



LIGHTHOUSE GREEN FUELS PROJECT

Preliminary Environmental Information Report

Chapter 14: Socio-economics

The Inspectorate Reference: **EN010150**

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Volume 1

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14. SOCIO-ECONOMICS

14.1. INTRODUCTION

- 14.1.1. This Chapter reports the preliminary assessment of the likely significant effects of the Proposed Scheme on Socio-economics during construction and operation. Where relevant, further assessment will be presented in the Environmental Statement (ES).
- 14.1.2. Socio-economics considers the interrelationship between the economy and society. It relates to the National Planning Policy Framework (NPPF)¹ definition of ‘sustainable development’ as having an economic and social role, as well as an environmental one. The delivery of infrastructure therefore needs to consider impacts on community and the economy. In the context of the Proposed Scheme, this Socio-economic Chapter considers employment generation and demand for temporary accommodation.
- 14.1.3. This Chapter of this PEIR sets out:
- relevant legislation, policy and guidance;
 - consultation undertaken with stakeholders to date;
 - the proposed scope and methodology for the assessment; and
 - identifies those impacts that can be scoped out of the assessment.
- 14.1.4. The socio-economic assessment has considered the potential impacts associated with:
- construction employment generation; and
 - demand for accommodation from construction workers.
- 14.1.5. This chapter should be read in conjunction with **Figure 14-1 (Volume 2)**.

MATTERS SCOPED OUT

- 14.1.6. Elements scoped out of the assessment include:
- increased demand for community infrastructure and services during construction;
 - operational employment generation;
 - employment generation and loss of employment during decommissioning; and
 - crime and safety for construction, operation, and decommissioning stages.

14.2. POLICY, LEGISLATION, AND GUIDANCE

- 14.2.1. The policy, and guidance relevant to the assessment of socio-economics for the Proposed Scheme is detailed in **Appendix 4A: Policy, Legislation and Guidance (Volume 3)**.
- 14.2.2. There are no legislative requirements which exist in relation to socio-economics, therefore the assessment is guided by the Government’s planning policy and guidance. The policy and guidance relevant to this Chapter is outlined below:
- Policy:
 - National Planning Policy Framework (NPPF) 2023¹;
 - Overarching National Policy Statement for Energy EN-1 2023²;

- The Energy White Paper: Powering Our Net Zero Future 2020³;
- North East Strategic Economic Plan 2019⁴ and North East Strategic Economic Plan Executive Summary 2022⁵;
- Tees Valley Combined Authority Strategic Economic Plan 2016 – 2026⁶;
- Stockton-on-Tees Borough Council Local Plan 2019⁷;
- Redcar and Cleveland Borough Council Local Plan 2018⁸
- Hartlepool Borough Council Local Plan 2018⁹; and
- Middlesbrough Council Core Strategy 2008¹⁰;
- Guidance:
 - Homes and Communities Agency Employment Density Guide 3rd Edition 2015¹¹; and
 - Homes and Communities Agency Additionality Guide 4th Edition 2014¹².

14.3. SCOPING OPINION AND CONSULTATION

- 14.3.1. An EIA Scoping Opinion¹³ was received by the Applicant from the Planning Inspectorate on behalf of the Secretary of State on 01 September 2023. The responses from the Planning Inspectorate in relation to socio-economics and how these requirements have been or will be addressed by the Applicant are set out in **Table 14-1** below.
- 14.3.2. No further consultation has been undertaken or is considered relevant for socio-economics beyond the Scoping Opinion¹³ comments from the Planning Inspectorate and stakeholders.

Table 14-1: Summary of the EIA Scoping Opinion in relation to Socio-economics

Section ID	Applicant's Proposed Matter	Scoping Opinion Comments	Response
3.11.1	Employment generation (direct, indirect and induced) – operation	<i>“The Scoping Report¹⁴ proposes to scope this matter out on the basis that the scale of employment from the operation of the Proposed Development is unlikely to result in significant effects on the local employment markets. On this basis, the Inspectorate is content to scope this matter out of further assessment.”</i>	Proposed approach agreed – this matter has not been included within this PEIR and is not required to be considered within the Socio-economics ES Chapter.
3.11.2	Increased demand for community infrastructure and services due to an influx of temporary	<i>“This matter is proposed to be scoped out on the basis that the number of specialist contractors required for the construction of the Proposed Development would be unlikely to significantly</i>	Since the Scoping Opinion ¹³ was received in September 2023, the projected total number of construction phase employees has

