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APPLICATION BY VATTENFALL WIND POWER LIMITED FOR A DCO FOR THE THANET EXTENSION OFFSHORE WIND FARM

DEADLINE 6 REPRESENTATIONS

OF

PORT OF TILBURY LONDON LIMITED AND LONDON GATEWAY PORT LIMITED

28 MAY 2019

1. SUMMARY

1.1 This document is the joint Deadline 6 Representation of Port of Tilbury London Limited (PoTLL) and London Gateway Port Limited (LGPL) (the Ports). In summary, this documents covers:

(a) a response to the Applicant's Deadline 5 submissions in Section 2;

(b) a response to the Examining Authority's Third Suite of Written Questions in Section 3;

(c) a final Statement of Common Ground set out in Section 4 and include at Appendix 1;

(d) comments on the Examining Authority's DCO commentary in Section 5; and

(e) a response to the ISH8 shipping and navigation hearing action points in Section 6.

2. RESPONSE TO THE APPLICANT'S DEADLINE 5 SUBMISSIONS

2.1 Table 1 below sets out a brief response to the submissions of the Applicant made at Deadline 5. The Ports have responded to specific remarks/excerpts from the Applicant's submissions where necessary. Full DCO Examination Library references are provided below for ease of reference.

2.2 **Table 1:**

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
REP5-012	Appendix 7 to Deadline 5 Submission: Response to EXA Action Points arising from Issue Specific Hearing 8 – Shipping and Navigation (April 2019)	Para. 91	*It is noted that Vince Crockett at ISH8 on behalf of London Gateway noted that the growth for the inshore route was unlikely to be greater than 10%*	A response to this comment is provided in the accompanying Deadline 6 document by POTLL/LGPL in response to EXQ 3.12.15(a).
		Para. 96	*Also it is important to note that "MMO1127: Futures analysis for the north east, north west, south east and south west marine plan areas" report of June 2017 notes in its assumptions and impacts under the future scenarios for ports, shipping dredging and disposal for the south east region that an allowance be made for annual growth in terms of freight tonnage of 1% between 2017 and 2027 and 2% between 2028 and 2036 under the business as usual scenario*	It is noted that the MMO1127 document refers to annual growth. The compound effect of a 1% increase for 10 years followed by a 2% increase for 8 years is a total increase of 29.4% (noting this would only relate to the period from 2017 to 2036 whereas the 'Reasonable Planning Horizon' with regard to the TEOWF has been defined as to 2054 (i.e. 35 years from 2019)). If the lower figure of 1% per annum was applied to the period 2036 to 2054 then the total compound growth from 2017 to the end of the Reasonable Planning Horizon would equate to 54.8%. It is accepted that these figures relate to growth in terms of freight tonnage as opposed to ship numbers. As indicated by POTLL and LGPL's Deadline 2 submission (Doc Ref: REP2-050) a 22.5% increase in freight tonnage between 2016 and 2018 equated to an increase in vessel numbers of 566 (from 3638 to 4204), equivalent to a 15.6% increase. Applying the same correlation to the 54.8% increase in freight tonnage figure would give rise to a 38% increase in ship numbers. It is also noted that growth of shipping

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
				associated with the Thames Estuary is not occurring in a "usual business scenario" and that the significant displacement of trade from other UK ports towards Thames Estuary ports (a result of the significant additional and consented infrastructure along the Thames) is likely to result in increased growth from the level suggested in the MM01127 document.

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
REP5-024	Appendix 16 to Deadline 5 submission - Response to LPC Deadline 4C submission	Page. 13, Item 2.3	*This is again mis-leading as the vessel had transited through Knock John Channel at the southern end of the estuary. The Channel here is only 2 cables wide (370m 2/10th nm) so assuming the vessel transited the middle of the channel it will be only 1 cable or 185 metres from danger. The vessel would not be able to alter course to mitigate a collision*	It is noted that the document titled 'The Shipping Industry and Marine Spatial Planning - A Professional Approach - November 2013' which was submitted by the Applicant to the examination at Deadline 4B [REP4B-003]) states: "*Non mariners often consider that offshore sea lanes do not need much more 'corridor width' than in-port channels, which may be measured in hundreds of metres. They fail to take into account that service and support levels in port differ to those offshore, as do navigational accuracy and visual references.*" In light of the above text in the Marine Spatial Planning Document, the statement made by the Applicant is questionable. The use of hundreds of metres of width along with the assumptions made about danger and the ability to alter course are akin to what the Marine Spatial Planning Document would characterise as the considerations of non-mariners. This calls into question the level of expertise that has informed the statements made by the Applicant in respect of the assessment of suitable sea space.

