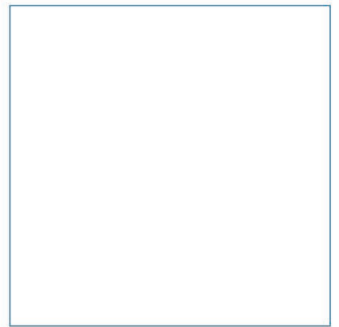
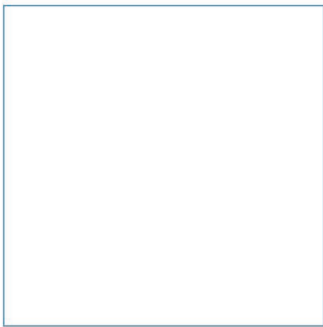
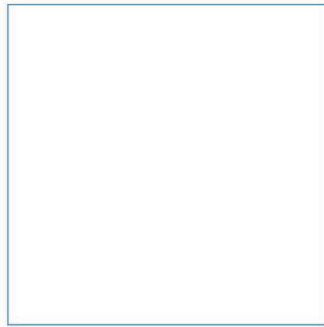


Associated British Ports

Immingham Eastern Ro-Ro Terminal

Preliminary Environmental Information: Chapter 17: Traffic and Transport

January 2022



Innovative Thinking - Sustainable Solutions

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17 Traffic and Transport

17.1 Introduction

- 17.1.1 This chapter provides a preliminary assessment of the potential significant effects of the proposed Immingham Eastern Ro-Ro Terminal (IERRT) on traffic and transportation. This chapter has been prepared by David Tucker Associates (DTA).
- 17.1.2 The following receptors have been considered as part of the assessment:
- Users of the public highway in the vicinity of the site including, pedestrians, cyclist, public transport users;
 - Private car and van drivers; and
 - Freight traffic users to the port and surrounding areas.
- 17.1.3 A number of figures support the description of the existing environment (baseline) and are provided in Volume 2 of this Preliminary Environmental Information Report (PEIR) document. Figure 17.1 is a plan of the local highway network in relation to the location of the IERRT. Figure 17.2 shows the wider highway network.
- 17.1.4 The preliminary assessment has been carried out in accordance with the Institute of Environmental Assessment (IEA) Guidance Note No 1 'Guidelines for the Environmental Assessment of Road Traffic' (1993) (the 'IEA Guidelines') and takes account of the relevant traffic and transport assessment aspects contained within section 5 of the National Policy Statement for Ports (Department for Transport (DfT), 2012) (NPSfP) (Section 5.4).
- 17.1.5 The impacts associated with traffic in relation to air quality and noise are set out in Chapters 13 and 14 of this PEIR respectively.
- 17.1.6 A Preliminary Transport Assessment (TA) (Appendix 17.1 in Volume 3 of the PEIR) has been prepared to support the assessment reported in this chapter. The assessment reviews the impact on both the local and strategic road network (SRN) and reflects initial discussions with National Highways (NH) and the local Highway Authorities (North Lincolnshire and North East Lincolnshire).

17.2 Definition of the study area

- 17.2.1 The study area for this assessment is the area over which potential direct and indirect effects of the IERRT project are predicted to occur during the construction and operational periods.
- 17.2.2 The landside of the Project site lies within the administrative area of North East Lincolnshire Council who are the Planning and Highway Authority. The

- western access to the port falls within North Lincolnshire Council (also a unitary authority and hence Highway Authority).
- 17.2.3 The A160 and A180 fall within the study area and lie under the jurisdiction of NH.
- 17.2.4 As noted above, the location of the Port of Immingham in relation to the surrounding network is shown on Figure 17.1.
- 17.2.5 Paragraph 6.13.18 of the Scoping Report, submitted to the Planning Inspectorate (PINS) in September 2021, recognises that consideration of transport impacts should include all immediate access points to the port of Immingham and all links that might experience an increase in flows of more than 30 % on a daily basis.
- 17.2.6 The broad study area, therefore, encompasses both main routes from the port to the A160, A180. Brief consideration is given of impacts on the A15 (Humber Crossing) and M180.

17.3 Assessment methodology

Data and information sources

- 17.3.1 In order to inform the assessment, traffic count data has been collected on the local road network at various locations during 2021. The location of the survey work is shown at Figure 17.3.
- 17.3.2 Full details of the data will be provided in the final TA, which will be provided as an appendix to the Environmental Statement (ES) and submitted with the Development Consent Order (DCO) application. The data will include continuous 7-day link flow data and more detailed turning movement counts at local junctions.
- 17.3.3 Traffic flow data is also available from the DfT for the A160 (from Rosper Road to A180), the A180, M180 and A15. That data is summarised below in the section which describes the existing environment.
- 17.3.4 Personal Injury Accident (PIA) data has been obtained from North East Lincolnshire Council for the latest 5-year period (to 20 August 2021). North Lincolnshire Council do not keep historic accident data and have requested that the assessment obtains details from the Crashmap.co.uk which provides the same data base.
- 17.3.5 The study area for PIAs includes the port access roads to the A160 at present. The data is included in full in the preliminary TA and a summary is provided in the section in this chapter which describes the existing environment (Section 17.6).

Determining significance of effects

- 17.3.6 To facilitate the impact assessment process and ensure consistency in the terminology of significance, a standard assessment methodology has been applied. This methodology has been developed from a range of sources, including the IEA Guidelines and advice given in the Design Manual for Roads and Bridges (DMRB).
- 17.3.7 The IEA Guidelines also sets out when traffic related environmental impacts can be scoped out for further assessment. Paragraph 3.15 notes that:
- “To assist the assessor it is suggested that two broad rules of thumb could be used as a screening process to delimit the scale and extent of the assessment. The rules are described and justified in the following paragraphs:*
- *Rule 1 include highway links where traffic flows will increase by more than 30 % (or the number of heavy goods vehicles will increase by more than 30 %).*
 - *Rule 2 include any other specifically sensitive areas where traffic flows have increased by 10 % or more.”*
- 17.3.8 This ‘rule of thumb’ has been used as a general guide in undertaking this preliminary assessment rather than a hard and fast rule. The assessment of the significance of an effect will be determined by the interaction of the following factors:
- The magnitude, scale or severity of the impact or change; and
 - The value, importance or sensitivity of the environmental resource or receptor being affected.
- 17.3.9 The IEA Guidelines make it clear in paragraph 4.5 that:
- “For many effects there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed up by data or quantified information wherever possible”.*
- 17.3.10 The approach to determining the significance of identified effects has regard to the guidance given in the Design Manual for Roads and Bridges - ‘DMRB Lifecycle Analysis (LA) 104 Environmental assessment and monitoring’ (LA 104) - in terms of defining the environmental value / sensitivity of the receptor (Table 3.2N of LA 104) and the magnitude of the impact (Table 3.4N of LA 104). The overall significance of effects will be determined using the matrix set out in Table 17.4 (which is based upon the tables listed above from LA 104).
- 17.3.11 The categorisation of the magnitude of the impact brought about by the proposals varies depending upon the impact area being considered (e.g. severance, driver delay etc.). In considering the impacts on the different topic areas regard has been had to the relevant guidance contained within the IEA Guidelines. This guidance is further discussed in the following paragraphs.

Table 17.1. Environmental value (or sensitivity) and typical descriptors

Value (Sensitivity)	Typical Descriptors
Very High	Facility of international or national significance.
High	Close proximity to schools, colleges, accident black-spots.
Medium	Close proximity to congested junctions, hospitals, community centres, conservation areas.
Low (or Lower)	Close proximity to public open space, nature conservation areas, and residential areas with adequate pavements.
Negligible	Receptors of low sensitivity.

Table 17.2. Magnitude of the Impact and typical descriptors

Value (Sensitivity)	Typical Descriptors
Major/ substantial	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse). Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse). Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Minor/ slight	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristic(s), features or elements (Adverse). Minor benefit to, or addition of, one (maybe more) key characteristic(s), features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).

Table 17.3. Descriptors of the significance of effect categories

Significance Category	Typical Descriptors of Effect
Major	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Minor	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the project.
Insignificant	No effects on those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 17.4. Significance of effect categories matrix

Sensitivity	Negligible	Minor	Moderate	Major
Very High	Minor	Minor or Moderate	Moderate or Major	Major
High	Minor	Minor or Moderate	Moderate or Major	Major
Medium	Minor or insignificant	Minor	Moderate	Moderate or Major
Low	Minor or insignificant	Minor or insignificant	Minor	Minor or moderate
Negligible	Insignificant	Minor or insignificant	Minor or insignificant	Minor

17.3.12 As the matrix in Table 17.4 demonstrates, the sensitivity of the receptor and the magnitude of impact for each environmental effect has been considered to determine the significance of the effect. In Environmental Impact Assessment (EIA) terms the impacts which are defined as moderate or major are taken to be significant.

