Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Appendix 5 to Deadline 8 Submission: Applicant's Response to Interested Parties Deadline 7 Submissions – Shipping and Navigation

Relevant Examination Deadline: 8

Submitted by Vattenfall Wind Power Ltd

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Revision A

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1 Introduction

1 This document provides the Applicant's responses to the commentary received from Interested Parties (IPs) relating to Shipping and Navigation matters. It should be noted that the Applicant's responses to commentary relating to the draft DCO, from IPs, is provided in Appendix 6 of the Applicant's Deadline 8 Submission.

2 This seeks to provide a summary of the key issues raised in IPs Deadline 7 Submissions and the Applicant's response. This document has been structured to provide a section per document on which commentary has been reviewed, as such the document is structures as follows:

- Section 3: Planning Policy;
- Section 4 : Shipping Commercial Assessment;
- Section 5 : Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3;
- Section 6 : Supplementary Note to ExAQ3.12.34 ;
- Section 7 : PLA published risk assessment;
- Section 8 : Summary response to Deadline 5 S&N Submissions;
- Section 9 : Shipping and Navigation: ISH8L ExQ Action Point 20: Pilot Transfer Bridge Simulation Study Specification;
- Section 11 : AIS Animations Note;
- Section 12 : Thanet Offshore Wind Farm Collison Assessment of Proposed Extension; and
- Section 13 : Detailed responses.

3 Section 13 provided a point by point response to the commentary provided by IPs.

4 This document should be read in conjunction with Appendix 2 of the Applicant's Deadline 8 Submission, which provides the Applicant's closing statement on all matters, including shipping and navigation.

1.1 MCA

5 The MCA's commentary on draft DCO matters is addressed in in Appendix 6 of the Applicant's Deadline 7 Submission.

1.2 Trinity House

6 The Trinity House's commentary on draft DCO matters is addressed in in Appendix 6 of the Applicant's Deadline 7 Submission.

1.3 Port of London Authority and Estuary Services Ltd

7 PLA and ESL provided commentary on the following Applicant's documents as part of their Deadline 7 submission (REP7-043):

- Shipping Commercial Assessment (PINS REF REP6-020);
- Applicant's Responses to the Examining Authority's Third Written Questions (PINS REF REP6-026);
- PLA published risk assessment (PINS REF REP6-028);
- Appendix 22, Annex C (PINS REF REP6-026 – REP6-031);
- Response to Deadline 5 Submission by Interested Parties - Shipping and Navigation (PINS REF REP6-041);
- Shipping and Navigation: ISH8L ExQ Action Point 20: Pilot Transfer Bridge Simulation Study Specification (PINS REF REP6-058-);
- AIS Animations Note (PINS REF REP6-060 – REP6-063);
- Thanet Offshore Wind Farm Collison Assessment of Proposed Extension (PINS REF REP6-064);

9 This section is structured to provide a summary of the commentary provided by PLA and ESL. A point by point responses is provided by the Applicant in Section 11.

10 Appendix 6 of the Applicant's Deadline 8 Submission addresses to commentary relating to dDCO matters within PINS RefsREP6-034 and REP6-066.

1.4 Port of Tilbury and London Gateway

8 PoTLL and LGPL provided commentary on the following Applicant's documents as part of their Deadline 7 submission (REP7-042):

- A response to the Applicant's Deadline 6 submissions;
- Comments on responses to the Examining Authority's Third Suite of Written Questions;
- Comments on the responses to the Examining Authority's DCO commentary; and

- Final overall submissions and closing remarks.

2 Planning Policy

9 The Applicant has made numerous representations with regards S&N and Planning Policy. At Deadline 7 further representations were received from Port of London Authority and Estuary Services Limited, offering reference to NPS EN-3 in relation to the ExA's request for information regarding the Marine Policy Statement. Additional concluding statements were also received from the POT/LG regarding their interpretation on the relevant policies.

10 The Applicant has provided a concluding summary of case in Appendix 2 of this Deadline 8 submission

3 Shipping Commercial Assessment

11 The Applicant has responded throughout the examination with regards the potential for commercial and economic impacts to arise as a result of the proposed Thanet Extension project. In brief the Applicant has concluded, robustly, that where a significant effect is not predicted on the technical receptor group, i.e. where a change to the baseline is either negligible or minor, the economic impacts are unlikely to be significant with regards the EIA Regulations. Notwithstanding this the Applicant provided at Deadline 6 a summary assessment of potential economic effects drawing on all submitted information provided by IPs during the Examination process. At Deadline 7 further representations were received from Port of London Authority and Estuary Services Limited, regarding the potential commercial effects.

12 The Applicant has provided a concluding summary of case in Appendix 2 of this Deadline 8 submission The Applicant notes however that the PoTLL/LGPL in particular appear to question the quality and cursory nature of the economic assessment. It is the Applicant's position that the analysis is robust and adequate having regard to the representations made by the IPs and the extent of associated data they have provided to generate the analysis.

4 Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3

13 The Applicant notes that in brief the PLA/ESL and POT/LG contend at D7 the:

- Marico Marine QA process
- Collision hazard definition in NRA A
- Need and extent of relocation of Tongue
- PLA plans for deepening the Edinburgh Channel / Fisherman's Gat
- Most Likely Consequence scores allocated to Stakeholders / Business in the "most Likely" assessment of hazard consequence
- Future growth forecasts
- Commercial impacts (which are addressed above)

14 It is the Applicant's position with regards point 1 that Quality Control, by its very nature, is undertaken in-house, and relates to the review of reports and analysis prior to issue. The review by the MCA / TH as statutory consultees, and attendance at both the examination and various workshop and meetings (e.g. Hazard Workshop) demonstrate independent oversite to the NRA process which has been agreed by statutory bodies as meeting the guidance requirements. Further to this the QA/QC process for the NRAA incorporated feedback from Capt. Simon Moore an expert witness acting on behalf of the Applicant.

15 In regard to collision definition in the NRA A then the Applicant would note that the methodology and process for the NRA A was consulted on with the PLA / ESL who agreed to all aspects of the NRA methodology, this includes the identification and definition of hazards including collision, which is shown to have been commonly used both by the PLA and other infrastructure organisations conducting navigation risk assessment in accordance with PLA Methodologies within PLA Statutory Waters (e.g. Tilbury 2 NRA, and PLA's own NRA guidance).

16 The Applicant would note that should the Tongue pilot boarding diamond require relocation, then it should only be relocated to a distance equal to the loss of searoom brought about by the TEOW, which is a maximum of 0.7nm based on the RLB / SEZ. 0.7nm.

17 With regards to the North Edinburgh Channel or Fisherman's Gat proposals by the PLA / ESL, then the Applicant notes this is not a proposal that is evidenced or has been brought forward into planning and is not a material consideration for this examination.

18 The Applicant would note that in regard to consideration of hazard scoring that "most likely" consequence scores, including those for the Stakeholders/ business consequence category, were considered in the workshop and the assessment. Furthermore the Applicant does not consider that hazard consequence scores of "moderate" for a "Most Likely" hazard occurrence to be appropriate. This level of consequence would ordinarily be related to more severe hazard magnitudes and as such would typically occur less frequently than a "Most Likely" hazard. In light of this it is therefore more accurate and appropriate to consider this within the "worst credible" category.

19 In relation to growth figures the POTLL / DPWLG focus comments around cargo tonnage or freight (TEU), which are not directly applicable, or appropriate to the metric of greatest importance for the TEOW study area – ship transits. The Applicant has noted a decline in vessel numbers transiting to London Ports, since 2005, with a trend towards larger container ships (as evidenced at ports like Felixstowe). The trend for ship arrivals is, in the round, and relating to the total of all ship types, likely to continue with a neutral growth rate as determined according to DfT statistics. Further to this the trend for larger ships means fewer ships will seek to board a pilot at NE Spit and will instead board pilots at the SUNK which is outside the TEOW study area and encouraged by the PLA through their pilotage charges.

20 Further to this, were DPWLG to 'tranship' the same amount of cargo (TEU's) per ship arrival as Felixstowe currently do, then, even with the construction of additional berths, there is little or no guarantee that ship arrivals at DPWLG will increase.

5 PLA published risk assessment

21 In brief the POT/LG have opted not to provide commentary on the PLA re-scored risk assessment submission. The PLA/ESL contend at D7 that;

- Since submission of the PLA's re-scored risk assessment for Thanet Extension, using the simplified xls approach published on the PLA website, the link to the spreadsheet has been deleted.
- In the future they propose to move away from the published assessment

22 It is the Applicant's position that any assessment undertaken pursuant to published guidance should be considered in accordance with the relevant guidance available at that time. Whilst the PLA appear to be seeking to retrospectively apply a revised position on their published guidance, it is evidentially the case that the re-scored NRA when considered against the guidance published at the time of submitting the PLAs Deadline 4C submission concludes that the project is 'ALARP and may continue'. Any amendments to methodologies, if not reflected in meaningful updates to guidance documents, undermines trust and reduces transparency in the decision making process undertaken by a statutory authority, or any other party undertaking EIA and NRA.

23 It is necessary to consider the context of the apparent change in policy. The PLA contend that it has recently reviewed the way it undertakes risk assessments, preferring to adopt a less transparent non-quantitative approach to assessment, however no details on any new methodology has been issued, either to the Applicant or to the wider Thames shipping and navigation community via the PLA website. At the time of conducting the NRA A the Applicant specifically spoke with the PLA / ESL via teleconference on the, 22nd March and met in person with LPC / PLA on the 25th March at PLA headquarters. The purpose of the meetings was to run through the NRA methodology proposed for the NRA A and confirm that it met PLA's expectation.

24 Whilst it may be the case that the PLA have updated the guidance and methodology it provides to stakeholders, it is clear that this is a position adopted by the PLA post submission of the NRA A and after the PLA NRA Annexed to their Deadline 4C submission (REP4C-015), and post ISH8.

6 Summary response to Deadline 5 S&N Submissions

25 Summary text here – in brief the PLA/ESL and POT/LG contend at D7 that…

- Risk Assessment Methodology (addressed above)
- Further Additional Risk Controls (e.g. Met Sensor)
- CRM (addressed below)
- Animations (addressed below)

26 With regards to further additional risk controls, the Applicant welcomes PLA agreement that the introduction of a Met Sensor at NE Spit will reduce the baseline level of risk further and improve navigation safety in the area. The provision of this data will be discussed and agreed with IPs through the Shipping and Navigation Liaison Plan (SNLP) (REP7-025). The Applicant has identified that other risk controls not taken forward in the PLA 2015 NE Spit NRA may also be useful in maintaining risk in the area to levels below ALARP and considered formalising pilot boarding areas to help in this regard. The Applicant is cognisant of the fact that the Shipping and Navigation Liaison Group (as set out in the SNLP) could provide a conduit for the review of other risk controls not taken forward as part of the PLA NE Spit 2015 NRA , but would like to make it clear than the NRA and NRA A do not mandate the need for further controls measures, and therefore the mandate to implement these controls is not related to reducing the risk associated with the TEOW project to ALARP, but rather it is related to a reduction of baseline risk that the Applicant could, where appropriate contribute towards. The Applicant and PLA / ESL have committed to ongoing engagement on such matters in the Statement of Common Ground (REP7-028/029) and will report to the Secretary of State on the progress of these discussions.

7 Shipping and Navigation: ISH8: ExQ Action Point 20: Pilot Transfer Bridge Simulation Study Specification

27 The Applicant has provided a collation of IP submissions relating to a pilot transfer bridge simulation study (REP7-004) which also responds to considerations raised on matters of the requirement for, and specification of, any simulation.

28 At Deadline 7, POTL/DPWLG offer no further detailed comment on the specification of the simulation beyond maintaining the previously stated requirement for it to be undertaken and for it to be *"representative of the size and mix of vessels likely to transit the inshore channel/board pilots …. in a future baseline scenario"*. The Applicant has addressed these points in REP7-004 (page 31-32 of 34) but the Applicants direct response to the points raised is:

- The premise of any simulation being representative of a baseline scenario is agreed as a logical approach one which the Applicant has developed the basis of the specification around.
- The Applicant considers the maximum baseline vessel would be 333m LOA vessel and does not consider inclusion of vessels of 366m and 400m LOA to be a requirement. Vessels of this size transiting the Thames estuary do not currently transit or transfer pilots on the inshore route and the Applicant understands that no other IP has proposed vessels of this size as a credible future baseline. Should the transit of such vessels within the inshore route/PLA VTS area be considered in the future it is understood that PLA as statutory authority for the approaches to the Thames would undertake a risk assessment, as it is understood has been done for the transit of a 333m vessel.
- Vessels will be simulated on transit through the inshore route prior to and post any act of pilot transfer (the latter being the Applicants proposed principal objective).

29 At Deadline 7, PLA/ESL (REP7-043 page 10) have raised a new comment in relation to simulator providers – which the Applicant has responded to in the tabulated response below. PLA/ESL have repeated their emphasis on the following points which the Applicant notes have been addressed in the specific paragraphs of their Deadline 7 submission REP7-004:

- Emergency situations: Section 4.10 'Emergency scenarios and unforeseen events'
- Feedback to the NRA: Section 3: 'Relationship with NRA'
- Limit state: Section 4.3 'Environmental conditions'

- Pilotage boarding and landings in combination with vessels in transit: Section 4.5 'Baseline third party traffic and interactions'

8 AIS Animations Note

30 The POT/LG offer no response or feedback to the animations. the PLA/ESL contend at D7 that

- The animations are not representative of the busiest time for pilotage
- The animations are based on snapshots and too short a duration of analysis
- Certain elements of the interpretation differ from the understanding of ESL

31 It is the Applicant's position with regards point 1 that the animations submitted are the busiest days during a 12 month period for either 'all vessels' or 'vessels > 90m' and as such are illustrative of the complexity associated with busy days in and around the inshore route. The Applicant considers these two scenarios to provide the best objective representation of the complexity of the area during the busiest periods that removes any subjectivity that may be applied when describing the challenges likely to occur in areas of general navigation.

32 Notwithstanding this the Applicant has generated a further animation drawing on the AIS data from the same 12 month period to identify the busiest day for pilotage vessel tracks (20th Feb 2018). It is hoped that in addressing ESL's criticism the Applicant also provides the ExA with relevant and useful contextual information in understanding the complexity of operations for the busiest days for all vessels, the busiest day for vessels over 90m in length, a 24 hours period during which ESL records show their operations to be at limit state, and the busiest day for pilotage operations specifically. It is the Applicant's view that the updated animation demonstrates that there are periods when numerous pilotage operations are undertaken in close proximity spatially and temporally. The Applicant notes however that when certain periods are looked at in detail the animations demonstrate that pilotage operations are managed to keep pilot transfer durations to a minimum, therefore concentrating activities around the NE Spit pilot diamond, rather than elsewhere. Table 1 provides a narrative description of notable occurrences during 24hr period noted as particularly busy for pilotage.

