DFDS SEAWAYS

RELEVANT REPRESENTATION ON THE PROPOSED IMMINGHAM EASTERN Ro-Ro TERMINAL

PINS REFERENCE TR030007

1 Introduction

1.1 This relevant representation summarises DFDS's key concerns in respect of the Immingham Eastern Ro-Ro Terminal Project ("the Project").

1.2 DFDS is an international shipping and logistics company and one of the largest users of the Port of Immingham, with around 1000 employees involved in its operations there, both ferry-based and landside.

2 Executive Summary

2.1 DFDS objects to the application for development consent for the Immingham Eastern Ro-Ro Terminal on several grounds:

2.1.1 for numerous reasons set out below, DFDS considers that navigational risk has not been properly assessed or mitigated and thus reduced to As Low As Reasonably Practicable (ALARP), and that mixed assessment methodologies have been used inappropriately; DFDS thus have serious concerns that the construction and operation of this project will be unsafe and introduce unacceptably high risks to people, property, the environment, trade and the reputation of the port;

2.1.2 on land, the traffic assessment is based on unrepresentatively low road use during the pandemic; the increase in HGV movements will impact businesses at the port and elsewhere, residents and ecological receptors in terms of congestion, noise and air quality and the mitigation currently proposed is inadequate;

2.1.3 the Environmental Statement should be held to be inadequate under regulation 20(2) of the EIA Regulations[1] because it does not assess the proposed overlap of construction and operation;

2.1.4 aside from safety, the additional vessel congestion and hence delays that the project will cause at the Port of Immingham is unassessed but will harm existing businesses within Immingham Dock and in the wider Immingham area to an unacceptable degree, including DFDS, and affect the ability to lower emissions and plans to grow at the port;

[1] SI 2017/572

2.1.5 the proposed dredge deposit sites are too close to port infrastructure and already being used for maintenance dredging, likely to cause siltation and reduced river depths;

2.1.6 the draft DCO [APP-013] is unacceptably vague in many areas and contains several drafting issues, unacceptable 'tailpiece' provisions and no protective provisions for DFDS;

2.1.7 the harm to the SAC/SPA/Ramsar site has been understated and insufficient mitigation and no compensation is being provided.

2.2 Unless these concerns are addressed by changes being made to the application, DFDS is of the view that it should neither be recommended for grant by the Examining Authority nor granted by the Secretary of State for Transport.

3 Marine Navigation Issues

3.1 Summary of marine navigation issues:

3.1.1 this development is proposed in an already-congested area handling dangerous materials where there has been a history of vessel collisions and allisions;

3.1.2 the Applicant has mixed two safety assessment methodologies rather than using the one for port development, confusing and underplaying the risk assessment;

3.1.3 rather than use available wind data from Immingham, the Applicant used data from Humberside Airport, 15km inland, without identifying this;

3.1.4 the wind data that is provided does not include gusts or durations of wind speeds, as would be normal practice;

3.1.5 no tidal flow (i.e. speed of the tide) data is provided despite this being an area of notoriously strong tidal flow;

3.1.6 navigation simulations contain a disclaimer that the data should not be relied upon by anyone other than the Applicant;

3.1.7 the Applicant aborted many of its navigation simulations, which ought to have been categorised as failures;

3.1.8 a more favourable tidal direction has been used than actually occurs;

3.1.9 the simulations used more manoeuvrable vessels than DFDS believes will actually use the new facility;

3.1.10 the Applicant over-relies on use of bow thrusters, tugs and pilots to achieve successful simulations;

3.1.11 the simulations only assessed one of the three berths that are proposed, which is the easiest berth to manoeuvre onto;

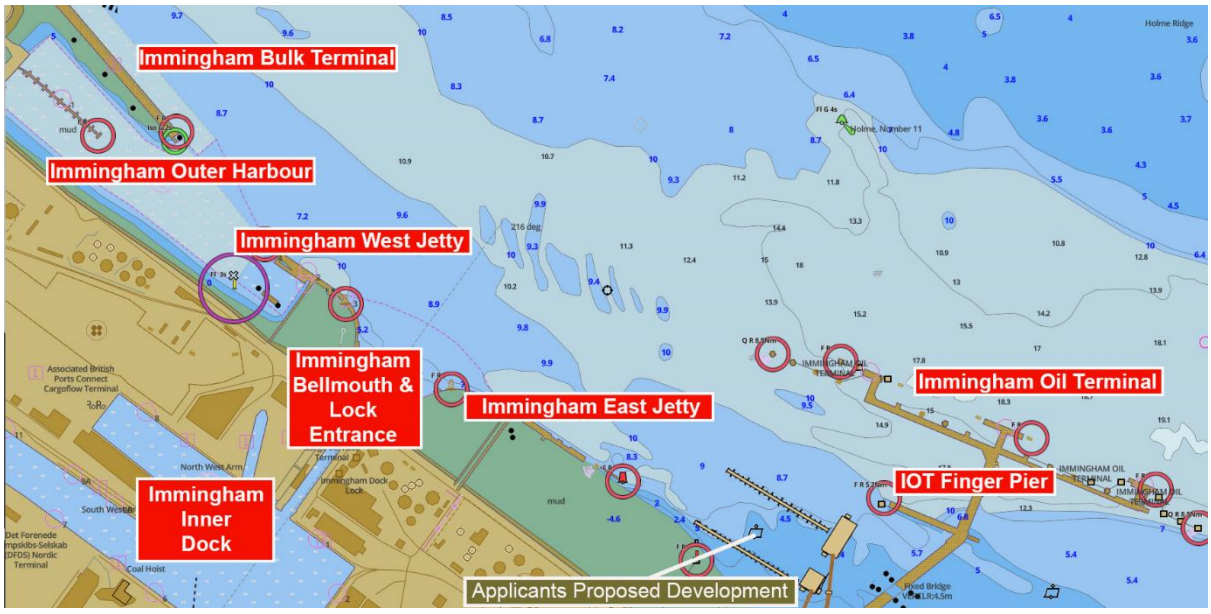
3.1.12 protection of the IOT trunkway is considered to have a 'very substantial mitigation effect' and yet would only be required upon the request of the harbourmaster;

3.1.13 hazard identification workshops were held but did not take stakeholders' views into account properly; and

3.1.14 the development of the project has been characterised by lack of proper engagement with stakeholders and independent scrutiny.

Proximity of other facilities

3.2 The Applicant proposes the construction of a three berth Ro-Ro facility within the Immingham area. This area constitutes one of the UK's busiest port locations and is host to a number of key port infrastructure facilities, many of which are of national significance. The proposed development is set to lie close to the Immingham Oil Terminal, Immingham East Jetty, Immingham Bellmouth and inner dock area, Immingham West Jetty, Immingham Outer Harbour and the Immingham Bulk Terminal, all shown on the plan below.



Overview of key port infrastructure at the Port of Immingham

3.3 DFDS are of the opinion that the Applicant's proposed location is wholly inappropriate given its already high traffic density, proximity to other key port infrastructure and the danger inherent to the types of cargo operations taking place at these locations (many of which are recognised as upper tier COMAH sites), combined with an area of strong and complex tidal flow. The key port infrastructure is listed as follows:

3.3.1 The Immingham Oil Terminal (IOT)The IOT is a recognised port infrastructure of key national significance. The three IOT berths are serviced by Aframax crude carriers and product tankers used for the import of crude oil to service the needs of two local refineries and the export of refined oil product. These refineries produce approximately 20% of the UK's petroleum products so are of vital national significance.

3.3.2 Immingham Finger Pier – heavily used by chemical and oil tankers (up to 104m long max 8,500 tonnes) for the export of refined oil products, mainly fuel oils.

3.3.3 Immingham East Jetty – a river berth accommodating chemical tankers (up to 213m long circa 45,000 tonnes) and used primarily for the import of Fatty Acid Methyl Esters (FAME) for the production of bio-diesel as well as other dangerous chemicals.

3.3.4 Immingham West Jetty – a river berth servicing product tankers (up to 213m long circa 45,000 tonnes) for the import and export of hydrocarbons and dangerous chemicals including caustic soda and benzene.

3.3.5 Immingham Inner Dock – used by a wide variety of ships (up to 223m circa 50,000 tonnes) and cargoes including containers, steel, fertiliser, bulk dry and liquid cargoes, scrap and Ro-Ro amongst others.

3.3.6 Immingham Outer Harbour – a three berth Ro-Ro facility serving Ro-Ro vessels (up to 240m long) on several near continental routes.

3.3.7 Immingham Bulk Terminal/Humber International Terminal – an import facility serviced by Panamax and Cape size bulk carriers (up to 295m long circa 200,000 tonnes) for the importation of Iron ore and coke for the manufacturer of steel at British Steel's Scunthorpe facility, and biomass pellets destined for Drax Power Station. Both these facilities, and the interrupted supply of raw materials to them, are of national significance.

3.4 The proposed terminal lies less than 100m from the IOT Finger Pier and 300m from the Immingham Eastern Jetty. As previously explained these terminals serve vessels carrying dangerous goods in bulk. The terminal also lies in close proximity to the cargo pipeline for both the IOT and IOT Finger Pier. The location of the proposed terminal will require the vessels utilising these berths to conduct complex and risky manoeuvres in a highly dynamic environment with fast flowing tides and frequent high winds. The lack of space within the manoeuvring area combined with the Applicant's lack of adequate protection for these facilities poses a serious pollution risk in the event of a collision and the associated environmental, commercial (including impacts to DFDS' operations at the port) and reputational damage.

Previous Major Incidents

3.5 The Immingham area is a complex and challenging waterway in which to navigate. There have been multiple marine incidents in the area and it continues to be an area in which vessel accidents are frequent. Since the turn of the century there have been several

notable incidents. The most serious incidents involving fatalities, potential widescale pollution, and/or serious marine casualties are investigated by the Marine Investigation Branch ("MAIB"). The MAIB usually investigates around 30 cases each year, their role being to prevent further avoidable accidents from occurring. Some recent major incidents which have occurred in the Immingham area since 2000 (note that an 'allision' is between a vessel and a stationary object and a 'collision' is between two vessels) are as follows:

3.5.1 **2000 Cargo Vessel Xuchanghai collides with the Aframax shuttle oil tanker Aberdeen berthed on IOT 1.** The MAIB report[2] into the incident identified the wind and strong tide in the area as being the primary cause for the loss of control of the vessel leading to the collision. Despite having tugs made fast the pilot was unable to maintain control of the vessel, lost steerage and collided with the berthed tanker.

