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IMMINGHAM EASTERN RO-RO TERMINAL

Applicant's Response to Immingham Oil Terminal Operators' Deadline 8 Submissions
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Contents

1 Executive Summary

1.1 Set out below is **the Applicant's response to the submissions provided by Associated Petroleum Terminals (Immingham) Limited and Humber Oil Trustee Limited ("the IOT Operators") at Deadline 8 [REP8-057].**

1.2 The IOT Operators' submissions to which responses are now being provided are:-

- Deadline 8 Submissions **[REP8-057]** comprising:
  - Responses to Examining Authority's Further Written Questions ("ExQ4");
  - Comments on navigational simulation runs for enhanced operational controls of 13 / 14 December;
  - Comments on the Applicants' Flow Modelling;
  - Comments on the Applicant's ISH5 Action Points 3 and 4: Navigation Risk Assessment Update; and
  - Comments on protective provisions for the protection of the IOT Operators;
- Deadline 8 Submissions Appendices **[REP8-058]** comprising:
  - Appendix 2 - Navigation simulation study - Briefing note – provided to IOT Operators on 11 December 2023; and
  - Appendix 4 - IOT Operators' notes on navigational simulation runs for enhanced operational controls of 13 / 14 December.

1.3 It should be noted, however, that in light of the ExA's Rule 17 Request for Further Information dated 12 January, rather than pre-empt its response to the Rule 17 Request, to be provided by Deadline 10, and in light of the obvious need for the Applicant to give specific consideration to the questions that have been put by the ExA in that letter, this Response will be limited in nature with a full response being provided for Deadline 10.

2 Introduction

2.1 This document provides the Applicant's response to the information submitted by Immingham Oil Terminal Operators (the "IOT Operators") at Deadline 8. These responses in turn draw upon information previously submitted by IOT Operators prior to that deadline.

2.2 IOT Operators' submissions to which responses are now being provided are:-

- Deadline 8 Submissions **[REP8-057]** comprising:
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2.3 It should be noted, however, that in light of the ExA's Rule 17 Request for Further Information dated 12 January, rather than pre-empt its response to the Rule 17 Request, to be provided by Deadline 10, and in light of the obvious need for the Applicant to give specific consideration to the questions that have been put by the ExA in that letter, this Response will be limited in nature with a full response being provided for Deadline 10.

3 General Comments

3.1 The ExA should be aware that despite generalised assertions of the IOT Operators, the Applicant has made repeated attempts to engage with IOT and their representatives, including immediately after ISH5, as directed by the ExA and agreed by all parties.

3.2 After an initially positive response, however, support for such engagement by IOT Operators' representatives seems to have been withdrawn, apparently under the direction of the IOT Operators. Subsequent attempts to discuss matters were again rebutted.

3.3 The ExA will appreciate that it is simply not possible for the Applicant to engage with an objector unless the objector agrees to engage in such discussions, despite the efforts and offers to do so by the Applicant.

4 Comments on IOT Operator's Responses to Examining Authority's ExQ4 [REP8-057]

4.1 ***ExQ4 DCO.4.06: Requirement 18*** – This question and the response relate to Requirement 18. These form part of the ExA's Rule 17 Request for information to which the Applicant will be responding at Deadline 10. As a consequence, the Applicant will provide its response on this particular topic in answer to that request. ***ExQ4 NS.4.04: Impedance of IOT Operations*** - The Applicant submitted a comprehensive response to NS.4.04 (likely extent of "impedance" to IOT Operations) at **[REP8-020]**. This explained that the Applicant's primary consideration in developing the IERRT proposals has been to ensure that operations can continue to be carried out safely at the IOT and without interruption, which the Applicant has evidenced throughout its NRA and the extensive navigational simulations.

4.2 Further information has been provided by the Applicant during the 'without prejudice' discussions that arose following the submission of the 28 September 2023 letter **[AS-020]**. A key consideration for the Applicant when considering the design proposed by Beckett Rankine (appended to the letter) was the continued operation of tankers berthing on the IOT finger pier. The Applicant's evidence in this respect is contained within the submissions made by Mr Hodgkin at ISH5 **[REP7-020]** the Applicant in Section 3 of its Changes Request Report **[AS-072]** and evidenced in the navigational simulations undertaken at **[AS-071]**.

4.3 The simulations conducted on 13 and 14 Dec **[REP7-033 and 7-034]**, and the wider body of work undertaken, demonstrates that there is no significant impedance to the operation of product tankers at IOT 8. There are a number of cases where the approach to the berth has been classified marginal by IOT operators, but these approaches were conducted in simulated conditions beyond the existing safe operating wind limit for the berth. In less challenging winds, the flows and the existence of IERRT had no effect on the operations to and from IOT.

4.4 ***NS.4.05: Closure of Grangemouth Refinery -*** In response to NS.4.05 (Relevance of closure of an oil products facility in Scotland) the IOT Operators have suggested that the closure of the INEOS refinery at Grangemouth will *"inevitably add further demand to products from Immingham (as the closest refineries to Grangemouth) and increase the importance of the Immingham facilities to Scotland and wider UK energy resilience".*

4.5 This is a point that is unsubstantiated and with no evidential support. The Applicant notes from various press releases that whilst the owners of the Grangemouth refinery intend to close down refining activity at the site, the intention is to then transition the site to a fuels import hub. As such, the Applicant suggests that it is not – as the IOT Operators claim – 'inevitable' that there will be further demand for products from Immingham and thereby an 'increase' in the importance of the Immingham facilities.

4.6 The Applicant understands that the reasons for the closure of refining activity at Grangemouth relate to market pressures and the energy transition. In this respect the owners of the refinery indicated that the change to an import

facility reflects the decline in demand for the type of fuels the facility produces and a decline in the flows of product being received at the facility from the North Sea oil and gas fields.

4.7 Furthermore, there has been no evidence provided that the UK fuel industry as a whole would be unable to address appropriately any shortfall in supply brought about by the closure of the Grangemouth Refinery. Fuel supply in the UK is a balance between imported refined fuels and fuels refined indigenously. Clearly this examination is not focussed on global oil and fuel trading trends, but the Applicant would, for the sake of good order, point to the increasing importance of fuel import facilities that are able to receive refined fuels form refineries overseas, some of which are close to the point of extraction. Furthermore, it would – anecdotally at least – be logical to assume that the closure of refineries in the UK would indicate that market forces no longer require that amount of refining capacity to be based onshore in the UK. The Applicant has separately addressed in any event the fact that the effect on safe operations of the IOT facility with the Proposed Development in place has been fully assessed, so that there is no basis for suggesting that any further demand for use of IOT (if it arises) will be materially or adversely affected by the Proposed Development in any event.

4.8 ***NS.4.06: Outline Offshore CEMP -*** The IOT's response to NS.4.06 appears to be suggesting that the Applicant has provided a lack of detail as to how the IOT will be included in the liaison process and the specific tanker berthing protocols between the SCNA and Port of Immingham SHA.

4.9 The Applicant considers the IOT Operators' response is based on an unfounded concern, misguided by the fact the IOT Operators are pursuing an objection. The Applicant notes the IOT's request to be involved where protocols and policies require specific knowledge about the oil transfer arrangements. The Outline Offshore CEMP **[REP8-012]** (paragraphs 3.1.10 – 3.1.15 and Table 3.4) clearly identifies a need for marine liaison and for specific tanker berthing protocols and the HMH has previously confirmed that tidally restricted vessels will be managed in line with the protocols already in place at the Port today, including the Humber Passage Plan.

4.10 It follows, therefore, that broadly that the Applicant and the IOT Operators are in agreement that appropriate liaison will be required. This will be confirmed when a Contractor has been appointed for the work and at the point of the Tidal Works Approval from the SCNA (which is explained in Table 3.4 of the Outline Offshore CEMP **[REP8-012]**).

4.11 As the Applicant has indicated on numerous occasions, it forms part of the duties of the Statutory Bodies (namely the SCNA and the SHA for the Port of Immingham) to manage vessel movements, communication and the interactions between marine activities within the Port to ensure marine operations are carried out safely. This will be no different during the IERRT construction phase.

4.12 Table 3.4 also makes clear that, as the IOT Operators must be aware, the Contractor will be contractually obliged to adhere to and comply with the terms of the contract – and will be liable for any non-compliance.

5 Comments on navigational simulation runs for enhanced operational controls of 13 / 14 December

5.1 In responding to the various unfounded and what the Applicant considers to be misleading comments made with regard to the navigational simulations conducted on the 13th – 14th December 2023, it is important to remember the context within which these simulations were undertaken.

5.2 The first objective was simply to understand the suitability of the Applicant's published Enhanced Operational Controls as described in its Environmental Statement Addendum **[AS-070** – Section 3.3**]**. These are Enhanced Operational Controls which are being suggested even though the risks associated with the operation of the IERRT have already been satisfactorily addressed without the need for such further controls.