Severance

17.3.13 Severance is the perceived division that can occur within a community when it becomes separated by a major traffic route. Whilst the IEA Guidelines refer to the effect of traffic on severance of 30 %, 60 % and 90 % producing 'slight', 'moderate' and 'substantial' changes in severance respectively, it is suggested that caution be applied to relying on these quanta of change. The consideration of severance in this assessment has had due regard to specific local conditions, in particular, the location of pedestrian routes to key local facilities and whether crossing facilities are provided or not.

Driver Delay

17.3.14 Traffic delays to 'non-development' traffic can occur:

- At the site entrances where there will be additional turning movements;
- On the highways passing the site where there may be additional flow; and
- At key junctions on the nearby highway network.

17.3.15 Impact on driver delay is based on the quantum of change in traffic levels against interpretation of the local highway link capacity expressed in terms of predicted flows.

Pedestrian Delay

17.3.16 The proposed development will bring about increases in the number of vehicle movements during the construction and operational phases. In general terms, increases in traffic levels are likely to lead to greater increases in delay to pedestrians seeking to cross roads. The IEA Guidelines recommend that, rather than rely on thresholds of pedestrian delay, the assessor should use judgement to determine whether pedestrian delay is a significant impact. This is the approach which has been adopted for the purposes of this preliminary assessment.

Pedestrian Amenity

17.3.17 This is broadly defined as the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic. The IEA Guidelines cite a doubling of traffic flow (or its lorry component) as representing a threshold for impact evaluation. This measure is considered within the preliminary assessment that follows.

Fear and Intimidation

17.3.18 This again relates to pedestrians, and shares characteristics with pedestrian amenity. There are no commonly agreed thresholds for estimating danger, but research work is cited setting out 'degree of hazard' levels relating to 18-hour average traffic flow, 18-hour heavy goods vehicle (HGV) flow and

average vehicle speed. These levels are considered within the preliminary assessment that follows in terms of impact.

Accidents and Safety

17.3.19 The PIA record for the local highway network has been obtained from North East Lincolnshire Council and Crashmap.co.uk for the most recently available 5-year period. The impact of additional traffic from the proposals is considered in terms of the magnitude of traffic increase and existing accident record data.

Hazardous Loads

17.3.20 The IEA Guidelines acknowledge that most developments will not result in increases in the number of movements of hazardous/dangerous loads.

17.4 Consultation

17.4.1 Consultation with regard to the outcomes of the formal scoping process and whether there are any likely significant traffic and transport effects of the IERRT project has been undertaken as appropriate.

17.4.2 The consultation that has been undertaken to date, as well as the comments received following the Scoping exercise, together with the outcome of such consultation/comments and how it has influenced the TA is provided in Table 17.5.

Table 17.5. Summary of consultation to date

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
PINS	Scoping Opinion, October 2021	The Inspectorate agrees that roads where the increase in traffic flows would be less than 30 % can be scoped out of further assessment, provided that the increase in HGVs would also be less than 30 % and the increase in traffic flows in sensitive areas would be less than 10 %.	This approach has been adopted in the PEIR.
PINS	Scoping Opinion, October 2021	Accident assessment to include consideration of NH comments.	These are being addressed through discussions with NH.

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
PINS	Scoping Opinion, October 2021	Traffic Flows to set out methodology clearly for development and cumulative impacts.	This is described below in Section 17.6.
PINS	Scoping Opinion, October 2021	Consideration of rail is required.	This is described below in Section 17.6.
PINS	Scoping Opinion, October 2021	Consideration of mitigation is required.	This is described below in Section 17.9.
North East Lincolnshire Council	Email 23/11/21	Confirms proposed ES scope is acceptable.	Ongoing discussions are being held with North East Lincolnshire District Council and the preliminary TA will be discussed separately with them.
National Highways	Jacobs Systra Joint Venture (JSJV) note (for NH) 6th October 2021	Sets out scoping requirements	Ongoing discussions are being held with NH and the preliminary TA will be discussed separately with them.
National Highways	JSJV note (for NH) 6th October 2021	This review has highlighted the need for a Transport Assessment and Travel Plan to be produced in support of this planning application, to be included within the Traffic and Transport Chapter of the ES.	The preliminary TA is included in Appendix 17.1 in Volume 3 of the PEIR.
National Highways	JSJV note (for NH) 6th October 2021	The TA should reference dredging, including the resultant transport impact, especially if the SRN is used as a route for disposal vehicles.	This is included in the preliminary TA which can be seen in Appendix 17.1 in Volume 3 of the PEIR.

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
National Highways	JSJV note (for NH) 6th October 2021	JSJV require details of the disposal area and [if decided], confirmation that the waste would be loaded directly into the estuary without impacting the SRN.	All dredged material will be disposed at sea without any terrestrial road movements.
National Highways	JSJV note (for NH) 6th October 2021	To make an assessment, JSJV require full details of the proposed development, including the 'area to accommodate trailer and container parking and storage' and full details of 'a number of small terminal buildings' as proposed. In addition, JSJV request that the amount of parking proposed is provided.	The amount of parking proposed as part of the development can be seen in the preliminary TA in Volume 3 of the PEIR.
National Highways	JSJV note (for NH) 6th October 2021	JSJV acknowledge that at this stage, the final details of the proposal are yet to be confirmed.	The current scheme is described in Chapters 1 to 3 (Figure 1.3)
National Highways	JSJV note (for NH) 6th October 2021	<p>The baseline section of the TA should:</p> <ul style="list-style-type: none"> ▪ Describe the site background, including the site's location, history, and existing use; ▪ Describe the existing highway network in the area and the existing level of accessibility; ▪ Provide a collision data assessment should be undertaken covering the most recently available complete five-year period for the SRN; and ▪ Outline any relevant outline planning consents and Local Plan allocations. 	This is included in the preliminary TA which can be seen in Appendix 17.1 in Volume 3 of the PEIR.

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
National Highways	JSJV note (for NH) 6th October 2021	The impact of the development should be assessed based on relevant regional and national planning policy (e.g. DfT Circular 02/2013, NH guidance document 'The Strategic Road Network: Planning for The Future' [2015], The DfT document 'Road Investment Strategy 2: 2020-2025').	Relevant policy and guidance have been considered in Section 17.5.
National Highways	JSJV note (for NH) 6th October 2021	JSJV understand that Associated British Ports (ABP) will submit a separate scoping document to agree the scope of the TA with NH, however, items raised within this review provide an outline of the details that JSJV would require within any assessment submitted.	This is included in the preliminary TA which can be seen in Appendix 17.1 in Volume 3 of the PEIR.
National Highways	JSJV note (for NH) 6th October 2021	It is also noted that there is no reference to a Travel Plan within the submitted Scoping Report.	A Travel Plan will be included as part of the DCO submission as mentioned in Section 17.9.
National Highways	JSJV note (for NH) 6th October 2021	Full details of the proposed study area should be provided within the TA and ES.	Full details of the study area will be provided within the TA and ES.
National Highways	JSJV note (for NH) 6th October 2021	JSJV note that the current estimated construction timescales commencing in Summer 2023 and will have been largely completed by mid-2025. The resultant forecasted 'opening year' scenarios should be informed using these anticipated timescales.	The opening year of 2025 has been mentioned in Section 17.7.

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
National Highways	JSJV note (for NH) 6th October 2021	In addition to those agreed with North Lincolnshire Council, JSJV suggest that this development should consider recent development proposed by Able Marine, comprising a 'Material Change' to their existing DCO on application reference: TR30006. The TA should state whether there would be any relationship between the two sites.	The development proposed by Able Marine will be considered as a committed development in the traffic impact section of the TA.
National Highways	JSJV note (for NH) 6th October 2021	ABP should present firm, robust trip rates and trip generation for the development. The trip rates and resultant vehicle trip generation presented could be derived on a first principles approach or using trip rates from a different development site with a comparable level of accessibility and scale. Alternatively, the Trip Rate Information Computer System (TRICS) online database could be used.	Traffic generation and the method of calculation has been considered in Section 17.8.
National Highways	JSJV note (for NH) 6th October 2021	As the proposed land use is for 'employment', JSJV request that appropriate weekday peak hours are presented, and these should be informed by appropriate traffic counts if necessary.	The standard peak hours of 08:00-09:00 and 17:00-18:00 will be assessed as well as any other peak hours identified from the traffic surveys.
National Highways	JSJV note (for NH) 6th October 2021	Due to the nature of the proposals, the TA should also estimate the amount of estimated Heavy Goods Vehicle movement that would be generated from the proposed development both	This is included in the preliminary TA which can be seen in Appendix 17.1 in Volume 3 of the PEIR.

