INFRASTRUCTURE PLANNING

THE INFRASTRUCTURE PLANNING (EXAMINATIONS PROCEDURE) RULES 2010

THE THANET EXTENSION OFFSHORE WIND FARM ORDER

Comments on Appendix 4 to Applicant's Deadline 2 Submission: Applicant's Response to Written Representation – Pilotage

submitted on behalf of the Port of London Authority and Estuary Services Limited
(Rule 8 letter 18 December 2018)

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Author	Winckworth Sherwood LLP
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Minerva House
5 Montague Close
London
SE1 9BB
DX: 156810 London Bridge 6

T 020 7593 5000
F 020 7593 5099

www.wslaw.co.uk

Winckworth Sherwood

Solicitors and Parliamentary Agents

Para	Response summary/extract	PLA/ESL comments
	Sea Room **Location of Sea Room for Pilot Transfer**	
11 Fig. 1	The Applicant notes, as per the sea room plot provided at Annex B, that the width at the narrowest point is 1.88nm (between the NE Spit buoy and the red line boundary) and greater area of sea room exists to the south (see Figure 1). The area to the south, in the vicinity of the NE Spit pilot boarding station, is where pilot transfers are undertaken (see Figure 2 taken from Figure 48 of Annex 10-1 Application Ref 6.4.10.1) and as such noting the sea room plot at Annex B, there remains sufficient sea room within the NE Spit pilot boarding area post construction of the TEOW for pilot boarding.	(a) The 1.88nm width between the NE Spit buoy and the current extension boundary is not the important one for pilotage operations. For all practical purposes the relevant distance is between the RLB and the charted boarding position, the NE Spit Pilot Station, situated approximately 3nm south of the NE Spit buoy as shown on the ESL sea room plan in Annex 1 to these comments. That is the 1.7nm distance referred to elsewhere in the PLA's submissions. (b) As can be seen from Fig. `1 and the ESL sea room plan, these distances include the 0.5nm buffer zone. The available distance is therefore only 1.2nm. (c) A significant portion of the "greater area of sea room" referred to in para. 11 and shown yellow on Fig. 1 1 Includes a large area West South West of the no anchor line (which will often have ships anchored in it) and shallower water in close proximity to the coast. These waters are not available to most vessels. The Applicant should re-calculate the yellow area so as to show the area that is suitable for use by larger/deeper draught vessels. (d) When the area of sea room was discussed the Applicant agreed that 'clear and available' sea room relates to the no anchoring line and the fact the Margate Roads anchorage can't be assumed as 'clear'. The Applicant confirmed that it was not suggesting that the no anchoring line should be moved (i.e. the

Para	Response summary/extract	PLA/ESL comments
		anchorage reduced in size) in order for more of the yellow area to provide sea room.. (e) The conclusion that the sea room plot is sufficient is referenced to the footprint of pilotage acts as shown in Fig. 2 of Appendix 4 - Pilotage/Fig. 48 in the NRA, which represent the spatial extent of pilot transfers (see NRA section 7..2, fourth paragraph). The Pilotage Study section 2.5.2 explains that this Figure (Fig. 13 in the Pilotage Study) "shows the locations where a pilot vessel has reduced speed to less than 10 knots for a period of time, presumably to conduct a transfer. These are centred around the North East Spit …". (f) For the reasons explained in section 2.5.2 the Pilotage Study also includes Fig. 14, which shows the tracks of vessels meeting the pilotage criteria at less than 10 knots. The study noted that these vessel. "would likely include vessels slow steaming, waiting for a pilot to arrive". This additional graphic produced by the Applicant shows an increased interaction (duration) between vessels engaged in pilotage, supporting the PLA and ESL's view that the act of pilotage has a bigger footprint than just the point of 'contact' between launch and ship. (g) The limited period covered by Fig. 14 (see 12(c)) will have affected the size of footprint and the density of traffic. The PLA and ESL believe a longer survey period would have increased both elements. (h) For all these reasons the PLA and ESL believe the sea room plot to be inadequate.

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	Sea Room Assessment by the Applicant	
12	The Applicant undertook a Pilotage Study as part of the PEIR at the commencement of the Shipping and Navigation assessment, identifying the nature of pilot transfers in the area and, specifically, analysing the area and sea room utilised for pilot transfers currently undertaken at the NE Spit pilot boarding station over a 3 month period AIS vessel tracking over 3 months. This is presented further at Section 2.5.4 of this report.	(a) It was important for the study to factor in seasonality. It failed to do so because the Applicant's chosen three months were December 2016, January 2017 and February 2017. These are all quiet months. By way of example, the number of vessels ESL served in December 2016 was only 475,the lowest monthly figure for the year. By contrast, in August 2017 (August being a peak month) ESL served 578 vessels. (That was not in fact the 2017 peak, with 619 vessels serviced by ESL in September.) The study did not therefore reflect pilotage operations over a typical year. (b) As regards the period of the pilotage study, the ExA should note that tracking over the full three months was only AIS traffic. The survey of non-AIS vessels, which was incorporated into Fig.. 14, only covered December 2016. (c) Fig. 14 better represents the sea room position because it takes account of the whole pilot transfer footprint, for one month's AIS data (December 2016). It would have been helpful if Fig. 14 had covered the same period as Fig. 13. (This does not alter (b) above.)

