

IMMINGHAM EASTERN RO-RO TERMINAL



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Chapter 4: Need and Alternatives
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Immingham Eastern Ro-Ro Terminal

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4 Need and Alternatives

4.1 Introduction

- 4.1.1 This chapter of the Immingham Eastern Ro-Ro Terminal (IERRT) Environmental Statement (ES) considers the issues of need and alternatives. As part of the IERRT Development Consent Order (DCO) application other documents build upon the information contained within this chapter to demonstrate the overall case for the IERRT project.
- 4.1.2 This chapter is supported by a Humber Shortsea Market Study provided at Appendix 4.1 in Volume 3 of the ES (Application Document Reference 8.4.4(a)), a Supplementary Consultation Report provided at Appendix 4.2 in Volume 3 of the ES (Application Document Reference 8.4.4(b)) and Figures 4.1 to 4.7 in Volume 2 of the ES (Application Document Reference 8.3.4 (a), (b), (c), (d), (e), (f) and (g)) which assist in illustrating points raised.
- 4.1.3 In summary, having regard to both the need to ensure that the United Kingdom (UK) has sufficient resilient and competitive roll-on/roll-off (Ro-Ro) freight capacity of the right type in the right location and a number of drivers of change that will influence the demand for and location of Ro-Ro freight capacity in the future, it has been determined that:
- There is an imperative need to provide additional appropriate Ro-Ro freight capacity within the Humber Estuary in order to meet the growing and changing nature of demand, and thereby strengthen the estuary's contribution to an effective, efficient, competitive and resilient UK Ro-Ro freight sector.
- 4.1.4 Meeting this need – out of which a series of specific related objectives have been identified (see paragraph 4.2.80) - is a matter that is clearly in the public interest, as demonstrated in the following paragraphs.
- 4.1.5 The analysis of possible alternative solutions that has been undertaken demonstrates that the need and objectives identified cannot be met by making better use of existing infrastructure but rather requires the creation of new capacity, and that, in this regard, there is no alternative to the IERRT development.

4.2 Need considerations

- 4.2.1 The need that has been identified – which is summarised above and is further discussed in the following paragraphs - arises out of a number of different national and local imperatives, objectives and matters of significance which are also explained in the following paragraphs.

The need to ensure that the United Kingdom has sufficient Ro-Ro freight capacity

- 4.2.2 Trade is of critical importance to the UK economy. It is a major driver of global economic growth, provides access to cheaper imports and services for consumers and households, enables lower prices and increased choice and opens up markets for businesses to export their goods. Trade allows businesses to benefit from wider access to inputs to the production process and to greater numbers of potential consumers and buyers.
- 4.2.3 The Trade White Paper, “Preparing for our future UK Trade Policy” (Department for International Trade, 2017) clearly sets out the importance of trade to the UK economy. Within the section of the executive summary which seeks to set out ‘The role of trade in an economy that works for everyone’, it is made clear that:
- “Trade is a key driver of growth and prosperity and has always been an important part of both the UK and world economy. Our total trade with the world is equivalent to over half of our GDP – exports and imports were each equivalent to about 30% GDP in 2016. International trade is linked to many jobs; it can lead to higher wages and can contribute to a growing economy by stimulating greater business efficiency and higher productivity, sharing knowledge and innovation across the globe. It ensures more people can access a wider choice of goods at lower cost, making household incomes go further, especially for the poorest in society.” (DfIT, 2017).*
- 4.2.4 The Government’s ambition is to strengthen the UK’s position as a great trading nation, lifting UK exports to £1 trillion each year (DfIT, 2021).
- 4.2.5 As the National Policy Statement for Ports (NPSfP) makes clear at paragraph 1.1.1, *“Throughout history, British sea ports have developed, thrived and changed, supporting the free movement of people, and the trade in goods and commodities, which is the basis for our national prosperity”* (DfT, 2012). As an island economy, there remain limited alternatives to the use of sea transport for the movement of freight and bulk commodities.
- 4.2.6 Ports are an enabler of trade in goods, ensuring the supply of energy, food and commodities. They facilitate the most efficient form of carrying imports and exports to the rest of the world and lifeline services to the most remote locations in the UK. ‘Maritime 2050: Navigating the Future’ indicates within its executive summary that around 95% of British imports and exports in goods are moved by sea and also highlights that reliable and timely importation is fundamental to the UK’s national security (DfT, 2019(a) – Executive Summary paragraph 16). In terms of trade matters, Maritime 2050 reiterates that it is the Government’s ambition to *“strengthen the UK’s position as one of the 21st century’s great trading nations”* (Section 9.2).

- 4.2.7 One of the key means by which trade is handled through UK ports is in the form of Ro-Ro freight cargo – cargo which is wheeled on and off vessels. Ro-Ro freight can be split into different types, accompanied (where the driver and Heavy Goods Vehicle (HGV) travel with the cargo) and unaccompanied freight (where the cargo is transported on the vessel on its own), and is fundamental to the UK's shortsea trade with Europe and the near continent – a matter further demonstrated in Section 3 of Appendix 4.1 (Application Document Reference 8.4.4(a)).
- 4.2.8 Ro-Ro freight is a form of unitised cargo (cargo that is transported in some form of identifiable unit, for example an HGV trailer). In recent decades, the shipping and logistics industries have developed different forms of unitised or modular cargo transportation. This has greatly assisted in the more efficient transport of cargo and goods in comparison to the historic form whereby general cargo was moved on multi-purpose vessels and required a laborious and time-consuming process to load and unload, which itself required large areas of quayside and warehouse space.
- 4.2.9 Perhaps the most well-known form of unitised cargo is the shipping container. Measuring either 20, 40 or 45 feet, containers now dominate the way in which goods are moved around the globe. The key strength of this form of cargo unitisation is that standardised equipment can be designed and used for its handling, with the full knowledge that the containers can be loaded on or off a ship at different locations around the world.
- 4.2.10 In general terms, the majority of the container trade is the moving of goods and cargo over longer routes with Ro-Ro units more commonly being used to move goods and cargo throughout Europe and over shorter routes. The use of Ro-Ro cargo has particularly been seen of benefit in terms of the 'just-in-time' delivery solution which the logistics industry has developed over recent years (the solution whereby goods and materials arrive 'just in time' to optimise cash flow and minimise inventory holdings).
- 4.2.11 The key strength of the Ro-Ro sector is in circumstances where a relatively short distance sea crossing needs to be travelled in combination with a direct delivery road journey. In Europe, and particularly on shortsea crossing routes, the Ro-Ro unit is, therefore, a vital means by which goods and cargo is moved.
- 4.2.12 UK Port Freight Traffic 2019 Forecasts suggest that the growth rate for unitised Ro-Ro freight (both in terms of tonnage and units) will increase by an average of 2.5% per year between 2016 and 2050. By 2050 there is forecast to be an approximate 130% increase in both Ro-Ro tonnage and units in comparison to the position in 2016, from 99.73 million tonnes in 2016 to 229.92 million tonnes in 2050 and from 7.94 million units in 2016 to 18.2 million units in 2050 (DfT, 2019(b)).
- 4.2.13 Forecasts prepared for Associated British Ports (ABP) – as reported in Section 8.4 of Appendix 4.1 (Application Document Reference 8.4.4 (a)) – indicate that, overall, UK shortsea trades are expected to grow in line with

Gross Domestic Product (GDP) developments in the years to come. The unaccompanied Ro-Ro freight element of shortsea trade is, in particular, forecast to experience strong growth with a Compound Annual Growth Rate (CAGR) of 3.6% in the period 2022 to 2027, 2.0% in the period 2028 to 2032 and 1.5% in the period 2032 to 2050.

- 4.2.14 Having regard to the various factors that are outlined in the following sections and the accompanying analysis that has been undertaken, Appendix 4.1 – at Section 8.6 - also looks at the position in respect of the Humber region specifically. The analysis undertaken forecasts strong growth in Ro-Ro freight traffic within the Humber region. In terms of Ro-Ro unaccompanied units, the growth rate is forecast to be a CAGR of 4.5% between 2022 to 2027, 2.3% between 2028 to 2032 and 1.5% between 2033 to 2050. Similar CAGR is forecast for unaccompanied Ro-Ro tonnage.
- 4.2.15 In terms of actual unaccompanied Ro-Ro units, the forecast growth (base case) would see an increase from 746,000 units in 2021 to 1,580,000 units in 2050 handled on the Humber – a more than doubling of the number of units handled.
- 4.2.16 The predicted level of growth for Ro-Ro units is illustrated on Figures 8-13 and 8-14 of Appendix 4.1, the relevant parts of which have, for ease of reference, been recreated in Image 4.1 and 4.2.
- 4.2.17 It is, for the reasons summarised above, clearly imperative that the UK has sufficient Ro-Ro freight capacity to meet both current and future demand, and that as part of meeting this overall demand it is also imperative that the Humber region specifically has sufficient capacity – a matter further expanded on in the sections that follow.

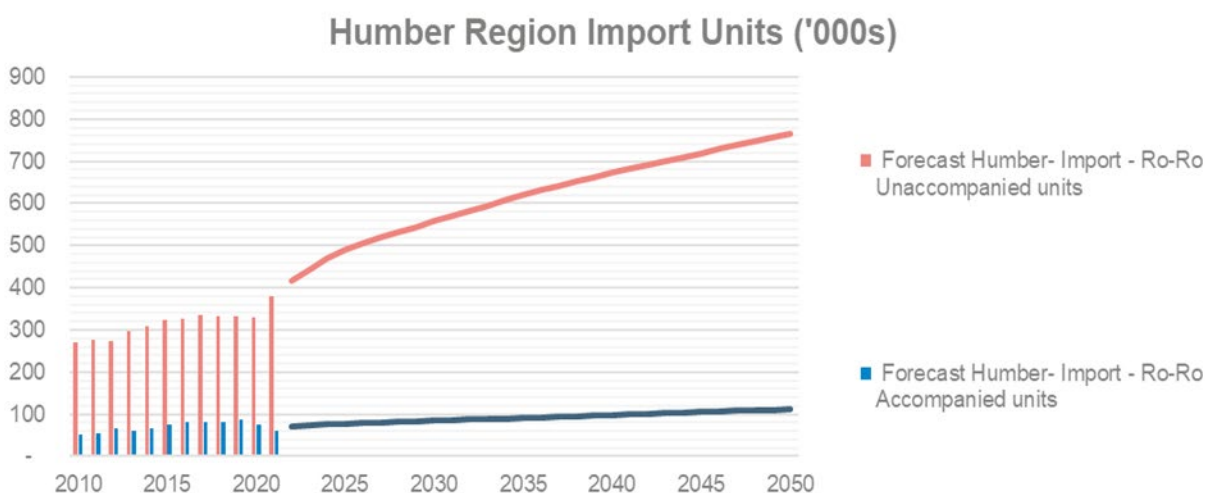


Image 4.1. Humber Region Import Ro-Ro Units (Forecast)