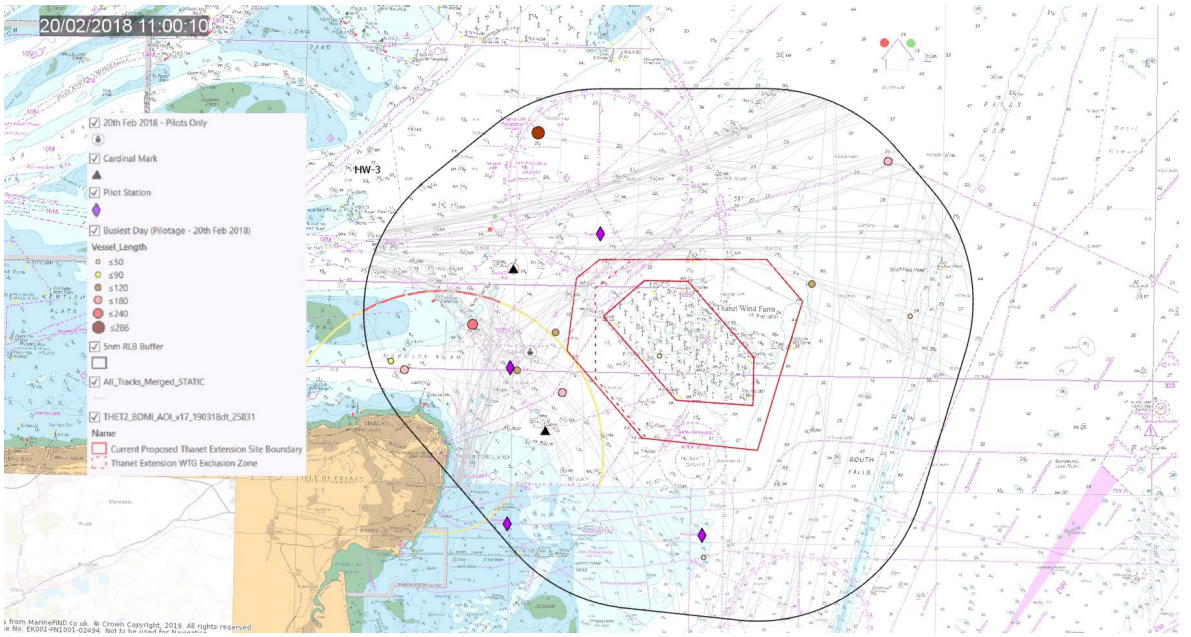
Table 1 Narrative on NE Spit Pilotage operations animation

Time	Notes
0001 - 0830	4 single transfers occur during the middle and morning watch (0001 – 0800). 2 out bound vessels departing via the inshore channel to the South East and

Time	Notes
	2 inbound vessels dipping down. All transfers take place north of the pilot diamond.
0830 -1200	The only double transfer occurs at 1100 (see screenshot below in summary row of this table) with one disembarking pilot from an outbound ship dipping down and an inbound ship embarking her pilot. The transfer takes place just north of the diamond and in relative proximity (but not dangerously) to two other transiting vessels.
1200 -1600	Just one transfer taking place with a pilot disembarking from an outbound ship dipping down to just north of the pilot station at 1600.
1600 - 2000	Three transfers take place during this period. All single ships; 2 outbound dipping down and one vessel sailing from Margate Roads inbound.
2000 -2359	One outbound dips down during this time slot and at the very end of the period a vessel approaches the diamond slowly (2345) waiting for his pilot who presumably boards after midnight.

SUMMARY

- The vast majority of vessels elected to transit between the East Margate and NE Spit buoys passing over the NE Spit bank regardless of the height of tide.
- The was only one double pilot transfer operations which was conducted well clear of the SEZ at all times and in plenty of sea room.
- It shows that the concentration of vessels passing between the NE Spit buoy and SEZ is very low. There were no multiple ship encounters in this area.
- Most vessels transiting through the inshore route buoy hopped passing close to the Elbow and East Margate buoys well clear of the SEZ.
- Numerous small vessels were observed in the sea area to the west of the windfarm. These vessels did not adversely impact on pilotage operations or general navigation in the area.
- There is a peak in small vessel movements of less than 50m in the morning around 0630 and again in the evening around 1630. These are mainly the windfarm service vessels proceeding from and to the Port of Ramsgate.
- All inbound and outbound vessels used the Princes Channel exclusively.
- The animations show that the remaining sea room with the SEZ in place is adequate for the size and number of vessels which use the inshore area to the west of the windfarm.

Time	Notes
	

33 The area of the NE Spit pilot diamond has been subject to significant discussion and whilst there is some difference in opinion between ESL and the London Pilots Council (LPC), it is the Applicant's position that the provision of the requested sea room (2nm +1nm buffer), with areas that exceed the request, allows for continued pilotage operations without impediment. This accords with the LPC position noted at ISH8. The animations demonstrate that even at the busiest times (whether in the context of all vessels, >90m vessels, limit states, or pilotage operations the existing and likely future operations can co-exist with the proposed Thanet Extension project.

9 Thanet Offshore Wind Farm Collision Assessment of Proposed Extension

34 PoTLL and LGPL have provided 9 points of feedback on the additional collision risk assessment (REP6-064) principally around the comparison between the Marico Marine and Anatec modelling together with some of the assumptions. The Applicant notes that it has provided additional and further responses at REP7-003 on the collision risk modelling to address points raised by other IP's and the ExA which should be read in context with the responses to the 9 points in the tabulated table of this document.

10 Detailed responses

Document	IP	IP Comment	Applicant's response
Appendix 16, Annex C: Shipping Commercial Assessment	PLA/ ESL	Contrary to the Applicant's understanding, the PLA and ESL's continuing concerns do not relate primarily to the commercial implications of displacement on pilotage operations. They are concerned in the round with the impacts of the TEOWF on navigation, safety, and pilotage operations. As set out in their earlier submissions, the PLA and ESL are still not satisfied that the risks of the extension to TOW have been sufficiently mitigated to ALARP.	The Applicant has provided a robust NRA and NRA A both of which PLA / ESL inputted into. The methodology and process for the NRA A was consulted on with the PLA / ESL who agreed to all aspects of the NRA methodology. The results of the NRA and NRA A (with SEZ in place) show that the highest residual hazard risk scores, score in the low ALARP level and that both embedded risk and residual risk controls have been applied. As no further, cost effective risk controls have been identified by PLA / ESL or by the Applicant, and given the low ALARP scores of the highest hazards, and the embedded and additional risk control measures that have been secured within the DCO, the Applicant remains firmly of the view that the TEOW project has acceptable levels of navigation risk and that risk sufficiently mitigated to ensure the ALARP level definition applies.
Appendix 16, Annex C: Shipping Commercial Assessment	PLA/ ESL	The PLA and ESL do not believe that the NRA and NRAA demonstrate that sufficient sea-room still exists to safely undertake pilotage operations, in combination with all other activities in the area. This is for the reasons stated in their own previous deadline submissions.	The sea room calculations have been provided based on MSP guidance as requested by IPs during Examination. The calculations, when undertaken using current baseline vessel traffic numbers and uplifted to allow for aspirational vessel sizes and vessel traffic numbers, have been presented clearly and transparently and in accordance with MSP policy and guidance. It is important to note that the underpinning studies (PIANC) are exactly the same as those that underpin the formal MGN543 guidance for the UK. As such the calculations meet policy and guidance requirements. In recognition of the qualitative experiential information provided, in the absence of empirical or quantitative data the Applicant has sought to ensure that in excess of the 2nm sea room plus 1nm buffer has been provided in the densest and most significant area of pilotage operations, the NE Spit Pilot Diamond, where over 92% of transfers in the NE Spit operational area are performed. When considered in the context of pilotage operations at the wider 'ESL operational' scale the Applicant has demonstrated that a small fraction of operations that have previously occurred in areas closer to TOWF would require limited deviations that could be accommodated with the NE Spit pilotage area, with no adverse effect on the overall ability to conduct pilotage operations.
Appendix 16, Annex C: Shipping Commercial Assessment	PLA/ ESL	The PLA and ESL understand that the LPC's comments on sea-room only relate to vessels transiting and not to pilotage transfer operations being undertaken in conjunction with boarding and landing.	The Applicant understood that this relates to sea rom for the vessels that use this area. At Deadline 4C LPC confirmed acceptability of the sea room at Elbow buoy due to there being fewer pilot transfers and generally smaller vessels (REP4C-012).
Appendix 16, Annex C: Shipping Commercial Assessment	PLA/ ESL	It is not only vessels over 250m that may divert around the wind farm. Smaller vessels may also be affected: size in relation to the vessel's draft and windage are also factors that would influence the Master's decision to divert.	The Applicant, through application of the MSP guidance has provided for sufficient sea room for all vessel that currently physically are able to transit the inshore route and as such does not agree that vessels will divert due to the windfarm. This is especially the case for small vessels.
Appendix 16, Annex C: Shipping	PLA/ ESL	It is not highly unlikely that 132 would be served at the Tongue. The Applicant's figures do not take into consideration the PLA's plans to open up either the	The Applicant has previously noted that the "plan" to open up either of the North Edinburgh Channel or the Fisherman Gat are not public and no record exists of these plans. The status of these plans is recognised to be an aspiration of PLA but, as

Document	IP	IP Comment	Applicant's response
Commercial Assessment		North Edinburgh Channel or Fisherman's Gat, or the potential re- routing of vessels from the inshore route as a consequence of the proposed TEOWF.	these plans are not identified on any public register of projects and plans the Applicant does not consider that they represent a reasonable material consideration for the purposes of the Examination of the Thanet Extension proposal.
Appendix 22: Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3	PLA/ ESL	It would appear that the QA process is undertaken entirely in house. All 'independent' review appears to be undertaken by people who work for Marico, which is engaged by the Applicant in a non-independent capacity.	Quality Control, by its very nature, is undertaken in-house, and relates to the review of reports and analysis prior to issue, the PLA seem to be referring to peer review, which is nether required in guidance or used in best practise. The review by the MCA / TH as statutory consultees, and attendance at both the examination and various workshop and meetings (e.g. Hazard Workshop) demonstrate independent oversight to the NRA process which has been agreed by statutory bodies as meeting the guidance requirements. Notwithstanding this the Applicant has also incorporated independent expert mariner review (Capt Simon Moore) of the NRAA hazard logs.
Appendix 22: Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3	PLA/ ESL	In section 3.12.29 of Appendix 22 to their Deadline 6 submission the Applicant maintains that "re-routing is not necessary as adequate searoom remains to allow safe passage through the inshore route. All other approaches to the Thames Estuary are narrower than the inshore route post-installation of the proposed project and as such passage planning will be made that accounts for more limited areas of searoom, and the inshore route will be a comparatively lesser concern". This would indicate that the Applicant does consider there to be an inshore route here and not only an area of general navigation.	The Applicant has been clear in its definitions and that passage inshore of the wind farm is a route that vessels take – though the Applicant would point out that the definition of a route has no basis in law in defining a "channel" or a "sea lane".
Appendix 22: Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3	PLA/ ESL	b) The PLA and ESL do not agree that the NRAA conducted with IP involvement demonstrated that all hazards were assessed as ALARP or lower. Although the overall methodology is similar to that previously employed by the PLA, there was a significant difference in the way that some hazards, specifically those relating to the risk of collision, were scored. (see PLA 27 / ESL 27 response to ExQ3.12.21(d)) Therefore the PLA and ESL do not accept that the scores reflect the level of risk, or that the risks relating to vessel collisions have been sufficiently mitigated to bring them to ALARP or lower.	The methodology and process for the NRA A was consulted on with the PLA / ESL who agreed to all aspects of the NRA methodology, this includes the identification and definition of hazards including collision, which is shown to have been commonly used both by the PLA and other infrastructure organisations conducting navigation risk assessment in accordance with PLA Methodologies within PLA Statutory Waters (e.g. Tilbury 2 NRA). Further to this, as has been established, the PLA's revised NRA as submitted at D4C provides outputs which conclude the hazards to be ALARP when considered against PLA published guidance and the published risk assessment template.
Appendix 22: Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3	PLA/ ESL	The PLA and ESL do not agree that 0.7NM is far enough to relocate the Tongue Deep Water Diamond from its current position. The applicant has not taken into consideration the increased use of the Tongue for boarding and landing pilots, either from vessels diverting or due to future projects such as the deepening of the Fisherman's Gat or North Edinburgh	It is not clear why a relocation, equal to the extent of the TEOW would extend past its current position, is not acceptable to the PLA. The current location of the Tongue Pilot Diamond is presumably acceptable to the PLA in relation to the existing TOW and therefore a similar relocation, irrespective of absolute vessel numbers using the diamond, must therefore be acceptable. The Applicant does not agree that large vessel would be diverted to Tongue and would originally, as they currently do, transit the inshore route with the TEOW in place.

Document	IP	IP Comment	Applicant's response
		Channel. No risk assessment has been undertaken with regard to a re-located position, as it was not considered either in the original NRA or NRAA. Therefore the PLA and ESL are not in a position to comment on the navigation safety of any proposed relocation of the Tongue Deep Water Diamond. In Annex E to Appendix 26 to Deadline 6 Submission. the second graphic demonstrates the two alternative positions of the TDWD. This clearly demonstrates ESL's proposed relocated position to be to the North of the denser traffic travelling East/West. the PLA and ESL maintain our position that the TDWD boarding area is likely to become busier as a result of larger vessels not being served in the vicinity of the inshore route.	In relation to traffic density, then if this were considered an issue for pilot boarding, then it is not clear to the Applicant why it is necessary to move the current Tongue pilot boarding station to a lower density traffic area than it is currently in. Any relocation of up to 0.7nm would not place to pilot diamond in an area of greater traffic density that its current location and given the associated offset of the east / west traffic to the north of the wind farm, a commensurate movement of the pilot diamond would see it located in virtually the same environment as it current is. .
Appendix 22: Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3	PLA/ ESL	The PLA's previous study, referred to by the Applicant in its response to this question, was undertaken in 2004. Seabed conditions have continued to be monitored since then and a recent feasibility study has been undertaken. The PLA, is now considering the options to dredge either the Fisherman's Gat or North /Edinburgh Channel.	The Applicant notes that the PLA / is "now considering the options to dredge either the Fisherman's Gat or North Edinburgh Channel" – This is not a proposal that is evidenced or has been brought forward into planning and is not a material consideration for this examination.
Appendix 22: Applicant's Responses to the Examining Authority's Third Written Questions – ExQ3	PLA/ ESL	Although the impact to stakeholders, specifically to vessel operators, was considered for the "worst credible hazard", it was not considered in terms of the most likely hazard. A collision between two Class 1 vessels, resulting in 'minor' damage, could still have significant financial consequences. Such vessels would incur delays a result of such an incident, for inspections/repairs and this could easily result in financial consequences to those vessels amounting to more than £100,000.	The consideration of most likely consequence scores was considered in the workshop and the assessment. The Applicant does not consider the realisation of "Most Likely" hazard occurrence to generate a Stakeholder / Business consequence scores of £100,000 to £1,000,000. This level of consequence would ordinarily be related to more severe hazard magnitudes, and is typically considered within a less commonly occurring "worst credible" category.
Appendix 22, Annex B: PLA published risk assessment	PLA/ ESL	This worked example of a risk assessment was on the PLA website until May 2019. It has been removed from the website because the PLA has relatively recently – independently of the TEOWF DCO application – reviewed the way it undertakes risk assessments; the test of whether or not a risk is ALARP is based on more than just a score. The PLA is therefore in the process of replacing the HAZMAN software supplied by Marico, as well as the risk assessment template developed with Marico, in favour of a more qualitative approach that	The Applicant has noted that the Hazman II software and the PLA Risk Assessment Proforma both rely entirely on input from users to score hazards and the effectiveness of risk controls. Both methods are therefore entirely dependent on qualitative inputs (which may frequently be given quantitative context (such as existing incident rates) where this is deemed appropriate by the participants), and it is not clear how, these methods are out of date, or indeed how a more qualitative approach can be implemented. Both approaches mandate a structured and formalised approach to risk assessment, as mandated by the MCA MGN 543 (M+F) guidance, to ensure a robust assessment can be carried out. They provide for a fixed risk matrix which is tangible and transparent (though it is noted by the Applicant that the more advanced and reflective of reality matrix contained within Hazman II is more advanced than the simple matrix provided for in the PLA form) to the user and ensures repeatability of assessment necessary to provide a robust assessment.