3.5.2 **2002 Cargo Vessel BOHINJ on passage to Immingham Dock allides with IOT 1.** The vessel was proceeding at slow speed past IOT when the vessel lost steerage alliding with the oil terminal. Again a primary cause of the incident was the inability of the pilot to maintain control of the vessel in the strong tide.

3.5.3 **2002 Ro-Ro vessel Stena Gothica allision with Immingham East Jetty**. The Ro-Ro vessel Stena Gothica allided with the eastern jetty at Immingham while attempting to enter Immingham Lock causing a 3m gash down her port side. The vessel consequently flooded and sank whilst in the lock at Immingham. The MAIB report[3] concluded the master under-estimated the strength of the ebb tide leading to the allision with the eastern jetty.

3.5.4 **2010 Coaster Fast Ann allides with IOT jetty stem.** Fast Ann, a decommissioned and unmanned cargo vessel waiting to be dismantled, parted her moorings on an ebb tide in dense fog in the River Humber. Her radar echo was acquired and tracked by Humber Vessel Traffic Services ("VTS"), who made several unsuccessful attempts to establish communications with the unknown contact. A pilot vessel and two tugs were then tasked to investigate. One of the tugs managed to identify the vessel and made fast a tow line to her stern. Dense fog and a strong ebb tide of about 4 knots hindered the efforts of the tug, which could not prevent Fast Ann from making contact with the Immingham Oil Terminal structure.

3.5.5 **2015 Coaster Fast Fillip collision with tanker berthed at IOT 1.** A vessel bound for Immingham Dock from Goole attempted to turn around the stern of an inbound ferry off the Immingham Oil Terminal. The MAIB reported[4] the pilot misjudged the

[2] [redacted]

[3] [redacted]

[4] [redacted]

strength of the ebb tide and collided with a moored tanker holing one of the tankers ballast tank.

3.6 In addition to these incidents there have been multiple smaller incidents that have not warranted a full MAIB investigation. The above demonstrates that Immingham continues to be a difficult area in which to navigate; the addition of the Applicant's proposed berths will add to the complexity and challenges posed and increase the likelihood of further incidents. Given the proximity of the berths to the Immingham Oil Terminal and the Immingham East Jetty the consequence of an incident is potentially catastrophic.

Wind

3.7 The wind data used as part of the Navigational Risk Assessment [APP-089] is clearly flawed and its presentation downplays the risk.

3.8 Despite the Applicant having access to wind data from anemometers at Immingham Dock Marine Control Centre ("MCC") (53º37.82' N, 0º11.25' W) and the Stone Creek Radar Mast (53º 39.25' N 0º 08.20' W), the Applicant has instead chosen to use data from the runway anemometer at Humberside Airport (53.567º N 0.350º W) [see APP-089 p12]. Humberside Airport is located at Kirmington, some 15km southwest of the intended development and wholly unsuitable as an indication of the wind speeds found at the proposed development location. Additionally Kirmington is located within a geographical basin being surrounded on all sides by more elevated land mass which serves to shelter the airport from strong winds. DFDS are also disappointed that the Applicant failed to be transparent about where their wind data was derived by quoting merely a latitude and longitude rather than location name.

3.9 The Applicant has chosen to use mean wind speed and ignored wind gusts. Wind gusts are periods in which the wind is 10mph faster than the mean wind speed but have a duration of less than 2 minutes. Wind gusts are significant in that they are difficult to anticipate or compensate for and therefore responsible for a greater proportion of incidents. Given the significance wind gusts will have during the berthing operation, DFDS is of the opinion gust should be included as part of the Navigational Risk Assessment (NRA).

3.10 Furthermore, the Applicant has chosen to represent the durations of wind speeds encountered at this sheltered location as percentages of one month rather than as hours and minutes – see the extract from the NRA below. This conceals the fact that the data is inconsistent with that experienced on a day-to-day basis by professional mariners familiar with the area.

Table 1 Wind Speed Statistics

Period	Wind Speed Percentage (of Period) Occurrence					Mean Wind Speed [kts]	Max Wind Speed [kts]
	0-10 kts	10-20 kts	20-30 kts	30-40 kts	40-50 kts		
January	57.29	39.81	2.89	0.01	-	9.83	31.11
February	47	45.37	7.28	0.34	0.01	11.04	40.03
March	50.14	41.82	7.7	0.32	0.02	11.01	42.76
April	68.63	29.57	1.8	0.01	-	8.52	34.92
May	73.6	23.19	2.99	0.23	-	8.29	32.96
June	68.21	28.16	3.17	0.46	-	8.78	36.73
July	73.88	25.39	0.73	-	-	8.18	27.03
August	54.76	38.8	5.95	0.47	0.01	10.35	40.32
September	62.34	33.43	4.19	0.04	-	9.33	31.49
October	59.86	38.26	1.88	-	-	9.58	28.35
November	60.96	35.14	3.85	0.05	-	9.19	33.12
December	59.74	37.1	3.11	0.06	-	9.48	33.79
All-Year	61.15	34.78	3.9	0.17	0	9.50	42.76

Table 1, p12 of NRA [APP-089]

3.11 Converting the percentages from the above table into hours, minutes and seconds gives the following:

Period	Wind Speed (of Period) hrs:min:sec					Mean Wind Speed (kts)	Max Wind Speed (kts)
	0-10 kts	10-20 kts	20-30 kts	30-40 kts	40-50 kts		
January	426:14:15	296:11:11	21:30:06	0:04:28	0:00:00	9.83	31.11
February	315:50:24	304:53:11	48:55:18	2:17:05	0:04:02	11.04	40.03
March	373:02:30	311:08:27	57:17:17	2:22:51	0:08:56	11.01	42.76
April	494:08:10	212:54:14	12:57:36	0:04:19	0:00:00	8.52	34.92
May	547:35:02	172:32:01	22:14:44	1:42:40	0:00:00	8.29	32.96
June	491:06:43	202:45:07	22:49:26	3:18:43	0:00:00	8.78	36.73
July	549:40:02	188:54:06	5:25:52	0:00:00	0:00:00	8.18	27.03
August	407:24:52	288:40:19	44:16:05	3:29:48	0:04:28	10.35	40.32
September	448:50:53	240:41:46	30:10:05	0:17:17	0:00:00	9.33	31.49
October	445:21:30	284:39:16	13:59:14	0:00:00	0:00:00	9.58	28.35
November	438:54:43	253:00:29	27:43:12	0:21:36	0:00:00	9.19	33.12
December	444:27:56	276:01:26	23:08:18	0:26:47	0:00:00	9.48	33.79

3.12 This shows how unrealistic the data presented is – for example it is inconceivable to the professional master mariners within DFDS who operate in the Immingham area that throughout the entire month of January, in Immingham, the wind would exceed 30 knots for less than 5 minutes.

Tide

3.13 The tidal flow in the port of Immingham is renowned for both its ferocity and direction which make the area highly complex and challenging for the navigator. The tidal flow in Immingham is semidiurnal experiencing two high and two low tides of approximately equal size every lunar day. Due to the fact that the Humber Estuary drains approximately 1/5 of England's fresh water, the ebb tide tends to be stronger than the flood tide. On spring tides, when the tides are at their strongest it is common to find tidal flows in excess of 4 knots.

3.14 The flow of the tide in Immingham area is generally accepted to be in the 135º/315º orientation[5]. Due to the tidal flow not being aligned with much of the port infrastructure there have been multiple accidents in the area and Humber Estuary Services (as the Competent Harbour Authority ("CHA")) has issued multiple notices warning mariners of the dangers of the tide in this area.[6] [7] [8] [9]

3.15 The tide is so strong in this area that the CHA has mandated the provision of 'standby pilots' and 'standby tugs' for large deep draught vessels whilst discharging cargo at the Immingham Oil Terminal for fear they could break free of their moorings during a spring flood tide. It is common for such vessels to sit 2m off the berth during the flood tide due to its strength and direction.

3.16 Despite this, the Applicant has not provided data regarding the tidal flow in the Immingham area, choosing instead to document purely the tidal levels and wave direction data. Furthermore, the Applicant used incorrect and more beneficial directions for tidal flows during the navigation simulations (see below).

Simulations

3.17 Supporting the application, the Applicant has submitted a series of documents about navigation simulation studies, APP-090, APP-091 and APP-092. Each document begins with the following disclaimer:

'This report has been prepared for HR Wallingford's client and not for any other person. Only our client should rely upon the contents of this report and any methods or results which are contained within it and then only for the purposes for which the report was originally prepared.

[5] ABP Humber Estuary Services Pilot Handbook 2011 p135.

[redacted]

We accept no liability for any loss or damage suffered by any person who has relied on the contents of this report, other than our client.'

3.18 Since stakeholders and the Inspectorate are being asked to rely upon these simulations, can the Applicant confirm that they stand by the contents of the reports?

The Simulation Process

3.19 In conducting the simulation runs, the Applicant's simulation consultants graded the results into four categories (Successful, Marginal, Fail and Aborted) [APP-90 p27-28]. DFDS are concerned that in carrying out these simulations the ability to 'abort' the simulation and re-run the same simulation several times, rather than declaring it a fail is poor practice and is not consistent with the reality that pilots and those with Pilot Exemption Certificates (PECs) will face on a daily basis in operating at this terminal – they cannot 'abort'. DFDS is concerned that the simulations that were classed as 'Aborted' would have been classed as 'Fail' if they had continued, and some runs that took more than one attempt to berth (16, 17, 19 and 59) should have been classed as 'Fail'. If these and 'Aborted' results are added to 'Fail' this represents 26% of runs, which is an unacceptable level of unsuccessful simulations. Additionally, this classification of the simulation process removes the element of reality and creates a process of 'normalisation of deviance' in which participants become immune to the risks involved and become goal driven. Furthermore, simulations classed as 'Successful' employed bow thrusters to such a significant degree that they should have been classed as 'Fail' (see below).

3.20 Simulation is a key component of modern terminal development. However the simulations are only as good as the models used both in terms of the hydrographic model and the ship models used within this environment.