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
REP5-024	Appendix 16 to Deadline 5 submission - Response to POTLL/DPWLG Deadline 4C submission	Page 7, Item 9	*The Applicant notes that the DfT data shows an increase in container ship calls - however, there is a corresponding decline in container ship calls to the port of Medway and also Felixstowe. Overall ship calls have therefore remained broadly level*	Vessels travelling to/from the port of Felixstowe would not pass through the inshore channel and thus the Applicant's statement is somewhat misleading. It is noted that the Applicant has confirmed in its statement that there has been a decline in vessel calls to Felixstowe whilst overall ship calls have remained broadly level. It must therefore follow that there has been an overall increase in vessel calls to the Thames Estuary.
REP5-018	Appendix 12 to Deadline 5 Submission: Written Summary of Vattenfall's Oral Case put at the ISH8 - Shipping and Navigation	Para. 76, Item (e)	In relation to future traffic and in particular the statement in the HR Wallingford report (section 12.1.4) that the 22.5% increase in port business accounted for the 10% assumed growth in the NRA and Addendum NRA (see para. 122): (a) The 22.5% figure, at para. 12.1.4 of the HR Wallingford report within the Statement of Evidence, purported to indicate growth in the ports' business; (b) It was accepted that growth in business did not translate directly into a commensurate percentage growth in vessel movements, for reasons including the use of larger ships;"	The figure of 22.5% in the HR Wallingford report originates from data provided in the table on page 2 of the Deadline 2 submission of POTLL/LGPL (Document ref: REP2-050). This identifies an increase in total throughput at POTL and DPWLG from 19,276,273 tonnes (2016) to 23,614,378 tonnes (2018). The table also identified that such increase in throughput corresponded to an increase in vessel numbers from 3,638 to 4,204, an increase of 15.6%.

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		Para. 76, Item (e)	(e) Figure 4.1 showed an overall trend of decreasing traffic when both aspects of the figure were considered together (albeit that VC considered that it was important to look at the future)	Figure 4.1 actually demonstrates a small increase in vessel numbers over the 4 ports and 8 year period considered (an increase of about 100 vessel arrivals). If only the ports which are served by the inshore channel are considered (i.e. Felixstowe and Southampton are removed) then Figure 4.1 demonstrates an increase of approximately 550 vessel arrivals (equal to a 35.5% increase) over this 8 year period.

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
		Para. 89	Simon Moore had earlier stated, in relation to qualitative considerations in this area, that ships entering the NE Spit racon buoy area, will have a passage plan approved by the master. SMO explained: this area there has two functions there. Ships transiting down to the pilot boarding area will be doing so at a relatively slow speed and assessing the conditions and the traffic density on the way down. The Master will not turn into a narrower area of sea room without formally assessing the conditions beforehand. The ship will produce a passage for its intended voyage as it is required to do and the master will approve that. On a normal day in average conditions this is fine. Then what happens as the ship gets closer to the intended destination the weather becomes more relevant and the ship will complete a dynamic risk assessment of the conditions. The bridge team will be watching out for traffic whilst monitoring the tidal conditions and monitoring the leeway caused by the wind. The master will make an assessment to see if the ship has the manoeuvring characteristics to balance out the anticipated met ocean conditions. If the master feels he	It is not disputed that masters of vessels will undertake dynamic risk assessment on approach to channels and other areas of sea. As a result, the impact of an increase in risk will not necessarily lead to an increase in accident occurrence as the master of a vessel will take actions to avoid such risk. Actions and measures taken to avoid risk (for example seeking an alternative (longer) route) will result in an economic impact for the shipping organisation, cargo owners and potentially the destination port. The perception of risk is therefore a material factor in considering whether economic impacts will occur as a result of the wind farm extension. By focusing on the risk/hazard, the Applicant has unfortunately failed to consider the economic impact of the alternative action, resulting from the perceived increase in risk. In this respect its DCO application was, and still is, lacking in a material way.