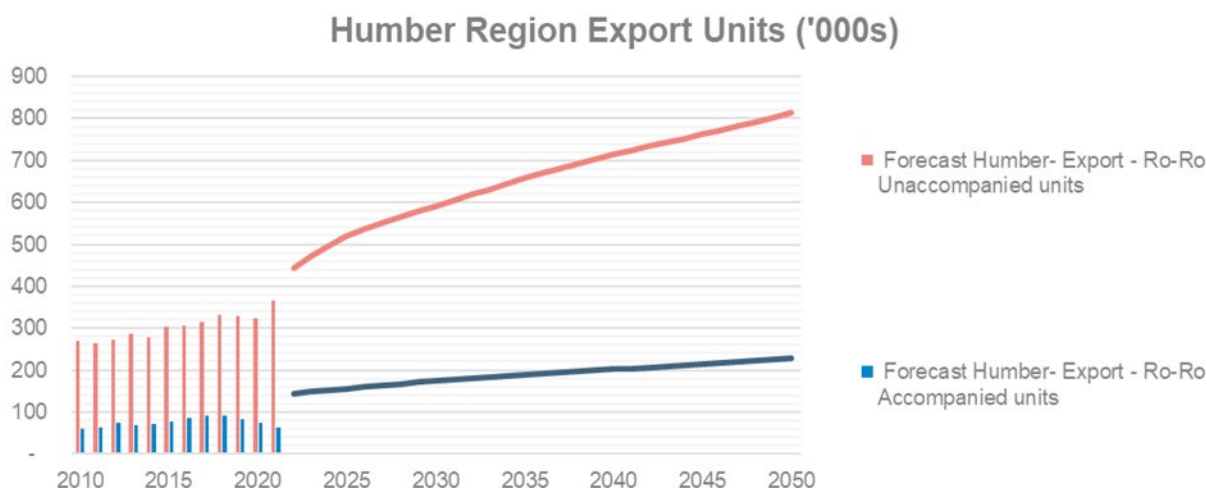


Image 4.2. Humber Region Export Ro-Ro Units (Forecast)

The need to ensure that sufficient Ro-Ro freight capacity of the right type is in a location where it is required

4.2.18 The NPSfP highlights that one of the elements of the fundamental policy for ports is that the UK ports industry is market led, specifically making it clear that it is the Government's policy to:

“allow judgements about when and where new developments might be proposed to be made on the basis of commercial factors by the port industry or port developers operating within a free market environment.” (DfT (2012), paragraph 3.3.1).

4.2.19 The NPSfP further makes clear (paragraph 3.4.1) that one of the elements that makes up the overall need for port infrastructure is *“ensuring that port capacity is located where it is required...”*. It is further stated in this regard at paragraph 3.4.11 that, *“Capacity must be in the right place if it is to effectively and efficiently serve the needs of import and export markets”*. It is also made clear that *“capacity needs to be provided at a wide range of facilities and locations, to provide the flexibility to match the changing demands of the market...”* (DfT, 2012).

4.2.20 In this respect national policy makes it clear (paragraph 3.4.12) that *“the Government does not wish to dictate where port development should occur”*, but rather this is something to be left to the market as the best mechanism for getting right (DfT, 2012).

4.2.21 Within the UK, a large share of the Ro-Ro freight market has historically moved through routes across the short straits corridor of the English Channel. The short straits market is predominantly one which handles accompanied Ro-Ro cargo (where the driver and HGV tractor unit travel with the trailer unit) and is the corridor which has best benefited from the UK historically being part of the European Single Market.

- 4.2.22 The short straits Ro-Ro freight market has been based upon both the corridor being the shortest route between the UK and the continental mainland of North West Europe, and its ability to offer frequent reliable journeys. This has provided benefits in terms of 'turn up and go' Ro-Ro services which are suited to 'just in time' production and retailing systems.
- 4.2.23 This position has been enhanced through the historic availability of Iberian and Eastern European haulage, which has had relatively low operating costs along with the ability for such hauliers to undertake further additional domestic road journeys once they are in the UK. This has encouraged the use of freight routes that involve longer road distance moves, both in the UK and on the continent. This has resulted, for example, in a situation where a significant proportion of international freight traffic to and from the large distribution centres in the Midlands has passed through Kent and around the M25, even though there may be an alternative Ro-Ro freight port facility in closer geographical proximity.
- 4.2.24 A further large share of the UK Ro-Ro freight market is moved through routes across the North Sea, with flows across this corridor largely consisting of cargo taken through facilities located on the Humber Estuary at Hull, Immingham and Killingholme. The reasons for this are explained further in the paragraphs that follow.
- 4.2.25 As can be seen from Images 4.1 and 4.2, the Ro-Ro services to and from the Humber Estuary are dominated by unaccompanied Ro-Ro freight services, albeit that there are some volumes – for example those associated with fresh foods – that are moved by accompanied means.
- 4.2.26 There are two main types of unaccompanied Ro-Ro freight. The first type consists of an HGV trailer containing cargo that is dropped at the port for onward delivery. The second type is where cargo is loaded onto some form of wheeled platform at the port, moved onto the vessel, transported by the vessel and then unloaded and unpacked for onward distribution at the arrival port.
- 4.2.27 Accompanied Ro-Ro freight is where the driver and the HGV tractor unit travels with the trailer containing the cargo on the vessel and distributes it to its inland destination at the other end of the crossing.
- 4.2.28 There has been, and continues to be, a general shift towards the movement of Ro-Ro cargo and freight by unaccompanied means, matters which are considered further in Section 3 of Appendix 4.1 (Application Document Reference 8.4.4(a)). The reasons for this include:
- (i) A move from cargoes which historically have been handled in break bulk vessels – for example, timber and paper – to such cargoes being moved in unaccompanied Ro-Ro form, thereby enabling the more frequent delivery of smaller cargo loads resulting in reduced inventory in the supply chain.

- (ii) Unaccompanied Ro-Ro gives the logistics industry the ability to switch routes quickly if problems arise on a particular route – a specific consideration that has taken on greater significance as a result of Brexit.
- (iii) Unaccompanied Ro-Ro provides benefits for hauliers and their trailer fleets in that an unaccompanied trailer unit does not have to return to the original destination it was sent from.
- (iv) There is currently a general shortage of HGV drivers – which has a greater impact on accompanied Ro-Ro activities than unaccompanied Ro-Ro activities.
- (v) A worsening trade balance between the UK and Europe resulting in a reduced amount of cargo returning to Europe which for accompanied transport increases the cost because of an increased number of non-profitable round trips.
- (vi) A lower level of human input associated with the movement of unaccompanied cargo in comparison to accompanied cargo, a matter highlighted by the pandemic, and
- (vii) Shippers have adapted their supply chains to the longer lead times associated with unaccompanied Ro-Ro which is better placed to address supply chain volatility (see Point (ii)).

4.2.29 Unaccompanied and accompanied Ro-Ro freight movements have different landside requirements. In simple terms, unaccompanied Ro-Ro freight requires more landside storage space within the port terminal because of the nature of how the cargo is delivered and moved on and off the vessel. Unaccompanied freight either builds-up at the port over a period of time in advance of it being shipped or stays at the arrival port until it is picked up. The time over which the freight dwells at the port (known as dwell time) has implications for the amount of storage space and the overall capacity of the facility.

4.2.30 To enable efficient and effective operations, the storage space for unaccompanied cargo needs to be located in relatively close proximity to where the Ro-Ro vessels berth. This is necessary to ensure that the vessels can be turned around (i.e., cargo loaded and unloaded) within the necessary timeframe to meet sailing schedules and that additional and unnecessary costs (both monetary and environmental) are not incurred by an increased use of land tugs and equipment caused by excessive distance between the berth and the landside storage location.

4.2.31 Ro-Ro freight movements require journey time reliability and certainty. A consistent and certain timetabling of vessel sailings is critical. A further crucial factor is the ability for a crossing to be made in an acceptable timeframe. For sailings between the UK and Europe, an overnight sailing timeframe is considered as industry standard. Such consistency and

certainty is not only critical to the freight customers and trailer operators, but is also critical to the shipping lines to ensure that vessels are used efficiently and effectively in what is a highly competitive market.

- 4.2.32 In addition to the above points, there has also been a steady increase in the size of Ro-Ro vessels that operate on the North Sea routes in recent years – a matter that is further demonstrated within Appendix 4.1 (Application Document Reference 8.4.4 (a)) at Section 6.2. This increase in vessel size has occurred in order to reduce the unit shipping cost and to accommodate the growth in the market whilst at the same time maintaining an acceptable sailing schedule.
- 4.2.33 The largest vessels in operation on the North Sea routes from the Humber Estuary provide in the order of 8,000 lane metres of capacity – for example, the Delphine and Celine vessels operated by CLdN Ro-Ro. As Appendix 4.1 explains, such vessels are considered to represent a realistic compromise between economies of scale and flexibility and efficiency of deployment, and for this reason it is considered that it is unlikely that vessels will grow significantly beyond this size.
- 4.2.34 The ability for Ro-Ro vessels to be able to use berths that are unconstrained from a marine perspective is, therefore, important. With the growing size of vessels this increasingly means that Ro-Ro shipping lines are seeking berths that are not located within a locked dock area or which are not constrained in some other way from a marine perspective.
- 4.2.35 In terms of locational matters, the Humber Estuary is well placed within the UK for the handling of Ro-Ro freight with Europe and the Baltics. This is for a number of reasons, including:
- (i) The natural deep channels of the Humber Estuary offer capacity for the large Ro-Ro vessels in operation to arrive and depart at all states of the tide, with Immingham and Killingholme in particular – due to the alignment of the deep-water navigable channel and the ability to offer unrestricted ‘in river’ berths – being able to offer berthing solutions for the large Ro-Ro vessels at all states of the tide. As indicated above, this is an important consideration that means that Ro-Ro services can operate to their own defined timetable ensuring that customers have certainty over sailing times and the length of time it takes to deliver or receive goods.
 - (ii) The estuary is located on the eastern sea-board of the UK within an overnight sailing time of key European ports on the western sea-board of mainland Europe that in turn provide good access to key European markets, thereby enabling daily timetabled Ro-Ro liner services to operate. As already indicated, this is important in terms of journey time reliability and certainty.

- (iii) The estuary is located such that it serves a large inland area of the UK. It is particularly well located to serve large distribution centres and centres of populations in the Midlands and the north of the UK. As the analysis contained within Sections 5 and 7 of Appendix 4.1 demonstrates, the Humber Estuary has a number of advantages in terms of its location close to relevant centres of population and key distribution centres. The location of the estuary is such that it provides a number of logistics cost and related benefits in comparison to other UK Ro-Ro port locations. For example, the south bank of the Humber Estuary is located such that a round trip to these distribution centres and main urban areas is possible within an HGV driver's daily driving hours, enabling return loads to be handled. By way of illustration, Figure 4.1 (Application Document Reference 8.3.4 (a)) shows the area of the country that can be accessed by an HGV within a 2-, 3- and 4-hour drive from Immingham on the Humber Estuary south bank.
 - (iv) As also indicated by Figure 4.1, the estuary benefits, in general terms, from good inland road transport connections that have capacity. This is especially the case for the south bank of the Humber Estuary, where direct strategic access is provided by the motorway network and dual carriageway A roads. As a result, the south bank is the preferable location for Ro-Ro capacity on the Humber Estuary.
 - (v) As a consequence of these strategic road links, and its geographical location, the Humber Estuary forms a key part of the 'land bridge' that links Northern Ireland and Ireland with the rest of Europe.
 - (vi) There are a number of Ro-Ro facilities and operations in existence within the area, meaning that necessary support services and expertise are already in place within the locality, which is, therefore, set up for supporting such activities and operations. When a cluster of similar infrastructure and operations build up, the collective sum has greater significance than its individual components.
- 4.2.36 The current position in respect of Ro-Ro facilities and services on the Humber – which itself demonstrates the reality of the fact that the Humber is fundamentally in the right location for the needs of the Ro-Ro freight sector - is detailed in Sections 4.3, 6.3 and 6.4 of Appendix 4.1 but in summary is as follows.
- 4.2.37 **Killingholme** – The Killingholme terminal (owned and operated by CLdN Ports Killingholme) currently has up to six in river berths from which various Ro-Ro services are operated by CLdN's own shipping companies and Stena Line, along with trade car import services.
- 4.2.38 The Ro-Ro services from this facility currently provide connections to Zeebrugge, Rotterdam, the Hook of Holland, Gothenburg, Esjberg, Leixoes and Santander.

