INFRASTRUCTURE PLANNING

THE INFRASTRUCTURE PLANNING (EXAMINATIONS PROCEDURE) RULES 2010

THE THANET EXTENSION OFFSHORE WIND FARM ORDER

Responses to ExQ3 submitted on behalf of the Port of London Authority and Estuary Services Limited

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ExQ3	Question to	Question	PLA and ESL response
3.12	**Navigation: Maritime and Air**		
3.12.6	The Applicant, Port of London Authority/Estuary Services Ltd (PLA/ESL), London Pilots Council (LPC)	**Sea Room at NE Spit Racon buoy** Would the IPs comment on the following: a) Do they consider that the distance of 2.5nm (effectively 1.5nm plus 1nm buffer at the narrowest point) between NE Spit Racon buoy and the proposed TEOW as currently proposed by the Applicant would be a "distance that is acceptable for continued safe pilot transfer operations" in the context of the uses of this sea space.	a) The PLA and ESL would not consider the reduction to 2.5nm (1.5nm with a 1nm buffer) to be an acceptable distance for boarding and landing operations. Although this area is used less frequently than the area directly north of the NE Spit diamond for boarding and landing, it is used by large vessels and contains a complex mix of transiting vessels and vessels on manoeuvre, with a range of commercial, leisure and fishing vessels. The previously-stated requirement for 3 miles sea-room (2nm plus 1 mile buffer) for boarding and landing should apply, regardless of how many vessels are using that particular area for boarding and landing.
		b) Would the embedded risk control of the SEZ as proposed be sufficient in combination with other risk controls proposed by the Applicant to reduce all of the perceived risks to shipping and navigation to As Low As Reasonably Practicable (ALARP) in their opinion.	b) The PLA and ESL cannot agree with the Applicant that the SEZ in combination with other risk controls proposed by the Applicant reduces the perceived risks to shipping and navigation to ALARP; the PLA and ESL still do not have the confidence that the impact of the reduction in sea room in relation to the understanding of on-site operations by ESL is captured in the data and approach to the NRA/NRAA. The primary concern is maintaining safe operational sea room on the inshore route. The proposed reduction of sea room at the NE Spit Buoy and Elbow buoy both leave a much reduced and limited amount of sea room for pilotage operations. A shipping liaison group, enhanced promulgation of information,

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			relocation of buoyage and enhanced optimisation of TEOW line of orientation and symmetry are essentially measures based around further discussion and provision of information about the risks created by the project; they will have very limited impact in terms of mitigating the risks caused by reduced sea room in a route used for boarding and landing services that are critical to ESL, the PLA, and the goods and services that depend on safe shipping in this area.
		c) Is it appropriate for the 1nm safety buffer to be reduced for short durations by the net effect of a 500m “rolling” safety zone.	c) It is not appropriate for the 1nm buffer to be reduced by 500m temporarily or otherwise. Any safety zone implemented would need to be in addition to the 1nm. The area for boarding and landing will be reduced by the proposed scheme, as there is only one area to the north of the NE Spit diamond where there is 2nm plus a 1nm buffer. Therefore there is no flexibility to use alternative locations, such as to the north or at the Elbow when a 500m rolling safety zone is in place. The risk assessment for the NRAA did not cover the construction phase so this has not been assessed with the SEZ in place.
		d) Can relevant sea space between NE Spit Racon buoy and the proposed TEOW reasonably be defined as the zone between the inner limit of an amended Structures	d) The PLA and ESL would agree with this definition of relevant sea space.