5.3 The Applicant's submission of the December 2023 simulation report [**REP8-029**] clearly explains the context and it makes clear that these additional simulations were being undertaken in what were therefore intended to be deliberately extreme and unlikely emergency scenarios. This then explores the outer limits of conditions which as the Applicant has stated on a number of occasions, is the principal objective of navigational simulations. There is little purpose in simulating runs which it is already known will be successful and uneventful – and which would be meaningless in terms of testing the limits of the proposed Enhanced Operational Controls in any event.

5.4 The simulations were, therefore, designed to test an extremely improbable scenario. It is a scenario which, first of all, entails a total control and power failure (which Stena confirm has <u>never</u> occurred in its 23 years of operations on the Humber), combined with exceptional and coinciding environmental conditions, including the perfect coincidence of a wind event likely to occur 1 or 2 times per year with a peak spring ebb-tide which only occurs every 28 days.

5.5 The scenario being tested would also require the coincidence of an IERRT vessel manoeuvring to Berth 1 and with no allision with the IERRT infrastructure and effectively "threading the needle" between the IERRT infrastructure and the IOT Finger Pier.

5.6 The scenario also assumes there has been a total lack or failure of other control measures such as anchors and the Chief Engineer onboard the vessel being unable to rectify the issue, combined with a lack of general good seamanship in attempting manoeuvres in the extreme conditions.

5.7 The ExA will appreciate that these scenarios are so extreme in their nature and so remote in likelihood, on their own that in combination they become almost unreal and theoretical in terms of probability anyway. Indeed, as the Stena Master pointed out at the simulation – in a way which has regrettably been misrepresented by being taken entirely out of context by the IOT Operators response **[REP8-057]** – in such extreme weather and tidal conditions the Master of the vessel would simply not attempt to berth but instead wait in the river until conditions had calmed.

5.8 In light of the above, it is unfortunate that the IOT are treating such simulations as an opportunity to criticise the numerous simulations and remote scenarios considered, rather than recognise these as evidence that the Applicant has taken points made by the IOT Operators with due respect and seriousness; going to great extents to test all eventualities, even the most extreme in terms of conditions and remote possibilities. All of this also needs to be seen in the context that further simulations will be undertaken before the IERRT can become operational, as well as the carrying out of a comprehensive FRA by the HMH and incorporation with an updated MSMS with the continued regulation of safety by the SHAs, including the HMH, throughout the lifetime of the operation of the IERRT.

5.9 Nevertheless, as explained, the simulations were designed to meet the following three objectives, which were communicated to the IOT Operators on 29 November 2023:

(a) Study the effectiveness of Tugs when used as enhanced control measures at IERRT Berth 1;

(b) Consider the effect of the proposed impact protection on operations at IERRT and for coastal tankers at the IOT finger pier; and

(c) Understand the flow model effects due to the increased size of the southern IERRT pontoon.

5.10 At the simulations, as the IOT Operators' have conceded at paragraph 18, that the Stena Masters repeatedly pointed to the improbability of the scenarios being tested and highlighted that ultimately if the PEC/Pilot actually experienced such conditions, the berthing operation would in fact be delayed until more reasonable conditions prevailed. Moreover, that is something that the HMH and Dock Master can require as necessary in any event.

5.11 The ExA should be aware that, contrary to the mischaracterisation of the outcomes claimed by the IOT Operators at Paragraph 6, the simulations successfully demonstrated the use of tugs as an enhanced control measure in various extreme conditions and remote likelihood scenarios identified above. The Stena T-Class vessel was arrested by tugs in all conditions simulated. The 50,600t G9 vessel (greater than the displacement of the design vessel) was arrested by two no. 70T tugs in all but one exceptional combination of wind and current speed.

5.12 In reiteration of points already made by the HMH in **[REP7-064, REP8-050]**, the proposed enhanced operational controls will not supersede the normal assessments and controls that are applied to any new vessel introduced to the port – a point which the IOT Operators – and indeed DFDS – seem unable to accept.

5.13 The Applicant, therefore, strongly disagrees with the IOT's interpretation of the simulations and the mischaracterised conclusions drawn in paragraph 23 **[REP8-057]** the IOT Operators now appear to be suggesting that any contact of a 'dead ship' with the IERRT infrastructure is evidence that the enhanced operational controls are not effective in such extreme circumstances. This is simply not correct and a serious mischaracterisation of the position. To the

contrary the sort of extreme situation and remote sort of emergency scenario that is being considered (leaving aside how improbable it is that the sequence of events necessary for it to arise ever occur), seeking to bring a vessel alongside the IERRT berths may well be the chosen and optimum strategy. Whilst that might result in forces against the IERRT infrastructure that are greater than those experienced during a routine berthing manoeuvre, the basic point in dealing with such an event (notwithstanding how remote it is as an event) is that it means allision with IOT infrastructure will have been avoided.

5.14 In addition, the Applicant would point out that its Design Basis Report **[REP7-025]** and Concept Design submission **[REP8-032]** provide evidence that clearly demonstrates that the IERRT infrastructure is structurally designed to withstand all of the vessel speeds that were recorded within the simulations.

5.15 It should also be remembered that in the extremely unlikely scenario that both engines fail, other controls are also available – for example, the deployment of anchors and emergency generators which provide back-up power sources to restart the engines. Critically, despite these obviously important characteristics of the Stena vessels – all of which incidentally are not shared by other Ro-Ro vessels such as the Jinling – none of these additional controls were factored into the simulations because the purpose of the simulations was to test the extreme – not the normal – scenarios.

5.16 In addition, such extreme scenarios have to be viewed in the context of port operations occurring on a daily basis and the risk assessments and management controls implemented by the two SHAs that have a duty to safe navigation.

5.17 Risks must be controlled so as to be tolerable and ALARP (which the Applicant has more than demonstrated is the case through its NRA **[REP7-011]**).

5.18 ***Simulation reports*** – The Applicant notes the request by the IOT Operators for early sight of the simulation reports. As the IOT Operators are fully aware, however, the report **[REP8-029]** was produced in a very short time period and was only available on the day of Deadline 8 submission. This was communicated to the IOT operators in the Applicant's response to their letters on 5 January 2024 **[REP8-031]**. HR Wallingford explained at the time of the simulation study that the production of the report would be in early January owing to the resourcing over the holiday season and offered to support the IP's with direct responses if required. This offer was taken up by the representatives from DFDS but not from the IOT Operators which is disappointing in the circumstances, bearing in mind the unnecessary comments they now make.

5.19 The Applicant does note the IOT Operators' comments on the simulations provided in Appendix 4 of their submissions **[REP8-058]** and reiterates that **[REP8-029]** reports the simulation results.

5.20 Para 6: design Vessel - Both the IOT Operators and DFDS have now focused on the concept of the "design vessel".

5.21 At the risk of having to repeat yet again information already before the ExA, for which the Applicant apologises and hopefully will not have to rehearse again -

(a) First, in undertaking an assessment of the proposed IERRT development, the Applicant had to identify, bearing in mind that the IERRT will have a 50 plus years life, the envelope parameters of a vessel which is likely to operate at IERRT. It could, of course, have simply assessed environmental and navigational impact of the Stena Class vessel which is currently in operation but it has carried out assessments beyond that given that the trend is for vessel sizes to increase.

For that reason, the Applicant approached the potential operators of the IERRT, i.e. Stena, who provided parameters for a dimensional envelope for the design vessel. As has been explained on numerous occasions throughout the examination, the design vessel may never be constructed to those maximum parameters which represent maximum dimensions in terms of beam, length and draught – but these have nevertheless enabled the Applicant to assess the "realistic worst-case scenario" in environmental and construction impact term.

(b) Second, with the design vessel parameters established, the proposed IERRT development has been assessed in terms of the "design vessel" parameters – not the smaller Stena T Class. As the "design vessel" does not actually exist, in order to achieve realistic and verifiable simulation results, the Applicant, with HRW, have simulated the use of the DFDS Jinling and the CLdN G9 class of vessels as appropriate substitutes – even though neither of these vessels enjoy all of the attributes of the Stena T Class. The irony of the position is that the Applicant would have been criticised if it had not used the Jinling and the G9, but now having used both classes vessels it is being criticised for not simulating a vessel that does not exist. This betrays a basic misunderstanding as to how simulation should be undertaken as has been repeatedly explained by Mr Parr of HRW.

(c) Third - When undertaking a simulation, it is critical that the assumptions regarding the simulation design vessel are minimised where practicable, hence why HR Wallingford have used vessel models, i.e. the Stena T Class, the Jinling and the G9 the capabilities of which they understand and are fully documented even though a future design vessel may prove to be far more manoeuvrable anyway.

(d) Fourth and finally, it is very clear from the above and the information already provided to the ExA during the course of the examination, that the Proposed Development has been comprehensively assessed in terms of its future use – not simply for the Stena T Class – but a class of vessel enjoying some, if not all of the design vessel parameters.

5.22 In the light of this, any suggestion that the use of the IERRT should be restricted to a particular class of vessel is misguided and unprincipled and ignores the nature of the simulations and the role of the SHAs in relation to

all future operations. It fundamentally undermines the credibility – and indeed the integrity – of the IOT Operators' objection because it misunderstands the principles of simulation that have been clearly explained and are logical in any event.