- 4.2.39 **Port of Immingham** – The Port of Immingham (owned and operated by ABP) contains two Ro-Ro terminals that are operated by DFDS. One of these terminals (the Dockside Terminal) is located through the lock entrance ‘in dock’ with the other (the Riverside Terminal) benefiting from an in-river location. These terminals provide sailings to Cuxhaven, Esbjerg, Rotterdam, Gothenburg and Brevik.
- 4.2.40 The Port of Immingham also provides – via a further ‘in dock’, albeit temporary, facility – for a daily Rotterdam sailing operated by Stena Line.
- 4.2.41 **Port of Hull** – The Port of Hull (owned and operated by ABP) currently provides for one daily sailing to Rotterdam from an in-river berth. This service, however, handles a mixture of passengers and freight, including accompanied freight so is more of a Ro-Pax (Ro-Ro / passenger) service than a Ro-Ro service.
- 4.2.42 The Port of Hull also provides for a twice weekly Finnlines service to Helsinki from an ‘in dock’ terminal.
- 4.2.43 Section 4.5 of Appendix 4.1 (Application Document Reference 8.4.4 (a)) provides, on the basis of a number of assumptions, a high-level estimate of existing Ro-Ro freight capacity on the Humber Estuary along with an estimation of the extent to which this capacity is utilised. Whilst the precise level of available capacity can be affected by variables such as cargo dwell time, the analysis demonstrates that the available capacity is highly utilised and the key facilities at Immingham and Killingholme are operating at or near their efficient capacity.
- 4.2.44 In summary, therefore, drawing all of the preceding points together it is clear that the Humber Estuary is a location where the market, in the form of Ro-Ro shipping lines, trailer operators and customers, wants capacity to be located. Furthermore, it is clear that the market increasingly needs that capacity to be unconstrained in terms of marine accessibility for the large Ro-Ro vessels in operation, or coming into operation, and with the ability to handle an increasing amount and proportion of unaccompanied Ro-Ro cargo. What this means in general terms by way of physical requirements is in river berths served by suitable storage areas located in close proximity to those berths within a facility with good inland connectivity.
- 4.2.45 As explained further in Appendix 4.1, however, there is currently very little, if any, available spare capacity of the right type available on the Humber Estuary.

The need to ensure that the UK has resilient and competitive Ro-Ro freight capacity

- 4.2.46 The NPSfP makes clear (at paragraph 3.4.1) that in addition to meeting overall capacity demand and ensuring that capacity is located where it is required, the total need for port infrastructure also depends upon ‘*the need to ensure effective competition and resilience in port operations*’ (DfT, 2012).

- 4.2.47 In terms of competition matters, the NPSfP highlights (at paragraph 3.4.13) that this is important because *‘Competition drives efficiency and lowers costs for industry and consumers, so contributing to the competitiveness of the UK economy’* (DfT, 2012).
- 4.2.48 Effective competition is further identified (at paragraph 3.4.13) as requiring *‘sufficient spare capacity to ensure real choices for port users’*. In this context it is further indicated that effective competition *‘requires ports to operate at efficient levels, which is not the same as operating at full physical capacity’* (DfT, 2012). As indicated in the preceding section, it is considered that the existing Ro-Ro facilities on the Humber Estuary are currently operating at or close to their efficient capacity.
- 4.2.49 The Ro-Ro sector is highly competitive with the result being that cost differentiation for customers between different lines and services is limited. Without such competition costs would likely be higher. As such, Ro-Ro shipping lines need to ensure that, in order to remain competitive, they offer a quality and reliable service. To achieve this, Ro-Ro shipping lines seek to operate a dedicated facility where they control matters such as vessel berthing and the loading and unloading of cargo and thereby have the ability to respond to the needs of customers on a flexible and efficient basis.
- 4.2.50 Where such matters are in the control of others, this can lead to a competitive disadvantage for the Ro-Ro shipping line and, in turn, the sector as a whole. This is particularly the case where such matters are in the control of a competitor Ro-Ro shipping line or related party.
- 4.2.51 In terms of resilience matters, the NPSfP highlights (at paragraph 3.4.15) that spare capacity also helps assure the resilience of the national infrastructure. It is made clear that:
- “Port capacity is needed at a variety of locations and covering a range of cargo and handling facilities, to enable the sector to meet short-term peaks in demand, the impact of adverse weather conditions, accidents, deliberate disruptive acts and other operational difficulties, without causing economic disruption through impediments to the flow of imports and exports...”* (DfT, 2012).
- 4.2.52 Given the large number of factors involved, the policy makes it clear (at paragraph 3.4.15) that *“the Government believes resilience is provided most effectively as a by-product of a competitive ports sector”*.
- 4.2.53 The analysis and explanation provided within the NPSfP is clear. The need for port infrastructure is not simply about ensuring that there is enough capacity or ensuring that the capacity available is in the right location. Ensuring that there is sufficient infrastructure and capacity available to ensure resilience is also a key element of overall need.
- 4.2.54 Recent supply chain events within the UK – in particular, the supply chain vulnerabilities exposed by Brexit and COVID – have highlighted the need for the country to have resilient and competitive trading options.

- 4.2.55 In addition, as has already been indicated (see paragraphs 4.2.32 and 4.2.33), the size of Ro-Ro vessels is increasing. This in turn places limits on the ability of some existing infrastructure to handle such vessels. For example, some existing Ro-Ro infrastructure on the Humber is located within one of the enclosed docks located on the estuary, which will increasingly become restricted in its ability to provide for the needs of the Ro-Ro trade that utilises larger vessels. This is because the large Ro-Ro vessels in operation simply cannot access the in-dock facilities on the estuary.
- 4.2.56 Having regard to such matters, it is considered that it is likely to be the case that over time new capacity that is unconstrained from a marine access perspective may well be required just to ensure that the status quo – in terms of existing Ro-Ro activity and capacity – is maintained.
- 4.2.57 On the Humber - which, as already explained, is where the market wants capacity to be located - it is considered that there is currently little contingency in the event that existing Ro-Ro infrastructure is damaged, blocked or otherwise becomes unusable for whatever reason. Vessels, and in particular the large Ro-Ro vessels in operation, may well be required to divert to an alternative terminal somewhere else within the UK in such circumstances.
- 4.2.58 As previously indicated, when a cluster of similar infrastructure builds up, the sum of all traffic handled by that collective infrastructure has greater significance than its individual components, and the issue of lack of spare capacity, and therefore resilience, in the event of inoperability of one or more facilities can become an issue. Having additional Ro-Ro capacity, capable of handling the largest Ro-Ro vessels transiting the North Sea, would greatly assist in ensuring overall resilience for those cargoes that pass through the Humber Estuary.

The lack of suitable Ro-Ro facilities on the Humber Estuary to meet the current and future needs of an existing Ro-Ro operator

- 4.2.59 Stena Line, one of Europe's leading Ro-Ro and ferry operators, currently operates two Ro-Ro services from the Humber Estuary to mainland Europe. These services are existing and heavily utilised and, therefore, play a key role in meeting existing Ro-Ro freight demand on the Humber Estuary. These services operate from the Humber Estuary because, fundamentally, this is where Stena Line consider there to be market demand for those services – a position which reflects the evidence provided earlier in this chapter and within Sections 5 and 7 of Appendix 4.1 (Application Document Reference 8.4.4 (a)).
- 4.2.60 The first of these services is a daily service that operates between the Port of Immingham and the Europort facility in Rotterdam. This is largely an unaccompanied Ro-Ro freight service (at present approximately 97% unaccompanied freight and 3% accompanied freight) that currently operates from a facility located within the enclosed dock complex at the Port. This service handles around 100,000 Ro-Ro units per year.

- 4.2.61 Until recently this service operated from one of the in-river berths at the CLdN Ports Killingholme facility. Due to the termination by CLdN of the agreement with Stena Line it was not possible for this service to continue to operate from Killingholme. By utilising a smaller vessel (one able to transit the locked entrance into the Port of Immingham, but smaller than was historically operated on this service and for which there is market demand) and accepting some restrictions and constraints on landside storage infrastructure, a temporary replacement facility was able to be found within the Port of Immingham for this service.
- 4.2.62 This replacement facility is, however, as noted above a temporary 'stop gap' facility because of its marine access constraints and also because of the limited landside storage space and infrastructure available. It is also located on a part of the Port of Immingham which ABP consider will, in the short to medium term, be necessary to accommodate growth from other neighbouring port trades. Stena Line, therefore, requires a more permanent in river facility for this service in an appropriate location that can accommodate larger vessels for which there is demand (and which have historically operated on this service) and which in turn is supported by necessary landside storage areas and facilities, and which can remain operational for the long term.
- 4.2.63 In addition to the above points, in order to maintain its ability to compete Stena Line require such a more permanent facility for this service to be one where they control the ability to berth vessels and where they have the ability to control the activities associated with the loading and unloading of cargo. These are necessary requirements in order to ensure that both this service, and the Ro-Ro market on the Humber Estuary more broadly, remains competitive.
- 4.2.64 The second of the Stena Line services is a daily service to a facility at the Hook of Holland in Rotterdam. This service currently operates out of the CLdN Ports facility at Killingholme, utilising as necessary one of the in-river berths at that facility. The service currently handles approximately 50% unaccompanied Ro-Ro cargo and 50% accompanied Ro-Ro cargo, although there is a continuing trend towards an increasing proportion of unaccompanied cargo on this service. This is a trend which Stena Line consider will continue to develop. This service handles in the order of 125,000 Ro-Ro units per year.
- 4.2.65 Stena Line are of the view, however, that the longer-term Humber Estuary location for this service cannot be at the CLdN Ports facility. This is largely because:
- (i) The move to a greater proportion of unaccompanied cargo on this service will require additional landside storage areas, which Stena Line, having discussed the issue with CLdN Ports, do not consider are available to it at the CLdN Ports facility. CLdN's own shipping lines are seeking to grow the Ro-Ro trade handled through the facility and

the needs of those shipping lines clearly, and understandably, take precedence at the Killingholme facility.

- (ii) Stena Line wishes to grow this service but consider that it is unable to do so at the CLdN Ports facility because of the landside storage constraints referred to above which it considers exist for it at the CLdN Ports facility.
- (iii) The CLdN Ports facility is, in effect, controlled by one of Stena Line's main competitors. As such, Stena Line are not able to control various matters that make up its overall service offer, which it considers will increasingly generate issues in terms of continuing to provide a competitive and high-quality service from the CLdN Ports facility.
- (iv) Splitting its two services between two different facilities on the Humber Estuary generates cost and operational issues which, in the longer term, will likely have adverse implications for the quality and efficiency of those services. Customers using both Stena Line services are currently faced with an increase in HGV journey time as they cannot benefit from the synergies that would exist if both services benefited from the same dropping and collecting point.

4.2.66 In addition to its existing services which have been discussed above, Stena Line are also of the view that demand for Ro-Ro capacity on the Humber Estuary will continue to grow. Stena Line has indicated to ABP that it agrees with the analysis on growth contained within this chapter and the accompanying Appendix 4.1 (Application Document Reference 8.4.4 (a)). Stena Line, therefore, are also looking for the ability to grow its operations and activities on the Humber Estuary alongside the more immediate need of providing a suitable location for its existing services.

