

Immingham Green Energy Terminal

Environmental Impact Assessment

Preliminary Environmental Information Report

Volume II – Main Report

Chapter 23: Socio-economics

Associated British Ports



Document History

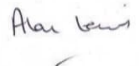
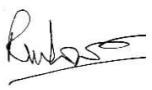
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23 Socio-economics

23.1 Introduction

23.1.1 This chapter presents the preliminary findings of the assessment of the likely effects of the Project on socio-economics. This includes considering potential impacts on the following:

- a. Employment (including training and apprenticeship opportunities) and effects on local community;
- b. Users of recreational routes and Public Rights of Way (PRoW); and
- c. Private assets (including residential properties, development land, local businesses, community facilities, open space and visitor attractions relevant for tourism).

23.1.2 This chapter interacts with the following chapters (PEI Report Volume II), in respect of employment generation:

- a. **Chapter 6: Air Quality;**
- b. **Chapter 7: Noise and Vibration;**
- c. **Chapter 11: Traffic and Transport;**
- d. **Chapter 12: Marine Transport and Navigation;**
- e. **Chapter 13: Landscape and Visual;** and
- f. **Chapter 24: Human Health and Wellbeing**

23.2 Approach to Assessment

Scope and Methods

23.2.1 A scoping exercise was undertaken in August 2022 to establish the form and nature of the socio-economics assessment, and the approach and methods to be followed.

23.2.2 The Scoping Report (**Appendix 1.A** of PEI Report, Volume IV) records the findings of the scoping exercise and details the technical guidance, standards, best practice and criteria being applied in the assessment to identify and evaluate the likely significant effects of the Project on socio-economics.

23.2.3 The Scoping Opinion (**Appendix 1.B** of PEI Report, Volume IV) provided by the Planning Inspectorate provides comments on the information that is to be provided in the Environmental Statement (ES). **Table 23.1** sets out the comments which are relevant to the socio-economics assessment and how the comments are addressed in this Preliminary Environmental Information (PEI) Report Chapter.

Table 23.1 Scoping Opinion comments for socio-economics

Consultee	Summary of Response	How comments have been addressed in this chapter
Planning Inspectorate	The Scoping Report seeks to scope out this matter as there are no tourism receptors in proximity to the Project, therefore it is unlikely there would be any impact experienced by tourists. Given the location of the development the absence of sensitive tourism receptors (other than the England Coast Path which is being assessed separately) the Inspectorate agrees that it is unlikely that significant effects on tourism would arise and this matter can be scoped out of the assessment on this basis.	Noted.
Planning Inspectorate	Two PRoWs are in proximity to the Project and it is proposed to scope this out of the assessment as user experience during operation would be as it is currently. The Inspectorate agrees that this matter can be scoped out on this basis.	The impact on PRoW/bridleway during the construction and decommissioning phases have been assessed. Impact during the operational phase has been scoped out as it is assumed that the PRoW/Bridleway would re-open.
Planning Inspectorate	<p>The Scoping Report states that the ES would include a figure to denote the relevant study areas. This should include the relevant Lower Layer Super Output Areas (LSOAs) and the Grimsby travel to work area (TTWA) in relation to the Project.</p> <p>Residential and business properties on Queens Road within the Project order limits should be clearly identified in any figures to help residents and businesses to identify likely impacts.</p>	A figure to show socio-economic receptors is included as part of the baseline analysis for socio-economics within the PEI Report (Section 23.3).

Consultee	Summary of Response	How comments have been addressed in this chapter
Planning Inspectorate	The Applicant refers to 2011 Census data and the Inspectorate notes that the 2021 Census data is now made available through the Office for National Statistics. As the DCO application will be submitted after the release of the 2021 Census data, this data should be used to inform the Socio-economic assessment.	2021 Census data has been provided within the baseline data of the PEI Report, where available (Section 23.3).
Planning Inspectorate	The Scoping Report proposes to assess the impact of a changing influx of workers, however it does not explicitly refer to effects on housing availability and effects on social cohesion in this chapter. The Inspectorate notes these matters are referenced under the chapter on health and well-being (para 23.4.3 of the Scoping Report). The assessment in the ES should consider if any likely significant effects would arise from the influx of construction workers on the local housing and rental market. This should cross-refer to the other relevant sections of the ES such as the assessment of health and well-being.	The baseline analysis and construction section has considered whether the local private rented sector can accommodate the influx of construction workers within the local area (Sections 23.3 and 23.5). The impact on primary healthcare has also been considered. Impacts upon Social Cohesion in respect of perception of risk and community severance have been assessed within Chapter 24: Human Health and Wellbeing .
Immingham Town Council	Residents and businesses are rightly concerned about the potential Compulsory Purchase of their properties and land. Resulting in loss of jobs and homes. If they are not included, as some maps indicate they need to be informed to ease their minds. If they are included it seems unnecessary as there is so much other land on the development that consideration should be given to leaving them alone.	An analysis of the impact on Private Assets (including residential properties, business premises, community facilities and development land) has been undertaken as part of the Socio-economic assessment for the construction, operational and decommissioning phase (Section 23.5).
UK Health Security Agency / Office for Health Improvement and Disparities	The scoping report does not identify the projected numbers of construction workers required for the scheme but does scope in potential social impacts from their presence. The presence of significant numbers of workers	The baseline analysis and construction section has considered whether the local private rented sector can

Consultee	Summary of Response	How comments have been addressed in this chapter
	<p>could foreseeably have an impact on the local availability of affordable housing, particularly that of short-term tenancies and affordable homes for certain communities. The cumulative impact assessment will need to consider this across the wider study area given the existing plans for Immingham and the number of other large schemes proposed within the region. Access to accommodation for residents with the least capacity to respond to change, for example, where there may be an overlap between construction workers seeking accommodation in the private rented sector, and people in receipt of housing benefit / low paid employment seeking the same lower-cost accommodation, should be considered. It should be noted the Housing Needs Assessment for North-East Lincolnshire Council (2019) identifies the private rented sector makes a significant contribution to meeting affordable housing needs. There are a number of infrastructure schemes proposed for the wider region, increasing the potential for non-home-based construction workers to be seeking accommodation.</p>	<p>accommodate the influx of construction workers within the local area (Sections 23.3 and 23.5).</p>
<p>UK Health Security Agency / Office for Health Improvement and Disparities</p>	<p>The peak numbers of construction workers and non-home-based workers should be established and a proportionate assessment undertaken on the impacts for housing availability and affordability and impacts on any local services. Any cumulative impact assessment should consider the impact on demand for housing by construction workers and the likely numbers of non-home-based workers required across all schemes.</p>	<p>The construction, operational and decommissioning analysis section of the PEI Report has considered the impact placed upon primary healthcare facilities within the local area. The construction assessment has also considered the impact upon the local rented housing sector, as a result of the influx of construction/ operational/ decommissioning workers (Section 23.5).</p>

23.2.4 Having regard to the information presented within the Scoping Report (**Appendix 1.A** of PEI Report, Volume IV), the Planning Inspectorate’s Scoping Opinion (**Appendix 1.B** of PEI Report, Volume IV) has also confirmed the Applicant’s view that significant effects on Tourism and PRoW links (during the operational phase) are unlikely. Accordingly, these matters will remain scoped out of consideration in the ES.

Legislation, Policy and Guidance

23.2.5 **Table 23.2** presents the legislation, policy and guidance relevant to the socio-economic assessment and details how their requirements will be met.

Table 23.2 Relevant legislation, policy and guidance regarding socio-economics

Legislation / Policy / Guidance	Consideration within the PEI Report
National Policy Statement for Ports (NPSfP) (Ref. 23-3)	
<p>This NPS provides the framework for decisions on proposals for new port development and recognises that ports have a vital role in the import and export of energy supplies. The NPS states that ensuring security of energy supplies through our ports will be an important consideration and that ports need to be responsive both to changes in the types of energy supplies needed and changes in the geographical pattern of demand for fuel. Within the document, it recognises that ports continue to play an important role in local, regional and national economies. In relation to socio-economics (section 5.14), it is stated that assessments should consider all relevant impacts including:</p> <ul style="list-style-type: none"> • the creation of jobs and training opportunities; • the provision of additional local services and improvements to local infrastructure; • effects on tourism; and • the impact of a changing influx of workers during the different construction phases, which could change the local population dynamics and alter demand for services and facilities (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion, depending on how populations and service provision change as a result of the development; and • cumulative effects arising from granted development consent from projects in the same region and built over a similar timeframe. 	<p>Provides guidance on the relevant impacts to consider as part of the assessment, which have been taken into consideration in the assessment of effects (Section 23.5)</p>

