Marsh Lane Car Storage and Distribution Facility

Environmental Statement – Chapter 14: Socio-Economics, Land Use and Recreation

Able Humber Ports Ltd

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CONTENTS

14.0 SOCIO-ECONOMICS, LAND USE AND RECREATION

14.1 Introduction

The following chapter presents an assessment of the effects of the proposed development on socio-economics, land use and recreational receptors.

Effects may occur as a result of direct interaction between the project and socio-economic, land use or recreation features (e.g. severance along a Public Right of Way [PRoW] or creation of employment during the construction phase) or indirectly such as employment created as a result of the local spending of wages earned by the construction workforce.

The majority of socio-economic, land use and recreation effects would be experienced during the construction phase. These are likely to include beneficial effects on the local economy, including employment opportunities and increased spend on local services. Other potential construction phase effects may include temporary restrictions on PRoW movements and potential secondary effects arising from disruption to neighbouring businesses.

Once operational, effects would mainly be concentrated in changes to the local labour market arising from the new jobs that the proposed development would create and potential changes to economic development in the area. Other effects may arise from impacts on the operations of neighbouring businesses and use of the PRoW.

14.2 Methodology

14.2.1 Legislation and Planning Policy Guidance

Policy guidance and policies relevant to the scope of potential effects on socio-economics, recreation and land use are as follows:

1. National Planning Policy Framework ('NPPF') sets out that the purpose of planning is to help achieve sustainable development. The NPPF describes that there are three dimensions to sustainable development: economic, social and environmental. All three of these are considered to be relevant to the assessment. Paragraph 75 of the NPPF states how:

   "planning policies should protect and enhance public rights of way and access. Local authorities should seek opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails".

2. Planning Practice Guidance ('PPG') Contains guidance which may be relevant to the socio-economic assessment including reference to achieving sustainable development and supporting a prosperous economy; and

3. Policies contained within the North Lincolnshire Local Plan (2003), the Core Strategy (2011) and the Housing and Employment Land Allocations DPD (adopted March 2016).

Policies and strategies which influence the port and surrounding area, supporting its growth comprise:

- **Humber Enterprise Zone** - a 1,238ha zone, which is the largest in the country comprising 30 sites incorporating a range of businesses. The Zone has now been authorised and is due for an extension which will almost double its current size[1];
- **Northern Way Growth Strategy** – seeks to enhance transport links in the North's three regions and eighty city regions, connecting key business destinations and enhancing economic growth. The Killingholme railway connecting the ports to the rest of the north is a focus of this Strategy;
- **Yorkshire and Humber Plan - Regional Spatial Strategy 2016 (Revoked)** – promotes employment and housing opportunities around the Humber Ports area**;**
- **Hull and Humber Ports City Regional Development Programme** – led and serviced by Hull City Council, has identified the Ports as key assets for economic growth; and
- **Port of Immingham Masterplan 2010 to 2030** – a high level masterplan for the development of the Port, as referred to in the land use baseline description. Albeit, it is recognised that this is not a policy document.

14.2.2 Scoping Assessment

The comments laid out in **Table 14.1** were made at the EIA scoping stage are relevant to the socio-economic, recreation and land use assessment:

Table 14.1: EIA Scoping Feedback

Paragraph No.	Scoping Opinion	Comments	Outcome	Reference within Environmental Statement
4	Natural England	Natural England encourages any proposal to incorporate measures to help encourage people to access the countryside for quiet enjoyment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways are to be encouraged. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be incorporated where appropriate.	The need for improved pedestrian access is considered in the EIA.	14.4.1, 14.4.2
4	Natural England	The EIA should consider potential impacts on access	Public rights of way within 250m of the application site are set out	14.4.1, 14.4.2

[1] Humber LEP (2015)

Paragraph No.	Scoping Opinion	Comments	Outcome	Reference within Environmental Statement
		land, public open land, rights of way and coastal access routes in the vicinity of the development. Appropriate mitigation measures should be incorporated for any adverse impacts.	in the baseline environment section. The EIA assesses the effect of the proposed development on these and presents mitigation measures where these are necessary.	
N/A	North Lincolnshire Council – Environment Team (Rights of Way)	The Environment Team recommends that public rights of way be treated as a specific topic within the forthcoming ES; not as a sundry part of one or two broader topics, as appears currently the intention.	Able Humber Ports Ltd recognise that the effects of the proposed development on rights of way is an important topic and have given this prominence within the socio-economic, land use and recreation chapter of the ES. A separate chapter relating to rights of way is not considered to be proportionate to the scale of the project and the likely interaction with rights of ways.	14.4.1, 14.4.2
N/A	North Lincolnshire Council – Environment Team (Rights of Way)	If Marsh Lane is to be widened to become a two lane carriageway, the applicant should make provision for walkers accordingly.	The need for improved pedestrian access is considered in the EIA.	14.4.1, 14.4.2

14.2.3 Assessment Methodology

Study Area

A two-tiered Study Area has been used for the assessment comprising:

1. a Wider Study Area ('WSA'); and
2. a Local Area of Influence ('LAI').

Wider Study Area ('WSA')

The WSA extends to a wider area within which socio-economic effects could occur. The WSA is required for certain receptor groups because the majority of the business and labour market effects that could occur would be experienced by population and business centres located outside the LAI. The WSA area is primarily set at the area of North Lincolnshire Council but is extended to the Yorkshire and Humber Region where relevant.

Local Area of Influence ('LAI')

The LAI is primarily defined by the planning application boundary plus an offset of 250m around the boundary. The LAI is the focus for the assessment of direct impacts such as physical impacts on PRoW or direct impacts on neighbouring businesses.

Assessment Approach

The approach to the socio-economic, land use and recreation assessment is presented in two parts focussing on both the construction phase aspects of the development and the longer term economic effects once the development is built and occupied:

1. Likely economic effects on the WSA; and
2. Direct effects on land use and recreation within the LAI.

Assessment of the likely economic effects of the proposed development.

This part of the assessment comprises a quantitative assessment of the likely direct, indirect and induced effects of the project on the WSA in terms of investment, employment, additional Gross Value Added (GVA) and contribution to the labour market.

Construction phase job creation and investment is assessed through the use of employment estimates provided by Able Humber Ports Ltd and the construction elements categories within which these jobs would fall. SLR has estimated construction jobs (in person-years of employment) based on estimated construction phase expenditure. The assessment addresses the potential effects of the proposed development to the labour market and the local supply chain and economic output in terms of GVA. The estimate for construction phase GVA is calculated using the latest (2013) regional estimates[2] for the average yield of GVA per worker for the construction and civil engineering sector in Yorkshire and the Humber obtained from the Office of National Statistics (ONS).

Information gathered from the baseline data review is used to develop a quantitative economic model which includes direct, indirect and induced effects of the development. The chapter assesses the significance of the likely socio-economic effects of the project during the construction phase based on the magnitude of the impacts and the sensitivity of the receptor groups.

In terms of operational phase effects, a quantitative economic model is undertaken based on information regarding creation of permanent jobs provided by Able Humber Ports Ltd. As well as direct job creation (e.g. car transit drivers or heavy goods vehicle (HGV) drivers), the assessment models indirect and induced job effects (i.e. supply chain jobs and multiplier effects).