4.2.67 On the basis of the above, there is a clear and urgent need for a new facility of the appropriate kind somewhere on the Humber Estuary – namely an appropriately located facility with the ability to accommodate large Ro-Ro vessels in a suitably unconstrained way, with sufficient storage / cargo handling areas in close proximity to the berths and where the necessary control in terms of operations can be achieved – to meet the current and future needs of Stena Line.

4.2.68 In terms of existing Ro-Ro infrastructure on the Humber Estuary, none has the necessary suitable capacity or characteristics to meet the needs of Stena Line, but even if they did none would be suitable because they are all currently in the control of competitors of Stena Line.

The implementation of the Government's levelling up agenda and the achievement of local objectives

4.2.69 The 'Levelling Up' agenda is a fundamental policy of the UK Government. This policy aims to reduce the imbalances, primarily economic, between areas and social groups in the UK, without any consequential detriment to

existing prosperous parts of the UK. Government has indicated that levelling up can only be achieved with a strong and dynamic economy.

- 4.2.70 One of the main demonstrations to date of the levelling up agenda is the establishment of 'Freeports' – special areas within the UK's border centred on a seaport or an airport where different economic regulations apply. The Government suggest that freeports will play a crucial part in the nation's post COVID recovery and indicates that, at its core the freeport model has three objectives, namely:
- (a) Establishing freeports as national hubs for global trade and investment,
 - (b) Creating hotbeds for innovation, and
 - (c) Promoting regeneration.
- 4.2.71 One of the early Freeport sites to be approved is one centred on the Humber Estuary that incorporates various existing port complexes located along the estuary. It is considered likely that, as a result, this initiative will further enhance the attractiveness of the Humber area for activities related to port operations and activities.
- 4.2.72 In addition to the specific Freeports initiative, the levelling up agenda is considered likely to result in further economic development occurring within the Midlands and the north of the UK. Such development will help achieve the Government's objective of a strong and dynamic economy across all of the UK which will inevitably lead to further global trade.
- 4.2.73 As a result of the levelling up of the UK economy it is considered that there will be increased demand for the facilities and infrastructure which enable the UK to trade with the rest of the world within the north of the country.
- 4.2.74 At the local level, the international importance of the various port facilities along the Humber Estuary is recognised by the relevant local authorities and bodies such as the Greater Lincolnshire and Hull and East Yorkshire Local Enterprise Partnerships. Various strategies, programmes and policies are in place which seek to further develop the various ports and the logistics activity that occurs as a result of the ports.
- 4.2.75 By way of example, North East Lincolnshire Council (NELC) has identified the need to allow ports within its area to grow and develop in order to promote economic prosperity. In an area with some significant areas of deprivation, and where ports and logistics activity underpin a significant proportion of the local economy, giving ports the ability to grow is seen as important for the local area. In addition, NELC has invested significantly in putting in place the right conditions for, amongst other things, port-related value-added services on the South Humber bank between Immingham and Grimsby via initiatives such as the South Humber Industrial Investment Programme.

4.2.76 The above points have been further highlighted in the response received from North East Lincolnshire Council to the statutory consultation held by ABP in early 2022. In its response the Council, amongst other things, state, *“This development [i.e. ABP’s proposed project] also ties in closely with the recent announcement of Humber Freeport Status and add[s] to the wider economic growth of the Humber Region. It is this growth that the NELLP [North East Lincolnshire Local Plan] is based upon and the principle of such development is therefore supported.”*

A move away from reliance upon the short straits for the handling of Ro-Ro freight

4.2.77 It is considered that there will be a continuing move away from some Ro-Ro freight being transported across the English Channel via the short straits corridor to such freight transiting the North Sea routes as a result of:

- Resilience issues at the short straits facilities resulting from the UK’s exit from the European Union (EU). Since leaving the EU, the ability to move seamlessly and without checks between the UK and the EU is no longer the case, making the short straits corridor less attractive. In addition, the need for additional checks and documentation can often lead to congestion - with associated journey time reliability issues – at the UK’s departure points.
- An increasing recognition that the short straits corridor requires additional HGV miles and driver time for freight to be moved to / from the north and the Midlands in comparison with North Sea routes. This is becoming a significant issue having regard to HGV driver shortage issues and fuel costs. The need to try and reduce HGV journeys, but also to try and better manage the work / life balance of HGV drivers is increasingly leading to a different approach being considered.
- An increased recognition that the road routes to and from the short straits corridor – which more often than not involves HGV vehicles using the M25 around London - are highly susceptible to disruption and congestion.
- A move to a supply chain model post the pandemic which incorporates a more robust degree of contingency and accepts relatively longer, but potentially more reliable, transport and distribution times. This model involves businesses keeping a larger inventory of goods, products and materials than would have previously been the case and anticipating demand to reduce the risk of outages or shortages due to large scale disruptions.
- The recognition of the need to reduce road travel from an emissions perspective, the drive towards net zero being one of the current key objectives of the UK Government.

- In respect of port activities, transport emissions can be removed or reduced by implementing technological changes (i.e., changing the means by which vehicles and vessels are powered) and by undertaking changes to the way in which activities are undertaken (i.e., using port facilities that require less road miles to be travelled).
 - Cutting down on HGV miles by utilising Ro-Ro facilities that are closer to the source or destination of the freight is seen as a key way in which supply chains can reduce their carbon footprint.
- The continuing development of trade with Eastern Europe, which does not necessarily require the short access connection to North West mainland Europe provided by the short straits corridor.
 - The continued development of the 'land bridge' system from Europe to Northern Ireland and Ireland, which is appropriately served by facilities within the Humber area.
- 4.2.78 In addition to the overall UK growth in the amount of Ro-Ro freight that is predicted, the above contributes to the conclusion that there is specific and on-going demand for further Ro-Ro freight capacity within the Humber Estuary.

The Statement of Need

- 4.2.79 Against the preceding contextual background, the following statement of need has been defined:
- There is an imperative need to provide additional appropriate Ro-Ro freight capacity within the Humber Estuary in order to meet the growing and changing nature of demand, and thereby strengthen the estuary's contribution to an effective, efficient, competitive and resilient UK Ro-Ro freight sector.

The objectives which a solution should meet

- 4.2.80 To assist in identifying the appropriate solution to meeting the need that has been identified, the following primary objectives – which arise out of the above statement of need and the background context to it – have been identified. The objectives which have been defined are to provide the Humber Estuary with the ability to:
- (i) meet the urgent needs of an existing Ro-Ro freight operator, Stena Line, with an established customer base, those needs being, in summary, the provision of sufficient suitable capacity at a facility that is suitably located at which it has control of appropriate functions and operations.
 - (ii) provide for, at least, a proportion of the future growth in demand for Ro-Ro freight capacity predicted within the estuary;

- (iii) continue to contribute effectively to UK Ro-Ro freight port infrastructure flexibility and resilience;
 - (iv) continue to provide competitive Ro-Ro freight services and routes to and from existing markets and provide opportunities for routes to new markets, and
 - (v) make efficient and effective use of existing established land and water transport connections and infrastructure.
- 4.2.81 Having regard to the contextual background to the statement of need and these objectives, it is considered that the solution to meeting this need within the Humber Estuary can only be met via the provision of additional suitable berths and supporting landside storage capacity in a suitable location. Existing Ro-Ro facilities and capacity on the Humber Estuary cannot meet the need which has been identified.

4.3 Consideration of alternatives

- 4.3.1 The following section of this chapter explains the consideration that has been given to potential alternative solutions to meeting the need.

Background to the consideration of alternatives

- 4.3.2 Regulation 14(2)(d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 makes clear that, amongst other things, an Environmental Statement (ES) requires,

“a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.”

- 4.3.3 In addition, the NPSfP (DfT, 2012) sets out (at paragraph 4.9.3) a series of principles to guide the consideration of alternatives by the relevant decision maker. It is highlighted that these principles are to guide the decision maker ‘*subject to any legal requirements (e.g., under the Habitats Directive) which may indicate otherwise*’.
- 4.3.4 The reference to the Habitats Directive in paragraph 4.9.3 of the NPSfP is taken to be a reference to the fact that in the circumstances where a proposed project is determined to have an adverse effect on the integrity of a European protected site it can only be approved if there are no alternative solutions, and that the project must be carried out for imperative reasons of overriding public interest (as well as appropriate compensation being provided).

- 4.3.5 As explained further in Chapter 9 of this ES (Application Document Reference 8.2.9) and the supporting evidence contained in the Habitats Regulations Assessment (HRA) (Application Document Reference 9.6), the IERRT project as applied for does not have an adverse effect on the integrity of a European site. On this basis the guiding principles set out in the NPSfP for the decision maker's consideration of alternatives are the key principles to have regard to. These principles are reproduced for completeness in Table 4.1.

Table 4.1. The NPSfP principles to guide decision makers consideration of alternatives

| Guiding Principles | |
|--------------------|--|
| 1. | The consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner. |
| 2. | Whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security and climate change benefits) in the same timescale as the proposed development. |
| 3. | An application should not be rejected for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and regard should be had as appropriate to the possibility that other suitable sites for port infrastructure of the type proposed may be needed for future proposals. |
| 4. | Alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the decision maker thinks they are both important and relevant to its decision. |
| 5. | If – in respect of a port development proposal that constitutes a Nationally Significant Infrastructure Project – the relevant decision maker concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the NPSfP, the existence of that alternative is unlikely to be important and relevant to the decision. |
| 6. | Suggested alternative proposals which mean the primary objectives of the application could not be achieved, for example because alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the decision. |
| 7. | Potential alternatives to a proposed development should, wherever possible, be identified before an application is made in respect of it. Where, therefore, an alternative is first put forward by a third party after an application has been made, the person considering that application may place the onus on the person proposing the alternative to provide the evidence for its suitability as such, and the applicant should not necessarily be expected to have assessed it. |

The approach to the consideration of alternatives

- 4.3.6 The consideration of possible alternative solutions to meeting the identified need that has been undertaken can be brought together and explained by reference to a series of different stages.
- 4.3.7 The **first stage** sets out the identification and consideration of potential broad options that might be available to meet the need. This leads to the identification of a preferred broad option to be taken forward to the next stage.
- 4.3.8 The **second stage** considers the identification and analysis, as necessary, of initial potential solutions to meeting the need that fall within the parameters of the preferred broad option identified under the first stage. This involves an explanation of the principal requirements which any initial potential solution would need to meet. This stage leads to the identification of a preferred initial solution
- 4.3.9 The **third stage** looks at the working up of the preferred initial solution into a more detailed proposal and the ongoing iteration of that proposal – taking account of the views of consultees and ongoing assessment and design work – to identify the proposal taken forward to application stage.