Legislation / Policy / Guidance	Consideration within the PEI Report
The National Planning Policy Framework (NPPF) (Ref. 23-4)	
<p>Paragraph 8 of the NPPF maintains the presumption in favour of sustainable development, which should be delivered in accordance with three main policy objective areas: economic, social and environmental. Paragraph 152 and 158 state that local planning authorities are encouraged to support the delivery of low carbon energy and associated infrastructure to increase the use of renewable and low carbon energy and help to move towards a low carbon economy.</p>	<p>Encouraging sustainable development has been considered throughout the Socio-economic assessment in Section 23.5.</p>
The National Planning Practice Guidance (Ref. 23-5)	
<p>This accompanies the revised NPPF and provides guidance on planning and the economy (including economic development, jobs and employment opportunities).</p>	<p>Economic development, jobs and employment opportunities have been assessed in Section 23.5.</p>
North East Lincolnshire Local Plan (Ref. 23-6)	
<p>The North East Lincolnshire Local Plan was adopted in 2018 and provides a planning framework to meet local development needs for the period 2013-2035, with a focus on '<i>creating opportunities for people</i>'. It states that the intention is to create 8,800 new jobs between 2013-2032, focused around five key economic sectors, two of which are: ports and logistics, and, renewable energy. The Project falls within two site allocations as part of the local plan: ELR001, a strategic proposed employment allocation site on Kings Road, which is 21.6ha in size and ELR025a, a site reserved for long term business expansion.</p>	<p>The Project will provide a number of construction/operational/decommissioning jobs within these relevant sectors, which has been assessed as well as the impact upon Development Land in Section 23.5.</p>
North East Lincolnshire Economic Strategy (Ref. 23-7)	
<p>Produced in 2021, this document recognises that ports and logistics as well as renewable energy are two key economic sectors in North East Lincolnshire. It recognises that the ports and logistics sector continue to be one of North East Lincolnshire's largest employers and the development of the ports has helped to underpin the growth of the local economy. The ports of Immingham and Grimsby are stated to be a critical part of the supply chain for sustainable energy generation and other energy production. As well as this, renewable energy is another key economic sector in the region. It states that North East Lincolnshire forms part of the 'Energy Estuary' and investment in the renewables sector has attracted a range of inward investors and significant</p>	<p>The Project will create a number of employment opportunities within these key economic sectors, which is assessed in Section 23.5.</p>

Legislation / Policy / Guidance	Consideration within the PEI Report
<p>future development is planned. It also states that in 2020, the Humber submitted a joint bid for Freeport status, covering a 45km area, including Grimsby and Immingham. The key objectives of a Freeport are to attract investment, create high value jobs, promote research and development, innovation and clean technology and practices, which is key for the future of the local economy.</p>	
<p>North East Lincolnshire Economic Recovery Plan (Ref. 23-8)</p>	
<p>The Economic Recovery Plan outlines the short and long term plan to support local businesses, create employment opportunities and reshape our future economy, especially since the COVID-19 pandemic and the changes brought about by Brexit. Three roadmaps have been developed (Restore, Reshape and Replenish). One of the key aims of the strategy is to <i>'ensure low carbon and green energy is our focus, grasping the opportunity to be nationally recognised as the place for leading edge of Offshore Wind Operations and Maintenance, Renewable Power Generation, Carbon Capture, Hydrogen and Biofuel production'</i>.</p>	<p>The Project will provide new port infrastructure which will foster the local authority's aspiration to develop its energy sector locally. As part of this, the Project will facilitate growth of the local energy sector by creating a number of local employment opportunities and contributing gross value added (GVA), which is assessed in Section 23.5.</p>
<p>Greater Lincolnshire Local Enterprise Partnership (LEP) Strategic Economic Plan (Ref. 23-9)</p>	
<p>The Strategic Economic Plan was produced in 2016 by Greater Lincolnshire (LEP), consisting of the Unitary Authorities of North and North East Lincolnshire, the County of Lincolnshire and seven districts. One of the key priorities is listed as seeking to drive growth of the area's defining and strongest sectors, one of which is the low carbon economy, with a particular focus on renewable energy, and, to grow specific opportunities identified as future defining features of the area, one of which is ports and logistics.</p>	<p>The Project will seek to develop the local energy sector, which is assessed in Section 23.5.</p>

Scope of the Assessment

Methodology

- 23.2.6 There is currently no industry-recognised guidance on methodology for undertaking assessments of socio-economic effects. The assessment follows best practice methodology from other assessments undertaken on comparable port infrastructure schemes.
- 23.2.7 The Project has the potential to result in a wide range of socio-economic effects from the construction stage, through operation and decommissioning, which differ in permanence. For the purposes of this chapter, due consideration is given to the Project in terms of effects on or arising from the following:

- a. Socio-economics (employment and Gross Value Added);
- b. Recreational routes and PRow (for construction and decommissioning only);
- c. Private assets (including residential properties, business premises and community facilities);
- d. Development land; and
- e. Influx of workers.

23.2.8 In the assessment of development land, planning applications are included if: they are within the development land study area (500m as described in **Table 23.11**); are either consented or pending approval; are of relevance to the receptors in this socio-economic assessment.

23.2.9 Further details on the methodology for the socio-economics assessment of the Project are detailed below:

- a. An assessment of the likely scale, permanence and significance of effects associated with socio-economics, recreation, and private assets receptors; and
- b. An assessment of the potential cumulative impacts with other schemes within the surrounding area.

23.2.10 The assessment of potential socio-economic impacts uses, where relevant, policy thresholds or standards and professional judgment to assess the scale and nature of the impacts of the Project against baseline conditions. For socio-economics, there is no accepted definition of what constitutes a significant (or not significant) socio-economic effect. It is however recognised that effects are categorised based upon the relationship between the scale (or magnitude) of effect and the sensitivity (or value) of the affected resource or receptor.

23.2.11 As such, the socio-economic effects have been assessed on the basis of:

- a. Consideration of sensitivity to impact: specific values in terms of sensitivity are not attributed to socio-economic resources/receptors due to their diverse nature and scale, however the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and, in particular, their ability to respond to change based on recent rates of change and turnover (if appropriate);
- b. Scale of impact: this entails consideration of the size of the impact on people or business in the context of the area in which effects will be experienced; and
- c. Scope for adjustment or mitigation: the socio-economic study is concerned in part with economies. These adjust themselves continually to changes in supply and demand, and the scope for the changes brought about by the Project to be accommodated by market adjustment therefore requires consideration.

23.2.12 The assessment aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. Effects are defined as follows:

- a. Beneficial classifications of effect: indicate an advantageous or beneficial effect on an area, which may be minor, moderate, or major in effect;
- b. Negligible classifications of effect: indicate imperceptible effects on an area;
- c. Adverse classifications of effect: indicate a disadvantageous or adverse effect on an area, which may be minor, moderate or major in effect; and
- d. No effect classifications: indicate that there are no effects on an area.

23.2.13 Based on consideration of the above, where an effect is assessed as being beneficial or adverse, the scale of the effect has been assigned using the below criteria:

- a. Minor: a small number of receptors are beneficially or adversely affected. The effect will make a small measurable positive or negative difference on receptors at the relevant area(s) of effect;
- b. Moderate: a noticeable number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect; and
- c. Major: all or a large number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect.

23.2.14 Those effects which are found to be moderate or major are considered to be 'significant' and those which are minor or negligible are 'not significant'.

23.2.15 Duration of impact is also considered, with more weight given to reversible long-term or permanent changes than to temporary ones. Temporary impacts are considered to be those associated with the construction works. Long-term reversible impacts are generally those associated with the completed and operational development. For the purposes of this assessment, short term impacts are considered to be of one year or less, medium term impacts of one to four years and long-term impacts for five or more years.

Economic Impact

23.2.16 The following criteria have been set out to assess the effects on receptors in relation to employment and GVA which have been grouped together as economic impacts. **Table 23.3** identifies the sensitivity criteria that have been used to inform the assessment of socio-economic receptors relating to employment and GVA in conjunction with the magnitude criteria set out above to establish the significance of identified effects.

Table 23.3 Economic Impact Sensitivity Criteria

Sensitivity	Description
High	Businesses, workers or residents who have little or no capacity to experience impacts without incurring an economic loss or have capacity to experience an economic gain.

Sensitivity	Description
Medium	Businesses, workers or residents that have a moderate or average capacity to experience impacts without incurring a change in their economic well-being.
Low	Businesses, workers or residents that generally have adequate capacity to experience impacts without incurring a change in their economic well-being.
Negligible	Businesses, workers or residents that are unlikely to experience impacts on their economic well-being.

23.2.17 **Table 23.4** identifies the magnitude of impact criteria which have been used to assess the socio-economic receptors relating to employment and GVA.

Table 23.4 Economic Impact Magnitude Criteria

Sensitivity	Description
High	An impact that is expected to have considerable adverse or beneficial socio-economics effects. Such impacts will typically affect large numbers of businesses, workers or residents.
Medium	An impact that will typically have a noticeable effect of a moderate number of businesses, workers or residents, and will lead to a small change to the study area's baseline socio-economic conditions.
Low	An impact that is expected to affect a small number of businesses, workers or residents; or an impact that may affect a larger number of receptors but does not materially alter the study area's baseline socio-economic conditions.
Negligible	An impact which has very little change from baseline conditions where the change is barely distinguishable, approximating to a 'no change' situation.

23.2.18 The economic impact of the Project is considered relative to the North East Lincolnshire Local Authority area. This is considered a reasonable area in light of the likely time which workers will spend commuting to the Project and therefore represents the principal labour market catchment area. **Table 23.11** provides details on the definitions of study areas such as this which apply in this chapter.

23.2.19 Additionality has been calculated by considering the overall impact of job gains to the area, the level of leakage, number of displaced jobs and multiplier effects, such as supply chains and worker spending related jobs. These assumptions have been informed by the Homes and Communities Agency (HCA) Additionality Guidance (Ref. 23-1).

23.2.20 **Table 23.5** below outlines the values that have been allocated to the construction, operation, and decommissioning phases' additionality formula, enabling the tailored calculation of the net additional employment and economic impacts. Justifications for the values have been considered and are summarised in the right-hand column of the table.