Document	IP	IP Comment	Applicant's response
		accurately reflects real-life scenarios. The worked example, based on the old process, is out of date and so is no longer available on the website.	Fundamentally the Applicant would have been open to an alternative (PLA) methodology if it met the guidance requirements when it conducted both the original NRA and the NRA A – though as PLA agreed to the use of the methodologies employed for the NRAA at the workshop which at that time they mandated for all navigation risk assessments, the Applicant was simply not able (subsequent to ISH8), to review whether the PLA "new" approach (which has not been shared) could have been used on either the NRA or NRA A.
Appendix 22, Annex C	PLA/ ESL	During the hazard workshop for the NRAA, participants were told to consider the hazard scoring for 'average' conditions. It was pointed out that pilotage boarding and landing takes place in adverse weather and therefore this needed to be taken into consideration, but 'limit state' conditions were not fully assessed in terms of the 'most likely' scores. Scores were not considered in combination, as, even when assessing the risk of a collision between two vessels, only the consequence of the collision to one of the vessels was scored for each hazard.	The hazard workshop considered "standard operational" conditions and not "average" conditions and did not seek to identify risk within purely limit state conditions. This is because limit states are not frequent and if this were the only condition assessed the likelihood over time would be very minimal. Not all hazards are realised during limit state conditions, and indeed it has been shown that incidents can occur at any point, mostly not in limit state conditions. Limit state conditions are included with the assessment under the term "standard operational" conditions.
Appendix 26: Response to Deadline 5 Submission by Interested Parties – Shipping and Navigation	PLA/ ESL	The PLA has accepted risk assessments based on Marico's Hazman methodology. However, for projects on the Thames such as Silvertown and Tilbury2 the PLA has been a consultee and fully engaged in the risk assessment process. In order to establish whether risks of any particular project is ALARP the PLA does not rely merely on a scored risk assessment. The NRA process involves various stages and the level of information required to inform it will vary depending on the size, type and location of the project. ALARP is more than just a number on a score sheet. If the PLA was not satisfied that risks had been sufficiently mitigated to as low as reasonably practicable it would not accept a scored assessment that demonstrates that they are. In the case of TEOW the PLA and ESL do not agree that the risks have been sufficiently mitigated to bring them to ALARP and therefore do not agree that the scored assessment reflects the actual situation.	The Applicant notes the PLA comment, however does not agree that a robust risk assessment, as provided in the original NRA and NRA A should be qualitatively dismissed. The NRA and NRAA have been drafted transparently, are based on significant body of evidence (greater than most OREI NRAs) including substantive data acquisition, analysis, extensive stakeholder consultation, modelling and simulation> The composite of which is expressed in a hazard log which concludes ALARP hazard scores have been met, and which is comparable to the PLA provided risk assessment. Guidance specifically states that qualitative judgments are amongst the lowest level of evidential basis, and as such the Applicant therefore does not agree in this instance with the PLA's qualitative judgement that the TEOW is not ALARP. As noted by Capt. Roger Barker of Trinity House during ISH2 and ISH8, it is the combination of qualitative and quantitative analysis that gives confidence in the assessment. The Applicant has demonstrably drawn together a significant body of evidence to support the quantitative components of the assessment and has complemented this with multiple and extensive qualitative exercises including the workshop in February which explored stakeholder understanding of the route through development of a discursive, experiential lead narrative with which to inform a set of parameters for searoom analysis which underpinned the SEZ, the associated NRAA.
Appendix 26: Response to Deadline 5 Submission by Interested Parties	PLA/ ESL	The PLA and ESL have recently engaged with the Applicant regarding additional risk controls. The PLA and ESL welcome the Applicant's willingness to provide a Met Sensor (Recommendation 5) on a WTG located at the NW extremity of the TEOW, and provide meteorological data to the PLA and ESL, and acknowledge that this may provide a small reduction in	The applicant welcomes PLA agreement that the introduction of a Met Sensor at NE Spit will reduce the baseline level of risk further and improve navigation safety in the area. The commitment to providing this information as required or requested by stakeholders, is set out in the revised Shipping and Navigation Liaison Plan (REP7-025) The Applicant has identified that other risk controls not taken forward in the PLA 2015 NE Spit NRA may also be useful in reducing risk in the area to levels below ALARP and also below current baseline navigation risk levels, and considers formalising pilot boarding areas to help in this regard.

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– Shipping and Navigation		the baseline risk. However, they do not agree that the establishment of defined boarding areas would necessarily reduce the risk. The idea of defined boarding areas was not taken forward following the 2015 risk assessment, but has been kept under consideration. Whilst the PLA and ESL would welcome further consideration of this in the future, the potential effectiveness would need to be re-assessed in light of the revised scheme. So far this has not been done and therefore no weight be attributed to this potential risk control at this time.	The Applicant is cognisant of the fact that the Shipping and Navigation Liaison Group could provide a conduit for the review of the PLA NE Spit 2015 not taken forward risk controls, but would like to make it clear than the NRA and NRA A do not mandate the need for further controls measures and the therefore the mandate to implement these controls is not related to the TEOW project.
Appendix 26, Annex A: Summary response to Deadline 5 S&N Submissions	PLA/ ESL	The quantitative collision risk modelling that accompanies the Applicant's deadline 6 submission did not take account of adverse MetOcean conditions or the consequences of any emergency scenarios, such as engine or steering failures.	The Applicant would like to clarify that the CRM takes this entirely into account in the use of historical incident rates, which CRM uses to calculate collision likelihood, and therefore includes many different incident causes. Notwithstanding this, the AIS data used to underpin the recent CRM (September 2017) coincided with not only a busy period for vessels but also Storm Eileen which saw 60mph winds along the coast of Kent on the 12th September. The Applicant therefore considers the independent CRM submitted at Deadline 6 to be entirely robust, independent, and appropriate with regards providing an understanding of the likely increases in collision risk that may occur as a result of the proposed Thanet Extension project. In this context the Applicant considers that the ExA can place weight on the conclusions of the CRM in confirming the limited increase in risk as a result of TEOW.
Appendix 26, Annex A: Summary response to Deadline 5 S&N Submissions	PLA/ ESL	The hazard log in the PLA's D4C submission re-scored the hazards to demonstrate where the PLA and ESL did not agree with the scores from the workshop. It identified the highest inherent risk as 'moderate' in the risk matrix, but was scored using the same methodology that was used in the hazard workshop so that the scores could be directly compared. The PLA does not agree that these scores demonstrate that the risks are ALARP, as the scoring was not undertaken in the same way as was done for the NRA, or for PLA risk assessments. The hazards for collisions between two vessels were only scored in the NRAA for the consequence to one of the vessels. The usual method for scoring such hazards is to consider the total consequence of the event, and not just one part of that event. Scoring the hazards in such a way results in lower consequence scores	The Applicant has noted that since the workshop which the PLA and ESL attended and directly fed into, that they subsequently did not agree with the scoring and produced an alternative risk assessment. The PLA / ESL rescoring of the NRAA hazards clearly demonstrates moderate level hazard scores within introduction of risk controls, and as such the Applicant does not appreciate why these scores do not show the hazards to be ALARP. In terms of hazard identification particularly around collision then all parties had opportunity to request an alternative approach however, in any case, the Applicant notes the approach taken is standard (particularly noting it is used by the PLA themselves), acceptable and does not underscore.
Appendix 26, Annex A: Summary response to	PLA/ ESL	The animations do not represent the busiest days for ESL's operations or marginal conditions at the limit state of pilotage operations. See PLA/ELS comments below on Appendix 41 for further detail.	The Applicant notes the PLA response, however based on a comprehensive dataset of AIS tracks for a full 12 month period for all vessel traffic, the busiest day is that provided by the Applicant in the animation. However, the Applicant has at Appendix A to this deadline response provided an animation and narrative on the PLA identified business pilot transfer day.

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Deadline 5 S&N Submissions			
Appendix 38: Shipping and Navigation: ISH8L ExQ Action Point 20: Pilot Transfer Bridge Simulation Study Specification	PLA/ ESL	The PLA and ESL note that in Appendix 38 the Applicant does not make any reference to emergency scenarios being considered within the scope. The PLA and ESL agree with the MCA that the results of any further bridge simulation should feed back into the NRA and it is important to consider 'limit state' conditions and emergency situations. The simulation should not focus only on pilotage, but on boarding and landing in combination with vessels in transit and other marine activities in the area.	It is understood by the Applicant that Emergency scenarios are not commonly tested in a simulator environment due to the whilst spectrum of variables that would need to be considered and the fact that they are "non standard" – therefore emergency scenarios can be considered in a qualitative manner as is normally the case. Also refer REP7-004, Section 4.10 'Emergency scenarios and unforeseen events'.
Appendix 38: Shipping and Navigation: ISH8L ExQ Action Point 20: Pilot Transfer Bridge Simulation Study Specification	PLA/ ESL	Rather than relying on the PLA simulator, it would be more appropriate and provide a more realistic simulation to use a full mission simulator with the capability to operate more than one vessel at a time, such as the HR Wallingford sim.	The Applicant notes that the PLA do not consider it appropriate to use their own simulator which is used for pilot training, and which was recommended by the PLA for use in the original NRA bridge simulation. Nevertheless, the Applicant is in agreement that an independent and technologically more advanced simulation centre is used, and has identified a short list of providers at REP6-058. The Applicant also notes that the PLA Simulator has the capability to operate more than one independent vessel at a time (operated by the simulator operator in a non full mission bridge but with mariner qualified control over the vessel) and this capability was agreed and used in the original simulation. This is also a common feature of many simulators and the Applicant has ensured that the proposed simulators include this capability.
Appendix 41: AIS Animations Note	PLA/ ESL	Although ESL operations were restricted on 30 November 2017, it was only the Tongue Deep water diamond that was not available. On this occasion the Sunk Pilot station was still in operation, which is very rare when ESL services are restricted. The weather was not at 'limit state' so this day is not fully representative of likely conditions when ESL is operating a restricted service.	The Applicant notes that the Tongue was off station and that the SUNK was on station – this information was not available from the ESL pilotage off station logs available to the Applicant and is not a scenario previously identified by PLA. However, it was made clear in the appendix that this was an adverse weather day where the conditions were 'Wind NW at speeds up to 25 knots, noting that this is considered a limit state in some locations by ESL' which is accurate given the Tongue was off station.
Appendix 41: AIS Animations Note	PLA/ ESL	On the 12 hour, day watch (0730 to 1930) of the two busiest days identified by the Applicant, ESL served 10 vessels on the 13th June and 8 vessels on the 1st August. These are not busy days for boarding and landing by ESL, 12 vessels or more could be regarded as a busy watch. Since this examination process begun in November 2018 up to the 31st May 2019, ESL has served 12 vessels or more in a single 'watch' of 12 hours, on 93 occasions. Some of those watches serving 16, 18, and 20 vessels. In the 24-hour periods referenced by the Applicant, ESL served 19 vessels on the 13th June and 15	The Applicant recognises this representation from ESL as focussing on the busiest day for pilotage operations. The Applicant's submissions however are intended to convey, transparently and for the benefit of all parties, the complexity that arises from the busiest day for all vessels. In order to provide this transparently and to illustrate what is understood to be key concerns for the ports and other IPS the Applicant submitted animations of the busiest day for all vessels, and the busiest day for large (>90m) vessels. The Applicant then produced an animation of a recognised poor weather/marginal day for pilotage operations. The Applicant therefore considers the presentation to be transparent and representative of the busiest days over a 12 month period. Notably the Applicant considers this dataset to be proportionate in the context of the IP issues raised, but nonetheless it is worthy of note that the presentation is a greater level of detail than presented for any other OWF or other maritime NSIP project.

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		vessels on the 1st August. To put this into context, ESL served 31 vessels in the 24-hour period of the 24th January 2019, 20 of which were served in the 12-hour day watch period. For this reason, the days in this report cannot be accepted as busiest days and the PLA and ESL would question the Applicant's overall interpretation of 'busiest' periods.	Notwithstanding the above the Applicant recognises ESL's request and has produced a further animation demonstrating the busiest day (during the same 12 month period) for pilotage transfers. The animation demonstrates a complexity of operations is present, and during these periods of heightened intensity of operations there is a clear trend for pilotage operations to be carried out in very close proximity to the NE Spit diamond. With the introduction of the SEZ the sea room at the NE Spit Diamond benefits from an area in excess of the requested sea room (request was 2+1nm), the Applicant has provided 3.4nm to provide greater precaution and flexibility in operations up to the North Foreland Sector Light, and it is noted that the majority of vessels can transit to the west of this sector light safety and indeed do so in the majority of occurrences in their transit over the NE Spit bank. The Applicant has produced an additional Animation at Annex A to this Appendix 5 Deadline 8.
Appendix 41: AIS Animations Note	PLA/ ESL	These conditions are not at the limits of ESL's operating parameters. The only restriction imposed was 'no Tongue Deep Water Diamond' and ESL's service was only restricted for 11 hours on the day in question.	The Applicant notes that the pilotage service was only restricted for 11 hours on the day and notes that it is more common than not for restriction to not apply for a whole day. However, it should also be recognised that restricted service or off station occurs for a fraction of the year; 1.8% in 2016, 1.3% in 2017 and 4% in 2018.
Appendix 41: AIS Animations Note	PLA/ ESL	Even though ESL were operating a restricted service on the 30th November 2017, an average windspeed of 8.6m/s (16.7knts) from the NW is not considered to be in the upper limits of 'poor MetOcean conditions'. According to figure 2 in the applicant's submission, there were two recordings of 11m/s (21knts) on the day, again these are not at the higher end of ESL's parameters. The reason ESL introduced a service restriction of no TDWD operation on that date, was in order to reduce the distance of runs to maintain the boat schedule in conditions that would impact on launch speed. It should be noted that, during the restricted period the crew did not impose a draft and rubbing band restriction. Therefore, indicating ESL were not operating in the upper limits of adverse weather.	The Applicant notes that the wind speeds given were 1 hour averages, and that peak gust will have been considerably greater than the 1 hour averages given. The Applicant also notes that this IP has noted ESL introduced a service restriction not due to safety reasons but due to operational reasons, and presumably vessels that would ordinarily board at the Tongue, were delayed or boarded elsewhere. This is at odds with ESLs position to date regarding the need for continued availability and use of all areas at all times and the concerns raised regarding restrictions which are seemingly influenced by factors outwith of safety and metocean conditions.
Appendix 41: AIS Animations Note	PLA/ ESL	Table 1 Demonstrates that High Water at Ramsgate was at 0813 and 2052 on 30 November 2017. These tides are regarded as just after 'Neap' tides and therefore will not create the worse wave conditions in the above-mentioned recorded weather. Note: The human factor comes into play with the instigation of a 'restricted service'. In the circumstances mentioned in this report, one coxswain may go restricted and another may not.	The Applicant notes this.