3.21 The tidal model used in the simulations was created by HR Wallingford purportedly through computer modelling and AWAC data from the proposed development site [APP-90 p11]. It is critical that this data is correct as the strength, direction and peculiarities of the tide are essential to the validity of the simulations carried out thereafter. When compiling tidal data for a project of this size it would be standard practice for the AWAC (acoustic wave and current) data buoy to be deployed in multiple locations over a substantial period in order to obtain reliable, comprehensive data. ABPmer have not shared the AWAC report and therefore DFDS is unable to assess the quality of the data gathering exercise.

3.22 When the Applicant shared the first simulation report DFDS was concerned about the tidal flow direction depicted, which seems at odds with what DFDS' experienced Captains encounter on a daily basis, what pilots tell us when embarked on our vessels and what Humber Estuary Services ("HES") has published with regard to the tidal flow in the vicinity of IOT and the Immingham Bellmouth.

3.23 The accepted direction of tidal flow in the Immingham area is around 310º-315º and 130º-135º on the flood and ebb tides respectively. This is confirmed by the tidal data published

for the area by the UK Hydrographic Office (UKHO) [Admiralty Chart 3496]. This direction of tide does not correspond to the orientation of the IOT which is aligned 112º/292º. This 18-23 degree difference causes the flood tide to set vessels strongly off the berth and the ebb tide to set vessels strongly onto the berth. The tide in this area is notoriously dangerous due to this combined with the high flow rates which can be in excess of 4 knots on a spring tide, making it one of the fastest-flowing estuaries in the UK.

3.24 The tide has been a major contributory factor in a number of serious incidents in the IOT and Immingham Bellmouth areas as previously documented.

3.25 However upon consulting the simulation reports [APP-90, APP-091] the professional mariners at DFDS were concerned that the direction of the tidal flow as indicated on the simulation imagery were not consistent with this. In the simulations the tidal flow indicated shows the tide running largely parallel to the berth both on flood and ebb tides.

3.26 In Simulation Report 1 [APP-90 p48] the diagram clearly shows the ebb tide running parallel to the IOT (tidal arrows circled in red for clarity):

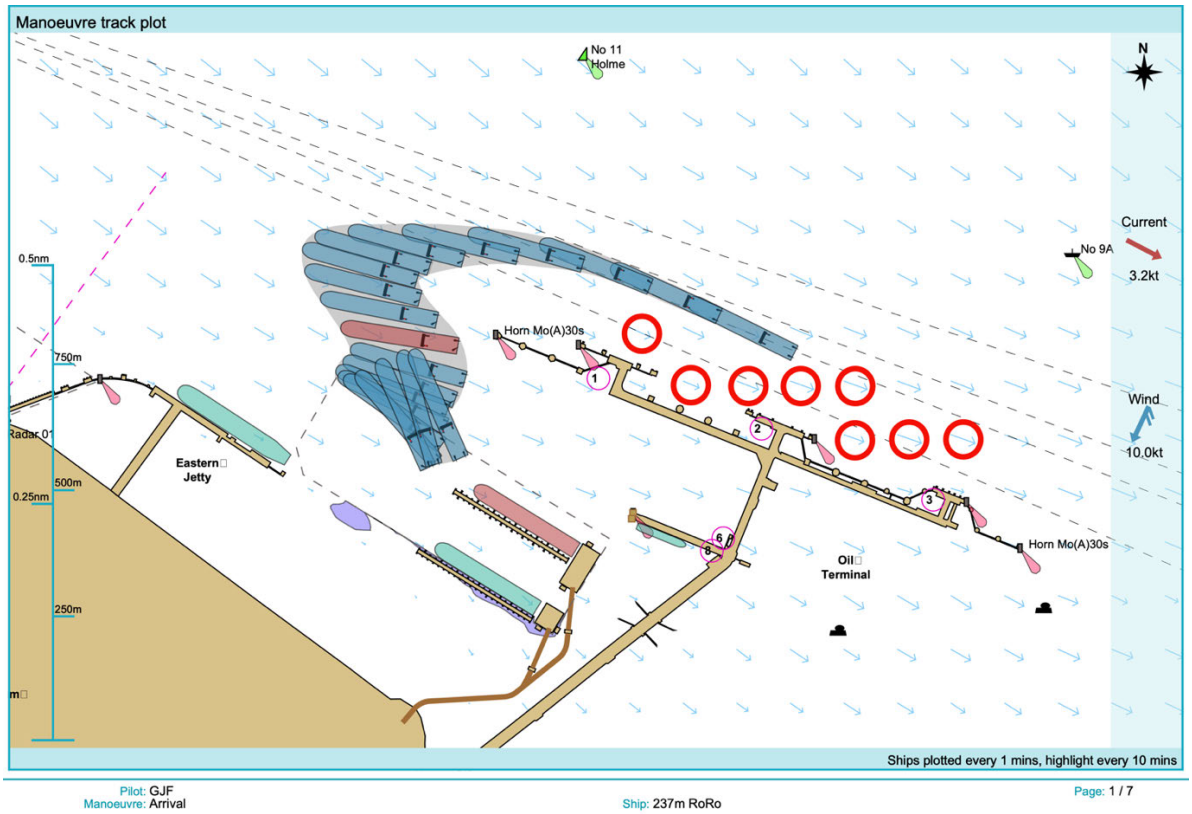


Image: ABP Environmental Statement: Volume 3 Navigational Simulation Study – Part 1, P48 [APP-90]

3.27 The depiction of the flood tide [APP-90 p146] also indicates a flood tide that acts parallel to the berth (circles again added):

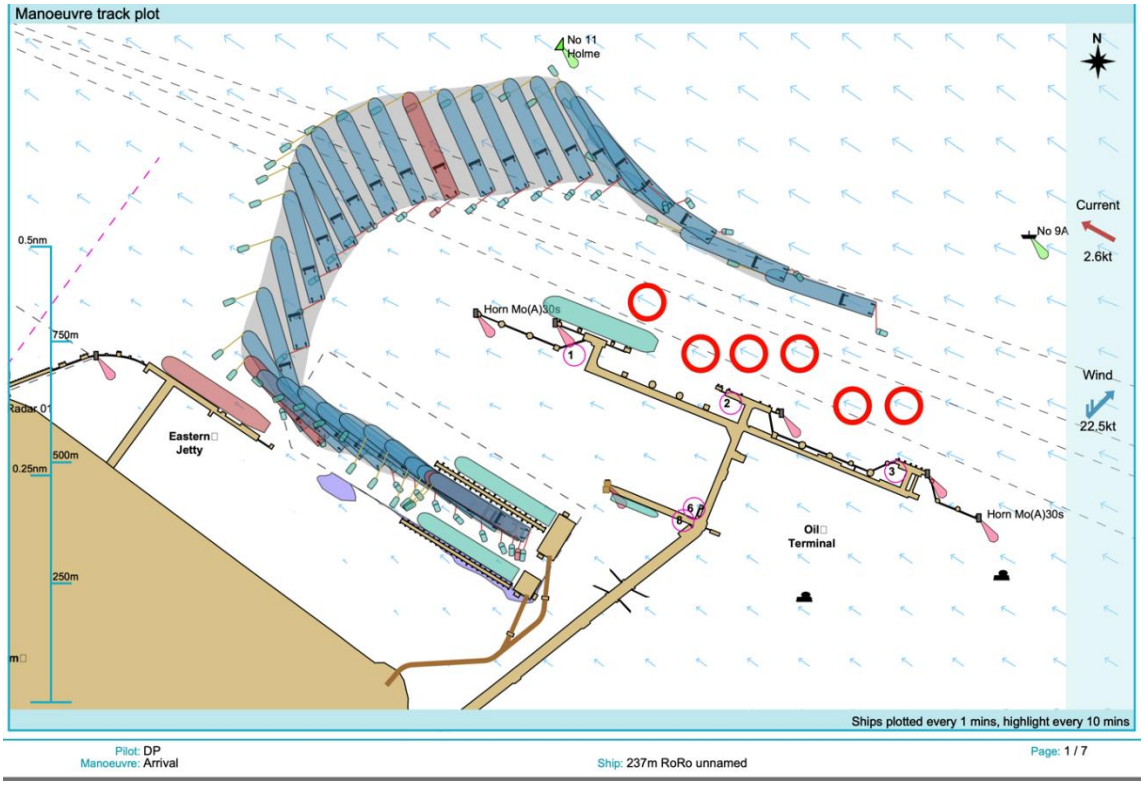


Image: ABP Environmental Statement: Volume 3 Navigational Simulation Study – Part 1, P146 [APP-90]

3.28 This is clearly not the case and a point made in various MAIB accident investigation reports, HES documentation and established procedures. Indeed in their own Pilot Handbook, the Applicant correctly indicates the tidal flow in this area (ebb tide indicated with red arrow) which clearly does not run parallel to the IOT, as shown in this image:

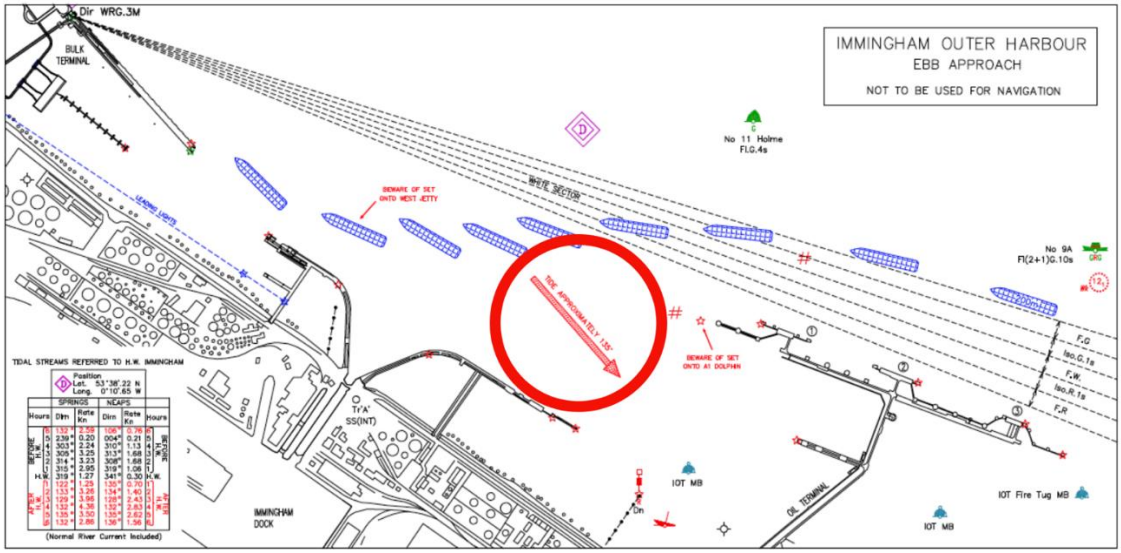
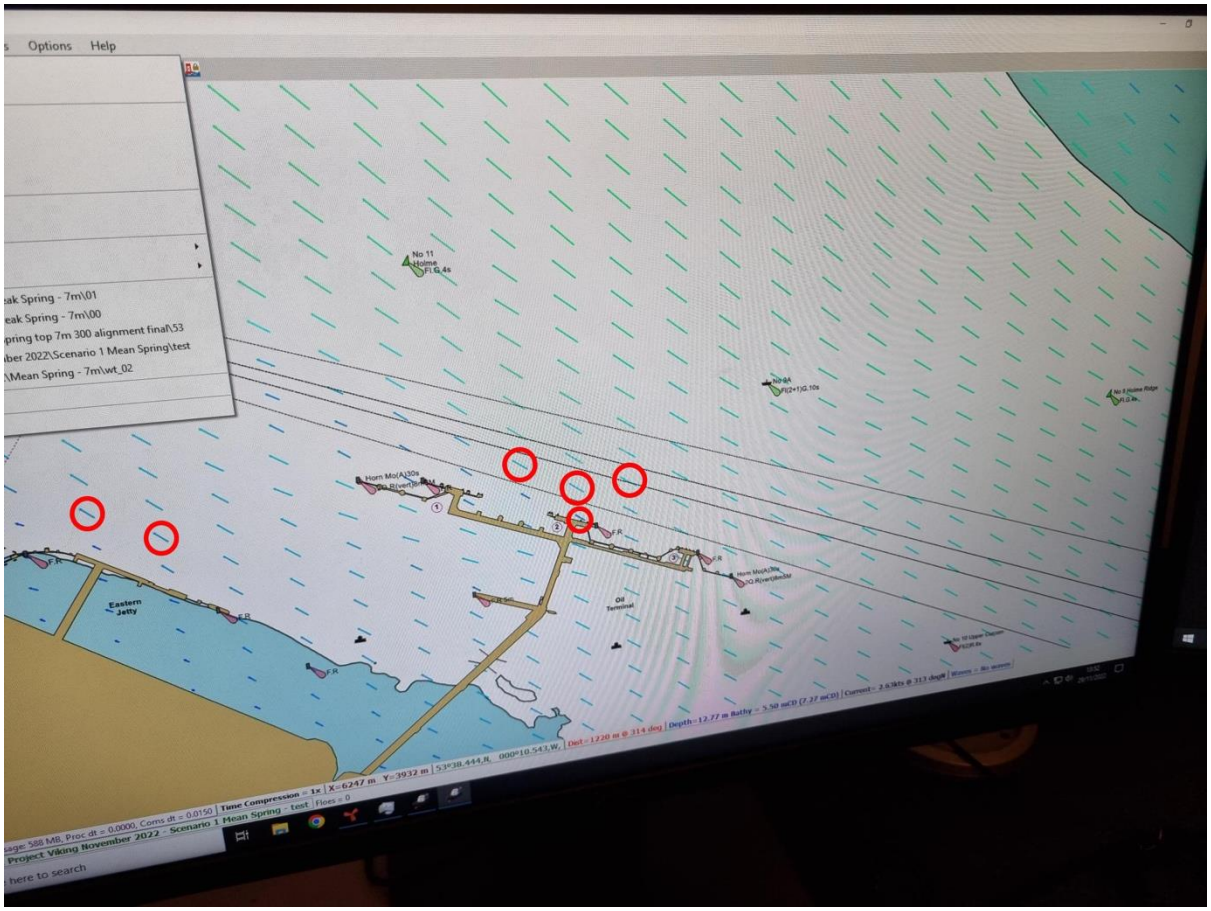


Image: ABP Humber Estuary Services Pilot Handbook 2017 p135

3.29 The tidal flow used in the simulations for this project is also inconsistent with the tidal flow used in simulations carried out at the same simulation centre for DFDS & ABP. In the photo below (taken by a DFDS participant at the DFDS simulations) the tide as depicted near to the IOT is different to the tide as depicted in the Applicant's submission but is consistent with published data and what our vessels' Captains experience in real life. This suggests that conflicting tidal models have been used at HR Wallingford and that a flawed model was used in the Applicant's submission.



Simulated Ship Models

3.30 It is good practice and common sense when designing a new terminal to simulate the vessels that will actually run to the berth in order to adequately gauge its viability. This will normally require the commissioning of a simulated ship model that exactly replicates the handling characteristics of the ship and the effect of wind and tide will have upon the vessel. In previous simulator trials for their Humber operations, in conjunction with the Applicant, DFDS has commissioned such models of their vessels to give as accurate as possible representation of how their vessels will perform in real life. The Applicant has also commissioned such models for other major projects, most notably the Siemens Gamesa development in Hull for which the Applicant commissioned a ship model for the wind turbine installation vessels that were due to operate to the berth.

3.31 However in simulating this development the Applicant chose to use a more manoeuvrable DFDS model (the 'Jinling Class' vessel) for the bulk of the simulations rather than the Stena E-Flex class vessel that will be used at this facility, as '*…there was not sufficient data, or ship master experience available at the time of the study, for an adequate ship manoeuvring model verification process to be completed*.' [APP-90 p21].

3.32 The DFDS Jinling Class vessel is a comprehensively equipped and highly manoeuvrable ship engineered for the complexities and restricted space of the port of Vlaardingen, Netherlands rather than the Humber. The use of this model rather than commissioning

their own representative model renders the simulations unrepresentative of the vessels that will visit the terminal (and unduly favourable) and therefore the anticipated viability of the terminal design.

3.33 DFDS acknowledges that in later simulations 'Stakeholder Demonstrations' [APP-91] the Applicant used a model of a Stena T class vessel. However these are smaller vessels than the design specifications of the terminal and therefore DFDS considers they are still unrepresentative of the types and design of vessels that will visit the terminal. It is also a concern that these simulations [APP-91] were exclusively carried out in relation to Berth 1 which is unquestionably the least challenging of the three proposed berths in terms of manoeuvring so is again not an adequate representative of the complexities of the full terminal.

Unrealistic use of vessel machinery

3.34 In reviewing the simulations runs for Part 1 of the study [APP-90] experienced DFDS Captains have expressed serious concerns over the unrealistic use of machinery required to achieve the desired manoeuvre.

3.35 Bow thrusters are transverse power units used on vessels to help control the positioning of the vessels bow. These electrically powered units are designed for 'fine control' and as such are designed for intermittent use in order to control the manoeuvring of the vessel in the final stages of berthing or the initial stages of departure. On the Jinling Class vessels these units are highly powerful developing over 65 tonnes of thrust at full capacity, having been developed for the unique challenges of the port of Vlaardingen in the Netherlands.

3.36 In consulting the simulation reports the experienced Captains within DFDS were extremely concerned about the use of the vessels bow thruster. In many of the simulation runs the thruster is running at full power for extended periods of up to 15 minutes [APP-90 p116]. This would be both irresponsible given the wash effect it would have on the tug attempting to assist the vessel and potentially damaging to the thruster unit. This level of thruster use is also indicative of a highly dangerous manoeuvre where the vessel is on the edge of losing control. Despite this the runs are categorised as 'Successful'. In simulations carried out by DFDS with Rotterdam pilots at the world renowned Maritime Research Institute Netherlands (MARIN), full power bow thruster use in excess of 30 seconds deems any simulation a failure, as are thrusters at 80% power for longer periods. Similar thruster limitations are observed at the Force Technology marine simulator in Denmark.

3.37 The issues surrounding the simulations were raised at a meeting on 13 October 2022 with DFDS representatives in Copenhagen attended by Head of Marine Paul Bristowe, Harbour Master (Humber) Andrew Firman and other representatives of the Applicant and representatives of DFDS. At the meeting the Harbour Master admitted he had failed to read the simulation reports and his only knowledge of the trials had come from conversations at a later date with the participants.

Towage

3.38 In Simulation Study 1 [APP-090 p22] the towage support for the Jinling Class of vessels makes use of the 'SUPERMAN' a high power, compact tug. This allows the tug to provide high levels of push and pull assistance and is small enough to render towage assistance in the limited space available between berths 2 & 3. However such tugs are rare within the Humber fleet. According to the tug list on the HES website[10] only two such tugs are servicing the Humber (Svitzer Valiant and SMS Superman). These two tugs operate for different companies and these companies do not operate together to assist a single vessel. Despite this two such tugs were made available to the vessels for the purpose of the simulation. This is not consistent with the current level of towage available on the Humber and there is no evidence that sufficient high power, compact tugs will be made available.

3.39 Furthermore, the amount of power exercised by the tugs during the simulations was higher than would normally be expected, and the simulations did not properly account for the effect of bow thrusters on tugs when both were being used. Such high thruster output not only limits the effectiveness of the tug but significantly increases the potential danger to the tug and her crew.

3.40 It is also the opinion of DFDS that the level of towage support required for the Applicants development combined with the additional towage that will be required for IOT is unsustainable given the current size of the tug fleet on the Humber. Delays in tug availability are common and the towage requirements for the Applicants new terminal will only exacerbate this situation to the detriment of other port users.

Pilotage

3.41 DFDS do not believe the Applicant has given sufficient consideration to a third element of navigational safety, namely the level of pilotage required for the berth. The simulation consultants state in their report [APP-090 p4] that

> *It should be noted that manoeuvring to and from the new infrastructure will be challenging particularly at the limiting conditions. Overall manoeuvres will require precise positioning of the vessel, tugs and their attitude to the tidal flow and the wind. Mitigating the inherent risks in these manoeuvring operations will require a robust training solution.*

3.42 However the Applicant has failed to identify what robust training solution will be put in place.

3.43 It is highly likely that the day-to-day pilotage operation of vessels visiting the berth will be undertaken by the vessel's Captain or Chief Officer with a valid Pilotage Exemption Certificate (PEC) with pilots being required when such an exemption holder is not on

[10] [redacted]

board. The vessels operating to and from the IOT finger pier are piloted with a mix of PEC holders and pilots.