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
			cannot balance out these conditions he would not proceed into that sea area. (our underline)	

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
		Para. 94	*Ed Rogers further explained by way of example that when considering likelihood scores the process identified there was a requirement to look at historical information; and it was also clear to him that future vessel movements were taken into account, as there was added 10% of likelihood of hazard occurring*	The Ports are not convinced that the assumption that a 10% increase in vessel numbers equates to a 10% increase in risk is a sound and robust conclusion. This is because the increase would mean that not only would there be 10% more vessels which could have an accident but there would also be 10% more vessels for the original vessels to have an accident with. To use a worked statistical example of the scenario of a vessel to vessel collision, if 100 vessels occupy an area of sea, any one vessel can potentially impact 99 other vessels. Thus there are 99 potential outcomes for each of the 100 vessels and therefore 9900 potential outcomes. If the number of vessels is increased to 110 then any one vessel can impact 109 other vessels. Thus each of the 110 vessels has 109 potential outcomes and therefore the there is a total of 11,990 potential outcomes. In the worked example given, a 10% increase in the number of vessels results in a 21% increase in the number of potential outcomes. It can therefore be seen that a 10% increase in vessel numbers does not equate to a 10% increase in risk.

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Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
		Para 105	*SL asked ER to respond to the ports' concern with consequence scoring, albeit raised after the workshop. ER explained that after the workshop there was a telephone conference during which there was no specific request for increasing individual hazard scores.*	The Ports consider that the characterisation by the Applicant (given both at issue specific hearings and in written representations) of the timeline following the workshop has been somewhat unclear. The Ports wish to provide clarity on this point. The statement highlighted at paragraph 105 indicates that there was no request for increasing individual hazard scores. This is, however, contradicted by other statements made by the Applicant, for example, in paragraph 29 of (REP5-018) in which it is stated that *"There was one point raised by the ports in the evening after the meeting finished* [29 March 2019] *relating to consequence scores*". In addition, at point 3.6 in the Responses to PLA/ESL D4C representations (REP5-024) it is stated that: *No specific request for changes in hazard scoring on either the 4 hazards scored at the workshop or the 14 hazards as initially scored by Marico Marine were received after the workshop despite requests being made for review of the hazards not scored at the workshop, with the exception of DPWLG who requested increase to some consequence classifications input scores on the day of releasing the NRA*

Document Reference	Document Title	Page/Para. Reference	Applicant's Representation excerpt	POTLL/LGPL Response
				Addendum [5 April 2019] – *which was included as a sensitivity.* POTLL and DPWLG wish to make it clear that they did raise concerns in respect of the Hazard scores promptly following the workshop.

3. **RESPONSE TO THE EXAMINING AUTHORITY'S THIRD SUITE OF WRITTEN QUESTIONS**

3.1 Table 2 below sets out the Ports' response to the Examining Authority's third suite of written questions.

3.2 **Table 2:**

ExQ3	Question to	Question	Response
Navigation: Maritime and Air			

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ExQ3	Question to	Question	Response
3.12.6	London Pilot Council (LPC); Port of London Authority / Estuary Services Ltd (PLA), Port of Tilbury London Ltd, London Gateway Port Ltd (PoTL/LGPL), UK Chamber of Shipping (UKCoS); Trinity House (THLS)	**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. 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. 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. d) Can relevant sea space between NE Spit Racon buoy and the	(a) The Ports are of the view that further assessment is required to fully understand the sea room requirements for pilot operations in the area referred to. Further assessment is required in particular for the future baseline scenario, particularly when such operations are taking place alongside vessel transits. (b) As above for (a) notwithstanding the Ports' positon that an SEZ is not the appropriate means through which to secure mitigation (the Ports have proposed an Order Limits reduction). (c) The Ports defer to the response of PLA/ESL on this matter. (d) The Ports defer to the response of PLA/ESL on this matter.