Table 23.5. Calculation of employment generation assumptions

Additionality Factor	Value	Justification
Leakage (% of jobs that benefit those residents outside the Project's study area)	30%	Relating to employment from outside the study area – this is the proportion of jobs taken by people who live outside of the study area of North East Lincolnshire Local Authority Area.
Displacement (% of jobs that account for a reduction in related jobs in the Project's study area)	25%	For the purpose of this assessment, a low level of displacement (25%) has been assumed, in line with the HCA Additionality Guidance (Ref. 23-1).
Multiplier (further economic activity associated with the additional local income, supplier purchase and longer-term development effects)	1.5	The multiplier is a composite figure which takes into account both the indirect jobs created across the study area based on supply chain activity but also the induced employment created through increased spending across the study area. The HCA Additionality Guidance (Ref. 23-1) provides a 'ready reckoner' of composite multipliers. The study area is likely to have 'average' supply linkages and induced effects based on the scale of its economy. Therefore, a 'medium' multiplier of 1.5 is determined from the HCA guidance to be the most appropriate measure.

Public Rights of Way Impact

23.2.21 The following criteria have been set out to assess the effects on users of PRoW focussing on the impact of severance of existing routes and the resulting changes in journey lengths and times, and local travel patterns.

23.2.22 **Table 23.6** identifies the sensitivity criteria that have been used to inform the assessment of PRoW, in conjunction with the magnitude criteria set out above, to establish the significance of the identified effects.

Table 23.6 PRoW Impact Sensitivity Criteria

Sensitivity	Description
High	PRoW is of high importance with limited potential to substitute other route options for access to the wider network or community infrastructure.
Medium	PRoW is of medium importance with moderate potential to substitute other route options for access to the wider network or community infrastructure; or PRoW is of high importance with alternative routes available.
Low	PRoW is of low importance with alternative routes available; or

Sensitivity	Description
	PRoW is of very low importance with moderate potential to substitute other route options for access to the wider network or community infrastructure
Negligible	PRoW is of very low importance with alternative routes available.

23.2.23 **Table 23.7** identifies the magnitude of impact criteria which have been used to assess the impacts on PRoW.

Table 23.7 PRoW Impact Magnitude Criteria

Magnitude	Description
High	Substantial increase/decrease in journey length and/or travel patterns and increased/decreased opportunities for users to access the wider network and/or community infrastructure.
Medium	Noticeable increase/decrease in journey length and/or travel patterns and increased/decreased opportunities for users to access the wider network and/or community infrastructure.
Low	Slight increase/decrease in journey length and/or travel patterns and increased/decreased opportunities for users to access the wider network and/or community infrastructure.
Negligible	No increase or decrease in journey length and/or travel patterns and no increase or decrease in opportunities for users to access the wider network and/or community infrastructure.

Private Assets (residential properties, business premises, community facilities) Development Land, and Changing influx of workers Impacts

23.2.24 The following criteria have been set out to assess the effects on private assets comprising residential properties, business premises, community facilities, development land, and effects on resources from the influx of workers i.e. access to housing/accommodation and primary healthcare.

23.2.25 **Table 23.8** identifies the sensitivity criteria that have been used to inform the assessment of effects relating to these, which in conjunction with the magnitude criteria set out above, establish the significance of the identified effects.

Table 23.8. Private Assets and Development Land Impact Sensitivity Criteria

Sensitivity	Description
High	Private asset, development land or resource is of high importance and rarity with limited potential for substitution or access to alternatives

Sensitivity	Description
Medium	Private asset, development land or resource is of medium importance and rarity with moderate potential for substitution or access to alternatives.
Low	Private asset, development land or resource is of low importance and rarity with alternatives available.
Negligible	Private asset, development land or resource is of very low importance and rarity with alternatives available.

23.2.26 The magnitude of change to private assets and development land is assessed by appraising the level of impact on the receptor and the permanence of change arising from the Project. **Table 23.9** identifies the magnitude of impact criteria which have been used to assess the impacts on private assets and development land.

Table 23.9 Private Assets and Development Land Impact Magnitude Criteria

Sensitivity	Description
High	An impact that permanently affects the integrity and value of a private asset or development land or a resource or an impact that considerably enhances the value and quality of an amenity or land use.
Medium	An impact that negatively affects the value of a private asset or development land or a resource, but a recovery is possible with no permanent impacts; or an impact that improves key characteristics and features of the amenity or land use.
Low	An impact that negatively affects the value of a private asset or development land or a resource, but a recovery is expected in the short-term with no change to its integrity; or an impact that has some beneficial impact on the attributes of the private asset or development land.
Negligible	An impact which is a very minor loss or benefit from baseline conditions where the change is barely distinguishable, approximating to a 'no change' situation.

Significance Criteria

23.2.27 Socio-economic effects are a reflection of the relationship between the sensitivity of the affected receptor (**Table 23.3**, **Table 23.6** and **Table 23.8**) and the magnitude of the impact (**Table 23.4**, **Table 23.7**, and **Table 23.9**). The determination of significance is given in **Table 23.10**. Those effects which are found to be moderate or major are considered to be 'significant' (highlighted), and those which are minor or negligible are 'not significant'.

Table 23.10 Impact Assessment and Significance

Magnitude of Impact	Sensitivity of Receptor			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

Stakeholder Engagement

23.2.28 A range of stakeholders have been engaged as part of the scoping process to obtain their views on the Project and the scope of the Socio-economic assessment, the results of which are presented within the Scoping Opinion (**Appendix 1.A** of PEI Report Volume IV).

Limitations and Assumptions

- 23.2.29 The information presented in this preliminary assessment reflects that obtained and evaluated at the time of reporting. It is also based on an emerging design for the Project and the maximum likely extents of land required for its construction and operation.
- 23.2.30 The assessment of the significance of effects has been undertaken using a benchmark of current (2022) socio-economic baseline conditions prevailing at the Site and surrounding area, as far as is possible within the limitations of such a dataset.
- 23.2.31 Baseline data is subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment. Current datasets will be used wherever possible, including the 2021 Census. At the time of writing, only a limited number of datasets from the 2021 Census (i.e. demography and migration) have been published, however wherever possible, these are presented within the baseline analysis.
- 23.2.32 Baseline conditions reported in **Section 23.3** in regard to population and labour force and the local economy are based on latest data available at the time of writing. It is likely that the baseline conditions may have changed owing to the impact of the COVID-19 pandemic on the labour market, businesses and the economy. The assessment of effects reported in **Section 23.5** is based on latest available data and is considered adequate despite this limitation, and is not expected to affect the findings of this chapter. Construction and operational employment figures have been based upon professional judgement through experience of assessments undertaken on schemes which are similar in scale, sector and location to the Project. It is therefore assumed that approximately 700

construction workers would be required, of which, it is expected that 450 construction workers would be required on the landside and approximately 250 workers would be needed for marine side construction.

- 23.2.33 For operational employment, the number of workers required for operation of the Project is uncertain pending further workforce requirements modelling being undertaken. It has been assumed for this PEI Report, as indicated in **Chapter 2: The Project**, that a base level of operation would require 120 workers on the landside. The terminal will operate 24 hours a day, 7 days a week and 365 days a year (though with lower activity at night compared to the day), and will have capacity to accommodate up to 400 vessel calls per year, and it is anticipated that up to 12 of these calls will be associated with the hydrogen processing facility. These vessel numbers have been assessed as a worst-case scenario, in terms of potential environmental effects, in the relevant topic chapters of this PEI report. Therefore, operational staff numbers for the terminal on the marine side are likely to be up to 40, with at least some staff working to shift systems. This therefore results in a total operational workforce of 160. Actual employment is likely to be higher and as such the assessment of effects on operational employment represents a worst-case which will be revisited at the ES stage.
- 23.2.34 There are two PRoW within the Site boundary. Public Footpath 32 is assumed not to be affected by the Project as the only relevant work in this area is the underground pipeline corridor and it assumed that would be constructed using Horizontal Directional Drilling. Public Bridleway 36, which runs north from Laporte Road to the Humber, along the east edge of the Long Strip woodland, is assumed to be either temporarily diverted or closed during the construction phase of the Project. However, as a worst case scenario, it is assumed in this PEI Report, to be closed for the entire duration of the construction phase, with no diversion in place. This information will be refined for the ES as more detail on the phasing of the Project becomes available. Impacts on PRoW during the operational period have not been assessed as it is assumed that Public Bridleway 36 will be reopened as referred to in **Table 23.1**.
- 23.2.35 For the purposes of this assessment, it is assumed that in the majority of cases, access to private assets within the Site boundary would be lost for the duration of construction, operation and decommissioning periods, i.e. permanently. Some assets are expected to be able to remain open. Where this applies, these are identified in the assessment.
- 23.2.36 Effects resulting from the changing influx of workers (impact on primary healthcare facilities and accommodation facilities) during the construction, operation and decommissioning phases are based on assessments as to whether the current capacity can accommodate demand arising from the workforce created as a result of the Project.
- 23.2.37 It is recognised that there is potential for a cumulative effect on construction labour force availability if the construction period coincides with the construction of other Nationally Significant Infrastructure Projects in the Yorkshire and Humber region, either those approved, pending determination or in preparation. A list of possible Cumulative Schemes is provided in **Chapter 25: Cumulative and In-Combination Effects**.

23.2.38 The findings of this preliminary assessment may be subject to change as the design of the Project is developed and refined further through the assessment and consultation processes, and as further research and investigative surveys are completed to fully understand its potential effects.