Limitations of simulations

5.23 In responding to Paragraphs 7 to 10 regarding the limitations of simulations, the Applicant notes that the simulator limitations in representing the outcome of an allision are covered in detail in the simulation report **[REP8-029]**. A summary of the simulator allisions is as follows;

- The allisions noted during the simulations where the T Class made contact with IERRT infrastructure are within the design parameters (2.5kt) set out in the Applicant's Design Basis Report [**REP7-025**] and Concept Design submission **[REP8-032]**.
- The allisions noted during the simulations where the 50,000t vessel made contact with IERRT infrastructure are within the design parameters (1.8kt) set out in the Applicant's Design Basis Report **[REP7-025]** and Concept Design submission **[REP8-032]**.

5.24 The simulations were undertaken with an independent tug master who confirmed that the actions taken in the event of an emergency in the simulation were in line with those he would anticipate.

5.25 In their response to Paragraph 8 and 9, the IOT Operators now appear to be suggesting that in no situation could a tug be considered an effective mitigation. This is a surprising assertion which is clearly at odds with the use of tugs across the world on a daily basis, including for IOT Operators' own operations – and should as a consequence be afforded no weight.

5.26 ***Paragraph 9*** – The Applicant's NRA has in fact considered the risk of a RoRo vessel alliding with the IERRT terminal at **[APP-089]** Table 31 CO.5. The comment at paragraph 9 of the IOT Operators is unprincipled, unjustified and alarmist. It is made without any evidential support.

5.27 It is unfortunate that the IOT Operators believe that such responses are required. The issues that they have ostensibly identified have been examined in detail by the Applicant and comprehensively addressed; and the IOT Operators' concerns have no proper basis in light of the controls that continue to apply to operations and the duties and responsibilities of the SHAs which apply now and will continue to apply with the IERRT in place.

5.28 ***Paragraph 11 –***

(a) As the IOT Operators are fully aware, the critical line of approach to Berths 1, 2 and 3 is largely similar and the line of approach to Berth 1 is the run scenario which has been considered in detail as it passes in closest proximity to the IOT infrastructure, which is why it was undertaken as part of these extreme emergency scenario simulations. The simulation was directed at verifying the safety of their own infrastructure for their own benefit.

(b) In addition, as already noted, the IOT infrastructure will be protected by the IERRT infrastructure at Berths 2 and 3. The Applicant's proposed enhanced operational controls **[AS-070** – Section 3.3**]** apply for Berth 1 ebb arrivals. That said, the procedures to be employed by the Applicant and the SCNA are being considered by the Applicant and the in light of the ExA's Rule 17 Request and as referenced above, will be dealt with at Deadline 10.

(c) This point, which the Applicant asserts is in fact groundless and will be covered in the Applicants' response at Deadline 10.

(d) This is simply not correct. Suffice to say, approaches to IERRT at night or in restricted visibility will be undertaken by suitably qualified and experienced personnel at the appropriate time – as the IOT Operators – if not their marine consultants – are fully aware.

Tugs as a single control measure

5.29 The conclusions drawn from the simulations are clearly set out within **[REP8-029]** at section 4.1.3. - confirming that the enhanced operational controls are safe and effective to arrest an errant vessel. Again, incorrect and misleading assertions are made by the Operators on this point and the Applicant will respond fully in the response for Deadline 10.

5.30 ***Paragraph 13***: Tugs as a single control measure - It is simply wrong to suggest that it was agreed that other controls, such as anchors, would be inappropriate as a control and the Applicant is surprised that the IOT Operators should make such an assertion as it is untrue. To the contrary, representatives from Stena, the Harbour Authority and HR Wallingford all agreed that the deployment of anchors as an additional control measure would be entirely appropriate.

Tugs as a control measure – design vessel

5.31 Regarding the assertion that result demonstrated a significant loss of control, as stated the purposes the simulations was to test towage requirements in extreme environmental conditions. The simulations are intended to test and then establish limits and appropriate controls – where a failure occurred, the process would be repeated to establish the minimum appropriate control hence why there were a number of failures. As has been repeated by the Applicant on a number of occasions, navigational simulations are not undertaken to be successful – but to test the parameters of a given marine proposal. The simulations undertaken involving the 50,000t displacement Ro-Ro were primarily designed to demonstrate that a process can be used to assess the level of towage required to support a larger vessel if required.

5.32 The Applicant would refer the ExA to the report of the simulations provided at **[REP8-029]**. Table 3.2 provides a clear presentation of the aim of each run and the outcome recorded. The commentary provided is pertinent as this provides a balanced record of the outcome. The conclusions drawn from the simulations are clearly set out within **[REP8-029]** at Section 4.1.3. - confirming that the enhanced operational controls are safe and effective to arrest an errant vessel.

5.33 As it is, in light of the ExA's Rule 17 Request, issued on Friday 12 January, the Applicant will provide its response on the enhanced operational controls in light of the information requested by the ExA. As already noted, the assertions made by the IOT Operators fundamentally mischaracterise the purpose of the simulations undertaken (as already referenced above) and fail to record the actual conclusions reached.

5.34 It is noted that Run 8c of the 13/14 December simulations is drawn out as an example in the IOT Operators' submission at Figure 1 and paragraph 15. The run plan for Run 8 **[**Table 3.2 of **REP8-029]** includes simulations from 8a to 8d. This is indicative of the detailed consideration that is and will be given by the SHA and SCNA when a specific vessel is proposed to be introduced. Run 8d was completed entirely successfully which has informed the understanding of the HMH and Dock Master Immingham. This clearly demonstrates that the enhanced operational controls would be sufficient to arrest an errant vessel (in circumstances where the chances of such a vessel becoming powerless are inherently remote in any event) and that impact protection is not required. This is entirely consistent with the position reached in the Applicant's NRA **[APP-089** updated by **REP7-011]**.

5.35 Paragraphs 1517 - The Applicant does not accept that towage is not a suitable control measure and has previously commented that berthing criteria will be established by the SHA and the SCNA. With respect to the comments raised on the IOT river berths, standing notice to mariners SH 34 'passing Immingham jetties' applies to all vessel movements occurring at the port of Immingham today. SH 34 states that ro-ro carriers berthing under normal circumstances at the Immingham Outer Harbour or Immingham Dock (and which manoeuvre past the IOT river berths) are not required to take an arrest tug although clearly there is no impact protection in place today for those berths. As a consequence, the Applicant refutes this suggestion.

5.36 Paragraph 18 – The Applicant is not sure what point the IOT Operators are attempting to make at this point. They have simply failed to acknowledge the degree of frustration that was in evidence during this simulation session about modelling the inherently unlikely events that were being simulated.

5.37 The Stena Masters were particularly frustrated with a failure by the IOT Operators to accept and recognise that:

- Modern Ro-Ro vessels do not generally suffer full controls failures;
- That the only control measure being tested was tugs; and
- That the study was being completed in conditions which would exceed the normal best practise of seamanship.

5.38 Neither the Applicant nor HR Wallingford recorded the Stena master stating that 'he would never berth in more than 2.5 knots of current or 20 knots of wind' and the Applicant is concerned that this has been misrepresented as it was not recorded as part of a de-brief. This should be considered in the context of the excessive conditions being simulated during Run 9B which was aborted. As the IOT Operators note in its Appendix 4 document, the conditions were a NW wind at 27.5 knots (gusting +/- 5 knots), combined with

a peak spring flow of 4 knots and the vessel moving astern at a speed of 2.5 knots when the controls failure occurred. This is an extremely improbable event. In any case, as discussed earlier in the simulations, the berthing protocols were likely to consist of a 1 knot maximum vessel speed whilst approaching the berth. It is an example of the Applicant going to extremes to test eventualities which are vanishingly remote, but with understandably those who operate the vessels pointing out the obvious control available to avoid the risk entirely – which would be to slightly postpone the manoeuvre.

Impact on IOT operations – paragraphs 19 to 22

5.39 The approach and departure manoeuvres to IOT 8 undertaken in December 2023 should be considered alongside the significant work previously conducted considering operations at IOT 8. In particular:

- Simulation study carried out in July 2022 – Specifically Runs 28 to 43, and Runs 52 and 65 to 70 (see Reference **Error! Reference source not found.**);
- Simulation study carried out in November 2022 – Specifically Runs 16 to 22 (see Reference **Error! Reference source not found.**).

5.40 These were all conducted in similar conditions and it was previously demonstrated, agreed and reported that, a coaster type vessel (specifically a 104m long tanker with a deadweight of 6535t) could operate at IOT8 after the construction of IERRT with no significant impedance.

5.41 With regard to paragraph 19, the Applicant provided a detailed narrative on matters relating to the 'Beckett Rankine' proposed scheme in its submissions at **[REP7-025]** and **[REP8-022]**. The Applicant has not 'resiled' from its position but does not intend to duplicate its previous responses which explain why the measures proposed by the IOT operators would not feasible as presented than as later enlarged.