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Appendix 41: AIS Animations Note	PLA/ ESL	The ship 'Enforcer' is seen to clear the East Margate buoy at a distance so to enable a turn and safely navigate over the deeper point of the NE Spit bank at low water. This vessel has a typical draft of 7.2m and would of passed over the bank whilst ensuring safe UKC (under keel clearance).	The Applicant notes this.
Appendix 41: AIS Animations Note	PLA/ ESL	The ship is observed transiting over the proposed SEZ, this is approximately 0.9nm from the nearest turbine therefore maintaining a safe distance from the current TOW. With the extension in place and probable placement of turbines 'up to' the boundary of the SEZ this ship would have had to negotiate the narrow corridor Appendix 41: AIS Animations Note between the SEZ and NE Spit racon buoy and approached with a North South track maintaining that safe distance from any turbine.	The Applicant notes this, and whilst the distance between the NR Spit Racon boy and the TEOW would be less, it was specified based on the MSP and accommodates up to 4 x 333m vessels- each of these are therefore significantly greater than the vessel identified.
Appendix 41: AIS Animations Note	PLA/ ESL	ESL and the PLA agree that this is a standard transit passage for a vessel of this size. Vessels typically of this type will make passage route through the Elbow area maintaining a safe distance from the shallow water to the West and from the windfarm to the East. This is also demonstrated in further examples in this Appendix 41.	The Applicant notes that ESL / PLA agree on this point.
Appendix 41: AIS Animations Note	PLA/ ESL	These two graphics demonstrate different approaches from the two vessels. The 'Transfighter' appears confident enough to pass closer to the existing TOW at approximately 0.9NM to the nearest turbine. The 'Henneke Rambow' takes a more cautious approach and passes the nearest turbine at approximately 1.5NM.	The Applicant notes the ESL / PLA comments but suggests that the proximity of transit past the windfarm could be due to any number of different reasons and not necessarily the confidence of the bridge team.
Appendix 41: AIS Animations Note	PLA/ ESL	It should be noted here how the two vessels proceeded east after landing their pilots. The 'Sea Cruiser 1' would have tracked directly East prior to the construction of the current TOW. Its route is affected by the windfarm and would be affected further with the extension in place.	The Applicant notes this and understand that some vessels currently transit in within the TEOW RLB as they are currently free to do so. With the WTG in place then these vessels will no longer chose the navigate the same course.
Appendix 41: AIS Animations Note	PLA/ ESL	The 'Valentine' is a twin screw (two propellers) Ro-Ro vessel. Making a 120 degree turn is not difficult for such a vessel in normal conditions. Many vessels served by	The Applicant notes that the 'Valentine' is a high sided Ro-Ro vessel, with relatively shallow draught, but concurs with the PLA / ESL that she is a manoeuvrable vessel.

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		ESL are single screw, considerably heavier and are not so manoeuvrable and require more sea room.	
Appendix 41: AIS Animations Note	PLA/ ESL	This track is unexplainable, the 'Makassar Highway' appears to have come from within port limits to board a pilot and then proceed back into port limits. The vessel would not have been diverted from the Sunk as she is/was a regular vessel served at the NE Spit pilot station by ESL.	The Applicant notes that the PLA / ESL are not able to shed any light on the actions of this vessel.
Appendix 41: AIS Animations Note	PLA/ ESL	This vessel did pass close to the SEZ boundary but this approach would have been considerably different with structures in place and a rolling 500m buffer zone during construction and decommissioning. The approach would have been from a more northerly track.	The Applicant has noted that vessel course would have to be altered were the TEOW constructed, and has provided sufficient sea room for such changes.
Appendix 41: AIS Animations Note	PLA/ ESL	ESL and the PLA consider that it is obvious that the majority of vessels, during the 3 days of this new study, were capable of navigating over the NE Spit bank. It should not be concluded that this is routine for all vessels as there are 362 other days in a year. It should also be noted that some of the vessels in this study carefully negotiated the 3 cable (0.3NM) gap between the bank and the NE Spit racon buoy or over a deeper part of the bank. This would have been carried out under pilotage, more than likely by a class 1 or 2 pilot.	The purpose of providing these animations was to present representative days and vessel movements for contextualising the actual baseline environment during busy periods. The Applicant has provided a great deal of evidence that characterises traffic movements throughout the year and was demonstrably not seeking to infer year-long trends from the three days of animations. Nonetheless the animations do reflect the general vessel movements and locations the Applicant has identified throughout the examination. The passage of vessels to the west of NE Spit Racon Buoy and over the NE Spit Bank is a frequent occurrence applying to the vast majority of vessel transits (as demonstrated through AIS vessel tracks (REP1-077) and generally agreed with IPs during examination), and as such sea room for these vessels with the TEOW is significantly in excess for the 2nm sea room plus 1 nm buffer provided for at the NE Spit pilot boarding diamond. This is because these vessels are not restricted to passage east of the North Foreland sector light or NE Spit Racon Buoy, which has been used as the precautionary eastern limit definition from which the 2nm plus 1nm calculations are based.
Appendix 41: AIS Animations Note	PLA/ ESL	As set out above, it is clear that neither of these two study days were anywhere near the upper end of what ESL would consider busy. A busy run constitutes 4 or more vessels served simultaneously, which did not occur during this study.	As noted above the Applicant did not seek to present the busiest days for ESL. Throughout the examination there has been a focus on the effects of TEOW on marine traffic in general, given the interaction with pilotage and the days chosen represented the busiest days for overall traffic. – however the applicant has produced an additional Animation at Annex A to this Appendix 5 Deadline 8. The Applicant would note that the animations submitted represent an entirely objective analysis of the busiest days of the year under multiple scenarios (>90m, all vessels, and for pilotage specifically (Annex A to this Deadline 8 submission).
Appendix 41: AIS Animations Note	PLA/ ESL	As previously stated, suggesting that busy runs/periods are a rare occurrence is incorrect. It highlights the inadequacies of short study periods and their inability to accurately capture the overall picture.	As stated above, the Applicant has not sought to characterise the overall picture of traffic movements through these animations and this has been achieved through the NRA and further AIS analysis, however the animations do reflect the general characterisation of the area during the busiest 24hr periods of a 12 month dataset. The Applicant does not consider this to be a short study period. Any extrapolation taken from the animations would in all likelihood increase vessel numbers utilising the inshore route by several orders of magnitude, as such it is entirely reasonable to consider that not only are the animations adequate, in presenting them as a general characterisation the Applicant has in fact provided a precautionary view of the receiving environment. set out in these documents.

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Appendix 41: AIS Animations Note	PLA/ ESL	Again, the PLA and ESL would suggest that this highlights the inadequacies of the short study period; although it is not frequent, in their experience vessels over 240m do pass through the inshore route.	As above, the animations are not a 'study' and is not presented as such. It is not disputed that vessels over 240m pass through this route, however it should be noted that use of the inshore channel by vessel greater than 240m is rare as demonstrated through both the Applicant's data and the analysis undertaken by PoTLL / LGPL
Appendix 41: AIS Animations Note	PLA/ ESL	As stated above, the PLA and ESL do not consider that these short study periods can represent the larger picture of busy periods and multiple ship runs.	The applicant has produced an additional Animation at Annex A to this Appendix 5 Deadline 8
Appendix 41: AIS Animations Note	PLA/ ESL	Again, the Applicant has stated this is the busiest period of the year, yet both of their marine experts have identified that this study was low in traffic density and no congestion. As set out above, the PLA and ESL do not consider this to be representative of a busy period.	The Applicant notes that this day is objectively and through reference to a 12 month AIS dataset the busiest day of the year for vessel transits within the study area, and as the Applicant did not have access to pilot boarding statistics was not able to correlate to pilot transfer frequencies. However the applicant has produced an additional Animation at Annex A to this Appendix 5 Deadline 8. The comment from the marine experts is reflective that even the busiest day in this area is relatively low in density compared to other areas and locations familiar to mariners who operate outside of NE Spit area. The Applicant would note that the animations submitted represent an entirely objective analysis of the busiest days of the year under multiple scenarios (>90m, all vessels, and for pilotage specifically (Annex A to this Deadline 8 submission)
Appendix 41: AIS Animations Note	PLA/ ESL	In the adverse weather category the study records that the wind was from the NW with an average speed of 8.6m/s (16.7knts). The ESL launch crew will endeavour to work closer to the NE Spit diamond in such conditions for the reasons Paul Brown has identified. If the wind had been from the NE, short boat runs would be preferred, but the crew would work away from the land and closer to the Elbow and windfarm. Hence the reason for as flexible a working area as possible.	The Applicant notes this response and agreement with the Applicants Expert Commander Paul Brown.
Appendix 41: AIS Animations Note	PLA/ ESL	From the animations, Captain Simon Moore and Commander Paul Brown conclude that the remaining sea room with the SEZ in place is adequate for the size and number of vessels which use the inshore area to the west of the windfarm. However, the animations did not represent 'limit state' conditions. Also, on the days in question, there were no occurrences of emergency situations, pilot ladder deficiencies, or other incidents, which may have resulted in the need for more sea room. Therefore, the PLA and ESL cannot agree with this conclusion.	The Applicant notes this response but based on the frequency and distribution of vessel transit on the statistically busiest days for a number of scenarios, the judgments remain valid and appropriate. When considered in this context the animations represent 'limit states' of vessel density, the 'all vessels', '>90m vessels', 'pilotage operations' (Annex A to this submission) scenarios each capture a limit state in terms of an upper limit to the baseline receiving environment experienced within the inshore route for vessel density alone. The addition animation then draws on a representative objective limit state day for ESL pilotage operations; being based on ESL records this latter animation is considered to be entirely representative of a limit state for metocean conditions.
Appendix 42: Thanet Offshore Wind Farm	PLA/ ESL	Given the high level of detail in the Anatec collision assessment we have tried to highlight our observations and concerns as clearly as possible however, the PLA	The Applicant appreciates the PLA / ESL view, but sought to conduct an independent CRM Study during a short timescale during the examination period. As such the Anatec CRM was purposefully designed to focus on the area of greatest concern by the PLA /ESL and debate generally within the examination. The Applicant feels this was and remains appropriate.

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Collison Assessment of Proposed Extension		and ESL would have preferred to have more time in order to compile a full response. Their observations on Appendix 42 to Deadline 6 Submission (Thanet Offshore Wind Farm Collision Assessment of Proposed Extension) are as follows; The PLA and ESL's primary observation regarding the new collision assessment is that a direct comparison cannot be made between the Marico CRM and the Anatec CRM, even at baseline level, as they have been based on different sized study areas and historical data periods. The NRA uses a 10nm study area in combination with 18 years of historical MAIB data (NRA/Section 7.3), this is increased to 20 years for the NRAA but the study area is decreased to 5nm (NRAA/Section 2.6). The Anatec study uses 10 years of MAIB incident data and a 7nm study area(Appendix 42 to Deadline 6/Collision Assessment/Sections 2.1 and 3.2). This inconsistency makes it difficult to understand baseline collision risk figures.	
Appendix 42: Thanet Offshore Wind Farm Collison Assessment of Proposed Extension	PLA/ ESL	Anatec's Pre Extension assessment finds that a majority of traffic passing the existing wind farm are 'majority weighted in excess of 1nm'. In a later section of this study (section 4.1.2.1) it is noted that through the TOEWF examination process 0.5nm has been established as a suitable distance for the prudent mariner. With vessels tracks 'majority weighted', according to Anatec's research, passing in excess of 1nm from the wind farm we would suggest 0.5nm is in fact not the appropriate passing distance for the prudent mariner.	1nm was not intended to represent a minimum CPA distance it was instead a general comment about the traffic within the data assessed. The prudent Mariner could (and does) still pass at 0.5nm CPA but this would be for them to decide back on their own risk assessment. It is noted that the MCAs shipping template does indicate that 0.5 to 3.5nm is tolerable with mitigation (and of course dependant on conditions).
Appendix 42: Thanet Offshore Wind Farm Collison Assessment of Proposed Extension	PLA/ ESL	The PLA and ESL do not agree that recreational traffic passing within 1nm of the Option A site (the SEZ) should not be deviated.	The Applicant notes the PLA /ESL view however, as with fishing vessels, it is widely accepted that the wind farm will remain open to navigation for these vessels.
Appendix 42: Thanet Offshore	PLA/ ESL	If pilot vessel tracks are to be deviated, because of their proximity to the wind farm, to the point where they	The method selected is intended to demonstrate the effect of the density of traffic within the area on collision risk rather than assessing the risk between a pilot vessel and the vessel it is attending. On this basis the Applicant assumed traffic values

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Wind Farm Collison Assessment of Proposed Extension		'misalign' with the commercial vessels they are attending, it is not clear how this reflects the predicted profile of future traffic behaviour. It is not clear when deviating a vessel, what factors are taken into account, specifically whether a vessel's draft is factored in. It may be that a deep drafted vessel is deviated into an area shallower than its previous track but again, this is not clear.	would remain the same but would operate within a different (i.e., reduced) sea area; simulating pilotage operations in a precise manner was not feasible within the time available to complete the study, but removing these tracks altogether would not have been a representative scenario. Noting the precise study of pilotage operations was not the scope of the study, as above. Simulated AIS data does consider navigational features such as channels, and it is noted that the vessels that were simulated were deviated into already established routes.
Appendix 42: Thanet Offshore Wind Farm Collison Assessment of Proposed Extension	PLA/ ESL	It would be helpful, for context, to know what 'rates of likelihood of an encounter becoming a collision' actually are. For example, how long would 2 Tankers have to occupy the same 250m area of the grid system (referenced in section 4.3) to result in a collision? The PLA and ESL understand that Anatec's database of MAIB data is used to inform a localised assessment but are unclear how this translates to a likelihood figure specifically. The model makes a 3% allowance for the increase in collision risk (based on this being accepted for other offshore renewable NRAs). There is no indication that vessel deviations have a 'poor' visibility factor, 1km is very poor visibility for an area such as the inshore route, given the wide variety of user type and activity, we would expect vessels to adapt to this by adjusting their passage. It is not clear if the vessel deviations made by the model account for poor visibility.	1.The CollRisk calculation for determining the likelihood that an encounter will become a collision is dependent on various factors over and above vessel durations, including the type and size of each vessel, the speed that the vessels are travelling at, the encounter type (e.g., overtaking, crossing, head on), historical calibration factors, and the probability of poor visibility. A single value for the example given is therefore not possible. 2.Anatec's CollRisk model uses MAIB statistics to identify the likelihood of a collision occurring at a national level, with the localised element (i.e., the actual estimated number of encounters within the Area of Interest) coming from the AIS data used within the model. The likelihood of collision is assessed by running the model for all UK waters (taking into consideration all factors mentioned above) and comparing against the number of collisions in the MAIB statistical database. 3.This statement is incorrect, in that the 3% relates to the incidence of visibility dropping to less than 1km; and not a factor against increase collision rates. No account for poor visibility has been made for within the deviations themselves; however the national MAIB statistics used within CollRisk includes collisions that occurred in reduced visibility, and is factored into the CollRisk calculations.
Appendix 42: Thanet Offshore Wind Farm Collison Assessment of Proposed Extension	PLA/ ESL	Although this may be appropriate for an area where the dominant activity is vessels on passage it is unclear what impact averaging out a vessel's speed would have in an area that is intensively used for boarding and landing. Vessels will have to reduce speed to 6 knots to board/land a pilot and it is not uncommon for that vessel to wait 'on station' for their pilot. With such a small study area in consideration the impact of a vessel reducing speed significantly for several minutes has not been adequately identified.	CollRisk is not intended to reflect how in reality an incident may occur, it is instead intended to assess the risk of a collision occurring based on current traffic patterns (density based). This assessment was intended to provide a high level indication as to how collision risk may be affected based on a reduced sea area, and not the specific nature of pilot vessel collisions.
Appendix 42: Thanet Offshore Wind Farm Collison	PLA/ ESL	Figure 5.3 demonstrates the highest/lowest areas of collision risk. The overall indication is that the highest collision risk increases are between Elbow and SEZ and NE Spit Buoy and SEZ, two of the key areas we have	Figure 5.3 does not show the highest and lowest areas of collision risk, it shows the change in collision from the base case no windfarm to base case with windfarm. The route around the NE Spit Buoy has decreased in risk and this is associated with some traffic (i.e., vessels in transit) moving to a more defined route which passes north of the area. However, traffic still

Document	IP	IP Comment	Applicant's response
Assessment of Proposed Extension		raised concerns about. We also note the apparent reduction in collision risk at the inner pilot boarding area. It is not clear whether this is a result of a 'more defined' route, but if so it seems to imply that boarding and landing is not considered here. It is unclear how a more defined and intensive 'route' can also accommodate boarding and landing.	passes through the boarding and landing area and the vessels within it (including the pilot vessels) are assessed within the overall collision risk output, which considers that the navigable sea area has reduced.
Appendix 42: Thanet Offshore Wind Farm Collison Assessment of Proposed Extension	PLA/ ESL	The PLA and ESL do not think 10% future traffic growth is suitable for this area. The PLA and ESL addressed future traffic growth in their response to ExQ3 3.12.15 (see PLA27/ESL27).	The Applicant notes this, but has demonstrated throughout the ExA that this is appropriate as evidenced at REP7-026.
Appendix 42: Thanet Offshore Wind Farm Collison Assessment of Proposed Extension	PLA/ ESL	ESL and the PLA do not agree that this study is directly comparable to the other wind farm projects referenced in table 5.2, primarily because the study areas for the other windfarms were considerably bigger. They note that Anatec also state that the results are not directly comparable.	The Applicant notes this, and as stated in the report a comparison has been provided for illustrative purposes only.
Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report [REP6-040]	PoTLL and LGPL	The characterisation by the Applicant of the main criticisms of the proposed TEOWF made by the Ports is incorrect. The Ports would characterise the main issues between the parties as: (a) the lack of assessment of available sea space for pilot boarding and concurrent boarding/transit activities; and (b) the lack of assessment of economic impact of the Scheme. The issues above have been consistently advanced by the Ports throughout the Examination and a summary of issues of disagreement between the parties is included in the Statement of Common Ground concluded between the Ports and the Applicant [REP6-106].	The Applicant notes the PoTLL and LGPL concerns but has addressed the sea room requirement for boarding of pilots by adopting the PLA / ESL requirement for 2nm sea room plus 1 nm buffer at the NE Spit Pilot Diamond, and in regard to the economic impact, the Applicant notes that there would be no need for vessels to deviate around the TEOW as sufficient sea room has been allowed for through calculation of sea room requirements for 4 x 333m length vessels transiting the inshore route at Elbow and at the NE Spit RACON buoy using the MSP guidance out forward by the ports.