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ExQ3	Question to	Question	Response
		proposed TEOW reasonably be defined as the zone between the inner limit of an amended Structures Exclusion Zone in an arc around the NW sector of the windfarm, extending from a line due west of the SW corner of the SEZ to the currently charted no-anchorage line and from the line of the North Foreland sector light as extended through the NE Spit Racon buoy?	
3.12.15	Port of Tilbury London Ltd / London Gateway Port Ltd (POTL/LGPL), Port of London Authority / Estuary Services Ltd (PLA) and London Pilots Council (LPC)	**Future growth of shipping traffic** 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; and b) provide a reasoned	(a) The Ports do not accept that 10% is a robust assumption for growth of vessel numbers in the inshore route, or that Mr. Crockett conceded such during his verbal representations at ISH8. Mr. Crockett made the point that discussing aggregated growth is somewhat misleading as it is the growth in certain sectors (for example container traffic where growth is anticipated to be high) which will inform the quantum of economic impact. The reduction in sea room is likely to disproportionately affect larger vessels (noting, that the Applicant's pilot simulation study only considered vessels up to 240m). It is therefore relevant that, notwithstanding the Applicant's aggregate growth assumption of 10%, it is the Applicant's contention that there will be a trend towards larger vessels and thus the future baseline growth in vessels greater than 240m LOA is likely to be more significant. Growth in large vessel-orientated sectors such as container traffic therefore needs to be taken in to consideration and weighed appropriately when considering the economic impact of the proposals. (b) As the data available to the Ports relates only to POTL/DPWLG vessel traffic, it is not possible to comment on growth in wider (total) usage of the NE Spit Pilot Boarding Diamond. The HR Wallingford Report (REP4C-016) identifies that in the year to 30 November 2018 a total of 754 and 160 POTL and

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ExQ3	Question to	Question	Response
		estimate for growth of traffic using the NE Spit Pilot Boarding Diamond; and c) with reference to their submissions at D5, confirm whether larger vessels would necessarily use the SUNK approach to the ports; and 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; and 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	DPWLG bound vessels respectively utilised the NE Spit. Within the Ports' Deadline 1 representations (REP1-148) at Table 3.2 of Appendix A, the Ports identify projected growth in throughput of approximately 285% and 265% respectively between 2018 and 2038. If these growth proportions are applied to the numbers of vessels utilising the NE Spit identified above then this would suggest that in the period to 2038 the number of POTL and DPWLG bound vessels utilising the NE Spit would grow to 2149 and 424 respectively, an increase of 1395 and 264 vessels respectively. It is acknowledged that there is a trend towards larger vessel sizes which may reduce vessel numbers using the NE Spit to an extent as the very largest vessels would have a draft above that which could be served at the NE Spit. As highlighted in the Ports' Deadline 4C submissions (REP4C-016), the expectation is that the majority of the growth in vessel sizes will be represented by a shift towards vessels of 280 – 320m LOA and such vessels are capable of boarding a pilot at NE Spit. (c) Table 5.2 of the HR Wallingford Report identifies a ruling depth (chart datum) of 8.1m in the Princes Channel. On the basis of a 4.8m maximum tide height and 1.3m under keel clearance, it is considered that vessels of up to 11.6m draft could route via the Princess Channel. Deeper draft vessels will be required to use alternative routes, such as the SUNK. (d) It is difficult for the Ports to provide an empirical assessment of growth in overall traffic movements to and from the Ports of London and Sheerness as the data the Ports have available relates only to POTL/DPWLG. However, information submitted by the Ports in their Deadline 2 representations (REP2-050) identifies that a 22.5% growth in throughput between 2016 and 2018 equated to a 15.6% increase in vessel numbers. Such data represented a ratio of throughput growth against vessel number growth of 0.69. If such a ratio is applied to the predicted throughput growth identified within Table 3.2 of Appendix A of the Ports' Deadline 1 submissions (REP1-148,) (i.e. 285%