Section ID	Applicant's Proposed Matter	Scoping Opinion Comments	Response
	workers – construction	<i>affect local community infrastructure and services. Considering that peak construction employment is expected to be around 750 staff and the combined population of the surrounding local area is approximately 470,300, the Inspectorate agrees that the influx of temporary workers for the construction phase is unlikely to have significant effects on community infrastructure. This matter can therefore be scoped out of further assessment."</i>	increased from 750, to an estimated 2,600 staff. It remains proposed that this matter is scoped out of the Socio-economics ES Chapter given the size of the populations and associated community infrastructure within the local authorities of Stockton-on-Tees, Redcar and Cleveland, Middlesbrough, and Hartlepool, where the majority of construction phase employees staying in temporary accommodation are likely to reside.
3.11.3	Employment generation (direct, indirect and induced) - decommissioning	<i>"This matter is proposed to be scoped out for two reasons. Firstly, decommissioning is expected to take around 15-18 months and the effects are therefore expected to be less than that of the construction phase. Secondly, due to uncertainty around the decommissioning techniques/technologies that are to be employed, the effects on employment generation would be difficult to predict. The Inspectorate accepts that due to the timescales and uncertainty involved, predicting the employment generation for the decommissioning phase would likely produce results which are not accurate. This matter can be scoped out of the ES on the basis that it is assessed in the</i>	This is considered acceptable to be scoped out of the socio-economic assessment and will be considered as part of the Decommissioning Plan, which will be prepared prior to commencement of the Decommissioning Phase.

Section ID	Applicant's Proposed Matter	Scoping Opinion Comments	Response
		<i>decommissioning plan prior to the Decommissioning Phase."</i>	
3.11.4	Loss of employment opportunities – decommissioning	<i>"This matter is proposed to be scoped out on the basis that even though jobs created during the operational phase could be lost, the Applicant may be able to re-deploy members of staff through retainment or re-skilling. The Inspectorate agrees that given the scale of employment and the intention to retain some staff, the loss of jobs associated with the decommissioning of the Proposed Development is not likely to be significant. This matter can be scoped out of further assessment in the ES."</i>	Proposed approach agreed – this matter has not been included within this PEIR and is not required to be considered within the Socio-economics ES Chapter.
3.11.5	Crime and safety – all phases	<i>"The Scoping Report¹⁴ states that crime and safety data has been scoped out under the assumption that the Proposed Development is located within a private industrial estate and has adequate security and safety measures. On this basis, the Inspectorate is content to scope this matter out of the ES."</i>	Proposed approach agreed – this matter has not been included within this PEIR and is not required to be considered within the Socio-economics ES Chapter.
3.11.6	Local Study Area	<i>"The Scoping Report¹⁴ defines the local socio-economic study area as including the local authorities of Stockton-on-Tees (host), Middlesbrough (adjacent) and Redcar and Cleveland (adjacent). The Inspectorate notes that Hartlepool is also adjacent to Stockton-on-Tees but has not been included within the study area. It is therefore not clear how this study area has been established. The ES should contain a statement</i>	Proposed approach agreed – Hartlepool local authority has now been included as part of the Study Area. Due to the evolving design of the Proposed Scheme, Redcar and Cleveland is also now a host authority due to the updated Scheme Boundary. Detail on the methodology for defining the Study Area has been