The economic modelling provides an estimate of the contribution of the development to GVA and the labour market within the WSA. The chapter assesses the significance of the likely socio-economic effects of the project during the operational phase based on the magnitude of the impact and the sensitivity of the receptor groups.

[2] Estimates are derived from two datasets comprising: Annual Business Survey estimates of regional GVA contributions by sector (2007SIC); and ONS quarterly regional estimates of Workforce Jobs by sector (2007SIC)

Assessment of effects of the proposed development on land use and recreation within the LAI.

The proposed development would have direct effects on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development.

This part of the socio-economic, land use and recreation assessment comprises a qualitative assessment of the effects of the Project on business and other receptors within the LAI including public rights of way and agricultural land. Any effects due to replacing the existing use of the application site with the proposed development or preventing a development or use on a neighbouring site from continuing are assessed.

Sensitivity of socio-economic, recreation and land use receptors

There are no published standards that define receptor sensitivity relating to socio-economic, recreation or land use assessment. As a general rule the sensitivity of each receptor or receptor group is based on its importance or scale and the ability of the baseline to absorb or be influenced by the identified effects. In assigning receptor sensitivity, consideration has been given to the following:

1. the importance of the receptor e.g. local, regional, national, international;
2. the availability of comparable alternatives;
3. the ease at which the resource could be replaced;
4. the capacity of the resource to recover or adapt to identified impacts over a period of time; and
5. the level of usage and nature of users (e.g. sensitive groups e.g. such as people with disabilities).

Significance Thresholds

The level of effect of an impact on socio-economic, recreational and land use receptors would initially be assessed by combining the magnitude of the impact and the sensitivity of the receptor. The level of effects presented in **Table 14.2** provides a guide to decision making.

Table 14.2: Level of Effect Matrix

Level of Effects Matrix				
Sensitivity or Value of Resource or Receptor	**Magnitude of Impact**			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

Defining significant effects

Where an effect is classified as **Major**, this is considered to represent a 'significant effect' in terms of the EIA Regulations. Where an effect is classified as **Moderate** , this may be considered to represent a 'significant effect' but should always be subject to professional judgement and interpretation, particularly where the sensitivity or impact magnitude levels are not clear or are borderline between categories or the impact is intermittent. The Level of Effects Matrix shown in **Table 14.2** therefore provides a guide to decision making, but is not a substitute for professional judgment. Impacts and effects can be beneficial, neutral or adverse and these would be specified where applicable. It should be noted that significant effects need not be unacceptable or irreversible.

14.3 Baseline Conditions

This section sets out the baseline conditions relevant to the socio-economic, land use and recreation assessment. A review of baseline conditions has been undertaken covering the following areas:

1. Population and demographic: summarising the principal characteristics of the human population of the WSA, covering:
   - Resident population: current levels and recent trends in the normally resident population of the WSA.
   - Working Age Population (WAP): current levels and recent trends in the WAP (aged 16-64) of the WSA.
2. Structure of employment: summarising the sectoral composition of the employment base of the WSA, covering:
   - Employment trends – employees: the number and type of jobs found in the WSA.
3. Sectoral analysis: providing an analysis of employment found in the WSA by broad business sector, focussing on sectors of relevance to the proposed development – construction and distribution.
4. Current labour market performance: providing an analysis of the performance of the labour market within the WSA, covering:
   - Participation levels and trends: the extent to which residents of the WSA are economically active (i.e. either in employment or actively seeking work).
   - Occupational structure: the breakdown of working residents' employment by occupational type.
5. Land use and recreation – a description of land uses within the LAI area, including PRoWs and other recreational features. This review will include a description of neighbouring businesses and other land uses.

14.3.1 Wider Study Area

Resident population

The total normally resident population of North Lincolnshire was 169,800 persons in 2015[3]. This was an increase in resident population amounting to 2,300 persons since the 2011 Mid Year Population Estimates (MYPE), and an overall increase of 16,800 (9.89%) since the 2001 MYPE.

[3] ONS (2015) NOMIS: December 2015.

This increase was less than population growth in the wider Yorkshire and the Humber region (1.9%) and the UK overall (2.83%) over this period.

Table 14.3: Normally resident population in the WSA

Local Authority Area	2001	2011	2015	2011-2015 change	2011-2015 change (%)
North Lincolnshire Council area	153,000	167,500	169,800	2,300	1.35
Yorkshire and the Humber	4,976,643	5,288,212	5,390,600	102,388	1.90
UK	57,424,200	61,470,800	63,258,400	1,787,600	2.83

Working age population

ONS defines the working age population (WAP) of those between the ages 16-64[4]. The WAP of North Lincolnshire increased by some 9,657 persons between 2001 and 2011. Since 2011 the WAP has declined, and by 2015 it had fallen to 104,300. This includes an estimated fall in WAP of 1,634 persons in four years[5].

The reduction in the size of the WAP in North Lincolnshire (-1.57%) was a more significant reduction than in the wider Yorkshire and the Humber region (-0.34%). The UK overall experienced an increase in the size of the WAP over this period (3.71%).

Table 14.4: Working age population (WAP) in the WSA

Local Authority Area	WAP 2001	WAP 2011	WAP 2015	2011-2015 change	2011-2015 change (%)
North Lincolnshire Council	96,277	105,934	104,300	-1,634	-1.57
Yorkshire and the Humber	3,161,573	3,409,275	3,397,800	-11,475	-0.34
UK	36,809,800	39,711,900	41,241,000	1,529,100	3.71

Structure of employment

Employment trends: Employees

Data on the number of employees in the WSA are available from NOMIS. These data in **Table 14.5** show that in 2015 there were 68,400 employees working in the WSA (not including self-employed persons), which represented a reduction of 1,900 from 2011 (-2.78%).

Table 14.5: Employee numbers in the WSA

Local Authority Area	2011	2015	2011-2015 change	2011-2015 change (%)

[4] This definition does not yet reflect the timetabled changes to State Pension Age that are coming into effect before 2020. Nor does it reflect changes to increasing trends for 16-18 year old to stay on in education.

[5] ONS (2015) NOMIS: Labour Market Profile

North Lincolnshire Council	70,300	68,400	-1,900	-2.78

Sectoral analysis: All employment

A sectoral analysis of persons in employment is presented in **Table 14.6**. Generally, there has been an increase in professional occupations, notably Managers, Directors and Senior Officials and a corresponding decrease in the number of Major Group 4-5 occupations; administrative & secretarial and skilled trades. The number of process plant and machine operatives has increased over the period 2011 to 2015 from 9,800 to 10,700.