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		Exclusion Zone in an arc around the NW sector of the windfarm, extending from a line due west of the SW corner of the SEZ to the currently charted no-anchorage line and from the line of the North Foreland sector light as extended through the NE Spit Racon buoy?	
3.12.7	The Applicant, Port of London Authority/Estuary Services Ltd (PLA / ESL), London Pilots Council (LPC)	**Relocation of Tongue DW pilot diamond** In [REP5-039] the NRAA (revised) at para 168 the Applicant notes: '*The TEOW, depending on final turbine layout may require the relocation of the Tongue Pilot Diamond slightly further north (noting ESL pilot boarding locations as presented in Section 2)*'. In [REP5-069] D5 comments on the Applicant's Deadline 4C Appendix 2 para 114-115, PLA express their concerns that the relocation of the Tongue boarding diamond and consequent costs of so doing have not been considered in the application or evidence to the Examination. In [REP5-070] response to Action Point 17 from ISH8, PLA states '*ESL and PLA therefore believe there will be an increase in traffic at the existing Tongue DWD*' and that '[t]*he reduction in sea room between the Tongue DWD and SEZ (by approx. 0.7nm) would require the Tongue DWD to be*	b) i. The PLA and ESL maintain their opinion that the repositioned Tongue DWD would be approximately 2.4nm NNE of its current location (Action Point 17/ISH8). ii. Whilst difficult to give a specific capital cost the factors that would need to be taken into account are fuel, increase in passage time (and the implications this could have for launch capacity), possible staffing increases/changes (both for ESL and Pilots), increase in maintenance costs and the impact on service resilience because of increased exposure to poor met ocean conditions. iii. There is likely to be increased strain on the pilotage services and pilots due to the longer transfer times. In the longer term the port may become less attractive to vessels, in particular container vessels, which may reduce employment opportunities and have a corresponding negative social and economic effect on the port and related services. iv. Any increase in running costs to ESL arising as a result of

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		relocated (even if there is no increase in usage)...ESL would suggest a relocated Tongue DWD should be approximately 2.4nm North-North-East of its current location.' a) Would the Applicant clarify whether their proposals require the relocation of the Tongue pilot diamond in order for pilot boarding or landing at that location to be at a safe distance from the proposed extension, taking into account the need for the North Thanet cardinal buoy to be displaced as a consequence of the proposed extension and the density of traffic between the TOWF and the Tongue anchorage. b) If any relocation is proposed: i) to the extent that this is known, to where would relocation occur ii) what if any capital costs are incurred iii) what if any additional running costs (revenue costs) are incurred by pilot services iv) who will meet these costs v) is there any basis for a commercial agreement or other secured	the Applicant's scheme should be met by the Applicant. v. The Applicant has been requested to meet these costs but no agreement or commercial arrangement has been agreed to. vi. The PLA and ESL note that the NRAA (para 168) suggests the boarding position may need relocation and the NRA Executive Summary (page v) recommends greater use of the Tongue DW position as key mitigation. ESL and the PLA do not believe that the full navigational effects of relocating the Tongue DW position have been fully assessed or taken into account. The PLA and ESL have not been involved in any risk assessment process with the Applicant which considers an alternative location of the Tongue diamond and are not aware of any such assessment.

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		provision for contribution by the Applicant to these costs; and vi) have the navigation effects of any relocation been taken sufficient account of in the NRA/NRAA? If b) and specifically b) v are responded to, a form of security should be outlined at Deadline 6 and final drafts / confirmation provided at Deadline 7.	
3.12.9	The Applicant	**Implications of pilot station relocation if needed** In [REP3-004] response to point 4 of [REP2-048] from Sunk User Group the Applicant refers back to [REP2-011] Appendix 4 to D2 responses which states "The Applicant, at the Pilotage Study Report undertook analysis of the time, distance and cost involved for launches servicing the various stations and this should be used in understanding the commercial impact". Would the Applicant please clarify with additional detail how this answer and the Pilotage Study report addresses the [REP2-048] point 4?	The PLA and ESL note that this question is for the Applicant to respond to. However, they would like to draw the ExA's attention to a specific element of the pilotage study to be considered alongside the answer the Applicant provides to this question. The Pilotage Study Report (PEIR Review Volume 4 – Offshore Annexes/Annex 10-1) refers, at section 3.3, to two alternative pilot boarding positions (table 3/section 3.3 is unclear on specific relocation areas). ESL has not discussed the commercial impact of relocation in any detail with the applicant. The PLA and ESL also note that the pilotage study uses an assumed launch speed of 24knots, whereas ESL would use 20knots as an average passage speed therefore further increasing the duration of pilotage acts due to relocation.
3.12.15	Port of Tilbury London Ltd /	**Future growth of shipping traffic**	a) The PLA and ESL are concerned about the figure of 10% growth being used to reflect the growth in usage of the