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12	It was necessary to undertake this study as no baseline information on locations of pilot transfers was available from IP.	The Applicant never requested such baseline information from ESL or the PLA.
13	Following the Pilotage Study, and in agreement and collaboration with PLA and ESL as participants, bridge navigation simulation was undertaken in the PLA simulator to examine whether pilot transfer operations would continue to feasible at the North East Spit station with the extended wind farm and over a range of operational scenarios.	The discussions between the PLA and the Applicant concerned the technicalities of using the simulator and the available scenarios that could be catered for in the context of a feasibility study. The discussions did not touch on the use to be made of the study in the NRA.
13	14 runs, consisting of 20 individual transfers were undertaken with a range of vessel types and metocean conditions in order to evidence this assessment. This assessment concluded that the available sea room (with the former pre-application RLB and therefore overly conservative) was identified to remain adequate for pilotage operations to remain feasible under a representative range of metocean conditions. Plots of the sea room used in these transfers are provided at Appendix 25, Annex L and show that transfers were all undertaken in the area of sea room near the pilot diamond (consistent with that observed from the vessel traffic data) and that the sea room used by the vessels	The simulation also used only four types of vessel. 14 runs, 20 transfers and four vessel types is adequate for the purpose of studying feasibility and available sea room but is not sufficiently representative for a fuller assessment of e.g. collision risk (see comments on paragraph 44)..

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	did not breach the red line boundary (as revised).	

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	Sea Room – Safety Concerns Raised by Interested Parties at Deadline 1	
14	The PLA / ESL raised the same safety concerns: "5.6 When undertaking pilotage operations, safety is paramount. A vessel is kept underway while the pilot transfer is taking place and must continue to interact with everything else around it. Pilots will need to factor in weather, tide, type and size of vessel, surrounding traffic and other factors before engaging with the ship to create a safe lee. The pilot will then need sufficient time to get on board, get to the bridge and have a handover with the master."	(a) Responsibility for all aspects of operating the launch (including course, speed and heading for pilot boarding) rests with the coxswain, not the pilot. The pilot can only request what he considers should happen. In practice the two work together, but the final say always rests with the coxswain. (b) The conversation during the simulation between pilots and those representing the Applicant did not contradict the PLA's and ESL's position that the current TEOWF proposals will not leave sufficient sea room and so compromise pilotage operations.
15	This response from the ESL WRs indicates that it is the pilot, and not the ESL launch Coxswain who determine the course, speed and heading for pilot boarding. The Applicant notes that this procedure is carried out prior to the boarding activities and that with the TEOWF in place sufficient sea room exists and pilot boarding remains feasible according to PLA pilots attending the Pilotage Bridge Simulation Study.	

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17	Referring to Havens Category vessels, to date the Applicant has not received any risk assessments and logs of incidents for the NE Spit area, and so requests this assessment as it notes this represents an important opportunity to compare the assessment with the NRA undertaken for TEOW.	The PLA does not have a specific risk assessment for Havens vessels at the NE Spit, but is happy to provide what incident and risk assessment data we have to the Applicant to help inform the proposed discussions/workshops ahead.
	Safety Concerns – Other Factors	
19	The Applicant considers that the cause of the radar interaction noted by pilot launch crews is due to the proximity of the pilot launch to the larger vessel when boarding a pilot (likely causing radar reflections) and not the existing windfarm – otherwise it would be expected that the interference would be present at all times whether alongside a "high sided" ship or not. However, it is the case that the interaction seen when a pilot launch is alongside a "high sided" ship will also occur in relation to navigation buoys, other passing vessels or even the Thanet coastline (were the pilot launch close alongside the landward side of a "high sided" ship).	(a) When a pilot launch is in close proximity to large ships, the large scale of the existing TOWF can then swamp the radar screen as a double echo. An example is in Annex 2. (b) As a separate issue, the need to maintain a distance from the wind farm means that in a given sea area (i) the number of vessels will increase and (ii) they will be closer together. This also increases the risk of radar interference. (b) When radar signals are compromised a pilot has to rely on vision. The position can become dangerous in conditions where vision is restricted e.g. by fog.
20	If the VHF issue were to continue presenting a problem to pilot boarding operations, and whilst it is not associated with the TEOWF, the Applicant would be	This is helpful. The PLA and ESL would be happy to have the opportunity to investigate the position with the Applicant and should be grateful for any information the Applicant can provide