Table 14.6: Employment by Occupation (Jan 2015- Dec 2015)

	North Lincolnshire (2011)	North Lincolnshire (2015)	Yorkshire & The Humber	UK
Soc 2010 Major Group 1-3	**24,800**	**26,800**	**1,009,400**	**13,678,200**
1. Managers, Directors and Senior Officials	6,000	8,800	241,700	3,520,100
2. Professional Occupations	8,600	10,100	448,800	6,128,500
3. Associate Professional & Technical	9,500	7,800	318,900	4,349,700
Soc 2010 Major Group 4-5	**20,000**	**17,900**	**548,200**	**6,655,300**
4. Administrative & Secretarial	8,600	7,600	259,200	3,338,000
5. Skilled Trades Occupations	11,400	10,400	289,000	3,317,400
Soc 2010 Major Group 6-7	**14,800**	**14,300**	**454,300**	**5,247,900**
6. Caring Leisure & Other Service Occupations	7,300	7,600	242,800	2,860,800
7. Sales & Customer Service Occs	7,500	6,700	211,400	2,387,100
Soc 2010 Major Group 8-9	**19,800**	**18,900**	**510,200**	**5,340,600**
8. Process Plant & Machine Operatives	9,800	10,700	207,300	1,982,900
9. Elementary Occupations	10,000	8,200	303,000	3,357,700

A breakdown of employment by industry is presented in **Table 14.7**:

Table 14.7: Employment by industry

	North Lincolnshire	Yorkshire & The Humber	UK
Primary Services (A-B: agriculture and mining)	500	34,000	468,000
Energy and Water (D-E)	1,700	29,000	349,000
Manufacturing (C)	14,500	285,000	2,680,000
Construction (F)	5,400	176,000	2,293,000
Services (G-S)	47,100	2,191,000	28,393,000
Wholesale and retail, including motor trades (G)	11,000	419.000	4,996,000
Transport storage (H)	5,200	127,000	1,588,000
Accommodation and food services (I)	4,000	196,000	2,290,000
Information and communication (J)	500	68,000	1,364,000
Financial and other business services(K-N)	8,100	517,000	7,577,000
Public admin, education and health (O-Q)	16,700	719,000	8,686,000
Other Services (R-S)	1,700	145,000	1,892,000

Commuting

The 2011 Census found that there were about 14,800 people who commuted into North Lincolnshire to work. The Census also found that there were about 15,800 people who lived in North Lincolnshire but who commuted outside the area to work. Therefore, there is net out-commuting of about 1,000 workers from North Lincolnshire.

The 2011 Census also found that just over 77% of workers whose workplace was located in North Lincolnshire were also resident of the district, while nearly 23% travelled in from neighbouring or other districts. These figures indicate that North Lincolnshire has a relatively high level of labour market self-containment.

The main locations of origin for workers who commute in to North Lincolnshire to work from other districts are:

- North East Lincolnshire – 7.2% of the overall number of workers whose workplace is located in North East Lincolnshire;
- West Lindsey – 4.5%;
- Doncaster – 3.1%;
- East Riding of Yorkshire – 1.7%.=; and

- Hull – 0.9%.

Similarly, the most important destinations for local residents who commuted outside the district for work were North East Lincolnshire, Doncaster, West Lindsey and Hull.

Current labour market performance

This section introduces a number of baseline indicators that describe the characteristics and performance of the local labour market. These data are used in assessing the overall net additional economic effects of the Project, particularly in terms of the proportion of the project workforce (construction and operational phases respectively) that is likely to be derived from the labour market of the WSA.

Participation levels and trends

The data in **Table 14.8** summarises three widely used indicators of labour market participation:

- the economic activity rate;
- the employment rate; and
- the model-based unemployment rate[6].

The data in each case are sourced from the Annual Population Survey (APS) and is for the calendar year to December 2015. The percentages relate to the normally resident population aged 16-64[7].

Table 14.8: Key indicators for labour market participation, 2015

Local Authority Area	Economic activity rate (%)	Employment Rate (%)	Unemployment rate (%, model based)
North Lincolnshire Council	74.7	71.6	5.3
Yorkshire and the Humber	77.2	72.5	6
GB	77.8	13.6	5.2

Full time and part time working

APS data reveal that 20,300 of employees (29.3%) in the WSA in 2015 worked part time, which is below the UK average (31.7%). The full time working rate for the North Lincolnshire area is 48,900 employees[8], which is some 2.4% higher than the UK average.

[7] ONS (2015) NOMIS: Labour Market Profile
[8] ONS (2014) BRES provisional results.

Qualifications

Apart from the availability of the workforce, a further key consideration is the skills profile of the workforce: i.e. the extent to which skills and qualifications are possessed by those of working age.

The average proportion of residents aged 16-64 with no qualifications in Yorkshire and the Humber as a whole was 9.8%, higher than the UK average (8.6%). The region has a lower number of individuals with NVQs than the UK; however, other qualifications and trade apprenticeships stand higher than the UK.

The same trends are apparent for the North Lincolnshire area, having a lower rate of WAP holding NVQ qualifications but a relatively high (9.3%) rate holding other qualifications compared with the rest of the UK (8.6%).

Earnings

Data obtained from the ONS Annual Survey of Hours and Earning (2015) reveal that on average the median weekly earning (gross) by place of residence within North Lincolnshire has grown between 2009 and 2015 (by 14.15%). This is a higher rate of growth than England as a whole (7.38%).

Median weekly earnings (gross) by place of work within North Lincolnshire have also grown between 2009 and 2015. The increase has been more gradual than by place of residence at 12.24%. This is still a higher rate of growth than England as a whole (7.39%).

14.3.2 Local Area of Interest

Land Use

Existing and proposed land uses within the Local Area of Interest (the application site plus 250m buffer) are presented in this section.

The application site (the Principal Site and the Port Related Storage Area) is currently in rough pasture having been used until recently for agriculture. It is no longer in active agricultural use. Other land uses within, or adjacent to, the application site comprise underground and overground pipelines which run across the site and along its northern boundary and there is a right of way running along the southern boundary of the Principal Site. Details of these land uses and their corresponding sensitivity for the purposes of the land use assessment are presented in
Table 14.9**.**

Table 14.9: Land Uses within the LAI

Land Use Receptor	Distance to application site (m)	Description	Sensitivity or receptor and justification
Agricultural Land - the Principal Site	Crosses the application site.	Agricultural use, part of the Killingholme Marshes. Land is Grade 3 ('Good to Moderate'[9]) and currently rough agricultural pasture. It is not currently in active agricultural use. The site is allocated for industrial development (Policy IN1 of the North Lincolnshire Local Plan). Part of the Principal Site occupies land that is consented for use as ecological mitigation for Able Marine Energy Park (AMEP). Further consideration of the effect of the Project on this designation is provided in the Planning Statement and the Ecology Chapter of this Environmental Statement.	**Low sensitivity**. An economic receptor of local importance.
Agricultural Land - the Port Related Storage Area	Crosses the application site.	Agricultural use, part of the Killingholme Marshes. Land is Grade 3 ('Good to Moderate') and currently rough pasture. It is not currently in active agricultural use. Alike the Principal Site, the Port Related Storage Area is allocated for industrial development (Policy IN1 of the North Lincolnshire Local Plan).	**Low sensitivity**. An economic receptor of local importance.
Rights of Way	Crosses the application site.	FP100 running between Principal Site and Port Related Storage Area. FP50 to the east of this also.	See Recreation section.
Overground Gas Pipelines	0m – running along boundary	Overground gas pipelines running along the northern boundary of the site, owned and operated by TOTAL and Conoco Philips. See Figure 14.1. The pipelines lead into the Killingholme Pipeline & Storage Depot.	A receptor of **high sensitivity** owing to its national economic importance.
Underground Pipelines	Crosses the application site	Two pipelines run under the Principal Site. One of these forms part of the former Government pipeline and storage system (GPSS) (now CLH Pipeline Systems and the other is a disused line privately owned by Conoco Philips. The CLH line is protected under the Land Powers Act 1958. See Figure 14.1. The pipelines lead into the Killingholme Pipeline & Storage Depot.	A receptor of **high sensitivity** owing to its national economic importance.
Underground	50m east of the	Located east of the site, the storage consists of two underground gas storage caverns jointly	A receptor of moderate economic

[9] Natural England – Agricultural Land Classification ALC003.