Study Area

23.2.39 The impacts of the Project are considered at varying spatial levels according to the nature of the effects considered. This approach is consistent with HCA Additionality Guidance (Ref. 23-1).

23.2.40 The Scoping Report stated that the potential economic impacts arising from the Project would be considered relative to the Grimsby Travel to Work Area (TTWA). However, for the PEI Report, the North East Lincolnshire area has been used, which matches the baseline section of this assessment, ensuring that a consistent approach is taken. Data for the TTWA is also only available from 2011, however more recent data is available at the Local Authority level, representing a more current picture of the local economy. Further consideration will be given to the Grimsby TTWA data in the ES.

23.2.41 Effects on PRoW considers those resources likely to be affected by closures and diversions of routes. The study area therefore includes PRoW located in or within 500m of the Site boundary.

23.2.42 The principal impacts on private assets are assessed on a geographical scale. Direct impacts on these relating to land take and access are assessed based on the Site boundary and immediate vicinity. Impacts on these as a result of community severance are also assessed. In light of this, residential and business premises within the Site boundary or within 500m of it and community facilities within 1.5km of the Site boundary have been identified as being within the study area. Development land applications within the Site boundary or those within 500m of the Project boundary have also been considered.

23.2.43 The effects associated with the influx of new workers associated with the Project, considers receptors such as capacity at local primary healthcare facilities (GP surgeries) and accommodation facilities. Those located within 5km of the Site boundary have been considered in the assessment. **Table 23.11** below lists the socio-economic impacts by geographical area (study area).

Table 23.11 Socio-economic impacts by geographical scale

Impact	Geographical area of Impact	Rationale for Impact Area
Employment generation during the construction phase, operational phase and decommissioning phase (direct, indirect and induced impacts)	North East Lincolnshire Local Authority Area	Range of local centres included within the area and more current data available for this geography.

Impact	Geographical area of Impact	Rationale for Impact Area
GVA during the construction phase ¹		
PRoW	The Site and the land within 500m of the Site boundary.	Professional judgement of likely affected PRoWs and experience of other schemes during construction and decommissioning.
Private assets - residential properties	Properties within the Site and those located within a 500m radius from the boundary. This will be reviewed again at ES stage.	Professional judgement and location of sensitive receptors for impacts arising from the Project as informed by other assessments.
Private assets – business premises	Properties within the Site and those located within a 500m radius from the boundary. This will be reviewed again at ES stage.	Professional judgement and location of sensitive receptors for impacts arising from the Project as informed by other assessments.
Private assets - community facilities	Community facilities within 1.5km from the Site have been assessed. This will be reviewed again at ES stage.	Professional judgement and location of sensitive receptors for impacts arising from the Project as informed by other assessments.
Private assets - Development Land	The Site and immediately adjacent land	Professional judgement and experience of other schemes.
Changing influx of workers - Primary Healthcare	A radius of 5km from the Site	Professional judgement and experience of other schemes.
Changing influx of workers- Accommodation	North East Lincolnshire Area	Professional judgement and experience of other schemes

¹ Gross Value Added (GVA) is the measure of the value of goods and services produced in an area, industry or sector of an economy.

23.3 Baseline Conditions

Current Baseline

- 23.3.1 In order to assess the potential effects of the Project, the environmental conditions, resources and sensitive receptors that currently exist in the relevant study areas have been determined. These include:
- The existing Site and land use, including development land;
 - Population and labour force;
 - The local economy;
 - PRoW;
 - Residential properties;
 - Business premises;
 - Community facilities;
 - Primary healthcare facilities (GP surgeries); and
 - Accommodation Facilities.
- 23.3.2 Potential effects arising from the Project are assessed relative to the baseline impact areas set out in **Table 23.11** and benchmarked against local, regional and national standards where appropriate. Therefore, baseline conditions have been provided for these areas.
- Existing Site and Land Use, including Development Land
- 23.3.3 As set out in **Chapter 13: Landscape and Visual Impact**, the Project is located within an area characterised as an industrial landscape type for the areas surrounding the Port. Beyond the industrial landscape, the wider area is largely agricultural. Part of the Site forms a part of the operational Port and has been in active use for port purposes since 1912 and is currently used for bulk cargo, steel sections and lorry and automotive storage. If the Project is not built, it is assumed that those parts of the Site would continue to be utilised for these activities.
- 23.3.4 The Project is located nearby to Immingham town centre, which lies approximately 1km west of the Site boundary, and Grimsby town centre is located approximately 5km to the south east. The A1173 runs along the border of the west Site, which in turn connects to the A180, a dual carriageway.
- 23.3.5 The border of the east Site y runs alongside Queens Road and partially Kings Road. Laporte Road also crosses the Site for approximately 250m. A number of residential properties and commercial businesses located on the western side of Queens Road are included within the Site boundary as listed in **Chapter 2: The Project**. It is currently anticipated that the continued residential use of seven properties on the west side of Queens Road will need to cease, as residential use is unlikely to be compatible with the operation of the hydrogen production facility on the West Site. A number of businesses are also present in the same area on the west side of Queens Road. It is likely that those businesses are compatible with the operation of the hydrogen production facility. As part of HSE

advice associated with hazardous substances, consent application will determine if there are relevant impacts on these businesses. Whilst it is possible that powers to compulsorily acquire the properties or undertake appropriate works may be sought as part of the DCO, this is currently considered unlikely. The Applicant is currently in discussions with the landowners / occupiers of the seven residential properties with a view to negotiating their acquisition. Where it is not possible to acquire those properties through negotiation, acquisition powers for these properties will be sought through the DCO.

- 23.3.6 There is one extant planning permission affecting the western side of the Site (Ref. 23-9). This planning permission has already been implemented in relation to delivery of an access road, however, reserved matter approval has not been applied for in respect of the build development and subject to confirmation of the DCO, ABP do not intend to apply for such consent or build out the development which is authorised under this extant planning permission. Once the DCO is confirmed, ABP will be implementing the DCO and the hydrogen production facility will be delivered by AP on this land. There are two proposed employment site allocations included within the North East Lincolnshire 2018 Local Plan (Ref. 23-5) relating to land which falls within the Site boundary. These are ELR001 (also an enterprise zone) which is located on the western side of the Site and ELR025a, located at the north of the Site. On the border of the Site is site allocation ELR027, which is also a proposed employment allocation and enterprise zone.

Population

- 23.3.7 Within the North East Lincolnshire area, the population has reduced from 159,616 in 2011 to 156,900 in 2021 (or by 1.7%). This is lower than the increase of 3.7% recorded for the Yorkshire and the Humber and lower than the 6.3% increase recorded for England and Wales during the same time period (Ref. 23-24).

Employment

- 23.3.8 According to the Annual Population Survey (Ref. 23-12), the unemployment rate among working age residents in the study area in 2021 was 2.3%. This is lower than the rate recorded for Yorkshire and the Humber (3.5%) and for England (3.6%).
- 23.3.9 Residents of working age residing in the study area had an economic activity rate of 74.7%, which is lower than that recorded for Yorkshire and the Humber (77.3%) and for England (78.8%). This is shown in **Table 23.12**.

Table 23.12 Economic Activity and Unemployment Rates

Economic Indicator	Study Area	Yorkshire and the Humber	England
Economic activity rate for residents aged 16-64	74.7%	77.3%	78.8%

Economic Indicator	Study Area	Yorkshire and the Humber	England
Unemployment rate (for residents aged 16-64)	2.3%	3.5%	3.6%

Source: Office for National Statistics (2021), Annual Population Survey (Ref. 23-12)

Qualifications and Occupational Profile

- 23.3.10 In 2021, the Annual Population Survey (Ref. 23-12) showed that 23.6% of working age residents in North East Lincolnshire had a degree level qualification or higher (National Vocational Qualification [NVQ] Level 4+). This is notably lower than the rate recorded for Yorkshire and the Humber (37.9%) and for England (43.2%).
- 23.3.11 The proportion of residents in North East Lincolnshire with no qualifications (12.1%) is also considerably higher than recorded in Yorkshire and the Humber (7.8%) and for England and Wales (6.5%) (Ref. 23-12).

Deprivation

- 23.3.12 Based on the 2019 Indices of Multiple Deprivation (IMD), North East Lincolnshire is the 66th most deprived out of 326 local authorities nationally (1st being the most deprived and 326th being least deprived) (Ref. 23-13).
- 23.3.13 In all, 32 of the LSOAs within the borough are within the top 10% most deprived LSOAs in the country.

Local Economy

- 23.3.14 In 2020, the workforce of North East Lincolnshire comprised of approximately 66,000 employees. According to the most recent data on commuting patterns from the 2011 Census, a majority (70%) of the workforce in North East Lincolnshire also live in the area (Ref. 23-2).
- 23.3.15 **Table 23.13** presents a detailed breakdown of employment by broad industrial group in North East Lincolnshire, Yorkshire and the Humber and England and Wales. Based on the most recently available data from 2020 (Ref. 23-14) on employment by group, the highest levels of employment are recorded in Health (17.4%), Manufacturing (16.7%) and Retail (9.8%).
- 23.3.16 Specific to this assessment, the construction sector contributes 4.2% of employment within North East Lincolnshire. This is somewhat lower when compared to the percentage make up of Yorkshire and the Humber region's economy (5.2%) and England and Wales as a whole (4.8%).
- 23.3.17 In addition, the mining, quarrying and utilities broad industrial group (which includes employment from the generation of energy) comprises 1.4% of North Lincolnshire's employees. This is broadly in-line with the Yorkshire and the Humber region (1.3%) and England and Wales proportions (1.2%).