Stage 1: Identification and consideration of potential broad options

Broad Option 1: The option of doing nothing

- 4.3.10 For completeness the broad option of doing nothing has been considered. Fundamentally, if this option were adopted, the consequence would be that the identified need set out in the first part of this chapter would not – and indeed could not – be met. This would, in turn, mean that the Humber Estuary would, going forward, be unable to satisfy the market demand for the type of capacity considered to be required by those who wish to import and export Ro-Ro cargo through this part of the UK.
- 4.3.11 Since users of Ro-Ro facilities on the Humber Estuary have to take a commercial view, the ‘do nothing’ course of action would inevitably result in the Humber Estuary being less attractive to Ro-Ro customers as it would be seen as capacity constrained. This would – as demonstrated by the information contained within Appendix 4.1 (Application Document Reference 8.4.4 (a)) – lead to adverse implications in terms of both cost and the environment. The result of such a course of action could be said to be forcing the market to do something it does not want to do.
- 4.3.12 The UK ports industry, as outlined earlier and explained further in Chapter 5 of this ES in the context of the NPSfP, is based on market demand and effective competition. This has resulted in a highly efficient industry where individual facilities or clusters of facilities are well able to compete against each other or other clusters. Nevertheless, however efficient a business,

port or cluster of ports is, if market demand for the services offered cannot be met the risk of decline exists along with the loss of its place in the market.

- 4.3.13 At the national level, within the NPSfP (DfT, 2012), it is identified that the provision of sufficient port capacity will remain an essential element in ensuring sustainable growth in the UK economy (paragraph 3.1.4), and that port facilities operate in a market led industry where they need to be competitive, resilient and in locations able to efficiently and effectively serve the needs of the market (Sections 3.3 and 3.4). Against this context, proceeding with a strategy of doing nothing in terms of additional Ro-Ro capacity on the Humber Estuary is, to quote the national ports policy, an outcome ‘strongly against the public interest’ (NPSfP, paragraph 3.4.16).

Broad Option 2: The option of developing or using capacity somewhere other than on the Humber Estuary

- 4.3.14 For similar reasons to those outlined in the preceding paragraphs, the potential use or development of Ro-Ro capacity at locations elsewhere other than on the Humber Estuary is not considered to be a realistic alternative broad option. This is because, fundamentally, such an option would not meet the need and objectives which have been identified.
- 4.3.15 In this regard it is noted that, amongst other guiding principles on the consideration of alternatives, the NPSfP (see Table 4.1) makes it clear that *‘suggested alternative proposals which mean the primary objectives of the application could not be achieved ... can be excluded on the grounds that they are not important and relevant to the decision’* (DfT, 2012).
- 4.3.16 Furthermore, any suggestion that an alternative location should be used or developed as an alternative to the Humber Estuary runs counter to the market led, competitive and resilient aspects of national ports policy. Matters which are outlined earlier in this chapter and also in Chapter 5 of this ES.
- 4.3.17 In this respect it is particularly highlighted that one key primary objective identified is to meet the needs of a specific Ro-Ro freight operator – Stena Line – that already operates from the Humber Estuary with an established customer base. Stena Line has made it very clear to ABP that there is no alternative location to meeting their specific needs other than the Humber Estuary.
- 4.3.18 In setting out this position, ABP is not suggesting that additional Ro-Ro capacity may not need to be developed at locations other than the Humber Estuary. It is, as national policy indicates, necessary for each port to take its own view. In any event, however, ABP does not consider that there is another existing or potential location on the east coast of the UK that has the combination of the Humber Estuary’s characteristics and benefits for the Ro-Ro industry.

- 4.3.19 Looking at the characteristics of the east coast of the UK, and its ability to provide connectivity to the major entry points along the western sea-board of Europe in Belgium and Holland, there are only a small number of options available for handling Ro-Ro trade other than the Humber Estuary.
- 4.3.20 In summary, viable locations for Ro-Ro facilities need to provide sufficient appropriate marine access, sufficient appropriate landside infrastructure and storage capacity, an acceptable sailing time to / from the continent along with marine journey time reliability and certainty, good inland connectivity and a good geographical location in respect of major urban centres and distribution hubs.
- 4.3.21 In addition to the Humber Estuary, the only potential locations on the east coast considered able to provide sufficient marine access for Ro-Ro services are the large estuaries of north east England (the Tyne, Wear and Tees) and the Harwich and Felixstowe area in Suffolk.
- 4.3.22 All of these locations already have established port infrastructure, and to a greater or lesser extent, already have Ro-Ro service offerings. They do not, however, offer the in-land connectivity and locational advantages to relevant parts of the UK that the Humber does – a matter explained further in Appendix 4.1 (Application Document Reference 8.4.4 (a)) and illustrated in Figure 4.1 (Application Document Reference 8.3.4 (a)).

Broad Option 3: The option of providing further capacity within the Humber Estuary

- 4.3.23 From the preceding summary analysis, it is concluded that the only realistic broad option for meeting the need that has been identified is to provide further Ro-Ro freight capacity within the Humber Estuary.
- 4.3.24 As already concluded, such further capacity can only be provided via the provision of sufficient additional suitable Ro-Ro berths and related sufficient suitable landside storage capacity in a suitable location. Existing facilities and capacity on the Humber Estuary is unable to meet the need and objectives which have been identified.

Stage 2: Identification of initial potential solutions

- 4.3.25 The next stage in the consideration of alternatives looks at the identification of initial potential solutions that fall within the parameters of the identified broad option of providing further capacity within the Humber Estuary in the form of additional Ro-Ro berths and landside storage capacity.
- 4.3.26 In order to identify and analyse any potentially available initial solutions, it is first necessary to understand – albeit at a relatively high level and in broad terms – the main principal requirements that any potential solution would be required to provide in order to meet the identified need and objectives.

4.3.27 In simple terms, these requirements – which link back to certain aspects of the primary objectives identified – are determined by considering the differing elements of a Ro-Ro facility that are considered important by the Ro-Ro shipping lines, trailer operators and customers, namely:

- Marine access capability and suitability;
- Berth capability and suitability;
- Landside storage capability and suitability, and
- Landside connectivity capability and suitability.

Marine access capability and suitability

4.3.28 The new Ro-Ro capacity has to be in a location within the Humber Estuary where it can be accessed by the Ro-Ro vessels operating or likely to be operating on relevant routes in the future. As explained in the early part of this chapter and within Appendix 4.1, it is not considered likely that Ro-Ro vessels operating from the Humber Estuary will extend beyond a maximum capacity of around 8,000 lane metres. This is because it is considered that this size of vessel offers the best compromise between the economies of scale offered by a large vessel and the flexibility and efficiency of deployment in terms of the ability to load cargo and keep to a regular scheduled sailing service.

4.3.29 In light of this, ABP and Stena Line have determined the design parameters of such a vessel to be length overall (LOA) of 240 m, beam of 35 m and a draught of 8 m.

4.3.30 When considering viable locations within the Humber Estuary for additional Ro-Ro infrastructure to accommodate such a vessel, the starting premise from a marine accessibility point of view is prevailing water depths. The Humber is an estuary with a tidal range that varies from approximately 6 m to 7 m. It also has natural and stable deep-water channels which have largely dictated the locations where port facilities have been developed.

4.3.31 Having regard to the vessel design parameters, a consistent water depth of around 7 m below chart datum is considered to be necessary to provide access for such vessels at all states of the tide – a critical requirement for the Ro-Ro shipping lines if sailing time reliability and consistency is to be achieved.

4.3.32 A review of the bathymetry of the estuary demonstrates – as shown in Figure 4.2 (Application Document Reference 8.3.4(b)) – that there are very few potential sites for the location of Ro-Ro infrastructure which meets this marine access requirement.

Berth capability and suitability

4.3.33 None of the ‘in dock’ port areas along the Humber Estuary (located at the ports of Grimsby, Immingham, Hull and Goole) would be able physically to accommodate the design vessel specified above. The lock entrances into these in dock areas are not big enough to accommodate such a vessel. On

this basis, additional berth capacity able to accommodate the design vessel would need to be located at an 'in river' lock free location.

- 4.3.34 In terms of the amount of berth capacity to be provided, the minimum level determined as being required is three berths, each able to accommodate the design vessel. This minimum level has been determined because two berths are required to provide for the needs of the operations of Stena Line and at least one new berth is needed to provide a combination of both much needed infrastructure resilience and to accommodate a proportion of the future growth in Ro-Ro freight that is forecast to occur within the Humber Estuary.
- 4.3.35 In this regard it should be noted that the existing Stena Line activities relating to their two daily sailings cannot be accommodated on a single berth due to various matters including vessel loading and unloading patterns and market dynamics.
- 4.3.36 It is emphasised that three berths is the minimum amount of additional berth capacity considered to be required to be provided by a potential solution. As the Ro-Ro freight growth forecasts set out in Appendix 4.1 and the existing lack of resilience in Ro-Ro infrastructure within the estuary indicate, the level of demand for additional capacity during the forecast period to 2050 will be greater than the capacity which can be provided simply by the one berth that would be in addition to the two required by Stena Line.

Landside capability and suitability

- 4.3.37 Ro-Ro berth capacity has to be supported by a suitable amount of landside storage area located as close as possible to the berths to enable efficient and effective handling of freight.
- 4.3.38 Having regard to the analysis contained within the earlier part of this chapter and in Appendix 4.1 it has been determined that, for the purposes of this element of the analysis, each new berth would need to be supported by at least approximately 8 hectares (*circa* 20 acres) of land for storage, operational and administrative activities – or approximately 24 hectares / 60 acres in total for 3 berths. This takes account of the increasing dominance of unaccompanied Ro-Ro freight and the fact that this form of Ro-Ro cargo requires more storage space than accompanied Ro-Ro cargo.
- 4.3.39 It is, of course, likely that the precise and specific space requirements would evolve through ongoing scheme design following the identification of an initial preferred option, but for the purposes of the consideration at this stage the above broad 'rule of thumb' requirement is considered sufficient to be able to identify and consider initial potential solutions.
- 4.3.40 In addition to the amount of landside space required the location and arrangement of that space in relation to the berths is important. If the storage space is located too far from the berths and separated from the berths and other related operational areas by other uses, then it becomes increasingly

difficult for the unaccompanied Ro-Ro cargo to be loaded and unloaded efficiently and in a way that does not impact upon vessel sailing times and schedules. An inefficient operation in this respect would also generate additional environmental and monetary costs.

Landside connectivity capability and suitability

4.3.41 Ro-Ro freight is a form of cargo which is predominantly moved to and from the relevant port facility by road vehicles. As such, the provision of additional Ro-Ro freight capacity on the Humber Estuary needs to be in a location benefiting from good road access both in terms of local access (i.e., from the port facility to the strategic network) and strategic access (i.e., good accessibility on the strategic network between the port location and the source or destination of the cargo being moved).

Identification and consideration of potential initial solutions

4.3.42 The following locations are those which are considered as potential locations for an initial solution to the need identified.

- (a) A location along the river frontage at the Port of Grimsby.
- (b) A location along the river frontage at the main Port of Hull complex.
- (c) A location along the river frontage from Killingholme to Immingham.

4.3.43 Other locations within the Humber Estuary are not considered to be able to provide even an initial potential solution due to:

- (i) the inability of those locations to either already provide suitable marine access or to be provided with such marine accessibility on an environmental or cost acceptable basis - for example, providing a facility further upstream of the main Port of Hull complex for use by the type of vessels envisaged would require a very significant capital dredge within the Humber Estuary, or
- (ii) the undeveloped nature of the location – where, in addition to any marine dredge requirements, it would be very challenging to create a new port facility with the necessary suitable landside facilities and connections.

4.3.44 Further analysis of the initial locations identified above against both the requirements identified in the preceding paragraphs and environmental considerations has then been carried out. This analysis is reported in the following paragraphs.

4.3.45 For each of the locations identified, the provision of a potential solution to meeting the need would require the provision of new marine infrastructure and / or dredging within the Humber European Marine Site (EMS) (consisting of the Humber Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site) – see Figure 9.3 (Application

Document Reference 8.3.9 (c)). As such, no distinction at this stage between the locations has been made in respect of the implications for the Humber EMS.