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	willing to make available a suitably positioned wind turbine for the PLA / ESL to place a VHF repeater on to seaward of the pilot boarding station which could help alleviate this issue and reduce baseline risk.	regarding a VHF repeater and its possible placement..
	Sea Room Requirements – Integrating Evidence from Interested Parties	
22	LPC have supplemented their submission with assessing the required sea room for pilot transfers using some of the guidance from MGN543 (Section 10.3, MGN Compliance at p. 6 of the LPC Action Point document, REP1-104), providing sea room calculations for a range of vessel sizes as provided in the table at Figure 2.	The LPC submission is a technical calculation applying MGN543 guidance. The guidance relates to shipping, not pilotage. As the PLA and ESL explain elsewhere, the two do not have the same requirements. (See the PLA's and ESL's Comments on paragraphs 9, 20, 21, 24 and 26 of the Applicant's Response to Written Representations on the theme of Ports/Shipping Routes.)
26	The Applicant has also produced a schematic for areas of required safe sea room for pilot transfers captured in the vessel traffic survey, showing the actual pilot transfer tracks of the largest vessels "dipping" to take a pilot, and the largest vessel transiting the inshore route and taking a pilot, a Grande class vessel "dipping" to take a pilot and runs 1-8 of the pilot bridge simulation study were a 236m LOA Grande Vessel was used. All these tracks demonstrate that these vessels are undertaking the transfers	(a) The schematic relates to a specific class of vessel in a particular location, but neither of these things can be an absolute. (b) The fact that the schematic relates to the largest vessel size does not mean that it represents the most demanding conditions: what works for the vessel used in the bridge simulation study may not work a smaller vessel with different characteristics. (c) The schematic works with the turning circles in the positions shown, but that cannot be guaranteed. Tide, weather conditions, vessel size and other vessels in the area

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	within the stated sea room circles (see Figure 6).	(whether or not AIS vessels or requiring pilotage) any of which can mean that the turning circle has to be located elsewhere. (d) The point is illustrated by Fig. 6, which shows in isolation (i.e. without taking account of other traffic) examples all of which could change radically for any of the reasons given in (c) above. Even without change the PLA and ESL have noted that the Applicant's own studies show vessels touching or overlapping the current RLB. Figure 6 shows: (i) the MSC Antigua with the turning circle overlaid, and the turning circle touches the boundary (well within the 0.5nm buffer); (ii) the Agios Dimitrios approaching from the North East passing approximately 0.25nm from the extension boundary. ESL does not consider either example would happen in reality. The schematics appear to be based on the assumption that these two large vessels would track exactly the same route with TWOWF in place. (e) This is not a matter of formulae or evidence in the shape of official guidance. It simply reflects the considerations that must always come into play when numbers of different vessels – or land vehicles or aircraft – share the same transport corridor.

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	Pilot Station Downtime	
32	The Applicant has clearly demonstrated that sufficient sea room remains at the NE Spit Station post construction of the TEOWF as detailed above. The use of the Tongue (formerly called the NE Spit Deep Water Pilot Boarding Station), also remains feasible with the extension in place and could, where necessary, provide additional pilot boarding capacity for large vessels as it is currently not frequently used.	The current Tongue DW boarding position would be approximately only 0.7nm north of the RLB as presently proposed. The boarding position would therefore have to be moved further NNE to create the safe sea room required for boarding and landing. A relocated Tongue DW boarding area would still be operable. However, as discussed in other PLA/ESL submissions, use of the Tongue other than on the present limited basis would have significant adverse operational and commercial implications. (See section 5 of the PLA's/ESL's WRs.)
33	It is noted that the PLA / ESL WR states that London Vessel Traffic Services "manages and oversees the safety of navigation in the area" which is different to consultee responses during the NRA in which VTS were not stated to manage traffic outside of the Statutory Harbour Authorities waters (port limits), and as such was not considered an embedded risk control measure in the assessment.	(a) LVTS's area extends into the estuary outside the PLA's statutory harbour authority area to the VTS arrival arc, which crosses through the existing windfarm. (b) The PLA is responsible for controlling traffic within its area, but does not have statutory powers outside its port limits. Within the VTS arc London VTS manages traffic, within its VTS authority, as a designated VTS. It is not able to provide any traffic management to vessels approaching the area. (c) The functions of both bodies – and especially LVTS – call for all those exercising statutory functions in the adjoining waters of the estuary to work closely and share information with them, including at authorisation stages such as the present application..