Document	IP	IP Comment	Applicant's response
		While the Ports consider the lack of consultation with the Ports to have been incorrect and contrary to policy, it is not one of the key issues on which the Ports have been focusing their criticism of the Application.	
Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report [REP6-040]	PoTLL and LGPL	The Ports do not agree with this statement. [Page 5,paragraph 7] Table 4.1 of the HRW report [REP4C-016] shows that between 2009 and 2017 there was a decline at Medway of approx. 250 container vessel calls but an increase in the Port of London of approx. 800 container vessels. Taking Medway into account, that represents a net increase of approx. 550. Table 4.1 demonstrates that in 2009 the combined number of vessel calls to London and Medway (the only two ports that influence the inshore route) was approximately 1,600. This increased (by approximately 550) to approximately 2,150 vessel calls in 2017. This represents a 34% increase in an 8 year period.	The Applicant notes that container ship movements have been largely static between 2009 and 2015, and that the introduction of DWPLG when considered against this static period and related to 2014 data (based on table 4.1 of the HRW report that London shows an increase from 1121 to 1931 a total of 810, and that Medway shows a decline from 734 to 207 which equals a total of 527, which shows that the difference between these years between he respective ports is 283 vessels – thus the increase at DPWLG is largely balanced by the decrease in Medway. Further and as noted in para. 7 there has also been a net reduction in ship arrivals at Felixstowe and when this is also taken in account and related to the TEOW study area, it is clearly evident that the analysis presented in the HRW report does not pride any basis for increase in container traffic within the TEOW study area. Further to this the Applicant has undertaken a detailed analysis of DfT maritime statistics to further evidence the future baseline assumptions (REP7-026). This demonstrates the assumption of 10% across all vessels to be suitably precautionary.
Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report [REP6-040]	PoTLL and LGPL	This is not correct. It has been demonstrated that vessels with a draft of up to 11.6m can transit the Princes Channel (see Table 5.2 of the HRW report which provides chart depths of certain channels).	The Applicant is cognisant of the fact that for the ease of ESL and PLA pilotage, vessels with draughts of greater than 7.5m are serviced at the NE Spit, but it should be noted that through the charging mechanisms of the Pilotage Directions, PLA do not charge addition pilotage cost for vessel of greater than 7.5m that use the SUNK compared to the NE Spit, even though it is a longer pilotage act – this mechanism therefore encourages vessels with a draught of greater than 7.5m to take the SUNK route. The Applicant is aware of examples where deeper draught vessel transit through the NE Spit area, despite the limited depth available, however these are clearly the exception not the rule and do not represent the regular operation of this area.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 7,paragraph 9	PoTLL and LGPL	The Ports consider that the reference to 2011 made by the Applicant is misleading. Figure 4.2 (referenced in Section 4.3 of the HRW Report) provides data from 2009 to 2017. The year 2011 happens to represent a peak in the data and thus when compared with 2017 levels represents a reduction. However, a comparison of 2013 to 2017 levels would show a slight increase. The Ports consider that the Applicant is being selective with data in order to advance its case.	The Applicant would point out that there has also been a decrease in ro-ro vessels shown in Figure 4.2, between 2009, 2010, 2011 (which represented the peak from the data set provided in the HR Report) and the 2017, that between 2013 and 2017 there was no difference and that a small increase in Ro-Ro vessels is noted between 2014, 2015 and 2016,m before a decline is again shown. The general trend over the data provided for London Ports is clearly therefore a decline. The Applicant would further note that in any trend analysis it is reasonable, and indeed common practise, to reference changes to either an evident peak or trough. Further to this the Applicant has undertaken a detailed analysis of DfT maritime statistics to further evidence the future baseline assumptions (REP7-026). This demonstrates the assumption of 10% across all vessels to be suitably precautionary.

Document	IP	IP Comment	Applicant's response
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 7,paragraph 10	PoTLL and LGPL	The Ports do not agree with this statement and wish to highlight that Figure 4.3 shows a small decline in carriers but not a decline in all vessels.	The Applicant considers is it evidenced in Figure 4.3 that a significant decline in carrier numbers is evident between 2003 to 2005 and 2018. Figure 26 of the NRA A provides longer trend analysis for all ship arrivals which also shows a significant decline in ship arrivals since 2005. Further to this the Applicant has undertaken a detailed analysis of DfT maritime statistics to further evidence the future baseline assumptions (REP7-026) which illustrates vessel arrivals to have been static in the period 2005-2017.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 7,paragraph 14	PoTLL and LGPL	The use of the NE Goodwin for pilot boarding is quantified in Table 7.5 and 8.10 of the HRW Report but it is largely inconsequential for the Ports given that it is used for approximately 13 pilot transfers per annum which equates to less than 1% of all pilot transfers for vessels bound for the Ports.	The Applicant has no further comment.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 11, paragraph 17	PoTLL and LGPL	The trend for larger vessels may be correct for organic growth however this is not considered to be representative of areas where new port infrastructure has or will become available at a later date. The Ports refer to the ratio of growth in volume to growth in vessels of 0.69 which was evidenced by Table 1 of their Deadline 2 Representations (REP2-050) and discussed in their Deadline 6 representations in response to EXQ 3.12.15(d) .	The Applicant notes considers that Table 1 of the ports Deadline 2 Representations (REP2-050) includes all vessel and tonnage going to POTLL and DPWLG, and it therefore does not provide any evidence contrary to that put forward by the Applicant at Pg 11, Para 17 of the REP6-040, which related to container ships only. Further to this the Applicant has undertaken a detailed analysis of DfT maritime statistics to further evidence the future baseline assumptions (REP7-026) which demonstrates the proposed ratio to be based on a flawed assumption that a short term correlation can be taken as indicative of a long term pattern.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's	PoTLL and LGPL	Please see the response above in respect of ship arrivals. In respect of London ports there is projected to be a large increase in container ship calls as shown in Figure 4.1 of the HRW Report. This is primarily due to the growth as a result of new port infrastructure at DPWLG	The Applicant does not consider that Figure 4.1 of the HR Wallingford report (which stops at 2017), provides any evidence for growth in container vessels for 2018 and onwards. There is a clear trend in the data provided, but this does not provide evidence that a trend will continue into the future. Further, the analysis and commentary at pg 11, para. 18, relates to container vessels, and therefore the inclusion of Tilbury 2, which is not proposed to be a container vessel facility, is not appropriate.

Document	IP	IP Comment	Applicant's response
Response to HR Wallingford's Final Report Page 11, paragraph 18		and it is noted that significant additional infrastructure is consented and planned at both LGP and Tilbury 2 (and in the latter case now under construction).	
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report	PoTLL and LGPL	The Ports agree that the ramp up of container ship arrivals for London, between 2013 and 2017 is likely to be primarily due to the build-up of ship arrivals at London Gateway following construction. The Ports would, however, point to the significant additional construction due to take place/taking place at LGP and at Tilbury 2 respectively, which means that further growth is anticipated.	As noted at Para. 19 of REP6-040, London have a very low average number of TEU handled per ship arrival at 693TEU per container ship arrival, compared to 2,600TEU per container ship arrival at Felixstowe, and 1,622 TEU per ship arrival a at Southampton. It is therefore evident that on average London tranships only around 26.7% of the TEU per container ship, compared to Felixstowe – this is why a clear reduction in ship arrival sat Felixstowe can actually lead to an increase in cargo tonnage handled. Whilst direct comparison is not possible within the data available with regards to DPWLG, it is nonetheless evident that DPW could actually see a reduction in ship arrival and an increase in cargo if it follows a similar trend to Felixstowe. And that future berth development can be easily accommodated by longer vessel stays associated with larger cargo transhipments, which in many ways is entirely the business plan of DWPLG, as it is more efficient to tranship a greater number of TEUS compared to having a greater number of ship arrivals.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 14, paragraph 30	PoTLL and LGPL	This is not correct, Table 7.3 of the HRW Report demonstrates that there are a number of large container vessels which transit through the inshore route. It is to be noted that these vessels have drafts of up to 14.1m (see - www.marinetraffic.com).	The Applicant firstly notes that Table 7.3 does not provide draughts of the vessels so cannot comment on a marine traffic link provided by the ports. Table 7.3 demonstrates that 5 vessels in excess of 294m transited the inshore route in the AIS data analysed, this relates to on average 1 vessel every 2.4 months, which the Applicant considers that is statement that "*the very low usage of the inshore route by London Gateway bound vessels, the vast majority (in excess of 90%) of which are vessels less than 250m in length" [Page 14, paragraph 30* [REP6-040]).
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 14, paragraph 31	PoTLL and LGPL	How such vessels transited to or from the port is set out in Tables 8.2 to 8.9 of the HRW Report.	The Applicant stands by its statement that it is not clear why the largest vessel visiting the ports are referenced when it is not clear from the report whether these vessels even passed through the TEOW study area.

Document	IP	IP Comment	Applicant's response
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 15, Paragraph 32	PoTLL and LGPL	As set out in the Ports' Deadline 6 Representations, the Tilbury2 Environmental Statement indicates that based on 2016/17 data there will be an increase in vessel movements in the Thames Estuary of up to 10% as a result of the development of Tilbury2.	The 10 percent growth rate at Tilbury 2 is referenced within page 15 of paragraph 32.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 17, Paragraph 45	PoTLL and LGPL	The Ports highlight that the provision of such analysis or modelling is the responsibility of the Applicant and it is the lack of such modelling and other assessment of impacts that means the impacts cannot be understood fully by IPs, the ExA and ultimately, the Secretary of State.	The Applicant has provided extensive analysis within the CRM modelling that demonstrates encounters between ships on passage and ships engaged in pilot transfer operations in defined study area. Further CRM analysis has been provided on the TEOW with SEZ which shows that there would be minimal impact to encounters.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 17, Paragraph 47	PoTLL and LGPL	Because the Applicant has provided insufficient assessment in order to inform the conclusions outlined, the Ports contend that a further Pilot simulation study is still required.	The Applicant does not agree with the port that a further pilotage simulation study is necessary, however if a study were undertaken the NRAA has demonstrated that the role of such a simulation study would be the confirmation of feasibility and the verification of risk controls.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's	PoTLL and LGPL	The HR Wallingford Report makes no such statement in respect of willingness to take routes which save time. The report suggests the importance of routes that save time to some vessels however it does not comment on their willingness to use such routes.	The Applicant notes in 11.2.2 that the ports state that table 11.3 "*gives an indication of the value of time that is implicit in the design of a particular vessel*" – it is this statement that the Applicant refers to in relation to its comment that "*statement is made that ship service speed is an indicator of vessels willingness to take routes that save time".*

Document	IP	IP Comment	Applicant's response
Response to HR Wallingford's Final Report Page 18, Paragraph 48			
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 18, Paragraph 50	PoTLL and LGPL	As set out in some detail in their past representations, the Ports disagree –and consider that there is a need for the additional simulation study. As is demonstrated by the Applicant's shipping commercial assessment (Annex C to Appendix 16) [REP6-020], the risks to stakeholders are at least consequence category 3 (when diverted transits and additional occasions when a vessel cannot take a pilot are considered) occurring on a yearly basis and thus result in a risk score above ALARP. The Ports note that the "POTLL/ DPWLG supplied guidance" referred to does not account for concurrent pilotage operations.	The Applicants notes that the ports do not agree that a simulation study is not a requirement. The Applicant also notes that it does not agree with reference to consequence level 3 results in ALARP level scores for reasons laid out within REP6-039.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 18, Paragraph 51	PoTLL and LGPL	The Ports wish to point out that there were 3 vessels of 11,000 TEU or more which boarded a pilot at NE Spit in the period December 2017 to November 2018 as is shown by Table 7.6 in the HRW Report.	The Applicant notes that the reference to 11,000TEU vessel was to the inshore route and not to pilot transfer within the NE Spit operational area, and that Table 7.3 relates to the inshore route where it is shown the largest vessel by TEU was the *Cap San Raphael* at 9,814 TEU capacity.
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report	PoTLL and LGPL	The Ports wish to point out that not all of the vessels of 11,000 TEU or more visit DPWLG via the sunk as is shown in Table 7.6 of HRW Report. It is noted that 5 of the vessels shown in Table 7.6 have a draft of 12m or above (the MSC Giselle for example has a draft of 14.4m – see www.marinetraffic.com).	The Applicant, notes that a small number of vessels greater than 11,000 TEU (specifically 2 vessels) used the NE Spit Pilot boarding area (which it assumes is the full NE Spit operational area), which make up a very small proportion of vessels greater than 11,000 visiting DPWLG, and such it is a basic rule that vessels of this size use the SUNK and the exception when they do not.

