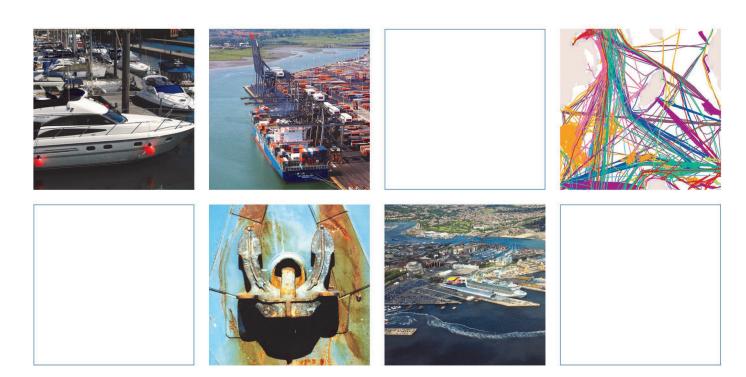
Associated British Ports

Immingham Eastern Ro-Ro Terminal

Preliminary Environmental Information Chapter 16: Socio-economic Receptors

January 2022



Innovative Thinking - Sustainable Solutions



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16 Socio-economic Receptors

16.1 Introduction

- 16.1.1 This chapter provides a preliminary assessment of the potential significant effects of the proposed Immingham Eastern Ro-Ro Terminal (IERRT) on employment, local businesses, and the local population. This chapter has been prepared by AECOM Ltd.
- 16.1.2 Socio-economic receptors include those who will potentially benefit from employment generation (either directly, indirectly or induced (secondary impacts, for example due to construction workers spending money at local businesses)).

16.2 Definition of the study area

- 16.2.1 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.
- 16.2.2 The proposed development site falls within Lower Super Output Area (LSOA) North East Lincolnshire 001A. (the 'Direct Impact Area'). LSOAs are small geographic areas defined by the Office for National Statistics (ONS). There are 34,753 LSOAs across England and Wales with a minimum population of 1,000 and a maximum of 3,000.



Image 16.1 Map of Direct Impact Area (LSOA North East Lincolnshire 001A)

16.2.3 The economic impact of the proposed development is considered relative to the Grimsby Travel to Work Area (TTWA) (the 'Wider Impact Area'). This area is defined by the ONS as representing the principal labour market catchment area (that is, the area which incorporates the population that may reasonably be expected to travel to and benefit from the proposed development).

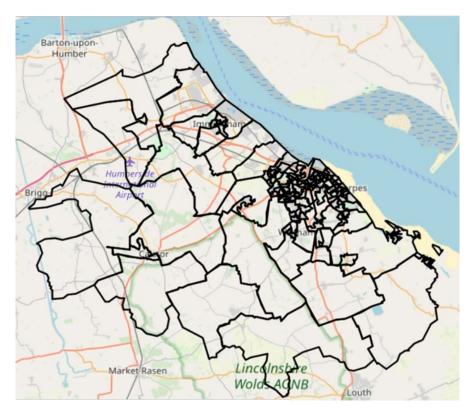


Image 16.2 Wider Impact Area, Grimsby TTWA

16.3 Assessment methodology

Data and information sources

- 16.3.1 Current baseline conditions have been determined by a desk-based review of available information. This includes Census data, and Business Register and Employment Survey (BRES) undertaken by the ONS.
- 16.3.2 The main desk-based sources of information that have been reviewed to inform the current baseline description within the vicinity of the proposed development are all published by the ONS and include:
 - 2011 Census data:
 - 2019 English Indices of Deprivation;
 - ONS UK Business Register and Employment Survey; and
 - Travel to Work data.
- 16.3.3 Where possible, socio-economic impacts have been appraised against relevant national standards, such as those provided by HM Treasury (2020a and 2020b), the Department for Business, Innovation and Skills (BIS)

(2009), and the Homes and Communities Agency (HCA) (2014). Where relevant standards do not exist, professional experience and expert judgement have been applied.

- 16.3.4 The socio-economic assessment determines the:
 - Sensitivity of receptors;
 - Magnitude of impacts; and
 - The consequent significance of effects.

Determining significance of effects

Receptor Sensitivity

16.3.5 The sensitivity of socio-economic receptors is assessed as high, medium, low or very low. The socio-economic receptors include those who will potentially benefit from employment generation (either directly, indirectly or induced (secondary impacts, for example due to construction workers spending money at local businesses)).

Effect Magnitude

- 16.3.6 The magnitude of the effects of the proposed development is assessed as being high, medium, low or very low. This is determined by:
 - Extent of change the absolute number of people affected and the size
 of area in which effects will be experienced i.e. the level of change to
 baseline conditions including the proportion of the existing workforce;
 - Scale of the impact the relative magnitude of each impact in its relevant market context (for example, the effects on local employment will be considered in the context of the overall size of the local labour market); and
 - Duration of impact more weight is given to long-term, permanent changes than to short-term, temporary ones. Temporary to short-term impacts are considered to be those associated with the construction works. Medium to long-term impacts are those associated with the operation of the proposed development.