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ExQ3	Question to	Question	Response
		although not as yet as firm project proposals), in particular the likely growth in Class 1 and 2 and other large vessels; and f) what might be a likely range of the quantum of economic and commercial effects on the efficient use of tidally constrained berths at the London and Sheerness ports by adding approximately an hour's inbound steaming time should masters carrying time-critical or time-sensitive cargo decide (based on "dynamic risk assessment") to divert passage around the east of the Thanet WF and board a pilot at NE Spit instead of otherwise taking the shorter route to the NESP pilot diamond?	and 265% respectively for the 20 year period to 2038 as set out in response to (b) above) this would result in a growth in vessel numbers of 197% and 183% respectively. This is considered to be a robust estimate given that the limitations of passages such as the Malacca Straits will limit the continued future growth in ship sizes. In terms of growth in overall traffic movements to and from the Ports of London and Sheerness, the Applicant's Deadline 5 submission (Response to ExA Action points arising from Issue Specific Hearing 8) (REP5-012) refers to *'MMO1127: Futures analysis for the north east, north west, south east and south west marine plan areas'* and notes that this suggests that an allowance be made for annual growth in terms of freight tonnage of 1% between 2017 and 2027 and 2% between 2028 and 2036 under the business as usual scenario for the South East region. Such growth rates would result in a compound growth of 29.4% between 2017 and 2036. Noting the EXA's definition of the reasonable planning horizon as 35 years from 2019, if a conservative approach was taken and the lower 1% annual growth figure was applied to the period 2036 to 2054 then the compound growth in freight tonnage would be 54.8% over the reasonable planning horizon. If the higher 2% figure was assumed for the period 2036 to 2054 then the growth would increase to 84.8%. Applying the freight/vessel number growth ratio of 0.69 discussed above this would result in growth of 37.8% to 54.5% in all vessel numbers over the reasonable planning horizon. It is also to be noted that in 2017 vessel movements to the Ports represented approximately 50% of all vessel movements to London Ports (3872 out of a total of 7800 vessel movements). With predicted growth in vessel movements to POTL/DPWLG of 197% and 183% respectively for the period 2018 to 2038 (as set out in response to (d) above), for overall growth to be within the Applicant's overall 10% growth assumption, all other trade to London Ports would need to decline by 73%. A decline of 73% for all other London Ports is

ExQ3	Question to	Question	Response
			neither predicted nor evidenced in the Applicant's submissions or elsewhere. (e) The Ports are not aware of the details of any potential future dredging of the North Edinburgh Channel and are therefore unable to offer a response to this question. (f) There are a number of unknown variables which make it difficult for the Ports to empirically assess the quantum of economic and commercial effects outlined. The Ports have however provided information below in order to try and assist the ExA in their analysis of quantum as far as possible. Information provided by the Ports at Deadline 5 (REP5-071) identified that DPWLG had a total REEFER (refrigerated shipping container) throughput of 147,942 TEU and POTL had a total throughput of perishable cargo of 789,611 tonnes in the year to 30 November 2018. This equated to an average of 140 TEU per vessel and 219 tonnes per vessel respectively (noting that not 100% of vessels which visit the Ports are REEFERs or carry perishable cargo). Applying weighting against differential vessel sizes (using vessel size proportions in Table 2 of the Ports' Deadline 2 submissions (REP2-050)) suggests that, for vessels over 250m this would increase to an average of 277 tonnes and 297 TEU per vessel respectively. Paragraphs 6.5 and 6.6 of the HR Wallingford Report (REP4C-016) identified that in the year ending 30 November 2018 a total of 534 and 79 inbound vessels transited the inshore route to POTL and DPWLG respectively. Therefore, if we are to apply the unweighted average of REEFERs and perishable cargo per vessel outlined above this would suggest that in the year to 30 November 2018 a total of 116,946 tonnes of perishable goods heading for POTL and 11,046 REEFER TEUs heading for DPWLG transited the inshore route. POTLL/LGPL contend that the Applicant has not provided sufficient