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34	As this is the first evidence presented to the Applicant on pilot boarding station down time, it wishes to interrogate the underlying data in more detail, to provide more detailed analysis of when and how the pilot stations are "Offline" or "Restricted" – and the interrelationship between the two (i.e. it is not clear from the information provided whether ships were diverted from the SUNK station to the NE Spit station or indeed the Tongue Pilot boarding station, when the SUNK) is off station.	(a) The Applicant has never asked for information regarding downtime. The PLA is happy to supply the underlying data now requested to the Applicant and to explain to the Applicant the interrelationship between 'Offline' and 'Restricted'. The Applicant will find that to be necessary for a proper understanding of the data. See also comments at 36 and 39 below. (b) Information regarding vessel diversions is not logged. Vessels are simply served as they come and go. The pilot station downtime data will not reveal what diversions resulted.
35	It is also not clear from the data presented whether the "Off Station" or "Restricted" conditions were met because of, adverse wind, wave or visibility restrictions, or whether they were for a full day or part of a day. Typically, adverse wind and visibility restrictions on pilot boarding may only apply for relatively short durations.	(a) The VTS data records only record durations of 'Offline' or 'Restricted' events, not the reason for them. It is generally due to the sea state which will in turn have been affected by some element such as those mentioned.. (b) In relation to short duration downtime the Applicant has perhaps assumed that short duration is invariably reflected in the level of disruption to shipping. That is not the case. Downtime of any duration may have knock-on disruptive effects on shipping that do not mirror the disruption to the pilotage station itself. As an example, a ship that misses its slot on the berth will not automatically go to the front of the queue and may have to wait. A short delay at the pilot station may also result in a vessel missing the tidal window and having to wait a number of hours until the next tide

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		before it can proceed to the berth.
36	Finally as ESL and the PLA state that they would expect to use the Tongue Pilot Boarding Station more often if the TEOWF were constructed then, as there are no details of the Tongue Pilot Boarding Station downtime, and whilst the Applicant agrees that it may be affected more than the NE Spit Boarding Station in certain conditions, there is no current evidential base for it being more prone to going off station that the NE Spit, or the significance or magnitude of any difference.	See comments on 39 below.
37	Fundamentally, the Pilot Bridge Simulations, the sea room distances plots and the response from the LPC show that there is sufficient sea room at the NE Pilot Boarding Station post construction of the TEOWF.	For all the reasons given in these comments and in earlier submissions, the Applicant's evidence does not support these assertions.
	Pilot Station Downtime and use of alternative pilot boarding stations	
39	As addressed under the 'Safety' section of this submission PLA and ESL have provided information on the number of days that the SUNK and NE Spit Pilot boarding stations were reported as off station for a 13-month period. This is on the basis that when SUNK is off station vessels are more likely to use the NE Spit	(a) The underlying details supporting the table in paragraph 5.18 of the PLA's/ESL's WRs are derived from the raw data mentioned in comment 34(a) above. Understanding the raw data is not a straightforward exercise, so the PLA and ESL will want to see the Applicant to present the data.

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	and incur an increased transit distance and time. Notwithstanding that the Applicant maintains that NE Spit remains a feasible location for transfers, the Applicant requests more detailed information on the downtime at SUNK and NE Spit and also that information is provided on the downtime at NE Goodwin and Tongue Pilot Boarding Station which are also alternatives in event of SUNK being off station.	(b) The table at para 5.18 includes the Tongue and NE Goodwin in the NE Spit figures. While there is raw data covering all three, the potential permutations as between the elements that may be affected in related sea areas make it complicated to reduce the raw data to a simple split between NE Spit, NE Goodwin and the Tongue. The PLA will present the raw data to the Applicant. There needs to be a discussion as to how best to deal with the split with the intention of producing an agreed note for the ExA if that would assist.
40	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.	(a) The PLA and ESL did not agree with the Pilotage Study's treatment of possible alternative locations of facilities e.g. an indication of the NE Spit buoy as a new station. They are also unclear as to the evidence supporting the proposals made. These proposals, which appear to be inconsistent with the NRA conclusion (section 7.2.3) that they are unsuitable. (b Contrary to the Applicant's statement, an analysis of cost does not in fact appear in the Pilotage Study.
	Pilotage Simulation	
44	The Applicant notes, at the outset, the extensive consultation and work that was undertaken in preparing the simulation, together with the participating Interested Parties (PLA and ESL). The PLA Simulator was put forward by the PLA as a	(a) The ExA is referred to 12 and 13 above regarding the discussions that took place preparing for the simulation to be run. The PLA was essentially the provider of the tool. The Applicant's representatives determined the way in which they wanted to use it.