- 4.3.46 Only if more than one of the locations is deemed capable of providing an initial solution to meeting the need is it considered necessary to then look at this issue in further detail.

A Port of Grimsby river frontage location

- 4.3.47 The Port of Grimsby is owned and operated by ABP, and the issues raised by the following analysis are supported by Figure 4.3 (Application Document Reference 8.3.4 (c)).
- 4.3.48 The Port of Grimsby does not currently handle Ro-Ro freight cargo, but is rather a facility that handles automotive cargo, is a major hub for the offshore wind industry and services the fishing and food industries.
- 4.3.49 The entrance into the commercial docks at Grimsby is located, via the existing Grimsby approach channel, in the order of 3 km from that part of the Humber Estuary where consistent minimum water depths of 7 m below chart datum are maintained. The approach channel to the Port of Grimsby is advertised at a depth of 2 m below chart datum and, therefore, does not currently provide sufficient water depths to be able to accommodate the Ro-Ro design vessel at all states of the tide. A significant deepening of some 5 m (and, therefore, also widening) of this existing marine access channel would be required in order to provide the necessary marine access for the Ro-Ro design vessel to access the river frontage at the Port of Grimsby at all states of the tide.
- 4.3.50 Although no detailed modelling or calculations have been undertaken, it is estimated that such deepening of the approach channel to the Port of Grimsby would alone require the removal of some 5 million cubic metres of material. Furthermore, once created a channel of such a depth and length would, as a result of the dynamic nature of the estuary in this location, be very difficult to maintain. Very frequent maintenance dredging of the channel would be necessary.
- 4.3.51 In addition to this fundamental issue, ABP does not consider that there is a suitable location along the river frontage at Grimsby where new marine infrastructure could be developed to provide the three additional berths identified as the minimum requirement. Even if a suitable location could be found, further localised dredging would be required to enable such newly created river berths to be developed and to continue to operate.
- 4.3.52 The Port does have existing 'in river' berths, in the form of the Grimsby River Terminal that provides two main berths. These berths, however, are not, in their own right, sufficient to meet the amount of additional berthing considered to be required. Furthermore, these berths are already utilised by

vessels that import trade cars and vehicles, which is a key trade for the Port of Grimsby.

- 4.3.53 Even if, however, these significant marine access constraints could be overcome there is insufficient appropriately located landside space available or able to be made available at the Port of Grimsby to support the required level of additional marine capacity identified as being required. The land that is potentially available is spaced out around the Port estate and, in certain instances, is accessible only via the public highway. Available land is not, therefore, sufficient to meet the need which has been identified.
- 4.3.54 Having regard to the requirements outlined earlier and the analysis undertaken, the Port of Grimsby would not be able to provide a solution to meet the need and objectives which have been identified.

A Port of Hull river frontage location

- 4.3.55 The Port of Hull is owned and operated by ABP, and the issues raised by the following analysis are supported by Figure 4.4 (Application Document Number 8.3.4 (d)).
- 4.3.56 The river frontage at the main port complex at Hull is generally located in relatively close proximity to that part of the Humber Estuary where consistent minimum water depths of 7 m below chart datum are maintained.
- 4.3.57 From an analysis of the current land use and activities within the Port, however, ABP consider that the only potential location for a new river frontage Ro-Ro facility would be at the eastern end of the port estate close to Saltend Power Station. Some dredging would be required to enable such marine infrastructure to operate and provide access to the 7 m deep water within the river.
- 4.3.58 A further consideration in terms of marine accessibility is that the Port of Hull is a further approximate one to one and a half hours sailing time further up-river from the other locations considered – an important factor for the type of Ro-Ro trade being considered.
- 4.3.59 However, even if a marine facility of suitable scale could be developed in the location identified (shown as development land on Figure 4.4) in an acceptable way, there is insufficient appropriately located land that is available or could be made available in and around the port estate to provide the necessary supporting landside facilities. The land immediately to the rear of the location identified is either in existing port use and subject to existing long term user agreements or is development land identified by ABP for use by other existing important port activities.
- 4.3.60 A further issue is that, through its position on the north bank of the Humber, a facility at Hull is not as well located in terms of the relevant hinterland, than a facility on the south bank of the Humber – a matter highlighted in Appendix 4.1 (Application Document Reference 8.4.4 (a)). Stena Line –

whose specific requirements are a key aspect of the overall need identified – have confirmed to ABP that the Port of Hull, even if it were possible to provide what was physically required, does not represent a location able to satisfactorily meet its requirements in this respect.

- 4.3.61 Furthermore, the traffic generated by any such new Ro-Ro facility at the Port of Hull would need to pass through the City of Hull to reach the wider strategic highway network – a disadvantage, with obvious environmental implications for the residents of the City. In comparison, certain other locations on the south bank of the Humber benefit from road access that does not pass through such a major urban conurbation.
- 4.3.62 Having regard to the requirements outlined earlier and the analysis undertaken, it has been concluded that the Port of Hull would also not be able to provide a solution to meeting the need and objectives which have been identified.

A Killingholme / Immingham river frontage location

- 4.3.63 The issues raised by the following analysis are supported by Figures 4.5, 4.6 and 4.7 (Application Document Reference 8.3.4 (e), (f) and (g)).
- 4.3.64 This stretch of the estuary is considered – from a marine access perspective – to be the most beneficial location within the Humber Estuary for the provision of port facilities needing to be accessed by large vessels such as the design ship. This is because the deep-water channel of the Humber Estuary runs in very close proximity to the shoreline in this location (see Figure 4.2 which illustrates this). Fundamentally, it is the presence of deep water in this location close to the shoreline that has led to the development of port facilities in this location at and between Killingholme and Immingham.
- 4.3.65 In addition, this stretch of the estuary is also considered to be the most beneficial location in terms of landside accessibility, as it benefits from good access provided by the A160, A180 and M180 corridor that in turn provides direct access to the wider strategic road network.

Land between Killingholme and Immingham

- 4.3.66 As shown on Figure 4.5, land located between the existing CLdN Ports facility at Killingholme and the Port of Immingham is either in existing port related use – for example, the Exolum fuel import facility and the Immingham Gas Jetty and storage caverns – or has consent in place to be developed as a marine energy park.
- 4.3.67 This latter development – known as the Able Marine Energy Park (AMEP) – was consented for reasons of overriding public interest related to offshore renewable energy, with the consent being restricted to that trade only.
- 4.3.68 As a result of these matters, the land between the CLdN Ports facility and the Port of Immingham would not be able to provide a solution to the need and objectives which have been identified.

The Killingholme Terminal

- 4.3.69 The Killingholme Terminal, operated by CLdN Ports Killingholme, is an existing established facility that handles both Ro-Ro freight cargo (both accompanied and unaccompanied cargo) as well as trade vehicle imports. The Ro-Ro services that currently operate from the facility are, as already highlighted, services operated by CLdN's own shipping companies and Stena Line. The facility has six berths, and it is known that some of these berths handle Ro-Ro vessels of the approximate size of the design vessel.
- 4.3.70 From available information, it is understood that five of the six available berths at Killingholme are currently actively used, and that one berth is currently unused - but assumed to be able to be brought into active use relatively easily. From the analysis provided in Section 6.4 of Appendix 4.1, the active berths at the facility are, however, already heavily utilised by Ro-Ro vessels – which emphasises the attractiveness of the facility for such trade. The analysis indicates that effectively three berths (increasing to four on occasion) at the facility are needed to ensure that the current Ro-Ro services operating from the facility can maintain their sailing schedules. In addition, the facility also accommodates vehicle carrier vessels around these Ro-Ro vessel sailings. The nature of the vehicle import trade is such that vessel arrivals are more *ad hoc* and less predictable than the tightly scheduled nature of Ro-Ro services. The available evidence, therefore, suggests that the active berths at the facility are extensively used with apparent limited ability for substantial additional use.
- 4.3.71 ABP does not know whether the owner of the facility has any marine expansion plans or whether it proposes to bring its current inactive berth into use, but any marine expansion would require relevant consents and approvals.
- 4.3.72 As indicated on Figure 4.6, the landside area of the facility is dissected by the Killingholme branch railway line. From available information, the north / north-eastern part of the facility (the area between the railway and the estuary) would appear to be predominantly used heavily for Ro-Ro cargo storage albeit with some trade vehicle storage on the northern periphery. The south / south-western part of the facility (the area inland of the railway line) would appear to be used predominantly for trade vehicle storage along with some administrative and operational activities. It is understood that no Ro-Ro cargo storage currently takes place in the south / south-western part of the facility beyond the railway line. It is suspected that this may well be due to the distance to the berths and the inefficiencies that could be generated in moving such cargo to and from the berths.
- 4.3.73 From publicly available information, it would appear that the available storage areas – both Ro-Ro cargo and trade car storage areas – are extensively utilised. Whilst there may be opportunities to provide an incremental increase in storage provision in some way within the current footprint of the facility, there does not appear to be any opportunities for substantial expansion within the footprint of the facility. The extensive use of

the facility is considered to be a reflection of the fact that, fundamentally, this part of the Humber Estuary is a good location for the provision of port facilities and where the market wishes relevant capacity to be located.

- 4.3.74 In addition to the above matters, large parts of the Killingholme terminal form part of the site on which there is an existing Development Consent Order approval for a thermal generating station Nationally Significant Infrastructure Project – the North Killingholme Power Project. This project was approved in 2014 with non-material amendments subsequently approved in 2021. Commencement of the development is required to have begun by 2 October 2026.
- 4.3.75 As well as the above DCO consent, a 28-hectare area of the south / south-western part of the facility (including areas which overlap with the above DCO consent) and adjacent land benefit from planning permission granted in November 2021 for the construction of an additional vehicle storage area and associated on-site infrastructure (North Lincolnshire Council planning application reference PA/2020/1483).
- 4.3.76 Using information available from the land registry and information submitted in respect of neighbouring development proposals there does not appear to be opportunities to expand the footprint of the facility in any significant way. This is because the facility would appear to be bordered by:
- (i) the proposed Able Marine Energy Park development and land owned by Able to the south;
 - (ii) the proposed Able Logistics and Business Park and land owned by Able to the north and west, and
 - (iii) existing power station, refinery and industrial uses, and areas consented for other development proposals to the west.
- 4.3.77 Leaving aside, however, any questions as to whether the Killingholme facility has any opportunities for substantial expansion along the lines defined as being required, the facility, as already explained, is not considered to be able to meet the needs of Stena Line (see paragraphs 4.2.59 to 4.2.68) – which make up a key part of the overall need and objectives which have been identified.
- 4.3.78 Whilst existing Ro-Ro facilities such as the CLdN Ports facility at Killingholme may well and are likely going to need to, in any event, develop in order that the overall future forecast growth in the Ro-Ro freight sector on the Humber Estuary is met, the CLdN Ports facility – for the reasons summarised – is not considered able to provide a solution to the specific, immediate and pressing need and objectives which have been identified.

The Port of Immingham

- 4.3.79 The Port of Immingham is a facility owned and operated by ABP.