Document	IP	IP Comment	Applicant's response
Page 19, Paragraph 52			
[REP6-040] Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report Page 19, Paragraph 55	PoTLL and LGPL	It should be noted that HRW do not say that they agree with the NRA Report findings; they simply state that they understand the methodology used.	The Applicant note the HRW report states at 12.1.5 that "The *methodological basis for findings that the marine risk have been reduced to as low as reasonably practical (ALARP) levels is established and understood*".
Applicant's Appendix 22 to its Deadline 6 submissions (document reference [REP6-026] 3.12.2	PoTLL and LGPL	The Ports consider that it would have been useful for the Applicant to clarify the level of increase in risk resulting from the 10% traffic growth assumption in the Anatec SEZ CRM. It remains unclear whether the level of increase was greater, lower or equal to 10%.	The Anatec CRM report identifies the level of increase associated with the future baseline scenario. Further to this the Applicant has undertaken a detailed analysis of DfT maritime statistics to further evidence the future baseline assumptions (REP7-026). The increase in risk associated with increasing traffic and the effect of the wind farm are set out in the CRM report.
Applicant's Appendix 22 to its Deadline 6 submissions (document reference [REP6-026] 3.12.13	PoTLL and LGPL	The Ports consider that the response given by the Applicant is a misrepresentation of LGPL/POTLL's comments made at ISH8. Indeed, Table 7.3 of the HRW Report [REP4C-016] demonstrates that vessels of up to 333m LOA and 14.1m drafts use the inshore route for transit (see www.marinetraffic.com data relating to MSC Chloe). Even with a shift to larger vessels, large vessels would continue to use the inshore route. The Ports consider that the reference to Felixstowe in the context of growth in shipping associated with the Thames Estuary or inshore route is irrelevant and is essentially a red herring. This is because Felixstowe vessel traffic does not utilise either the Thames or the inshore route. Therefore, whilst regionally an increase in throughput to the London Ports is somewhat offset by a decrease in throughput to Felixstowe, such a balancing factor does not apply to use of the inshore route and is	The Applicant does not recognise the Port's statement that Felixstowe vessels do not utilise the inshore route. LPC submissions have identified vessels to have transit the area on occasion. The Applicant recognises the Ports aspirations to take trade from Felixstowe, however a reasonable planning assumption cannot be based on the aspiration for a port to outcompete another port. The future baseline submitted at d7 addresses the likely increase at Port of London in a robust quantitative forecast, with reference to the DfT 2019 vessel freight forecast. The Applicant maintains that the aspirational growth in TEU from PoT and LG does not in and of itself represent a likely or evidenced commensurate increase in vessel numbers along the inshore route or in the NRA study area.

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<tr><td></td><td></td><td>therefore not relevant to the issues discussed in relation to the Examination of this proposed development.

The Applicant's confirmation that there has been "a reduction of 12% overall and a spiked decline of 15% between Q4 2017 and Q4 2018" at Felixstowe is, however, noteworthy and demonstrates that the significant new port infrastructure which is now being implemented along the Thames is resulting in a significant and relatively rapid shift in trade towards London ports. Such growth, which is the result of the competitive nature of ports rather than just organic growth, cannot be simply adsorbed by increasing vessel sizes and will inevitably result in significant growth in vessel numbers visiting, i.e, shipping services switching to London ports.</td><td></td></tr>
<tr><td>Applicant's Appendix 22 to its Deadline 6 submissions (document reference [REP6-026]

3.12.15</td><td>PoTLL and LGPL</td><td>The Ports consider that it is difficult to understand how a 10% growth figure for a 35 year period from 2019 (reasonable planning horizon as referenced in the EXA's ISH2 Action Points (EV-003)) is considered precautionary in the context of 7% growth in 10 years and recent growth of 11% for the Port of London.

Even simply applying the 7% figure pro-rata would suggest growth of 24.5% over the reasonable planning horizon (notwithstanding that the historic growth referenced will not have been influenced by the roll out of additional port infrastructure to the degree the future period will).

The Ports dispute the Applicant's understanding of how perishable cargos are generally carried.

The Applicant's understanding is relevant and probably applicable with regard to conventional 'reefer' vessels visiting Dover and Portsmouth, however such vessels represent a declining share of the global fleet and are largely focused on the carriage of bananas. Containerisation has resulted in the majority of perishable goods now being shipped by large container vessels. To evidence this the Applicant has highlighted as an example the following 6 container vessels which have visited DPWLG in the past week (26 May 2019 to 2 June 2019):</td><td>The Applicant would note that the 10 percent growth figure relates to ship arrival numbers and not to trade or cargo handled. The growth rates provided by the port seem to be related to trade or cargo handled and not ship arrival numbers as there has been an evidenced reduction or decline in ship arrivals at London Ports (see NRA A Figure 26).

The Applicant would note that vessel size examples given relate only large vessels and that no examples are given that relate to smaller vessels such as the "time critical vessel" noted at the POTLL on the site visit with was the *Ensemble* a 134.6m container vessel. Without a full frequency distribution of "perishable" goods vessels being provided, simply providing examples of the largest does not negate the point made by the Applicant, and demonstrated on the site visit, that perishable goods are not typically carried on the largest vessels.

The Applicant notes the 6 container vessels named by the Interested Party and has provided a track plot at Annex C to Appendix 5 of this Deadline 8 submission to provide further context to the vessel routes on their arrival. A tabulated information, extracted from AIS, shows the vessels arriving at 'THAMES' (London Gateway) from a range of destinations. It is notable that AS PAULINA's is the smallest vessel (210m LOA) and her stated origin port is Port of Moin in Costa Rica – which despite the considerable journey duration with perishable goods still elected to transit into the estuary via the SUNK (rather than North East Spit).

<table>
<tr><th>Date/Time</th><th>Vessel Name</th><th>Port Call Type</th><th>Current Port</th><th>Origin Port</th></tr>
<tr><td>26/05/2019 07:14</td><td>MSC DESIREE</td><td>ARRIVAL</td><td>THAMES</td><td>LAS PALMAS (ESLPA)</td></tr>
<tr><td>27/05/2019 03:26</td><td>AS PAULINA</td><td>ARRIVAL</td><td>THAMES</td><td>MOIN (CRPMN)</td></tr>
<tr><td>31/05/2019 04:00</td><td>CARTAGENA EXPRESS</td><td>ARRIVAL</td><td>THAMES</td><td>ROTTERDAM MAASVLAKTE (NLMSV)</td></tr>
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<tr><th>Document</th><th>IP</th><th>IP Comment</th><th>Applicant's response</th></tr>
<tr><td></td><td></td><td>26/5/19 – MSC Desiree – 300m LOA – 198 reefers
27/5/19 – AS Paulina – 210m LOA – 165 reefers
31/5/19 – Cartagena Express – 333m LOA – 349 reefers
31/5/19 – Cap San Maleas – 333m LOA – 121 reefers
1/6/19 – MOL Proficiency – 293m LOA – 324 reefers
2/6/19 – MSC Athens – 300m LOA – 125 reefers
The Ports can confirm that all reefers referred to above were 40ft units and therefore these vessels represent a total of 2,564 TEU of perishable throughput, equivalent to an average of 427 TEU per vessel. This is contrary to the Applicant's understanding of perishable cargos.</td><td>
<table>
<tr><td>31/05/2019 19:44</td><td>CAP SAN MALEAS</td><td>ARRIVAL</td><td>THAMES</td><td>ROTTERDAM MAASVLAKTE (NLMSV)</td></tr>
<tr><td>01/06/2019 06:14</td><td>MOL PROFICIENCY</td><td>ARRIVAL</td><td>THAMES</td><td>ALGECIRAS (ESALG)</td></tr>
<tr><td>02/06/2019 11:31</td><td>MSC ATHENS</td><td>ARRIVAL</td><td>THAMES</td><td>LA SPEZIA (ITSPE)</td></tr>
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</td></tr>
<tr><td>3.12.27</td><td>PoTLL and LGPL</td><td>The Ports consider that this comment by the Applicant demonstrates a significantly outdated understanding of the modern logistics industry which has shifted significantly to a 'just in time' delivery approach. It also pays no regard to the significant quantities of perishable goods being imported via London ports (see the Port's Deadline 6 Representations [REP6-105] in which information in respect of perishables is outlined in more detail).</td><td>The Applicants notes the Ports comment, but does not agree with the context in relation to the Applicants answer to 3.12.27.</td></tr>
<tr><td>3.12.27</td><td>PoTLL and LGPL</td><td>It is to be noted that, as a result of their inland locations on the Thames estuary, quayside operations at London ports are not as affected by adverse weather as ports in some coastal locations. It is also the case that new port infrastructure (such as that at DPWLG) adopts a more automated approach to cargo handing which de-risks operations to a degree in adverse weather (by replacing the human element in hazardous locations such as within the container stack).
As a direct example, some information is supplied in respect of LGP below:
At the outset for the planning of LGP, specific consideration was taken in the design of the terminal to ensure that it would be open as much as possible. Commercially one of the biggest issues with UK ports is closure due to the weather. Competing ports can be closed for up to 10 days per year due to weather.</td><td>The Applicant would note that it references not only berth availability as a possible limitation with regards to "limit states", but other limits on transit of channels and berthing of vessels during period of adverse weather.
The Applicant notes LGPL weather resilience statistics and has no further comment.</td></tr>
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Document	IP	IP Comment	Applicant's response
		Taking this consideration on board, LGP was specifically designed to be able to operate in the toughest of weather conditions such as strong winds. LGP spends a significant amount of additional money to enable the equipment to operate safely. Its quay cranes, which are used to unload/ load vessels, are designed to work in winds of up to 25 m/s (49 knots) compared to other competing ports which work up to 20 m/s (39 knots). An increase of 10 knots. The Automatic Stacking Cranes (ASCs) which load containers on and off trucks are designed to work in up to 28 m/s (55 knots). This is world leading. Since the opening of LGP just over 5 years ago, it has only been closed shipside (unloading/ loading ships) for 4.5 days. Landside (serving HGVs) it has only been closed for 2.3 days. The weather resilience of LGP was reinforced earlier this year when Europe was hit by 10 days of strong winds. It caused massive issues in the ports around the UK, however LGP was only shut for 12hrs shipside and 4 hrs landside. Such resilience to adverse weather is part of DPWLG's unique selling point and contributes significantly to DPWLG's efficiency and thus its ability to compete with other ports such as Felixstowe. It also influences commercial decisions (i.e. by shipping lines) to provide services to DPWLG. If such efficiency was adversely affected due to delays to shipping on approach, the result would be an adverse effect on DPWLG's competitiveness.	
3.12.29	PoTLL and LGPL	It is not clear what "other approaches" the Applicant is referring to, however, if this is reference to navigation channels such as Fisherman's Gat, Black Deep, the Sunk Separation scheme or Long Sand Head (the only approaches we are aware of that are narrower than the inshore route) it somewhat contradicts the Applicant's assertion that the inshore channel is an area of open sea and not a sea lane and that it may not even be a major commercial navigation route.	The Applicant does not agree it has contradicted itself by simply noting that other routes into the Thames estuary are significantly narrower than that provided on the inshore route with the TEOW in place.

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3.12.30	PoTLL and LGPL	Given that the Applicant's answer is in response to the EXA's question regarding economic consequence of risk as set out in the Ports' D5 submission [REP5-071], this statement appears to be at odds with the Applicant's verbal representations at ISH8 and in previous written representations. In previous representations the Applicant has maintained that the Ports did not raise such concerns at the HAZID workshop on 29 March 2019 or at the follow up teleconference on 2 April 2019 and, in fact, did not express concerns regarding consequence scores for stakeholders or property until 5 April 2019. However, the Applicant now appears to be suggesting that such concerns were considered at the HAZID workshop on 29 March 2019. The Ports can, in fact, confirm that there was no such consideration at the HAZID workshop, as demonstrated by the fact that the issue was raised with the Applicant during the teleconference on 2 April 2019 and followed up by an e-mail to the Applicant on 5 April 2019.	The Applicant notes that hazard consequence scores for Stakeholder and Business were discussed at length at the hazard workshop.
3.12.30	PoTLL and LGPL	The statement made by the Applicant that increased pilot transit time could have an increased cost to ESL and the PLA fails to consider the availability of additional suitably trained pilots. Should the PLA/ESL not be able to identify and recruit additional pilot resource, the result of increased pilot transit time could mean delays to shipping, as vessels are required to wait for pilots to become available. In the worst case this could result in constraints on trade and regional economic growth.	The Applicant does not consider the need for deviation as stated and demonstrated by the MSP calculation on the inshore route and the meeting of PLA / ESL 2nm plus 1nm nominal sea room request at NE Spit. If as result of a hazard being realised into an incident, any additional pilotage requirements would be temporary and relate purely to the aftermath of the incident and not to a long term need for additional pilotage requirements as there is no deviation requirement for normal transits.
3.12.30	PoTLL and LGPL	With regard to the Applicant's response, the Ports make the following points: a) Economic and commercial impact is a consequence of increased risk (or the perception of increased risk). The impact will be the consequence of the shipping line, ship's master or pilot taking an alternative course of action to avoid risk or hazard. This point was emphasised by the Applicant in Appendix 12 to Deadline 5 Written summary of oral case [REP5-018] which discussed the actions of a ship's master on	a) As sea room for 4 x 333m vessels is provided for no deviation is considered necessary for the inshore route. b, c) The FSA NRA methodology is not suitable to characterise economic impact, and as mandated by the MCA MGN 543 (M+F) is designed to assess navigation risk, a consequence of which is economic impact contained within the Business / Stakeholder category. In relation to a most likely occurrence hazard, the applicant does not consider it would reach a category 3 consequence (see response 3.12.30). d) Whilst the NPS EN3 does indeed state economic impact and ALARP, this is not referenced to a a defined FSA NRA methodology. The Applicant has noted that the ALARP definition needs to be related to methodology and definitions that

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		approach to an area of sea, stating that: "if the master feels he cannot balance out these conditions he would not proceed into that sea area" (Paragraph 89). b) The methodology proposed and relied upon by the Applicant to assess risk comprised four consequence categories including Property and Stakeholders. These are set out in Table 17 of the Applicant's NRAA [REP5-039]. In Table 17 consequence categories are defined with reference to financial values. With regard to stakeholders the descriptions for consequences given include loss of revenue and restrictions or disruption to operations. This is at odds with the Applicant's response to EXQ 3.12.32©. c) Following the concerns raised by the Ports during the post HAZID workshop teleconference on 2 April 2019 (concerns that were based on economic and commercial impact) the Applicant increased the consequence scores for stakeholders in the most likely scenario from Category 1 to Category 2. Clearly, at that time the Applicant felt that the NRAA methodology was able to consider such matters. In addition, no claim that the FSA risk assessment methodology was unsuitable to consider economic loss was made by the Applicant at ISH8. It has only been since the Ports demonstrated (through their Deadline 5 Representations [REP5-071]) that the level of impact would likely exceed £100,000 per annum, and thus fall within a Category 3 consequence occurring annually and resulting in an above ALARP and intolerable score (in accordance with Figure 25 of the Applicant's NRAA), that the Applicant has claimed that the FSA Navigation Risk Assessment methodology is not suitable to assess economic impact. d) Paragraph 2.6.163 of the National Policy Statement EN3 refers to a direct correlation between economic impact and ALARP. It states "many of these routes are important to the shipping and ports industry as is their contribution to the UK economy. In such circumstances the IPC should expect the applicant to minimise negative impacts to as low as reasonably practicable (ALARP)". It is noted that NPS EN3 considers ALARP to be a measure of impact (not risk as the	apply to that methodology, not as the ports would contend, that they are able to select aspects for a methodology without following through the whole process of that methodology. The Applicant does not agree with the Ports that the "*significance of the inshore route, paragraph 2.6.163 is not the highest tier of NPS EN-1 policy which should be considered in respect of the Application*", and that as agreed with the MCA the inshore area is not a defined sea lane. The Applicant refers to Annex B of the Appendix 5 Deadline 8 submission for further comment on this aspect.