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
		during the construction and operational phases.	
National Highways	JSJV note (for NH) 6th October 2021	JSJV suggest that the trip distribution rates for the proposed development, the trip assignment based on these rates, and the proposed traffic flows, are clearly presented on traffic flow diagrams. Considering the proposed development's location, JSJV expect the traffic flow diagrams to extend from the proposed development to all junctions that connect to both the A160 and A180.	The traffic flow diagrams are mentioned in Section 17.8 and can be seen as part of Volume 3 of the PEIR.
National Highways	JSJV note (for NH) 6th October 2021	Given the proposed development's scale and proximity to the SRN, JSJV suggest that a construction traffic management plan (CTMP) should be produced and agreed with NH, prior to the determination of this planning application.	This is considered in Section 17.5.
North Lincolnshire Council (highways)	Email 05/10/21	Confirms proposed ES scope is acceptable.	Ongoing discussions are being held with North Lincolnshire District Council and the preliminary TA will be discussed separately with them.

17.5 Implications of policy, legislation, and guidance

17.5.1 This section of the chapter sets out key aspects and implications of policy and guidance that are relevant to the assessment of likely impacts on traffic and transport. It builds upon the overarching chapter covering the Legislative and Consenting Framework (Chapter 5). This will be kept under review as the assessment progresses.

UK legislation

17.5.2 The traffic and transport assessment will be predominantly governed by the statutory framework provided by the Highways Act 1980 which directs the management and operation of the road network in England and Wales.

National policy

National Policy Statement for Ports (NPSfP)

17.5.3 The NPSfP (DfT, 2012) provides in paragraph 5.4.4 that:

“If a project is likely to have significant transport implications, the applicant’s Environmental Statement (ES) should include a TA, using the WebTAG1 methodology stipulated in Department for Transport (DfT) guidance, or any successor to such methodology. Applicants should consult Highways England and/or the relevant highway authority, as appropriate, on the assessment and mitigation. The assessment should distinguish between the construction, operation, and decommissioning project stages as appropriate.”

17.5.4 As well as a TA, paragraph 5.4.5 requires the applicant, where appropriate, to:

“Prepare a travel plan, including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.”

17.5.5 Paragraph 5.4.8 states that:

“The TA should include private traffic accessing and leaving the port, where significant, even where not generated by the development under application”.

17.5.6 This chapter and the accompanying preliminary TA have been prepared in consultation with NH and the Local Highway Authorities following their initial advice. The nature of the development is such that a Travel Plan is not appropriate as the vast majority of the traffic will consist of HGVs.

17.5.7 A Construction Environmental Management Plan (CEMP) will be agreed as part of the DCO application process before the close of the Nationally Significant Infrastructure Project Examination.

National Planning Policy Framework (NPPF)

17.5.8 In July 2021, the Government published a revised National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021). This preliminary assessment should therefore be read in the context of the new NPPF.

17.5.9 Paragraph 111 of the NPPF is clear that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".

17.5.10 Within this context, the NPPF provides in Paragraph 112 that applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and within neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- c) create places that are safe, secure, and attractive – which minimise the scope for conflicts between pedestrians, cyclists, and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible, and convenient locations.*

17.5.11 Paragraph 113 of the NPPF goes on to state that:

"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed".

17.5.12 In reinforcing the principle of supporting sustainable development, paragraph 10 stipulates that at the heart of the Framework is

"A presumption in favour of sustainable development".

DfT Circular 02/2013 – ‘Strategic road network and the delivery of sustainable development’

17.5.13 DfT Circular 02/2013 (Highways Agency and DfT, 2013) sets out the way in which Highways England, now NH will engage with communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the strategic network.

17.5.14 Where development proposals are consistent with an adopted Local Plan, Highways England does not anticipate the need for engagement in a full assessment process at the planning application stage. However, where proposals are not consistent with the adopted Local Plan then a full assessment of the impact will be necessary.

17.5.15 NH require that:

“In consultation with relevant infrastructure providers, statutory environmental advisors and consenting authorities, developers must ensure all environmental implications associated with their proposals, are adequately assessed and report so as to ensure that the mitigation of any impact is compliant with prevailing policies and standards. This requirement applies in respect of the environmental impact arising from the temporary construction works and permanent transport solution associated with the development, as well as the environmental impact of the existing trunk road upon the development itself.”

Para 45

Local policy

North East Lincolnshire Local Plan 2013-2032

17.5.16 The local plan is a key document which will guide the changing use of land in the Borough and define the purpose to which it is put in the future (North East Lincolnshire Borough Council, 2018). The Plan sets out the Council’s vision and strategy for development, including why, where, and how the Borough will grow. The Plan is a plan for growth and aims to ensure North East Lincolnshire becomes a sustainable location in which people can live, work, and enjoy their recreation, both now and in the future.

17.5.17 Strategic Objective 7 considers transport around North East Lincolnshire.

“Improve accessibility to jobs and services by sustainable transport modes, including cycling and walking; reduce the overall need to travel with employment and housing growth spatially balanced; and provide the necessary infrastructure to support sustainable growth.”

17.5.18 Policy 36 promotes sustainable transport within North East Lincolnshire.

- *“To reduce congestion, improve environmental quality and encourage more active and healthy lifestyles, the Council will support measures that promote more sustainable transport choices. Where appropriate, proposals should seek to:*
 - *focus development which generates significant movements in locations where the need to travel will be minimised;*
 - *prioritise pedestrian and cycle access to and within the site;*
 - *make appropriate provision for access to public transport and other alternative means of transport to the car, adopting a 400 m walk to bus stop standard;*
 - *make suitable provision to accommodate the efficient delivery of goods and supplies; and,*
 - *make suitable provision for electric vehicle charging, car clubs and car sharing when considering car park provision.*
- *Planning permission will be granted where any development that is expected to have significant transport implications delivers necessary and cost effective mitigation measures to ensure that development has an acceptable impact on the network's functioning and safety. These measures shall be secured through conditions and/or legal agreements.*
- *Where appropriate, Transport Statements, Transport Assessments and/or Travel Plans should be submitted with applications, with the precise form being dependant on the scale and nature of development and agreed through early discussion with the Council.*
- *The priority areas where combinations of sustainable transport measure and highway improvements will be focused are:*
 - *Grimsby town centre;*
 - *Cleethorpes town and centre and resort area;*
 - *A180 corridor, (urban and industrial); and,*
 - *urban area congestion hotspots and defined air quality management zones.”*

Guidance

Institute of Environmental Assessment Guidance Note No 1

17.5.19 The Guidelines for the Environmental Assessment of Road Traffic (GEART) (Institute of Environmental Assessment, 1993) (the ‘IEA Guidelines’) were published in January 1993 by the Institute of Environmental Assessment. These guidelines assess the environmental impacts of road traffic associated with new developments, irrespective of whether the developments are to be subject to formal EIA.

17.5.20 The purpose of the guidelines is to provide the basis for systematic, consistent, and comprehensive coverage for the appraisal of traffic impacts arising from development projects. Impacts that may arise include pedestrian severance and pedestrian amenity, driver delay, accidents and safety and noise, vibration, and air quality.

17.5.21 The GEART have been used to inform this assessment.

Planning Practice Guidance

17.5.22 Following directly on from paragraph 111 of the NPPF, the 'Travel Plans, Transport Assessment and Statements in decision taking' Planning Policy Guidance (Department for Communities and Local Government (DCLG), 2014) paragraph 009 states:

“Local planning authorities must make a judgement as to whether a development proposal would generate significant amounts of movement on a case by case basis (i.e. significance may be a lower threshold where road capacity is already stretched or a higher threshold for a development in an area of high public transport accessibility).

