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15.0 SOCIO-ECONOMICS

15.1 Introduction

15.1.1 This chapter of the Environmental Statement (ES) provides an initial assessment of the potential socio-economic impacts as a result of the construction, operation (including maintenance) and decommissioning of the Proposed Development and reports on the potential effects on employment, local businesses and the local population.

15.2 Legislation and Planning Policy Context

National Planning Policy

15.2.1 The Overarching National Policy Statement (NPS) for Energy (EN-1) (Department of Energy and Climate Change, 2011) states that socio-economic effects should be considered where a development has the potential for effects at the local or regional level. The NPS states (at paragraph 5.12.3) that all relevant impacts should be assessed including:

- *“creation of jobs and training opportunities;*
- *...the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure...; and*
- *cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.”*

15.2.2 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2019) requires local authorities to set out a clear economic vision and strategy for their area which encourages sustainable economic growth. The NPPF states that planning policies should help create the conditions in which businesses can invest, expand and adapt.

15.2.3 The NPPF also places focus on the need for sustainable development. Achieving sustainable development means that the planning system has three overarching objectives: economic, social, environmental. These objectives are interdependent and need to be pursued in mutually supportive ways. The details of the planning system’s objectives are as follows:

- an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and

- an environmental objective – to contribute to protecting and enhancing the UK’s natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

15.2.4 Paragraph 80 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 82 of the NPPF also states that planning policies should *“recognise and address the specific locational requirements of different sectors.”*

Regional Policy

The Humber Local Enterprise Partnership (LEP) Strategic Economic Plan 2014-2020 (2014)

15.2.5 The Humber Strategic Economic Plan (SEP) outlines its ambition to *“maximise the potential offered by the Humber Estuary, leading the Humber to become a renowned national and international centre for renewable energy and an area whose economy is resilient and competitive.”* It highlights the national importance of the Humber Energy Estuary and its role in the economic development of the Humber LEP area. It aims to *“Ensure that the appropriate infrastructure, supply of skilled labour and business support services are in place to drive the growth of the Energy Estuary, maintain the Humber’s competitiveness and maximise the benefits of new inward investment for local people and businesses.”*

The Humber’s Blueprint for an Industrial Strategy (2018)

15.2.6 Following on from the delivery of the Humber SEP, the Humber LEP is in the process of developing an Industrial Strategy for the region which will build on the strengths of the Energy Estuary. The Blueprint for an Industrial Strategy sets out the Humber LEP’s plan for delivering an Industrial Strategy focussing on four sectors where the Humber has strengths including clean energy. It highlights the Humber’s leading role in energy production including energy from waste, and the contribution it can make to the UK Industrial Strategy.

Greater Lincolnshire LEP Strategic Economic Plan 2014-2032 (Updated 2016)

15.2.7 The Greater Lincolnshire SEP outlines the priorities for economic growth in the Greater Lincolnshire area. This includes the growth of the area’s strongest sectors such as the low carbon economy including energy from waste. It also highlights the LEPs ambitions for the Humber Energy Estuary to become a leading national and international centre for energy. The Greater Lincolnshire SEP also outlines priorities for the manufacturing/ engineering sector including support for growth in the renewable energy sector along the South Humber Bank complex through the provision of infrastructure and land assembly to unlock the development of key sites.

Local Planning Policy

North East Lincolnshire Local Plan 2013-2032 (Adopted 2018)

15.2.8 The spatial vision for the North East Lincolnshire stated in the Local Plan includes:

“By 2032 North East Lincolnshire will be nationally and internationally recognised as a centre for offshore renewables, focusing on operations and maintenance and contributing significantly to the Humber's 'Energy Estuary' status. Growth in key sectors, food, energy, chemicals, ports and logistics, will be matched by a strong tourism and leisure offer.”

15.2.9 Strategic objective SO3 (Economy) commits to *“Support environmentally responsive local economic growth by promoting conditions that sustain an increase in the number of better paid jobs; removing barriers to investment and access to jobs.”*

15.2.10 Policy 1 (Employment Land Supply) supports the development of sites to accommodate B class uses in North East Lincolnshire. It aims to support the generation of 8,800 jobs including through growth in the Renewables and Energy sector.

15.2.11 Policy 8 (Existing Employment Areas) safeguards existing employment areas, such as the Site, and supports the development or re-use of vacant sites within existing employment areas for employment use.

North East Lincolnshire Economic Strategy (2016)

15.2.12 The North East Lincolnshire Economic Strategy outlines three main outcomes for North East Lincolnshire (NEL): *“NEL's businesses invest and grow; NEL's workforce is skilled and productive; and NEL is a great place to live, work, visit and invest”*. 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.

Other Guidance

15.2.13 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:

- 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, 2018);
- The Magenta Book: Guidance for evaluation (HM Treasury, 2011); and
- Additionality Guide (Fourth Edition) (Homes and Communities Agency, 2014).

15.3 Assessment Methodology and Significance Criteria

- 15.3.1 This assessment considers the role of the Proposed Development in the generation of direct and indirect employment opportunities at the local and regional level during construction, operation (including periods of maintenance) and decommissioning.
- 15.3.2 As described in Chapter 4: The Proposed Development and Chapter 5: Construction Programme and Management, three possible construction programme scenarios have been identified for the purposes of assessment. There is no difference in the scale and duration of construction for all three scenarios, so all scenarios are considered to be the same for the purposes of the socio-economic assessment.