Land Use Receptor	Distance to application site (m)	Description	Sensitivity or receptor and justification
Gas Storage	Principal Site	owned by Calor Gas and Phillips 66. The caverns sit 180m underground and between them hold 60,000 tonnes of both propane and butane in its liquid form[10].	value and **medium sensitivity**.
External Coal and Iron Ore Storage	50m east of the Port Related Storage Area	External storage area within Port of Immingham operated by ABP, Hargreaves and Corus.	A receptor of moderate economic value and **medium sensitivity**.
Hazel Dene (Residential Property), Marsh Lane.	Adjacent to western boundary of Port Related Storage Area	Lies south and east of the site as it crosses over Marsh Lane.	A receptor of local socio-economic importance and **low sensitivity**.
Killingholme Branch railway	10m east of the principal Site and the Port Related Storage Area	Railway running along the eastern boundary of the site which is currently leased to ABP.	A receptor of moderate socio-economic value and **medium sensitivity**.
Rosper Road Pools Nature Reserve	150m south west of Port Related Storage Area.	Nature reserve site.	See Recreation Section.

Elsewhere within the LAI there are a number of neighbouring land uses, predominantly commercial in nature and associated with larger industrial uses within the wider local area. Details of other land uses within the LAI and their corresponding sensitivity for the purposes of the land use assessment are also presented in
Table 14.9.

[10] Phillips 66. Website accessed June 2016. www.phillips66.co.uk

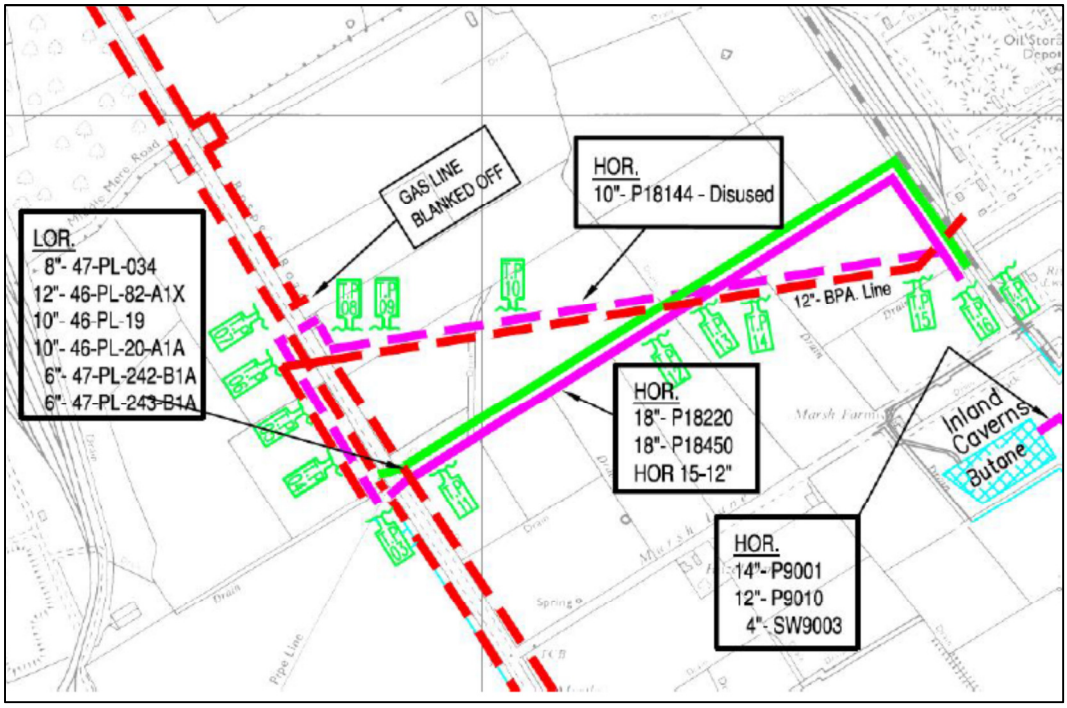

Figure 14.1: Overground and Underground pipelines crossing the application site.

In addition to the land uses within the 250m LAI study area set out in **Table** 14.9 there are a number of major land uses located within 1km of the application site boundary. Some of these are nationally significant facilities in international trade and the petrochemical industry. These land uses are set out in **Table 14.10**.

Table 14.10: Nationally Significant Land Uses

Land Use Receptor	Distance to application site	Description	Sensitivity of receptor and justification
C.Ro Port (Killingholme)	1km	The Port, which is operated by , comprises some 107ha and is one of the largest in the UK in terms of port traffic. The proposed Able Logistics Park (ALP) and the Halton Marshes Wet Grassland Scheme (HMWGS) are located to the north of this site.	The Port is assigned a **high sensitivity** as it is of national economic importance.
ABP Port of Immingham	400m south	The Port of Immingham is the UK's largest port by tonnage, handling over 48 million tonnes in 2011, and directly employs 4,700 people. ABP's land holdings at the Port total over 526ha. The Port have published a	The Port is assigned a **high sensitivity** as it is of national economic importance.

		Masterplan which sets out its goals. over the period 2010 to 2030[11].	
Lindsey Oil Refinery	50m west	The refinery is wholly owned by Total S.A. Crude oil is imported via pipelines from berths on the River Humber and refined products are despatched by rail, pipeline, road and sea. The refinery has a capacity of 11 million tonnes per year, the majority of which comprises petrol, diesel and LPG[12].	The refinery is assigned a **high sensitivity** as it is of national economic importance.
Humber Oil Refinery	550m south west	The refinery is owned and operated by Phillips 66. The Humber Refinery has a crude oil processing capacity of 221,000 barrels per day. It is the only coking refinery in the UK and is the world's largest producer of speciality graphite cokes and the largest anode coke producer in Europe[13].	The refinery is assigned a **high sensitivity** as it is of national economic importance.
Able Marine Energy Park (AMEP) (proposed)	Adjacent to northern boundary of site.	The AMEP is intended to service the offshore renewable energy industry. The facility is fully consented and would cover some 360ha when complete and featuring c. 1,300m of new deep-water quays. The Able Logistics Park, which is separate to AMEP, is located to the north of this site.	AMEP is assigned a **medium sensitivity** as it is of moderate economic importance.

Effects on these receptors would be limited to those arising from increased levels of traffic on local roads during the construction and operational phases of the proposed development. No other direct or indirect effects on these receptors are anticipated to occur.

Effects arising from construction and operational phase traffic generation on the local road network are considered in Chapter 10, Traffic and Transportation and are not considered further in this chapter.

[11] Associated British Ports. Port of Immingham Masterplan 2010 – 2030 (non-statutory document).
[12] United Kingdom Petroleum Industry Association. Website accessed June 2016. www.ukpia.com
[13] Phillips 66. Website accessed June 2016. www.phillips66.co.uk

Recreation

Footpath 100

Footpath (FP) 100 runs in a north easterly direction between Rosper Road and the south bank of the River Humber, running along the southern boundary of the Principal Site initially following the carriageway of Marsh Lane. The footpath provides access between Rosper Road and the banks of the River Humber. On the section that follows Marsh Lane there is no defined footway and accordingly it is necessary for users of the PRoW to use the surfaced carriageway of the lane.