5.42 The December 2023 Simulation Report **[REP8-029]** does not evidence restrictions to the IOT Finger Pier which the IOT are claiming in paragraph 21. Section 4.2 of **[REP8-029]** confirms that all 9 runs were completed successfully.

5.43 Again, as IOT fail to acknowledge, the runs referenced were completed in wind conditions which exceeded the routine operating parameters stated in APT's safety management system. Seeking to make a point that the runs were marginally successful is a point of no substance bearing in mind that the runs were being undertaken in conditions which exceeded APT's own routine operating parameters. The record maintained by HR Wallingford shows that the consensus at the time was three runs were successful and only one run was marginal in any event. This is fully reported in **[REP8-029]**.

5.44 The ExA should be aware that IOT are taking the runs and conclusions entirely out of context and implying a greater degree of concern than was

actually noted or recorded in the simulation at the time. Details of the 4 runs referred to APT are covered below but described in full in **[REP8-029]**:

5.45 Run 15 (APT Ref 16) The pilot did not fully expect the level of sheltering simulated, and his line of approach was close to the adjacent moored vessel but the wind and elements were setting away. Given the conditions were setting away, the pilot assessed the passing distance was just acceptable hence the successful result recorded during the study.

5.46 Run 16 (APT Ref 17). The first run was considered poor due to the set-up position; this was due to poor communication between the pilot and simulation team rather than the nature of the infrastructure. 16b repeated the run with stronger wind and better line of approach and was successful.

5.47 Run 22 and 23 (APT ref 20 and 21) were undertaken at or above the recommended wind limits for routine navigation at IOT. These limits are in place to reduce the risk of a heavy landing. Occasionally, the limits may be exceeded to accommodate a change in forecast; it would be expected that the outcome in this circumstance would simply be a heavy landing. The landing speeds in both cases were around 0.5 knots lateral. The record kept by HR Wallingford shows that run 23 was deemed successful at the time of the simulation.

5.48 It should also be noted that during previous simulations attended by APT personnel nor for that matter in earlier submissions the impedance for the approach to IOT 8 has not been highlighted.

5.49 ***Paragraph 22*** - It is not clear from the simulations that any preference to IOT traffic is required as expressed in their representation. Indeed, even within their representation it is not clear what evidence base they are using to support their claim.

Conclusions from December simulations

5.50 Paragraph 23 - The Applicant strongly disagrees with the conclusions that IOT are attempting draw which are wrong and unprincipled. The clear conclusions from the study which were drafted with input from APT staff and their expert marine advisors present at the simulations are reported in **[REP8-029]** and are not repeated here.

5.51 ***Paragraph 24 –*** The Applicant is not clear what point IOT are attempting to make about tugs. There are some clear conclusions that can be drawn regarding the availability of tugs and operations at IEERT as follows -

- **[REP8-029]** demonstrates that 50 t BP ASD tugs are effective for arresting Stena T class operations in the event of a full controls failure during an ebb tide operation at IERRT berth 1, preventing hazard to IOT infrastructure. The Stena T Class will be the vessels operating initially at the IERRT; and

- There is no other future operating vessel currently specified for operation at IERRT. When and if a future operating vessel is selected for operations at IERR; and

- T it will be a straight-forward exercise for the SHA to determine the minimum level of towage required and set limits for the environmental operating conditions. This is normal practice at Humber and at ports worldwide. It is simply not true that this is an impossible hurdle. Tug fleets are routinely being upgraded around the UK.

Comments on the Applicants' Flow modelling - Paras 27-32

5.52 It is certainly the case that the W113 document is not a set validation standard but it is commonly used to describe best practise for estuarine modelling. By using the guidance validation accuracies, the baseline (without IERRT) model accuracy can be taken as appropriate for the purpose of creating flow model for navigation simulation. Furthermore, the quantity of observed data, both the duration of the AWAC and the spatial coverage of the vessel mounted ADCP transects, used for the validation means there is high confidence in the model simulation of the hydrodynamics of the area around the IERRT, IOT and Immingham Dock entrance.

5.53 ***Paragraph 28 -*** The validation report (**ref DJR6612-RT007-R01-00**) shows comparisons between observed and simulated currents in the top 6 m of the water column throughout. These are also included in the report comparing the original and revised layouts (**our ref DJR6612_RT015).** All the plots comparing the currents for the original and revised layouts or the revised layout and baseline case show the results over the top 7 m of the water column as used in the navigation simulator.

3D modelling for revised layout [REP7-035]

5.54 ***Paragraph 34*** - Considering the required area and duration of flow data needed for the navigation studies, the drag approach for modelling the effect of the piled structures is the only practical method available and is fit for purpose. It may not show the micro effect, immediately around the piles, however any medium scale effect on current magnitude and direction that would affect navigation of larger vessels will have been modelled correctly.

5.55 ***Paragraph 35 -*** A cursory examination of the situation demonstrates that it is highly unlikely that the additional piling suggested for the impact protection measures would make any material alteration to the overall flow compared to the effect from the exiting trunkway piling or the IOT finger pier piling.

5.56 The Applicant notes the IOT Operator's acknowledgement at paragraph 35a and furthermore reinforces that it is a standard approach to modelling floating structures.

5.57 In respect of ***paragraph 35b***, the full extent of the pontoon is modelled at its full draft – the chamfered effect of the depression in the water surface is beyond the limits of the pontoon which results in the total blockage of the pontoon to the passing flow being larger. The illustration of the model's representation of the pontoon in the report comparing the hydrodynamic effects of the original and revised layouts (**our ref DJR6612_RT015** has been

updated). A CFD based approach would better demonstrate small scale effects within the immediate vicinity of the pontoon but this is unnecessary here. However, as discussed above, the spatial extent and duration of the flow data required for the navigation simulation leads to the approach as has been applied, which is commonly applied and which is appropriate for showing the effects of the pontoon on hydrodynamics in navigated areas. It should be noted that the generation of eddies, in particular time varying Karman vortices by TELEMAC-3D is among the standard validation test cases which gives confidence that the model would generate eddies if they were possible.

5.58 Sub paras. (i) and (ii) – These results are provided in the latest version of the simulation report **[REP8-019]**.

5.59 At paragraph 35c, the IOT Operators suggest a comparison of TELEMAC-3D with a CFD model of flows around a pontoon. Whilst this might be of academic interest, the necessary and appropriate simplifications of the situation (limited modelled area, using a steady state input) required to apply CFD would remove the simulated conditions considerably from the dynamic conditions at the study site and so would not add to the confidence of modelled flows at IERRT which is fit for purpose.

5.60 ***Paragraph 36*** – The changes are not ignored and the flow modelling reports submitted into the examination fully takes the period from LW to LW+1 into account **[REP7-035 (**Section 3)**]** and **[REP8-019** (Section 3)**]**. It is suggested that the IOT Operators review those reports.

5.61 During a briefing call ahead of the 13/14 December simulations, the IOT Operators raised questions on the flow modelling report. In response to this, the Applicant and HR Wallingford arranged for HR Wallingford's technical specialist to attend to address any queries in an open forum on 14 December 2023. Accordingly, the points raised by the IOT Operators have already been addressed in **[REP8-019]** which the Applicant had agreed to update in light of the discussion. Section 3 presents the results and these are portrayed graphically in Figure 3.2 and 3.3. The conclusion is that there is a short period of higher differences between the revised and original layouts, which is seen on occasion as the tide turns at low water. This phenomenon appears linked to localised, transient changes to the timing and pattern of the turn of the tide. Figures 3.2 and 3.3 **[REP8-019]** show the effect is not apparent on every tide and is only just detectable on a mean-spring tide. It should be noted that current magnitudes at these times remain low (<0.3 m/s) for both the original and revised layout. It should also be noted that the representation of the pontoon as described above is likely to result in an over-estimate of its impact on hydrodynamics on navigated areas.

Navigation Simulation Study – Briefing Note [Appendix 2]

5.62 The original flow data is created by TELEMAC-3D based on a variable mesh, which adjusts the spatial distribution of data points based on the required features to resolve, be they physical features or hydrodynamic features such

as areas of shear or eddies. Furthermore, the variable mesh allowed the shapes of the existing and proposed structures was included in the mesh. This allowed the representation of the areas of piled floating structures to be modelled as accurately as possible whilst removing the imposed boundary conditions far enough away avoid undue influence. The mesh was of the order of 150 m at the boundaries and 10 m in the area of interest around the IERRT structure. Subsequently the data was interpreted within the simulator at 5m grid spacing and 15-minute time resolution.

Flow modelling

5.63 ***Paragraph 40 –*** The Applicant has previously commented on the flow modelling in response to ISH5 Action Point 16 **[REP7-020]** and explained to the IOT Operators that the effect was considered to be negligible to the overall outcome of the simulations in November 2023. The additional modelling undertaken by the Applicant has shown this to be the case in its submissions at **[AS-071]**, **[REP7-035]** and **[REP8-019]**.

