Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Annex B to Appendix 26 to Deadline 6 Submission: Applicant's Response to HR Wallingford's Final Report

Relevant Examination Deadline: 6

Submitted by Vattenfall Wind Power Ltd

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1 Overview

1 The HRW report provides a detailed overview of POTLL and DPWLG and puts this into the context of the proposed TEOW project, which the report states has the potential to effect the transit of ships to and from both ports through causing a delay of up to 1hr for northbound vessels that choose not to take the inshore route, despite their being demonstrably adequate searoom to do so.

2 The report focuses on the need for additional simulations studies, which HRW have noted in their oral submissions is a service that HRW provide.

3 Much of the POTLL and DPWLG criticism of the TEOW application focusses on two issues which have been highlighted during the ISH:

- Lack of consultation – the Applicant has not accepted that there has been a lack of consultation given the wide extent of discussions with bodies including the MCA, Trinity House and the PLA as harbour authority. Further, consultation has continued throughout the examination process and this is not addressed in the HRW report; and
- The view that the 10% future uplift to vessel traffic passing the TEOW is not representative of POTLL and DPWLG trade forecasts – although no details on what should be used as a future uplift is provided and limited evidence is provided that 10% is too low, beyond identifying the proposed increase in trade at POTLL and DPWLG, a proportion of which may use the inshore route.

2 Review of Report Details

4 The report largely presents statistics and analysis on the POTLL and DPWLG ship arrivals and volume of trade and does not focus on vessel traffic disposition in the TEOW study area, neither does the report present future growth figures for the TEOW study area. In these regards the report facilitates understanding of the operations at POTLL and DPWLG but does little to relate how vessels visiting these ports currently interact with the existing TOW or will likely interact with the future TEOW.

5 The report is broadly broken down into the following sections:

- Section 4 – Overview of SE UK Ship Calls
- Section 5 – Access Routes to port of London
- Section 6 – AIS and POLARIS data analysis
- Section 7 & 8 – DPWLG and POTLL marine operations
- Section 9 & 10 – Potential impacts on DPWLG and POTLL
- Section 11 – Vessel deviation considerations
- Section 12 - Review of key Applicants submission
- Section 13 & 14 Summary, Principal Conclusions and Recommendations

2.1 Section 4 – Overview of SE UK Ship Calls

6 This section provides an overview of ship statistics based on UK Department for Transport ship arrival statistics.

7 At 4.2.1 a conclusion is reached that the increase in container calls in London should be seen in context to the number of calls per annum for the ports of London, Medway, Felixstowe and Southampton, which combined has remained effectively static between 2009 and 2017. In the context of Figure 4.1 a decline has been seen at Medway and Felixstowe, and an increase is seen for London and Southampton. In terms of ship arrivals the increase in London is largely balanced by the decline in Medway. This demonstrates that there has been little net increase in container vessel calls between 2009 and the introduction of DPWLG has taken market share from Medway, Tilbury (as noted in the report) and Felixstowe.

8 Section 4.2.2 conflates growth between ship arrivals and TEU capacity, with growth for DPWLG and POTLL driven by the UK Economy and demonstrates transfer of TEU trade from other ports to DPWLG. The report notes that POTLL is likely to receive larger vessels of 10,000-11,0000 TEU and from refence to the report table 7.6 relates to vessels of around 333m, which will have a draught of greater than 7.5m and therefore should transit into / out of the port via the SUNK pilot boarding area and the Black Deep.

9 The report at Section 4.3 shows that RO-RO arrivals to London have declined since 2011.

10 At Section 4.4 analysis shows (Figure 4,3) a general decline in Ship Arrivals at London & Medway ports from a peak in 2003 to 2005 – this corresponds to similar findings in the NRA Addendum, and when correlated with an increase in trade shows the propensity for larger vessels to service London and to a lesser extent Medway ports.

2.2 Section 5 – Maritime access routes to the Port of London

11 Section 5 and in particular Figure 5.1 show ship routes to the Port of London – it should be noted that Figure 5.1 is incorrect in that it does not include the NE Sit Pilot boarding Diamond within a route into the Port of London, or the highly used route over the NE Spit bank; and nor does it show the Fisherman's Gat.

12 The report at Section 5.2 concedes that the deep water approach to the port of London is "*effectively unaffected by the expansion of the TOWF*".

13 At *Section 5.4 South East Approach*, the report states that "*This route passes to the west of the TOWF and provides the shortest route to and from the Princess Channel*". This statement only applies to vessels navigating from the south and is not the shortest route for the majority of vessels bound for the Princes Channel, which approach from the south east, east, and north.