ExQ3	Question to	Question	Response
			information to determine the impact of the proposed TEOWF on the ability of vessels to continue to transit the inshore route/board a pilot at NE Spit. It is therefore considered impossible at this stage to determine what proportion of these perishable goods/REEFER TEU would be subject to diversion, whether it be planned or based on the dynamic assessment of the ship's Master. The effect of diversion, in cost terms, depends on a number of other factors. For planned diversions the cost impact would be expected to be limited (to a large extent to the cost of the 1 hour additional steaming time). It is not considered that a tidal window, for example, would be missed in a planned diversion. An exception to this is that some short sea services from Europe compete with road haulage with very small margins such that a very small increase in transit times can significantly affect commercial decision-making. The cost impact of the unplanned diversions which the ExA alludes to (i.e. based on dynamic assessment) will depend on a number of factors including the nature of the product, the shipping service, tidal conditions at the time and berth availability. Products such as chilled lamb and pharmaceuticals are of particularly high value. Some fruit products such as tomatoes have a very short life (approximately 2 weeks from picking). Short sea services such as those from the Mediterranean and Rotterdam are far more susceptible to time delays than other services. Should the Master's dynamic decision to re-route result in a tidal window being missed then the delay, and thus cost impact, can be very significant, particularly if berth availability does not allow the rescheduling of the vessel call on the next available tide. KPMG calculations (summarised in a 2018 House of Lords EU Committee Report) suggest that one day of delay for a lorry will easily cost a business 600 to 1000 euros (https://publications.parliament.uk/pa/ld201719/ldselect/ldeucom/129/129.pdf see paragraph 46). Longer sailing times or late arrivals often result in the need to utilise ‘last-minute’ hauliers who charge premium rates of between 20

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ExQ3	Question to	Question	Response
			– 25% higher than standard.
3.12.18	Port of Tilbury London Ltd, London Gateway Port Ltd (PoTL/LGPL)	**Answers given at ISH8 by POTL/LGPL Expert witness** In [REP5-018] at para 76, the Applicant states that in questioning of expert witness Mr Vincent Crockett {VC}, "*VC accepted that all other input scores had been agreed at the workshop*" and "*there were no comments on the risk controls*". • Would PoTL/LGPL comment on this record of answers given?	The Ports have been consistent throughout the examination process in clarifying that their primary interest lies in the potential economic consequences of the proposed TEOWF. It is considered that an increased risk, or the perception by mariners of an increased risk, would give rise to economic consequences if such increased risk, or perceived increase in risk, results in mariners taking alternate actions (i.e. re-routing or seeking alternate pilot boarding stations). At the hazard workshop on 29 March 2019 POTLL/LGPL were represented by Mr. Crockett and Mr. Hutchinson. The remit of the Ports' representatives was to ensure that the economic consequences were appropriately considered by the Applicant and IPs. Neither Mr. Crockett nor Mr. Hutchinson are master mariners nor do they have experience of commanding or piloting commercial vessels. Minded by the above, during the workshop Mr. Crockett and Mr. Hutchinson limited their comments to matters relating to property or stakeholders. No comment was offered with regard to likelihood of accidents or the appropriateness/effect of risk controls. POTLL/LGPL defer to the other IPs who are responsible for maritime safety in this regard. At ISH8 Mr Crockett, in his verbal representations, confirmed that POTLL/LGPL had not offered comment on the scoring applied to matters beyond consequence scores relating to Property and Stakeholders. He also confirmed that POTLL/LGPL had no views on the hazard scoring subsequently put forward by the PLA.
3.12.20	Port of London Authority (PLA); Maritime and Coastguard Agency (MCA); Trinity House (THLS); POTL/LGPL	**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	(a) The Ports refer to the response provided to question 3.12.15 (b) and (d) above. (b) Para. 122 of the NRAA does not provide a full reference to assist the Ports in identifying a specific reference in the Tilbury 2 NRA. The Ports do, however,