In determining whether a Transport Assessment or Statement will be needed for a proposed development local planning authorities should take into account the following considerations:

- *The Transport Assessment and Statement policies (if any) of the Local Plan;*
- *The scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Transport Assessment or Statement);*
- *Existing intensity of transport use and the availability of public transport;*
- *Proximity to nearby environmental designations or sensitive areas;*
- *Impact on other priorities/ strategies (such as promoting walking and cycling);*
- *The cumulative impacts of multiple developments within a particular area; and*
- *Whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).”*

17.5.23 The document advocates initial consultation with key decision makers at an early stage through pre-application discussions to determine the scope of the technical work required to underpin the associated transport assessments and travel plans. The key issues it suggests that should be considered are:

- *“The planning context of the development proposal;*
- *Appropriate study parameters (i.e. area, scope, and duration of study);*
- *Assessment of public transport capacity, walking/ cycling capacity and road network capacity;*
- *Road trip generation and trip distribution methodologies and/ or assumptions about the development proposal;*
- *Measures to promote sustainable travel;*
- *Safety implications of development; and*
- *Mitigation measures (where applicable) – including scope and implementation strategy.”*

17.5.24 It acknowledges that the scope and level of detail in reports will vary from site to site, but suggests the following should be considered when confirming the scope of the proposed assessment:

- *“Information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport);*
- *Information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
- *Data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;*
- *A qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
- *An assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);*
- *Data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*
- *An analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;*
- *An assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
- *Measures to improve the accessibility of the location (such as provision/ enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
- *A description of parking facilities in the area and the parking strategy of the development;*
- *Ways of encouraging environmental sustainability by reducing the need to travel; and*
- *Measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.*

In general, assessments should be based on normal traffic flow and usage conditions (e.g. non-school holiday periods, typical weather conditions) but it may be necessary to consider the implications for any regular peak traffic and usage periods (such as rush hours). Projections should use local traffic forecasts such as TEMPRO drawing where necessary on National Road Traffic Forecasts for traffic data.

The timeframe that the assessment covers should be agreed with the local planning authority in consultation with the relevant transport network operators and service providers. However, in circumstances where there will be an impact on a national transport network, this period will be set out in the relevant Government policy.”

Para 015

The Strategic Road Network: Planning for the Future

17.5.25 This guidance document describes the approach which NH (formerly Highways England) takes to engage in the planning system and the issues looked at when considering draft planning documents. It also offers advice on the information which NH would like to see included in a planning proposal. The relevant paragraphs are summarised below.

“Transport assessments should generally be carried out in line with prevailing government guidance in agreement with us, through preapplication and scoping, such as a road safety audit (stage 1)”.

Para 37

“We will expect to see measures implemented that fully mitigate any and all environmental impacts arising from and relating to the interaction between developments and the SRN. There are three aspects to this:

- *The environmental impacts arising from the temporary construction works;*
- *The environmental impacts of the permanent transport solution associated with the development; and*
- *The environmental impact of the road network upon the development itself.”*

Para 49

“To avoid potential delay or challenge, transport assessments/statements and environmental statements/impact assessments should be mutually consistent and pay due regard to each other.”

Para 52

“If the development is in an approved local plan and has had an appropriate level of assessment of the impact of the development undertaken, we [Highways England] do not anticipate the need to repeat the full assessment process at the planning application stage.”

Para 87

“If, however, the development proposed has not been subject to an appropriate level of assessment, or is not included or consistent with an approved local plan, then we anticipate agreeing the scope of work

required to make a full assessment. For those sites that have been considered at local plan stage, we will take into account any assessment already undertaken.”

Para 88

“Formal pre-application discussions are an effective means of gaining a good, early understanding of the development, its benefits, its likely impacts and its infrastructure needs. By consulting with us pre-application, you will ensure that the transport assessment you prepare is appropriately scoped and is based on the most relevant and up-to-date data. It will also ensure that you are made aware of, and can take account of, any SRN issues that might have a bearing on the way in which the development is planned and/or delivered. This, in turn, helps avoid delays and difficulties further into the application process”.

Para 94

“If a SR is to be prepared, we advise this includes:

- *Details of the development, such as location, access arrangements, use class, size or number of units, likely phasing, maximum number of parking spaces and any other relevant information;*
- *Proposed methodology for estimating the vehicular trip generation and distribution on the SRN, and resulting trip generation figures;*
- *Proposed methodology for assessing the impact of this trip generation on the SRN; and*
- *Proposed methodology for assessing the environmental consequences of the transport impacts of the development.”*

Para 98

17.6 Preliminary description of the existing environment

Local Highway Network

- 17.6.1 A plan of the local road network can be seen on Figure 17.1, and the wider network is shown on Figure 17.2. This shows the context of the Port of Immingham which has two highway access points, East Gate and West Gate.
- 17.6.2 From East Gate – Queens Road is a single carriageway road which measures approximately 8.0 m in width. The road is subject to a 40 mph speed limit. There is a footway along the western side of the carriageway starting some 700 m south of the East Gate. Queens Road runs between the East Gate of the Port of Immingham and the A1173 Manby Road via a three-arm roundabout.
- 17.6.3 From West Gate – Humber Road is a single carriageway road which measures approximately 10 m in width. The road is subject to a 40 mph speed limit. Humber Road runs between the West Gate of the Port and the A160/ A1173 Manby Road/ Humber Road Roundabout.

- 17.6.4 The A1173 Manby Road is a single carriageway road which measures approximately 8.0 m in width. The road is subject to the national speed limit of 60 mph. There is a footway along the A1173 which changes between the eastern and western sides of the carriageway between the A1173 Manby Road/ Queens Road Roundabout and the A1173 Manby Road/ Pelham Road Roundabout. Dropped kerbs with tactile paving are provided at all crossing points. The A1173 runs between the A160/ A1173 Manby Road/ Humber Road Roundabout and the A180/ A1173 Manby Road Roundabout.
- 17.6.5 The A160 is a dual carriageway road which measures approximately 26 m in width with an approximately 6.5 m wide central reservation. The road is subject to the national speed limit of 70 mph. The A160 runs between the A160/ A1173 Manby Road/ Humber Road Roundabout and the A180.
- 17.6.6 The A180 is a dual carriageway road which measures approximately 20 m in width. The road is subject to the national speed limit of 70 mph. The A180 runs between Grimsby and becomes the M180 motorway some 20 km south-west of the Port of Immingham.
- 17.6.7 The M180 motorway runs from Junction 5 of the M18 motorway before becoming the A180 near Immingham.

Existing Rail Infrastructure

- 17.6.8 There are two running lines passing through the port estate, both of which enter the Port boundary at Humber Road Junction. At this point the main running line (KIL1) travels in a north-easterly direction, curving north-westerly at West Junction where it exits the port estate to join the branch line to Killingholme (KIL2). KIL2 subsequently crosses Station Road by means of a level crossing. This is shown in Figure 17.4.
- 17.6.9 ABP control and operate all the lines within the Port Estate.
- 17.6.10 KIL1 is the most heavily used part of the Immingham Dock rail infrastructure. It connects into terminal facilities at Humber International Terminal (HIT), Tata's Immingham Bulk Terminal (IBT), Simon Storage West, Henderson Quay, the Mineral Quay, and the Killingholme Branch Line (KIL2).
- 17.6.11 The national rail network, operated by Network Rail and leading to the Port of Immingham provides three routes from the East Coast Main Line (ECML) to the key intersection at Wrawby Junction, about 14 km (*circa* 9 miles) west of Immingham. These are the west facing South Humberside Line passing Scunthorpe and joining the ECML at Doncaster. The south-west facing Brigg Line passes Gainsborough joining the ECML at Retford. The south facing Lincoln Line passes through Lincoln and joins the ECML at Newark.
- 17.6.12 East of Wrawby Junction is a three-track railway of four miles to Brocklesby Junction where passenger services to Grimsby and Cleethorpes branch to the south-west. Freight traffic to the Port branches north to Ulceby then loops past the two Immingham oil refineries and onto the Port.

- 17.6.13 East of the Killingholme line, Immingham Reception sidings can be accessed, traffic can continue east on to DFDS Nordic Terminal, DB Cargo sidings, then onto ABP Rail sidings to the east of the Lock. Simon Storage and Ridleys Sidings. Onward rail running lines continue on the Grimsby Light Railway (PYE2) to Great Coates, with onward rail traffic facing west on to the Down Cleethorpes Line. PYE2 is bi-directional and access to Immingham reception sidings can be via Great Coates.
- 17.6.14 The proposed development straddles the existing railways line over which a bridge will be built.