2.3 Section 6 – AIS and POLARIS data analysis

14 At Section 6.1 it is noted that the use of the NE Spit pilot boarding station is preferred by the PLA / ESL as it is a shorter pilot boat transfer from base compared to the Tongue pilot boarding station, in additional to be being less exposed. No mention is made of the NE Goodwin pilot boarding station located to the south of the existing TOW. It is the case that as the PLA / ESL do not differentiate their charging between different areas of the NE Spit boarding area and as such it economically advantageous to board vessels at the NE Spit diamond than the Tongue diamond, even if they are deep draught vessels.

15 The AIS data supplied by the PLA include extracts of data from two Gates identified in Figure 6.1 – it is important to note that these gates do not correlate exactly with the location of the gate in the analysis presented by the Applicant. The gate located at Elbow, is similar, though extends further west than the gate analysis provided by the Applicant at Deadline 4. Figure 1, provided below provides a reference of the PLA gates (as extracted from Figure 6.1 of the HR Wallingford report) together with the gates used by the Applicant for the analysis provided at Deadline 4.

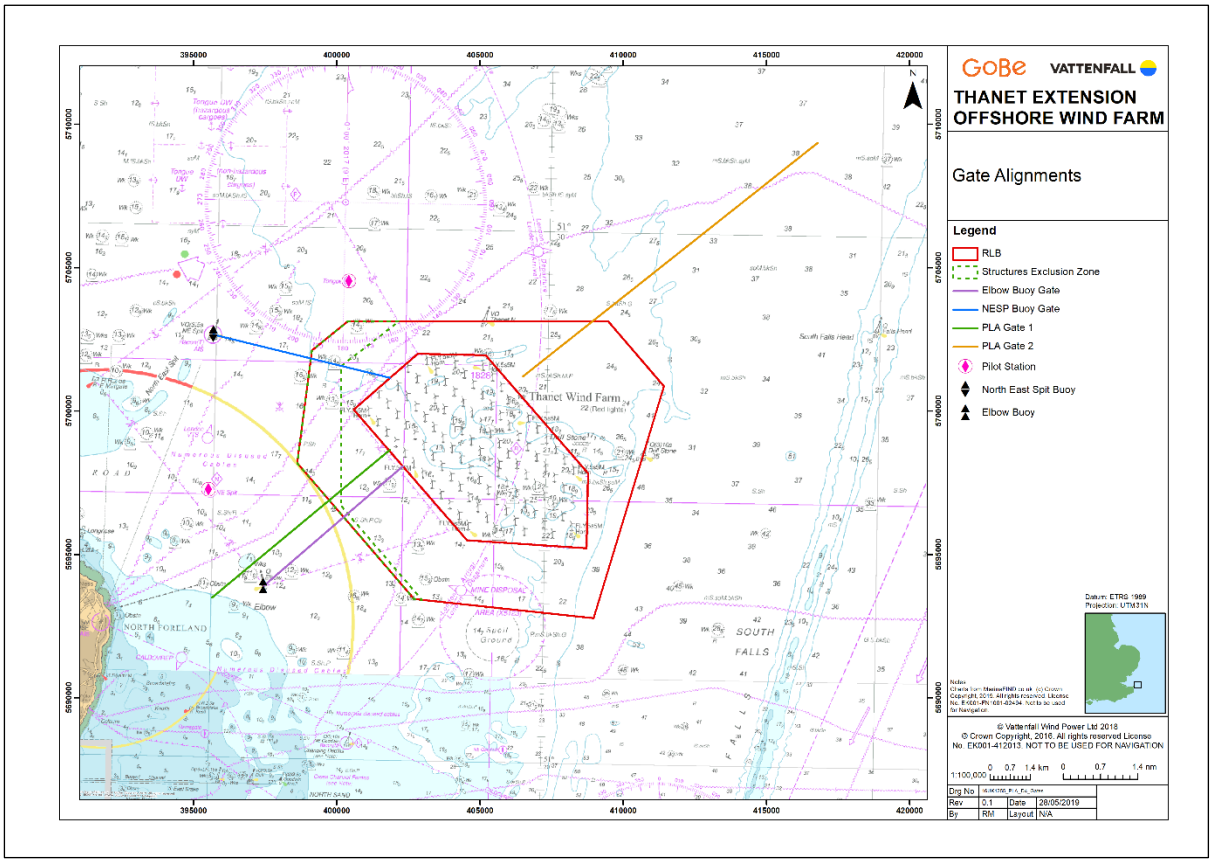


Figure 1: PLA Gates and Applicant Gates at Deadline 4

16 No specific methodological details are provided on how the PLA data was extracted, QA'd or subsequently analysed in order to provide the gate analysis presented. When the location co-ordinate data points of the AIS data provided for the Gates was plotted by Marico Marine during benchmarking (Figure 2) a wide distribution of points was noted, located some distance away from the actual gate and a high concentration showing an indicative box boundary. Whilst the Applicant suspects this appearance boundary could partially relate to the location at which any vessel (which subsequently passed through Gate 1) entered the box boundary - this is not clearly explained and the Applicant questions the utility and accuracy of the gate data provided by the PLA and analysed by POTLL and DPWLG and considers caution should be exercised until this is fully understood. Figure 1 and 2 are at Annex E of this Appendix 26 to Deadline 6 submission.