Effect Significance

- 16.3.7 The effects of the proposed development are defined as either:
 - Beneficial an advantageous or beneficial effect on an impact area;
 - Negligible an imperceptible effect on an impact area; or
 - Adverse a disadvantageous or negative effect on an impact area.
- 16.3.8 Where an effect is assessed as being beneficial or adverse, the effect has been classified as Major, Moderate, Minor or Negligible. The assessment of significance is informed by the sensitivity of the receptor and the magnitude of impact as set out in Table 16.1. For the purposes of this assessment, only Moderate and Major impacts are considered 'significant'.

Table 16.1 Classification of effects

Magnitude	Sensitivity of receptor						
of impacts	High Medium Low Very low						
High	Major	Major	Moderate	Minor			
Medium	Major	Moderate	Minor	Negligible			
Low	Moderate	Minor	Negligible	Negligible			
Very low	Minor	Negligible	Negligible	Negligible			

16.4 Consultation

16.4.1 Formal consultation with external bodies has not at this stage been undertaken, but the response received as part of the scoping process have been summarised below in Table 16.2 as will be taken into account as part of the assessment.

Table 16.2 Summary of consultation to date

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
PINS, Scoping Opinion	Table ID 4.11.2	The Applicant refers to 2011 Census data and the Inspectorate notes that the provisional release date for the 2021 Census data is between March and April 2022. If the DCO application is submitted after the release of the 2021 Census data, and it is reasonably practical, this data should be used to inform the Socio-economic assessment.	If there is sufficient opportunity to include the 2021 Census date in the Environmental Statement (ES) then it will be included.
PINS, Scoping Opinion	Table ID 4.11.3	The list of impact pathways during construction and operation does not explicitly refer to effects on housing availability although it is noted that effects on social cohesion are included. The assessment in the ES should consider if any Likely Significant Effect (LSE) would arise from the influx of construction workers on the local housing and rental market.	The impact of an influx of construction workers on the local rental market will be considered in the ES.

Consultee	Reference, Date	Summary of Response	How comments have been addressed in this chapter
PINS, Scoping Opinion	Table ID 4.11.4	The ES should include a figure / figures to identify the final study area including the relevant Lower Super Output Areas (LSOAs), and the Grimsby travel to work area (TTWA) in relation to the Proposed Development.	Images showing the study areas are included in this Preliminary Environmental Information Report (PEIR) chapter (Images 16.1 and 16.2).

16.5 Implications of policy legislation and guidance

16.5.1 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 employment, local businesses, and the local population. It builds upon the overarching chapter covering Legislative and Consenting Framework (Chapter 5). This will be kept under review as the assessment progresses.

UK legislation

- 16.5.2 Whilst there is no dedicated UK legislation that details the content required for a socio-economic assessment as part of an Environmental Impact Assessment (EIA), the socio-economic assessment presented in this chapter is based upon a range of relevant guidance. This includes:
 - Department for BIS (2009) Research to Improve the Assessment of Additionality;
 - HM Treasury (2020a) The Green Book Appraisal and Evaluation in Central Government;
 - HM Treasury (2020b) The Magenta Book Guidance for evaluation; and
 - HCA (2014) Additionality Guide (4th Edition).

National policy

National Policy Statement for Ports (NPSfP)

- 16.5.3 The National Policy Statement for Ports (NPSfP) (Department for Transport, 2012) requires economic benefits of port developments that fall within the Planning Act 2008 thresholds and are thereby required to be taken forward as NSIPs, to be estimated and these need to outweigh any adverse effects of the development. It states that substantial weight must be given to the positive economic benefits such as stimulation of employment and training.
- 16.5.4 Section 5.14.2 of the NPSfP details that where projects are likely to have socio-economic impacts, these should be assessed as part of the Environmental Impact Assessment. This includes consideration of creation of

- jobs, providing additional services, effects of tourism, impacts of changing flux of workers during the life cycle of the development, and cumulative effects.
- 16.5.5 Existing socio-economic conditions should be outlined and how the development will correlate with local planning policy.

National Planning Policy Framework (NPPF)

- 16.5.6 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021) requires local authorities to set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth. It states that planning policies should help create the conditions in which businesses can invest, expand and adapt.
- 16.5.7 Paragraph 81 of the NPPF states that "Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development." The NPPF indicates that this approach will allow areas to build on their strengths especially in areas of high productivity. Paragraph 83 of the NPPF also states that planning policies should "recognise and address the specific locational requirements of different sectors".

East Inshore Marine Plan

- 16.5.8 The East Inshore Marine Plan (Marine Management Organisation, 2014) details policies which encourage increased economic productivity and employment benefits in order to meet the needs of the assessment. It is important that economic development is also delivered sustainably and provides environmental and social benefits too.
- 16.5.9 In this context, Socio-economic factors are also referenced. Policies state that proposals should provide health and social wellbeing benefits through maintaining the coastal environment and access to it.