Table 23.13 Employee Jobs by Broad Industrial Group in 2020

Sector	North East Lincolnshire (%)	Yorkshire and the Humber (%)	England and Wales (%)
Agriculture, forestry and fishing	0.2	0.6	0.7
Mining, quarrying and utilities	1.4	1.3	1.2
Manufacturing	16.7	11.4	7.9
Construction	4.2	5.2	4.8
Motor Trades	2.8	2.0	1.8
Wholesale	3.0	4.0	3.8
Retail	9.8	8.8	9.3
Transport and Storage (including postal)	8.3	5.3	5.1
Accommodation and food services	6.1	6.3	7.2
Information and Communication	0.7	2.7	4.5
Financial and Insurance	0.9	2.9	3.5
Property	1.3	1.5	1.8
Professional, scientific and technical	4.5	6.8	8.8
Business, admin. and support services	8.3	9.7	8.8
Public administration and defence	2.1	4.6	4.4
Education	9.1	9.6	9.0
Health	17.4	13.7	13.3
Arts, Education, Recreation & other services	3.4	3.9	4.2

Source: Office for National Statistics (2020), UK Business Register and Employment Survey (BRES) (Ref. 23-14)

23.3.18 GVA is a measure of the value of goods and services produced in an area of the economy. Information on overall GVA per head is only available for both North and North East Lincolnshire combined, which, in 2020, was £22,497. This is broadly in-line with the Yorkshire and Humber average of £22,855, though significantly lower when compared to England as a whole, where GVA per head is £29,063 (Ref. 23-15).

23.3.19 For GVA per head in the construction industry specifically, the latest data available is from 2017 and also only available for North and North East Lincolnshire combined. At this time, the sector contributed £460 million to the local economy and consisted of 8,250 workers. The GVA per worker within the construction sector in North and North East Lincolnshire was therefore £55,757 (Ref. 23-27)

Public Rights of Way

23.3.20 The North East Lincolnshire Local Plan emphasises the importance of ensuring existing PRoW are kept open and minimal disruptions to PRoW are made during the construction process: *'Proposals that would result in the loss or reduction in quality or existing Public Rights of Way (PRoW) will not be permitted, unless acceptable equivalent alternative provision is made. Where diversions are proposed, these should be convenient and attractive to users and not increase disturbance on protected wildlife sites.'* (Ref. 23-6)

23.3.21 As described in the **Paragraph 23.3.3**, the Project is located within an area characterised as an industrial landscape type, but beyond this, the wider area is largely agricultural in nature. There are two PRoW routes on or abutting the Project.

23.3.22 There are two PRoW located within the boundary of the Project site, Public Bridleway number 36 (part of England's Coast Path, connecting Laporte Road to Grimsby) and Public Footpath number 32 (connecting Queens Road to the Redwood Industrial Park) (Ref. 23-16).

23.3.23 Public Bridleway number 36 is used predominantly for recreational purposes and forms part of a wider network of PRoW. It is understood that Public Footpath 32 is not in active use.

Residential Properties

23.3.24 The study area is mostly industrial and relatively sparsely populated with residential properties. The closest residential premises to the Project are located on the west side of Queens Road within the western side of the Site. This consists of a cluster of terraced properties and a detached dwelling, totalling seven dwellings. A large number of residential properties are also located approximately 500m to the west of the Site boundary on the edge of the town of Immingham.

Business Premises

23.3.25 There is a collection of small businesses on the western (or southern) side of Queens Road, which are within the Site boundary and these, so far has been determined to date, are listed in **Chapter 2: The Project**.

23.3.26 Within the Site boundary east of Laporte Road the site of the main proposed temporary construction area is an area of agricultural land which is currently used for arable farming and is assumed to form part of a larger agricultural business.

23.3.27 Further businesses are present surrounding Prince Edward and Prince Henry Drive, on the north-eastern side of Queens Road which consist of Painting and

Labour Services, Boyers Industrial Turning Services Ltd (engineers), Windsor Materials Handling (forklift truck rental business), Port Equipment Engineering Ltd (Engineers), Roxton Building Services (Builders), a laboratory, a takeaway business. These are outside of the Site boundary.

- 23.3.28 To the south-east of the Site boundary, there are industrial businesses which consist of Polynt Composites UK Ltd, a chemical plant on the border of the Site and PD Ports, a delivery company, approximately 70m away from the Site boundary. Kiln Lane Trading Estate is also located approximately 500m away from the Site boundary.
- 23.3.29 Both Queens Road Power Station (located to the east of the West Site) and Kings Road Power Station (to the west) are situated outside the Site boundary. Both power stations are operated by Sembcorp.
- 23.3.30 To the north-west of the Site are several businesses located approximately 200m away, which consist of shipping businesses, trucking companies, and HGV driver training. There is also a large manufacturing business located on the border of the Site.

Community Facilities

- 23.3.31 There are some community facilities located within 1.5km of the Site boundary, which includes a community recycling facility (located within the Site boundary but only within the pipeline corridor).
- 23.3.32 Within the town of Immingham, approximately 1km to the west are a range of different facilities including a veterinary practice, several sports facilities, petrol stations, large supermarkets, a variety of shops and a range of accommodation facilities.
- 23.3.33 Immingham East Fire Station is located within the Kiln Lane industrial estate, approximately 1km to the south of the Site.
- 23.3.34 The nearest open space is Homestead Park located within Immingham town centre, approximately 1.5km from the Site boundary.
- 23.3.35 There is one education facility located 1km west of the Site boundary. This is The Canon Peter Hall Church of England Primary School.
- 23.3.36 A border control facility is within the Site boundary but only within the pipeline corridor. It is understood that this facility has recently been completed and may become operational in future. The border control facility will be retained during the construction and operational phase of the Project.

Primary Healthcare- GP Surgeries

- 23.3.37 The reporting of the baseline primary healthcare provision is made with reference to guidance from the Royal College of General Practitioners, which recommends a GP:Patient ratio of 1:1,800 (Ref. 23-17).
- 23.3.38 The Site is located within the National Health Service (NHS) Humber and North Yorkshire Integrated Care Board [ICB] (which replaced Clinical Commissioning Groups in 2022). As of July 2022, this ICB had 1,775,158 registered patients (Ref. 23-18) and approximately 1,036 full time equivalent general practitioners

(FTE GPs) (Ref. 23-19). This equates to an average patient list size of 1,714 per FTE GP. This average list size at the ICB is thus lower than the target list size detailed above.

- 23.3.39 NHS General Practice Workforce data shows that there are two GP practices within 5km of the Site comprising a total of 17.9 FTE GPs. Given the industrial nature of the site location, there are not any practices within a typical walking distance of 1km. As shown in **Table 23.14**, there are a total of 34,974 patients registered at these practices. For identified practices taken as a whole, the GP:Patient ratio is 1:1,953, which is higher (i.e. worse) than the recommended ratio of 1:1,800. This is variable however, as the Roxton Practice (located approximately 1km from the Site), exceeds the recommended ratio by far. However, Killingholme Surgery (located approximately 4km from the Site) is below (i.e. better than) the recommended ratio set by the Royal College of General Practitioners (Ref. 23-19).

Table 23.14 GP Practices within 5.0km of the Site.

GP Surgery Name	Number of patients	Number of GPs (FTE)	Patients per GP (FTE)
Roxton Practice	33,452	16.5	2,027
Killingholme Surgery	1,522	1.4	1,087
Total*	34,974	17.9	1,953

Note: Figures may not sum due to rounding.

Source: NHS Digital (2022); General Practice Workforce (July 2022) and NHS Digital (2022); Patients Registered at a GP Practice (July 2022)

Accommodation Capacity

- 23.3.40 When last estimated in 2018 by Office for National Statistics, there were 15,440 privately rented homes in North East Lincolnshire (accounting for approximately 20.6% of the tenure mix). This compares to 48,762 owner occupied properties (65.2%) and 10,508 socially rented houses (14.1%) (Ref. 23-22). Although no area-based statistics are available, when last recorded by the English Housing Survey in 2020 (Ref. 23-25), nationally, 10% of private rented homes were vacant, noting that not all of these properties would be available for occupancy.

Future Baseline

- 23.3.41 In the absence of the Project, the future baseline is anticipated to be largely the same as the existing baseline for socio-economics. However, according to the ONS Population Projections, the population of North East Lincolnshire is projected to decrease from 159,996 in 2020 to 158,738 in 2040 which represents a decrease of -0.8%. In Yorkshire and the Humber and England as a whole, there is expected to be increases of +5.8% and +7.9% respectively (Ref. 23-21).
- 23.3.42 In terms of the local economy, the proportion of the population in North East Lincolnshire which is of working age is expected to reduce (from 59.7% in 2020

to 55.4% in 2040). This is however a similar picture reflected at both the regional (Yorkshire and Humber) and national (England) scale. Business and community facilities may open and close (especially given the proximity of the Site to an existing industrial area) including the proposed Immingham Eastern Ro-Ro Terminal (IERRT), construction of which is likely to commence in early 2025, with operation anticipated to begin in mid-2027. This is a new three berth Ro-Ro terminal at the Port of Immingham, to service the import and export of cargo. However, it is not expected that there would be any perceptible or material changes to the local economic baseline assessment and the Project should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline conditions (Ref. 23-21).