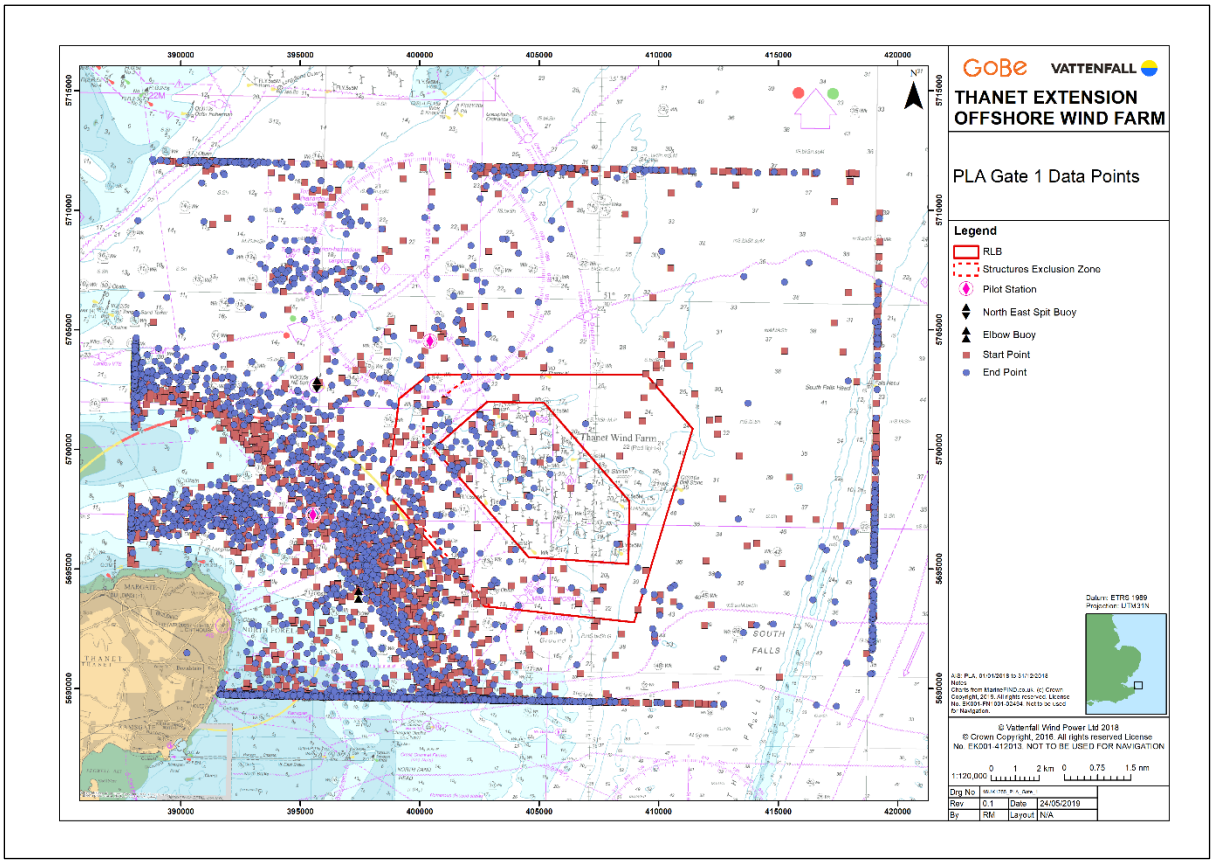
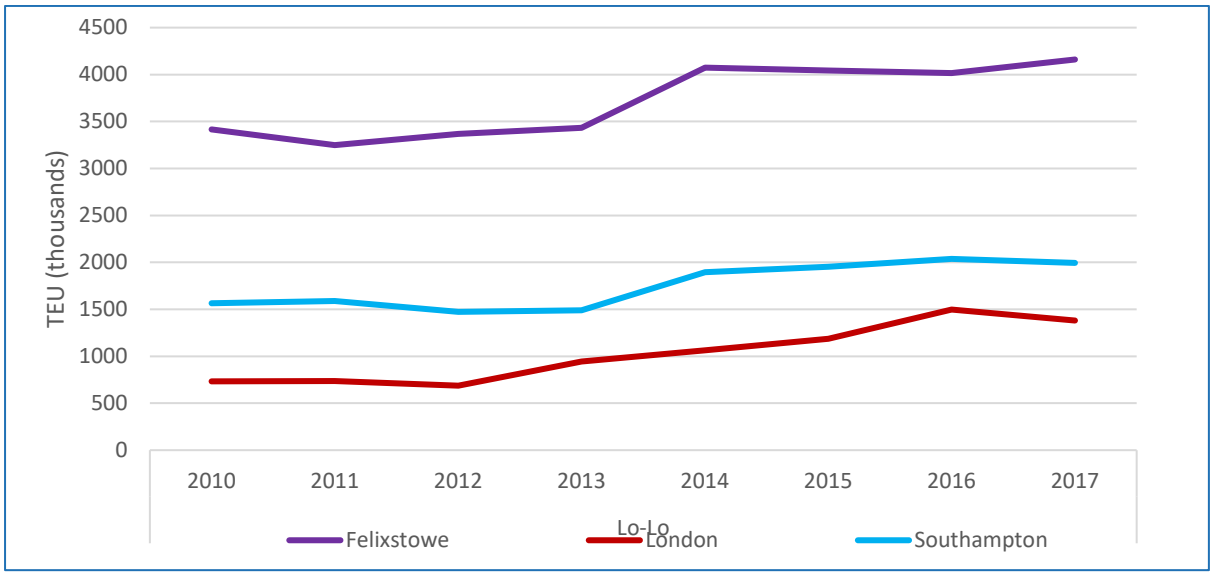