The footpath was subject of a modification order in 2005[14] which extinguished a 770m long section of the footpath between Marsh Lane and the River Humber. The extinguished section is shown between points A and B on Figure 14.2. The replacement section, which runs to the north of the extinguished route, is shown running between points A and F (via points C, D and E) on Figure 14.2.

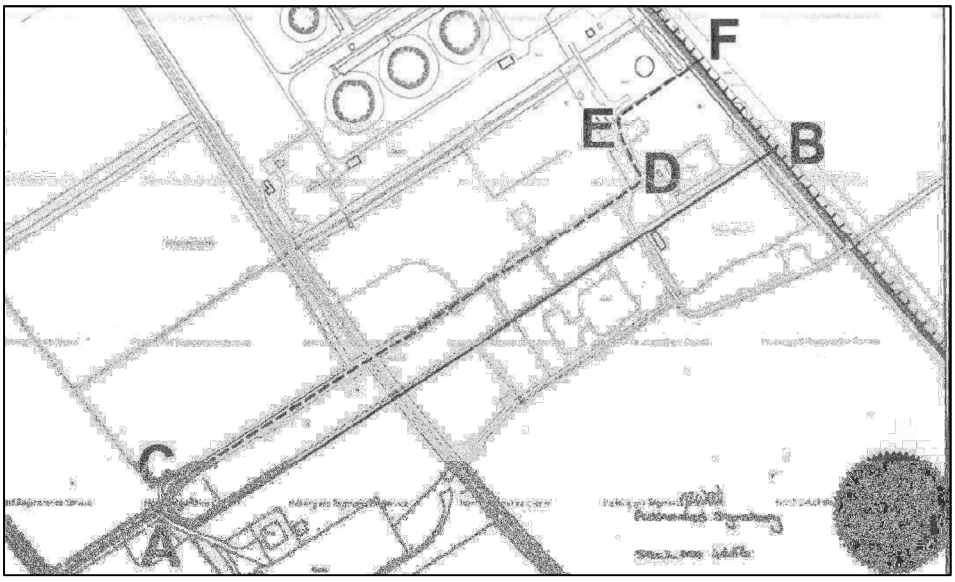

Figure 14.2: Abstract from Definitive Map Modification (Public Footpath 100 South Killingholme) Order 2005 (1)

Footpath 50

FP50 runs along the southern bank of the River Humber, some 450m east of the Principal Site boundary at its closest point. The footpath currently runs between the Port of Immingham External Coal and Iron Ore Storage Facility in the south and the C.Ro Port (Killingholme) to the north.

The footpath will partially be diverted to accommodate the proposed Able Marine Energy Park (AMEP), which when constructed will involve the development of a quayside along the southern bank of the River Humber crossing the alignment of the footpath. The proposed diversion will comprise three principal parts:

[14] Definitive Map Modification Order 2005 (1)

1. The stopping up of a 1.1km section of FP50 running along the south bank of the River Humber;
2. Creation of a replacement section along Rosper Road and to the west of Haven Road connecting with FP77; and
3. Creation of a replacement section along the north- west boundary of the C.Ro Port (Killingholme).

The diversion will be implemented when construction of the quay commences.

England Coast Path

The England Coast Path (ECP) will be a new National Trail running around the coastline of England, which is currently due for completion by 2020. The ECP is being opened in sections and when complete will be one of the longest coastal walking routes in the world. Several sections of the route are already open.

The application site falls inside the Mablethorpe to Humber Bridge section of the proposed Trail. Work on this section is currently ongoing but there is no estimated completion date and no details of the proposed alignment of the Trail through this section are available.[15]

However, as with other sections of the ECP in England, it is assumed that where possible access will generally be kept as close to the coastal/estuarine strip as possible, unless access to this area is not available for example due to quayside developments.

On this basis, it is possible that the ECP may seek to use the diverted FP50 and thereby using FP100 to access the Trail.

If the route of the diverted FP50/FP100 is not used for the ECP it is assumed that the Trail would continue in the direction of Immingham using what is currently a grass verge along Rosper Road. This route would be around 2km shorter than the diverted FP50/FP100 option but would miss out a c. 700m section of coastline.

Irrespective of any future decisions by Natural England concerning the route of the ECP in this area, it is recognised that at present FP100 plays a role connecting Rosper Road and the wider urban area with the banks of the River Humber.

Due to the possible future designation of FP50 as a National Trail, and either the similar designation or use as a link to the ECP for FP100, both footpaths are assigned a **medium sensitivity**, each being a receptor of moderate recreational value for the purposes of the land use and recreation assessment.

Rosper Road Pools Nature Reserve

Rosper Road Pools Nature Reserve is managed by the Lincolnshire Wildlife Trust and is a flood-relief reservoir with associated wet grassland. It is of ornithological interest, supporting breeding, wintering and migrant birds.

[15] https://www.gov.uk/government/publications/england-coast-path-in-the-north-east-of-england

Table 14.11: Sensitivity of Recreational Receptors

Receptor	Sensitivity of receptor and justification
FP100	A PRoW of local recreational value and ordinarily of low sensitivity. However, PRoW is likely to serve as part of or link to the proposed ECP when this is opened by 2020 and is therefore assigned **medium sensitivity**.
FP50	A PRoW of local recreational value and ordinarily of low sensitivity. However, the PRoW is likely to serve as part of or link to the proposed ECP when this is opened by 2020 and is therefore assigned **medium sensitivity**.
Rosper Road Pools Nature Reserve	A receptor of local recreational value and **low sensitivity** for recreation.

14.4 Assessments of Effects

The proposed development would include: secure storage for vehicles on the Principal Site north of Marsh Lane; a Pre-Delivery Inspection facility with offices (net internal area c. 3,200m^2); petrol and diesel dispensing facility; 2 wash bays; 25 load sticks (each with 2 stacking lanes, 61m long); a security cabin at the HGV entrance; a Port Related Storage facility south of Marsh Lane (which could accommodate an additional 5,000 cars); 30m high mast lighting; and perimeter fencing.

Associated development would include: improving the junction at Marsh Lane/Rosper Road; widening Marsh Lane to a 2-lane highway; diversion or protection of services and the creation of a temporary construction access from Rosper Road.

14.4.1 Construction Effects

Socio- Economic Effects (Gross)

Although construction phase impacts are by their very nature temporary, for large-scale schemes such as the proposed Marsh Lane Car Storage and Distribution facility these construction phase effects can be both sizeable and extend over a period of many months or years.

To understand the potential construction phase impacts that may arise from the proposed development of the Marsh Lane Car Storage and Distribution facility, information on expected development costs have been supplied by the developer, Able Humber Ports Ltd.

This information indicates that the overall expenditure expected during the construction phase is expected to amount to £40.3 million. The breakdown of this total is expected to be as follows:

1. Site preparation and earthworks: £25.1 million;
2. Roads, paving and hard-standing: £2.7 million;
3. On-site buildings (e.g. the PDI): £4.8 million; and
4. Other external works (e.g. fencing, lighting, CCTV, utilities, etc.): £7.7 million.