Section ID	Applicant's Proposed Matter	Scoping Opinion Comments	Response
		<i>providing the rationale for the selection of the final study area."</i>	included as part of this Chapter.
3.11.7	Employment	<i>"The Scoping Report¹⁴ states that the Applicant would work proactively to provide local employment opportunities and to enable access to training where possible. The ES should detail how these opportunities would be provided and how they link to local economic and employment strategies."</i>	Proposed approach agreed – information on the employment and training strategy to be delivered by the Applicant will be included within the Socio-economic ES Chapter (this is currently under development).
Appendix 2, UK Health Security Agency Response (including response from the Office for Health Improvement and Disparities (OHID))	Socio-economic effects – employment	<p><i>"The Scoping Report¹⁴ identifies that the Applicant would work proactively to provide local employment opportunities and to enable access to training where possible (para 15.6.1). The opportunity for local employment and training during construction and operation of the scheme should be used to assist in mitigating local deprivation levels.</i></p> <p><i>The ES should include details of how local employment opportunities and access to training will be provided and how this links to local economic and employment strategies."</i></p>	As with 3.11.7, proposed approach agreed – information on the employment and training strategy to be delivered by the Applicant has been included within this Chapter (this is currently under development and is likely to evolve). Final details of this will be included in the Socio-economics ES Chapter.

14.4. ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

14.4.1. This section sets out the methodology followed for the assessments of the socio-economic effects arising from the Construction Phase of the Proposed Scheme.

SENSITIVE RECEPTORS

14.4.2. The following sensitive receptors have been identified:

- Local economic receptors, including working age individuals within the local and regional level Study Areas, who would access jobs during the Construction Phase of the Proposed Scheme; and

- Local accommodation providers who may provide temporary accommodation for construction workers during the Construction Phase of the Proposed Scheme.

METHOD OF BASELINE DATA COLLECTION

- 14.4.3. A desk-based baseline data collection exercise has been undertaken, including a review of available information to determine the baseline conditions in the relevant local and regional Study Areas to be potentially affected by the Proposed Scheme.
- 14.4.4. The key sources of information used to determine the socio-economics baseline conditions are:
- NOMIS Labour Market Profiles (Office for National Statistics)¹⁵;
 - Indices of Multiple Deprivation¹⁶;
 - North East Strategic Economic Plan¹⁷;
 - Stockton-on-Tees Local Plan¹⁸;
 - Middlesbrough Borough Council Local Plan Core Strategy¹⁹;
 - Redcar and Cleveland Local Plan²⁰;
 - Hartlepool Local Plan²¹; and
 - Mapping software including Google Maps²², Ordnance Survey²³, and ArcGIS.

ASSESSMENT METHODOLOGY

- 14.4.5. A desk-based review of publicly available demographic information has been undertaken to inform the baseline conditions in relation to the population, as well as the economy and employment at the local and regional level. There are no legislative requirements which exist in relation to socio-economics, and therefore the assessment is guided by the UK Government's planning policy and guidance, as well as past experience and professional judgement. Relevant local, regional and national socio-economic planning policies and strategies (as outlined in **Section 14.2**) have informed this PEIR.

EMPLOYMENT GENERATION

- 14.4.6. The assessment methodology for the generation of employment has been based on Homes and Communities Agency (now known as Homes England) Employment Density Guide 3rd Edition and also by the Additionality Guide 4th Edition. It should be noted that while both documents were withdrawn in 2022 no statement on replacement guides to be published by the UK Government has been made and both guides are still available for reference. It is considered that in the absence of any further guidance on employment density, these documents remain relevant and appropriate other guidance documents.
- 14.4.7. The assessment of likely significant effects relating to employment generation during the Construction Phase has been undertaken using desk-based analysis. Gross employment projections have been provided by the Applicant (based on their past experience of developing similar facilities, due to the specialist nature of the Proposed Scheme and the requirement for a skilled construction labour force). Leakage,

displacement, multiplier factors and construction gross value added have been used to determine the total net construction employment generation.

LEAKAGE

- 14.4.8. Leakage effects are the “*proportion of outputs that benefit those outside of the intervention’s target area or group*”. Leakage rates have been applied to construction employment calculations. On the basis of travel to work data, past experience and expert judgement, a medium leakage rate (as set out in the HCA Additionality Guidance) of 25% has been applied.

DISPLACEMENT

- 14.4.9. Displacement measures the extent to which the benefits of a project are offset by reduction of output or employment elsewhere. Additional demand for labour as a result of the Construction Phase of the Proposed Scheme cannot simply be treated as a net benefit as it has the potential to remove workers from other positions, and the net benefit is therefore reduced by the extent that this occurs.
- 14.4.10. Overall, it is assumed that, due to the flexibility of the labour market and the fact that construction workers at the Proposed Scheme are likely to represent a small proportion of the regional construction labour force, displacement of the direct construction employment will be low. In line with the HCA Additionality Guide, within the context of a North East construction project, a low level of displacement of 25% is considered appropriate, where “*there are expected to be some displacement effects, although only to a limited extent*”²⁴.