Figure 2: PLA Gate 1 Data Plotted

2.4 London Gateway Marine Operations

17 It is apparent from Section 7.1, 7.2, 7.3 and 7.4 that container ship "geometric" size within North Europe and particularly within DPWLG is set to increase. Whilst a further three operational berths are yet to be developed at DPWLG, the report at 7.2.2 states it is difficult to predict "with any precision" future growth in vessel numbers for DPWLG, albeit the cargo volumes are likely to increase. As noted above with larger vessels comes larger cargo volumes, so it is likely that there is no increase in ship arrivals, but an increase in the volume of containers handled.

18 Further analysis can be undertaken to demonstrate the move towards larger vessels and that increases in trade especially for London Gateway, is not likely to mean an increase in ship arrivals – the plots below show total volumes of loaded TEU (containers) handled at Felixstowe, London and Southampton – this shows an increase in trade for Felixstowe despite, a reduction in ship arrivals, when benchmarked to HRW Figure 4.1 (also presented below).



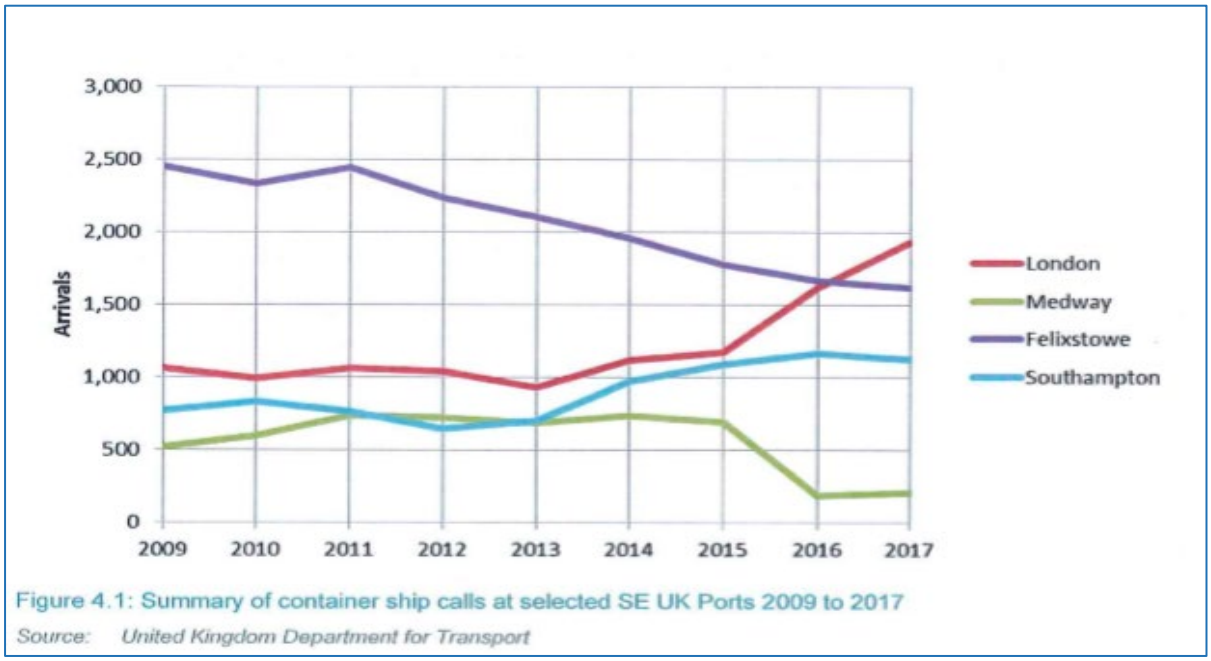


Figure 3: Total TEU handled at Felixstowe, London and Southampton (DfT Statistics – PORT0202) – top, ship arrivals from HRW report (Figure 4.1)- bottom.