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		Applicant suggests) and that the impacts to be considered include those of an economic nature. The Ports contend that given the significance of the inshore route, paragraph 2.6.163 is not the highest tier of NPS EN-1 policy which should be considered in respect of the Application (further information in respect of policy is considered in section 5 below).	
3.12.32(d)	PoTLL and LGPL	The Ports contend that if there were six occasions when four or more concurrent transits occurred and on all six occasions they corresponded with high tide, then this would appear to demonstrate a very strong correlation between tidal time and congestion, not "little correlation" as the Applicant suggests in its response.	The Applicant notes that the Figure 46 of the NRA shows little correlation between HW and vessel numbers on the inshore route, and that if large draught sensitive vessels transited the inshore at high tide, they would be entering the Thames estuary on a falling tide, which is not considered prudent.
3.12.32(e)	PoTLL and LGPL	The Applicant's response is completely contrary to the discussions and subsequent agreement reached between the IPs and the Applicant at the HAZID workshop on 29 March 2019. At the workshop, when considering Hazard ID 1 (Collision of a Class 1 / 2 vessels), the IPs expressed confusion as to what the Class 1 / 2 vessel in question would be colliding with. The Applicant's response was that consideration should be for the Class 1 / 2 vessel in collision with all vessel types. IPs expressed concerns with this approach given that the likelihood and consequences would greatly differ depending on what type of vessel the Class 1 / 2 vessel collided with. It was at this point that some IPs criticised the generalised categorisations, with some IPs suggesting a more granular approach was needed. Led by the Applicant those present at the workshop first considered the most likely outcome. With regards to collision, the Applicant suggested, and IP's agreed, that the most likely outcome would relate to a glancing blow. However all IPs present asserted and agreed that a glancing blow between a Class 1 / 2 vessel and a fishing vessel would almost inevitably result in the sinking of the fishing vessel. This was therefore considered within the range of most likely outcomes. While it was understood that the consequence for the fishing vessel falls to be considered under Hazard ID 4,	The Applicant does not consider its response contrary to the discussions at the hazard workshop. All parties attending the workshop agreed with the hazard identification. The ports contend that a small delay brought about by a "most likely" collision would result in wide spread loss of perishable goods, which is not evidenced, when delays to vessels from a "most likely" outcome would be expected to be very minimal, and a vessel involved in such an incident would ordinary continue its passage and discharge its cargo with minimal delay. The hazard workshop scoring of category 1 / 5 for "most likely", was increased by request from the ports to 2/5 following the workshop, and it is understood that they wish to further increase this scoring. The Applicant does not agree increasing this category further.

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		the consequence for the Class 1 / 2 vessel of being involved in a collision which results in the sinking of a fishing vessel needs to be considered as well. This therefore falls to be considered under Hazard ID 1, as one of the most likely scenarios of a collision involving a Class 1 / 2 vessel (and indeed under Hazard ID 2 – for a Class 3 / 4 vessel). The consequences of such collision may include the Class 1 / 2 vessel being held over in port pending investigation, with potential for shipping line representatives (including senior crew) to be required to participate in post-accident enquiries. There would also be consequences for the goods being carried on the vessel particularly if they were perishable goods. Such matters have not been considered in the NRAA, having appeared to have 'fallen between the stools' as a result of the approach adopted. If this had been properly considered then the consequence score attributed to the Class 1 / 2 vessel would appropriately be significantly higher than Category 2 (under £100k cost).	
3.12.33	PoTLL and LGPL	As a point of clarification, the reference in the Applicant's response to Annex C of Appendix 26 appears to be in error with the correct reference being Annex C of Appendix 16 (REP6-020). The Ports note that the only assessment of economic effects submitted by the Applicant to inform the examination is that now provided as Annex C to Appendix 16 of the Deadline 6 submissions [REP6-020]. Therefore it is not clear what assessment gives rise to the Applicant's conclusion of "negligible impact", and the apparent attempts by the Applicant to distance itself from the conclusions provided within the submitted assessment seem perverse given that this is the only assessment which has been submitted in support of the application. The Ports have examined the Applicant's "illustrative assessment" in Annex C to Appendix 16 and understand it to offer the following conclusions with regard to overall economic impact:	The Applicant does not agree that deviation would be necessary, and that the examples provided in REP6-020 are for information only. The ports conflate the FSA NRA methodology with an assessment of economic loss (of diversion), not specifically caused by a navigation hazard materialising, and the Applicant considers its response to 3.12.33 that "negligible impact" is correct and relates to the Applicants conclusions that deviations would not be necessary. With regard to the ports view on the status of the appendix submitted by the Applicant at Deadline 6, there appears to be confusion as to its purpose. This report was written in order to respond to the submissions made by IPs on the suggested commercial impacts set out in response to ISH8 Action point 19, the Applicant assessment of these submissions in the context of the baseline environment to demonstrate that the level of impact of even these entirely unevidenced positions was negligible. This assessment was not, and did not purport to be, a full EIA socioeconomic assessment as this has already been undertaken and did not explicitly include impacts on shipping because, as stated previously, there is no evidence that these will occur. The response on suggested commercial impacts was therefore targeted specifically on responding to the submissions made by IPs. The Applicant therefore does not agree with the IPs suggestion of a lack of compliance with the EIA Regulations given that the submission was not made in respect to those requirements. Nonetheless it is notable that the ports do not disagree with the figures set out in that submission and instead have wrongly sought to equate commercial impacts with assessment of navigation risk, as set out above.

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		• 54 vessels that would not transit between Elbow Buoy and the SEZ and would instead re- route east of the TEOWF resulting in a total cost of £98,592 (Ref: Para. 40 and Table 3); • between 0.5% (Para. 52) and 1% (Para.53) of vessels would suffer additional delays to pilot boarding as a result of loss of resilience associated with the TEOWF. When related to total ESL transfers for 2018 (Table 2) this equates to between 33 and 65 vessels. The cost of such delays is not quantified in monetary terms however, given the delays would likely be significantly greater on average than one hour (particularly if a tidal or port berth window is missed) and relate to a similar number of vessels, the resulting cost is assumed to be significantly greater than the cost figure for diverted transits (£98,592); and • there would be additional steaming time for pilots and pilot vessels serving vessels displaced to the Tongue DWD. This is stated as equal to 35 hours but is not quantified in monetary terms. The Ports note that the assessment provided by the Applicant in Annex C to Appendix 16 has given no regard to devaluation of perishable goods resulting from delays to vessel passage. The Ports accept that devaluation of perishables is unlikely to be significant with regard to diverted transits (as the additional 1 hour steaming time will be foreseen and could therefore be planned) but maintain that such costs associated with pilot boarding delays (due to loss of resilience of pilot boarding stations) would be significant. In this regard the Ports refer to their Deadline 6 submissions [REP6-105] which, in response to EXQ 3.12.15(d), identify that vessels over 240m are likely to carry an average of either 277 tonnes (POTLL vessels) or 297 TEU (DPWLG vessels) per vessel. Thus the impact of pilot boarding delays due to loss of resilience resulting from TEOWF would fall in a range somewhere between 9,141 tonnes or 9,801 TEU (if 33 vessels delayed) or 18,005 tonnes or 19,305 TEU (if 65 vessels delayed). The Ports also note that the assessment in Annex C to Appendix 16 is based on historic vessel numbers and has	

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		given no regard to future growth within the 'Reasonable Planning Horizon', which the Applicant has assumed to be 10% but IPs (including the Ports) contend will be significantly higher (as set out in more detail in the Ports' previous representations). The Ports consider that it is eminently clear that the total level of economic consequence to stakeholders is significantly in excess of £100,000, and potentially in excess of £1,000,000, giving rise to a consequence score of a minimum of 3 (and potentially 4) when assessed in accordance with Table 17 of the Applicant's NRAA (REP5-039). Given that such consequence would occur on an annual basis, in accordance with Figure 35 of the NRAA this gives rise to a hazard score of 8.3 (and potentially 9.4), which, as indicated by Table 18 of the NRAA, is above ALARP and in-tolerable. The Ports consider that the Applicant's last minute attempt to provide economic assessment of the impacts of the proposed offshore wind farm extension is deficient, rushed and lacking in a number of areas. On that basis it is hard to conclude that the assessment has been carried out in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). The Ports would highlight in particular regulation 14(4) (a) of the EIA Regulations which requires that: "the applicant must ensure that the environmental statement is prepared by competent experts". While the Ports do not question the quality of the consultants used by the Applicant in drafting the Application, it remains unclear whether a suitable organisation has been consulted and given a sufficient brief in order to carry out in depth economic assessment of the impacts of the proposals. The Applicant's statement that it has produced "an illustrative assessment through reference to material submitted by IPs during the examination process" certainly suggests that it has not given due regard to carrying out a thorough economic analysis of the impacts of the proposals and instead of instructing a suitable competent expert to carry out independent analysis, it has sought simply to rebut the material	

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		submitted by IPs during the Examination. Nevertheless, taken at face value the Applicant's assessment results in above ALARP hazard scores.	
3.12.35(a)	PoTLL and LGPL	As discussed in detail herein within comments on the Applicant's response to EXQ 3.12.32(e) and EXQ 3.12.33, the Ports do not accept that these hazard outcomes were or are agreed.	The Applicant has no further comment to make.
Comments on Responses to the ExA'S DCO Commentary	PoTLL and LGPL	At Deadline 5A the Ports submitted comments on the Applicant's draft DCO [REP5A-001]. The Ports' submissions included two main comments: one in respect of the impact on shipping; and one in respect of the safety of navigation. The ExA published its commentary on the draft DCO on 7 May 2019 and sought comments from IPs on numerous issues. The issues which concern the Ports mainly pertain to the drafting suggested by the Ports at Deadline 5A. The Ports have set out a response below and in doing so have focused on the comments of the Applicant, Trinity House, the MCA and the PLA/ESL.	Please see Appendix 6 of the Applicant's Deadline 8 Submission for full details and the Applicant's response.
N/A – Final Submissions	PoTLL and LGPL	Despite not having been consulted by the Applicant on its proposals for the offshore wind farm extension during the pre-application stage, the Ports have engaged diligently and thoroughly with the Application throughout its examination. The Ports have done so at considerable cost both financially and in terms of time, however they consider that their engagement has been necessary and hope that it has been of assistance to the ExA. As commercial entities operating on the Thames estuary, the Ports are primarily concerned with the considerable economic and commercial impacts which they consider could be caused if the offshore wind farm extension is consented. It is regrettable that with the end of the examination now upon us, there remain a number of areas of fundamental disagreement between the Applicant and the Ports. The Ports had hoped that through their engagement with the examination process, an acceptable compromise could be reached and that they could say that they were satisfied that the Applicant's proposals would not cause a significant economic and commercial impact to the Ports. Unfortunately, this is not the case and a summary of the	The Applicant notes the ports final position and is equally disappointed that despite considerable engagement with the IPs during the examination, agreement has not been reached. The ports residual concerns relating to 'significant economic and commercial impacts' have nevertheless not been justified or evidenced by the IPs other than through qualitative statements such as this. At no point have the ports identified where investments, developments or business cases might be directly affected by the suggested impacts of TEOW nor how such impacts would result in a decrease in trade, in employment or in the commercial viability of these business. Whilst the Applicant does not agree that these impacts will be realised, there has no attempt has been made by IPs to elaborate on the proposed consequential effects of the project beyond such high level statements.

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		main issues which remain are set out in more detail below. The Ports have made submissions at each examination deadline as directed by the ExA, have participated in issue specific hearings and have submitted a report by HR Wallingford [REP4C-016] on navigation aspects of the proposals in the Application.	
N/A – Final Submissions	PoTLL and LGPL	The Ports have entered into a statement of common ground with the Applicant which was most recently submitted at Deadline 6 [REP6-106]. The main overarching issue in respect of the Application which the Ports continue to object to is the inadequacy of the assessment of navigational safety and the resulting potential economic impacts on commercial vessels. This overarching issue can be broken down into a number of sub issues and the Ports consider that the following matters need to be addressed in order to assess the magnitude and range of potential impacts on commercial shipping interests (such concerns have been covered in detail in the Ports' representations and so the below provides only a summary): (a) a pilotage simulation study, which is representative of the size and mix of vessels likely to transit the inshore channel/board pilots at the NE Spit in the future baseline scenario, is required to inform sea room requirements and likelihood of incidents. The Applicant has had ample time and opportunity to provide this during the Examination and it is not clear why it has refused to do so; (b) appropriate allowance should be made for uplift in the number of vessels transiting the inshore channel / boarding at the NE Spit in the future planning horizon; (c) appropriate vessel traffic mix should be considered (with regard to draught and manoeuvring characteristics in addition to LOA); (d) consequence scoring needs to be re-scored in particular in respect of property and stakeholders; and (e) a thorough assessment of the potential economic impacts of the project needs to be carried out by the Applicant.	a) The Applicant has provided a comprehensive summary of submissions relating to the pilot transfer bridge simulation study at REP7-004 which collates and responds to aspects raised in light of any requirement and specification. b) The Applicant considers that appropriate allowance has been made for future vessel traffic uplifts c) The appropriate vessel traffic mix has been considered and discussed with IP's for inclusion within the NRAA. This has included vessels as defined by LOA, manoeuvring characteristics and draught. d) The Applicant considers that consequence scoring as undertaken in the NRAA is appropriate and notes that notwithstanding this IP comments, it was modified to reflect their contributions. e) The Applicant's position is that a socio-economic assessment of the project has been carried out and did not directly consider impacts on ports as it was not, and is not, evidenced that there will be an impact of shipping that would result in economic impacts to the extent that can be assessed.

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N/A – Final Submissions	PoTLL and LGPL	In the absence of the Applicant addressing these issues, the Ports contend that the Application is not compliant with (a) national planning policy; or (b) the Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). More detail regarding planning policy is included at paragraph 5.8 below. The EIA Regulations require that the environmental impact assessment includes the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment. At present, it cannot be said that such information (i.e. the assessment of navigational safety and the resulting economic impacts on commercial vessels) is available and, as such, the environmental statement is considered deficient and not compliant with the EIA Regulations.	The Applicant has responded to points on compliance with policy in Annex B to Appendix 5 of this Deadline 8 Submission.
N/A – Final Submissions	PoTLL and LGPL	Much of the discussion during the course of the examination has centred on navigation risk and safety. The Ports wish to highlight that it is not only actual navigation risk which could lead to economic impacts on the ports, but perceived navigational risk must also be considered given that the perception of risk amongst mariners, sea users and pilotage operators will ultimately lead to behavioural changes which could have economic consequences. As such, the views of the other IPs engaged with the examination of the proposals are highly material to the view of the Ports. It is highlighted that the following statements have been made at Deadline 6 by IPs with a concern for the safety of navigation: (a) MCA: "the MCA is unable to agree that the proposed project is acceptable with regards to the safety of navigation" [REP6-087]; (b) Trinity House: "the NRAA only identified a limited amount of general risk and we cannot categorically state that "all" risk to shipping and navigation have been reduced to ALARP" [REP6-108]; and (c) the PLA/ESL "if the Order is made in the from currently proposed, the PLA and ESL will remain	The Applicant notes the comment from PoTLL and LGPL, and would further note in a general response that the MCA (and until recently, it appears, TH) have largely based any views on navigation safety / or ALARP, including Tolerability, not on any independent assessment or review of the evidence laid out in the Applicants submissions of the scheme, but by deferring to the views expressed by interested parties such as the PLA/ESL and LPC, whose interests are influenced by maintaining their current commercial position in the area. Further, the purpose of undertaking an NRA is to ensure that judgments on navigational risk are informed not simply by the subjective perceptions of stakeholders, but by the objective scrutiny of evidence which can show expressions of perceived risk to be overstated. The PoTLL and LGPL response suggests that the extensive analysis involved in the NRA and NRA A, such as the MCA MGN 543 (M+F) requirements of vessel traffic analysis and vessel incident analysis and NRA scoring, and further the higher evidential assessments such the carrying out of pilotage simulation, collision risk modelling should be set aside simply where an Interested Parties (without any statutory function for the area in question) expresses some concern with its conclusions, without any testing of whether there is a clear evidential basis for that concern. In the case of the PLA/ESL, the Applicant notes that their own rescoring of the NRA shows the scheme to fall within the ALARP scoring range which has been used for previous assessments, which in itself contrasts with the concerns otherwise expressed in their evidence. If on proper scrutiny the evidence demonstrates that there will be no unacceptable impact on navigational safety, it is reasonable to conclude that economic impacts will not result as suggested.