Para	Response summary/extract	PLA/ESL comments
	key stakeholder and recognising it is suitably established, proven and endorsed by the PLA and its Pilots for use in training and familiarisation/testing of new and updated vessels and infrastructure. The capability of the PLA simulator is considered, by the PLA, to be "highly advanced" and "Pilots can test out and perfect manoeuvres against a background of the highest wind speeds and worst weather" (Source PLA Handbook 2018). It is therefore considered a fit for purpose and adopted facility. It is important to also note that frequent opportunity for feedback of the nature, now emerging during the Examination phase, was provided (and sought) by the Applicant during the structured process of this work which included preparatory meetings (and the minutes of these meetings), the inception report, setup day, the simulations themselves, debriefs and the simulation report.	(b) The PLA repeats that the simulator is indeed as mentioned in para. 44. It must be noted that the simulator has been developed specifically for the stated purposes and its output reflects that. In addition, the results of any simulator run are only as good as the information on which the run is based. The PLA's/ESL's comments on the simulation report reflect both factors and the issues raised became apparent to them only following consideration of the report itself and the NRA. (c) The reference to feedback "emerging during the Examination stage" implies that there was opportunity to discuss concerns with the Applicant before then. As appears in the NRA Annex C 9C-3), following the simulation there were meetings with the PLA on 5 December 2017 and with ESL on 6 December 2017. At the 5 December meeting Cathryn Spain, the PLA's Harbour Master Lower , mentioned concerns about the simulation. Attention was also drawn to the PLA's need for substantial mitigation to be put in place to reduce the impact of the proposed development on pilotage and sea room. The 6 December meeting with ESL did not discuss the simulation. (d) The Applicant therefore had the PLA's comments on the simulation shortly after it had been carried out but did not discuss them further with either the PLA or ESL. Concerns about the use of the simulation in the NRA could have been raised before the NRA was settled had drafts been shared with the PLA and ESL, but the Applicant did not do this. The first the PLA and ESL saw was when the NRA was published following the application. As a result the Examination provides the first opportunity for the PLA and ESL to address

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		these matters fully.
46	ESL, PLA, POTLL, POTLL and DPWLG make reference to environmental and met-ocean conditions utilised in the PLA simulator. As outlined in Section No. 4 and 5 of Appendix 25, Annex N the Applicant notes that the conditions have been benchmarked alongside long-term datasets and are considered 'representative of conditions of challenging operation conditions (ESL Ref 6.8)'. Comments made by Interested Parties at Deadline 1 on the vessel/wind interactions were not raised at the simulations themselves, although the capability of the simulator to represent effects such as leeway (as stated by LPC) is not considered to be doubted given that the PLA state that "Pilots can test out and perfect manoeuvres against a background of the highest wind speeds and worst weather" (Source PLA Handbook 2018). The reported comments on night time condition visibility of the simulator were also not raised at the time by the PLA or ESL participants, or addressed for Pilot training – the primary purpose of the simulator.	(a) The parameters used for the simulator runs were (with the exception of the use of a tug rather than a launch) appropriate for the feasibility study for which the Applicant confirms the simulation was intended. However, for the simulation to support robust conclusions on sea room and collision risk, additional parameters would have to have been provided for. By way of example, the dates adopted were limited. Runs for the wider purposes would have called for further dates to be introduced. Night vision would also have had to be more effectively catered for. Section 7.3 of the NRA illustrates additional factors necessary to deal with collision risk., (b) The timing of comments is dealt with at 44(d) above.
47	PLA and ESL make reference to the use of the tug in the simulator in lieu of a pilot	(a) The PLA simulator did not have a programme for a pilot launch. A tug was used as the Applicant wanted the nearest

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	launch. This was trialled and agreed prior to the simulation runs, with time allocated to ensure the ESL coxswains were familiar with operation. The primary limitation observed during setup related to the lower transit speed of a tug. Although it was agreed that at the wind speeds being tested of 25kts, the resulting sea state would in reality limit the launch speed to 18kts or less (the tug speed) and therefore this was felt to be precautionary. It is recognised that some of the inter ship handling characteristics will differ, but this is not considered to be critical for the simulation objectives which were not focussed on assessing the complexity of vessel interaction once the vessels are alongside each other for transfer (this was managed through allowing a period of time once alongside for the pilot to transfer to/from ship – as recorded in the grading criteria of each run). Whilst a radar was not available on the tug simulator (noting separately that ESL report issues using radar) – an ECDIS screen provided proximity and positioning information to facilitate the simulations	available alternative, but that cannot alter the fact that there are critical differences between the two types of vessel. (b) In particular, they handle very differently. Inter ship handling characteristics would have been an issue had the metocean conditions been more representative of real life conditions. Importantly, a launch is smaller and much lighter than a tug – up to 25 tonnes/ 15-17m loa and a draft of 1.5m for a launch as against 35m loa, typically 350 tonnes and a draft of 3.2m for the simulator tug. Because of this size, difference a launch is more affected by swell. This can be a critical factor, but neither the simulation report nor para 47 mentions it as an issue or any adjustment for it that might have been made.
48	The number of runs performed are commented on by the Interested Parties, with ESL noting that they requested additional runs to increase complexity. The	(a) As explained above, the main issue is not the number of runs used for a feasibility study but the need for additional runs to support a simulation study for wider purposes.