19 The analysis, for 2017, demonstrates therefore that for Felixstowe each ship arrival is discharging / loading more containers per visit, as:

- Felixstowe at 4,160,000 TEU / ~1600 ship arrivals = 2,600 TEU per ship arrival
- London at 1,318,000 TEU / ~1900 ship arrivals = 693 TEU per ship arrival
- Southampton 1,995,000 TEU / ~1200 ship arrivals = 1,662 TEU per ship arrival

20 The ramp up of container ship arrivals for London, between 2013 and 2017 is likely primarily due to the build-up of ship arrivals at London Gateway following construction. As noted the transfer rate of TEU per ship arrival in London has the lowest number of the three main container ports in the UK. This is likely driven by two factors: (1) POTLL is predominantly a feeder container port, and (2) DPWLG is a new port and is building its customer base.

21 The business case for DPWLG is predicated on attracting large container vessels (as demonstrated through the PLA channel deepening programme / depth alongside and container crane size), and whilst further berths are being constructed (which will therefore increase capacity), as larger numbers of containers are loaded / unloaded per ship arrival the relative time alongside for each vessel increases and therefore the need for more berth capacity is required. Therefore, additional berths at DPWLG do not necessarily relate to additional ship arrivals, nor does it necessarily relate to an increased use of the inshore route.

22 Section 7.4 extols the importance of the largest vessel to DPWLG in future cargo forecasts, and the Applicant notes these vessels are not affected by the TEOW, as identified by the report.

23 Section 7.5 presents pertinent information of vessel transits on the inshore route bound for DPWLG at Table 7.3.

24 It is unclear why the report does not categorise vessels bound for DPWLG into length classifications to facilitate the reader in understanding the distribution of vessels by length – noting that this information can be calculated based on Tables presented at Appendix A.

25 It is however evident that since only 79 vessels transited the inshore route inbound for London Gateway based on table 7.3 and only 2 transit were by vessels with a LOA of greater than 300m, 97.5% of DPWLG bound vessels transiting the inshore route are equal to or less than 300m and 91.1% of vessels are equal to or less than 250m. The SEZ has been implemented based on calculations made to provide for 4 vessels of 333m passing concurrently, although the use of the inshore by DPWLG bound vessels is dominated vessels of less than 250m in length, the searoom is therefore demonstrably adequate for the current use and future use to continue.

26 Section 7.7 provides statistic for transfers of Pilot at NE Spit for vessels bound to and from DPWLG – this analysis is based on PLA POLARIS data – which is ship arrival data collected by the PLA and primarily used for accounting purposes.

27 It is not clear from the analysis provided whether the NE Spit pilot area includes the whole of the NE Spit Pilot transfer area of operations as provided by PLA / ESL which includes the Tongue pilot boarding area. It is assumed it does, as the Tongue pilot boarding area is a deep draught pilot boarding station and is not included in list of areas provide at table 7.5.

28 It is evident from Table 7.5 that 160 out of a total 1,069 pilot transfers, are undertaken at NE Spit area (presumably including the Tongue) for vessels bound to or from DWPLG, however the vast majority of vessels that transfer a pilot on vessels bound to / from DPWLG (82%) occur at the SUNK pilot boarding station.

29 Table 7.6 provides a list of the largest vessels using the NE Spit Pilot transfer area of operations – as noted above it is not clear where in this area these transfer took place (e.g. NE Spit Pilot Diamond or Tongue Pilot Diamond) and under what circumstances (e.g. adverse MetOcean conditions). It is evident that the largest vessel to transit the inshore route (noted at Table 7.3 the *Cap Sans Raphael*) is absent from the pilot transfer data, and presumably this meant the vessel boarded a pilot at either the NE Goodwin, Dover, "Europe" or "other" pilot boarding location – confirming that not all large vessels transiting the inshore route do so to pick up a pilot at NE Spit.

30 In summary the data and analysis presented in relation to DPWLG and use of the inshore route does not demonstrate that the 10% future uplift provided by the Applicant in the NRA A is under-representative, and neither does it provide evidence of larger vessel usage of the inshore route. It does however confirm 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.