MULTIPLIER EFFECTS

- 14.4.11. In addition to the direct employment generated by the Proposed Scheme itself, there will be an increase in local employment arising from “*further economic activity (jobs, expenditure or income) associated with additional local income and local supplier purchases*”; the indirect and induced effects of the construction activity¹¹. Employment growth will arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, part of the income of the construction workers and suppliers will be spent in the region, generating further employment (induced or income multipliers).
- 14.4.12. The effects of the multiplier depend on the size of the geographical area that is being considered, the local supply linkages and income leakage from the area. The HCA Additionality Guidance provides a guide to the composite multipliers (the combined effect of indirect and induced multiplier effects) which should be applied. In line with the HCA Additionality Guide, a medium multiplier of 1.5 has been applied on the basis that there are likely to be average supply linkages associated with the Proposed Scheme, based on its location within the North East.

CONSTRUCTION GROSS VALUE ADDED

- 14.4.13. Gross Value Added (GVA) is the measure of the value of goods and services produced in an area, industry or sector of an economy. It equates to the value of output minus the

value of intermediate consumption. GVA has been estimated by applying an average GVA benchmark per construction employee to the estimated net construction jobs generated by the Proposed Scheme, for both within and outside of the region. The GVA benchmark has been estimated using employment figures within the Business Register and Employment Survey (BRES)²⁵ and the GVA value within the Regional Gross Value Added dataset²⁶; both of which are available from the Office for National Statistics. This methodology for estimating GVA is based on a standard industry accepted approach for UK projects.

INCREASED DEMAND FOR ACCOMMODATION FROM CONSTRUCTION WORKERS

- 14.4.14. An evaluation of the likely number of additional individuals coming to live in the Study Area (as defined in **Section 14.5**) has been undertaken, based on assumptions made by the Applicant, derived from their experience with other similar projects, associated with travel planning, construction methodologies, and the construction programme. A percentage of the overall construction employment workforce has been determined based on these factors. Consideration has been given to any additional pressure which may arise on local accommodation facilities, in the context of existing availability and likely demand within the local area.

SIGNIFICANCE OF EFFECT CRITERIA

- 14.4.15. The methodology for assessing socio-economic impacts has followed standard EIA guidance as set out in **Chapter 3: Approach to EIA (Volume 1)**, and has involved:
- Consideration of local policy, plans and development constraints;
 - Assessment of the likely scale, permanence and classification of impacts; and
 - An assessment of the residual and cumulative impacts of the Proposed Scheme.
- 14.4.16. The assessment has considered the likely direct, indirect and cumulative impacts associated with socio-economics during construction. Cumulative impacts associated with the Proposed Scheme will be addressed in the Cumulative Effects Chapter of the ES, for further information see **Chapter 19: Cumulative Effects (Volume 1)**.
- 14.4.17. For socio-economics there is no accepted definition of what constitutes a significant (or not significant) socio-economic effect. It is however recognised that classification of an effect reflects the relationship between the scale of an impact (magnitude) and the sensitivity (or value) of the affected resource or receptor.
- 14.4.18. As such socio-economic effects have been assessed on the basis of:
- Consideration of sensitivity to effects: 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).
 - Magnitude of the impact: this entails consideration of the size of the effect on people or businesses in the context of the area in which effects will be experienced.

14.4.19. The assessment process aims to be objective and quantify effects as far as possible. However, many socio-economics effects can only be evaluated on a qualitative basis. Effects have been defined as follows:

- **Beneficial:** classifications of significance indicate an advantageous or beneficial effect on an effected area, which may be minor, moderate, or major in effect;
- **Adverse:** classifications of significance indicate a disadvantageous or adverse effect on an effected area, which may be minor, moderate or major in effect; and
- **Negligible:** classifications of significance indicate imperceptible effects on an effected area.