Existing Traffic Flows

- 17.6.15 In order to inform the assessment, traffic count data has been collected on the local road network at various locations during 2021. The location of the survey work is shown at Figure 17.3.
- 17.6.16 Full details of the data will be provided in the TA. The data includes continuous 7-day link flow data and more detailed turning movement counts at local junctions.
- 17.6.17 Traffic flow data is also available from the DfT for the A160 (from Rosper Road to A180), the A180, M180 and A15 from 2019.
- 17.6.18 The resulting baseline 24-hour flows on the network area are as follows:

Table 17.6. Summary of Baseline Link Flows (24-hour two-way)

Location	AADT	HGVs
West Gate	5,536	2,360
East Gate	5,834	803
Queens Road	3,883	566
Kings Road (North of Queens Road)	7,722	568
A1173 (South of Kings Road)	7,384	795
A1173 (Stallingborough Road)	16,854	1,318
A180 (East of A1173)	34,246	3,253
A160 (Adjacent South Killingholme)	10,536	5,048
A180 (West of A160)	31,706	8,990
M180 (West of A15)	37,748	9,634
A15 (North of M180)	22,467	2,082

- 17.6.19 Additionally, a series of turning surveys were obtained from for the area surrounding the Port to support junction modelling assessments and these will be reported in the TA.

Road Safety

- 17.6.20 Personal Injury Collision (PIC) data has been obtained for the latest 5-year period (21/08/2016-20/08/2021) from North East Lincolnshire Council. North Lincolnshire have requested the use of Crashmap. Two areas have been analysed – the first is the A160/ A1173 Manby Road/ Humber Road

Roundabout and the area surrounding it, and the second is Queens Road, the A1173 Manby Road, and the A180/ A1173 Manby Road Roundabout. The dataset is assessed in detail in the Preliminary TA Scoping report.

17.6.21 Overall, it is concluded that there are no existing highway safety issues that would need to be addressed as part of this application.

Public Transport Provision

Bus Services

17.6.22 The nearest bus stop to the site is located on Queens Road approximately 250 m south of the East Gate into the Port of Immingham. The stop is serviced by the number 5M. This service runs between Immingham and Grimsby every Monday to Friday between 15:49 and 17:39 at a frequency of 30-minutes to 1-hour.

Rail Services

17.6.23 The nearest railway station to the Port is Habrough Railway Station which is approximately 7.5 km west off the B1210. There are 4 cycle storage spaces located at the station and 13 car parking spaces. The services at the station are operated by East Midlands Railway, Northern Trains and TransPennine Express.

17.6.24 On weekdays, the station is served by an hourly TransPennine Express service between Cleethorpes and Manchester Airport. East Midlands Railway operate a two-hourly service between Grimsby Town and Leicester via Lincoln and Nottingham as well as a two-hourly service between Cleethorpes and Barton-on-Humber. On Saturdays, there are also three trains per day between Cleethorpes and Sheffield via Brigg which are operated by Northern Trains.

17.6.25 On Sundays, the TransPennine Express service is two-hourly in the morning but increases to hourly in the afternoon. During the summer months, there are three East Midlands Railway services between Nottingham and Cleethorpes and four services to Barton-on-Humber with no services on either of these routes in the winter.

Walking and Cycling Provision

17.6.26 As well as the footways mentioned above, all the residential roads in and around Immingham have lit footways on both sides of the carriageway. They are also all subject to a 30 mph speed limit making them safe routes for both pedestrians and cyclists to use.

17.6.27 There is currently no segregated access into the port estate for pedestrians or cyclists.

17.6.28 There are a number of Public Rights of Way (PROWs) in the vicinity of the Port. There is a public footpath off Queens Road and a public Bridleway off

Laporte Road both of which are approximately 500 m from East Gate. All the PROWs near to the Port are identified in the Preliminary TA.

17.7 Future baseline environment

- 17.7.1 In the absence of the IERRT project, it is assumed there will be economic growth both on the proposed development site and in the wider port area which will result in increases in traffic movements.
- 17.7.2 The site of the proposed development forms part of the operational Port of Immingham and has been in active use for port purposes for a number of decades. The current use of the site is for bulk cargo, steel sections, lorry, and automotive storage. In the absence of the IERRT, the site would continue to be utilised for port activity.
- 17.7.3 Whilst there are understood to be no material physical changes to the baseline (in terms of highway works or infrastructure improvements), the local network will experience growth in traffic over the assessment period. This will include growth from other port related activities and growth from other economic development in the area.
- 17.7.4 The precise details of specific committed and cumulative developments are under discussion with consultees. At present it is assumed that the assessment will consider two scenarios a) year of opening (2025) and b) 10 years after year of application (in accordance with Circular 02/13) which will be 2032.
- 17.7.5 To inform this, the base traffic flows will be factored up using Trip End Model Presentation Program (Tempo) Growth Rates. The relevant Middle Super Output Area (MSOA) will be used for each junction or link which is assessed. The resulting factors are shown in Table 17.7.

Table 17.7. Future Year Growth Factors

Middle Super Output Area	Road Type	2019-2021		2021 – 2025		2021 – 2032	
		AM	PM	AM	PM	AM	PM
North East Lincolnshire 001	Minor	1.0189	1.0175	1.0298	1.0291	1.0773	1.0750
	Trunk	1.0281	1.0266	1.0401	1.0394	1.1049	1.1025
North East Lincolnshire 007	Minor	1.0133	1.0123	1.0269	1.0255	1.0683	1.0649
	Principal	1.0132	1.0121	1.0262	1.0248	1.0654	1.0620
	Trunk	1.0224	1.0214	1.0372	1.0358	1.0957	1.0921
North Lincolnshire 004	Trunk	1.0252	1.0239	1.0443	1.0434	1.1131	1.1108
North Lincolnshire 011	Motorway	1.0296	1.0289	1.0501	1.0500	1.1262	1.1260

17.7.6 Given the lack of any significant housing growth in the immediate area, the predominant growth will occur from increased commercial activity in and around the Port of Immingham. Road based throughput has increased from the port by around 10 % over the last ten years. On that basis the Temprow growth rates of *circa* 7 to 10 % on the local roads is consistent with historic growth.

17.8 Preliminary Consideration of Likely Impacts and Effects

17.8.1 This section identifies the potential likely effects on the traffic and transport receptors as a result of the construction and subsequent operation of the IERRT project which have been identified at this preliminary stage.

Construction phase

17.8.2 This section contains an assessment of the potential impacts to traffic and transport as a result of the construction phase of the IERRT project.

17.8.3 The timescales for the construction phase of the project is under review at present.

17.8.4 Around 120 to 150 construction workers are expected on site on a typical day. The Census 2011 journey to work data for the MSOA within which the site is located shows that around 65 % of people drive to work. Applying this to the maximum number of staff indicated above equates to 98 trips (196 two-way light vehicle movements).

17.8.5 In total, therefore, forecast construction traffic movements are 196 light vehicles on a typical day and a maximum of 140 heavy vehicle movements (70 in, 70 out) per working day.

17.8.6 Overall, the daily construction traffic movements (*circa* 340 movements) will be significantly lower than the operational traffic level set out in the following paragraphs (*circa* 2,500 movements). Furthermore, this level of traffic will be occurring for a temporary period of time. The environmental impacts will therefore be reduced from those set out below for the operational phase.

Operational phase

17.8.7 This section contains an assessment of the potential impacts to traffic and transportation as a result of the operational phase of the IERRT project. The following impact pathways have been assessed:

- Light vehicle generation;
- Heavy goods vehicle generation;
- Traffic distribution; and
- Overall traffic impact.

Light vehicle generation

- 17.8.8 Land side staffing will include customs, security and stevedores and it is expected that up to 50 staff per shift over 3 shifts per day will be required. It is assumed that the three shifts will be 06:00-14:00, 14:00-22:00, and 22:00-06:00.
- 17.8.9 At present, there are very few on site staff and so the staffing levels above are assumed to all be new. This equates to 150 vehicles in and out over the day.
- 17.8.10 There will also be servicing and maintenance vehicles accessing the site throughout the day. This equates to an average of 5 vehicles in and out (10 two-way movements) in each hour between 07:00 and 19:00.
- 17.8.11 The profile of the light vehicle movements can be seen in Table 17.8 below.