Definition of the Study Area

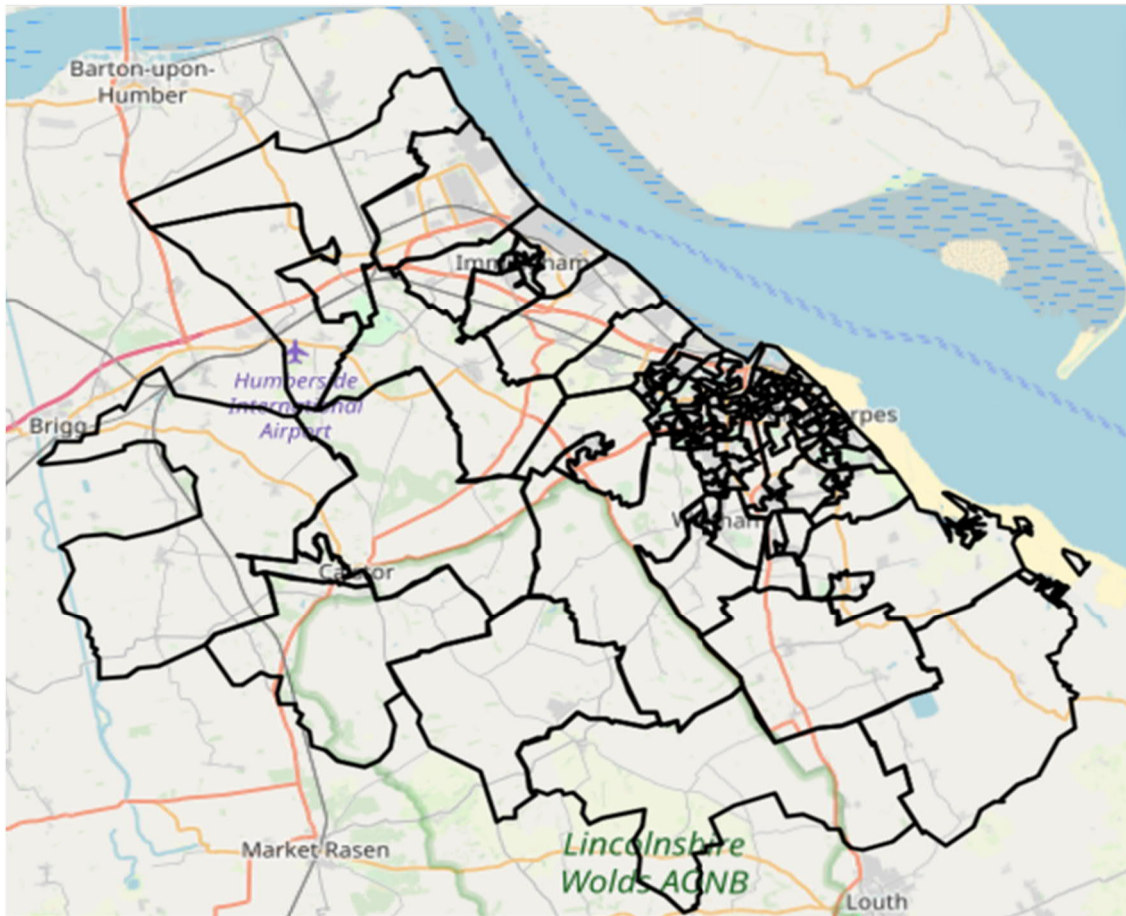
- 15.3.3 The Proposed Development is located in the industrial, port hinterland area of South Humber Bank, with some open space and agricultural land located to the south of the industrial area.
- 15.3.4 The Office of National Statistics (ONS) statistical geographies have been used to define the study area for the socio-economic assessment as described below.
- 15.3.5 The Site falls within Lower Super Output Area (LSOA) North East Lincolnshire 007A (the 'Direct Impact Area') (see Plate 15.1). 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. The Direct Impact Area is located in North East Lincolnshire, between the settlements of Immingham to the north-west and Grimsby to the south-east. The Site is located in the north-east corner of the Direct Impact Area, close to the adjacent LSOA North East Lincolnshire 007B and the River Humber. The Direct Impact Area extends further to the south-west, away from the River Humber.

Plate 15.1: Map of Direct Impact Area (LSOA North East Lincolnshire 007A)



15.3.6 As well as understanding the socio-economic conditions immediately surrounding the Site (as per the LSOA analysis), the socio-economic assessment also takes into account the principal labour market catchment area of the travel to work area (TTWA). TTWAs contain at least 75% of the area's workforce that both live and work in the area. TTWAs have populations of at least 3,500 people. The Site falls within the Grimsby TTWA (the 'Wider Impact Area'). The Grimsby TTWA features the town of Grimsby as its employment centre, also covering other local settlements including Cleethorpes and Immingham. The Site is located relatively centrally in the TTWA, located between the two largest settlements of Grimsby and Immingham (see Plate 15.2).

Plate 15.2: Map of Wider Impact Area (Grimsby TTWA)



15.3.7 The assessment outlines the socio-economic context of both the Direct Impact Area and the Wider Impact Area (together being the 'Study Area') and makes comparisons to the whole of England. Key indicators include: population and labour force; skills and unemployment; industry and the economy.

Sources of information

15.3.8 The following ONS datasets have been reviewed to inform the assessment: Business Register and Employment Survey (BRES) (2018); Jobseeker's Allowance by Occupation (2019); Census of Population (2011); and Population Projections (2016).

15.3.9 Where possible, socio-economic impacts have been appraised against relevant national standards, such as those provided by HM Treasury, the Department for Business, Innovation and Skills (now Department for Business, Energy and Industrial Strategy), and Homes and Communities Agency (now Homes England). Where relevant standards do not exist, professional experience and expert judgement have been applied.

15.3.10 The socio-economic assessment determines the:

- sensitivity of receptors (as defined below);
- magnitude of impacts; and

- consequent significance of effects.

Sensitivity (Value)

15.3.11 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)). The sensitivity of these receptors is considered to be high due to the good local availability of the labour and skills that are required for the Proposed Development.

15.3.12 Section 15.4 (Baseline Conditions) summarises the receptors that are likely to be affected during construction, operation (including maintenance) and decommissioning of the Proposed Development.

Assessment of Magnitude

15.3.13 The magnitude of the impacts 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 the area in which effects are likely to 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 and/ or decommissioning phases. Medium to long-term impacts are those associated with the operation of the Proposed Development.

Assessment of Significance

15.3.14 The effects of the Proposed Development are defined as either:

- beneficial – an advantageous or beneficial effect on an impact area;
- neutral – an imperceptible effect on an impact area; or
- adverse – a disadvantageous or negative effect on an impact area.