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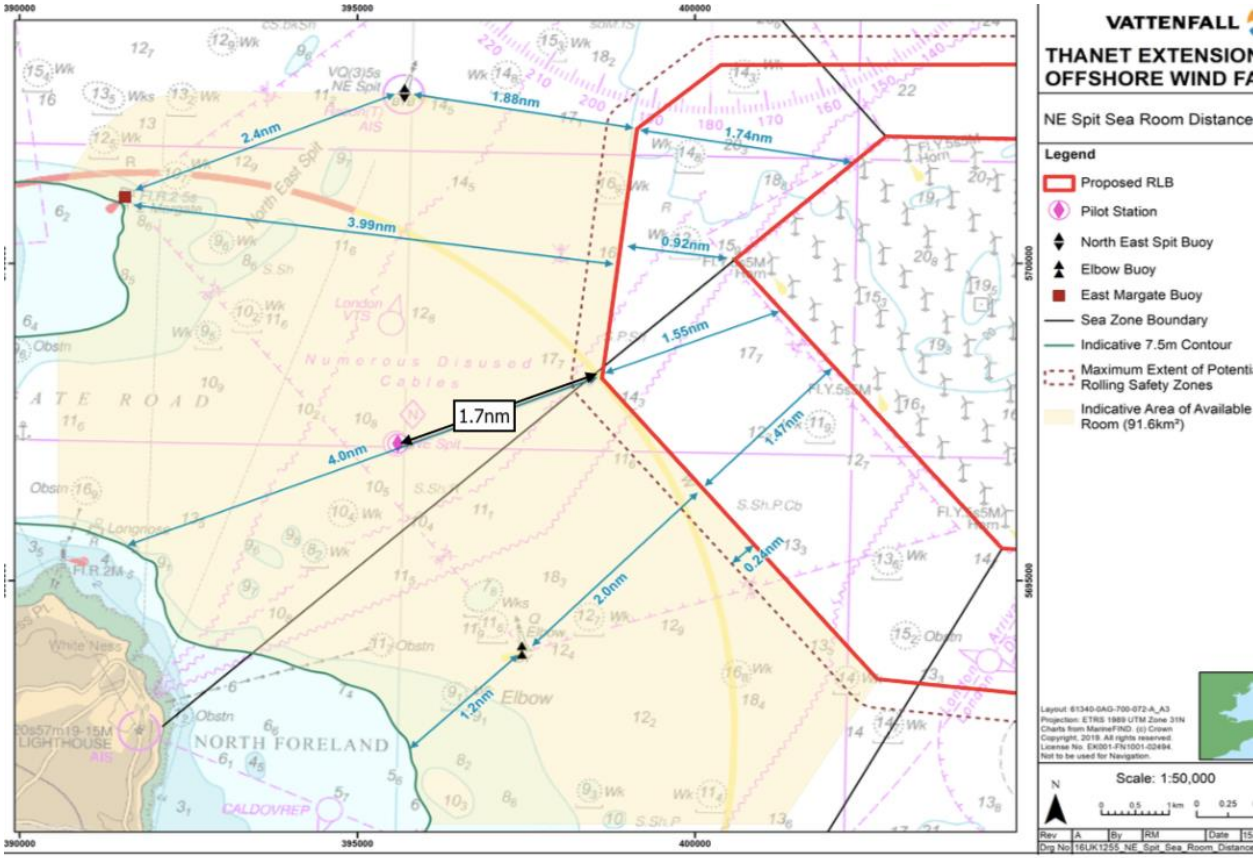
	agreed run plan contained a number of multiple and complex transfers and it was considered by participants at that time that the runs undertaken provided a range and breadth of scenarios sufficient to inform the conclusions. Additional runs were willingly undertaken at the request of ESL with increasing complexity and successful pass criteria.	(b) During the simulation itself no overall conclusions, such as those stated in the final simulator report, were discussed. Individual runs were evaluated at the time on the basis of the simulation being for a feasibility study. (c) The number of planned simulator runs is in Appendix 25 Annex k – Pilot Transfer Bridge Simulation Inception Report, section 4.3. ESL did no more than advocate adhering to this, and no runs above or beyond the inception report were conducted. (d) With the conclusions as formulated in the pilotage study and their application in the NRA ESL could only comment at that later stage and after discussions with all coxswains. Had the Applicant shared its draft NRA with the PLA and ESL any further issues arising out of the NRA could have been addressed, but neither the PLA nor ESL had sight of a draft.