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	London Gateway Port Ltd (POTL/LGPL), Port of London Authority / Estuary Services Ltd (PLA)and London Pilots Council (LPC)	In [REP5-012] D5 Appendix 7 para 81 the Applicant notes that Mr Crockett for POTL/LGPL accepted at ISH8 a figure of 10% growth for the inshore route and at para 92 that an increase in "larger vessels which would necessarily use the ...SUNK pilot boarding ground"; and at para 98 the Applicant states "...as vessel size increases use of SUNK over NE Spit boarding grounds would therefore be apparent...". Would POTL/LGPL, PLA and LPC: a) confirm this understanding of 10% growth of use of the inshore route	inshore route. When conducting an NRA, the figure for the increase in use of a route should include all users, commercial and otherwise. They are concerned that this 10% figure appears to conflate port growth with growth in usage of the inshore route. It would appear that the 10% figure includes the route to the East of TOW (not just the inshore route) which can be used by larger traffic bound for ports other than London and Medway. This is a route frequently used by very large vessels bound for Harwich. Growth of inshore route useage should encompass all users, commercial or otherwise, when conducting an NRA. It does appear that route usage growth has given way to port growth. It is not clear whether the 10% traffic growth is just for the inshore route. We have assumed that it is not, so includes traffic that uses the route to the East of TOW which can be used by larger traffic bound for ports other than London and Medway; this is a route is frequently by very large vessels bound for Harwich.
		b) provide a reasoned estimate for growth of traffic using the NE Spit Pilot Boarding Diamond	b) Overall, future growth of traffic using the NE Spit is expected to be in line with the Ports' projections for future growth. In addition, a capital dredge of the North Edinburgh Channel or Fisherman's Gat would bring in additional traffic which currently uses the Sunk, which could be an additional 1000 vessels per year. This is an estimate for vessels potentially engaged in pilotage at the inner boarding ground rather than for all shipping.

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		c) with reference to their submissions at D5, confirm whether larger vessels would necessarily use the SUNK approach to the ports	c) Vessels that are too deep to use the Princes Channel would necessarily use the North channels via the Sunk deep water route or Long Sand Head. However they do not necessarily have to use the Sunk Pilot station. Vessels such as the LNG ships bound for the Medway take Pilots in the vicinity of the Tongue and then transit to the north. The future dredge of the North Edinburgh Channel or Fishermans Gat will allow larger vessels, especially those approaching the ports from the south to use the NE Spit instead of the Sunk and optimise their journeys in and out of the Thames and Medway. Even if growth was focussed on larger vessels, a good proportion could still be served at the NE Spit, it is not a fair assumption that all large vessels will only use/or focus on the Sunk. The importance of the NE Spit will also increase as a proven bad weather station. This is because larger ships face a larger impact when they are delayed and the NE Spit currently provides a more resilient operation than the Sunk when time 'off-station' is considered.
		d) what net difference is likely to be made to the overall traffic movements to and from the Ports of London and Sheerness over the life of the TEOW project due to increase in ship movements to and from the PoT and DPWLG	d) These Ports, rather than the PLA and ESL, are be best-placed to advise on projected increases in ship movements to and from the ports.