15.3.15 Where an effect is assessed as being beneficial or adverse, the effect has been classified as minor, moderate, major or negligible. The magnitude of the change and the value of the receptor will be used to determine the significance of effects caused. Significant effects will be those identified as being moderate or major (adverse or beneficial) as set out in Table 15.1. For the purposes of this assessment, only moderate and major effects are considered 'significant'.

Table 15.1: Classification of effects on socio-economics

MAGNITUDE OF IMPACT	SENSITIVITY/IMPORTANCE OF RECEPTOR			
	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

Consultation

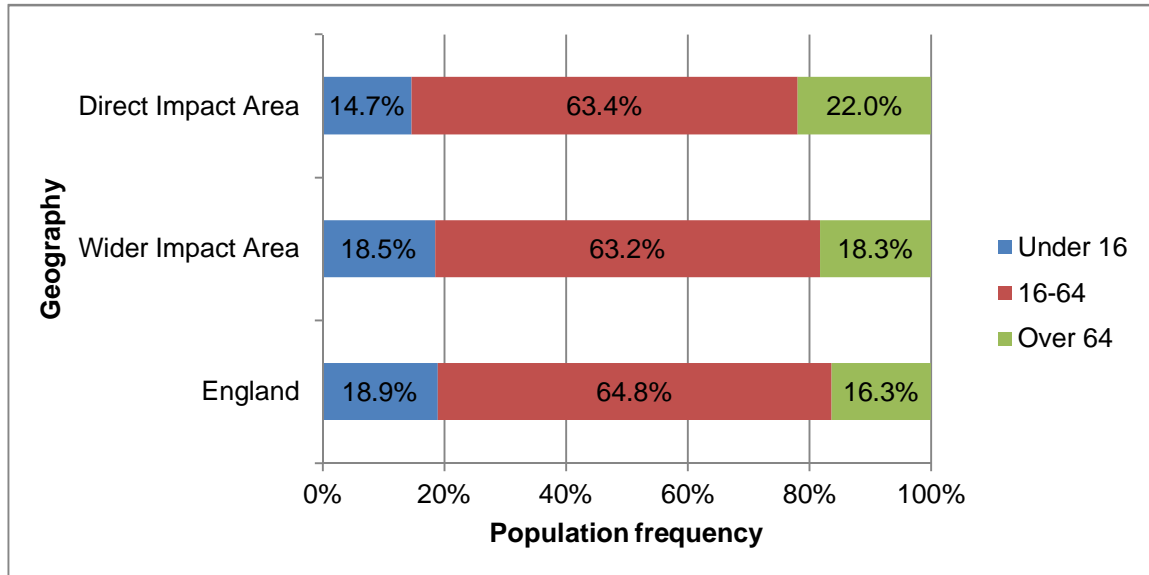
- 15.3.16 This assessment has been prepared in accordance with the EIA Scoping Report submitted to the Planning Inspectorate in August 2019, and the EIA Scoping Opinion received in October 2019.
- 15.3.17 During consultation on the scope of the EIA for the Consented Development, North East Lincolnshire Council (NELC) requested that the EIA should demonstrate impacts upon the labour force, impacts of construction, and how this would impact on the economic prosperity of the area (refer to Section 15.6). NELC also requested that the assessment of socio-economics should demonstrate how the LEP strategy for the Humber Estuary for Energy would be met (refer to Sections 15.6 and 15.9).
- 15.3.18 The Scoping Opinion received from PINS on 2nd October 2019 included no specific comments on the scope of the socio-economic assessment. The consultation response by NELC to PINS explained that the EIA Scoping Report captured the relevant information requested by NELC in the scoping opinion in respect of the Consented Development and that NELC have no further comments.
- 15.3.19 There were no specific comments relating to the socio-economics assessment received through consultation on the Preliminary Environmental Information (PEI) Report.

15.4 Baseline Conditions

- 15.4.1 This section outlines the socio-economic baseline conditions in the Study Area itself against England as a whole. 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 on the local population and labour market. The impact is mostly influenced by the size of the labour market and whether it has the relevant skills, occupations and sector strengths.
- 15.4.2 The 2011 Census data shows that the Direct Impact Area had a population of 1,234 while the Wider Impact Area had a population of 187,068 (ONS, 2011). Plate 15.3 shows that the Direct Impact Area had a smaller proportion of young people (aged 0 to 15) than both the Wider Impact Area and England. Both the Direct Impact Area and Wider Impact Area contain fewer people of working age (aged 16 to 64) than the national average. There is a higher proportion of

residents aged over 64 in the Direct Impact Area than in both the Wider Impact Area and England as a whole.

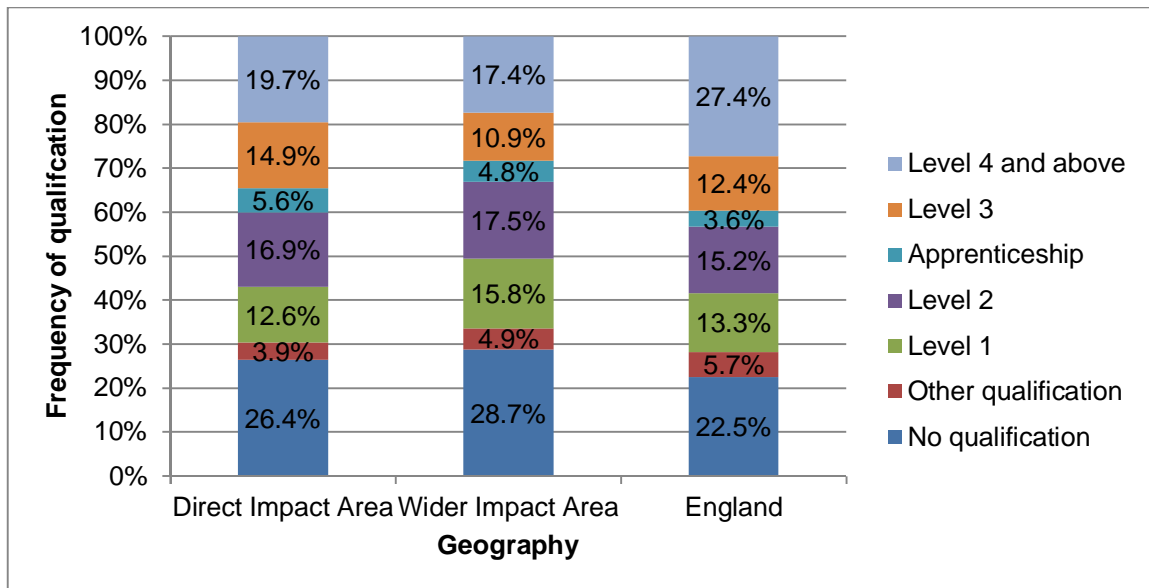
Plate 15.3: Age structure of residents (source: census (ONS, 2011))