Local policy

North East Lincolnshire Local Plan 2013-2032

16.5.10 The North East Lincolnshire Local Plan (North East Lincolnshire Council, 2018) highlights the importance of the 'Estuary Zone' of the local authority area, which includes the 'nationally important port' of Immingham. When considering the detail of how the economy will be developed, the Plan specifically identifies from the beginning that there are good expectations of growth within the ports and logistics sector.

North East Lincolnshire Economic Strategy

16.5.11 The North East Lincolnshire Economic Strategy (North East Lincolnshire Council, 2016) outlines three main outcomes for North East Lincolnshire in section 2: 'North East Lincolnshire's businesses invest and grow; North East

- Lincolnshire's workforce is skilled and productive; and North East Lincolnshire is a great place to live, work, visit and invest'.
- 16.5.12 Creating the right conditions for the growth of existing businesses and inward investment is seen as key. The Economic Strategy highlights the need for effective business support across sectors including in Renewable Energy due to the significant role the Humber Estuary plays in the sector and its contribution to local employment and skills development.

North East Lincolnshire Economic Recovery Plan

16.5.13 The North East Lincolnshire Economic Recovery Plan (North East Lincolnshire Council, 2021) outlines steps for the area to take to create employment opportunities and help reshape the future economy particularly following the COVID-19 pandemic. It is comprised of three roadmaps (Restore, Reshape and Replenish). The document states that the ports and logistics sector is one of North East Lincolnshire's largest employers and is a major contributor to the economy of the area.

North Lincolnshire Core Strategy 2006-2026

- 16.5.14 The main local road route to be used by traffic generated by the proposed development runs through the neighbouring authority area of North Lincolnshire. The policies from the North Lincolnshire Core Strategy (and the emerging Local Plan also discussed below) are, therefore, relevant to this development.
- 16.5.15 The North Lincolnshire Core Strategy (North Lincolnshire Council, 2011) sets out the long-term spatial planning framework for the development of North Lincolnshire up to 2026. Section 9.2 states that it supports the: "long-term success of existing and new businesses in the area to help encourage job creation and the diversification of the employment base, particularly in key growth sectors."

North Lincolnshire Local Plan

16.5.1 Chapter 6 of the North Lincolnshire Local Plan (North Lincolnshire Council, 2021) plan details that developments should drive and support sustainable economic development to deliver jobs that the country needs. The Council places a key emphasis on driving economic vitality. "It seeks to shape the area into a more prosperous place for residents and businesses alike and to be 'safer, greener and cleaner' by increasing economic growth and prosperity through higher employment and increased home ownership".

Greater Lincolnshire LEP Strategic Economic Plan 2014-2032

16.5.2 The Strategic Economic Plan sets out plans and objectives to deliver sustainable growth by helping businesses increase productivity and creating new commercial and employment opportunities. Importance is placed upon increasing skills levels of people in the area, giving them new career choices and allowing businesses to recruit and train talented individuals.

Guidance

- 16.5.3 Whilst there is no dedicated UK legislation that details the content required for a socio-economic assessment as part of an EIA, the socio-economic assessment presented in this chapter is based upon a range of relevant guidance. This includes:
 - Research to Improve the Assessment of Additionality (Department for Business, Innovation and Skills, 2009);
 - The Green Book: Central Government Guidance on Appraisal and Evaluation (HM Treasury, 2020a);
 - The Magenta Book: Guidance for evaluation (HM Treasury, 2020b); and
 - Additionality Guide (Fourth Edition) (HCA, 2014).

16.6 Preliminary description of the existing environment

- 16.6.1 This section outlines the socio-economic baseline conditions in the Direct Impact Area (LSOA North East Lincolnshire 001A), Wider Impact Area (Grimsby TTWA), and England. The local population and labour market are the main receptors in the assessment for employment effects. The baseline conditions help to determine the impact of employment generated by the Proposed development. The impact is mostly influenced by the size of the labour market and whether it has the relevant skills, occupations, and sector strengths to access employment opportunities.
- 16.6.2 The 2011 Census data shows that the Direct Impact Area had a population of 1,464 while the wider impact area has a population of 187,068. Image 16.3 below shows that the Direct Impact Area had a larger proportion of young people (aged 0 to 15) than the Wider Impact Area and England.