5.64 ***Paragraph 41*** – Further detail has in fact been provided in **[REP8-019** – Section 3.4**]**. In summary, however, the blockage by the pontoons which are 5 m draught effectively shelters any vessel moored at IERRT.

5.65 ***Paragraph 42*** – Analysis and modelling show that the flows between IOH and IERRT are highly complex with significant spatial and temporal variation. This is reflected in the pilotage handbook, admiralty tidal data. It is unfortunate that the IOT Operators and DFDS continually try to oversimplify the flows in the area. The Applicant's position with respect to **[REP7-047]** (which the IOT is cross-referencing), is set out in its response to DFDS's D7 Submissions **[REP8-023]**. The Applicant views this to be a personal and subjective account which is not substantiated by evidence. The Applicant has made multiple submissions regarding the flow model and the extensive survey and validation work undertaken and does not wish to repeat this again. It is noted, however, that the IOT Operators do not seem to have attempted properly to review the formal analysis of the models and the comparison with survey data.

5.66 The Applicant does not accept the comments made with respect to serving Humber pilots which is factually incorrect. Humber pilots have been present at all simulations undertaken.

5.67 Paragraph 43 – The Applicant has reviewed the comments made with respect to the flow modelling and draws the conclusion that the IOT Operators does actually agree that on the whole, industry standard best practice has been used to undertake the flow modelling (as the IOT note in 35a). There maybe a few technical points to debate which would be interesting at an academic level – but which in no manner affect the conclusions reached by the Applicant.

5.68 The Flow modelling provided and used within the navigation simulations meets industry standards, has been verified against significant observed data. HR Wallingford and the Applicant continues to consider that the flow model data is appropriate for the navigation simulations undertaken.

6 Comments on the Applicant's ISH5 Action Points 3 and 4: Navigation Risk Assessment Update

6.1 At ***paragraph 45***, the IOT Operators state that they welcome the ExA requiring updates to the NRA but remain concerned as to the manner of the updates. The Applicant has responded to the more detailed points below but would like to make clear that the updates made to the NRA **[REP7-011]** do not alter the methodology or outcomes of the NRA and are the same as presented in **[APP-089]**. The updates were simply made, at the request of the ExA, to improve the understandability of the document. The concerns raised by the IOT Operators and other Interested Parties, both during the NRA process and through examination, have been considered in detail. As explained in the Supplementary Navigation Information Report **[REP7-030]**, the updated NRA and information provided during examination has been reviewed by the Harbour and Safety Board (HASB), as Duty Holder. The risks associated with the IERRT development, taking account of mitigation, are tolerable and ALARP.

Review of the amended NRA

6.2 In ***paragraph 47*** the IOT Operators suggest that on reviewing the amendments to the NRA in respect of risk assessment and cost benefit analysis and applied controls the Applicant has provided too little information too late in the process to be effectively examined by stakeholders. They further suggest that it is open to question whether the EIA requirements have been complied with.

6.3 The Applicant is firmly of view that the information provided in the updated NRA is comprehensive, and that the requirements of EIA have clearly been discharged. Unsubstantiated assertions by IOT at this stage of the process are unjustified and should be given no weight.

Definition changes

6.4 In ***paragraphs 49 to 51*** of **[REP8-057]**, the IOT Operators suggest the definition of "tolerability" has been updated and the terminology changed regarding "receptors". This is not the case. The comments made by IOT Operators are unjustified and incorrect, are not clearly articulated, and do not raise any legitimate basis for concern.

6.5 The rationale for updating the NRA was to simplify meanings, streamline text and align the assessment with other submitted navigation documentation, at the request of the ExA. The NRA submitted with the DCO application [APP-089] states that: '*The concept of 'tolerability' seeks to define the point at which a risk has an unacceptable outcome (a function of frequency and consequence) when measured against key criteria'*. The updated NRA submitted at Deadline 7 **[REP7-011]** states that: '*The concept of 'tolerability' seeks to define the point at which a risk (a function of frequency and consequence) has an unacceptable outcome when measured against key receptors'*.

6.6 The IOT response states that receptors are physical or biological resources or user group that would be affected by a project. Whilst the EIA Regulations do not define receptors, the Applicant does not disagree with the principle of IOT's definition of receptors. The use of the word 'receptor' is common in EIA and is a generic term referring to an aspect of the environment that is affected by an impact pathway caused by a project or development. The use of this term in the updated NRA **[REP7-011]** identifies the four assessment areas of life, the environment, port and port user operations, port and shipping infrastructure as detailed in the Port Marine Safety Code. There has been no attempt to conflate meanings; revisions made to the NRA were added to simplify and align language use. It is not clear how such a minor point can or should be of any concern whatsoever.

Tolerability / ALARP

6.7 At ***paragraphs 52 and 53***, the IOT Operators describe what they consider to be a very significant change relating to the methodology used in the NRA relating to acceptability and the concept of ALARP. There is no such change. The acceptance of a risk outcome is a two-part test. The language has simply been revised in the updated NRA **[REP7-011]** to match the Maritime and Coastguard Agency's (MCA) Guide to Good Practice which states, in Section 13.1.3, that - "*The Code relies upon the principle that duties and powers in relation to marine operations in ports should be discharged in accordance with a Safety Management System. That system should be informed by and based upon a formal risk assessment. The aim is to establish a system covering all marine operations in ports which ensures that risks are both tolerable and as low as reasonably practicable*".

6.8 The IOT Operators suggest, incorrectly, that a change has not been carried through the NRA. This statement is incorrect, all risk assessments presented in both the original NRA **[APP-089]** and the updated NRA **[REP7-011]**, have applied the test of tolerability and ALARP to the outcomes. Moreover, both iterations of the Applicant's NRAs have laid out the method; this is detailed in Section 6.5 where both Tolerability and 'As low as reasonably practicable' (ALARP) are described. The tolerability thresholds are shown in Figure 24 **[REP7-011]** which match those presented in Figures 26 to 29 in **[APP-089]**.

Statutory Harbour Authority interface

6.9 The comments made by IOT Operators at paragraph 54 are unjustified and mistaken. The Applicant has been clear that the NRA was completed as required to support the Environmental Statement (ES). As such the NRA is project specific and is not intended to detail all facets of port operations, the vast majority of which have been developed over many decades to run a safe and efficient port marine operation at Immingham. The NRA is written to assess the possible impact to vessels navigating to/from and in proximity to the development, this in turn feeds into environmental risk assessment and impact.

6.10 The Applicant has also made clear that if the DCO is approved, the recommendations of the NRA will feed into the formal risk assessment (FRA)

for port marine operations with subsequent changes made to procedures within the Marine Safety Management System (MSMS).

6.11 The Port Marine Safety Code (PMSC) and Guide to Good Practice for Port Marine Operations (GtGP) does not mention Navigational Risk Assessment or NRA, nor does it state that an NRA will need to follow the PMSC or GtGP. It does mention the use of FRA and MSMS to manage the operational risk.

6.12 Any control identified as being required post DCO will be implemented as required using the ports FRA and MSMS process using port baseline information to ensure safe operations, in full compliance with the PMSC.

Incident analysis

6.13 IOT Operators at paragraph 55, comment on the Port of Immingham's incident data records identified in Section 3.8.2 of the updated NRA **[REP7-011]**. Specifically, it refers to 'Impact with Structure' as being an important incident category. The Applicant agrees on this point, as demonstrated in Table 5 of the NRA which identifies that that *circa* 25% of the port-recorded MARNIS incidents fit this category; also Table 6 presents MAIB data, identifying *circa* 39% are impact with structure records. The Applicant would like to point out that records are spatially identified on Figure 19 of the updated NRA, showing an intensity of location around the Immingham dock entrance and the enclosed docks. A further cluster of impact with structure records are seen at the inset panel to Figure 19, providing a closer view of proposed IERRT site, including the Finger Pier and IOT main berths.

6.14 The IOT Operators, at paragraph 56 state - "*The IOT Operators provided a detailed analysis of available incidents data (derived from UK Marine Accident investigation branch), which shows that Grimsby and Immingham have the highest incident rate for "Contacts" (termed an allision in the IERRT NRA hazard table and the IOT Operators' sNRA) of any UK Ro-Ro port / harbour*". That is correct but this ignores the factors which readily explain this given the nature of the way the vessels are operating, for example entering and exiting a lock to access the Inner Dock of the Port of Immingham.

6.15 Whilst 'Impact with Structure' records do form the largest components of incidents from the MAIB dataset presented in the NRA **[REP7-011]**, a review of port incident data from MARNIS between 01/2011 and 01/2021 (10 years) identifies 111 incidents recorded that involved a Roll-on/Roll-off (Ro-Ro) vessel 'impacting with a structure' in the study area. Of these 111 incidents only one (1) has a primary or secondary cause of any equipment failure. And even then the incident involved a bow thruster failure when entering Immingham Lock resulting in minor dents to some shell plating and lock structure. The vessel was already operating only on one engine due to a known defect of the other engine and was using a tug aft to assist. (It should be noted that prior to 2013 the primary and secondary causes were not recorded but a description of the incident was given, and none included equipment failure as a cause).