23.4 Design, Mitigation and Enhancement Measures

Embedded Mitigation Measures

- 23.4.1 During the construction and decommissioning phases, there may be temporary impacts on users of PRow if, as a worst case scenario, the Public Bridleway is closed for the entire period of construction and decommissioning works, with no diversion available. This will be reviewed at ES stage.

23.5 Potential Impacts and Effects

- 23.5.1 The preliminary assessment has identified that construction, operation and decommissioning have the potential to result in adverse and beneficial impacts and effects on socio-economics, which may be significant.

Construction

Employment during Enabling Works, Construction and Commissioning

- 23.5.2 Employment creation includes temporary employment opportunities, both directly at work sites and indirectly in the supply chain, arising from the construction of the Project.
- 23.5.3 The construction period is set out in detail in **Chapter 2: The Project** and is likely to extend over a ten year period. Therefore, employment generation during this phase will be of long term duration and represent a positive economic effect for a substantial period.
- 23.5.4 Employment requirements are established based on the type and nature of construction. It is assumed for the PEI Report that the construction of the Project will require on average 700 gross direct full-time employment (FTE), for both the marine and land side construction activities throughout the construction phase.

Leakage

- 23.5.5 Leakage effects are the benefits to those outside the economic impact study area, defined as North East Lincolnshire, as shown in **Table 23.5**. Analysis undertaken of the Census 2011 data indicates that 30% of people working in North East Lincolnshire live outside of the area (Ref. 23-2). This corresponds to

approximately a medium-high leakage rate as set out by the HCA Additionality Guidance (Ref. 23-1). This rate implies that, although a reasonably high proportion of employment opportunities will be retained in the effect area, a noticeable amount of jobs will be taken up by people living outside the impact area.

- 23.5.6 An adjustment of 30% has therefore been applied to the gross construction jobs to estimate the jobs created outside the target area. Thus, it is estimated that the construction period at the Project will create 490 jobs for residents within North East Lincolnshire and 210 jobs for residents outside of this area.

Displacement

- 23.5.7 Displacement measures the extent to which the benefits of a development are off-set by reductions in output or employment elsewhere. Any additional demand for labour cannot simply be treated as a net benefit since it has the potential to displace workers from other positions and the net benefit is reduced to the extent that this occurs.
- 23.5.8 Construction workers typically move between construction projects when delays occur or to help the workforce meet construction deadlines. Due to the flexibility of the labour market, construction labour force displacement has been assumed to be low.
- 23.5.9 The HCA Additionality Guide (Ref 23-1) provides standards (or 'ready reckoners') for displacement. Within the context of a construction project in the study area, a low displacement factor for 25% is considered appropriate according to the HCA. This factor is a best practice approach which is used in the absence of specific local information.
- 23.5.10 Applying this level of displacement to the total gross direct employment figure results in an estimated total net direct employment figure of 525 jobs per year during the construction period.

Multiplier Effect

- 23.5.11 In addition to the direct employment generated by the construction of the Project, there will be an increase in local employment arising from the indirect and induced effects of the construction activity. For example, employment growth will arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, it is assumed part of the income of the construction workers and suppliers will be spent in Immingham and the wider North East Lincolnshire area, generating further employment (in terms of induced or income multipliers).
- 23.5.12 The effect 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 (Ref. 23-1) provides a 'ready reckoner' of composite multipliers - the combined effect of indirect and induced multipliers. This is a best practice approach in the absence of specific information that might provide a defensible justification for another multiplier effect level being used, appropriate to the sectors concerned. For the study area, a medium multiplier effect of 1.5 is

considered appropriate as it applies to a scenario with average linkages, and according to HCA additionality guidance is applicable to the majority of interventions.

- 23.5.13 Applying the 1.5 multiplier to the total net direct employment figure of 525 workers results in net indirect and induced employment of 263 jobs per annum during the construction period, together generating 788 total net jobs per annum.

Net Construction Employment

- 23.5.14 **Table 23.15** presents the temporary employment generated by the Project identified above, accounting for leakage, displacement and multiplier effects. The Project will support on average 788 total net jobs per annum during the construction period. Of these 552 jobs per annum will be expected to be taken up by residents within North East Lincolnshire, whilst 236 jobs will likely be taken up by workers living outside the region.

Table 23.15 Net Additional Construction Employment per annum from the Project:

	Study Area	Outside Study Area	Total
Gross Direct Employment	490	210	700
Displacement	-123	-53	-175
Net Direct Employment	367	158	525
Indirect and Induced Employment	184	79	263
Total Net Employment²	552	236	788

Source: AECOM Calculations 2022

- 23.5.15 The sensitivity of receptor is considered to be medium, taking into account the size of the construction worker labour pool in North East Lincolnshire (2,750) (Ref. 23-14). Factoring this in, the impact of the direct, indirect and induced construction employment generation in the study area has been assessed as medium. Therefore, the direct, indirect and induced employment created by the construction phase of the Project is likely to have a **moderate beneficial** effect on the North East Lincolnshire economy, which is considered **significant**. This is based on information available at the time of writing. A separate assessment of jobs that could be created by the Project, based primarily on assessment of

² Sum of Net Direct Employment and Indirect and Induced Employment

project-value, has concluded that at least 1,600 construction and operational jobs could be created in the wider supply chain. The ES will draw further on the separate assessment (and any updates to it), to define with greater certainty the jobs that are likely to be created in the construction phase.

Gross Value Added during the construction phase

- 23.5.16 GVA creation includes growth added through direct and indirect employment opportunities.
- 23.5.17 Applying the average GVA per construction worker in the area to the total number of construction workers generated from the Project gives the total GVA arising from the construction period.
- 23.5.18 As described in the baseline section, GVA estimations are only available for both North and North East Lincolnshire combined. The average GVA per worker for both areas in the construction sector was £55,757 in 2017 (Ref. 23-27, Ref. 23-14). By applying this figure to the total construction workers generated by the Project, it is estimated the construction phase will contribute nearly £44 million as an average to both economies, of which nearly £31 million is projected to remain within North East Lincolnshire; as shown in **Table 23.16**.

Table 23.16 Gross Value Added per annum from the Scheme during the construction phase

	North East Lincolnshire	Outside North East Lincolnshire	Total
GVA during the construction phase	£30,777,864	£13,158,652	£43,936,516

Source: AECOM Calculations 2022

- 23.5.19 The effect of GVA generation from the construction phase on North East Lincolnshire's economy has been assessed (given the medium sensitivity and medium magnitude of impact) to result in a **moderate beneficial** effect. This is considered **significant**.

Public Rights of Way (PRoW)

- 23.5.20 The effects on PRoW includes impacts on users of footpaths, bridleways, byways and National Cycle Routes from disruption to or diversion of journeys.
- 23.5.21 Changes to journey time, local travel patterns and certainty of routes for users would arise from the temporary closures and diversions of PRoW. Effects during construction on relevant routes are set out in the following paragraphs.
- 23.5.22 It is not possible to confirm with certainty the length of time each route will be closed for or the exact route of the provided temporary diversion, so as a worst-case scenario, it is assumed the affected PRoW will be closed for the entire length of the construction period, with no diversion in place.
- 23.5.23 It is understood that Public Footpath 32 is not currently in active use. This PRoW would also remain unaffected by the Project and would not need to be diverted.

Thus, as a result of no additional impact on users of this route, it is assessed that there would be **no effect** on this PRoW.

- 23.5.24 Temporary disruption to users making journeys on Public Bridleway 36 between Immingham and Grimsby would be experienced during the construction period. As a worst case scenario, it is assumed that part of the bridleway would be closed during the entire construction period, with no temporary diversion in place. This will be further assessed at ES stage. The impact from closure on users would be high. Given that the sensitivity of the receptor is medium this results in a **major adverse** effect, which is considered **significant**.

Private Assets

Residential Properties

- 23.5.25 As a result of the land use planning associated with hazardous substances, construction of the Project is assumed to require the permanent acquisition of residential properties located at 1 to 6 and 31 Queens Road. This would result in these properties ceasing to be residential. Although the number of properties makes up a relatively small proportion of stock in the local authority area, within the context of Immingham, and likely limited alternative supply, the loss is considered to represent an impact of medium magnitude. Therefore, at PEI Report stage, the effect on these residential properties during construction is assessed (given the high sensitivity of this receptor and medium magnitude of impact) to result in a **major adverse** effect, which is considered **significant**.

Businesses

- 23.5.26 Whilst the land use planning requirements may result in a number of businesses being unable to operate, this is considered unlikely. As a worst case scenario on a preliminary basis and for the purposes of assessment, it has been assumed that all of the businesses which are located within 7-30 Queens Road would be impacted. As detailed within **Table** , total employment at these businesses is estimated to be 82 jobs based on application of HCA Employment Density Guidance (Ref. 23-23). Actual employment at these businesses will likely vary, with this estimate considered to represent a reasonable worst-case, in the absence of this information.

