigation risk with the extension and embedded risk controls in place
  - Residual level of risk - navigation risk with the extension, embedded and additional risk controls in place
- 21 To date, the MCA have not been able to commit to a workshop and, in the absence of an evidential basis to their concerns, or guidance on appropriate additional empirical tools to clarify sea room concerns, the specific issues being identified by stakeholders including the MCA, the Applicant refers to its response to ISH2 Action Points (REP1-012) at Deadline 1 that a specific workshop on this matter may have limited value. Notwithstanding this the Applicant remains committed to continuing engagement with shipping stakeholders. .
- 22 In summary, the NRA has taken into account the consultation responses received by the various stakeholders and this has informed, along with primary data, the hazard scoring as far as practicable. The outcomes of the NRA are therefore robust, compliant with guidance, and have been reached with full cognisance of the qualitative inputs from stakeholders.

### 3.3 Stakeholder Consultation

- 23 Particular concern was raised by the PLA / ESL and POTLL / DPWLG on consultation.
- 24 Throughout the NRA the PLA / ESL:
- Were extensively consulted as evidenced by the number of meetings held during the NRA (see consultation in Annex I to Appendix 25 to Deadline 1 Submissions)
  - Delivered and agreed the Pilotage Bridge Simulation Study by:
    - Agreeing to the approach to assess feasibility of pilotage

- NRA

- Reviewing and agreeing the inception report that laid out the basis of the assessment
- Provided the PLA pilot training simulator to carry out the assessment
- Provided pilots of their choice to act as pilots boarding vessels
- Provided ESL coxswains to act as pilot boat coxswains
- Provided experience pilots as simulator operators / managers
- Agreed on the findings of the simulation at a hot wash up at the end of the simulation study
- Did not provide any comment on the draft pilotage simulation report

25 The focus of the PLA / ESL concerns over lack of engagement seems to relate not to the extent of the consultation - which the Applicant considers as significant - but the extent to which the Applicant implemented the change to RLB and reacted to the concerns that were raised (see separate note on Pilotage Simulation). The PLA specifically reference the meeting held in December 2017, during which the PLA “raised a number of concerns about the NRA methodology” – however review of the meeting minutes does not show that any issues were raised with regards to the NRA methodology.

26 As noted in the PLA written representation, the study area falls into the navigation safety jurisdiction of the MCA who were given a draft of the NRA for comment. As the PLA jurisdiction for navigation safety falls outside of this area they were not provided a draft of the NRA. However, it is clear that the PLA were aware of the approach that was being taken to the NRA and had the opportunity to comment through the consultation process that took place both during meetings and during Section 42 consultation.

- NRA

- 27 POTLL and DPWLG have small embedded Statutory Harbour Authority areas that are surrounded entirely by the PLA Statutory Harbour Authority. Their statutory responsibilities for navigation safety are therefore around 45 nautical miles and 40 nautical miles from the proposed TEOWF, with vessels having to transit through PLA Statutory Harbour Authority waters, before entering MCA waters to the west of the NE Spit. This is further evidenced by the approach taken by POTLLs Tilbury2 DCO, which in the NRA (ES Appendix 14.A) states clearly the navigation safety issues outside of their harbour limits were the jurisdiction of the PLA and that 'hazards and risks [those outside of T2 berths] have already been subject to a robust NRA by the PLA as part of their wider responsibilities as a Statutory Harbour Authority (SHA) and, by virtue of being the pilotage service, the Competent Harbour Authority (CHA) for these waters (<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000257-ES%20Appendix%2014.A%20Navigational%20Risk%20Assessment.pdf>).
- 28 POTLL or DPWLG do not hold Competent Harbour Authority status for the provision of pilotage, which is entirely provided by the PLA for vessels inbound or outbound from both harbours, and indeed all terminals, quays, jetties and facilities within the PLA Competent Harbour Authority limits.
- 29 It is the view of the Applicant that through consultation on the NRA with the PLA, primarily on pilotage related issues, it is the responsibility of the PLA as Competent Pilotage Authority and Statutory Harbour Authority through which vessels pass, to provide the main conduit for consultation. Notwithstanding this, the Applicant has engaged with POTLL and DPWLG on a Statement of Common Ground and continues to liaise on the issues raised by these stakeholders.

### 3.4 Provision of mitigation

- 30 The application of mitigation in the NRA is defined as embedded mitigation or additional mitigation. Additional mitigation is only applied where it is considered to be required in order to reduce risks to ALARP and as such is, to a large extent, predicated on the results of the NRA.
- 31 The mitigation (both embedded and additional) that is committed to by the Applicant is set out Appendix 41 (REP1-026) to the Deadline 1 submission.
- 32 Whilst the Applicant stands behind the results of the NRA and considers the risks of the project to be ALARP, it is committed to engaging with stakeholders to identify whether reasonable further mitigation is required to provide comfort that the likely effects on shipping and navigation are suitably controlled.