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ExQ3	Question to	Question	Response
	and PLA and London Pilot Council (LPC); Thanet Fisherman's Association (TFA); UK Chamber of Shipping (UkCoS); Port of Sheerness Ltd (PSL)	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*…"; 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*…"; 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*." d) Para 124: downward or static trend for recreational and fishing activity; and e) Para 125: additional	highlight that paragraph 14.36 of Volume 6, Part A of the Tilbury 2 Environmental Statement (ES) dated October 2017 states: "*Based on 2016/17 data there will be an increase in the vessel movements in the Thames Estuary of up to 10% as a result of the development of Tilbury2*" It is therefore clear that the significant additional growth at DP World London Gateway and other port facilities along the Thames will result in overall growth of vessel movements in the Thames Estuary significantly in excess of the 10% allowed by the Applicant for future growth and that the Tilbury 2 ES is consistent with other representations made by POTLL/LGPL in this respect. (c) The reference at Para. 123 of the Applicant's NRAA is to "annual growth" rates. As discussed in response to question 3.12.15 (d) above, such rates would result in compound growth of 29.4% for the period 2017 to 2036. If this was extended at 1% per annum for the remainder of the reasonable planning horizon (to 2054) it would result in compound growth from 2017 to 2054 (i.e. 35 years) of 54.8% (if applied at 1% for 2036 to 2054) or 84.8% (if applied at 2% for 2036 to 2054). The Ports' assessment presented in response to 3.12.15(d) indicates that this would correlate to an increase in vessel numbers of 37.8% to 54.5%. (d) No comment. (e) No comment.

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ExQ3	Question to	Question	Response
		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.*"	
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); b) Paras 141 to 144 and	(a) POTLL/LGPL defer to the response of the PLA/ESL on this matter. (b) POTLL/LGPL defer to the response of the PLA/ESL on this matter. (c) POTLL/LGPL defer to the response of the PLA/ESL on this matter. (d) Notwithstanding that some factors which inform scoring are still not clearly understood, the Ports do not agree with the consequence score of 2 for property or stakeholders in the most likely scenario for vessel (Class 1 to 4) collision or grounding or for property in the event of a contact (noting Table 17 of the NRAA prescribes a value to a category 2 consequence of £10k to £100k). The Ports are of the view that such incidents clearly have the potential to have direct consequences for property or stakeholders in excess of £100k, and therefore should be scored as category 3 as an absolute minimum. Furthermore, the Ports contend that further indirect consequences exist (for example as a result of a revised routing of pilot boarding arrangements in reaction to an incident) which have not been considered by the Applicant. (e) No comment.

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ExQ3	Question to	Question	Response
		Table 19: New insertion in rev B; c) Para 145: "…*the assessment of cost benefit in the original NRA remains valid*." 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…*"; e) Ranked Hazard list (now Table 20) changed to omit columns for individual baseline and inherent risk scoring with colour grading; the highest inherent risk score now being 4.80 (previously 4.34); residual risk scores added to rev B. f) Para 147: hazards with baseline risk ALARP-rated now seven in number (previously four in number); g) Paras 152-154: New paras on hazard likelihood including a return rate for all commercial vessel collisions of 1 in 10 years to	(f) As discussed in response to Item (d), the Ports do not agree with the scoring of some consequences. Use of more appropriate scoring would likely alter the summary set out in Paragraph 147. (g) No comment. (h) As discussed in response to Item (d), the Ports do not agree with the scoring of some consequences. Use of more appropriate scoring would likely alter the summary set out in Paragraph 157. (i) As discussed in response to Item (d), the Ports do not agree with the scoring of some consequences. Use of more appropriate scoring would likely alter the summary set out in Paragraph 158 – 160. (j) As discussed in previous representations POTLL/LGPL are of the view that 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 assessment of adequate sea room and risk. The Ports do not agree that it is appropriate that the remit of the Pilotage Simulation Study be limited to validation. (k) No comment.