Table 23.17 Existing Employment Calculations

Employment Floorspace Type	Floorspace (m ²)	Measurement	Jobs
General Office (Professional Services)	761	GIA	53
Retail (High Street)	85	GIA	5
Light Industrial	795	GIA	15

Employment Floorspace Type	Floorspace (m ²)	Measurement	Jobs
Restaurants and Cafes	180	GIA	10
Total	1,821	GIA	82

Source: HCA Employment Density Guidance (2015) (Ref. 23-23)

- 23.5.27 The loss of these jobs would, on this worst-case basis, represent a medium impact. The effect of permanent displacement of these businesses and employment during construction is assessed (given the medium sensitivity of this receptor and medium magnitude of effect) to result in a **moderate adverse** effect, which is considered **significant**.
- 23.5.28 Construction of the Project will require approximately 3ha of temporary landtake from an agricultural business for a three year period. It is not currently known whether this would result in any loss of employment, though based on the extent of the land take, no significant effects are expected. A full assessment will be undertaken in the ES.
- 23.5.29 There is a border control post/facility which is located in the centre of the Site. This is within the pipeline corridor and would not be demolished. It is not currently operational, but is likely to become operational in the future. The building will remain in situ during the construction, operation and decommissioning and there would be **no effect** on this facility.
- 23.5.30 There are two Sembcorp Power Station sites on Queens Road and Kings Road. Access to these would be retained during construction, operation and decommissioning and therefore there would be **no effect** on these businesses.

Community Facilities

- 23.5.31 There is also one community facility, a community recycling facility which is located within the Site boundary. The facility and access to it will be retained and it will be able to continue operating during construction, operation and decommissioning. As such there would be **no effect** on this community facility.

Development Land

- 23.5.32 There is one extant planning permission affecting the western side of the Site (Ref. 23-9). This planning permission has already been implemented in relation to delivery of an access road, however, reserved matter approval has not been applied for in respect of the build development and subject to confirmation of the DCO, ABP do not intend to apply for such consent or build out the development which is authorised under this extant planning permission. Once the DCO is confirmed, ABP will be implementing the DCO and the hydrogen production facility will be delivered by AP on this land.
- 23.5.33 Part of the land within the Site is allocated within the North East Lincolnshire Local Plan for employment uses (and partially as an enterprise zone). As an employment use, the Project aligns with the allocation. Therefore, the impacts

arising from this on development land are assessed to be negligible, and the overall effect of the Project on the allocation is assessed as a **negligible** effect, which is **not significant**.

Impact of a changing influx of workers – primary healthcare

- 23.5.34 The principal impact arising from the changing influx of workers will be on local amenities, with the potential for impacts on primary healthcare provision being the most likely based on the number of workers required during construction of the Project.
- 23.5.35 It has been assumed that a total 700 workers would be involved in the construction period. Of these, 490 of are anticipated to reside within the North East Lincolnshire area all of whom can be assumed to be registered at local GP practices already. Therefore, there are likely to be an approximately 210 workers who are not currently registered at a local practice.
- 23.5.36 Taking a ‘worst case scenario’ approach, in which all of these construction workers register with local GP practices, this would increase the overall practice list size from 1,953 patients per GP to 1,965 patients per GP, which remains above, (i.e. worse than) the recommended GP:Patient ratio of 1:1,800, but not significantly higher than the current scenario.
- 23.5.37 It is therefore deemed that the Project will have a negligible magnitude of impact on primary healthcare facilities. Given the medium sensitivity of the receptor, this results in a **negligible** effect, which is considered **not significant**.

Impact of a changing influx of workers - accommodation

- 23.5.38 The private rented homes sector is considered to be the principal sector for accommodating demand for housing from ‘non-home based’ construction workers in an urban development context. When last estimated in 2018, there were 15,440 private rented properties in North East Lincolnshire. National data recorded in the English Housing Survey 2020 indicates that 10% of properties are vacant though not all would be available for occupancy. With no more local data available, applying this to the private rented housing stock in the local area, and taking a cautious approach and assuming that only half are available, there were an estimated 772 properties within North East Lincolnshire in 2018 that could potentially be available to construction workers.
- 23.5.39 As shown in **Table 23.15**, it is assumed that there would be approximately 236 workers involved in the construction phase who will be from outside the North East Lincolnshire area, and who may require accommodation on a temporary basis. It is anticipated that these workers could share accommodation on the basis of at least two workers per home, reducing the number of homes required. It is also acknowledged that some construction workers may not need temporary accommodation. Based on a worst case scenario whereby all 236 workers need accommodation on a two workers per rented property basis within the local authority area, the workers would require 118 homes in which approximately 772 are available, there is considered to be sufficient local supply to facilitate all construction workers being housed in accommodation. The impact magnitude is

therefore considered to be low. Given the medium sensitivity of the receptor this results in a **minor adverse** effect, which is considered **not significant**.

Operation

Existing employment

- 23.5.40 The assessment of employment creation has been included to reflect the creation of long-term employment opportunities, both direct and indirect, once the Project is operational including consideration of any existing employment uses on-site.
- 23.5.41 The Site is predominantly classed as industrial, and, as a worst case scenario, it is assumed (as described in **Paragraph 23.5.29 – 23.5.32**) that business premises located at 6-30 Queens Road within the Site boundary would be displaced along with any employment within these firms.
- 23.5.42 There is also a border control post (currently vacant but assumed to become operational in future), two power station sites and a community recycling facility located within or near the Site boundary, however, these will all remain in situ and are assumed to be operational throughout the construction and operational period of the Project.
- 23.5.43 As described in **Paragraph 23.5.26**, it is estimated that in total there are 82 permanent jobs which will be displaced as a result of businesses potentially ceasing operation, to enable construction and operation of the Project. This will be reviewed at the ES stage as further information becomes available on these businesses.

Total net operational employment

- 23.5.44 The number of operational workers created as a result of the Project is uncertain pending further workforce requirements modelling being undertaken. However, as stated in **Chapter 2: The Project**, the Applicant estimates the gross number of direct jobs to be generated by the fully operational Project is 160 jobs.
- 23.5.45 Assuming a leakage of 30% outside the North Lincolnshire area, a displacement of 25% and a 1.5 multiplier, it is estimated the Project would result in a net creation of an estimated 120 jobs, of which 84 would be within the North East Lincolnshire area. Accounting for the existing employment as outlined above, as a worst case scenario, the total net employment arising from the scheme would be 98 jobs of which 69 would be within the North East Lincolnshire area. This is presented in **Table 23.18**.

Table 23.18 Net employment of the proposed development in operation.

	North East Lincolnshire	Outside North East Lincolnshire	Total
Gross Direct Employment	112	48	160
Displacement	-28	-12	-40

	North East Lincolnshire	Outside North East Lincolnshire	Total
Net Direct Employment	84	36	120
Indirect and Induced Employment	42	18	60
Existing Employment	-57	-25	-82
Total Net Employment³	69	29	98

- 23.5.46 It should be noted that the actual number of jobs generated by the Project may be greater than those represented in **Table 23.18** as part-time staff will be created to perform maintenance and engineering works from time to time to ensure the Project is operational over a long period of time.
- 23.5.47 There are around 66,000 total jobs in North East Lincolnshire (Ref. 23-14). In this context and accounting for the additional net direct, indirect and existing employment associated with the Project, the impact of the operational employment generation on North East Lincolnshire's economy has been assessed to result in a low magnitude of impact. Given the medium sensitivity of effect, this is assessed to result in a **minor beneficial** effect, which is **not significant**.
- 23.5.48 As described in **Paragraph 23.5.43** the number of operational workers created as a result of the Project is currently uncertain and is based on information available at the time of writing. Actual employment is likely to be higher and as such this assessment conclusion represents a worst-case. A separate assessment of jobs that could be created by the Project, based primarily on assessment of project-value, has concluded that up to 750 operational jobs and at least 1,600 construction and operational jobs in the wider supply chain could be created. The ES will draw further on the separate assessment (and any updates to it), to define with greater certainty the jobs that are likely to be created in the operational phase. An updated assessment based on more detailed information on operational workforce numbers will be undertaken in the ES.

Private Assets

- 23.5.49 It is not anticipated that the operational phase of the Project will require further land from residential or private properties, businesses, community land and assets or from development land to that used during construction. As such there would be **no effect** on private assets arising during operation above those residential and business effects defined above.

³ Sum of Direct Employment and Indirect & Induced Employment minus Existing Employment.

Changing influx of workers - primary healthcare

- 23.5.50 The principal impact arising from the changing influx of workers will be on local amenities, with the potential for impacts on primary healthcare of provision being the most likely based on the number of workers required during operation of the Project.
- 23.5.51 During the operational phase, there are an additional 160 workers estimated to be employed. Of these, 48 workers are expected to reside outside of the study area and so are unlikely to be registered at one of the local practices. Taking a 'worst-case scenario' approach, in which all of these workers register at local GP practices, it would increase the overall practice list size from 1,953 patients per GP to 1,956 patients per GP, which is only marginally higher (i.e. worse than) than current provision (although still in excess of the recommended GP:Patient ratio). It is therefore deemed that the Project would have a negligible impact on primary healthcare provision locally. Given the medium sensitivity of the receptor and low magnitude of impact, this results in a **minor adverse** effect, which is considered **not significant**.

Decommissioning

- 23.5.52 The impacts of the decommissioning period are predicted to be less than those experienced in the construction phase. This is because decommissioning would only involve the hydrogen production facility and not the marine facilities (these would continue to be maintained so that they can be used for port-related activities to meet long term need).
- 23.5.53 For the landside structures, the design life is around 25 years, although the operational life may be longer depending on commercial considerations.
- 23.5.54 Decommissioning of the hydrogen production facility would likely involve leaving underground pipelines in situ and making them safe. All above ground infrastructure would likely be dismantled and all material removed would be reused or recycled where possible or disposed of in accordance with relevant waste disposal regulations at the time of decommissioning and land restored to a satisfactory state. It is estimated that the decommissioning period for the hydrogen production facility would last for approximately two years.