2.5 Port of Tilbury Marine Operations

31 Section 8.1.1 primarily gives either the maximum dimensions of vessels that the POTLL is able to accommodate, or the largest vessels that have arrived at the port. It is not clear from the statements presented how these vessels transited to from the port – i.e. did they pass the existing TOW?

32 The Tilbury 2 development is stated as a RO-RO terminal and CMAT (Construction Materials and Aggregates Terminal). No) – no details are provided on future traffic profiles for the Tilbury 2, or the likelihood that its development will likely take vessels currently bound for the impounded Tilbury docks (as vessels would not need to transit the lock, which is restricted for large vessel to high water periods only). The Applicant notes that the Tilbury2 shipping and navigation assessment does assume it will result in a 10% increase in vessels at Gravesend and that, given the information provided at the accompanied site inspection, a significant proportion of the CMAT vessel traffic will be transiting up the Thames to service construction projects within the Thames Estuary. This does not however represent a 10% increase in vicinity of TEOW and particularly the inshore route.

33 Section 8.2 shows the ship size by length for Tilbury and demonstrates the anomalies with the data provided by POTLL contained within REP2-050, in that within the PLA POLARIS data set, no vessels of less than around 75m are evident, despite POTLL Table 2 of REP2-050 stating that 1,191 vessels between 0-50m length visited the port accounting for 33% of all vessels and that 436 vessels of between 50-100m visited the port accounting for 12.1%. Whilst specific *metadata* on the POLARIS dataset has not been provided or referenced, it is likely that the disparity in vessel numbers is associated the POLARIS dataset only capturing commercial vessel movements on coastal or international trade and does not capture "intra" port trade vessels such as tug and tows or other smaller commercial traffic, which only trade within the Thames. Vessels engaged on "intra" port trade are very unlikely to pass through the TEOW study area.

34 In terms of Section 8.3, details are provided on the use of the inshore route, and the analysis shows that the longest container vessel to use the route bound for Tilbury was 269m which is well below the 333m vessel size chosen to defines searoom with the SEZ in place, and further to which a 4 x vessel parameter has been applied (which provides for an exceptionally precautious calculation).

35 It is noted in Section 8.4 that the largest RO-RO bound for Tilbury that passed the inshore route were the Grande class (236m length) vessels, that as high sided vessels, and amongst the least manoeuvrable, were used in the Pilot Transfer Bridge Simulation Study in consultation with PLA/ESL pilots and coxswains to determine feasibility.

36 General cargo vessel passing the inshore route bound for POTLL are were all less than 157m length, with the most being between 88m – 140m if Table 8.5 and 8.6 are combined. The vast majority of Bulk Carriers are generally less than 200m in length and from the data provided at Table 8.7 only one vessel was greater than 200m length.

37 Cruise ship transits on the inshore route, bound for Tilbury were all less than 250m.

38 In summary, the use of inshore route, based on the analysis presented in the HRW report, shows that for POTLL, the route was used by vessels of less than 270m, and that the majority of vessels are between 100- 250m, though no direct statistics on this are presented. No evidence has been provided to demonstrate that vessel increases from Tilbury 2 (and London Gateway in-combination) would contribute to an overall increase in the vicinity of TEOW of over 10%.

39 In terms of pilotage operations then 754 out of 1469 pilot transfers took place at the NE Spit with accounts for around 51% of all pilotage operations for vessels bound to/from the Tilbury.

2.6 Potential Impacts on Port of Tilbury

40 Section 9 identifies operations that are:

- Potentially least likely to be affected by the TEOW
- May potentially be affected by the TEOW

41 The report therefore does not specifically identify any impacts to POTLL operations, which is at odds with the written representations and oral evidence given at ISH.

42 The report categorises that the following ships are least likely to be affected by the TEOW:

- Non-piloted short sea dry cargo ships (<90m)
- Deeper draught container ships
- Deeper draught bulk carriers
- Self-discharging bulk carriers
- Scrap export bulk carriers
- Cruises to Northern Fjords and other Northern Destinations

43 It is evident from the report that most of these vessels (with exception of <90m coasters) are not only least likely to be affected by the TEOW, they mostly do not navigate the TEOW study area and therefore would rarely come into any proximity of the TEOW.

44 Section 9.2 provides that "larger ships operating on routes passing to the north and West of the TOWF are most likely to be affected" but notes that this is "not because of insufficient space for ships to make safe passage" – so accedes that sea room for larger ships transiting both on the inshore route and for dipping vessels is acceptable – this presumably is without the SEZ in place.

45 The report however states that any potential impact, would be "because encounters between ships on passage and ships engaged in pilotage transfer operations may take place in a more confined area" – however no analysis or modelling is provided to document this statement or finding, and the Applicant notes the caveat of may potentially be affected is used.