Table 17.8. 24hr Traffic Profile for Staff and Service Vehicle Movements

	Inbound	Outbound	Total
00:00-01:00	0	0	0
01:00-02:00	0	0	0
02:00-03:00	0	0	0
03:00-04:00	0	0	0
04:00-05:00	0	0	0
05:00-06:00	50	0	50
06:00-07:00	0	50	50
07:00-08:00	5	5	10
08:00-09:00	5	5	10
09:00-10:00	5	5	10
10:00-11:00	5	5	10
11:00-12:00	5	5	10
12:00-13:00	5	5	10
13:00-14:00	50	5	55
14:00-15:00	5	50	55
15:00-16:00	5	5	10
16:00-17:00	5	5	10
17:00-18:00	5	5	10
18:00-19:00	5	5	10
19:00-20:00	0	0	0
20:00-21:00	0	0	0
21:00-22:00	50	0	50
22:00-23:00	0	50	50
23:00-24:00	0	0	0

Heavy goods vehicle generation

17.8.12 The HGV generation related to the Ro-Ro element has been derived using the following assumptions:

- Days of operation = 364 days per year (52x7);
- Throughput of cargo units pa = 880,000;
 - Each berth can accommodate a design vessel which carries a maximum of 300 units per trip with one visit per day (600 units). This therefore equates to a total of 220,000 units per year per berth;
- Throughput of accompanied trailers, based on the current split provided by the intended operator, pa = 246,400;
- Throughput of unaccompanied trailers, based on the current split provided by the intended operator, pa = 633,600;
- Number of HGV movements per freight unit;
 - Unaccompanied will be dropped off and whilst generally an HGV will drop and collect in the same visit, an allowance of 10 % has been allowed for single deliveries meaning 1 unit = 1.1 HGV movements;
 - Accompanied all have a tractor unit attached so each unit = 1 HGV movement; and
- All traffic will travel by road.

17.8.13 On that basis total HGV movements generated by day can be seen in Table 17.9 below.

Table 17.9. Annual Throughput Assumptions

	Units In	Units out	Total
Annual Units	440,000	440,000	880,000
Accompanied units	123,200	123,200	246,400
Unaccompanied Units	316,800	316,800	633,600
HGVs for Unaccompanied Units	348,480	348,480	696,960
Total HGVs	471,680	471,680	943,360

17.8.14 Based on 364 days per year this equates to a total of 1,296 HGVs in and 1,296 HGVs out per day, a total of 2,592 movements.

17.8.15 The above generation is based on the maximum capability of the proposed development based on four berths being built each servicing four vessels carrying a full cargo load. This report is addressing up to four berths, so it is unlikely to be achieved in reality.

17.8.16 The HGV profile is provided below in Table 17.10 based on a typical operators' activities, split between unaccompanied freight (which is generally spread across the day) and accompanied freight (which tends to be more focused on sailing times) and Table 17.11 based on surveys of existing HGV profiles from the Port of Immingham generally.

Table 17.10. 24hr Traffic Generation Summary Based on End User Profile

	Inbound	Outbound	Total
00:00-01:00	3	1	5
01:00-02:00	2	1	3
02:00-03:00	2	1	3
03:00-04:00	2	1	3
04:00-05:00	2	4	6
05:00-06:00	5	12	16
06:00-07:00	15	29	45
07:00-08:00	25	42	67
08:00-09:00	35	33	68
09:00-10:00	41	295	336
10:00-11:00	47	120	167
11:00-12:00	54	97	152
12:00-13:00	58	98	157
13:00-14:00	67	105	171
14:00-15:00	84	93	177
15:00-16:00	120	84	204
16:00-17:00	142	82	224
17:00-18:00	161	70	231
18:00-19:00	193	55	248
19:00-20:00	170	39	209
20:00-21:00	51	22	72
21:00-22:00	8	8	16
22:00-23:00	4	3	7
23:00-24:00	3	2	4

Table 17.11. 24hr Traffic Generation Summary Based on Port of Immingham Profile

	Inbound	Outbound	Total
00:00-01:00	8	6	17
01:00-02:00	8	9	20
02:00-03:00	6	9	16
03:00-04:00	12	9	23
04:00-05:00	25	17	45
05:00-06:00	60	26	84
06:00-07:00	94	53	145
07:00-08:00	104	57	157
08:00-09:00	84	76	161
09:00-10:00	82	93	169
10:00-11:00	83	99	179
11:00-12:00	88	103	187
12:00-13:00	90	97	184
13:00-14:00	103	105	205
14:00-15:00	102	114	214
15:00-16:00	98	101	198
16:00-17:00	76	101	179
17:00-18:00	55	83	139

	Inbound	Outbound	Total
18:00-19:00	41	52	97
19:00-20:00	22	36	62
20:00-21:00	17	18	38
21:00-22:00	13	13	28
22:00-23:00	15	11	28
23:00-24:00	9	10	19

Traffic distribution- Light vehicles

17.8.17 The light vehicle traffic has been distributed using the 2011 Census Journey to Work data for the MSOA North East Lincolnshire 001 which the site is located within. A summary of the journey to work data can be seen in Table 17.12 below.

Table 17.12. Journey to Work Summary for MSOA North East Lincolnshire 001

Location	Percentage
North East Lincolnshire	67.1 %
<i>North East Lincolnshire 001</i>	17.6 %
North Lincolnshire	17.9 %
West Lindsey	5.0 %
East Lindsey	3.6 %
East Riding of Yorkshire	1.5 %
Kingston upon Hull	1.5 %
Other	3.3 %

17.8.18 In order to present a worst-case scenario, the junctions will be assessed to have 50 vehicles travelling inbound and outbound from the site in the AM and PM peak periods.

17.8.19 The distribution of the light vehicles can be seen in Figure 17.5 with the assignment of the light vehicles in Figure 17.6.

Traffic distribution- Goods vehicles

17.8.20 The wider distribution for commercial traffic on the strategic highway network has been derived using data included within the Base Year Freight Matrices (BYFM) published by the DfT (2012). The Matrices consist of the number of vehicles per average day between a set of origin-destination zone pairs for a 2006 base year. These zones are based on all 408 local authority districts, unitary authorities and London Boroughs and point zones for the 88 largest ports, of which the Port of Immingham is one, 5 main freight airports and 56 major concentrations of distribution centres.

17.8.21 The outputs from the model have been analysed through the ArcGIS package to determine likely route of vehicles. The Geographic Information System (GIS) assumed routing has been sense checked using Google maps and a review of the suitability of the network.

17.8.22 The resulting distribution and assignment of heavy vehicles on the wider network can be seen in Table 17.13 below.

Table 17.13. HGV Distribution and Assignment

Region	Distribution	Assignment
East of England	2.6 %	A1173 (Stallingborough Road)
East Midlands	21.5 %	M180 20.5 % A1173 (Stallingborough Road) 0.8 % Hobson Way 0.2 %
Greater London	1.5 %	M180
North East	0.9 %	M180
North West	7.4 %	M180
Scotland	2.9 %	M180
South East	1.4 %	M180
South West	1.3 %	M180
Wales	1.7 %	M180
West Midlands	12.2 %	M180
Yorkshire and the Humber	46.7 %	M180 43.2 % A15 3.1 % Hobson Way 0.4 %

17.8.23 The facility is located adjacent to East Gate on the eastern side of the docks. As described above the assignment of traffic locally from the port is a function of the destination of the vehicles. Both GIS and Google Maps confirm the quickest route from the site to the M180 west is via the East Gate.

17.8.24 However, the route through the port is marginally shorter and therefore it can be expected some traffic might chose that route, which will depend on day-to-day changes in flows, Satnav systems etc.

17.8.25 On that basis it is assumed that the majority of traffic 85 % will use East Gate, with a sensitivity assessment of 15 % using West Gate.

17.8.26 The flows for each gate are set out below using the end user profile, Table 17.14, and the Port of Immingham profile, Table 17.15.