15.4.3 Plate 15.4 shows that the Direct Impact Area has fewer residents qualified to Level 4 and above (19.7%) than England as a whole (27.4%), but more than the Wider Impact Area (17.4%). However, there are more residents qualified to Level 3 in the Direct Impact Area (14.9%) than both the Wider Impact Area (10.9%) and England (12.4%).

15.4.4 At the other end of the spectrum there are fewer residents in the Direct Impact Area with no qualifications (26.4%) when compared to the Wider Impact Area (28.7%), but more than in England as a whole (22.5%). There are fewer residents with 'other qualifications' than the Direct Impact Area (3.9% as against 4.9%) and fewer residents with 'other qualifications' than in England as a whole (3.9% as against 5.7%). These figures are broken down in Plate 15.4 below.

Plate 15.4: Highest level of qualification of residents (source: census (ONS, 2011))



15.4.5 Table 15.2 shows that the largest employment sector in the Direct Impact Area is manufacturing with 16.6% of residents employed in the sector, more than in the Wider Impact Area (15.2%) and England as a whole (8.8%). Other key employment sectors in the Direct Impact Area include wholesale and retail (including repair of motor vehicles) (15.6%), human health and social work activities (13.0%), and transport and storage (11.7%).

Table 15.2: Employment by sector (source: census (ONS, 2011))

SECTOR	DIRECT IMPACT AREA	WIDER IMPACT AREA	ENGLAND
Manufacturing	16.6%	15.2%	8.8%
Wholesale and retail trade (including repair of motor vehicles)	15.6%	18.5%	15.9%
Human health and social work activities	13.0%	13.0%	12.4%
Transport and storage	11.7%	7.8%	5.0%
Construction	8.1%	8.3%	7.7%
Public administration and defence; compulsory social security	7.8%	4.9%	5.9%
Education	7.5%	9.1%	9.9%
Professional, scientific and technical activities	4.1%	3.6%	6.7%
Administrative and support service activities	3.9%	4.2%	4.9%
Accommodation and food service activities	3.6%	5.3%	5.6%
Agriculture, forestry and fishing	2.4%	1.2%	0.8%
Financial and insurance activities	2.0%	1.3%	4.4%
Other	3.7%	7.6%	12.0%

15.4.6 More residents aged between 16 and 74 are economically active in the Direct Impact Area (70.6%) than in the Wider Impact Area (68.3%) or England as a whole (69.9%). A large proportion of residents are in employment (65.0%) compared to the Wider Impact Area (59.7%) and England (62.1%). The percentage of residents who are unemployed is low compared to the wider areas. This is broken down in Table 15.3.

Table 15.3: Economic activity (source: census (ONS, 2011))

ECONOMIC ACTIVITY	DIRECT IMPACT AREA		WIDER IMPACT AREA		ENGLAND	
	NO.	% OF RESIDENTS (AGED 16-74)	NO.	% OF RESIDENTS (AGED 16-74)	NO.	% OF RESIDENTS (AGED 16-74)
In employment	599	65.0%	81,550	59.7%	24,143,464	62.1%
Employee: Part-time	122	13.2%	22,146	16.2%	5,333,268	13.7%
Employee: Full-time	401	43.5%	49,518	36.3%	15,016,564	38.6%
Self-employed	76	8.3%	9,886	7.2%	3,793,632	9.8%
Un-employed	32	3.5%	8,102	5.9%	1,702,847	4.4%
Full-time student	19	2.1%	3,575	2.6%	1,336,823	3.4%
Total	650	70.6%	93,227	68.3%	27,183,134	69.9%

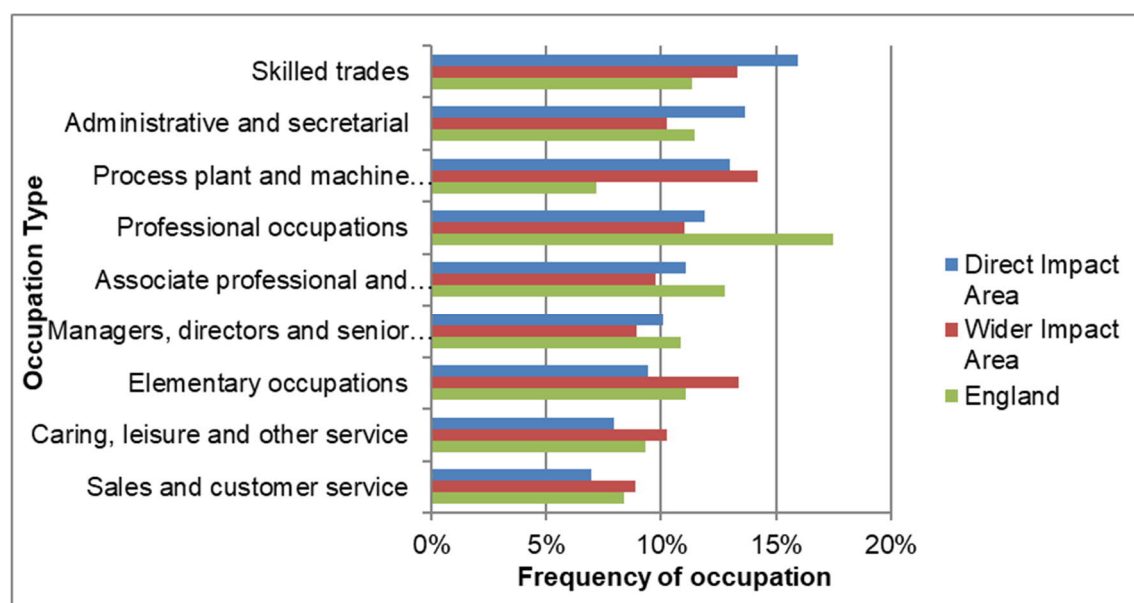
15.4.7 There are fewer economically inactive residents aged between 16 and 74 in the Direct Impact Area (29.4%) than in the Wider Impact Area (31.7%) and England as a whole (30.1%). However, a higher proportion of residents in the Direct Impact Area are retired (19.5%) when compared to the Wider Impact Area (16.3%) and England as a whole (13.7%). This is broken down in Table 15.4.