6.16 Of the 111 incidents, 70 occurred while transiting Immingham Lock. 41 Ro-Ro contact with structure incidents occurred while berthing in Immingham, which includes the enclosed docks and riverside berths. 11 of these caused

material damage to either the vessel or shore infrastructure. In the context of those operations, there is nothing inherently surprising or of specific concern that affects the assessment in respect of the Proposed Development.

6.17 To the contrary, it can be seen that ABP has a robust reporting system which ensures that all Contacts, no matter how minor, are recorded and tracked.

6.18 ABP reports all impact with structure incidents in MARNIS for both completeness and to guide improvement - these statistics are reported under 'The Merchant Shipping (Accident Reporting and Investigation) Regulations 2012' to the MAIB as 'Contact' data. ABP are clear that the MAIB definition of 'Contact' is not analogous with the term 'Allision'. 'Contact', post 2013 is defined as '*a casualty caused by ships striking or being struck by an external object, the objects can be floating (cargo, ice, other or unknown), a fixed object, but not the sea bottom, or flying object*'. An 'Allision' is defined as '*a violent contact between a vessel and a fixed structure'*.

6.19 Using MAIB data only, for the same time period of 01/2011 and 01/2021 there were 40 incidents recorded in the study area. Out of these incidents, 21 were impacts with structure. Two (2) were categorised as serious, none of those were categorised as very serious or had any fatalities.

6.20 In summary, the key points to note are:

- MARNIS data includes contact with structure reports that would not be reported to MAIB. IOT Operators reference the difference between MARNIS and MAIB data in order to assert that the MAIB data is conservative.
- ABP has a robust incident reporting process that requires all incidents, no matter how minor, to be reported.
- ABP is clear that the MAIB definition of 'Contact' is not analogous with the term 'Allision'.
- The IOT Operators' choice of use of data from two ports (Grimsby and Immingham) does not provide a contextual picture of the type summarised above.

6.21 The IOT Response, ***paragraph 56,*** first sentence, appears to be suggesting that ABP's response has not recognised the difficulty of navigating in tidal conditions. That is patently incorrect. For clarity, ABP as the Applicant is fully aware of the operating environment, having many decades of experience running the tidal port and enclosed docks. ABP as the Applicant has not stated a lack of tidal component for impact with structure incidents, conversely entering the Immingham lock from sea requires a skilled and trained mariner as it can be as challenging as a tidal manoeuvre. This evolution is successfully conducted multiple times a day, however, on some occasions, contact is made which is predominantly of a minor nature and reported in line the ABP's robust reporting procedures as described above. The Applicant has in its updated NRA **[REP7-011]** at Section 3.8.2 stated that the majority of 'Impact with Structure' incidents (from port MARNIS records) have minor

consequences. IOT Operators recognise the same conclusion in their analysis of MAIB Ro-Ro contact data stating that *"Fatalities resulting from Ro-Ro incidents are generally rare, with none of the 416 contacts resulting in fatalities"* in their NRA **[REP2-064]** (see paragraph 271).

6.22 ABP as the Applicant, reject the notion that its NRA incident analysis has shortcomings, as stated by IOT Operators in ***paragraph 57***. The Applicant would point out that the whilst the IOT Operators' NRA has a longer incident analysis section **[REP2-064]** (see Section 8), there are multiple exaggerations of this information within its probabilistic model. From the IOT Operators NRA, incident data (combining MAIB, IMO, MARNIS, EMSA) for the period 1992 to 2021 (30 years) has been used which is stated to be "*in the vicinity of the study area which resulted in MAIB reports"*. Only three of these were allisions **[REP2-064]** (see Table 10) and five were collisions. Over this same 30-year period, the estuary will have seen *circa* 3.5 million vessel movements. IOT Operators probabilistic assessment **[REP2-064]** (see Table 16, Figure 58) has determined a significantly higher incidence of Allision than is evidenced by the 30 years of empirical data. Additionally, the IOT Operators' probabilistic model **[REP2-064]** (see Table 17) has determined significantly higher rates of fatalities per incident and potential loss of life per year than is evidenced by the 30 years of empirical data.

6.23 In its NRA **[REP2-064]** (see Section 316) the IOT Operators have calculated loss of life based on sinking speeds of low to high, both with and without Trunkway impact. The examples cited for this are not applicable to the IERRT situation in any way, given that they involve vessels in collision outside of port areas in storm conditions (vessel *European Gateway*) and through poor operating procedures (vessel *Herald of Free Enterprise*). This is an attempt to create a high potential loss of life scenario, to justify using societal risk as a benchmark to undermine the Applicant's NRA, thereby trying to suggest that a quantitative approach is better suited. The approach used the Applicant's NRA is considered robust and the conclusions of the assessment are supported by the empirical data set out in Section 3 of the NRA **[REP7-011]**.

Example impact protection at Port of Immingham

6.24 The Applicant notes IOT Operators' comment at paragraphs 58 and 59 regarding existing impact measures deployed at the Port of Immingham behind the Western Jetty. IOT Operators describe this as a 'reactionary approach' in managing safety. The Applicant does not agree with this characterisation. As a matter of principle it is perfectly reasonable for an infrastructure operator to iteratively adapt its facility, as and when, specific hazards are identified. It is unclear, however, what relevance IOT Operators are seeking to place on this – other than it highlights that the Applicant does respond proactively to such issues when there is an identified need to do so. For the avoidance of doubt these impact protection measures are not remotely comparable in role, extent and specification to those under discussion in the context of IERRT.

6.25 IOT Operators state that an incident at Immingham West Jetty Berth 4 sets a precedent – in other words the fact that impact protection measures were installed at the Western Jetty automatically means that they must be included

for IERRT. However, the decision to install infrastructure such as physical protection measures must be based on a case-by-case basis and proper assessments as circumstances will vary from situation to situation, as it was in that case, and as is reflected in the assessment that has been undertaken for IERRT.

6.26 In the case of IERRT, of course, the Applicant has detailed numerous operational protections that will ensure that the IOT trunkway remains protected in any event – as, in risk assessment terms, the risk factors can be removed from a situation by deploying specific safe systems of work which can be just as effective, if not more effective, as a physical measure. Thus, for example, IOT Operators did not install impact protection to the trunkway after the vessel *Fast Ann* allided with it on 19 January 2010 even though this incident presumably indicated that such an incident was reasonably foreseeable – albeit highly unlikely to be ever repeated, and in any event not considered necessary by IOT Operators to address in that way.

IERRT marine works and future operations –

6.27 The IOT Operators note that various changes are made in Section 4.2 of the updated NRA **[REP7-011]** relating to the description of the project. This was undertaken to make use of the opportunity to reflect the changes made to IERRT project in the Change Application, which was accepted by the ExA on the 6 December 2023, with the updated NRA being submitted afterwards at Deadline 7. However, to be clear, as previously stated by the Applicant, no changes were necessary to the assessment conclusions of the NRA in light of the Change Application.

6.28 IOT Operators at ***paragraph 61*** state that: '*The IERRT NRA therefore remains clear that the application is for operation of the IERRT with maximum design vessels and not smaller Stena T class vessels which are less than half the displacement and much more manoeuvrable than the vessel proposed for the terminal'*. The Applicant reiterates that the NRA has considered a 'reasonable worst case' and maximum expected vessel usage, therefore smaller and more manoeuvrable vessels will present a lesser effect. IOT Operators at paragraph 62 reiterate the Applicant's projection of a maximum vessel use of 2,190 additional movement per year, as stated in the updated NRA **[REP7-011]** (at paragraph 5.3.3).

Statutory Harbour Authority roles –

6.29 IOT Operators are wholly incorrect in asserting that, at ***paragraph 63***, the ABP Harbour Authority Safety Board (HASB) had not approved the risk assessment methodology and risk acceptability / tolerability thresholds. The SHA was represented at the HAZID meetings through ABP experts with the presence of the Harbour Master, Dock Master and Senior Pilots etc, who perform their respective roles within the framework of the Marine Safety Management System (MSMS). The MSMS has been in place for many years, it is updated at Group level and implemented by each respective SHA. The MSMS is issued on behalf of the HASB, who as Duty Holder, is accountable for Marine Safety. During the HAZID for the IERRT project, all ABP attendees were working under and to the ABP Group risk assessment. The fact that the

IOT Operators have made such a statement indicates a lack of understanding of operational expert judgement and how this feeds into decision making. The December 2022 meeting, commented on by IOT Operators in its response (at paragraph 63), was a project specific briefing on the outcome of the NRA to the HASB in its role as Duty Holder.

Expert judgement

6.30 The IOT Operators statement in paragraphs 65 and 66 are again unjustified and make allegations seeking to impugn integrity which have no evidential basis. The HAZID is an expected part of the Risk Assessment process, and includes port stakeholders, the Harbour Authority, marine professionals, vessel owners and operators and facilitators. The Applicant has run these sessions as workshops, in good faith, with the express intent of identifying Hazards for inclusion in the NRA. The suggestion that the Applicant has attempted to discredit or ignore views is entirely untrue and is rejected in the strongest terms.