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		e) provide evidence of what difference to the volume and profile of traffic using NE Spit PBD (whether or not via the inshore route) would be likely if a capital dredge were made of North Edinburgh Channel or Fisherman's Gat (as have been stated in evidence to this Examination as being under consideration although not as yet as firm project proposals), in particular the likely growth in Class 1 and 2 and other large vessels	e) The feasibility studies for the North Edinburgh Channel or Fisherman's Gat channel dredge estimated that there were just over 1000 vessels in a year of drafts between 8m and 13m (based on 2017 data) that used the Sunk, but approached from the South. For these vessels it would have been feasible for them to have taken pilots at the East Spit and used the North Edinburgh Channel or Fisherman's Gat, as a more optimal route. The majority of these vessels fall into Class 1 or 2, either by length, draft or both. From an ESL perspective this could lead to a significant upturn in traffic at the NE Spit PBD, particularly improving potential for class 1 vessels to use the southern route (class 1 vessels accounted for 23% of overall ESL boarding and landing in 2018).
		f) what might be a likely range of the quantum of economic and commercial effects on the efficient use of tidally constrained berths at the London and Sheerness ports by adding approximately an hour's inbound steaming time should masters carrying time-critical or time-sensitive cargo decide (based on "dynamic risk assessment") to divert passage around the east of the Thanet WF and board a pilot at NE Spit instead of	f) The economic and commercial effects on berths at the London and Sheerness ports are best identified by those Ports. In terms of time the effect on any diversion around the eastern side of the windfarm would be at least 1 hour, which could be increased by poor met ocean conditions. In terms of distance the diversion is 14nm (if the vessel comes to the inner boarding position) or 11nm (to the vicinity of current Tongue DWD). The additional time would have a significant impact on the cost-effectiveness of ESL's pilot and boarding operations and knock-on economic and commercial effects on vessels using those ports.

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		otherwise taking the shorter route to the NESP pilot diamond?	
3.12.19	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS)	**Embedded and additional risk controls in NRA and NRAA** In [REP5-012] D5 Appendix 7 para 81 the Applicant states that "*the embedded and additional risk controls identified as part of the Addendum NRA do not need managing by the PLA*" and at paras 82 and 90 commits to 2 lines of orientation that would ordinarily be left to later confirmation with MCA and TH. Would the PLA, MCA and THLS comment on: a) whether they agree with this statement; and	a) The PLA and ESL consider that the promulgation of information (enhanced or otherwise) will need the PLA to inform shipping, and London VTS. It is also possible that the PLA would need to give out navigational warnings if there are works in the area.
		b) whether it addresses the concerns raised in earlier representations	b) In the PLA and ESL's view, the Applicant's statement does not address the concerns raised in earlier representations. The extent to which the PLA and ESL agree with the mitigation proposed is set out at 3.12.21.
		c) whether there are other considerations of involvement by IPs in maintaining the effectiveness of such embedded or additional risk controls that should be	c) See 3.12.21: no further comment

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		considered by the ExA	
		d) whether the commitment made by the Applicant to 2 lines of orientation (thereby proposed as embedded rather than additional mitigation) changes the IPs' view on the "double-counting" of embedded and additional mitigation?	d) No further comment
3.12.20	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS); POTL/LGPL and PLA and London Pilot Council (LPC); Thanet Fisherman's Association (TFA); UK Chamber of Shipping (UkCoS); Port of SheernessLtd	**Textual changes to the NRAA made at deadline 5** Would the IPs comment on the recent textual changes in regard to traffic projections made at Deadline 5 to the NRAA (rev B) [REP5-039] insofar as relevant to this DCO application: a) Para 121: *"...slightly downward trend in chargeable ship arrivals over recent years..."* albeit *"...PLA figures do not include other estuary ports..."*	a) The 'All Trade' figures for 2018 (including intra-port information) indicate that there has been a slight downward trend in ship arrivals over 2018 in particular. However, the ships that have been coming into the Port are getting bigger and so there has not been a downward shift in tonnage etc. coming into the Port. In addition, data gathered by the PLA for the first 3 months of 2019 shows an 11% rise in the number of ships entering the Port, indicating an upward trend in vessel movements. ESL served 622 vessels over 199.9 loa in 2016 and 757 in 2018, an increase of approximately 21%.