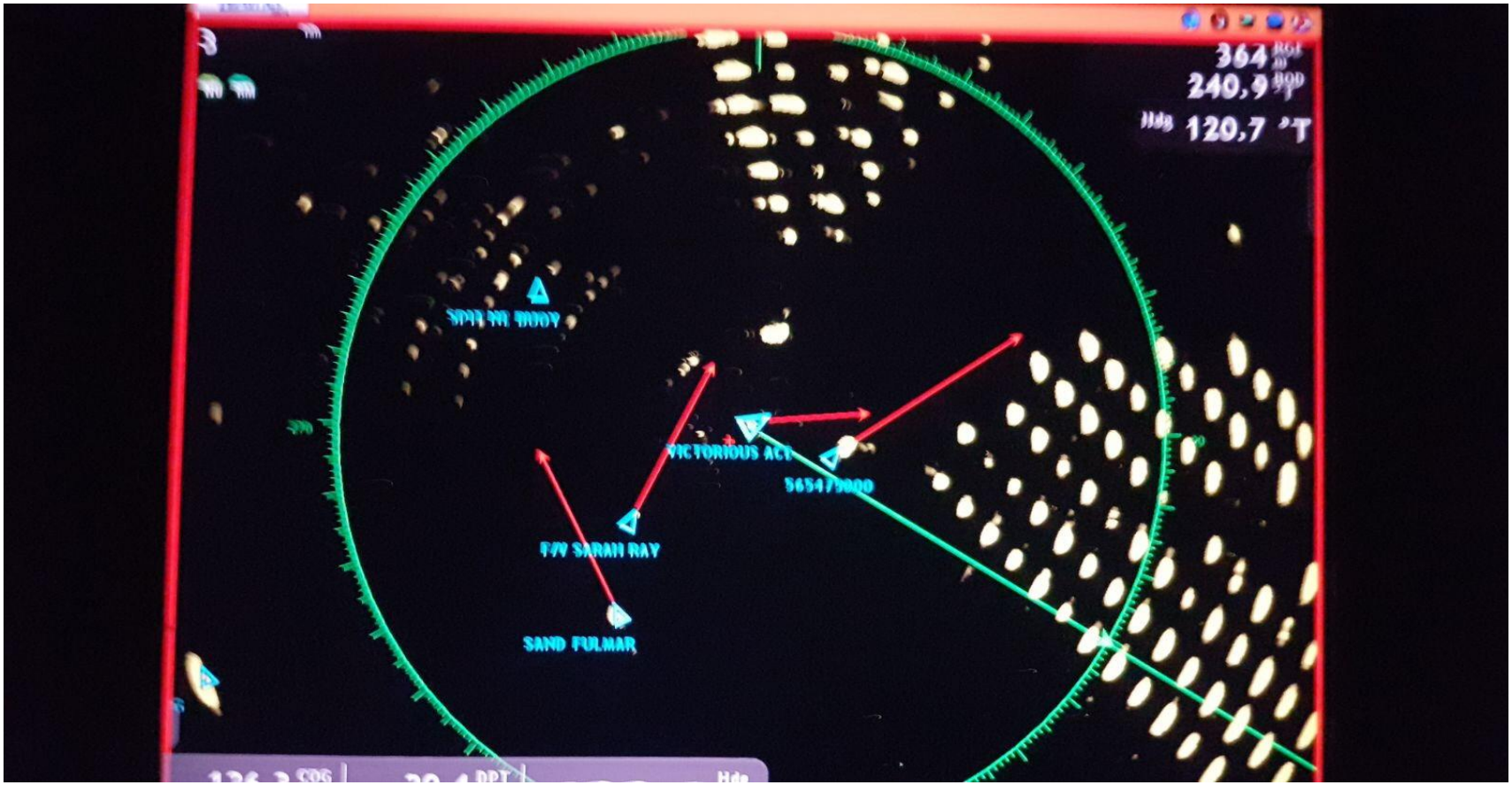
ANNEX 1

ESL Sea Room Plan



ANNEX 2

Radar interference – double echo effect



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THE THANET EXTENSION OFFSHORE WIND FARM ORDER

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

(Rule 8 letter 18 December 2018)

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Author	Winckworth Sherwood LLP
Date	7 March 2019

Minerva House
5 Montague Close
London
SE1 9BB
DX: 156810 London Bridge 6

T 020 7593 5000
F 020 7593 5099

www.wslaw.co.uk

Winckworth Sherwood

Solicitors and Parliamentary Agents

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8	The methodology employed is used by the Port of London Authority in their management of navigation risk, required under the direction of the United Kingdom Port Marine Safety Code.	The PLA and ESL do not take issue with the methodology employed by the Applicant. Their concern is with the data used, the level of consultation, particularly on the draft NRA, and the conclusions that resulted from these failings..
14	As no specific concerns have been raised with regards to individual hazard likelihood or consequence scores, it remains difficult for the Applicant to interrogate the concerns in more detail than has already been presented in the NRA – specifically in Section 7 of the NRA on the Impacts of the Thanet Extension, which documents the issues raised by stakeholders and provides an evidence-based response to their assessment. However, it is recognised that there is a continuing disconnect between the results of the NRA and the qualitative views put forward by stakeholders.	(a) If the PLA and ESL had had sight of the draft NRA any specific concerns could have been raised in advance of its being finalised. In the period since its publication the Applicants have sought further discussion on it only in the context of the draft SoCG. (b) As the Applicant is aware from the SoCG discussions with ESL, does not agree with the hazard scores or vessel categories as stated. Reflecting discussions with the Applicant to date, a detailed note of specific issues is in course of preparation. Once it ca be passed to the Applicant ESL would welcome the opportunity to discuss the issue further so as to reach a resolution if possible. (c) For specific points on seasonality see 17 below.
	Conclusions of ALARP level hazards	
16	The evidence base for the build-up of hazard scores is based on primary data from vessel traffic analysis and historical incident analysis, supplemented by feedback and input from stakeholder	"Stakeholder consultation": The PLA and ESL were not consulted on hazard scores.