14.4.20. Based on consideration of the above, where an effect is assessed as being beneficial or adverse, the significance has been assigned using the scale below based on professional judgement:

- **Negligible:** no receptors (or very few) are affected. No discernible improvement or deterioration to the existing environment because of the Proposed Scheme will occur;
- **Minor:** the Proposed Scheme would cause a small improvement or deterioration to the existing environment;
- **Moderate:** the Proposed Scheme would cause a noticeable improvement or deterioration to the existing environment; and
- **Major:** the Proposed Scheme would cause a large improvement or deterioration to the existing environment.

14.4.21. Only Moderate and Major effects are considered to be significant in EIA terms.

14.5. STUDY AREA

14.5.1. The Study Area for this socio-economic assessment varies according to receptor. In the absence of statutory guidance on socio-economic assessments, reference has been made to planning policy, best practice guidance and professional judgement/experience.

14.5.2. For the purposes of this assessment, a broad 'local' Study Area has been defined as including the local authorities of Stockton-on-Tees, Middlesbrough, Redcar and Cleveland, and Hartlepool – see **Figure 14-1 (Volume 2)** for details. The 'regional' Study Area encompasses North East England (the 'North East'). Those socio-economic receptors for which some specific geographical parameters can be applied in relation to the Proposed Scheme Site are outlined below.

EMPLOYMENT GENERATION

14.5.3. The economic impact of the Proposed Scheme is considered relative to the North East, as this represents the principal labour market catchment area. Stockton-on-Tees and Redcar and Cleveland are accessible from all areas of the North East and are likely to be served by labour from the wider region rather than just restricted to the local labour markets, particularly given the scale and nature of the Proposed Scheme. The North East labour market incorporates the population that may reasonably be expected to

travel to and benefit from the Proposed Scheme. The Study Area for employment generation follows best practice guidance set out within the Employment Density Guide 3rd Edition and Additionality Guide 4th Edition.

INCREASED DEMAND FOR ACCOMMODATION FROM CONSTRUCTION WORKERS

- 14.5.4. Any workers employed at the Site during the Construction Phase are likely to require access to local accommodation, should they be drawn from a wider geographical area outside of the region. This may be due to the requirement for a specialist construction skill or activity.
- 14.5.5. It has been assumed that the majority of the required construction workers would come from within a one-hour commute of the Site. Whilst no onsite worker accommodation is proposed (as described in **Chapter 2: Site and Proposed Scheme Description (Volume 1)**), consideration of the potential requirement for use of local accommodation providers by some construction employees has been undertaken in order to present a 'worst-case scenario' for assessment. Assumptions surrounding the number of employees who may require temporary accommodation will be confirmed as part of the ES.
- 14.5.6. Any workers who are required to temporarily relocate to the local area during construction will likely reside within close proximity to the Site. As such the Study Area comprises the surrounding settlements, including Coatham, Seaton Carew, Haverton Hill, and Billingham. In order to capture accommodation providers within the area closest to the Site, a catchment of 2km has been used to represent the 'immediate' local area in proximity to the Site, within which accommodation providers are located. In addition, accommodation providers in Middlesbrough, Hartlepool and other areas of Stockton-on-Tees within the 2km catchment have also been considered, given that these are larger settlements offering a range of local amenities including temporary accommodation, hotels, and other services. The extent of the 2km Study Area has been determined based on past experience and professional judgement, and is deemed appropriate to capture the receptors most likely to be affected by the Proposed Scheme.

14.6. BASELINE CONDITIONS AND FUTURE BASELINE

EXISTING BASELINE

Population

- 14.6.1. The 2021 population estimates¹⁵ for Stockton-on-Tees, Middlesbrough, Redcar and Cleveland, and Hartlepool were 197,000, 143,700, 136,600, and 92,600 respectively. In the North East there were a total of 2,646,800 residents in 2021. The estimated working age population aged 16-64 years as a percentage of the total resident population is outlined in **Table 14-2**. The proportion of the working age population across all four local authorities is broadly in line with both the North East and Great Britain levels.