3.44 If tugs and pilots are not available this will lead to delays in berthing and unberthing of vessels, adding to congestion to the detriment of other port users.

IOT Trunkway Protection

3.45 The cargo pipelines carrying oil and oil products to and from vessels discharging and loading on the IOT run down a trunkway along the jetty stem. This makes this area particularly vulnerable to impact from a vessel with the associated pollution event that would occur following such an incident.

3.46 In APP-089 p81 the Applicant's consultant recognises that trunk way impact protection is a key mitigation:

"*This control is therefore detective as it is considered to have very substantial mitigation effect on both frequency and consequence."*

3.47 (A 'detective' control is one that reduces both the frequency and consequence of a risk). Despite this, and the proximity of the proposed terminal to these exposed pipelines the Applicant has failed to positively commit to any protection for this area. [APP-89 p96] and would only be implemented at the harbour master's discretion according to the dDCO [APP-010], requirement 18 (see further below).

"*IOT trunk way protection has not been ruled out (as an adaptive control during operation) however and may form part of the operational 'adaptive procedures' control of which the specific details will be determined on a progressive basis and managed by the Humber Estuary Services."*

3.48 The Applicant has not indicated what would trigger the harbour master to request such protection mitigation, but it is the opinion of DFDS that if this trigger is a collision or near miss that this constitutes a wholly inappropriate approach to navigational safety and risk assessment and the protection should be provided from the outset.

Dredging

3.49 Due to the nature of its hydrography the Humber is an area that experiences high levels of siltation. The Immingham/Killingholme area is particularly affected due to its location and the requirement for multiple deep water 'dredge boxes' at berths in this area. Dredging is important to maintain water depths and stop vessels running aground.

3.50 In order to remove silt in this area there is already a constant need for maintenance dredging which is carried out through a combination of suction dredging, grab dredging and bed levelling carried out by UK Dredging ("UKD") which is a subsidiary of the Applicant's company.

3.51 The Applicant proposes that 190,000m^3 of dredge material is removed from the development site (150,000m^3 of silt and 40,000m^3 of boulder clay) to be disposed of in sites HU056 (Holme Channel) and HU060 (Clay Huts) (APP-089, p44 4.2.10). It is obviously beneficial to the Applicant to use these two sites given their proximity to the development site. However DFDS believe these sites to be unsuitable to receive this material for the following reasons:

3.51.1 The proposed dumping sites are relatively small and are already commonly used for the disposal of material from maintenance dredging campaigns for the Immingham and Killingholme areas. DFDS is concerned that the disposal of this quantity of material in these two deposit grounds could seriously reduce the capacity to accept material from the continual maintenance dredging campaigns forcing the dredgers carrying out such maintenance dredging campaigns to use other deposit grounds therefore reducing their efficiency and availability.

3.51.2 DFDS has operations in the inner dock at Immingham and in the Immingham Outer Harbour ("IOH") both of which are highly prone to siltation and require constant dredging. DFDS are concerned that the disposal of such a vast quantity of dredge material so close to the Immingham area is likely to find its way back into the IOH and Immingham bellmouth areas on the ebb tide which could pose a danger to the safe operation of vessels in these areas. It is of note that when the IOH was constructed the associated capital dredge material was deposited at Hawkins Point some 3.5nm down river of the development rather than in the Applicant's proposed deposit areas.

3.51.3 The dredge deposit areas also lie close to 'Halton Middle', which is a shallower area of the Humber river bed, where the addition of further silt would add to navigational risk for vessels proceeding further up river, e.g. to Hull and Saltend.

Navigational Risk Assessment ("NRA") Methodology [APP-089, p54 6.1.3]

3.52 An NRA is an exercise which is completed to assess and measure the hazards associated with an activity within an area of high vessel navigation. This to ensure that the activity being conducted does not pose an unacceptable level of risk to persons, the environment, trade, the business reputation or property.

3.53 The process for assessing risk starts by identifying hazards associated with the assessed activity. Once the hazards are known they are given a score (a numerical value based on a potential outcome description) for the damage they potentially could cause to all four categories (people, environment, infrastructure and reputation). They are also given a score for the likelihood of that event occurring. These scores are then processed by risk assessment software using a complex algorithm which takes account of other pieces of data (such as type and effectiveness of embedded control measures). The output of that calculation provides a risk score for most likely and worst credible event outcomes. That score is compared against a 'risk score / actions to take' table (See Table 1) which informs if the risk is acceptable or not.

3.54 It is common practice that when conducting NRAs for proposed terminal developments to follow the International Maritime Organization Formal Safety Assessment ("IMO FSA") guidance since it is the only guidance available which is relevant to marine risk assessments.

3.55 In completing this NRA, however, the Applicant has chosen to use parts of two methodologies rather than one. The individual methodologies applied separately do comply with the requirements of the IMO FSA guidance. However, the Applicant appears to be using a heterogeneous methodology mix of the Port Marine Safety Code and the Maritime Coastguard's Agency's (the "MCA") MGN 654 and Annex 1 'Methodology for assessing marine navigational safety and emergency response risks of [Offshore Renewable Energy Installations] OREIs'.

3.56 The first paragraph of the MCA publication Methodology for Assessing Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations ("OREIs"), executive summary states:

"This revised document has been produced by the Maritime and Coastguard Agency (MCA) with the co-operation of key stakeholders as a methodology for assessing the marine navigational safety & emergency response risks of offshore renewable energy installations."[11]

3.57 In comparison The Port Marine Safety Code ("PMSC") establishes a national standard for every aspect of port marine safety aiming to enhance safety for those who use or work within ports and Harbours.

3.58 The area covered by the NRA is part of the port of Immingham. The port's location is described as being: "on the southern bank of the river Humber and is one of four ports on the river owned and operated by ABP. ABP are both the Statutory Harbour Authority (SHA) and a Competent Harbour Authority (CHA)." The study area is clearly not an offshore installation. It is within an SHA and a CHA.

3.59 Therefore, the risk assessment methodology described within the PMSC can be viewed as properly applicable to ports and harbours, whereas the OREI methodology is not.

3.60 The Applicant informs in section 6.1.3 of Immingham Eastern Ro-Ro Terminal Preliminary Environmental Information: Appendix 10.1: Preliminary Navigational Risk Assessment Dated December 2022 (APP-089) that the process for carrying out an NRA follows the methodology from MGN 654, Annex 1 'Methodology for assessing marine navigational safety and emergency response risks of OREIs' (MCA, 2021); plus, the process identified in the PMSC 'Guide to Good Practice' (DfT, 2018).

3.61 The two methodologies are designed to produce different outputs: one qualitative and the other quantitative and they use different terminology for what is acceptable risk and what is not. The combination of these two methodologies into a single heterogeneous methodology renders the

11 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/981718/MGN_654_Annex_1_NRA_Methodology_2021.pdf

Applicant's NRA confusing to the reader. Meaning the assessment of risk is also confusing and therefore not credible.

3.62 An acceptable level of risk across both methodology's is considered reached when the risks involved in the activity taking place have been reduced to ALARP' (As Low As Reasonably Practicable).The PMSC methodology adopts and uses the term 'ALARP' within its NRA process **(See Table 1)** whereas the OREI methodology uses the term 'Tolerable'.

ALARP is described in the PMSC as being *'an objective Judgement of risk, without being influenced by the financial position of the authority. The degree of risk in a particular activity or environment can, however, be balanced on the following terms against the time, trouble, cost and physical difficulty of taking measures that avoid that risk. If these are so disproportionate to the risk that it would be unreasonable for the people concerned to incur them, they are not obliged to do so.'*

The point at which ALARP is reached is articulated as a numerical value.

That numerical value is compared against the calculated risk score of a given activity to decide if the level of risk associated with that activity is acceptable or not.

Risk Score	Risk Definition	Action Taken
0 - 1.99	Negligible	The risk is acceptable and at level where operational safety is unaffected.
2 - 3.99	Low	The risk is acceptable and at level where operational safety is assumed.
4 - 6.99	ALARP	The risk is neither acceptable nor unacceptable. Risks in the ALARP band are to be managed to a level which is "As Low As Reasonably Practicable", based on the cost-effectiveness of implementing additional risk control measures. These hazards and associated risk control measures shall be regularly reviewed as part of the Safety Management System.
7 - 8.99	Significant	The risk is unacceptable and additional risk control measures shall be identified and implemented as soon as possible (or the activity / operation temporarily suspended). These hazards and associated risk control measures shall be regularly reviewed as part of the Safety Management System.
9 - 10	High	The risk is unacceptable and additional risk control measures shall be identified and implemented immediately (or the activity / operation permanently suspended). These hazards and associated risk control measures shall be regularly reviewed as part of the Safety Management System.

Table 1 Risk level numerical value range. '*Taken from MARICO UK report 21UK1704 Issue 01 dated 14 June 2021. Able Marine Energy Park NRA Update. Used as an industry example from a completed NRA which was written following the IMO FSA guidance. It also follows the methodology set out within the Port Marine Safety Code.'*

3.63 The OREI methodology uses the term 'Tolerable' within its NRA process.

3.64 There is no final description of 'Tolerable' within the Methodology for Assessing Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations

(OREI) instead section 6 discusses a mechanism for assessing tolerability with guidance provided in section C4. Its then left for the assessor to set an appropriate level to be considered 'Tolerable'.

3.65 Therefore, DFDS are of the opinion that whilst the two methodologies used are individually compliant with the IMO's FSA guidance the use of the OREI model as one part of the heterogeneous mix is not appropriate given that the Applicant's proposed development is not in any way connected to the offshore renewable sector and the description for the term 'Tolerable' is decided by the assessor.

3.66 DFDS believe the utilisation of the OREI methodology in elements of the applicants NRA, apart from being a fundamental error in principle, also serve to downplay the risk of the new terminal in two key areas, namely consequence and frequency.