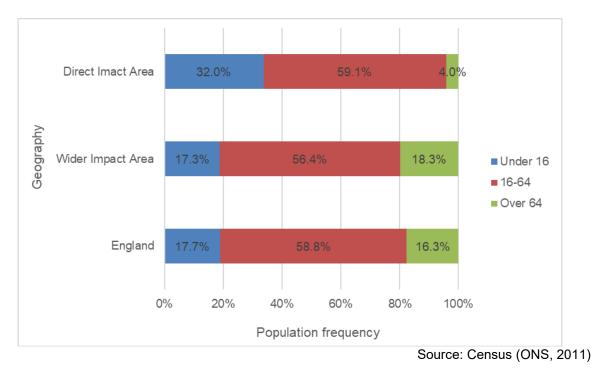


Image 16.3 Age breakdown

- 16.6.3 The Direct Impact Area and Wider Impact Area contain similar people of working age (aged 16 to 64) than the national average. There is a much lower proportion of residents aged over 64 in the Direct Impact Area than in both the Wider Impact Area and England.
- 16.6.4 The Direct Impact Area has a lower proportion of residents qualified to Level 4 or above (greater than A-level and equivalent qualifications) at 5.9 %, compared to both the Wider Impact Area (17.4 %) and England (27.4 %). The Direct Impact Area has a greater proportion of residents with Level 1 or Level 2 as their highest qualification (43.3 %) than the Wider Impact Area (33.3 %) and England (28.5 %). Apprenticeships are also slightly lower in the Direct Impact Area (2.7 %) than the other two geographies.
- 16.6.5 At the other end of the spectrum the Direct Impact Area has a greater proportion of residents with no qualifications (33.1 %) when compared to the Wider Impact Area (28.7 %) and England (22.5 %). Additionally, the number of residents with 'other qualifications' in the Direct Impact Area (4.3 %) is lower than the wider geographies. This is illustrated in Image 16.4 below.

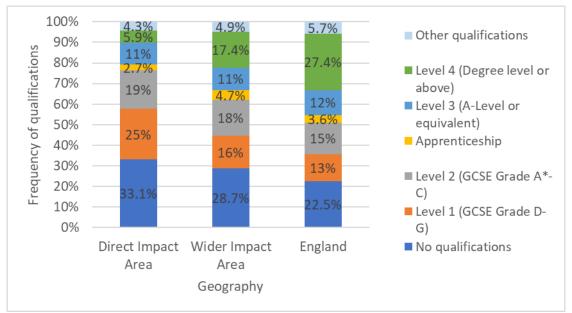


Image 16.4 Qualifications breakdown

16.6.6 The largest employment sector in the Direct Impact Area is wholesale and retail trade; repair of motor vehicles and motorcycles (18 %). The Direct Impact Area has a similar proportion of this type of employment to the Wider Impact Area (18.6 %) and England (15.9 %). The second largest sector in the Direct Impact Area is transport and storage (15.4 %) which is greater than in the Wider Impact Area (7.7 %) and England (5 %). This is illustrated in Table 16.3.

Table 16.3 Employment sectors

Sectors	Direct Impact	Wider Impact	England
	Area	Area	
Agriculture, forestry and fishing	0.2 %	1.2 %	0.8 %
Mining and quarrying	0.2 %	0.4 %	0.2 %
Manufacturing	13.8 %	15.1 %	8.8 %
Electricity, gas, steam and air conditioning supply	1.2 %	0.7 %	0.6 %
Water supply; sewerage, waste management and remediation activities	0.6 %	0.6 %	0.7 %
Construction	7.9 %	8.3 %	7.7 %
Wholesale and retail trade; repair of motor vehicles and motorcycles	18.0 %	18.6 %	15.9 %
Transport and storage	15.4 %	7.7 %	5.0 %
Accommodation and food service activities	15.4 % 6.7 %	7.7 % 5.2 %	5.6 %
Information and communication	0.0 %	1.1 %	4.1 %
Financial and insurance activities	0.0 %	1.3 %	4.4 %
Real estate activities	0.2 %	1.0 %	1.5 %
Professional, scientific and technical activities	2.0 %	3.7 %	6.7 %
Administrative and support service activities	9.5 %	4.2 %	4.9 %
Public administration and defence; compulsory social security	2.4 %	4.9 %	5.9 %
Education	4.3 %	9.1 %	9.9 %
Human health and social work activities	14.4 %	13.1 %	12.4 %
Other	3.2 %	3.9 %	5.0 %

16.6.7 The Direct Impact Area has a slightly lower proportion of residents who are economically active (64.8 %) than the Wider Impact Area (68.3 %) but less than England as a whole (69.9 %). The Direct Impact Area also has a lower proportion of residents in employment (49.4 %) than both the Wider Impact Area (59.6 %) and England (62.1 %). In terms of unemployment, the Direct Impact Area presents the highest rate at 11.9 %. This is almost double the rate of the Wider Impact Area (6 %) and higher still than England (4.4 %). There is a similar proportion of students in the Direct Impact Area (3.6 %) to the England average. Table 16.4 below presents a breakdown the economic activity for the study area in comparison with England as a whole.

Table 16.4 Economic Activity

Economic Activity	Direct Impact Area	Wider Impact Area	England
Total economically	64.8 %	68.3 %	69.9 %
active			
In employment	49.4 %	59.6 %	62.1 %
Employee: Part-time	16.1 %	16.3 %	13.7 %
Employee: Full-time	30.3 %	36.2 %	38.6 %
Self-employed	3.0 %	7.1 %	9.8 %
Unemployed	11.9 %	6.0 %	4.4 %
Full-time student	3.6 %	2.6 %	3.4 %

16.6.8 Table 16.5 shows economic inactivity rates for each geography in the study area. The Direct Impact Area has a higher proportion of economically inactive residents (35.2 %) than both the Wider Impact Area (31.7 %) and England (30.1 %). The Direct Impact Area has a much lower proportion of retired residents (6.2 %) than the Wider Impact Area (16.3 %) and England (13.7 %). However, it has around double the number of residents who are long-term sick or disabled (8.3 %) than the England average (4 %).