ExQ3	Question to	Question	PLA and ESL response
	(PSL)		
		b) Para 122: *"...precautionary 10% uplift in hazard likelihood has been applied...in line with other OWF NRA assessments...and is reflected in the Tilbury 2 NRA..."*;	The PLA and ESL do not agree with the 10% increase in shipping/vessel growth for the TOW extension area and therefore do not agree that a pro-rata increase in risk of 10% is still applicable. The Tilbury 2 NRA was completed in 2017 and already in this year we have seen an upturn in trade, so these forecasts need updating. Given the complicated and varied nature of the traffic transiting and manoeuvring in the vicinity of the proposed Thanet Extended Offshore Windfarm, and that the proposed extension is in open waters rather than a river, it is not appropriate to draw a direct comparison with the Tilbury 2 development. Furthermore, the Tilbury2 risk assessment was for a specific part of the river and would not be affected by growth in some other areas such as London Gateway Port.
		c) Para 123: *"...It is important to note ...[that the MMO] future analysis for the region assumed that overall freight tonnage would increase, by between 1% and 2% per [sic] the trend for larger vessels would continue, and that the Thanet Extension OWF would be consented*."	c) In the MMO 1127 future analysis document table 85 (Section 13.4/page 307) under the local stewardship scenario it suggests 1% annual growth in tonnage between 2017 and 2036, it also assumes slower growth for international shipping but an increase in smaller coastal vessels and windfarm maintenance vessels with regional shipping routes likely to show a larger increase in density. The MMO future analysis would not appear to suggest the increase in freight will be handled by fewer but larger ships, it actually appears to support an increase in traffic on localised regional routes and suggests an increase in smaller regional ports rate of growth.

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		d) Para 124: downward or static trend for recreational and fishing activity	d) The PLA and ESL do not agree with a long term projection of static/negative growth in the recreational sector. The RYA water sports participation survey 2017 does suggest a relatively small amount of growth in vessel ownership however it also recognises the South East as one of the highest use areas. It seems a broad assumption to relate national recreational boat ownership with localised recreational activity. The RYA survey is also, we believe, based on UK based survey participants only. The inshore route is frequently used by vessels crossing from the channel from Holland and Belgium who would not be considered by a study of domestic recreational sea users. It is also noted that NRA Section 6.3 (Summary of Future Traffic Profile) suggests a “steady increase” in recreational and fishing vessels although it is unclear if this is included in the 10% overall uplift by the applicant. The MMO future analysis document (section 11.4/table 67/page 228) also suggests potential growth for the fishing industry in the south east with regard to stock recovery over 20 years and the local stewardship scenario places emphasis on this growth having a positive impact on the 10m (and under) fleet specifically. The vast majority of fishing vessels operating around the inshore route and TOW are under 10m. We would suggest the national fleet numbers do not necessarily reflect regional fishing activity.

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		e) Para 125: additional WSV (traffic) associated with the TEOW; "*WSV engaged on other projects within the Thames Estuary and transiting through the study area are anticipated to remain largely the same...based on consultation.*"	e) The PLA and ESL consider that the estimate for WFSV traffic increase is highly conservative given the relative youth of the offshore wind industry. Recently, the PLA has seen the London Array windfarm increase from 4 onsite WFSVs to 18 because of a summer maintenance programme. This has included work at night which was not previously the case. Although currently TOW does not work at night, this could change in the future. The PLA and ESL also note that in the NRA/Section 7.3.2/Results (collision modelling) it tests a scenario of WFSVs doubling on site and not remaining static for the Thanet wind farm. The MMO future analysis document (section 13.4/table 85/page 307/308) suggests an increase in wind farm maintenance vessels under the *Nature@Work* and *Local Stewardship* categories. It is difficult to understand what the predicted increase in WFSVs would be for the construction period (Annex D to Appendix 31 of Deadline 5/page 17). If WFSVs are provisionally incorporated within *commissioning vessels,* this would mean an estimate of 7 vessels making a total of 480 trips over a 3 year period. This would give an average return of 160 trips per year across, potentially, 7 vessels. This appears very low given our experience of traffic volume during construction or high maintenance periods for offshore