Table 17.14. 24hr Traffic Distribution Summary Based on End User Profile

	To West Gate			To East Gate		
	Inbound	Outbound	Total	Inbound	Outbound	Total
00:00-01:00	0	0	1	3	1	4
01:00-02:00	0	0	0	2	1	3
02:00-03:00	0	0	0	1	1	2
03:00-04:00	0	0	0	2	1	2
04:00-05:00	0	1	1	2	3	5
05:00-06:00	1	2	2	4	10	14
06:00-07:00	2	4	7	13	25	38
07:00-08:00	4	6	10	21	36	57

	To West Gate			To East Gate		
	Inbound	Outbound	Total	Inbound	Outbound	Total
08:00-09:00	5	5	10	30	28	58
09:00-10:00	6	44	50	35	251	285
10:00-11:00	7	18	25	40	102	142
11:00-12:00	8	15	23	46	83	129
12:00-13:00	9	15	23	50	83	133
13:00-14:00	10	16	26	57	89	146
14:00-15:00	13	14	27	72	79	151
15:00-16:00	18	13	31	102	71	174
16:00-17:00	21	12	34	121	70	191
17:00-18:00	24	10	35	137	59	196
18:00-19:00	29	8	37	164	47	211
19:00-20:00	26	6	31	145	33	178
20:00-21:00	8	3	11	43	18	62
21:00-22:00	1	1	2	7	7	14
22:00-23:00	1	0	1	3	2	6
23:00-24:00	0	0	1	3	1	4

Table 17.15. 24hr Traffic Distribution Summary Based on Port of Immingham Profile

	To West Gate			To East Gate		
	Inbound	Outbound	Total	Inbound	Outbound	Total
00:00-01:00	1	1	3	7	5	14
01:00-02:00	1	1	3	7	8	17
02:00-03:00	1	1	2	5	8	14
03:00-04:00	2	1	3	10	7	19
04:00-05:00	4	3	7	21	14	38
05:00-06:00	9	4	13	51	22	71
06:00-07:00	14	8	22	80	45	123
07:00-08:00	16	9	24	88	49	133
08:00-09:00	13	11	24	71	64	137
09:00-10:00	12	14	25	69	79	143
10:00-11:00	13	15	27	71	84	152
11:00-12:00	13	15	28	75	87	159
12:00-13:00	14	15	28	77	83	156
13:00-14:00	15	16	31	88	89	174
14:00-15:00	15	17	32	87	98	182
15:00-16:00	15	15	30	83	86	168
16:00-17:00	11	15	27	65	86	152
17:00-18:00	8	13	21	46	71	118
18:00-19:00	6	8	15	35	44	83
19:00-20:00	3	5	9	18	31	53
20:00-21:00	3	3	6	14	15	32
21:00-22:00	2	2	4	11	11	24
22:00-23:00	2	2	4	13	9	24
23:00-24:00	1	1	3	7	8	16

- 17.8.27 The distribution of the commercial vehicles on the local highway network can be seen in Figure 17.7, with the assignment of the commercial vehicles in Figure 17.8.
- 17.8.28 The assignment of all vehicles accessing and departing the proposed development in the peak periods, measured in Passenger Car Units (PCUs), can be seen in Figure 17.9.
- 17.8.29 The percentage change for total vehicles and then also, for completeness, for HGVs is shown in Table 17.16 for the proposed operational traffic flows.

Table 17.16. Traffic Impact on the Surrounding Road Network for Proposed Traffic Flows

Locations	Base Traffic Flow – AADT		Proposed Traffic Flow		Percentage Increase	
	Totals	HGVs	Totals	HGVs	Total	HGVs
West Gate	5,536	2,360	456	389	8.2 %	16.5 %
East Gate	5,834	803	2,546	2,203	43.6 %	274.3 %
Queens Road	3,883	566	2,220	2,080	57.2 %	367.4 %
Kings Road (North of Queens Road)	7,722	568	94	0	1.2 %	0.0 %
A1173 (South of Kings Road)	7,384	795	2,299	2,187	31.1 %	275.1 %
A1173 (Stallingborough Road)	16,854	1,318	102	98	0.6 %	7.5 %
A180 (East of A1173)	34,246	3,253	69	39	0.2 %	1.2 %
A160 (Adj. South Killinghome)	10,536	5048	413	389	3.9 %	7.7 %
A180 (West of A160)	31,706	8,990	2,532	2,429	8.0 %	27.0 %
M180 (West of A15)	37,748	9,634	2,405	2,308	6.4 %	24.0 %
A15 (North of M180)	22,467	2,082	127	121	0.6 %	5.8 %

Likely Impacts and Effects – Operational Stage

17.8.30 The following sections of this chapter set out the impacts which have been identified, along with an indication of the significance of the resulting effects in the absence of any mitigation.

Severance

17.8.31 Severance is the perceived division that can occur within a community when it becomes separated by a major traffic route. Whilst the IEA Guidelines refer to the effect of traffic on severance of 30 %, 60 % and 90 % producing 'slight', 'moderate' and 'substantial' changes in severance respectively, it is suggested in the guidance that caution be applied to relying on these quanta of change as each case depends on specific local conditions.

17.8.32 Taking total traffic volumes – in accordance with the IEA Guidelines - the level of traffic related to the operational phase is less than 30 % on all links with the exception of the short section of Queens Road and Kings Road/A1173. The magnitude of overall traffic increase can, therefore, in accordance with Table 17.2 be categorised as negligible for the majority of links.

17.8.33 Combined with the fact that the relevant stretch of Queens Road is – in accordance with Table 17.1 – is categorised as a receptor of negligible / low sensitivity meaning that the overall effect is insignificant on this stretch of road.

17.8.34 For completeness, a similar exercise has been undertaken in respect of HGVs only. For HGVs, the increase is above 30 % on Queens Road and the A1173. This increase is, however, due to the fact that base flows along these roads are currently under-utilised. The road has long been an integral part of the key highway access to the port.

17.8.35 The A160 / A180 are categorised as receptors of negligible / low sensitivity (Table 17.1). The magnitude of the impact is considered to be major (Table 17.2). Overall, therefore, just considering HGV flows alone results in an effect considered to be, at worst, of moderate significance (Table 17.4).

17.8.36 The impact on the strategic network is dealt with further in the preliminary TA. In terms of the impact on the M180 and A15 on the strategic road network, the daily percentage change will be 6.4 and 0.6 % respectively.

17.8.37 The magnitude of overall traffic increase can, therefore, in accordance with Table 17.2 be categorised as negligible. Combined with the fact that the A13 is – in accordance with Table 17.1 - categorised as a receptor of negligible / low sensitivity meaning that the overall effect is **insignificant**.

Driver Delay

- 17.8.38 The IEA Guidelines note that driver delay is only likely to be significant when the traffic on the highway network is at or close to the capacity of the system. Each of the roads considered within the assessment operate well within capacity threshold levels for future years.
- 17.8.39 It can, therefore, be concluded that there will be negligible impact in respect of driver delay. As part of the detailed TA junction modelling will be provided to review this as appropriate. There are no operational impacts associated with the Ro-Ro proposals.
- 17.8.40 Adopting the methodology set out in Tables 17.1 to 17.4, the overall network, are negligible / low sensitivity receptors (Table 17.1). The magnitude of the impact is minor / slight (Table 17.2) and overall, this is considered to be an **insignificant / minor** effect (Table 17.4). As already indicated, in common with standard assessment practice, minor effects are not considered be significant in environmental assessment terms.

Pedestrian Delay and Amenity

- 17.8.41 Given the range of local factors and conditions which can influence pedestrian delay, the guidance suggests it is not considered wise to set down any thresholds, but instead it is recommended that assessors use their judgement to determine whether pedestrian delay is a significant impact.
- 17.8.42 There are no footways on the A160. On site observations confirm that pedestrian activity on Queens Road is relatively low. It is, therefore, concluded that the proposals will have an insignificant effect on pedestrian delay and amenity.
- 17.8.43 Adopting the methodology set out in Tables 17.1 to 17.4, the pedestrian routes within the vicinity of the site are considered to be low sensitivity receptors (Table 17.1). The magnitude of the impact is minor / slight (Table 17.2) and overall, this is considered to be an **insignificant / minor** effect (Table 17.4). As already indicated, in common with standard assessment practice, minor effects are not considered be significant in environmental assessment terms.

Accidents and Safety

- 17.8.44 The review of existing accident records above confirms that whilst incidents occurred at a number of locations along the access routes there are no clusters identified and there were no patterns in the causal factors or specific locations of incidents, and none were related to deficiencies in highway layout or design.
- 17.8.45 Adopting the methodology set out in Tables 17.1 to 17.4, the low sensitivity of the receptor (Table 17.1) and negligible magnitude of impact (Table 17.2) results in an **insignificant** effect (Table 17.4) of the proposals on highway safety.