6.31 IOT state that the Applicant's methodology was only put in place and agreed by ABP HASB in December 2022. This is incorrect, as stated in the previous response to ***paragraphs 63-64***, the HASB was presented with the NRA and findings in December 2022 for approval and agreement as the Duty Holder. At an operational and local level, the SHA and officers charged with the safety and regulatory day to day functions had provided expert judgement which was incorporated within the NRA. For the IOT Operators to state that the well-founded industry approved methodology did not exist to the knowledge of the ABP HASB responsible for the safe operations of 21 ports and harbours is nonsensical.

Changes to ABP NRA methodology and Port of Immingham baseline risk assessment

6.32 The IOT Operators state, in paragraph 70, that the Applicant has chosen to change the application of ALARP in its NRA. This is entirely incorrect, the application of ALARP has remained consistent throughout the issue of the NRA documents, as described in the response to paragraph 52 and 53. All risk assessments presented in both the original NRA **[APP-089]** and the updated NRA **[REP7-011]**, have applied the test of tolerability and ALARP to the outcomes. Moreover, both iterations of the Applicant's NRAs have laid out the method, this is detailed in Section 6.5 where both Tolerability and 'As low as reasonably practicable' (ALARP) are described. The tolerability thresholds are shown in Figure 24 **[REP7-011]** which match those presented in Figures 26 to 29 in **[APP-089]**.

6.33 In response to ***paragraph 71***, the Applicant is disappointed to note the comments raised, particularly as the IOT Operators are an active participant in the safety management at the Port of Immingham at, for example, the Safety of Navigation Resource Committee. Feedback received from stakeholders support the continuous improvement of all aspects of the MSMS management, including updates to policies and procedures. Risk assessment forms one aspect of this. Furthermore, the Applicant's approach to safety management is internally audited by ABP and externally audited by a third-

party contractor to ensure that it meets compliance requirements detailed in the PMSC.

Risk matrices

6.34 The Applicant agrees with the premise in ***paragraph 72*** that a hazard first needs to be determined as tolerable or not. The Applicant would point out, however, that even if a hazard is tolerable, further reduction in risk should be considered to a point of ALARP (i.e., all reasonably practicable controls have been added). ABP as Applicant has sought to include all reasonably practicable risk controls within each assessment, considering carefully the outcome risk level and whether further risk reduction could be achieved with proportionate cost. This requires judgement and was addressed over a sequence of meetings including HAZID, workshops and senior management determination resulting in the outcome reported to the HASB as the Duty Holder and the body ultimately accountable for marine safety for the Harbour Authority.

6.35 The Tolerability matrix forms a key part of the process, with thresholds set by the HASB, applied to the risk assessment outcomes. The assertion by IOT Operators that the Duty Holder has created arbitrary thresholds for tolerability (as purported in paragraph 74) is entirely incorrect. These matters are taken extremely seriously by the Applicant, and more specifically by the Duty Holder who is accountable for marine safety for each SHA in the Group. Determination of risk thresholds has carefully balanced the corporate risk tolerability with operating ports to the highest standard of marine safety, often in challenging environmental conditions.

6.36 In ***paragraph 75*** of the IOT response, the IOT Operators suggest that further changes to the NRA text have been made to introduce less transparency. This is certainly not the case, as described in the Applicant's response to paragraphs 49 and 51 above. The comments made by IOT are an incorrect interpretation of the changes made to the NRA. Paragraph 75 goes on to state that '*it has to be questioned why this has been done at such a late stage in the DCO process'*. As the IOT Operators are fully aware, the Applicant was asked by the ExA to update the NRA to simplify meanings, streamline text and align the assessment with other submitted navigation documentation. The IOT Operators' comment is unhelpful.

Cost-benefit analysis and tolerability meeting and other meetings

6.37 A cost benefit analysis was undertaken as reported in both the NRA **[REP7-011]** and SNIR **[REP7-030]** and outlined above. This is quantified, where appropriate, with clear rationale provided for the decisions taken. As noted, it is simply not appropriate to attempt to quantify benefits and costs in an unclear and opaque manner, as has been put forward by the IOT Operators in their NRA, effectively reporting the outputs of a 'black box' approach. For example, in one paragraph of their Deadline 8 submission, the IOT Operators state that no cost benefit analysis was undertaken whilst in another state that the cost benefit analysis undertaken can only be considered preliminary in nature. The Applicant reconfirms its position that the cost benefit analysis

undertaken was appropriate and proportionate to inform the NRA **[APP-089]**, with reference to the approach set out in the SNIR **[REP7-030]**.

6.38 The Applicant strongly rejects the assertion that the cost benefit analysis is deficient and stands behind its comprehensive assessment of navigational risk, informed by the expertise used in the safe and successful operation of the largest port group in the UK.

6.39 The Applicant re-asserts that the output of the cost benefit analysis discussions are contained within the hazard logs, as these clearly set out the controls that are proposed to be adopted during the construction and operation of the proposed project. The cost benefit analysis is included in the SNIR **[REP7-030]**, clearly setting out the cost benefit considerations that have informed the conclusions reached by the HASB as Duty Holder.

6.40 The rationale for the inclusion of physical impact projective measures, as 'Project specific adaptive procedures', has been made clear by the Applicant in the original NRA, the updated NRA and the SNIR. It has clearly and consistently set out that the inclusion of the ability to install vessel impact protection is to provide the SHA with the flexibility to adjust or reduce the level of operational controls, if deemed beneficial to the overall operation of the IERRT Terminal. The assessment of risk is a continual process and is a core function of the safe operation of the SHA and the Port of Immingham. This is not reliant on 'occurrence incidents or near misses' as suggested by the IOT Operators.

Section changes to IERRT NRA

6.41 ***Paragraphs 84 to 87*** of the IOT Operators response provide a commentary, from the IOT Operators' review of the updated NRA **[REP7-011]**, questioning the requirement of the updates to Section 8 onwards.

6.42 To reiterate the previous answers given above, the NRA update has been provided to simplify meanings, streamline text and align the assessment with other submitted navigation documentation, at the request of the ExA. Section 8 provides detail on the Hazard Scenarios and the Risk Assessment process, with detail on each Applicable Controls moved to an appendix (Appendix E) to improve the readability of the NRA's main body. This move of text led to the prompted the amalgamation of some sections. To assist the ExA and other interested parties, a track-change version has been provided, a significant proportion of the track-change items relate to text moved within the NRA document. However, to be clear, the methodology and outcomes of the NRA are the same between **[APP-089]** and **[REP7-011]**.

Costs of risk control measures

6.43 The costs of the control measures that were subject to a cost-benefit analysis have been provided in the SNIR **[REP7-030]**, which also considered the cost stated in the IOT Operators' NRA for the relocation of the Finger Pier (see para 4.58). The IOT Operators' own NRA states that the cost-benefit of relocating the finger pier is less than 1 for low energy strikes. The Applicant

has demonstrated through navigational simulation that the proposed controls will control and fully eliminate the approach speed of a vessel in the case of a full bridge failure. The Applicant is, therefore, surprised that the IOT Operators appear still to be advocating the relocation of the finger pier, which is in conflict with the conclusions of its own NRA.

6.44 ***Paragraph 90*** of the IOT Operator's response states that Table 32 of the updated NRA **[REP7-011]** has 'Project Specific Adaptive Procedures' included as applied controls. This is correct. The applied controls are those taken forward by the scheme, however (as the name implies) the adaptive controls are subject to operational experience, for example, procedures used during the familiarisation period as the Port of Immingham and Stena Line gain operational experience which, as is normal practice, will be are reviewed and adapted. This includes the use of tugs, tidal restrictions, delayed start of use of berth 1 during familiarisation period, and impact protection. 'Project Specific Adaptive Procedures' are listed in the relevant Risk Assessments, for example, assessment "Hazard Category: Allision; Scenario: Ro-Ro allision with IOT trunk way; Risk ID O4" **[REP7-011,** Appendix C, Table C4**]**.

6.45 The Applicant strongly rejects the assertion made at ***paragraph 92*** that the cost benefit analysis is not fit for purpose or deficient in any way for the reasons set out at paragraphs 6.36 – 6.38 above.

6.46 The Applicant also does not intend to traverse the same points in respect of the design vessel raised at ***paragraph 93***. The Applicant's response has been assiduously and repeatedly provided during the course of the Examination. The Applicant simply refers to paragraphs 5.19 – 5.22 above.

7 **Comments on** protective provisions for the protection of the IOT Operators

7.1 At ***paragraphs 95 and 96,*** the IOT Operators assert that the Applicant did not share its comments on the Protective Provisions sought by the IOT Operators in their response to the ExA's Schedule of Proposed Changes to the draft DCO **[REP7-029]** and that no attempt has been made by the Applicant to engage directly with the IOT Operators on the Protective Provisions. This is not the case. The Applicant has in fact repeatedly engaged with the IOT Operators regarding the project, with the protective provisions necessarily dependant on the outcome of that engagement. The Applicant has certainly attempted to engage with the IOT Operators specifically on the Protective Provisions as is recorded in the Protective Provisions Tracker **[REP8-017]**.