ExQ3	Question to	Question	PLA and ESL response
			wind farms.
3.12.21	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS); POTL/LGPL and PLA and London Pilot Council (LPC); Thanet Fisherman's Association (TFA);UK Chamber of Shipping (UkCoS); Port of Sheerness Ltd (PSL)	**Additions to the NRAA made at deadline 5** Would the IPs comment on the recent textual changes in regard to risk assessment made at Deadline 5 to the NRAA (rev B) [REP5-039]: a) Para 135: Additional Risk Control: Enhanced promulgation of information (redrafted); Shipping and Navigation Liaison Group Terms of reference (redrafted); Post-consent Monitoring (redrafted); Enhanced optimisation of TEOW line of orientation etc (redrafted); Aids to Navigation etc (redrafted);	a) **Enhanced Promulgation of information:** The PLA and ESL believe this constitutes embedded mitigation**.** The issuing of NTMs is already in place and they are still unsure of how this would be enhanced. It is also difficult to see the advantage of issuing the WFSVs passage plans as they will often take the same track toward the existing site. The PLA and ESL are unsure of how realistic it is to expect the Applicant's WFSVs to be able to adhere to the timings published in a passage plan given the need, we assume, for onsite vessels to have flexibility. It is also difficult to see how NTMs can reduce the issues of reduced sea room, the local operators will already be aware of the reduction in sea room and will be trying to operate within it. **Shipping and Navigation Liaison Group ("SaNL Group"):** Whilst the final structure of this group is to be determined and as such the PLA and ESL appreciate this is only an outline of the group's role in making recommendations for mitigation, they are still unsure of its overall effectiveness in helping reduce the issues caused by a physical reduction in sea room. Whilst it is agreed that a group of this sort is a good idea, the PLA and ESL do not think that it should be considered as a form of mitigation itself. Instead it should be viewed only as a tool for assessing issues and then trying to establish further mitigation in the future. ESL and the PLA also believe that any shipping related issues identified on the inshore route would result in third party management either by

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			ESL, the PLA, MCA, Trinity House. Although the group could theoretically advise on what mitigation could be introduced, it should not be regarded as mitigation in and of itself. **Post Consent Monitoring:** This could be a good information tool to inform the SaNL Group but it will be a retrospective tool for traffic analysis. Again, the PLA and ESL are unsure how effective this would be, particularly as it is assumed that it will probably be AIS based and therefore not cover all vessels. The smaller, more at risk vessels, are less likely to have AIS. The PLA and ESL do not believe that this can be considered as mitigation for reduced sea room. **Aids to Navigation/Buoyage:** The PLA and ESL would consider aids to navigation to be embedded mitigation because the two main buoys (Thanet North and Drill stone buoy are already in place) and will only require moving. Any additional buoyage would, it is assumed, be related to the construction phase and whilst aiding navigation will likely serve to further reduce sea room on the inshore route.
		b) Paras 141 to 144 and Table 19: New insertion in rev B;	b) Currently there have been no discussions regarding risk control effectiveness per se. The current review of risk control effectiveness is based upon the Applicant's weighting and the PLA's 2015 risk assessment (which obviously was not reviewing the area with reduced sea room with TEOW in place). Whilst noting the benefit of liaison between relevant

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			authorities and stakeholders the PLA and ESL do not agree with the risk mitigation scores, including that which has been attributed to the Shipping and Navigation Liaison Group. It has been given an effectiveness score of 30% against the likelihood of collisions and contacts. However, it is the implementation of any additional mitigation identified and implemented that will reduce the risk, rather than the existence of the Group itself, as explored above.
		c) Para 145: *"...the assessment of cost benefit in the original NRA remains valid*."	c) The PLA and ESL have not seen a full cost benefit analysis and do not believe that one was contained in the original NRA.
		d) Para 146: Summary results of the hazard workshop (New Annex C to Deadline 5 submission) *"...ID's 4-18 [sic]...were updated based on IP comments...*";	d) The PLA and ESL recognise that their concerns regarding broad groupings of vessels types in the NRA were reviewed and partially addressed. However after the workshop they still have concerns about the breakdown of hazard types. For example a class 1 or 2 vessel in collision with *any other* vessel is too broad a category. In the original NRA the hazards logs were more specific but an awareness of the time pressures at the workshop lead to a broader approach. The PLA and ESL believed there would be a final presentation after the workshop which would be similar to that in the original NRA. It has become clear that the Applicant does not intend to produce such a presentation. It is noted that the scores have been updated following the hazard workshop, but the scores are still based on a different