2.7 Potential Impacts on London Gateway

46 No potential impacts to vessels bound for DPWLG that use the inshore route or the NE Spit are drawn out in the report. The report at Section 10 states that issues related to the ability of large container vessel use of the inshore passage, disruption to feeder and /or intra-European vessels if masters choose to not to navigate to the west of the TEOW and disruption to feeder and /or intra-European vessels if masters choose to not to navigate to the north of the windfarm. However, the Applicant has demonstrated through use of the MSP guidance, as provided by POTLL / DPWLG, that sufficient searoom exists to the west and north west of the TEOW, which is further confirmed by the HRW report.

2.8 Vessel Deviation considerations

47 The Applicant does not consider the need for any vessel to be deviated as a result of the TEOW for reasons laid out previously and above related to searoom calculations. Notwithstanding this, it is noted however that within Section 11 no definitive details are provided on the extent of any deviations by vessels. Analysis presented in Table 11.1 and 11.2 is not referenced within the text and it is not clear the methodological basis for the analysis they contain or what the tables are conveying to the reader - as such these tables are not reviewed.

48 Table 11.3 is provided as it gives service speeds for vessels, and a statement is made that ship service speed is an indicator of vessels willingness to take routes that save time. Whilst this is generally the case for vessels on oceanic passages, many of the deep sea container vessels transiting to / from POTLL and DPWLG also stop at other western European ports. It is evident within the Applicant's Statement of Evidence (REP4C-004) that many vessels, even with high service speeds, frequently wait prior to transiting into the Thames Estuary, presumably due to berth, pilot or water depth restrictions, and therefore the Applicant does not agree that service speed is a good indicator of a vessels propensity to absorb delays.

49 At Section 11.3 the report states that Table 7.3 demonstrates that time saving is important for DPWLG vessels that transit the inshore route – however this is not proven to be the primary driver for 79 vessels electing to take the inshore route during the study period. Alternate drivers for us of the inshore route may include vessels origins and destinations, MetOcean characteristics at the time of transit and berth availability, all of which are not affected by the TEOW.

50 At Section 11.4 it is stated that navigation simulation studies are required to be completed to enable the threshold for a particular operation to be identified that would necessitate a vessel deviating tot the west of the TEOW. The Applicant does not consider there is a need for additional navigation simulation studies as:

- NRA A found navigation risk to be ALARP or Lower with the SEZ in place
- SEZ searoom requirements were derived from POTLL / DWPLG supplied guidance and the inshore route exceeds these guidance requirements, including an allowance for factors including variations in metocean conditions and complexities in traffic movements.

2.9 Review of Key Applicant submissions

51 Section 12 provides a review of the TEOW NRA, and in particular the HRW report notes that the NRA did not consider ships over 11,000 TEU geometric capacity using the inshore route. However, on examination of the data presented by HRW, there are no vessels of 11,000TEU that have been shown in their data analysis to transit the inshore route. Further, in regards to the Pilot Transfer Bridge Simulations, the PLA chose to assess a 240m Ro-Ro vessel, as a representative large vessel that is high sided and has low manoeuvrability. The PLA, as the Competent Pilotage Authority, and Statutory Harbour Authority, through which all POTLL and DPWLG vessels navigate, is the closest statutory authority to the inshore route, for vessels bound to and from the Thames Estuary, and as such were best placed to identify the size and type of vessel that should be considered for simulation.

52 The Applicant notes that whilst vessels of 11,000 TEU and greater currently visit DPWLG they do so via the SUNK pilot boarding station and therefore transit well clear of the TEOW, and the Applicant is not aware of any plans put forward by the PLA to consider that they would use the inshore route.

53 Comments on "*Surveys and AIS Analysis"* to inform the NRA at Section 12.1.3 are limited to commentary on "Gate Plots" included in the NRA within Section 5.5. Out with of this commentary, which appears accurate, no wider comments are made on the NRA Surveys or AIS analysis, and therefore it is concluded that the HRW report does not draw any issues on data quality, seasonality of validity.

54 Section 12.1.4 provides a review of the NRA's future marine traffic growth. Here the HRW report notes increases in trade forecast for the POTLL and DPWLG, but does not relate growth the vessel numbers within the TEOW study area. As noted above in London Gateway Marine Operations – trade growth does not equate to an increase in vessel numbers, and based on historical information for London Ports, a clear decline in vessel numbers is evident. Further to this, it is agreed by the HRW report that the tendency for ship size increases is valid. The HRW notes that despite a decrease in ship numbers an increase in maritime traffic growth has been provided for within the original NRA of 10%.