Table 16.5 Economic Inactivity

Economic Inactivity	Direct Impact Area	Wider Impact Area	England
Total economically	35.2 %	31.7 %	30.1 %
inactive			
Retired	6.2 %	16.3 %	13.7 %
Student (including full-	4.8 %	4.1 %	5.8 %
time students)			
Looking after home or	11.9 %	4.7 %	4.4 %
family			
Long-term sick or	8.3 %	4.6 %	4.0 %
disabled			
Other	4.0 %	2.1 %	2.2 %

Source: Census (ONS, 2011)

16.6.9 The workforce occupation profile varies across the geographies (see Image 16.5 below). Elementary occupations are most common in the Direct Impact area (26.1 %) This is a much higher rate than in the Wider Impact Area (13.4 %) and the national average (11.1 %). In the Wider Impact Area, the most dominant occupation is process plant and machine operatives which make up 14.2 % of occupations. This is also high in the Direct Impact Area (18.6 %) compared to the lower England average (7.2 %). One of the least common occupation types in the Direct Impact Area and the Wider Impact Area is professional occupations at 3.4 % and 11.1 %. This is low compared to the national average of 17.5 %.

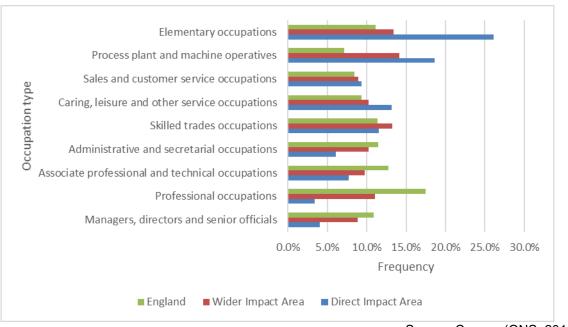
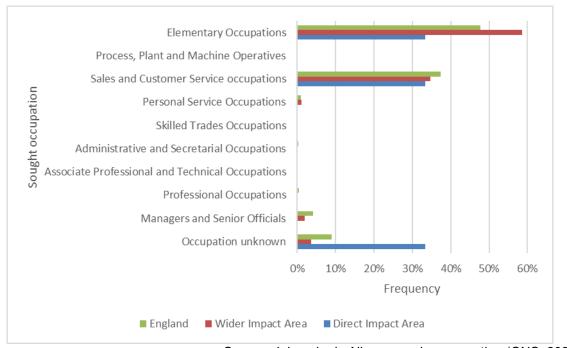


Image 16.5 Workforce Occupations

- 16.6.10 The nearest school to the site is Canon Peter Hall CE Primary School located 980 m from the proposed development. Other possible sensitive receptors in the area include Pilgrim Primary Care Centre (750 m south of the proposed development). There are no hospitals in close proximity of the site.
- 16.6.11 In terms of social infrastructure, the only one that lies within direct proximity to the site is Immingham West Fire Station located 2 km to the north west of the site. The nearest police station (Immingham Police Station) is located 1 km south west of the site.
- 16.6.12 There are a number of businesses located close to the proposed development in the Port of Immingham. These are primarily energy and industrial businesses, and are tenants of ABP. Located to the north east of the proposed development is Associated Petroleum Terminals and to the north of the site is Inter Terminals Computer Services. To the west of the development are Origin Fertilisers UK, Nippon Gases UK, and PB Kent Quality Fertiliser Products.
- 16.6.13 There are also businesses outside the Port of Immingham, located to the south west of the proposed development. These businesses include several truck hire services (Isotank Services Immingham, North East Truck and Van Hire, APM Commercials, Ivo Transport), Knauf Immingham manufacturing plant, Jewson and Ainscough Crane Hire.

16.7 Future baseline environment

- 16.7.1 Table 16.6 highlights projected population figures for the study area. The Direct Impact Area population is expected to see a slight net decrease between 2011 and 2041 by 0.02 %. The losses are expected to be seen in residents aged 0-65. In comparison, the older age population (aged 65+) is expected to increase by 1.52 %. In comparison, the Wider Impact Area and England are expected to experience population increases of 0.32 % and 0.54 % between 2011 and 2041. However, like the Direct Impact Area, the largest increases will be seen in residents aged 65 or over with an increase of 1.69 % in the Wider Impact Area and 1.91 % in England overall.
- 16.7.2 In 2020 the Direct Impact Area sought occupations were split between elementary, sales and customer service and unknown occupations. Elementary occupations were also commonly sought in the Wider Impact Area and England sitting at 58.6 % and 47.8 % respectively. Many other occupations such as skilled trades and administrative and secretarial were not sought in 2020 in the Direct and Wider Impact Areas and also saw very low figures nationally.