Table 15.4: Economic inactivity (source: census (ONS, 2011))

ECONOMIC INACTIVITY	DIRECT IMPACT AREA		WIDER IMPACT AREA		ENGLAND	
	NO.	% OF RESIDENTS (AGED 16-74)	NO.	% OF RESIDENTS (AGED 16-74)	NO.	% OF RESIDENTS (AGED 16-74)
Retired	180	19.5%	22,212	16.3%	5,320,691	13.7%
Student (including full-time students)	20	2.2%	5,535	4.1%	2,255,831	5.8%
Looking after home or family	37	4.0%	6,400	4.7%	1,695,134	4.4%
Long-term sick or disabled	28	3.0%	6,292	4.6%	1,574,134	4.0%
Other	6	0.7%	2,822	2.1%	852,450	2.2%
Total	271	29.4%	43,261	31.7%	11,698,240	30.1%

15.4.8 As shown in Plate 15.5, skilled trades dominate the workforce occupations in the Direct Impact Area, with 15.9% of employed residents in this occupation. This is compared to 13.3% in the Wider Impact Area and 11.4% in England as a whole. This is followed by administrative and secretarial, and process plant and machine operatives. There is a notably-greater frequency of process plant and machine operatives in the Direct Impact Area (13.0%), and the Wider Impact Area (14.2%) than in England as a whole (7.2%). Compared to England as whole, the Direct Impact Area is underrepresented in professional occupations, with 11.9% of residents compared to England's 17.5%.

Plate 15.5: Workforce occupations (source: census (ONS, 2011))



Deprivation

15.4.9 Deprivation in small areas in England is measured by the Index of Multiple Deprivation (Department for Communities and Local Government, 2019) which ranks every LSOA in England from 1 (most deprived area) to 32,844 (least deprived area). These are based on seven key measures: 'Income Deprivation', 'Employment Deprivation', 'Education, Skills and Training Deprivation', 'Health Deprivation and Disability', 'Crime', 'Barriers to Housing and Services', and 'Living Environment Deprivation'.

15.4.10 The Direct Impact Area is amongst the 40% least deprived areas in the country based on the overall Index of Multiple Deprivation measure. On the 'Barriers to Housing and Services' domain, the Direct Impact Area is ranked in the 40% most deprived areas in England (based on this measure). The next most pressing domain is the 'Health Deprivation and Disability' measure, with the area featuring just outside of the 50% most deprived areas in England. The best performing domain is the 'Crime' domain, where the area is amongst the 20% least deprived neighbourhoods in England.

15.4.11 The Direct Impact Area is located next to the highly deprived LSOA North East Lincolnshire 001A which features in the top 10% of deprived areas in the country. The 001A area particularly suffers in the Education, Skills and Training and

Income Deprivations domains, featuring in the top 1% of deprived areas in the country for each measure.

Local Receptors

- 15.4.12 No residential properties lie within direct proximity of the Site (within 500 m). The nearest properties are approximately 1 km away (South Marsh Road and Station Road).
- 15.4.13 No social infrastructure lies within direct proximity to the Site. Immingham East Fire Station is located 2.5 km west of the Site, outside of the town of Immingham. The closest school is the Stallingborough Church of England Primary School located 2.7 km to the south-west of the Site.
- 15.4.14 The existing South Humber Bank Power Station is located directly adjacent to the west of the Main Development Area. A dedicated entrance will be provided for the Proposed Development to reduce impact on the power station. There are a number of businesses located close to the Site. Directly to the north of the Site is Synthomer (UK) (a polymer manufacturer). Approximately 250 m to the north of the Site is the NEWLINCS waste management facility (an integrated waste management company). Approximately 430 m to the south-east of the Site is Lenzing Fibers (a producer of fibres). Technical Absorbents (a producer of super absorbents) is located approximately 900 m to the south-east of Site, with BASF Performance Products (a chemical manufacturer) 1.4 km to the south-east of the Site. To the north-west is BOC Gases (a gas supplier) 740 m from the Site, BCA Automotive (a car importer) 1.1 km from the Site, and Tronox (a chemicals business) approximately 1.7 km from the Site.

Future Baseline

- 15.4.15 Table 15.5 highlights projected population figures for the Study Area. The population in the Direct Impact Area is expected to fall between 2011 and 2041 (-0.07%)¹. This is opposed to the Wider Impact Area (0.32%) and England as a whole (0.54%) which both display an opposite, increasing trend. In all areas the strongest growth is apparent in the age 65+ cohort. Working aged population is projected to decline in both the Direct Impact Area (-0.50%) and the Wider Impact Area (-0.05%). Working aged population in England as a whole (0.18%) shows the slowest level of growth. All areas are therefore expecting an increasingly aging population with this impact being greatest in the Direct Impact Area.