Para	Response summary/extract	PLA/ESL comments
	consultation.	
17	Vessel traffic analysis has been undertaken on agreed baseline data as set out in the NRA, including winter and summer radar, AIS and visual surveys, supplemented by an additional AIS survey.	(a) As the PLA and ESL have pointed out elsewhere at D3, the summer survey is not representative because it was taken during a known quiet month. It therefore fails to reflect the August peak. (b) The significant effect of non-AIS vessels on the navigation of AIS vessels has been explained by the PLA/ESL elsewhere in these D3 submissions. Unusually for this type of report, the Applicant has not published details of its survey vessel's tracks. The PLA and ESL believe the survey vessel did not fully survey east of the TEOWF. This means the assessment does not take account of non-AIS vessels in this area. This is a significant deficiency especially given the density of shipping there.
20	The Applicant identified a disconnect between concerns raised by consultees (mentioned in para. 19) and the specifics identified when preparing the NRA. As a result it requested the MCA, as Navigation Authority for the area, to attend a workshop to review the risk scoring within the NRA, which is a commonly adopted approach for OREI NRAs, to ensure that it was aligned to their professional judgement on hazard likelihood and consequence based on the evidence provided. This was requested in the form	(a) The PLA is the public authority responsible for and operator of pilotage operations directly affecting the waters being assessed. (b) Within those waters, the MCA is the statutory authority, but the PLA manages VTS operations in this area under powers designated by the MCA. (c) The PLA is also the competent harbour authority for the Thames and undertakes pilotage operations directly affecting the waters being assessed. (d) Given the disconnect between its in-principle concerns and

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	of a hazard review workshop where individual hazards would be reviewed against the evidence base and the hazard likelihood and consequence scores assessed for accuracy.	the developing NRA, the PLA should have been consulted about the applying of in-principle problems to specific assessment. This would be achieved by involvement in the workshop which, it is noted, has not taken place. (e) The Applicant's review of the NRA is therefore all the more welcome. Both the PLA and ESL are looking forward to involvement in the review process when they will be able to assist the Applicant with detail of matters that they believe should be included..
21	To date, the MCA have not been able to commit to a workshop and, in the absence of an evidential basis to their concerns, or guidance on appropriate additional empirical tools to clarify sea room concerns, the specific issues being identified by stakeholders including the MCA, the Applicant refers to its response to ISH2 Action Points (REP1012) at Deadline 1 that a specific workshop on this matter may have limited value. Notwithstanding this the Applicant remains committed to continuing engagement with shipping stakeholders. .	(a) The Applicant is saying it has now taken account of consultation comments but that it was unable to apply in-principle concerns to the practical assessment. The PLA and ESL are unsure of the difficulty here and would be happy to assist the Applicant to reflect the issues of principle with which they are concerned in the Applicant's own specific assessment exercise. Whatever the problem with this, the treatment of in-principle issues must mean that the NRA does not in fact take account of such stakeholder concerns. (b) It follows that a workshop as originally proposed would have a real value. Now that a revised RLB and 'refreshed NRA' are in development the PLA hopes the Applicant can confirm that the disconnect will be addressed when considering the risk

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22	In summary, the NRA has taken into account the consultation responses received by the various stakeholders and this has informed, along with primary data, the hazard scoring as far as practicable. The outcomes of the NRA are therefore robust, compliant with guidance, and have been reached with full cognisance of the qualitative inputs from stakeholders.	assessment. The PLA would also be grateful for confirmation that both the PLA and ESL – alongside the MCA - will be involved in that exercise. A workshop may be the best way of achieving this.
	Stakeholder Consultation	
24	Throughout the NRA the PLA / ESL: • Were extensively consulted as evidenced by the number of meetings held during the NRA (see consultation in Annex I to Appendix 25 to Deadline 1 Submissions) • Delivered and agreed the Pilotage Bridge Simulation Study by: o Agreeing to the approach to assess feasibility of pilotage o Reviewing and agreeing the inception report that laid out the basis of the assessment o Provided the PLA pilot training simulator to carry out the	The ExA is referred to the PLA's/ESL's D3 submissions concerning (i) consultation and (ii) the Pilotage Bridge Simulation Study.

Para	Response summary/extract	PLA/ESL comments
	assessment ○ Provided pilots of their choice to act as pilots boarding vessels ○ Provided ESL coxswains to act as pilot boat coxswains ○ Provided experience pilots as simulator operators / managers ○ Agreed on the findings of the simulation at a hot wash up at the end of the simulation study ○ Did not provide any comment on the draft pilotage simulation report	
	Provision of mitigation	
	The application of mitigation in the NRA is defined as embedded mitigation or additional mitigation. Additional mitigation is only applied where it is considered to be required in order to reduce risks to ALARP and as such is, to a large extent, predicated on the results of the NRA.	The PLA and ESL note that the mitigation must be re-visited following completion of the review of the NRA.