The construction phase would last for 18 months.

A number of assumptions have been applied with respect to the average number of person years of employment supported by infrastructure development and construction phase expenditure:

1. Infrastructure: £183,750 of expenditure per person-year of temporary employment; and
2. Buildings: £93,188 of expenditure per person-year of temporary employment.

These assumptions are based on:

1. Construction expenditure benchmarks obtained from the most recent quarterly BCIS quarterly report on construction costs;
2. Construction phase employment benchmarks developed by the Construction Skills network and UK Contractors Association, updated to an up-to-date price base (i.e. 2016 prices); and
3. The latest (2014) detailed regional employment data for the construction and civil engineering sectors, obtained from the Office for National Statistics (ONS) Business Register and Employment Survey (BRES) (published September 2015).

Based on the cost information provided by Able Humber Ports Ltd and the assumptions set out above, the estimates for the total amount of gross construction phase employment and additional economic output measured by Gross Value Added (GVA) that are likely to be supported by the proposed development are set out in **Table 14.12** below:

Table 14.12: Development Phase Gross Employment and GVA Impacts

Construction Element	Development expenditure (£m)	Gross Employment (person years)	Gross Value Added (£m)
Site prep. & earthworks	£25.1m	137	£6.9m
Roads, paved areas, etc.	£2.7m	15	£0.7m
Buildings	£4.8m	52	£2.6m
Other external works	£7.7m	42	£2.1m
Total	**£40.3m**	**245**	**£12.4m**

Hence, the proposed development is expected to yield 245 person years of gross employment during its 18-month construction phase.

Table 14.12 also sets out estimates for the amount of GVA that is likely to be generated during the construction phase. The estimate for construction phase GVA has been calculated using the latest (2013) regional estimates for the average GVA yield per worker for the construction and civil engineering sector in Yorkshire and the Humber obtained from the ONS.

The proposed development is therefore estimated to be likely to generate 245 person years of gross employment and £12.4 million of GVA during the construction phase, with these effects expected to be in place over a development period of 18 months.

Socio-Economic Effects (Net)

So far the results have been presented on a gross basis, but it is also necessary to estimate the net additional effects at the spatial level of the WSA (North Lincolnshire). The calculation of net additional construction phase impacts is based on estimating the additionality of the development (i.e. the conversion of gross impact estimates into net impact estimates) covering the additionality factors described below:

1. **Leakage**: is the proportion of project outcomes that benefit individuals or organisations located beyond the relevant area of impact (in this case, North Lincolnshire). Leakage is generally higher at a local level, although it also varies by the nature of development type. For some specialist types of construction activities leakage rates can be quite high, as a specialist workforce may be required for certain aspects of work. None of the proposed buildings or infrastructure proposed for the Marsh Lane Car Storage and Distribution facility is considered to be of this type;
2. **Displacement**: is an estimate of the economic activity hosted by the site that would be diverted from other businesses in the local (North Lincolnshire) area. This again varies by the nature of development type. For construction activities displacement rates are usually considered to be quite low, because of the temporary, 'one-off' nature of the activities. In the case of the proposed development the amount of displacement expected during the construction phase is zero; and
3. **Multipliers**: composite employment multipliers measure the employment benefits created through the indirect and induced effects of subsequent rounds of direct expenditure in the local (North Lincolnshire) economy. Values for multipliers vary according to the size and complexity of the economy under consideration, and are generally lower at a more localised level.

The specific assumptions used in the assessment of construction phase net effects are set out in **Table 14.13** below:

Table 14.13: Additionality Factors: Construction Phase (WSA)

Additionality factor	Construction Phase
Leakage	22.7%
Displacement	0.0%
Multipliers	0.21%

The assumption regarding leakage is based on commuting data obtained from the 2011 Census. The Census found that just over 77% of workers whose workplace was located in North Lincolnshire were also resident of the district, while nearly 23% travelled in from neighbouring or other districts. On this basis, it has been assumed that 77% of construction jobs would also be filled by local residents, the balance (23%) being assumed to represent leakage.

As noted above, it has been assumed that there would be no displacement of local economic activity during the construction phase.

The value of 0.21% assumed for the local construction sector multipliers is based on a ready reckoner obtained from the current edition of the Homes and Communities Agency *Additionality Guide*, which is a widely used reference for assumptions of this type for development projects throughout England.

Table 14.14 below sets out the results of this additionality assessment for the construction phase of the project.

Table 14.14: Construction Phase Net Employment and GVA Impacts (WSA)

Element	Net Employment (person years)	Gross Value Added
Net construction sector effects	189	£9.6m
Multiplier effects	40	£1.8m
Overall effects	**229**	**£11.4m**

Therefore, at the spatial level of North Lincolnshire, the proposed development would be expected to generate an overall total of 229 person years of net additional local construction phase employment and £11.4 million of GVA in the local economy (WSA) over an 18-month development period.

The magnitude of impact of the construction phase jobs on the general employment at WSA level is anticipated to be low, resulting in a minor level of effect (beneficial). However, within the construction sector, the effect of the project will be more significant. Assuming that 229 person years equates to an average of 153 jobs per year, this represents almost 3% of the 5,400 jobs of the North Lincolnshire construction sector. The magnitude of impact of the construction phase jobs on the construction workforce at WSA level is therefore considered to be moderate beneficial, which may be significant.

Land Use Effects

This section presents the land use effects arising as a result of the construction phase activities. Effects would arise as a result of the direct impact of the proposed development on land uses within the application site and on neighbouring land uses during the construction phase. The anticipated magnitude of impact on each receptor is assessed and the significance of the resulting effect is presented in Error! Reference source not found.. Where appropriate, mitigation measures are presented. Effects are assessed on the land use receptors identified in the baseline section, namely:

1. Agricultural land;
2. Overground pipelines;
3. Underground pipelines;
4. Underground gas storage;
5. External Coal and Iron Ore Storage;
6. Hazel Dene (residential property), Marsh Lane; and
7. Killingholme Branch railway.

Effects on PRoW FP100 which runs to the south of the Principal Site are considered in the section relating to Recreation.

Elsewhere, outside of the application site, effects on land uses present within the LAI (i.e. the site buffer + 250m) would be indirect in nature and would primarily arise as a result of traffic movements to and from the application site during the construction phase and the operational phase or other environmental impacts such as visual impact, light impacts or

noise disturbance. Where relevant, these impacts are referenced in the following assessment. However, to avoid 'double-counting' these impacts in the Environmental Statement (as they are considered elsewhere in the relevant environmental topic e.g. Chapter 10 Traffic and Transport), no further consideration is given in the socio-economic, land-use and recreation chapter.