Source: Jobseeker's Alloweance by occupation (ONS, 2020)

Image 16.6 Sought After Occupations

Immingham Eastern Ro-Ro Terminal

 Table 16.6
 Population Projections 2011-2041

Direct Impact Area			Wider Im	pact Area			England					
Year	All Ages	Aged 0 to 15	Aged 16 to 64	Aged 65+	All Ages	Aged 0 to 15	Aged 16 to 64	Aged 65+	All Ages	Aged 0 to 15	Aged 16 to 64	Aged 65+
2011	1,462	497	915	61	187,068	221,666	118,250	34,220	53,012,456	10,022,836	34,329,091	8,660,529
2016	1,535	505	939	91	192,083	228,479	118,117	38,712	55,268,067	10,529,100	34,856,126	9,882,841
2021	1,465	509	863	72	195,786	235,660	118,091	41,570	57,030,534	11,027,950	35,298,513	10,704,133
2026	1,462	483	847	79	198,815	232,936	118,029	45,466	58,505,621	11,048,393	35,659,571	11,797,633
2031	1,456	450	825	87	201,459	227,171	117,378	50,140	59,789,798	10,857,286	35,765,627	13,166,895
2036	1,453	436	805	93	203,507	224,772	116,247	54,102	60,905,483	10,779,344	35,788,796	14,337,402
2041	1,453	439	796	94	205,387	225,547	116,610	55,633	61,952,118	10,838,109	36,120,411	14,993,573
CAGR %	-0.02 %	-0.42 %	-0.48 %	1.52 %	0.32 %	0.06 %	-0.05 %	1.69 %	0.54 %	0.27 %	0.18 %	1.91 %

Source: ONS Population Projections (2020)

16.8 Preliminary Consideration of Likely Impacts and Effects

- 16.8.1 This section identifies the potential likely effects on the local population and labour market receptors as a result of the construction and subsequent operation of the IERRT project which have been identified at this preliminary stage.
- 16.8.2 Cumulative impacts on the local population and labour market could arise as a result of other coastal and marine developments and activities in the Humber Estuary will be considered as necessary as part of the cumulative impacts and in-combination effects assessment, the approach to which is explained further in Chapter 20 of this PEIR.

Construction phase

- 16.8.3 This section contains an assessment of the potential impacts to the local population and labour market as a result of the construction phase of the IERRT project.
- 16.8.4 Construction of the proposed development is anticipated to commence in Summer 2023. During the construction period employment opportunities will be created as a result of the works. Although these jobs are temporary, they represent a positive economic impact that can be estimated as a function of the scale and type of construction. The direct expenditure involved in the construction phase will lead to increased output generated in the Grimsby TTWA economy.
- 16.8.5 The average number of construction staff during the construction of the proposed development has been estimated based on anticipated construction cost. There are predicted to be approximately 700 total gross Full Time Equivalent (FTE) employees during the construction period. This is a preliminary estimate based on the information available at the PEIR stage, and will be updated at the ES stage based on available information.

Leakage

16.8.6 Leakage effects refer to the proportion of jobs within an Impact Area that are filled by residents living outside the Impact Area (i.e. outside the Wider Impact Area, defined as the Grimsby TTWA). Overall, it is assumed that the majority of the employment generated will be taken by people living in the Grimsby TTWA and as such leakage levels effects are considered to be low. Leakage has therefore been set at 10 % in line with the HCA Additionality Guide (HCA, 2014). A 10 % discount is therefore applied to the estimated 700 gross jobs created and as such it is anticipated that 70 people from outside the Grimsby TTWA and 630 persons from within will benefit from working at the proposed development during the construction period.

Displacement

- 16.8.7 Displacement measures the extent to which the benefits of a project are offset by reductions of output or employment elsewhere. Any additional demand for labour cannot simply be treated as a net benefit it removes workers from other posts and the net benefit is reduced to the extent that this occurs.
- 16.8.8 Overall, it is assumed that due to the flexibility of a typical construction workforce (i.e. they quickly move from project to project) displacement effects are considered to be low. The HCA Additionality Guide (HCA, 2014) suggests 25 % as a 'ready reckoner' for low levels of displacement (i.e. there are expected to be some displacement effects, although only to a limited extent). Applying this level of displacement to total gross direct employment results in net direct employment of 524.

Multiplier Effect

- 16.8.9 In addition to the direct construction employment generated by the project itself there will be an increase in local employment arising from indirect and induced effects of the construction activity. Employment growth will arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, part of the income of the construction workers and suppliers will be spent in the Grimsby TTWA, generating further employment (induced or income multipliers).
- 16.8.10 The impact of the multiplier depends on the size of the geographical area that is being considered, the local supply linkages and income leakage from the area. The HCA Additionality Guide (HCA, 2014) provides 'ready reckoners' of composite multipliers the combined effect of indirect and induced multipliers. It has been assumed that the Grimsby TTWA has 'average' supply linkages based on the scale of its economy. A multiplier of 1.3 is, therefore, determined from the HCA guidance. Applying this multiplier generates an additional 158 indirect and induced jobs.
- 16.8.11 Based on the gross construction worker requirements in the construction schedule and the additionality factors outlined above 682 net construction jobs would be generated, of which around 614 are expected to be from the Grimsby TTWA.
- 16.8.12 Table 16.7 presents the short-term employment created by the proposed development taking leakage, displacement and multiplier effects into account.
- 16.8.13 The sensitivity of receptors is considered as High. Taking into account the size of the labour pool of construction workers in the Grimsby TTWA (6,788) (ONS, Census 2011), the magnitude of impacts is considered to be High. For example, the gross direct employment required during the construction phase of the proposed development would account for around 10 % of the

existing construction workforce in the Grimsby TTWA. Therefore, the direct, indirect and induced employment created by the construction phase of the Proposed development is likely to have a Major Beneficial effect on the Grimsby TTWA economy.