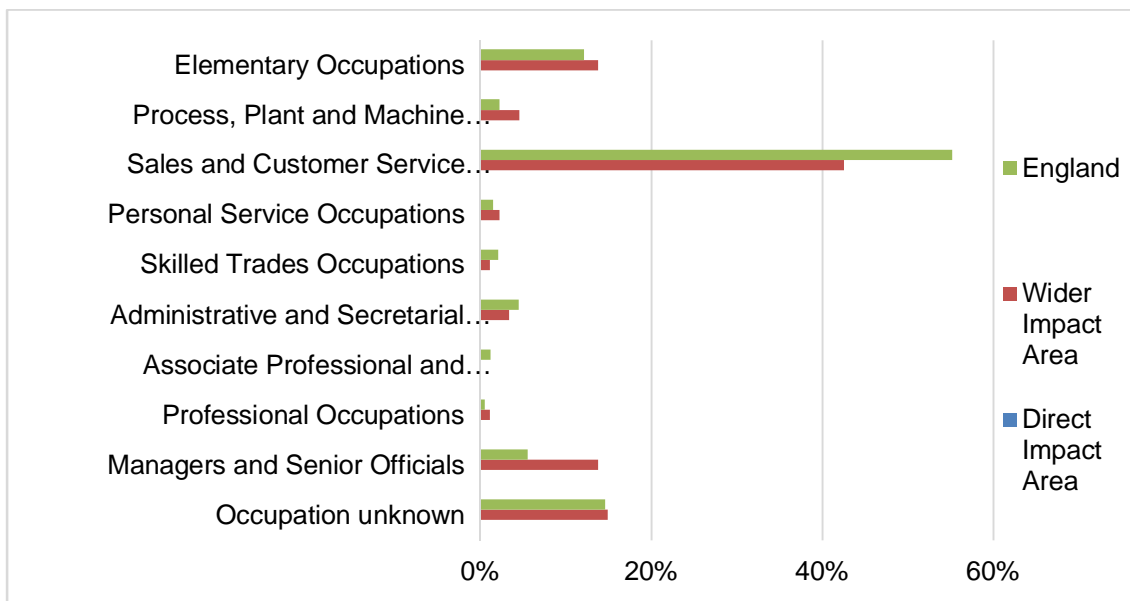
¹ Population projections to the year 2041 have been used as this is the furthest possible date available from the Office of National Statistics: 'Population estimates based by single year of age'

Table 15.5: Population projections

PROJECTED YEAR	DIRECT IMPACT AREA				WIDER IMPACT AREA				ENGLAND			
	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	1,234	181	782	271	187,068	221,666	118,250	34,220	53,012,456	10,022,836	34,329,091	8,660,529
2016	1,236	183	756	302	192,083	228,479	118,117	38,712	55,268,067	10,529,100	34,856,126	9,882,841
2021	1,233	185	736	320	195,786	235,660	118,091	41,570	57,030,534	11,027,950	35,298,513	10,704,133
2026	1,227	176	720	346	198,815	232,936	118,029	45,466	58,505,621	11,048,393	35,659,571	11,797,633
2031	1,220	166	699	379	201,459	227,171	117,378	50,140	59,789,798	10,857,286	35,765,627	13,166,895
2036	1,214	161	681	402	203,507	224,772	116,247	54,102	60,905,483	10,779,344	35,788,796	14,337,402
2041	1,210	160	676	406	205,387	225,547	116,610	55,633	61,952,118	10,838,109	36,120,411	14,993,573
CAGR	-0.07%	-0.43%	-0.50%	1.41%	0.32%	0.06%	-0.05%	1.69%	0.54%	0.27%	0.18%	1.91%

- 15.4.16 Data for the Direct Impact Area shows no sought after occupations (see Plate 15.6 below). This does not mean there were zero sought after occupations across all job types but that none of the categories were large enough to warrant appearing within the ONS dataset. The dataset rounds to the nearest 5 for privacy purposes.
- 15.4.17 In the Wider Impact Area the most sought after occupation was Sales and Customer Service Occupations (43%) followed by Elementary Occupations (14%) and Managers and Senior Officials (14%). This trend does not vary greatly when analysing the data for England as a whole.
- 15.4.18 England’s top four sought after occupations are Sales and Customer Service Occupations (55%), Elementary Occupations (12%), Managers and Senior Officials (6%), and Administrative and Secretarial Occupations (5%).
- 15.4.19 Sought after occupations are slightly more varied between roles in the Wider Impact Area compared to England as a whole; Sales and Customer Service Occupations dominate England’s sought after occupations. The rounding of data limits the use of sought occupation analysis for the Direct Impact Area.

Plate 15.6: Sought occupations²



15.5 Development Design and Impact Avoidance

- 15.5.1 The Proposed Development will be situated on vacant land within the site of the existing South Humber Bank Power Station (SHBPS). If developed, this will maintain the Site as an energy generation employment site beyond the current anticipated lifetime of the SHBPS. A dedicated entrance to the Proposed

² Source: Jobseeker’s Allowance by occupation in December 2019, retrieved February 2020

Development will be provided in order to avoid impacts on the operation of the SHBPS.

- 15.5.2 The Applicant will host a careers fair to promote employment opportunities at the Proposed Development for local residents, and a "meet the buyer" event will be held to promote supply chain opportunities for local businesses.
- 15.5.3 A Combined Heat and Power (CHP) Assessment (Document Ref. 5.6) has been undertaken and is submitted as part of the DCO Application identifying potential opportunities for heat and/ or power offtake to local industrial users.

15.6 Likely Impacts and Effects

The Proposed Development

- 15.6.1 The impacts and effects of the Proposed Development are described below.

Construction

Employment

- 15.6.2 Construction of the Proposed Development is expected to last approximately three years. During this time employment opportunities will be created as a result of the works.
- 15.6.3 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. This supports the Humber LEP's vision of job creation for residents in the Humber driven by growth in the energy sector and its aim to "*become a renowned national and international centre for renewable energy*". The Humber SEP indicates a need to ensure that a supply of skilled labour is in place to drive the growth of the Energy Estuary but also maximise opportunities from the investment for local people. Although it is recognised that many of the roles required to construct the Proposed Development will be specific construction contracting roles, the area has an above average proportion of the workforce employed in skilled trades so some demand may reasonably be met locally. The direct expenditure involved in the construction phase will also lead to increased output generated in the Grimsby TTWA economy.
- 15.6.4 The peak number of construction staff during the construction of the Proposed Development is predicted to be approximately 750 workers.