Table 14.15: Construction Phase Land Use Effects

Land Use Receptor	Sensitivity of Receptor	Anticipated Land Use Impact During Construction Phase	Magnitude of Impact	Likely significance of effect before mitigation	Mitigation Requirements	Further consideration in Operational effects?
Agricultural Land - the Principal Site	Low sensitivity.	Non- active agricultural land would be lost as a result of the construction works. Degree of loss would be insignificant and land is currently allocated for industrial development	Low adverse	Negligible land use effect on agricultural land.	See Geology Chapter for details of soil management measures.	No – once constructed, the proposed development would have no ongoing effect on agricultural land.
Agricultural Land - the Port Related Storage Area	Low sensitivity.					
Overground Gas Pipelines	High sensitivity	None of the construction works would affect the area crossed by the pipelines	Negligible.	Negligible land use effect on the operation of the overground pipelines.	Yes – see Section 14.1.1	Yes
Underground Pipelines		Construction works would take place above the pipelines. In agreement with the pipeline owners a lower level of fill is proposed above the pipelines to allow easy access for maintenance yet allowing safe clearance between pipelines and pavement surface. No lighting columns will be proposed within pipeline easement.	Low adverse	Moderate land use effect on operation of pipelines during construction works, but effect is unlikely to be significant provided appropriate clearance is maintained with pavement surface and dialogue maintained with pipeline owners.	Yes – see section 14.1.1.	Yes

Land Use Receptor	Sensitivity of Receptor	Anticipated Land Use Impact During Construction Phase	Magnitude of Impact	Likely significance of effect before mitigation	Mitigation Requirements	Further consideration in Operational effects?
Underground Gas Storage	Medium sensitivity.	No construction works would take place within the site boundary of the underground gas storage facility. No land use impacts on site operations are anticipated to arise. Note: Construction phase traffic movements may cause delays to deliveries to and from premises.	Negligible	A negligible land use effect on the operations of the underground gas storage facility. Effects of construction traffic movements on local road network are considered in Traffic and Transportation section.	See Traffic and Transportation section for details of traffic mitigation measures.	Yes
External Coal and Iron Ore Storage	Medium sensitivity.	No construction works would take place within the site boundary of the coal and iron ore storage area. No land use impacts on site operations are anticipated to arise.	Negligible	Effects of construction traffic movements on local road network considered in Traffic and Transportation section.	See Traffic and Transportation section for details of traffic mitigation measures.	Yes
Hazel Dene (residential property) Marsh Lane	Low sensitivity.	No construction works would take place within the site boundary of the property.	Negligible	A negligible land use effect on the residential property.	Amenity impacts arising from traffic, visual, noise & vibration, air emissions and lighting are assessed in the relevant ES chapters[16].	Yes
Killingholme Branch railway	Medium sensitivity	No construction works would take place within the site	Negligible	A negligible land use effect on the operations of the	None.	Yes

[16] Chapter 7 Landscape & Visual; Chapter 10 Traffic & Transport; Chapter 11 Noise & Vibration; Chapter 12 Air Quality; and Chapter 13 Lighting.

Land Use Receptor	Sensitivity of Receptor	Anticipated Land Use Impact During Construction Phase	Magnitude of Impact	Likely significance of effect before mitigation	Mitigation Requirements	Further consideration in Operational effects?
		boundary of the branch railway. No land use impacts on railway operations are anticipated to arise. All construction works would take place to the west of the railway and would not require any crossing of the railway.		railway branch line.		

Recreation Effects

FP100

As set out in the baseline section, Marsh Lane is used as the route of FP100 east of Rosper Road. As described in Chapter 3 Proposals and Alternatives, the majority of this section of Marsh Lane would be used as an access for construction vehicles moving between Rosper Road and the Principal Site and/or the Associated Port Storage site. This would continue for the duration of the construction phase.

Construction traffic using this section of Marsh Lane is likely to be disruptive to users of the footpath as it would mean that users would need to move on to the grass verge of the road temporarily to allow construction vehicles to pass by. Without appropriate mitigation this may act as a deterrent to persons looking to use the footpath. In the longer term, some walkers may seek alternative means of accessing the banks of the River Humber or be displaced into other areas as a result of this inconvenience.

The impact of the construction works on users of FP100 as it runs along Marsh Lane is anticipated to be moderate for the duration of the construction works. As there are few alternatives available to access the banks of the Humber in what is a primarily industrial area, this is anticipated to lead to a medium impact on what is considered to be a medium sensitivity receptor owing to its future role as a link or part of the proposed ECP. The resulting level of effect without mitigation would be **moderate**. Proposed construction mitigation measures are described in section 14.5.1.

As set out elsewhere in the ES, significant environmental effects are anticipated to occur in relation to visual impacts to footpath users and noise also. Mitigation measures are proposed in the relevant ES chapters for those topics.

FP 50

All construction phase works would be 440m to the west of FP50 and would not directly affect accessibility along the route. Owing to the distance between the application site and FP50, no other significant environmental effects such as visual or noise impacts are anticipated to occur.

Notwithstanding, it is acknowledged that adverse effects on FP100 during the construction phase would in turn adversely affect FP50 as the former acts as a link to FP50 from Rosper Road. As FP 50 is a medium sensitivity receptor due to its potential status as part of the proposed ECP, a low indirect impact due to disruption of the link from FP100 would have a **minor** adverse effect. Proposed mitigation for FP100, as set out in Section 14.5.1 would mitigate this adverse effect also.

Rosper Road Pools Nature Reserve

No construction works would take place inside the Nature Reserve. Whilst environmental effects may arise which adversely affect the Nature Reserve during the construction phase (see chapters 7 Landscape & Visual; Chapter 10 Traffic & Transport; Chapter 11 Noise & Vibration; Chapter 12 Air Quality; and Chapter 13 Lighting), these are unlikely to affect the recreational usage of the Nature Reserve. The impact on the recreational use of the nature reserve is anticipated to be low, resulting in a negligible effect on this low sensitivity receptor.

14.4.2 Operational Effects

Socio-Economic Effects (Gross and Net)

The estimate for the number of jobs (in gross terms) likely to be required to operate the proposed development once it is operational has been supplied by Able Humber Ports Ltd. The estimated total for operational jobs is 200 employees.

This gross employment figure has been converted into a net employment estimate using assumptions for the additionality factors (leakage, displacement, multipliers) in a similar way as for the construction phase effects. Table 14.16 below sets out the results of this assessment.

Table 14.16: Operational Phase Net Employment and GVA Effects

Element	Gross Employment (jobs)	Net Employment	Gross Value Added p.a. (£m)
Direct effects	200	155	£5.3m
Indirect and multiplier effects	n/a	32	£1.5m
Overall effects	**200**	**187**	**£6.8m**

Therefore, at the spatial level of North Lincolnshire, it is expected that a total of 187 net additional permanent jobs would be created by the operations of the facility. Of these, 155 jobs would be created directly, and a further 32 jobs would be contributed in the local supply chain and through local multiplier effects.

Similarly, the annual increment to the local economy in terms of the value of economic output (Gross Value Added) is expected to amount to £6.8 million per annum, of which £5.3

million p.a. would be contributed directly and £1.5 million p.a. would be contributed via local supply chain and multiplier effects.

The magnitude of impact of the operational phase jobs on the local workforce and local economy within the WSA is anticipated to be low, resulting in a minor (beneficial) level of effect.

Land Use Effects

The following section presents the land use effects arising once the project is operational. The anticipated magnitude of impact on each receptor is assessed and the significance of resulting effect presented in **Table 14.17**. Where mitigation measures would be required this is noted.