Hazardous or Abnormal Loads

- 17.8.46 The Terminal will accommodate HGVs which may be carrying Hazardous and Abnormal Loads.
- 17.8.47 These will be managed through other regulations both on site and when the vehicle is travelling on the public highway.
- 17.8.48 Once a vehicle leaves the port the transport of any hazardous load is the responsibility of the haulier and prospective clients under the European Agreement concerning International Carriage of Dangerous Goods by Road (ADR) to ensure compliance with the regulations set out within that agreement.
- 17.8.49 On this basis, procedures will be in place for transporting such on the local road network to ensure any risks are minimised.
- 17.8.50 Any abnormal loads will be moved under standard procedures including notification of police as necessary.
- 17.8.51 Adopting the methodology set out in Tables 17.1 to 17.4, the low sensitivity (Table 17.1) and negligible magnitude of impact (Table 17.2) results in an **insignificant** effect of hazardous or abnormal loads as a result of the proposals (Table 17.4).

Fear and Intimidation

- 17.8.52 The IEA Guidelines identify indicative levels of traffic and HGV flows at which point fear and intimidation is considered to be notable. Whilst the average traffic flow over an 18-hour day on the majority of road links resulting from the proposals is above the threshold identified in the IEA Guidelines, the existing footfall on adjacent roads is low.
- 17.8.53 Therefore, such traffic will not be close to major pedestrian routes, and it is not considered that there will be a lack of protection, for example caused by narrow pavements widths.
- 17.8.54 Adopting the methodology set out in Tables 17.1 to 17.4, the low sensitivity (Table 17.1) and minor/slight magnitude of impact (Table 17.2) results in a **minor / insignificant** effect (Table 17.4) of the proposals on fear and intimidation.

17.9 Mitigation measures

- 17.9.1 There are no specific highway capacity mitigation measures required to ensure the proposed development is acceptable in highway terms.
- 17.9.2 The NPSfP (paragraph 5.4.12) encourages the use of demand management measures for spreading peak hour traffic impacts. The ES and TA at present confirms this is not required. However, as the assessments progress this will be considered if necessary.

17.9.3 NPSfP Paragraph 5.4.22 requires consideration of the following mitigation:

- Control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;
- Make sufficient provision for HGV parking, either on the port estate or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads during normal operating conditions. Developments should be designed with sufficient road capacity and parking provision (whether on- or offsite) to avoid the need for prolonged queuing on approach roads, and particularly for uncontrolled on-street HGV parking on nearby public roads in normal traffic operating conditions, and allowing reasonable estimates for peak traffic patterns and fluctuations during normal operations; and
- Ensure satisfactory arrangements, taking account of the views of road network providers and of the responsible police force(s), for dealing with reasonably foreseeable abnormal disruption. Where such effects are likely to cause queuing on the strategic road network or significant queuing on local roads, the applicant should include the outcome of consultation with the relevant police force(s) as to traffic management measures that will be brought into effect, what the procedures will be for triggering them, and attribution of costs.

17.9.4 If abnormal conditions prevent sailing, then there are mitigation methods to prevent a build-up of HGVs off-site. All HGVs are booked in through a booking system so if there is a delay of more than 30 minutes or a not scheduled cancellation then the operator will advise customers with a cancel and delay advice by email and Short Message Service (SMS). If there is a cancelled sailing, the reservations department will also call all freight customers to rebook. The same approach will be taken for travel passengers. All scheduled cancellations will be communicated long in advance.

17.9.5 The site layout will be designed to accommodate all peak inbound traffic movements. No specific off-site management for HGV is therefore necessary.

17.9.6 A Framework Travel Plan will be produced as part of the DCO Submission to ensure that any vehicle movements which can be reduced are committed to being reduced.

17.9.1 The initial assessment of the preliminary traffic data has indicated that there may be the potential for adverse noise effects at residential NSRs along Queens Road due to additional HGV movements from the new facility once fully operational. Mitigation may, therefore, be required to avoid any significant adverse noise impact. Potential mitigation options will be reviewed as part of the ES process, and may involve the routing, at some times in the day, of HGVs via West Gate onto the A160.

17.9.2 Rail is not currently considered to be a feasible or viable mode for Ro-Ro traffic, although this will be kept under continuous review and the layout does not in any way prejudice use of rail. Two options have been considered as set out below.

17.9.3 Option 1 – Piggyback Ro-Ro trailers on rail wagons

- Requires gauge clearance to European gauge or specialist wagons
 - UK Gauge to key Humber market to the North West gauge cleared to W12 2026, no plans to gauge clear to European Gauge (High Speed Rail);
 - No specialist UK wagons exist, would require new build wagons and restricted trailer height to fit on W12 gauge cleared routes; and
 - Cost to lift the vehicle on and off the train at each end could be commercially unviable.

17.9.4 Option 2 – De-van the road trailer into containers

- Will require the cost, time, and space to perform the activity at the port. All commercial unviable;
- Key routes to the North West is not currently gauge cleared until 2026; and
- Containers would need to be a drop and swap and end location rather than the destuffing otherwise the final mile costs are unviable.

17.10 Limitations

17.10.1 The assessment has been undertaken based on the following assumptions:

- The baseline traffic flows as recorded in November 2021 are representative. Although November is a neutral month, the long-term implications of COVID on traffic flows generally is uncertain.

17.11 Preliminary Conclusions on Residual Effects

17.11.1 A summary of the impact pathways that have been assessed, the identified residual impacts and level of confidence is presented in Table 17.17.

17.11.2 The preliminary assessment undertaken has considered the impact of the maximum daily traffic associated with the proposed development. The scope of impact matters to be assessed and impact significance have been based upon IEA Guidelines and best practice techniques.

17.11.3 From the assessment undertaken, it is concluded that there will be no residual adverse significant impacts on the free flow of traffic and road safety as a result of the proposals.

Table 17.17. Summary of potential impact, mitigation measures and residual impacts

Receptor	Impact pathway	Impact Significance	Mitigation measure	Residual Impact	Confidence
Construction Phase					
Severance	Pedestrians	Insignificant	None	Insignificant	Medium
Driver Delay	Road users	Insignificant	None	Insignificant	Medium
Pedestrian Delay and Amenity	Pedestrians	Insignificant	None	Insignificant	Medium
Accidents and Safety	Road users	Insignificant	None	Insignificant	Medium
Hazardous or Abnormal Loads	Road users and pedestrians	Insignificant	None	Insignificant	Medium
Fear and Intimidation	Pedestrians	Insignificant	None	Insignificant	Medium
Operational Phase					
Severance	Pedestrians	Insignificant/ minor	None	Insignificant/ minor	Medium
Driver Delay	Road users	Insignificant/ minor	None	Insignificant/ minor	Medium
Pedestrian Delay and Amenity	Pedestrians	Insignificant/ minor	None	Insignificant/ minor	Medium
Accidents and Safety	Road users	Insignificant	None	Insignificant	Medium
Hazardous or Abnormal Loads	Road users and pedestrians	Insignificant	None	Insignificant	Medium
Fear and Intimidation	Pedestrians	Insignificant/ minor	None	Insignificant/ minor	Medium

17.12 References

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17.13 Abbreviations/Acronyms

Acronym	Definition
AADT	Annual Average Daily Traffic
ABP	Associated British Ports
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
AM	Ante Meridiem (before noon)
ATC	Automatic Traffic Count
BYFM	Base Year Freight Matrices
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DTA	David Tucker Associates
ECML	East Coast Main Line
EIA	Environmental Impact Assessment

ES	Environmental Statement
GEART	Guidelines for the Environmental Assessment of Road Traffic
GIS	Geographic Information System
HGV	Heavy Goods Vehicle
HIT	Humber International Terminal
IBT	Immingham Bulk Terminal
IEA	Institute of Environmental Assessment
IERRT	Immingham Eastern Ro-Ro Terminal
JSJV	Jacobs Systra Joint Venture
LA	Lifecycle Analysis
MSOA	Middle Super Output Area
NH	National Highways
NPPF	National Planning Policy Framework
NPSfP	National Policy Statement for Ports
PEIR	Preliminary Environment Information Report
PIA	Personal Injury Accident
PIC	Personal Injury Collision
PINS	Planning Inspectorate
PM	Post Meridiem (after noon)
PROW	Public Rights of Way
SMS	Short Message Service
SRN	Strategic Road Network
TA	Transport Assessment
Tempro	Trip End Model Presentation Program
TRICS	Trip Rate Information Computer System
UK	United Kingdom

Cardinal points/directions are used unless otherwise stated.

SI units are used unless otherwise stated.

17.14 Glossary

Term	Definition
Baseline Conditions	Existing conditions and past trends associated with the environment in which a proposed activity may take place

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