Net Decommissioning Employment

- 23.5.55 Employment creation includes the creation of temporary employment opportunities directly at work sites and indirectly in the supply chain, arising from the decommissioning period associated with the Project.
- 23.5.56 Employment requirements for decommissioning activities are presently unknown. Based on the assumption that the decommissioning activities will generate jobs, but will be considerably shorter in duration than construction, the impact magnitude is likely to be low. The sensitivity of the labour force is considered to be medium, resulting in a **minor beneficial** effect, which would be **not significant**.

Public Rights of Way

- 23.5.57 Potential effects on PRow resulting from the decommissioning of the Project include impacts on users of footpaths, bridleways, byways and National Cycle Routes from disruption to, or diversion of, journeys.
- 23.5.58 Changes to journey time, local travel patterns and certainty of routes for users would arise from the temporary closures and diversions of PRow. Effects during decommissioning on relevant routes are set out in the following paragraphs.
- 23.5.59 It is anticipated that due to the nature of decommissioning of hydrogen production facility only and the location of PRow, it would not be necessary for any PRow to be temporarily or permanently diverted or closed.
- 23.5.60 As in the construction period, it is understood that Public Footpath 32 would remain unaffected by the Project during decommissioning and would not need to be diverted. Thus, as no additional impact on users of this route is anticipated, it is assessed that during decommissioning there would be **no effect** on this PRow.
- 23.5.61 It is also assumed in the decommissioning phase that there would be a similar effect on Public Bridleway 36. As a worst case scenario, part of the bridleway will be closed for the entire period, with no diversion route available. Given the high impact and medium sensitivity of this receptor, this results in a **major adverse** effect, which is considered **significant**. This will be revisited at the ES stage as it is likely that decommissioning would require a much reduced working area compared to the construction of the Project.

Private Assets

- 23.5.62 It is not anticipated that the decommissioning phase of the Project will require further land from residential or private properties, businesses, community land and assets or from development land to that used in construction and operation and as such there would be **no effect** on private assets.
- 23.5.63 The final outcomes of the likely significant effects of the Project on socio-economics will be reported within the ES.

23.6 Residual Effects

Construction

- 23.6.1 Based on this preliminary assessment of socio-economic impacts, it is considered that there are likely to be residual significant effects associated with the construction period. These are construction employment generation (moderate beneficial), generation of gross value added (moderate beneficial), effects on residential properties (moderate adverse) and effects on businesses (moderate adverse).

Operation

- 23.6.2 Based on the current understanding of socio-economic impacts, it is considered that there are no residual significant effects associated with the operational period.

Decommissioning

- 23.6.3 Based on the current understanding of socio-economic impacts, it is considered that there are no residual significant effects associated with the decommissioning period.
- 23.6.4 The final outcomes of the likely significant effects of the Project on Socio-economics will be reported within the ES.
- 23.7 Summary of Preliminary Assessment
- 23.7.1 **Table 23.19** below outlines a summary of the preliminary assessment on Socio-economics.

Table 23.19 Summary of potential impact, mitigation measures and residual effects

Receptor	Impact Pathway	Impact Significance	Mitigation Measure	Residual effect	Confidence
Construction Phase					
North East Lincolnshire's economy	Employment generation during the construction phase	Medium	None required.	Moderate beneficial Significant	High
North East Lincolnshire's economy	GVA generation during the construction phase	Medium	None required.	Moderate beneficial Significant	High
Users of PRoW	Impacts on PRoW users during the construction phase	Minor	To be assessed at the ES stage.	Major adverse Significant	Medium
Private Assets	Loss of residential properties on Queens Road	Moderate	A full assessment will be undertaken at the ES stage, including the possibility of a compulsory acquisition process.	Major adverse Significant	Medium
	Permanent displacement of businesses on Queens Road	Moderate	A full assessment will be undertaken at the ES stage, including the possibility of a compulsory acquisition process.	Moderate adverse Significant	Medium
	Impacts on other: <ul style="list-style-type: none"> • residential properties. 	No effect	None required.	No effect	High

Receptor	Impact Pathway	Impact Significance	Mitigation Measure	Residual effect	Confidence
	<ul style="list-style-type: none"> business premises. community facilities. 				
Private Assets	Landtake of development land affecting the viability for future development of an employment allocation	Negligible	None required.	Negligible Not significant	High
Impact of a changing influx of workers	Impact on the capacity of local primary healthcare facilities.	Low	None proposed.	Negligible Not significant	High
Impact of a changing influx of workers	Impact on the capacity of local accommodation facilities.	Low	None proposed.	Minor adverse Not significant	High
Operational Phase					
North East Lincolnshire's economy	Employment generation during the operational phase	Low	None proposed.	Minor beneficial Not significant	High
Private Assets	Impacts on residential properties, business	No effect	None required.	No effect	High

Receptor	Impact Pathway	Impact Significance	Mitigation Measure	Residual effect	Confidence
	premises and community facilities.				
	Land take of development land affecting the viability for future development of the land allocation.	No effect	None required.	No effect	High
Impact of a changing influx of workers	Impact on the capacity of local primary healthcare facilities.	Low	None required.	Minor adverse Not significant	High
Decommissioning Phase					
North East Lincolnshire's economy	Employment generation during the decommissioning phase	Low	None required.	Minor beneficial Not significant	Medium
Users of PRoW	Impacts on PRoW users during the decommissioning phase	No effect	To be assessed at ES stage.	Major adverse Significant	Medium
Private Assets	Impacts on residential properties, business premises and community facilities.	No effect	None required.	No effect	High

- 23.7.2 The final assessment of the likely residual significant effects of the Project on socio-economics will be reported within the ES.
- 23.7.3 With regards to construction and operational employment, as explained in **Paragraphs 23.5.15 and 23.5.46**, this estimation is based on information currently available at time of writing. This will be further assessed as part of the ES, which may confirm increased direct and indirect employment opportunities, which in turn would create a larger positive benefit for the local economy.

23.8 References

- Ref. 23-1 Homes and Communities Agency (HCA), (2014); Additionality Guide: A Standard Approach to Assessing the Additional Effect of Projects: 4th edition.
- Ref. 23-2 Office of National Statistics (ONS); Census 2011.
- Ref. 23-3 Department for Transport (2012), National Policy Statement for Port.
- Ref. 23-4 Ministry of Housing, Communities and Local Government (2021), National Planning Policy Framework.
- Ref. 23-5 Ministry of Housing, Communities and Local Government (2019), The National Planning Practice Guidance.
- Ref. 23-6 North East Lincolnshire Council (2018), North East Lincolnshire Local Plan.
- Ref. 23-7 North East Lincolnshire Council (2016), North East Lincolnshire Economic Strategy.
- Ref. 23-8 North East Lincolnshire Council (2021), North East Lincolnshire Economic Recovery Plan.
- Ref. 23-9 Greater Lincolnshire Local Enterprise Partnership (2016), Greater Lincolnshire LEP Strategic Economic Plan 2014-2030.
- Ref. 23-10 North East Lincolnshire Council (2022), Online Planning Portal.
- Ref. 23-11 Office for National Statistics (2020), Population Estimates – Local Authority based by five year age band.
- Ref. 23-12 Office for National Statistics (2021), Annual Population Survey.
- Ref. 23-13 Office for National Statistics (2019), The English Indices of Multiple Deprivation.
- Ref. 23-14 Office for National Statistics (2020), UK Business Register and Employment Survey (BRES).
- Ref. 23-15 Office for National Statistics (2020), Regional gross value added (balanced) per head and income components.
- Ref. 23-16 North East Lincolnshire Council, Online Mapping
- Ref. 23-17 Royal College of General Practitioners (2005); Information Note 20.
- Ref. 23-18 NHS Digital (2022); Patients Registered at a GP Practice- July 2022.

- Ref. 23-19 NHS Digital (2022); General Practice Workforce – July 2022.
- Ref. 23-20 Co-Star (2022), Online Mapping: Property data,
- Ref. 23-21 Office for National Statistics (2020), Population Projections, Local Authority based by single year of age.
- Ref. 23-22 ONS (2018), Research outputs: Alternative estimates of subnational dwelling stock by tenure, England and Wales 2018.
- Ref. 23-23 Homes and Communities Agency (2015), Employment Density Guide, 3rd Edition.
- Ref. 23-24 Office of National Statistics; Census 2021.
- Ref. 23-25 Department for Levelling Up, Housing and Communities (2021), English Housing Survey 2020 to 2021: headline report.
- Ref. 23-26 HMSO (2012), National Planning Statement for Ports.
- Ref. 23-27 Office for National Statistics (2017), Gross Value Added (Income Approach) by SIC07 industry at current basic prices.

23.9 Abbreviations and Glossary of Terms

Table 23.20 Glossary and Abbreviations

Term	Acronym	Meaning
Full Time Equivalent	FTE	A measure of the number of full time employees (or part time employees which add up to full-time employees).
Gross Value Added	GVA	A measure of the value of goods and services produced in an area, industry or sector of the economy.
National Health Service	NHS	The government funded medical and healthcare services in the UK.
Lower Layer Super Output Area	LSOA	Small areas designed to be of a similar population size, with an average of approximately 1,500 residents or 650 households.
Public Rights of Way	PRoW	A right by which the public can pass along linear routes over land at all times. Although the land might be owned by a private individual, the public have a legal right across that land along a specific route.