7.2 The Applicant notes that **[REP7-029]** was produced in response to the ExA's direction that the Applicant should provide a detailed explanation of its position with regards to the DFDS and IOT Operators' Protective Provisions. The Applicant does not believe it should be criticised for responding directly to the ExA in circumstances where the ExA asked the Applicant to submit such an explanation.

Existing agreements

7.3 The IOT Operators claim that the existing legal and commercial relationship between themselves and the Applicant did not foresee the IERRT Development as now proposed. Such a statement is simply unsustainable and unrealistic in the context of an operation port. To seek Protective Provisions which would be entirely inconsistent with the existing legal protections afforded by the Applicant would be disproportionate and entirely inappropriate.

7.4 The existing commercial and legal relationship was entered agreed so as to provide the necessary rights and protections for the IOT Operators to run their Immingham operation. As contemplated by the IOT Operators when entering into those agreements, the Port and its bellmouth have been in constant use (with higher marine traffic levels than today) with the inherent risks to the IOT appropriately and safely managed.

7.5 Once the construction period for the IERRT has finished, the Humber will be operating 'as normal' under the safe and rigorous control of HMH and VTS. As such, the IOT Operators' operation will (and should) return to its present position without the benefit of protective provisions.

7.6 As demonstrated by the Applicant's numerous navigational submissions on Navigational Safety, including the Stakeholder Simulations **[AS-022** to **AS-024, AS-071, REP7-033** and **REP7-034]** and NRA **[APP-089 and REP7-011]**, the proximity of the IERRT to the IOT will not materially affect the IOT's risk exposure, meaning that the protections which were previously sufficient for IOT Operators to run their operation will continue to be sufficient following the end of the construction period.

7.7 The fact the Associated Petroleum Terminals (Immingham) Limited ("APT") is not a party to pre-existing agreements simply confirms and demonstrates that the IOT Operators did not consider this necessary in order to secure the necessary rights and protections for their operation. The Applicant recognises that APT may require protections during the constriction period, but once operations at the IERRT have commenced the Applicant does not consider that APT will require any additional protections over and above those already noted by the Applicant..

7.8 On the question of insurance, the Applicant notes that this is an additional late request by the IOT Operators which was not included in their early draft Protective Provisions (see for example **[REP1-039]**). The Applicant can only assume, therefore, that the IOT Operators did not consider the insurance provisions which they are now requesting to be necessary. As sufficient indemnities are being provided to IOT Operators and as there is no question of ABP's covenant strength in respect of these indemnities, ABP can see no justification for this late request for the Applicant to procure a prohibitively expensive and heavily restrictive policy of insurance in addition to the already offered indemnity.

7.9 The Applicant does not consider that IOT Operators' Deadline 8 submissions necessitate any change to its position on the Protective Provisions as set out in **[REP7-029]**. The IOT Operators, when making their submissions and

vague citations to precedent DCOs, have failed to acknowledge the unique relationship in this case between themselves and the Applicant. Namely that the IOT Operators are tenants of the Applicant and as such, there are already in place legal protections for the benefit of both bodies through the existing licence/lease arrangements – including a legal requirement for the Applicant to indemnify the IOT Operators for any damage caused to their infrastructure – both marine and landside.

Parent company protections

7.10 On the question of including protections for the IOT Operators' parent companies, the Applicant again notes that this is an additional and late request by the IOT Operators which was not included in their early draft Protective Provisions (see for example **[REP1-039]**). As such, the Applicant can only assume that IOT Operators did not consider these protections to be necessary, and it does not understand why this position has suddenly changed. The Applicant further notes that no other recipient of Protective Provisions has required a parent company to be indemnified in addition to the company which is to be directly affected and it cannot understand why IOT Operators consider themselves to be a special case in this regard.

7.11 As stated in **[REP7-029**], the Applicant recognises that IOT Operators' reasonable costs incurred in connection with the construction works should be indemnified. This indemnity should not, however, go beyond those which are reasonably necessary in order to protect IOT Operators' interests, and indeed beyond precedents from other DCOs. To do otherwise would potentially set a dangerous precedent for future DCOs in requiring protections which are overly onerous, costly and damaging for the Applicants.

7.12 The Applicant also stands by its position articulated in **[REP7-029]** that the provision of indemnities and protections for the owners of IOT Operators in respect of the same set of circumstances would constitute double indemnification. Paragraph 106 of IOT Operators' **[REP8-057]** defined double indemnification as "*a scenario where two separate indemnities are provided for the same loss or liability, effectively compensating twice for the same incident*". In circumstances where the IOT Operators' main concern is allision or collision, the Applicant being liable to both IOT Operators and their parent companies in respect of any single incident of that sort would lead to the IOT group companies being compensated twice for the same incident. Any loss of loading or unloading of product at the IOT would be compensable to IOT Operators, and should not be compensable to their owners as well.

Land Acquisition

7.13 The Applicant notes that IOT Operators do not object to the deletion of provisions relating to acquisition of land. These provisions have already been deleted from the Applicant's dDCO submitted at Deadline 8 **[REP8-005]** in line with **[REP7-029]**.

Work No. 3 (Impact Protection Measures)

7.14 Comments on this aspect of the proposed development will be provided at Deadline 10 in response to the ExA's Request for Information.

Approval of works

7.15 As stated in **[REP7-029]**, the Applicant does not consider that it is appropriate to provide the IOT Operators with the power to prevent construction works through the withholding of their approval of plans and other documents. What they propose provides the IOT Operators with an effective veto over the proposed development, creating uncertainty over the delivery of a nationally significant infrastructure project.

7.16 The Applicant notes, HMH's Deadline 7 submissions **[REP8-048]** which state that, should the ExA consider that IOT Operators should be provided with a power to approve works (which the Applicant submits would be inappropriate), this should be subject to approval or refusal by HMH.

Expenses

7.17 The Applicant does not consider that it has proposed significant limitations on the recovery of expenses. The Applicant's proposed wording in **[REP7-029]** recognises that the Applicant should indemnify IOT Operators' reasonable costs incurred in connection with the construction works.

7.18 Such an indemnity should not, however, go beyond what is reasonably necessary in order to protect IOT Operators' interests. The Applicant notes that IOT Operators have not articulated their concerns with regards to the specifics of the Applicant's drafting, simply making broad statements as to it being unsatisfactory. The Applicant is, therefore, unable to understand why IOT Operators believe that the Applicant's wording does not provide sufficient protection.

Damage to Property

7.19 The Applicant has already articulated in **[REP7-029]** that is considers that many of the elements included in the IOT Operators' draft indemnity provision go beyond those which are reasonably necessary in order to protect IOT Operators' interests, and indeed beyond precedents from other DCOs. The Applicant notes with interest that IOT Operators have not articulated their concerns with regards to the specifics of the Applicant's drafting, instead simply making broad statements as to it being unsatisfactory, whilst IOT Operators were also unable to provide an example of another DCO which contained the wording which they have proposed in this case (see page 13 of **[REP7-070]** which states "N/A" for "other DCO example"). The Applicant is, therefore, unable to understand why IOT Operators believe that the Applicant's wording does not provide sufficient protection and which other DCOs the IOT Operators consider support their position.

7.20 The IOT Operators, when making their submissions and vague citations to precedent DCOs, have failed to acknowledge the unique relationship in this case between themselves and the Applicant. As noted above but worthy of repetition, there are already in place legal protections for the benefit of both bodies through the existing licence/lease arrangements – including a legal requirement for the Applicant to indemnify the IOT Operators for any damage caused to their infrastructure – both marine and landside.

7.21 In the absence of any support from IOT Operators for their own drafting, the Applicant believes that the wording included in **[REP7-029]** is fair, reasonable and should be adopted.

7.22 The IOT Operators have not provided reasons in support of their drafting of the Protective Provision paragraphs relating to 'Co-operation and Reasonableness', 'Miscellaneous' provisions or 'Emergency Circumstances'. The Applicant can only conclude the IOT Operators agree with the Applicant's amendments to these paragraphs as per **[REP7-029].**

Glossary

Abbreviation / Acronym	Definition
ABP	Associated British Ports
ALARP	As Low As Reasonably Practicable
DCO	Development Consent Order
dDCO	Draft Development Consent Order
ExA	Examining Authority
HMH	Harbour Master, Humber
IERRT	Immingham Eastern Ro-Ro Terminal
NSIP	Nationally Significant Infrastructure Project
OFMP	Operational Freight Management Plan
PA 2008	Planning Act 2008
PINS	Planning Inspectorate
PP	Protective Provision
RFC	Ratio Flow to Capacity
Ro-Ro	Roll-on/roll-off
SCNA	Statutory Conservancy Navigation Authority
SoCG	Statement of Common Ground
SoS	Secretary of State for Transport
VTS	Vessel Traffic Services
UK	United Kingdom