3.67 In terms of consequence the applicant has elected to use rapidly escalating bandings for the financial consequence of an incident that would be more appropriate to a high value offshore windfarm project. If we compare the financial consequence bandings of the applicant's NRA to that of the Humber Able Marine Energy Park which was granted a DCO in 2013 the differences are stark

Consequence Descriptors: Port	
None	Negligible (1)
Minor (Little local publicity. Minor damage to reputation. Minor loss of revenue, £0 - £750,000)	Minor (2)
Moderate (Negative local publicity. Moderate damage to reputation. Moderate loss of revenue, £750,000 - £4M)	Moderate (3)
Serious (Negative national publicity. Serious damage to reputation. Serious loss of revenue, £4M - £8M)	Major (4)
Major (Negative national and international publicity. Major damage to reputation. Major loss of revenue, > £8 M)	Extreme (5)

ABPmer NRA [APP-089]

Consequence Criteria.

Cat	People	Property	Environment	Business
1	Negligible Possible very minor injury (e.g. bruising)	Negligible Costs <2k	Negligible No effect of note. Tier1 may be declared but criteria not necessarily met Costs <2k	Negligible Costs <2k
2	Minor (single minor injury)	Minor Minor damage Costs 2k –20k	Minor Tier 1 – Tier 2 criteria reached. Small operational (oil) spill with little effect on environmental amenity CEAS Site warning Costs 2K–20k	Minor Bad local publicity and/or short-term loss of revenue Costs 2k – 20k
3	Moderate Multiple minor or single major injury	Moderate Moderate damage Costs 20k – 200k	Moderate Tier 2 spill criteria reached but capable of being limited to immediate area within site COMAH site evacuation Costs 20k -200k	Moderate Bad widespread publicity Temporary suspension of operations or prolonged restrictions Costs 20k – 200k
4	Major Multiple major injuries or single fatality	Major Major damage Costs 200k -2M	Major Tier 3 criteria reached with pollution requiring national support. Chemical spillage or small gas release COMAH local evacuation Costs 200k - 2M	Major National publicity, Temporary closure Costs 200k - 2M
5	Catastrophic Multiple fatalities	Catastrophic Catastrophic damage Costs >2M	Catastrophic Tier 3 oil spill criteria reached. International support required. Widespread shoreline contamination. Serious chemical or gas release. Significant threat to environmental amenity. COMAH major area evacuation Costs >2M	Catastrophic International media publicity. Operations and revenue seriously disrupted for more than two days. Ensuing loss of revenue. Costs >2M

Able Marine Energy Park Material Change 2 NRA, page A-5 (Marico Marine)[12]

3.68 In terms of frequency the applicant has also chosen to use the lifetime of the project (which the applicant estimates to be 50 years) as their maximum considered scope, which also serves to downplay risk. Once again when compared to the DCO submission NRA for the Able Marine Energy Park the differences in timescale are stark.

Table 16 Frequency Descriptors

Descriptor	Frequency
The impact of the hazard is realised but should very rarely occur (within the lifetime of the entity)	Rare (1)
The impact of the hazard might occur but is unlikely (within the lifetime of the entity)	Unlikely (2)
The impact of the hazard could very well occur, *but it also may not* (within the lifetime of the entity)	Possible (3)
It is quite likely that the impact of the hazard will occur (within the lifetime of the entity)	Likely (4)
The impact of the hazard will occur (within lifetime of entity)	Almost Certain (5)

[12] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030006/TR030006-000135-TR030006-APP-6A-14-1.pdf

ABPmer NRA [APP-089]

Frequency Criteria.

Scale	Description	Definition
F1	Remote	An event that could be expected to occur less than once > 1, 000 years.
F2	Unlikely	An event that could be expected to occur once in 1,000 years.
F3	Possible	An event that could be expected to occur once in 100 years.
F4	Likely	An event that could be expected to occur once in 10 years.
F5	Frequent	An event that could be expected to occur yearly.

Able Marine Energy Park Material Change 2 NRA, page A-4 (Marico Marine)[13]

3.69 It is noteworthy that in the Applicant's pre-submission paperwork for the proposed Immingham Green Energy Terminal (IGET), located approximately 0.5nm east of this proposed development, the PMSC methodology is exclusively followed.

3.70 In producing this NRA the applicant has also failed to share the current NRA for the Immingham area. Without this data it is impossible for observers to understand the effectiveness of the current baseline level of risk mitigation and therefore impossible to assess the effectiveness of additional controls proposed in the applicants NRA for this proposed development.

3.71 DFDS are also of the opinion that the effectiveness of proposed future mitigation is overstated and, in some cases, does not constitute 'new' control measures. An example of such being the effectiveness of 'pilot training' as a highly effective new control measure. DFDS would assume that continual pilot training would form part of the current safety regime included in the current NRA for the Immingham area and therefore for the applicant to propose this as an additional control is both incorrect and the effectiveness in reducing risk vastly over inflated.

3.72 DFDS is also of the opinion that given the number of potentially catastrophic incidents that have occurred since the turn of the century (as previously listed at 3.5), averaging one every three years, the applicant is being unrealistic about the frequency with which such events will occur in the future.

HAZID Meetings and Outcomes

3.73 The IMO's Revised Guidelines for FSA for Use in the IMO Rule-Making Process (section 3.3.1)[14] states:

[13] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030006/TR030006-000135-TR030006-APP-6A-14-1.pdf

[14] https://wwwcdn.imo.org/localresources/en/OurWork/Safety/Documents/MSC-MEPC%202-Circ%2012-Rev%202.pdf

"The use of expert judgment is considered to be an important element within the FSA methodology. It not only contributes to the proactive nature of the methodology, but is also essential in cases where there is a lack of historical data."

3.74 The initial two HAZID (hazard identification) workshops were held simultaneously using two groups of stakeholders allocated to a workshop. One workshop considered the construction phase, the second considered the operational phase.

3.75 Although relevant stakeholders had been invited to attend the HAZID workshops the skill sets and workshops were mismatched. For example, Master Mariners were asked about the construction of the terminal and not about how ships might manoeuvre around the terminal when operational.

3.76 Also, in these meetings:

3.76.1 No explanation of the descriptions that were attached to frequency or consequence was provided to the attending stakeholders;

3.76.2 No explanation of the hazard categories prior to the assessment being conducted was offered;

3.76.3 Although a selection of relevant stakeholders had been invited, the wrong stakeholders attended the wrong workshops leading to non-credible results; and

3.76.4 No representatives from the construction/engineering team were present at the initial or subsequent meetings.

3.77 DFDS are therefore of the opinion that these workshops were not completed in line with the FSA guidance and offered little value to the Hazard identification stage of the NRA.

3.78 The IMO's Revised Guidelines for FSA for Use in the IMO Rule-Making Process (section 3.3.2) states:

"In applying expert judgment, different experts may be involved in a particular FSA study. It is unlikely that the experts' opinions will always be in agreement. It might even be the case that the experts have strong disagreements on specific issues. Preferably, a good level of agreement should be reached. It is highly recommended to report the level of agreement between the experts in the results of an FSA study."

3.79 Two further HAZID meetings were held and organised in a more structured way than the previous two with correct stakeholders attending relevant meetings. However, agreement was not always reached in terms of the consequence and severity levels being used to assess risk.

3.80 It was clear that the invited stakeholders all tended to agree with each other in terms of risk assessment severity and consequence levels, and the ABP Harbour Master also agreed with some of the arguments put forward by the subject matter experts.

3.81 Despite this the ABPmer consultant conducting the workshops did not agree with the stakeholders evaluation of consequence and severity in some areas.

3.82 Although these items are discussed in the NRA report it appears the consultant considered all arguments by discussing with peers (not including stakeholders) then wrote to the stakeholder experts explaining why they disagreed and had chosen to use their own views in the NRA.

3.83 DFDS is therefore of the opinion that Hazard consequence and severity were not accurately assessed. Nor were the stakeholders sufficiently informed regarding previous incidents in the area to reach reasonable conclusions regarding frequency.

Duty Holder and Designated Person

3.84 In determining whether the risks identified are tolerable the Applicant has relied upon the opinion of the Duty Holder. In the case of the Humber the Duty Holder is the ABP Harbour Board.

3.85 According to the Applicant's 'Port Marine Safety Code Annual Performance Review'[15] the Harbour Board is identical to the Applicant's Board of Directors. As such, the vast majority are commercial managers and have no professional marine qualifications.

3.86 In order for the Harbour Board 'HASB' to make informed decisions regarding marine safety issues a 'designated person' is required to provide independent assurance directly to the 'duty holder'.

3.87 The Port Marine Safety Code Guide to Good Practice (p22 2.3.21)[16] states:

"A designated person is somebody independent from the organisation holding suitable qualifications and having relevant experience such that they can advise the Duty Holder in terms of Marine Risk and safety.'

3.88 The standard procedure in making marine risk decisions of this magnitude would be for consultants acting for an applicant to conduct a Navigational Risk Assessment. The consultants would benchmark what constitutes ALARP (as a numerical value) and measure quantitively whether the risks identified are above or below the ALARP figure.

3.89 The designated person would review the NRA and advise the duty holder in terms of whether the correct procedures were followed, the quality and relevance of the data collected and the correct interpretation of data ensuring the quality of NRA output.

3.90 The assurance would then be provided to the Harbour Board by their designated person that the NRA was of sufficient quality and present the marine risks identified and the numerical (quantitative) value for each risk identified from which decisions can be made on whether the risk was tolerable or not.

[15] https://www.abports.co.uk/media/11dfnigs/pmsc-annual-report-2021.pdf

[16] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/854521/MCGA-Port_Marine_Guide_to_Good_Practice_NEW-links.pdf

3.91 The Port Marine Safety Code Guide to Good Practice (p33 4.3) states: that 'Risk assessments should be done by competent people, especially when choosing appropriate quantitative risk assessment techniques and interpreting results'.

3.92 The Applicant has used the wrong (offshore wind) methodology, which produces qualitative outputs, rather than the Port Marine Safety Code methodology that should have been solely used, which gives quantitative outputs. This in turn requires the Harbour Board (as duty holder) to interpret qualitative outputs, which is not consistent with this guidance given the composition of the Harbour Board, the vast majority of whom are not marine professionals and therefore not qualified or experienced to be making decisions on what constitutes an acceptable risk based on a qualitative marine risk assessment of this high-risk area.

3.93 To compound matters further the board's designated person failed to attend any of the HAZID meetings and is not identified as having participated in any way during the production of the NRA. He is therefore not best equipped to fully appreciate the concerns raised by the stakeholders at any of the meetings and is giving advice based solely upon the NRA and its heterogeneous methodologies.