- 4.3.80 Whilst the enclosed dock basin at the Port of Immingham continues to be used for Ro-Ro, general cargoes, break bulks and container movements, a variety of 21 different riverside berths have been constructed over a number of years to enable the Port to accommodate larger vessels (associated with growth in trades) that cannot be accommodated within the dock basin. The development of the Port over time in this regard has been an iterative process.
- 4.3.81 Having considered the current layout and use of the Port of Immingham, ABP considers that a potential location for additional Ro-Ro capacity that could meet the need that has been identified is in the eastern part of the port estate.
- 4.3.82 Within this part of the port estate, there is a gap in river frontage infrastructure within which there is considered to be sufficient space to accommodate the necessary scale of marine infrastructure required. This gap is located east of the existing Eastern Jetty and west of the Immingham Oil Terminal Jetty.
- 4.3.83 Water of the depth required is located in close proximity to this area, albeit that some limited localised dredging would be required to link the provided infrastructure with the deep water.
- 4.3.84 In addition, there is also considered to be sufficient port land within close proximity to the areas where berths could be created which is either vacant and available or which can be made available relatively easily to support the additional marine infrastructure in this location.
- 4.3.85 The Port of Immingham already contains existing Ro-Ro freight operations within the western extent of the Port. The majority of this activity is undertaken by DFDS who operate from two terminals – the Riverside Terminal within the Outer Harbour and the Dockside Terminal within the enclosed dock. The remaining Ro-Ro activity is the single sailing operated by Stena Line from its temporary in dock facility.
- 4.3.86 Whilst ABP considers that there exists the possibility of some further Ro-Ro capacity, including the provision of further in river berth capacity, being provided at the Riverside Terminal within the Outer Harbour area, the use of any additional capacity generated – which would be unlikely to be of the scale identified as being required - in this locality would need to be with the agreement of DFDS. This is due to the physical layout of the Port in this area and the commercial arrangements in place with DFDS.
- 4.3.87 The creation of such capacity within the Outer Harbour area would not, therefore, meet the need or the objectives which have earlier been identified. In particular, such capacity would not meet the needs of Stena Line – a competitor of DFDS – and would raise competition and resilience issues in this regard.

- 4.3.88 Furthermore, as detailed in Appendix 4.1, the forecasts for future growth of Ro-Ro freight on the Humber Estuary are such that, on the basis of simply just meeting forecast capacity demand (which is only one element of the need identified) there is considered to be a requirement for the provision of additional capacity at more than one location on the estuary. On this basis, DFDS, for example, may well wish to expand their own operations in the future.
- 4.3.89 The current temporary Stena Line facility within the enclosed dock area that, through a series of significant compromises, currently handles a daily Rotterdam sailing would not meet the need or the objectives which have been identified. Fundamentally there is no prospect of the facility handling the design vessel, neither is there the prospect of expanding this facility in the way that would be necessary. It is also the case that the land occupied by this temporary facility is already earmarked for other port trades by ABP once a permanent new home for the Stena Line service is available.
- 4.3.90 In addition to this in dock facility not meeting the need identified it is also, therefore, the case for the reasons summarised above that the capacity currently provided by this in dock facility cannot be relied upon in the longer term. The space is required for other port activities.

Area to the east of the Port of Immingham

- 4.3.91 In respect of marine accessibility, placing new marine infrastructure for the Ro-Ro trade further to the east of the Port of Immingham – for example, to the east of the Immingham Oil Terminal - would be unlikely to be viable as the deep-water channel moves away quite sharply from the river frontage between Immingham and Grimsby in this location. Whilst on the face of it the estuary frontage to the east of the Port of Immingham appears to be developable for a Ro-Ro facility, the subtidal area is shallow meaning that the provision of any marine infrastructure would require a long jetty approach to reach the deeper water, or a large capital dredging programme in order to berth vessels closer to the shoreline.
- 4.3.92 Furthermore, an energy related proposal to develop this area for the purposes of a new bulk liquid terminal and associated processing facility – known as the Immingham Green Energy Project – is separately now being taken forward on this location. Unlike a Ro-Ro operation, such a facility can operate effectively with a long jetty approach. This area has, therefore, been discounted as a location for a potential new Ro-Ro facility for these reasons.

Conclusions

- 4.3.93 From the analysis which it has undertaken, which is brought together and summarised in the preceding paragraphs, the conclusion reached by ABP is that the only potential solution to meeting the need and objectives which have been identified is the provision of new Ro-Ro freight capacity within the eastern extent of the Port of Immingham.

4.3.94 As the conclusion reached is that there is only one potential solution to meeting the need and objectives, it is unnecessary to give further consideration as to whether there is a difference in terms of the implications for the Humber Estuary EMS and other potential environmental impacts between the different locations that have been considered.

Stage 3: Working up a detailed proposal

4.3.95 Having identified an initial potential solution to meeting the need the following paragraphs explain how this was then worked up into a detailed proposal to be taken forward for formal consents and approvals.

4.3.96 Having regard to the requirements given to it by Stena Line, its own requirements and the baseline position in terms of land availability within the eastern part of the Port of Immingham, ABP undertook a design exercise to work up a proposed form of development which then formed the basis of the iteration of the proposal publicly announced and made the subject of statutory consultation in early 2022.

4.3.97 This exercise took account of relevant historic port design work undertaken by and on behalf of ABP at the Port of Immingham and relevant design standards.

4.3.98 In summary, the iteration of the proposal made the subject of statutory consultation in early 2022 consisted of:

- (a) In that part of the estuary located between the Port's existing East Jetty and the Immingham Oil Terminal Jetty:
 - (i) an open piled straight jetty and linkspan providing access between the shore and a linked pair of floating pontoons;
 - (ii) two open piled finger piers extending in a north westerly direction from each of the two floating pontoons, with the two piers collectively creating up to four berths for the large Ro-Ro design vessel; and
 - (iii) a capital dredge of the berth pockets and approaches over an area of approximately 90,000 m² to create a navigable consistent water depth of 9 m below chart datum.

- (b) On land adjacent to the landing point of the proposed jetty and along the south-eastern edge and southern corner of the port estate:
 - (i) a northern HGV / trailer storage park;
 - (ii) an eastern HGV / trailer storage park;
 - (iii) a central HGV / trailer storage park;
 - (iv) a western HGV / trailer storage park;
 - (v) a southern area containing a southern HGV / trailer storage park area along with pre-gate parking area, a terminal building and marshalling yard for accompanied vehicles, and
 - (vi) appropriate circulation and movement space – including a new access bridge over an existing port road linking the northern and central areas.

- 4.3.99 Further detail of this iteration of the proposal is provided in Chapter 2 of the Preliminary Environmental Information Report (PEIR) and accompanying figures.
- 4.3.100 As a result of responses received during the early 2022 statutory consultation exercise, ongoing consultation with stakeholders and bodies, and the ongoing design and assessment work, the form of the proposal presented in the PEIR was further refined and improved. The main refinements made, and the reasoning for those refinements are set out in the sub-sections that follow and a full description of the proposal being taken forward for approval – including the refinements now discussed - is contained within Chapters 2 and 3 of this ES.
- 4.3.101 The refinements made to the scheme that are explained in the following sub sections were themselves the subject of supplementary statutory consultation in November 2022. The supplementary consultation report produced for the purpose of the supplementary consultation exercise explains in further detail the refinements made and the rationale behind those refinements – what follows is a summary of the position that is explained within the supplementary consultation report. The Supplementary Consultation Report is provided at Appendix 14.2 (Application Document Reference 8.4.4 (b)).

The removal of one berth and the realignment of the marine infrastructure

- 4.3.102 As already indicated, the location of the marine infrastructure – along with the wider Humber Estuary as a whole – is designated as an EMS (consisting of the Humber Estuary SAC, SPA and Ramsar site).
- 4.3.103 Although it was initially hoped that the iteration of the proposal presented at PEIR stage would not have unacceptable impacts on the EMS, it became clear to ABP through a combination of consultation responses, discussions with key stakeholders and ongoing assessment work (which indicated that in the order of 1.64 hectares of designated intertidal habitat could be directly lost as a result of the PEIR stage proposal) that this was going to be difficult to demonstrate.
- 4.3.104 Confirming that its minimum operational requirement was the provision of three berths and in light of comments received both during and after the statutory consultation undertaken in early 2022, ABP took the decision to proceed on the basis of a scheme comprising only three berths and to consider in further detail the precise location and alignment of the three berths within this part of the estuary. This exercise not only had regard to the implications for the EMS but also had regard to the fact that the proposed works should have no significant implications for the ongoing operations of existing marine infrastructure within the locality.
- 4.3.105 As a result of this exercise, in comparison to the earlier PEIR iteration of the proposal, the now reduced number of berths have been repositioned both slightly further to the east and further away from the shoreline. They have

also been realigned such that they are more parallel with the shoreline and prevailing tidal flows and more in line with the existing marine infrastructure in the locality.

- 4.3.106 These changes have also then resulted in subsequent revisions to the size, alignment and positioning of the approach jetty and the floating pontoons, and in this regard different iterations of the approach jetty and floating pontoons were considered. The option being taken forward – which in summary consists of a single curved approach jetty that connects to a floating pontoon that in turn is then connected to a second pontoon by a linking bridge – is considered to be the most efficient form of design that can be implemented.
- 4.3.107 As is explained in the detailed assessment work provided elsewhere in this ES – see in particular the Nature Conservation and Marine Ecology chapter (Chapter 9 of this ES – Application Document Reference 8.2.9) and the Commercial and Recreation Navigation chapter (Chapter 10 of this ES – Application Document Reference 8.2.10) – the proposal in its revised form and as now applied for does not generate any unacceptable implications in respect of the matters considered in those chapters. In particular, it is highlighted that the project in this revised form is not considered to have an adverse effect on the integrity of the Humber Estuary EMS.
- 4.3.108 The removal of one potential berth does, however, further emphasise the likely requirement for further additional Ro-Ro capacity to be created elsewhere within the estuary in due course.

Possible impact protection measures

- 4.3.109 As detailed elsewhere within this ES and supporting documentation, the new IERRT will be able to operate efficiently and safely without the need for any additional physical marine mitigation measures – although it may occasionally be necessary for tugs to be used when berthing a vessel, as is common practice on the Humber Estuary.
- 4.3.110 As part of its assessment of the IERRT project, however, ABP does recognise, that, in light of the dynamic nature of the Humber Estuary at all states of the tide – it may be necessary at some time in the future to install impact protection measures to the east of the IERRT marine infrastructure and in front of the western elevation of the Immingham Oil Terminal approach jetty.
- 4.3.111 It should be emphasised that ABP, having comprehensively assessed the various berthing scenarios for IERRT is confident that no such measures will be required. Indeed, such measures are not routinely provided elsewhere within this very busy operational port and port operations are monitored at all hours both by the ABP Dock Master and independently by the Harbour Master through Humber Estuary Services.

4.3.112 The inclusion of such impact protection measures in the DCO application, therefore, is a purely precautionary step.

The removal of a proposed landside storage area

4.3.113 As a result of confirming the number of berths as three, it was recognised that there could then be a subsequent reduction in the area of land needed to support the berths.

4.3.114 The decision was taken to remove the previously proposed east storage area. This decision was taken because this area was in any case separate from the other areas of land identified for the storage of cargo and would have required the cargo moving to and from that area to interact with other port users on a main access route into and out of the Port leading to and from the East Gate into the Port. The remaining areas of the proposed terminal are able, once cargo and / or passengers have arrived at the pre-gate area, to operate on a self-contained basis.

4.3.115 In addition, the use of the east storage area would have been less efficient than the remaining other proposed cargo storage and handling areas.

4.3.116 This amendment to the proposal generates no additional environmental impact and in fact is considered to be beneficial in terms of making available an area of previously developed and utilised land within the port estate for an alternative port use.