ExQ3	Question to	Question	Response
		reflect stakeholder concerns; h) Para 157: hazards with inherent risk ALARP-rated now eight in number (previously four in number); i) Paras 158-160: New text on residual risk assessed; j) Paras 169-173: New Text on Risk Control Validation; 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.*"	

4. **FINAL STATEMENT OF COMMON GROUND (SOCG)**

4.1 The final SOCG between the Ports and the Applicant is included at Appendix1. Representatives of the Ports met with the Applicant on 20 May 2019 to finalise the SOCG, although the Examining Authority will note that there remain a number of areas of disagreement.

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5. COMMENTS ON THE EXAMINING AUTHORITY'S DCO COMMENTARY

5.1 The Ports note that one of the Deadline 6 deliverables is to provide comments on the Examining Authority's DCO commentary. The Ports provided comments in respect of the draft DCO (with reference to the proposed SEZ) at Deadline 5A and at this stage have no further comments in respect of the draft DCO. The Ports note that there are a number of points in the Examining Authority's DCO commentary which require Interested Parties (IPs) to comment on the DCO. The Ports will consider the responses of IPs and respond as appropriate at Deadline 7.

6. RESPONSE TO THE ISH8 SHIPPING AND NAVIGATION HEARING ACTION POINTS

6.1 The Ports note that the ISH8 hearing action points which were published by the Examining Authority on 18 April 2019 require at point 20 that by Deadline 6, "*IPs comment on what the precise brief for an updated simulation study would b*e". The Ports set out a number of key criticisms of the Pilot Transfer Bridge Simulation Report in Appendix A to their Deadline 1 submissions [REP1-148]. Further criticisms were also outlined in the HRW Report [REP4C-016] and it is suggested that an updated simulation study should address these criticisms. The criticisms included:

6.1.1 the lack of consideration for the range of potential weather and sea state conditions that may reasonably be assumed to occur i.e. the simulations did not consider winds above 25 knots and boarding operations can take place in winds of up to 75 knots;

6.1.2 the inadequate 1 to 2 minutes allowed in the simulations for the pilot to board the ship. The boarding process, which involves positioning of the pilot vessel, boarding, transfer of the pilot to the bridge, orientation and master/pilot briefing, would be likely to take a minimum of 15 minutes in practice;

6.1.3 the study's use of a tug, instead of a pilot boat, in the simulation runs;

6.1.4 the failure to consider the presence of other craft (including fishing and leisure craft making way or at anchor); and, importantly

6.1.5 the lack of consideration of vessels in excess of 240m in length. This is clearly not long enough, given that ships of over 330m transit through the inshore route and it is clear that such larger ships will require more space to accommodate their greater swept paths.

6.2 The HRW Report outlined some parameters for the updated study and set out that the key point which this study is required to consider is whether or not there will be sufficient space for a ship to manoeuvre safely to transfer a pilot(s). The objectives of the study should be to:

6.2.1 demonstrate likely transit tracks through the inshore route and around the NE Spit cardinal mark for a range of agreed ships and agreed environmental conditions, with and without the wind farm extension in place; and

6.2.2 undertake a pilot transfer study using agreed ships with and without the windfarm extension in place, in agreed environmental conditions. At least two pilot transfers should be carried out simultaneously. It is considered that the Pilot Transfer Simulation Study should be repeated using mutually agreed ships.

6.3 The Ports consider that given their involvement in maritime safety and crucially pilotage operations, input from the PLA, ESL, Trinity House, the MCA and the LPC will be particularly important in shaping the parameters of the updated study in addition to the Ports' own representations.

6.4 The Ports reiterate that they consider that until such updated simulation study is provided, the Applicant's assessment of the impacts on shipping and navigation caused by the proposed extension to the offshore wind farm remains materially incomplete. Given the already noted deficiencies of the original Pilotage Simulation Study and in particular its failure to consider the correct size and mix of vessels, carrying out such a study to support the findings of the NRAA is both necessary and proportionate.

7. FINAL SUBMISSIONS

7.1 The Ports will make final submissions to the Examination at Deadline 7.

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APPENDIX 1
FINAL SOCG