3.94 A meeting of the Harbour Authority Safety Board ("HASB") was held on Monday 12 December 2022, at which the descriptors for the criteria shown in the likelihood and consequence and were formally approved by the ABP duty holder.

3.95 As previously mentioned, the OREI's methodology produces a tolerable risk level by description which is open to the interpretation of the reader.

3.96 It therefore becomes easy for the lay observer to reach the conclusion that the risks' descriptions are tolerable / ALARP, when in fact, if the views of the stakeholders had been properly included it would have been demonstrated that they are not.

3.97 Furthermore, as the Harbour Board is identical to the Board of Directors, the need to decide what constitutes an acceptable risk means that there is an apparent conflict of interest in terms of the development proposers and development risk assessment safety related decision makers being the same persons.

3.98 Given the above, DFDS give notice that they may wish to conduct oral questioning of the duty holder, harbour master or designated person at one or more hearings to ensure adequate testing of the conclusions of the NRA.

4 Inadequacy of Environmental Statement

4.1 At paragraphs 3.1.61-2 of the Environmental Statement (Chapter 3) [APP-039] it states that although the preferred option is to complete construction before commencing operation, construction and operation may overlap between mid-2025 and late 2026. However, apart from in the commercial and recreational navigation chapter, the effects of simultaneous construction and operation have not been assessed, when they could be significant.

4.2 Furthermore, the Applicant is proposing another project that would be the subject of an application for development consent, the Immingham Green Energy Terminal (IGET) (PINS reference TR030008). This underwent statutory consultation earlier this year. At paragraph 2.5.1 of that project's Preliminary Environmental Information Report it states that construction of the project is likely to start in early 2025, and phase 1 would take 3 years to construct. It would be brought into operation at that point and further phases may be constructed depending on market demand.

4.3 IGET is acknowledged as being only 100 metres away from the present application, and although the cumulative impacts of the two projects are considered at item 57 in Table 20.5 in chapter 20 of the Environmental Statement [APP-056], no additional mitigation is proposed for the current application due to the existence of IGET and the only additional mitigation proposed for IGET due to the existence of this project is in relation to noise and vibration on properties in Queens Road. The Applicant should properly assess both projects being constructed and operated at the same time by rerunning the transport and navigational assessments with the cumulative totals of vessels and vehicles from both projects if they are to be constructed at the same time and similarly for other impacts.

5 Impact of vessel congestion

5.1 Chapter 10 of the Environmental Statement [APP-046] only assesses navigational safety, it does not assess any impacts such as increased access times for vessels using the existing port due to the increase in number of vessels (likely slow-moving due to issues of manoeuvrability) from the construction and operation of this project. This should have been assessed, just as it has been for vehicles on land. ABP committed to a commercial workshop on this issue but it has not happened.

5.2 The navigational simulations show that the new berths will cause significant interference with the existing agreed vessel waiting areas (stemming). The impact on the two currently agreed areas for stemming will reduce overall capacity and cause delays for existing services and will become a barrier for growth at the port. Notice to mariners SH22 outlines the current agreed areas for stemming. The manoeuvres shown on the navigational simulations will result in the existing stemming areas becoming unusable during every vessel arrival and departure at the new terminal. This means vessels will need to stem 20 nautical miles (nm) east of the current locations, resulting in longer waiting periods, increased fuel consumption and CO_2 emissions before reaching their destination.

5.3 Modelling three scheduled daily services arriving between 0500hrs and 0800hrs and departing between 1900hrs and 2100hrs 6 days per week, the simulations show arrivals will take on average 45 minutes and departures around 20 minutes. The additional movements have the potential to cause delays or remove capacity in the lock programme for over three hours per day. During days when the weather impacts vessel manoeuvring or there are other operational delays, these will be significantly longer. During periods when the shipping programme is particularly busy the additional time required for manoeuvring will cause a significant over-demand and under-capacity for the lock. This

will result in further vessel delays which the operating plan has no resilience to recover from causing disruption to scheduled services.

5.4 Delays in tug vessel availability is already common, and the towage requirements for the new terminal will only exacerbate the situation. The challenging manoeuvres required at the new terminal will result in higher tug occupancy resulting in lower tug availability and increased waiting times for other users. This will impact schedule performance, fuel consumption and CO_2 emissions.

5.5 Similar considerations apply to the effect of congestion on the roads, which is covered in the next section.

6 Onshore issues – traffic, noise and air quality

Traffic

6.1 The submissions below refer to the updated Transport Assessment [AS-008] that was submitted part-way through the representation period, but DFDS reserve the right to make further points on it given the limited time available to consider it.

6.2 Surveys of existing traffic flows on the network were undertaken between 27 September 2021 and 22 November 2021, during a period when the conditions on both the highway network and freight and logistics operations were still being affected by the Covid-19 pandemic. The baseline traffic flows require validation to ensure they are representative of typical network conditions and port operations. It must be demonstrated that the baseline traffic flows are robust and that the assessments based on these do not overstate the existing capacity of the highway network. The peak hours to which baseline traffic flows relate are also unclear and require clarification.

6.3 In both the Transport Assessment [AS-008] and the Traffic and Transport chapter of the Environmental Statement [APP-053], the Applicant has used Automatic Traffic Counts (ATC) undertaken in 2021 to calculate traffic volumes through the east and west gates, and to establish the Port of Immingham profile, when activity at the port was likely to have been affected by the Covid-19 pandemic. The use of ATC's for recording classified traffic volumes on the approaches to gates is known to be an unreliable method of data collection due to the high proportion of HGV's and the presence of queuing vehicles resulting in inaccurate measurement of both total traffic volumes and HGV's. The lack of validation of this data is a concern and evidence should be provided to demonstrate that the data collected is both accurate and representative of typical operating conditions at the Port of Immingham.

6.4 DFDS' consultants have carried out visual surveys that show that more than the assumed 10% ([APP-053] paragraph 17.8.39) of trips are solo units, meaning that the total volume of vehicles is underestimated. Evidence should be provided to verify the assumed 10% proportion of solo units and updated as necessary to ensure assessments are robust.

6.5 There is insufficient evidence of analysis of the impact of additional vehicles within the port estate – with 1,430 additional parking bays for vehicles this could well cause additional congestion and hence impacts on existing port users.

6.6 The Environmental Statement says (paragraph 17.9.7, [APP-053]) that the site layout has been designed to accommodate peak inbound traffic but does not provide any evidence to demonstrate this. A new pedestrian route has also been provided but there is no assessment as to whether this would require crossing facilities across Laporte Road in response to the increased traffic.

6.7 The only mitigation for increased traffic outside the port is a proposed short new section of access lane at the East Gate entrance to the port, Work No. 12. DFDS does not consider that this will significantly increase capacity at the East Gate (contrary to the claim of doubling capacity at paragraph 6.4.10 of the Transport Assessment [AS-008]) – indeed the existing and new capacities of the East Gate have not been calculated by the Applicant. Once inside the port estate, the lane stops and traffic will have to merge back to single file. A bus layby is being closed to accommodate the changes but the impact of buses stopping on the main carriageway has not been assessed; furthermore vehicles queuing in the new and existing lane will block access for other road users, including emergency vehicles. Further evidence is required to identify the impact of the IERRT in terms of additional congestion and queueing at the entry gates and demonstrate that the mitigation provided is appropriate to address these impacts.

6.8 There is an assumption that only 15% of the new HGV traffic will use the West Gate and the remaining 85% will use the East Gate (paragraph 17.8.53 [APP-056]), and no mitigation at the West Gate is therefore proposed. DFDS are concerned that this figure may be unrealistic, given several factors:

6.8.1 current practice is heavily geared to the West Gate (82% / 18%); there are several logistics companies on the route to the West Gate (e.g. DSV, Smeets Ferry, Den Hartogh) that will wish to continue to use it;

6.8.2 the vast majority (some 90%) of journeys originate to the west of the port;

6.8.3 driver facilities near the port tend to favour arrival at the West Gate;

6.8.4 signage on the A180 directs vehicles towards the West Gate and DFDS believe that satnav devices also tend to do this; and

6.8.5 the A160 is a dual carriageway which is designed for use by high numbers of HGV's. The highway alignment and junctions along this route are also more appropriate for use by high volumes of HGV's relative to those junctions on the A1173 corridor.

6.9 In the absence of certainty that the proposed distribution is feasible or realistic the distribution outlined does not represent a robust assessment; at the very least, a sensitivity test with greater use of the West Gate should be provided, as well as one with greater use of the East Gate, as DFDS suspect the impacts would be much worse should there be more use of that gate as well. As well as the impact on public roads, additional

use of the West Gate will result in greater crossings within the port and congestion to port users.

6.10 There is also a concern that should existing West Gate traffic divert to the East Gate due to the signage / behavioural shifts associated with mitigation measure, this would further increase the East Gate demand and generate further queuing. Assessments to consider the impact of diverted traffic along the A1173 corridor and at the East Gate are omitted from the application and should be provided.

6.11 The A1173, which must be used to access the East Gate from the strategic road network, has not been assessed for its suitability for this intensified use. The Traffic and Transport chapter of the Environmental Statement [APP-053] disregards the impact of the IERRT on the A1173 corridor, despite it being the primary access route. Whilst it is recognised that there are limited receptors along this route at present, in the future that will no longer be the case with the implementation of developments such as the Stallingborough Interchange Business Park. The effects of significant increases in HGV traffic along this route in terms of severance, driver delay, pedestrian delay and amenity, accidents and safety and fear and intimidation, need to be appropriately considered and mitigated.

6.12 The assessments provided by the Applicant are considered to materially under-state future congestion on the highway network. DFDS consider that the capacity of at least five junctions on the highway network would operate over capacity by 2032 and would therefore require mitigation to ensure that journey times and access to the Port of Immingham are not materially worsened. Further scrutiny of the traffic flow scenarios and distribution of IERRT trips across the network is therefore required.

Noise

6.13 Chapter 14 of the Environmental Statement [APP-050] contains the noise assessment. Paragraph 14.8.26 commits to acoustic screening but without committing to reducing noise levels at Noise Sensitive Receptors by 5dB. The assessment of construction noise on noise-sensitive receptors does not account for existing background noise levels (see paragraph 14.8.29).

6.14 The assessment (paragraphs 14.8.31, 32, 35) assumes not all construction activities will occur at the same time but there is nothing to ensure that this is the case and no mitigation proposed if it does happen.