55 Section 12.1.5 states 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"*, and therefore it is understood that HRW agree methodologically with the NRA report findings. At this section the HRW report states that "*since future demand is considered at a high level only in Section 6 of the NRA, it is not clear that collision modelling reported to have been carried out takes sufficient account of the space requirement for operations with significantly ships or greater numbers of ships"*. The HR Wallingford report however, whilst stating future demand is only provided for at a "high level", does not provide any further details on what any future demand should be.

56 Within Section 12.1.6 Summary, the HRW report states the NRA does not appear to recognise the complexity of navigation associated with the routes leading around the windfarm – however the NRA and subsequent NRA A has undertaken several analyses of vessel traffic data (track analysis, density analysis, gate analysis), undertaken Pilot Transfer Bridge Simulation, Collision Risk Modelling, and undertaken numerous stakeholder meetings including two workshops, such that the body of evidence presented in the application and examination documentation, demonstrates the Applicant has not only met the minimum MGN 543 (M+F) guidance requirements, but exceeded the minimum requirements in several areas (e.g. multiple survey data and analysis, Collision Risk Modelling (original, and as provided for the SEZ at Appendix 42 of this Deadline 6 submission), and provision of a Pilot Transfer Bridge Simulation study). Applicant notes that as it is entirely normal for judgements to be made in accordance with the accepted methodologies employed, even without any CRM or Bridge Simulation, indeed the use of Bridge Simulation is very rare on OREI Shipping and Navigation Assessments and has only been used a handful of times.

57 The Applicant further notes that the HRW report mandates the use of the "*The World Ocean Council, Nautical Institute and IALA Special paper titled "The Shipping Industry and Marine Spatial Planning – A Professional Approach – November 2013*" - which the Applicant has used in determining the extent of the SEZ and exceeded requirements in all locations in reflection of qualitative concerns raised by IPs.

58 At 12.2 NE Spit Pilot Transfer Simulation Study, the HRW report considers that larger vessels should have been simulated – however, at the time of the PTBS study, in the study that was driven by PLA and ESL staff, the PLA and ESL confirmed that they considered a 240m to be representative (see earlier comment on this). The section also considers that a repeat study should "*Demonstrate likely transit tracks through the inshore route and around the NE Cardinal mark for a range of agreed ships and agreed environmental conditions, with and without the windfarm extension in place".* A*",* s noted above this is not required as vessel length was chosen by the PLA, and in addition the Applicant would note that as appropriate guidance has been followed in implementing an SEZ, therefore such a simulation is not required.

59 A further recommendation of re-running the PTBS is to "*Undertake a pilot transfer study using agreed ships with and without the windfarm in place, in agreed environmental conditions. At least 2 pilot transfer should be carried out simultaneously"*. The Applicant notes this request but wishes to point out that the original PTBS undertook up to four transfers simultaneously, and used vessels agreed by the PLA and ESL to be representative and confirmed the all pilot operations were completed successfully with the 'original' Red Line Boundary in place. The RLB has since been amended and an additional SEZ introduced which increases available searoom and therefore also increases the ability for pilotage operations to continue without hindrance in all conditions. The Applicant would also note that ISH8 ESL confirmed pilotage operations go off station at around 30 knots, given the PTBS was conducted at 25knots (again as dictated by PLA/ESL staff) it is considered to be sufficiently representative of metocean conditions and limit states so as to remain valid.

3 Summary and principal conclusions

60 A summary is provided at 13.1 which states that present levels of vessel traffic have been summarised for DWPLG and POTLL, but little has been provided in terms of analysing vessel tracks in and around the TOW, and no future growth forecasts have been provided for the TEOW study area, albeit the report acknowledges the trend for larger vessels, which in all likelihood will result in increased usage of the SUNK and Black Deep approach channel to the Thames Estuary.

61 Whilst the Applicant does not agree the need to provide for a new NRA or PTBS, a revised NRA Addendum was undertaken based on the introduction of the SEZ to increase searoom to the west of the TEOW. This is noted within the HRW report, and whilst the basis for the SEZ is the guidance recommended by HRW, they nevertheless recommend that additional "*real time navigation simulation studies*" are required, which the Applicant does not consider necessary.

62 The statement by HRW at 13.2.2 (and repeated at 14.1.1 and 14.1.2) that the NRA Addendum will be incomplete if not accompanied by real time navigation simulation studies, is not in accordance with the MCA MGN 543 (M+F) guidance, which does not mandate the need for simulation studies for OREI NRAs (as confirmed by the MCA in their Statement of Common Ground), albeit the Applicant has already conducted one such study, and as such the Applicant does not consider such a study is warranted. However if the ExA recommends, and the Secretary of State considers, that before consent can be granted, this work should be carried out to confirm the outcomes of the Applicant's NRA and NRA A, the Applicant has provided a specification at Deadline 6 Appendix 24.