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		concerned about the safety of navigation and the continued viability of their operations to the west of the existing wind farm" [REP6-097].	
N/A – Final Submissions	PoTLL and LGPL	Evidently the statements above make it clear that the Applicant has failed to provide adequate and robust assessment to convince many of the key bodies with a concern for navigational safety that the proposals are acceptable in respect of safety of navigation. It is therefore clear to the Ports that if the Order is made in its current form then at the very least perceived risk will exist. With perceived risk will come economic impacts.	The Applicant notes the comment but would draw the ExA to its responses above.
N/A – Final Submissions Planning Policy	PoTLL and LGPL	In respect of planning policy, action point 4 of the ExA's ISH8 Hearing Action Points note (published on 18 April 2019) required the IPs to outline their final position regarding policy. The Ports have already set out extensive representations in respect of planning policy in particular in their Deadline 3 submission [REP3-070] which included a Planning Policy Position Paper at Annex 1 (the Planning Policy Position Paper).	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.
N/A – Final Submissions Planning Policy	PoTLL and LGPL	As explained in the Planning Policy Position Paper, in accordance with section 104 (decisions in cases where national policy statement has effect) of the Planning Act 2008: "(2) In deciding the application the [Secretary of State] must have regard to— (a) any national policy statement which has effect in relation to development of the description to which the application relates (a "relevant national policy statement"), [(aa) the appropriate marine policy documents (if any), determined in accordance with section 59 of the Marine and Coastal Access Act 2009] (b) any local impact report (within the meaning given by section 60(3)) submitted to the [Secretary of State] before the deadline specified in a notice under section 60(2), © any matters prescribed in relation to development of the description to which the application relates, and (d) any other matters which the [Secretary	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.

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		of State] thinks are both important and relevant to [the Secretary of State's] decision." As such, the two ports contend that the following should be taken into account in deciding the Application: National Policy Statements (NPS) which have effect in relation to the description of development, namely: (a) NPS EN-1 'Overarching National Policy Statement for Energy', July 2011 (EN-1); and (b) NPS EN-3 'National Policy Statement for Renewable Energy Infrastructure', July 2011 (EN-3); the appropriate marine policy documents, namely: (a) the UK Marine Policy Statement, March 2011 (MPS); (b) the South East Marine Plan (which is in the early stage of development with consultation on a draft plan expected in 2019); and © the East Marine Plan, April 2014 which is a made marine plan in an area which borders the area of the proposed South East Marine Plan; and any other matters which the Secretary of State thinks are both important and relevant to his/her decision, which the Ports contend should include: (a) the National Policy Statement for Ports, January 2012.	
N/A – Final Submissions Planning Policy	PoTLL and LGPL	The Planning Policy Position Paper sets out information in respect of each of the policies outlined above in more detail including their applicability to the proposed extension offshore wind farm. It concludes that "the Ports consider that Vattenfall (the Applicant) has failed to properly consider relevant national policy in making its application for development consent for the Thanet Extension Offshore Wind Farm (TEOWF). The ports	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.

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		therefore consider that the policy positon is such that the Secretary of State should not grant development consent for the TEOWF as currently proposed." The Ports have not moved from this position.	
N/A – Final Submissions Planning Policy	PoTLL and LGPL	A great focus of the policy discussions during the course of this examination has been on paragraphs 2.6.161-2.6.162 of EN3. Key excerpts from that policy with our underlining is set out below for reference: 2.6.161 : "The IPC should not grant development consent in relation to the construction or extension of an offshore wind farm if it considers that interference with the use of recognised sea lanes essential to international navigation is likely to be caused by the development. 2.6.162 : "The IPC should be satisfied that the site selection has been made with a view to avoiding or minimising disruption or economic loss to the shipping and navigation industries with particular regard to approaches to ports and to strategic routes essential to regional, national and international trade, lifeline ferries and recreational users of the sea. Where a proposed development is likely to affect major commercial navigation routes, for instance by causing appreciably longer transit times, the IPC should give these adverse effects substantial weight in its decision making. There may, however, be some situations where reorganisation of traffic activity might be both possible and desirable when considered against the benefits of the wind farm proposal. Such circumstances should be discussed with the MCA and the commercial shipping sector and it should be recognised that alterations might require national endorsement and international agreement and that the negotiations involved may take considerable time and do not have a guaranteed outcome. 2.6.163 : "Where a proposed offshore wind farm is likely to affect less strategically important shipping routes, a pragmatic approach should be employed by	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.

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		the IPC. For example, vessels usually tend to transit point to point routes between ports (regional, national and international). Many of these routes are important to the shipping and ports industry as is their contribution to the UK economy. In such circumstances the IPC should expect the applicant to minimise negative impacts to as low as reasonably practicable (ALARP). Again, there may be some situations where reorganisation of traffic activity might be both possible and desirable when considered against the benefits of the wind farm application and such circumstances should be discussed with the MCA and the commercial shipping sector."	
N/A – Final Submissions Planning Policy	PoTLL and LGPL	At Deadline 4, the Ports submitted a short response to Deadline 3 submissions. This reiterated the Ports' positon that the inshore route should be considered to be a recognised sea lane essential to international navigation for the purposes of applying EN-3 to the application. In addition, the Ports aligned their position to that of the MCA's Deadline 3 submission. The MCA's position was that: …that area of sea is actively used by all vessel types, including large commercial and international vessels. It is therefore considered an essential area for navigation and of strategic importance for vessel operation and accessing ports, with the SUNK TSS, an internationally recognised and established sea lane, in close proximity. Looking at the Archipelagic Sea Lanes given in the IMO Ships' Routeing Guide, and the criteria for such measures as set out in UNCLOS, this area meets many of the conditions necessary for it to be designated as such. UK experts on UNCLOS advised that the area is within the UK's Territorial Sea, therefore, international recognition by IMO may not be mandatory before UKHO would chart it, however explicit MCA direction to do so will be required.	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.

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N/A – Final Submissions Planning Policy	PoTLL and LGPL	The Ports note that the Applicant submitted with its Deadline 4 submissions: "Appendix 5 to the Deadline 4 Submission - Responses to comments on Shipping Policy Considerations" [REP4-007]. This document concludes that EN-3 paragraph 2.6.163 applies to the inshore channel and that in respect of EN-3 paragraph 2.6.162 "no substantiated case, by reference to regulatory definitions or otherwise, to confirm that the inshore or northern routes fall within this definition" and in any case that: "Even to the extent that a few vessels diverted from the inshore route (which is not accepted), the proposals would not therefore conflict with this aspect of policy (if it were considered to apply)". The Applicant also argues that EN-3 Paragraph 2.6.161 does not apply to the inshore channel. The Ports do not agree with the Applicant's position.	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.
N/A – Final Submissions Planning Policy	PoTLL and LGPL	In respect of paragraph 2.6.161 the Ports defer to the positon of the MCA which is set out above. The Ports note the MCA's comments and the importance which the MCA assign to the inshore route stating that it is an "essential area for navigation and of strategic importance for vessel operation and accessing ports".	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.
N/A – Final Submissions Planning Policy	PoTLL and LGPL	As per the Ports' submissions in the Planning Policy Position Paper, it is contended that, at the very least, the policy in paragraph 2.6.162 of EN-3 should apply. This sets out that (our underlining): "The IPC should be satisfied that the site selection has been made with a view to avoiding or minimising disruption or economic loss to the shipping and navigation industries with particular regard to approaches to ports and to strategic routes essential to regional, national and international trade, lifeline ferries and recreational users of the sea. Where a proposed development is likely to affect major commercial navigation routes, for instance by causing appreciably longer transit times, the IPC should give these adverse effects substantial weight in its decision making. There may, however, be some situations where reorganisation	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.

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		of traffic activity might be both possible and desirable when considered against the benefits of the wind farm proposal. Such circumstances should be discussed with the MCA and the commercial shipping sector and it should be recognised that alterations might require national endorsement and international agreement and that the negotiations involved may take considerable time and do not have a guaranteed outcome.	
N/A – Final Submissions Planning Policy	PoTLL and LGPL	As set out in the Planning Policy Position Paper, EN-3 does not provide a definition of "major commercial navigation routes" however it is clear that the inshore route in question is at the very least a major commercial navigation route. This is evidenced by the volume of traffic which passes through the inshore route as is demonstrated by POLARIS (Port of London River Information System) database data and AIS data (see the HRW Report submitted by the Ports to the examination [REP4C-016] which sets out an analysis of such data) . In addition the view of the MCA outlined above is of importance, i.e. that the route is an: "essential area for navigation and of strategic importance for vessel operation and accessing ports". In addition, the MCA has further set out in its Deadline 5 Representations [REP5-063] that: "the area of concern is an area of sea to the west of the existing Thanet windfarm and while it is not an IMO designated routeing measure, the area of sea is actively used by all vessel types, including large commercial and international vessels. It is therefore considered an essential area for navigation and of strategic importance for vessel operation and accessing ports. The SUNK TSS and Dover Straits TSS, both internationally recognised and established sea lanes, are in close proximity to the north and south of the TEOW site and, therefore in an operational sense, the area of sea should be treated as a recognised sea lane". Given that the MCA considers that the inshore route should be treated as a recognised sea lane, i.e. as per EN-3 Paragraph 2.6.161, it would be hard to argue that at the very least the second highest tier of policy in EN-3 at paragraph 2.6.162 would not apply and that the inshore route is not at least a " major commercial navigation route".	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.

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N/A – Final Submissions Planning Policy	PoTLL and LGPL	As such, in determining the Application, the Secretary of State should give at least "substantial weight "to the adverse effects on the inshore route but should be mindful of the view of the MCA that the inshore route should be "treated as a recognised sea lane" . In respect of "longer transit times", as set out at some length in the Ports' representations, if the inshore route cannot be used then there will be appreciably longer transit times and the impact of this should therefore be given substantial weight. Given the lack of economic assessment carried out by the Applicant in respect of the Application (save for what the Applicant has described as an "illustrative assessment [created] through reference to material submitted by IPs during the examination process" at. Annex C to Appendix 26 of the Applicant's Deadline 6 submission), it is not possible for the Secretary of State to be satisfied that site selection has been made with a view to avoiding or minimising disruption or economic loss to the shipping and navigation industries with particular regard to approaches to ports and to strategic routes essential to regional, national and international trade.	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.
N/A – Final Submissions Planning Policy	PoTLL and LGPL	The Ports therefore maintain that the application cannot be regarded as being in accordance with the relevant national policy statements. The Secretary of State should therefore refuse development consent on this basis alone.	The Applicant notes the comment and would direct the ExA to Annex B to Appendix 5 of this Deadline 8 Submission.
N/A – Final Subissions Structures Exclusion Zone	PoTLL and LGPL	As set out in more detail at ISH8 and in the Deadline 4C representations [REP4C-016], the Ports remain to be convinced that a SEZ is the appropriate means to seek to reduce the impact of the extension to the offshore wind farm. The appropriate starting point to try and mitigate the impacts of the wind farm extension must be through an order limits reduction. The Ports have nevertheless attempted to assist the ExA in providing proposed DCO drafting in order to enhance the control of key IPs over activities carried out in the SEZ (see section 4 above).	The Applicant notes the comment and would direct the ExA to the Applicants response at Deadline 5 Submission - Annex A to Appendix 7 to Deadline 5 Submission: Response to ISH8 Action Point 16: Thanet Extension Structures Exclusion Zone Consented Works Clarification Note [REP5-013.

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N/A – Final Submissions Simulation Study	PoTLL and LGPL	As set out above, the Ports consider that a key missing element of assessment in this Application is a further pilotage simulation study, one that is representative of the size and mix of vessels likely to transit the inshore channel/board pilots at the NE Spit in the future baseline scenario. This is required in order to inform sea room requirements and the likelihood of incidents. Without such a study, it is simply not possible to assess adequately the impacts on navigational safety and the resulting economic impacts on commercial vessels. The Applicant has had ample time and opportunity to provide this during the Examination and it is not clear why it has refused to do so.	The position of the Applicant is that there is adequate information before the ExA and the SoS to enable consent to be granted for the project. However, in the event that it is considered that further information is necessary to enable a positive decision to be reached on shipping and navigation grounds, then the Applicant has set out a scope for the further simulation work which could be undertaken if necessary, and understands the ports' submission to be that they would support the provision of such information to the SoS in advance of any decision
N/A – Final Submissions Simulation Study	PoTLL and LGPL	In the Ports' Deadline 6A representations, they commented that the ExA is obliged to report on the Application, and to make its recommendations to the Secretary of State, based on the evidence and submissions before it at the end of the Examination.	The Applicant notes this comment, and its response is as noted above - The position of the Applicant is that there is adequate information before the ExA and the SoS to enable consent to be granted for the project. However, in the event that it is considered that further information is necessary to enable a positive decision to be reached on shipping and navigation grounds, then the Applicant has set out a scope for the further simulation work which could be undertaken if necessary, and understands the ports' submission to be that they would support the provision of such information to the SoS in advance of any decision
N/A – Final Submissions Simulation Study	PoTLL and LGPL	If, in the light of those recommendations, the Secretary of State considers that more information is needed, e.g. in respect of economic impact assessment or the suggested additional simulation study, then, in the normal way, that further information may be requested of the Applicant and of IPs and OPs during the decision period. The Ports consider that such a further pilotage simulation study in particular would certainly be of great value to the Secretary of State in evaluating the overall impact of the proposed development. Without such a further study, the Ports contend that it is simply not possible for the Secretary of State to make a reasoned assessment of the navigation risks and economic impacts of the project and that therefore the application for development consent should be refused.	The Applicant notes this comment, and its response is as noted above - The position of the Applicant is that there is adequate information before the ExA and the SoS to enable consent to be granted for the project. However, in the event that it is considered that further information is necessary to enable a positive decision to be reached on shipping and navigation grounds, then the Applicant has set out a scope for the further simulation work which could be undertaken if necessary, and understands the ports' submission to be that they would support the provision of such information to the SoS in advance of any decision
N/A – Final Submissions Final Statement	PoTLL and LGPL	The Ports consider that in its current form and based on the evidence before the ExA, the application for development consent should not be granted owing to uncertainty as to the economic impact and navigational safety implications of the scheme. These implications have not been properly assessed, as outlined above and	The Applicant notes this Final Statement, and its response is as noted above - The position of the Applicant is that there is adequate information before the ExA and the SoS to enable consent to be granted for the project. However, in the event that it is considered that further information is necessary to enable a positive decision to be reached on shipping and navigation grounds, then the Applicant has set out a scope for the further simulation work which could be undertaken if necessary, and understands the ports' submission to be that they would support the provision of such information to the SoS in advance of any decision

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		in more detail in numerous representations of the Ports and other IPs.	
N/A – Final Submissions Final Statement	PoTLL and LGPL	Unless the Secretary of State considers, despite the front loading requirements of the Planning Act 2008 regime and the many opportunities given to the Applicant during the Examination to supplement the evidence in favour of the scheme, that further evidence as to impact should, and can properly, be required in the determination period, the Application should be determined with reference to the evidence made available to the ExA. As that evidence is deficient and lacking in a number of important respects, applying the relevant provisions of National Policy Statement EN-3 the application for development consent should be refused.	The Applicant notes this Final Statement, and its response is as noted above - The position of the Applicant is that there is adequate information before the ExA and the SoS to enable consent to be granted for the project. However, in the event that it is considered that further information is necessary to enable a positive decision to be reached on shipping and navigation grounds, then the Applicant has set out a scope for the further simulation work which could be undertaken if necessary, and understands the ports' submission to be that they would support the provision of such information to the SoS in advance of any decision

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