6.15 'It is understood' that air conditioning or alternative means of ventilation are provided within various buildings (14.3.49, 14,8.32, 14.8.34) but it is not clear upon what this understanding is based. At 14.8.58 it is assumed that fixed plant will not be noisy, but this assumption is not secured anywhere, nor is there any data to justify the statement that it will not be noisy for noise sensitive receptors.

6.16 The committed development taken into account in the traffic projects is listed in paragraphs 6.1.2-3 of the Transport Assessment [AS-008] but does not include the South Humber Bank Energy Centre or VPI Immingham OCGT, both granted via DCOs in 2020 and 2019 respectively, nor the Applicant's own proposed DCO, the Immingham Green

Energy Terminal (IGET) which is proposed to be constructed at the same time as IERRT according to its PEIR (and even though Chapter 20 of the Environmental Statement [APP-056] notes the potential for significant cumulative effects on noise and vibration at the top of page 20.78 and the compulsory acquisition of seven properties on Queens Road is contemplated in the IGET PEIR).

6.17 The Border Control Post is discounted because it is considered only to be likely to have 30 vehicles a day (Transport Assessment paragraphs 1.18-20 [AS-008]). DFDS believes that this is likely to underestimate traffic flows, given that it will ultimately be used as both a BCP, conducting Phyto and Phytosanitary checks, Border Force facility, and Office of Departure, Destination and Transit for the provision and receival of Transport Accompanying Documents, and even if it were only 30 vehicles per day, its proximity to the development is such that it should be taken into account.

6.18 Paragraph 14.9.1 acknowledges that some landside construction works may take place outside core hours, but these have not been assessed. Paragraphs 14.9.4 and 14.9.12 state that electrical plant will replace diesel power 'where possible and feasible' but this is not guaranteed and there is no mitigation proposed if it does not happen or until it happens.

6.19 The noise insulation scheme (mentioned at 14.9.14-15 and requirement 10 of the dDCO) does not oblige any particular reduction in noise and will not be implemented unless the landowner concerned agrees to it, neither is its cost quantified in the Funding Statement [APP-018] – this falls far short of a binding commitment and what an insulation scheme should involve.

6.20 In the marine ecology chapter of the Environmental Statement [APP-045] paragraphs 9.8.96, 9.8.98 and 9.8.102 appear to contradict each other on whether there is scientific knowledge about the effect of underwater noise and vibration on marine invertebrates. Paragraph 9.9.5 proposes that construction activity between October and March is prohibited until an acoustic barrier has been installed, but no evidence is offered as to whether this will sufficiently reduce noise impacts.

Air quality

6.21 The Environmental Statement Chapter 13 [APP-049] uses Defra background data for NOx, PM10 and PM2.5, supplemented by some diffusion tube data for NO_2, scaled down for 2025 on the assumption (without any specifics) that there will be technological changes to vehicles that improve emissions (see e.g. paragraph 13.9.9). This amounts to insufficient data-gathering and unjustified over-optimistic assumptions about trends. SO_2 emissions from vehicles are not assessed at all.

6.22 The nearest highly sensitive nature conservation receptors are considered to be 3km away (paragraph 13.8.26) despite the development being within an SAC/SPA/Ramsar site, which is surely not credible.

6.23 Priority habitats are assessed as having their air quality affected (see e.g. paragraph 13.8.55-56), but no mitigation is proposed, apparently because there is no guidance on how to take the sites into account (see paragraphs 13.8.26 and 13.11.10).

6.24 Mitigation for dust settling on the SPA/SAC/Ramsar site is simply that it will be washed away by the tide (paragraph 13.8.20) which is insufficient – the dust could cause enrichment, smothering and flooding.

6.25 The assessment states that all committed developments have been included (13.7.4 and 13.8.3) but these are not set out.

6.26 The assessment assumes half the vehicles will enter and leave by the West Gate and half by the East Gate (paragraph 13.8.39), but the transport assessment assumes the split will be 15%/85% (paragraph 5.5.9 of the Transport Assessment [AS-008]).

6.27 The operational mitigation proposed is extremely limited (see paragraphs 13.9.7-9) and even those are not secured via the draft DCO.

7 DCO-related issues

7.1 Article 2: The definition of 'Order limits' refers to 'limits of construction activity shown on the works plans' but those are not shown on the works plans.

7.2 Article 6 allows maintenance that does not go beyond what has been assessed in the ES, but there does not appear to be any assessment of maintenance in the ES.

7.3 Article 7 – the ability to vary limits to any extent downwards should not apply to the dredge pocket (Work No. 2). Although a Building Schedule [APP-078] was added to the application in its second incarnation, building heights in this article still refer to the engineering drawings [APP-010].

7.4 Article 10(1) – it is not clear what 'rights' are being sought through compulsory acquisition, simply stating 'such rights as may be required' is unacceptably broad. Land covered by article 10(2) will need Crown consent to allow acquisition. Despite what it says in the Book of Reference [APP-016] for parcel 10, the way the article is drafted allows acquisition of that parcel.

7.5 Article 16 refers to paragraph (2) but there is no paragraph (2).

7.6 Article 21 allows the number of passengers to be increased if the local authority agree, but that is a 'tailpiece' provision that could introduce additional environmental impacts and should not be allowed.

7.7 Article 24 (4) (b) contains repeated wording which makes the meaning of Article 24 (4) unclear.

7.8 Article 25, the power to dredge, should be governed by the deemed marine licence at Schedule 3 but is unlinked to it.

7.9 Article 31 – it is not clear how felling 24 trees subject to a Tree Preservation Orders constitutes 'woodland enhancement'.

7.10 Schedule 1, work no 2 is a 'berthing pocket' where the dredging may be carried out but the area shown on the Works Plans [APP-007] for this work (Sheet 1) is very large and far beyond what should be needed to dredge a berthing pocket.

7.11 Schedule 1 ancillary works – this whole list is not appropriate for every work and which they apply to should be set out; furthermore these do not appear to have been environmentally assessed.

7.12 Schedule 2, paragraphs 5 and 8 – there is duplication and confusion between the piling restrictions in Schedule 2, the CEMP [APP-111] and Schedule 3, for example paragraph 12(7) does not correspond to the bottom of p17 of CEMP; 'the waterbody' and 'marine works' are not defined.

7.13 Schedule 2, paragraph 10 – the noise insulation commitment is not linked to any level of protection (e.g. sufficient to protect from a specified noise level).

7.14 Schedule 2, paragraph 11 – this paragraph does not guarantee that the enhancements will be built.

7.15 Schedule 2, paragraph 12 – it is not clear if the 'East Gate improvements' are work no 12 or more than or different from that, this should be clarified; the drafting also appears to allow for another unacceptable 'tailpiece' to allow this work to be varied.

7.16 Schedule 2, paragraph 15 – this conflicts with paragraph 8, which allows the CEMP to be varied, where this doesn't; this paragraph also requires compliance with the Navigational Risk Assessment, but that document does not suggest any mitigation.

7.17 Schedule 2, paragraph 18 (1) – the construction of the impact protection is at the harbour master's discretion, but the Environmental Statement Non-Technical Summary [APP-035] at paragraph 1.1.3 it suggests that only in the event of a collision will this be implemented, which is unacceptable. Further, 18 (4) says that any dispute arising under this Requirement shall be determined by the harbour master. It is not appropriate that only the Harbour Authority may determine if protection works are necessary.

7.18 Schedule 2, paragraph 19 – this contains another 'tailpiece' that would allow impacts beyond those assessed to occur.

7.19 Schedule 2, paragraph 23(1)(a) – typo – 'and' should be 'an'; Schedule 3 9 typos: 'licenced' should be 'licensed', the word 'strategy' is missing.

7.20 Schedule 2, paragraph 23 should allow for appeal documentation and other documents relating to amendments to be required to be disclosed to "interested parties" rather than only the discharging authority.

7.21 Schedule 3 – paragraph 3(1) simply licenses such of the works as need a licence without specifying which elements of the project need a licence under section 66 of the Marine and Coastal Access Act 2009.

7.22 Schedule 4 (Protective Provisions) contains protective provisions for some port users such as Exolum, but not others such as DFDS. DFDS would wish to see the inclusion of equivalent protective provisions for it where the construction and operation of the new facility would impact upon its operations.

8 Ecological concerns

Inadequate assessment

8.1 Aspects of Chapter 9 of the Environmental Statement - Nature Conservation and Marine Ecology [APP-045] do not adequately describe the situation for some species, especially waterbirds, associated with the Humber Estuary European Marine Site ("EMS") and underestimates the potential scale of the effects of the project.

Loss of the intertidal habitat has a particular effect of the very localised feeding area of the Black-tailed Godwit ("BTG")

8.2 This effect on the BTG and other foraging waterbirds has not fully been taken into account in the ES. The loss of intertidal habitat may be small in relation to the wider Humber area, but the BTG has a very localised roosting area in North Killingholme.

8.3 Direct loss or loss through damage of intertidal and subtidal habitats such as through piles and pile scour have not been accurately quantified.

8.4 There is no mention of shadowing impacts from the linkspan and jetties, which would restrict utilisation by fish and birds underneath them and along an adjacent corridor. Where the intertidal habitat delivers an important invertebrate resource for foraging waterbirds, the issue can be intensified for a species such as Black-tailed Godwit which has both a relatively niche prey requirement and a local foraging range in relation to its roost.

Proposed construction mitigation for the Black-tailed Godwit is insufficient

8.5 BTG are in peak numbers late summer/early autumn (i.e. before October), but works are to be restricted October – March and restriction of works need to be more nuanced and take into account effect of different tides (spring and neap) on feeding patterns, rather than set months.

Operational mitigation is very poor for waterbirds

8.6 Currently, screening is suggested which is a default measure. However, it will not remove issues relating to over-sailing and shadowing and the associated potential loss of habitat, as well as noise generation such as from container movement. The assessment

conclusion is minor, but there is insufficient consideration to the impacts to utilisation/availability of the area for BTG, an impact which would be over the lifespan of the facility.

8.7 Bird monitoring is noted to be undertaken, but without any outcome or proposed actions stated as a result of the monitoring. The precautionary approach given the uncertainty of impact and remedial measures suggests the provision of compensatory measures at the consenting stage are necessary. Although uncertain, the impact will be greater than minor, so cannot be discounted. As such, compensatory provisions are expected.