Table 14.17: Operational Phase Land Use Effects

Land Use Receptor	Sensitivity of Receptor	Anticipated Land Use Impact During Operational Phase	Magnitude of Impact	Likely significance of effect before mitigation	Mitigation Requirements
Overground Gas Pipelines	High sensitivity	None – alignment of the overground pipelines are outside of the application site and would not be affected once the project is operational.	Negligible	Negligible land use effect on the operation of the overground pipelines.	None
Underground Pipelines	High sensitivity	As there would be no lighting columns within the pipeline easement there would be no effects once the proposed development is operational. Access for maintenance of the pipeline would be possible by using a lower level of fill above the pipeline.	Negligible	Negligible land use effect on the operation of the underground pipelines.	See Section 14.5.2
Underground Gas Storage	Medium sensitivity.	No land use effects on the operation of the underground gas storage facility as all works would be outside the boundaries of the site.	Negligible	A negligible land use effect on the operations of the underground gas storage. Effects of construction traffic movements on local road network considered in Traffic and Transport chapter.	See Traffic and Transport chapter for details of traffic mitigation measures.
External Coal and Iron Ore Storage	Medium sensitivity.	No land use effects on the operation of the storage facility as all works would be outside the boundaries of the site.	Negligible	A negligible land use effect on the operations of the storage facility. Effects of operational traffic movements on local road network are considered in Traffic	See Traffic and Transport chapter for details of traffic mitigation measures.

Land Use Receptor	Sensitivity of Receptor	Anticipated Land Use Impact During Operational Phase	Magnitude of Impact	Likely significance of effect before mitigation	Mitigation Requirements
				and Transport chapter.	
Hazel Dene (residential property), Marsh Lane.	Low sensitivity.	No land use effects on the residential property as all works would be outside the boundaries of the property.	Negligible	A negligible land use effect on the residential property.	Environmental impacts arising from traffic, visual, noise & vibration, air emissions and lighting are assessed in the relevant ES chapters[17].
Killingholme Branch Railway	Medium sensitivity.	No land use effects on the railway as all works would be outside the boundaries of the railway.	Negligible	A negligible land use effect on the operations of the railway branch line.	None.

Recreational Effects

FP100

Without mitigation, traffic using Marsh Lane to access the proposed development would be disruptive to users of FP100 as it would mean that users would need to move on to the grass verge of the road to allow vehicles to pass by. However, due to the volume and nature of traffic (fewer HGVs than the construction phase) using Marsh Lane the operational phase and its intermittent nature this level of disruption is unlikely to act as a deterrent to persons using the PRoW.

The impact on users of FP100 as it runs along Marsh Lane is anticipated to be low during the operational phase. The resulting level of effect would be **minor** on what is considered to be a medium sensitivity receptor. Nevertheless, mitigation measures proposed for the construction phase would remain in place during the operational phase (see section 14.5.2) and would further reduce the level of effect.

As set out elsewhere in the ES, significant environmental effects are anticipated to occur in relation to visual impacts to footpath users and noise. Mitigation measures are proposed in the relevant ES chapters for those topics.

FP50 and the Rosper Road Pools Nature Reserve

There would be no significant effects on the usage of FP50 or the Nature Reserve during the operational phase of the proposed development owing to the distance between the application site and these receptors.

[17] Chapter 7 Landscape & Visual; Chapter 10 Traffic & Transport; Chapter 11 Noise & Vibration; Chapter 12 Air Quality; and Chapter13 Lighting

14.4.3 Cumulative Effects

Able Marine Energy Park – cumulative employment and economic output

Cumulative employment and additionality effects would occur in combination with the proposed Able Marine Energy Park, if both projects are constructed in parallel. These effects would be beneficial in nature.

Able Marine Energy Park – Cumulative Effects on Footpath 50

The proposed development would not directly affect the diversion of FP50, which is proposed as part of the Able Marine Energy Park proposals. However, FP100 which runs along southern side of the Principal Site acts as a continuation of FP50 and both may form part of proposed England Coast Path (ECP) when this is completed by 2020. Activities which discourage walkers using FP100 would be likely to have a similar impact on FP50 as it acts as the two are used as one continuous route.

Mitigation measures proposed for FP100 (see Section 14.5) would ensure that walkers are not discouraged from using the diverted FP50 / proposed ECP. On this basis there would be no cumulative adverse significant effect on FP50 arising as a result of the combined Marine Energy Park proposals and the proposed development.

14.5 Mitigation

14.5.1 Construction Phase

Overground Gas Pipelines

The overground gas pipelines would be clearly marked during construction phase and exclusion zone created along the boundary of the Principal Site.

Underground Pipelines

The underground pipelines crossing the Principal Site would be clearly marked during the construction phase. A method statement for the protection of these pipes and subsequent surfacing of the ground would be prepared by Able Humber Ports Ltd in consultation with the pipeline operators, CLH Pipeline System Ltd, and implemented in accordance with the agreed scheme. Able would continue to liaise with the pipeline operators whilst the construction works are ongoing.

FP100

A permanent footway would be created running along the length of Marsh Lane. The footway would be created as one of the first phase of construction activities to ensure that walkers using the route would have safe passage along Marsh Lane, whilst construction works are being undertaken.

14.5.2 Operational Phase

Underground Pipelines

Whilst not yet established with CLH, if necessary the pipelines crossing the site can be demarcated at the Principal Site boundaries so that the alignment is visible. Notwithstanding, the land raising above the pipelines has been designed to ensure that the amount of fill is

less than the remaining site area. Furthermore, no permanent lighting columns are to be erected within the north eastern corner of the site to ensure that the necessary easement is adhered to.

FP100

The Marsh Lane footway created for the construction phase works would be kept permanently in place and would facilitate safe passage between Rosper Road and the banks of the Humber / FP50 during the operational phase.

14.6 Residual Effects (Construction and Operation)

14.6.1 Overground and Underground Pipelines

Residual effects on pipelines once mitigation measures are incorporated would be **negligible**.

14.6.2 FP100

Residual effects on FP100 would be **negligible** once the Marsh Lane footway is created.

14.7 Summary of Effects

Socio-economics: the magnitude of impact of the construction phase jobs and operational jobs on the local workforce is anticipated to be low, resulting in a minor beneficial level of effect. Taking into account leakage out with North Lincolnshire, the magnitude of impact of the construction phase jobs on the **local construction workforce** is anticipated to be moderate. Beneficial effects will arise in relation to GVA in the North Lincolnshire area, however without baseline data available at this sub-regional level it is not possible to quantify the significance of this impact.

Land-use: Mitigation measures, comprising implementation of a protection plan, are necessary to ensure effects on underground pipelines crossing the Principal Site are not significant. All other land use effects during the construction phase will not be significant.

Recreation: Mitigation measures are necessary to ensure that effects on PRoW FP100 are not significant. Mitigation comprises the construction of a permanent footway along Marsh Lane to facilitate safe passage for walkers between Rosper Road and the banks of the River Humber / FP50. All other recreational effects are not significant. These measures would ensure that the proposed development does not significantly adversely affect usage of FP50 and the route of the proposed ECP, which may follow the route of this footpath.

14.8 Conclusions

The proposed development would lead to beneficial effects on local employment and GVA / economic output. These effects would be most significantly experienced within the local construction workforce where the project is estimated to create 229 person years of employment. Other beneficial effects would be experienced with regard to the additional 187 net jobs created through direct employment and local multiplier effects during the operational life of the facility.

Mitigation measures are necessary to ensure that construction phase and operational phase activities do not significantly adversely affect PRoW FP100 which acts as a link to the proposed ECP, and the underground pipelines crossing the Principal Site.

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