Leakage

- 15.6.5 Leakage refers to the proportion of jobs within a TTWA that are filled by residents living outside the TTWA (the Wider Impact Area). TTWAs reflect labour market commuting patterns where at least 75% of people living within an area also work there. The Proposed Development is within the Grimsby TTWA and the latest census data shows that the proportion of people who work in but live outside the Grimsby TTWA is 12.9% (ONS, 2011). However, many of the roles at the Proposed Development will be specialist roles and are likely to be from overseas or other construction sites in the UK. The Homes and Communities Agency (HCA) Additionality Guide (HCA, 2014) suggests 50% as a 'ready reckoner' for high levels of leakage. In addition, Department for Business, Innovation and Skills guidance (2009) suggests a leakage of 46% (upper end of range) for

regeneration through physical infrastructure – capital projects at the sub-regional level.

- 15.6.6 Based on a worst case scenario, a 50% discount is applied to the 750 gross jobs created by the Proposed Development and, as such, it is estimated that 375 people from outside the Grimsby TTWA and 375 from within are likely to benefit from working at the Proposed Development during the construction period.

Displacement

- 15.6.7 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.
- 15.6.8 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 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 the total gross direct employment in the Grimsby TTWA results in net direct employment of 563 arising from the Proposed Development during the construction period.

Multiplier Effect

- 15.6.9 In addition to the direct construction employment generated by the Proposed Development 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).
- 15.6.10 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. This means that a multiplier of 1.3 has been used, as determined from the HCA guidance. Applying this multiplier of 1.3 generates an additional 168 indirect and induced jobs in the Grimsby TTWA arising from the Proposed Development during the construction period.

Net Construction Employment

- 15.6.11 Based on the gross construction worker requirements for construction of the Proposed Development and the additionality factors outlined above, 730 net construction jobs would be generated, of which 365 are expected to be from the Grimsby TTWA. This meets with Objective 8 of the Humber LEP’s SEP which highlights the need to ensure that “*residents of the Humber are able to access good quality employment opportunities*”.

15.6.12 Table 15.6 presents the short-term construction employment created by the Proposed Development taking leakage, displacement and multiplier effects into account.

Table 15.6: Net construction employment in Grimsby TTWA (average no. of workers onsite per year)

CONSTRUCTION EMPLOYMENT	GRIMSBY TTWA	OUTSIDE OF GRIMSBY TTWA	TOTAL
Gross Direct Employment	375	375	750
Displacement	94	94	188
Net Direct Employment	281	281	562
Net Indirect/ Induced Employment	84	84	168
Total Net Employment	365	365	730

15.6.13 The sensitivity of receptors is considered as high. Taking into account the size of the labour pool of construction workers in the Grimsby TTWA (4,000 (BRES (2018))), 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 18.3% 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 short-term (significant) effect on the Grimsby TTWA's economy.

Wider Effects During the Construction Phase

15.6.14 The construction period for the Proposed Development will see a slight increase in vehicle movements (e.g. construction staff, delivery of materials and movement of excavated materials) which could impact on journey times for local residents during the peak of construction and other amenity effects such as increased noise levels all of which have been assessed within the relevant technical chapters in ES Volume I (Document Ref 6.2). However, there are no high sensitivity receptors in direct proximity of the Proposed Development. Therefore, this impact is likely be negligible adverse (not significant).

15.6.15 There are a number of businesses within proximity to the Proposed Development. The potential for temporary noise and traffic impacts during construction are assessed respectively in Chapter 8: Noise and Vibration and Chapter 9: Traffic and Transport. Overall it is determined that due to the short-term nature of the effects, and the nature of the existing businesses (mainly manufacturing) the impact is likely to be negligible adverse (not significant).

Operation

Employment

- 15.6.16 The Proposed Development will generate long-term jobs once operational including a number of highly skilled roles. This meets the long-term challenge outlined in the Humber LEP's SEP of increasing the number of highly skilled jobs across the Humber. These jobs also support the Humber SEP's main objective of becoming a recognised centre for energy generation.
- 15.6.17 The following analysis estimates gross operational employment arising from the operation of the Proposed Development and then takes into account deadweight (existing employment on Site), leakage, displacement and multiplier effects (to assess indirect jobs and induced employment) in order to assess net impacts on the sub-regional and national economies within the Study Area.
- 15.6.18 During the Proposed Development operational period, which will be approximately 30 years, employment will be generated in operative, management and maintenance roles in relation to the electricity generating element of the Proposed Development and its maintenance. Precedents from elsewhere suggest that there will be approximately 56 gross direct jobs.
- 15.6.19 The Main Development Area is currently unoccupied and has no existing employment as such there is no existing employment and therefore no deadweight is applied.
- 15.6.20 Assuming leakage of 12.9% (percentage of people who work in but live outside the Grimsby TTWA), displacement of 25% (i.e. there are expected to be some displacement effects, although only to a limited extent), and a composite multiplier of 1.3 (as per the gross to net calculations for construction employment and as determined by the HCA Guidance (2014), as described at paragraph 5.6.10 above), it is estimated that the total net employment for the operational element of the Proposed Development will be 55 employees, of which 48 are predicted to be from the Grimsby TTWA. This is presented in Table 15.7.

Table 15.7: Net employment of the Proposed Development in operation

OPERATIONAL EMPLOYMENT	GRIMSBY TTWA	OUTSIDE OF GRIMSBY TTWA	TOTAL
Gross Direct Employment	49	7	56
Displacement	12	2	14
Net Direct Employment	37	5	42
Net Indirect/ Induced Employment	11	2	13
Total Net Employment	48	7	55

Maintenance

Employment

- 15.6.21 It is expected that each year the Proposed Development will be taken offline for approximately three weeks to allow for maintenance activities to be undertaken safely, including an internal inspection of the boiler. Approximately every five to six years it will be taken offline for a major outage for other more substantial maintenance activities, including for example replacement of sections of the boiler. Such a major outage is likely to last approximately five weeks. Work will typically be undertaken 24 hours a day during the outage period and staffing levels will vary as each element of the works is completed. The peak number of employees on Site at any one time during a major outage is likely to be around 200.
- 15.6.22 Assuming leakage of 75% (many of the maintenance roles will be specialist roles so employment benefits will go to people living outside of the TTWA), displacement of 25% (i.e. there are expected to be some displacement effects, although only to a limited extent), and a composite multiplier of 1.3 (as per the gross to net calculations for construction employment and as determined by the HCA Guidance (2014) – see paragraph 15.6.10 above), it is estimated that the total net employment for the maintenance element of the Proposed Development will be 195 employees, of which 146 are predicted to be from outside of the Grimsby TTWA. This is presented in Table 15.8.