Table 16.7 Net construction employment in Grimsby TTWA (average number of workers onsite per year)

	Grimsby TTWA	Outside of Grimsby TTWA	Total
Gross Direct Employment	630	70	700
Displacement	158	18	176
Net Direct Employment	472	52	524
Net Indirect/ Induced	142	16	158
Employment			
Total Net Employment	614	68	682

Impact on local services and local infrastructure during construction

16.8.14 The local services and infrastructure receptors (school, care centre and fire station) identified in Section 16.6 are assessed as having Medium sensitivity and the impact is assessed as having Low magnitude, resulting in an overall effect of Negligible.

The impact of a changing influx of workers during the different construction phase

16.8.15 It is anticipated there will be limited numbers of workers arriving from outside the wider impact area for the construction of the proposed development. There will be some specialist construction workers required for the marine works contributing to the worker inflow, but these are still estimated to be limited in number. These details of specialist workers from outside the local area are still to be finalised at this stage. The assumption made for construction employment is that the same amount of employment from outside the wider impact area is consistent with the typical amount of people travelling in from outside the Grimsby TTWA. With the majority of employees expected to be already based in the TTWA, there is expected to be limited change experienced from any inflow of employees in the area. There are likely to be more construction workers required from outside the local area for the marine elements of the proposed development due to the specialist expertise required. Sensitivity is assessed as Low and impact magnitude is assessed as Low. The overall effect on the receptor is anticipated to be Negligible.

The impact of an influx of workers on temporary accommodation

16.8.16 Based on the above assumptions, there are expected to be a limited number of construction workers coming to the area for employment at the proposed development site. There will be some specialist construction workers required for the marine works contributing to the worker inflow, but these are still estimated to be limited in number. These details of specialist workers from outside the local area are still to be finalised at this stage. The current assumption is that most construction roles will be filled by residents of the Grimsby TTWA, resulting in limited need for temporary accommodation. Where there is need for temporary accommodation, it is expected that this could lead to a beneficial impact on the local economy, with vacant hotel spaces being used by construction workers from outside the area. Sensitivity is assessed to be Low and impact magnitude is assessed to be Low, resulting in a Negligible effect.

Effects on existing businesses and activities during construction

- 16.8.17 At this preliminary stage, it is not anticipated that there will be any direct impacts on businesses and activities during construction. There are no businesses located within the site resulting in no direct impact on businesses.
- 16.8.18 Indirect impacts on businesses are considered based on other technical chapters' identified impacts and whether significant effects are predicted. The Airborne Noise and Vibration assessment (Chapter 14) does not consider any impacts on businesses in the assessment of receptors, and therefore no significant noise impacts on businesses would be anticipated. The Traffic and Transport assessment (Chapter 17) also finds no significant effects during the operation stage. The Air Quality assessment (Chapter 13) will be concluded at the ES stage. Overall, it is concluded that there will be Negligible effects on businesses during the construction stage.

Operational phase

16.8.19 This section contains an assessment of the potential impacts to receptors as a result of the operational phase of the IERRT project.

Employment

- 16.8.20 The proposed development will generate long-term jobs once operational. The following analysis estimates gross operational employment arising from the proposed development and then takes into account deadweight (existing employment on site), leakage, displacement and multiplier effects (to assess indirect and induced employment) in order to assess net impacts on the subregional and national economies.
- 16.8.21 During the operational period, employment will be generated by the operation and maintenance of the new facility. It is currently anticipated that there will be circa 64 operational jobs (gross) at the proposed development.

16.8.22 As with the construction employment, additionality values have been used to estimate the net operational employment. These include a 10 % leakage figure (a low ready reckoner from the HCA Additionality Guide (HCA, 2014)), 25 % displacement figure (a low ready reckoner from the HCA Additionality Guide), and a multiplier of 1.3 (a multiplier for 'average' supply linkages in the economy of the Grimsby TTWA, from the HCA Additionality Guide). Taking these additionality values into consideration, it is anticipated that there will be 61 net jobs, with 56 of these being filled by residents of the Grimsby TTWA.

Table 16.8 Net employment of the proposed development in operation

Operational Employment	Grimsby TTWA	Outside of Grimsby TTWA	Total
Gross Direct Employment	58	6	64
Displacement	15	2	17
Net Direct Employment	43	4	47
Net Indirect/ Induced Employment	13	1	14
Total Net Employment	56	5	61

16.8.23 The magnitude of impact is considered to be Low, and sensitivity assessed as Medium. Therefore, the direct, indirect and induced employment created by the construction phase of the Proposed development is likely to have a Minor beneficial effect on the Grimsby TTWA economy.