Realignment of the access bridge

4.3.117 As a result of ongoing design and assessment work and having regard to the needs of existing port users, the alignment of the proposed bridge over Robinson Road (an internal port road) linking the proposed central and north storage areas has been slightly amended. The alignment of the bridge has been moved further to the east, and the benefits are twofold.

4.3.118 First, it improves the alignment of the access roads that will lead to and from the bridge.

4.3.119 Second, it provides the opportunity for existing port tenants to continue to conduct their operations, which include the servicing of other port users in terms of maintenance, repair etc - albeit in a slightly rearranged layout – within the area around the northern embankment of the proposed bridge structure. Further information on these existing port uses and activities are explained further in Chapter 2 of the ES.

4.3.120 The ability to retain these businesses in this area has in turn required the reduction in the area of available storage to be provided within the north storage area and the relocation of the proposed container storage element within this north storage area. This reduction in the area has been achieved, however, without significantly affecting the ability of the proposed terminal to operate efficiently and effectively.

4.3.121 Whilst developing the refinements to this part of the scheme the decision was also taken to remove the optional outbound gate that was previously to be located just to the north of the proposed bridge onto the East Riverside port road. This decision was taken because the use of this gate could have led to potential congestion within the north storage area and also outside of the new terminal at the junction between East Riverside and Robinson Road.

Improvements to East Gate

4.3.122 As a result of ongoing assessment work and having regard to comments and views presented by various port users, the IERRT project now also includes improvements to the East Gate entrance into the Port of Immingham. The improvements and why they form part of the proposal being applied for are further explained within the Traffic and Transport chapter (Chapter 17 of this ES – Application Document Reference 8.2.17) and accompanying Transport Assessment (Appendix 17.1 - Application Document Reference 8.4.17 (a)).

4.3.123 In simple terms the improvements are proposed to ensure that the East Gate, once the proposed IERRT development is operational, is able to operate in an appropriate way.

Junction and road layout refinements

4.3.124 Through ongoing assessment and design work and having regard to relevant consultation responses and views received from port users, various refinements have been made to a number of the proposed in port road junctions and the alignments and design of in port road links. These are matters further detailed in the Traffic and Transport chapter (Chapter 17 of this ES - Application Document Reference 8.2.17) and accompanying Transport Assessment (Appendix 17.1 - Application Document Reference 8.4.17 (a)).

Ecological enhancement

4.3.125 Within the PEIR it was highlighted that consideration was being given to potential ecological enhancements that could be brought forward as a result of the IERRT project. Two elements of ecological enhancements were referenced in the Supplementary Consultation Report, namely:

- (i) the enhancement to an approximate 1 hectare area of woodland located on ABP owned land to the south east of the main site of the development – which is being taken forward through the IERRT DCO; and
- (ii) enhancement benefits from a one-hectare area of an already consented scheme on ABP owned land at Skeffling on the north bank of the Humber Estuary. This does not form part of the DCO application and is being taken forward separately.

Drainage

4.3.126 Further design work has been undertaken in respect of the site drainage. As a result of this work and ongoing considerations as to potential environmental implications, the drainage strategy (an annex to Application Document Reference 8.4.11) for the site now utilises existing outfalls rather than create additional new outfalls.

Project boundary

4.3.127 As a result of the ongoing design and assessment work and the subsequent scheme refinements that have been made, the boundary of the proposed IERRT development has been both extended and rationalised in a number of locations. For example, in terms of rationalisation, the boundary along the south-eastern corner of the proposed terminal has been drawn in to avoid an existing open culvert and to remove an area of unregistered land from the site of the proposal.

Environmental implications of scheme refinements

4.3.128 Within the Supplementary Consultation Report produced in respect of the scheme refinements, an analysis of the environmental implications – in comparison to the previous PEIR proposal – was undertaken. The detail of this analysis is contained within the Supplementary Consultation Report (Appendix 4.2 – Application Document Reference 8.4.4 (b)), but in summary the refinements do not generate any significant adverse environmental effects in comparison to the PEIR proposal. Where a difference does occur, these are all environmental benefits in comparison to the PEIR proposal.

4.4 Consideration of consultation responses

- 4.4.1 Table 4.2 sets out the consultation responses that have been received during the pre-application process that are of relevance to the need for the project and the consideration of alternatives.
- 4.4.2 Having regard to the principles for the consideration of alternatives set out within the NPSfP (reproduced at Table 4.1 of this chapter) it is of note that no consultee has suggested that there is a potential alternative to the proposed IERRT development.

Table 4.2. Summary of consultation

| Consultee | Reference, Date | Summary of Response | How Comments have been Addressed or Considered in this Chapter |
|--------------------------------------|---|--|--|
| Planning Inspectorate (PINS) | Scoping Opinion, paragraphs 2.3.5 and 2.3.6, October 2021 | The Scoping Opinion references the EIA Regulations requirements in respect of the consideration of alternatives and indicates that the ES should provide a discrete section providing details of the reasonable alternatives studied and the reasons to selecting the chosen option including a comparison of environmental effects. | Section 4.3 of this chapter provides the information on alternatives the scoping opinion indicates should be provided. |
| Associated Petroleum Terminals (APT) | Statutory Consultation Response, Section 6, February 2022 | Whilst the NPSfP contains a presumption in favour of granting consent for applications for port development this is subject to other policies within the NPSfP. | Matters relating to the ‘presumption in favour’ point being raised are considered in Section 4.2 of this chapter. The wider policy compliance point is not a matter for the ES but is addressed in a separate application document – Application Document Reference 5.1. |
| APT | Statutory Consultation Response, Section 6, February 2022 | Although the Immingham Oil Terminal (IOT) operators do not suggest that the IERRT development is, as a matter of principle, incompatible with the IOT, ABP should give significant consideration in the design of the IERRT development in respect of its potential impacts on IOT. | Paragraphs 4.3.95 and following paragraphs summarise the consideration ABP has given to the design of the IERRT. Further details of the potential implications for IOT are considered through various of the detailed assessment chapters of this ES – see in particular Chapter 10 and accompanying appendices of the ES, and Chapter 16 of the ES. |

| Consultee | Reference, Date | Summary of Response | How Comments have been Addressed or Considered in this Chapter |
|--------------------------------------|---|--|---|
| DFDS | Statutory Consultation Response, paragraphs 11 and 12 | The IERRT project will almost certainly have an adverse effect on the integrity of the Humber Estuary European Marine site. ABP must, therefore, demonstrate that there are no alternatives and that the project is needed for imperative reasons of overriding public interest. | As explained elsewhere in this ES – see Chapter 9 – and the separate Habitats Regulations Assessment (Application Document Reference 9.6) the IERRT development as applied for will not have an adverse effect on the integrity of the European Marine site. The legal tests identified by the consultee do not, therefore, apply. Even if they did, however, it is ABP’s view that the evidence as presented in this chapter demonstrates that those tests would be met. |
| Consultation Questionnaire Response | Response Q86 | There is enough development on the waterfront already. The development will only take trade from other UK ports, and it will destroy wildlife. | As explained within this chapter there is a very clear and specific need for the proposed development. The wider assessment undertaken also demonstrates the acceptability of the location for the development proposed. |
| Consultation Questionnaire Responses | Response Q3, Q8, Q9 and Q37 | The proposed terminal should be rail connected. | The nature of the Ro-Ro cargo to be handled by the terminal is such that it currently cannot be moved to and from the facility by rail. However, this potential means of moving cargo would not be precluded in the future. |
| Consultation Questionnaire Response | Response Q26 | A general point raised that due to the traffic that will be generated the development should be considered at another – albeit unspecified – location. | As the ES Traffic and Transport chapter demonstrates, the traffic implications of the proposed development are not unacceptable. As explained in this chapter, there is no alternative location. |

4.5 Conclusions

4.5.1 In summary, having regard to:

- (i) the need to ensure that the UK has sufficient Ro-Ro capacity of the right type that is both resilient and competitive, to serve the current requirements and growth in Ro-Ro freight that is forecast;
- (ii) the need to ensure that this Ro-Ro capacity is in a location where it is required – namely the Humber Estuary where the market wishes capacity to be located, where existing capacity has limited growth potential and where specific significant growth is, for a number of reasons, forecast; and
- (iii) the need to meet the specific requirements of an existing Ro-Ro freight shipping line operating out of the Humber,

it has been determined that there is an imperative need to provide additional appropriate Ro-Ro freight capacity within the Humber Estuary in order to meet the growing nature of demand, and thereby strengthen the estuary's contribution to an effective, efficient, competitive and resilient UK Ro-Ro freight sector.

4.5.2 In order to assist in identifying the appropriate solution to meeting the need identified, the following primary objectives have been defined. These are to provide the Humber Estuary with the ability to:

- (i) meet the urgent needs of an existing Ro-Ro freight operator, Stena Line, with an established customer base, those needs being, in summary, the provision of sufficient suitable capacity at a facility that is suitably located at which it has control of appropriate functions and operations.
- (ii) provide for, at least, a proportion of the future growth in demand for Ro-Ro freight capacity within the estuary;
- (iii) continue to contribute effectively to UK Ro-Ro freight port infrastructure flexibility and resilience;
- (iv) continue to provide competitive Ro-Ro freight services and routes to and from existing markets and provide opportunities for routes to new markets, and
- (v) make efficient and effective use of existing established land and water transport connections and infrastructure.

- 4.5.3 Doing nothing or developing or using capacity somewhere other than on the Humber Estuary are not realistic broad options. Fundamentally, these options do not meet the need that has been identified and – particularly in the case of the do-nothing option – would be outcomes that would be strongly against the public interest. The solution has to involve the creation of new Ro-Ro capacity – both appropriate marine and landside capacity - somewhere within the Humber Estuary.
- 4.5.4 In terms of potential locations for such new capacity the only location identified as able to provide a solution to the need identified is the eastern part of the Port of Immingham estate.
- 4.5.5 Through ongoing design and assessment work the most appropriate solution to the need that has been identified is the form of proposal for which consent is now being applied for.
- 4.5.6 In conclusion, therefore, the proposed IERRT development has been identified by ABP as the only solution to meeting the identified need and objectives.

4.6 References

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4.7 Abbreviations/Acronyms

| Acronym | Definition |
|----------------|--------------------------------|
| ABP | Associated British Ports |
| AMEP | Able Marine Energy Park |
| APT | Associated Petroleum Terminals |
| CAGR | Compound Annual Growth Rate |
| CLdN | CLdN Group |
| COVID | Coronavirus |
| DCO | Development Consent Order |
| DFDS | DFDS Group |

| | |
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| DfIT | Department for International Trade |
| DfT | Department for Transport |
| EIA | Environmental Impact Assessment |
| EMS | European Marine Site |
| ES | Environmental Statement |
| EU | European Union |
| GDP | Gross Domestic Product |
| HGV | Heavy Goods Vehicle |
| HRA | Habitats Regulations Assessment |
| IERRT | Immingham Eastern Ro-Ro Terminal |
| IOT | Immingham Oil Terminal |
| LOA | Length Overall |
| NELC | North East Lincolnshire Council |
| NPSfP | National Policy Statement for Ports |
| PEIR | Preliminary Environmental Information Report |
| PINS | Planning Inspectorate |
| Ramsar | Wetlands of international importance, designated under The Convention on Wetlands (Ramsar, Iran, 1971) |
| Ro-Ro | roll-on / roll-off |
| SAC | Special Area of Conservation |
| SPA | Special Protection Area |
| UK | United Kingdom |

Cardinal points/directions are used unless otherwise stated.

SI units are used unless otherwise stated.

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