Table 15.8: Net maintenance employment of the Proposed Development during outages

MAINTENANCE EMPLOYMENT	GRIMSBY TTWA	OUTSIDE OF GRIMSBY TTWA	TOTAL
Gross Direct Employment	50	150	200
Displacement	13	38	50
Net Direct Employment	38	113	150
Net Indirect/ Induced Employment	11	34	45
Total Net Employment	49	146	195

15.6.23 Taking into account the existing overall size of the labour pool in the Grimsby TTWA (81,550), the magnitude of impacts is considered to be low during the operational and maintenance phases of the Proposed Development. Therefore, the direct, indirect and induced employment created by the operational phase of the Proposed Development is likely to have a moderate beneficial long-term (significant) effect on the Grimsby TTWA's economy.

Decommissioning

15.6.24 The Proposed Development is expected to operate until at least 2053. At the end of its operating life, the most likely scenario is that the Proposed Development would be shut down and all above ground structures removed from the Site. There is limited information available at this stage regarding decommissioning methods and timescales, and the following is based on professional judgment considering the likely scope of works.

Employment

15.6.25 It is anticipated that staff employed during the decommissioning phase would have an effect on the economy by spending their wages in the same way that those employed during other stages would. The actual numbers are uncertain at this stage but are anticipated to be less than the construction stage. Overall the decommissioning phase of the Proposed Development is likely to have at least a minor beneficial (not-significant) effect on employment in the local area.

Comparison of Proposed Development and Consented Development

15.6.26 The impacts and effects of the Proposed Development compared to the impacts and effects of the Consented Development are described below.

15.6.27 The socio-economic assessment of the Consented Development considered a 'worst case' scenario for socio-economics whereby only a single-stream plant was constructed, a scenario that has subsequently been ruled out (see Chapter 6: Alternatives and Design Evolution).

Construction

15.6.28 Both the Consented Development and the Proposed Development have been assessed to have major beneficial socio-economic construction effects, so in EIA terms the Proposed Development will have no greater socio-economic effects during construction compared to the Consented Development.

15.6.29 Although both assessments conclude major beneficial construction effects, the Proposed Development is predicted to generate higher construction employment presented (750 gross/ 730 net jobs) compared to the Consented Development (450 gross/ 439 net jobs), because the Consented Development could comprise only a single stream plant, but this has subsequently been discounted by the Applicant for the Proposed Development.

Operation

15.6.30 Both the Consented Development and the Proposed Development have been assessed to have moderate beneficial socio-economic effects during operation, so in EIA terms the Proposed Development will have no greater socio-economic effects during operation compared to the Consented Development.

- 15.6.31 Although both assessments conclude moderate beneficial operational effects, as described above for construction, the Proposed Development is predicted to generate higher operational employment (49 gross/ 48 net jobs in the Grimsby TTWA) compared to the Consented Development (39 gross/ 38 net jobs in the Grimsby TTWA), because the Consented Development could comprise only a single stream plant, whereas the Proposed Development would be two stream.
- 15.6.32 As described above for construction, in overall terms the numbers of operational staff required for the Consented Development and the Proposed Development are the same, although it is noted that the assessment of the Consented Development predicted slightly lower employment than the assessment of the Proposed Development presented in this Chapter due to the adoption of a 'worst case' scenario of a single stream plant.
- 15.6.33 The frequency and scale of maintenance outages is expected to be the same for the Proposed Development as for the Consented Development therefore the same number of staff required for maintenance has not changed.

Decommissioning

- 15.6.34 The nature and scale of decommissioning activities required for the Proposed Development would be the same for the Proposed Development as for the Consented Development. The decommissioning of the Proposed Development is therefore predicted to have no additional socio-economic effects compared to the decommissioning of the Consented Development.

15.7 Mitigation and Enhancement Measures

- 15.7.1 No significant adverse effects are predicted during the construction, maintenance, operation and decommissioning of the Proposed Development, and as such no specific mitigation is required, there is a need to ensure local residents are able to secure the employment opportunities available.
- 15.7.2 No other additional mitigation measures, over and above that stated in the other technical chapters of the ES, are required to avoid or minimise the socio-economic effects identified in this chapter.

15.8 Limitations or Difficulties

- 15.8.1 This socio-economic assessment is based on the available data at the time of writing (and as detailed herein).

15.9 Residual Effects and Conclusions

- 15.9.1 It is considered that the Proposed Development will have an overall positive effect on the Grimsby TTWA economy, through the provision of employment and through associated multiplier effects.
- 15.9.2 The creation of employment opportunities during both the construction, operation, and decommissioning phases of the Proposed Development supports the objectives set out in the Humber LEP's SEP related to job creation, in particular skilled roles and the overall contribution to the growth of the energy sector in the Humber Estuary.
- 15.9.3 The residual significant effects associated with the Proposed Development are summarised in Table 15.9.

Table 15.9: Socio-economic predicted residual significant effects

EFFECT	SIGNIFICANCE	EXPLANATION
Net employment generated during the construction phase.	Major beneficial (significant) effect.	The estimated net employment generated during the construction phase is 730 workers per annum of which 365 are likely to be from the Grimsby TTWA.
Net employment generated during the operation phase.	Moderate beneficial (significant) effect.	The estimated net employment generated during the operational phase is 55 employees, of which 48 are likely to be from the Grimsby TTWA.

15.10 References

Department for Business, Innovation and Skills (2009) *Research to Improve the Assessment of Additionality*

Department for Communities and Local Government (2019) *English Indices of Deprivation*

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Humber Local Enterprise Partnership (2018) *The Humber’s Blueprint for an Industrial Strategy*

Ministry for Housing, Communities and Local Government (2019) *National Planning Policy Framework*

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