Impact on local services and local infrastructure during operation

- 16.8.24 Very few residential properties lie within close proximity of the site (within 500 m). Those that do are all located on or near Pelham Road to the south west of the site.
- 16.8.25 Given the distance of the local services and infrastructure receptors (school, care centre and fire station) identified in Section 16.6 any impact is anticipated to have a Very Low magnitude. The sensitivity of the receptors is considered to be Low. The effect is therefore assessed as Negligible.

Effects on existing businesses and activities

16.8.26 There are no anticipated direct impacts on businesses and activities during operation. Indirect impacts on businesses are considered based on other technical chapters' assessments and whether significant effects have been identified. The Traffic and Transport assessment (Chapter 17) does not identify any significant effects, indicating businesses would also not be impacted indirectly from the travel network. The Airborne Noise and Vibration assessment (Chapter 14) concludes one potentially significant effect during operation, for receptors on Queens Road at some times of day. There are some businesses located on Queens Road mainly industrial and logistics firms located on Prince Andrew Drive, and at The Bridge on Graypen Way (off Queens Road). From research and professional

judgement, it is not anticipated that the businesses are sensitive to noise effects on their own, and it would not impact on their operation in an adverse way. The Air Quality assessment (Chapter 13) will be concluded at the ES stage. Overall, it is concluded that there will be a Low impact and Low sensitivity, resulting in a Minor adverse (non-significant) effect on businesses during the operation stage.

The impact of a changing influx of workers during the different operation phase

16.8.27 There is anticipated to be a small inflow of workers from outside the study area to work on the operation of the proposed development. There will be some specialist construction workers required for the marine works contributing to the worker inflow, but these are still estimated to be limited in number. These details of specialist workers from outside the local area are still to be finalised at this stage. As such, there is not anticipated to be a notable impact on social cohesion and local facilities during operation. There is therefore expected to be Negligible.

16.9 Mitigation measures

16.9.1 No significant adverse effects have been identified during the construction or operation of the proposed development, and as such no mitigation is required.

16.10 Limitations

- 16.10.1 The socio-economic assessment is based on the available data at the time of writing (and as detailed herein). The socio-economic baseline is informed by secondary data and although the most recently available data have been used, it usually suffers a time lag.
- 16.10.2 The assessment is a preliminary desk-based study and will be expanded for the ES once further information is made available.

16.11 Preliminary Conclusions on Residual Effects

- 16.11.1 A summary of the impact pathways that have been assessed, the identified residual impacts and level of confidence is presented in Table 16.9.
- 16.11.2 It is considered that the proposed development will have an overall beneficial economic effect on the Grimsby TTWA economy, through the provision of employment and through associated multiplier effects.

Table 16.9 Summary of potential impact, mitigation measures and residual impacts

Receptor	Impact pathway	Effect Significance	Mitigation measure	Residual Effect	Confidence
Construction	on Phase				
Socio- economics	Employment	Major beneficial (significant)	N/A	Major beneficial (significant)	Medium
	Impact on local services and infrastructure	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium
	Effects on existing businesses and activities	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium
	Changing influx of workers	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium
	Temporary accommodation	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium
Operationa	I Phase				
Socio- economics	Employment	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium
	Impact on local services and infrastructure	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium
	Effects on existing businesses and activities	Minor (non- significant)	N/A	Minor (non- significant)	Medium
	Changing influx of workers	Negligible (non- significant)	N/A	Negligible (non- significant)	Medium

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16.13 Abbreviations/Acronyms

Acronym **Definition** AA Appropriate Assessment ABP Associated British Ports BIS (Department of) Business, Innovation and Skills **BRES Business Register and Employment Survey** EIA **Environmental Impact Assessment** ES **Environmental Statement** HCA Homes and Communities Agency **LSOA** Lower Super Output Area **NPPF** National Planning Policy Framework **NPSfP** National Policy Statement for Ports **ONS** Office for National Statistics **PEIR** Preliminary Environmental Impact Report **PINS** Planning Inspectorate Travel to Work Area **TTWA**

16.14 Glossary

Term Travel To Work Area (TTWA)	Definition TTWAs are geographies defined by the ONS, created to approximate labour market areas.
Lower Super Output Area (LSOA)	LSOAs are small geographic areas defined by the ONS. There are 34,753 LSOAs across England and Wales with a minimum population of 1,000 and a maximum of 3,000.
Direct impact	Direct impacts occur through direct interaction of an activity with an environmental, social, or economic component.
Indirect impact	Indirect impacts on the environment are these which are not a direct result of the project
Leakage	The proportion of outputs from the development that benefit those outside of the intervention's target area or group.
Displacement	The proportion of outputs from the development accounted for by reduced outputs elsewhere.
Multiplier	Further activity (jobs, expenditure or
	income) associated with additional local income, local supplier purchases and longer term development effects.

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