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			methodology to that used in the original NRA. For example, the methodology used at the workshop to assess consequence was not the same as that used for the original NRA. In the original NRA each hazard was scored for the total consequence. e.g. for a collision between two vessels the consequence was scored for the combined consequence to both vessels. However, at the workshop on 29th March the hazards were only scored for the consequence to one vessel. When assessing the likelihood of a collision for a Class 1 or 2 vessel, the most likely and worst credible consequences were assessed. The consequence to the Class 1 or 2 vessel was scored, but the score did not take into consideration the consequence to the vessel with which it collided. It was explained to workshop participants that the consequence to the other vessel would be scored in a separate hazard for the other vessel. However, this leads to an underscoring of the risk. For a collision between a Class 1 or 2 vessel and a fishing vessel the consequence to the Class 1 vessel is scored in one hazard and the consequence to the fishing vessel is scored in a separate hazard. Therefore the total consequence of the collision is split between two risk scores, giving a lower score for each than if they had been combined.
		e) Ranked Hazard list (now Table 20) changed to omit columns for individual baseline and inherent risk scoring with colour grading; the highest inherent risk score now being 4.80	e) The PLA and ESL can see no reason why the two columns have been omitted from revision B.

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		(previously 4.34); residual risk scores added to rev B.	
		f) Para 147: hazards with baseline risk ALARP-rated now seven in number (previously four in number)	f) Four out of the seven hazards referred to are risks of collisions, where the PLA and ESL believe the methodology for assessing them to be flawed. Therefore the PLA and ESL do not agree that there are seven hazards with a baseline risk ALARP.
		g) Paras 152-154: New paras on hazard likelihood including a return rate for all commercial vessel collisions of 1 in 10 years to reflect stakeholder concerns	g) In the original NRA the baseline collision likelihood was 1 in 6 years (NRA/section 7.3.2/page 80), within 10nm of the development. It is difficult to understand how the original NRA had an overall analysis of all collisions resulting in a baseline of 1 in 6 reduced to 1 in 4 (post collision modelling). The NRAA does not present the overall collision rate, just the rate for commercial vessels. The risk assessment scores cannot be compared, not only because of the different hazard types, but because of the different methodologies utilised. The 2015 PLA risk assessment was scored on the overall consequences of a collision to both vessels, whereas the NRAA risk assessment was only scored for the outcome to one vessel.

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		h) Para 157: hazards with inherent risk ALARP-rated now eight in number (previously four in number)	h) Four out of the eight hazards referred to are risks of collisions, where the PLA and ESL believe the methodology for assessing them to be flawed. Therefore they do not agree that there are eight hazards with inherent risks at ALARP.
		i) Paras 158-160: New text on residual risk assessed;	i) These hazards are at the low end of ALARP as defined in the NRAA, but the PLA and ESL do not consider the collision risks to be at the low end of ALARP, due to the way in which they have been assessed and scored. (see d above)
		j) Paras 169-173: New Text on Risk Control Validation;	j) See Responses to ISH8 Action Point 20 (PLA 23/ ESL23).
		k) Para 174: Added conclusions text on hazard consequence scores provided by PLA/ESL at D4C "*...which has been used to update some hazard consequence scores*."	k) Some of the hazard consequence scores have been updated, but the scores for collision risks have not been re-scored to reflect the same methodology that was used for scoring the original NRA.
		l) Para 178: Added text on feedback from DPWLG on risk consequence scores	l) Some of the consequence scores have been updated but, again, the scores for collision risks have not been re-scored to reflect the same methodology that was used for scoring the original NRA.

ExQ3	Question to	Question	PLA and ESL response
		m) Para 184: New text varying the Recommendations made in the revA NRA Addendum.	m) Paragraph 184 of the NRAA appears to undermine the principle of the SaNL Group. The Applicant appears to be declaring that the PLA/ESL are the primary navigation users so therefore any navigational issues should be resolved by them and the MCA. This would seem to suggest that the NRAA's conclusion that all risks have been reduced to ALARP means that any future navigational issues around TEOW are not as a result of the wind farm. If that was the intended meaning, the PLA and ESL cannot agree to this.

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On behalf of the Port of London Authority and Estuary Services Limited
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