Table 14-2: Population aged 16-64 (% of the resident population)

Stockton-on-Tees	Middlesbrough	Redcar and Cleveland	Hartlepool	North East	Great Britain
61.4%	62.3%	58.9%	61.1%	61.8%	62.9%

ECONOMY AND EMPLOYMENT

14.6.2. The NOMIS Job Densities Report is available on a local authority-wide and sub-regional level and indicates the availability of employment and labour demand. As of 2021, the job density levels (i.e. the ratio of total jobs to the working age population) in Stockton-on-Tees was 0.77. This indicates that there are 0.77 jobs available for each working age resident in the local authority. This compares with 0.82 in Middlesbrough, 0.56 in Redcar and Cleveland, and 0.64 in Hartlepool. Levels in Stockton-on-Tees and Middlesbrough are broadly in line with the North East (0.75) and Great Britain levels (0.85), indicating similar rates of employment opportunities. Within Redcar and Cleveland and Hartlepool however, employment rates are somewhat lower when compared with the North East and Great Britain as a whole, indicating fewer employment opportunities within these local authorities compared with the regional and national averages.

14.6.3. **Table 14-3** details the qualifications of the resident population aged 16-64 in Stockton-on-Tees, Middlesbrough, Redcar and Cleveland and Hartlepool, compared to the North East and Great Britain in 2021. The proportion of people aged between 16-64 with no qualifications in Stockton-on-Tees is significantly lower than Middlesbrough, Redcar and Cleveland and Hartlepool as well as the North East and Great Britain. The achievement of degree level qualifications (NVQ 4 and above) is significantly lower in Stockton-on-Tees, Middlesbrough, Redcar and Cleveland, Hartlepool and the North East in comparison to Great Britain. Overall, this suggests a lower-skilled workforce within the North East region.

Table 14-3: Qualifications of resident population aged 16-64 (2021)

Qualifications	Stockton-on-Tees (%)	Middlesbrough (%)	Redcar and Cleveland (%)	Hartlepool (%)	North East (%)	Great Britain (%)
NVQ4 and above	35.8	28.6	33.4	30.2	34.5	43.6
NVQ3 and above	58.8	48.7	53.3	56.4	54.6	61.5
NVQ2 and above	77.1	71.8	76.8	75.3	75.0	78.1
NVQ1 and above	89.6	83.5	86.3	86.2	85.0	87.5
Other qualifications	5.7	8.4	5.5	6.1	6.9	5.9
No qualifications	4.7	8.0	8.2	7.6	8.2	6.6

14.6.4. There were estimated to be 82,000 jobs in Stockton-on-Tees in 2022 of which 69.5% were full-time and 30.5% part-time. **Table 14-4** shows a breakdown of the proportion of employee jobs in Stockton-on-Tees, Middlesbrough, Redcar and Cleveland, Hartlepool, the North East and Great Britain. There is a broadly similar breakdown of full time and part time jobs across Stockton-on-Tees, Middlesbrough, Redcar and Cleveland, Hartlepool, the North East and Great Britain. However, there is a higher proportion of full time jobs in Stockton-on-Tees when compared to the other Local Authorities and the regional and national figures.

Table 14-4: Proportion of Employee Jobs

Employee Jobs	Stockton-on-Tees	Middlesbrough	Redcar and Cleveland	Hartlepool	North East	Great Britain
Full Time	69.5%	65.1%	64.1%	66.7%	67.9%	68.8%
Part Time	30.5%	34.9%	33.3%	33.3%	32.1%	31.2%

14.6.5. **Table 14-5** shows the proportion of total employees working in each industry sector in 2022 within Stockton-on-Tees, Redcar and Cleveland, and Hartlepool, the most highly represented employment sector was the Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles sector (Sector G) at 15.9%, 15.4%, and 15.0% respectively. This is aligned with industry sector distribution within the North East (where Sector G is the second most highly represented) and Great Britain (where Sector G is the most highly represented).

14.6.6. Notable employment trends include the proportion of (Sector Q) Human Health and Social Work Activities employees in Middlesbrough (28.6%) which is significantly higher than the Stockton-on-Tees, Redcar and Cleveland and Hartlepool, as well as the North East and Great Britain. The James Cook University Hospital and the Tees Valley Hospital are both located in Middlesbrough. The James Cook University Hospital is likely to provide many jobs in the area as a regional major trauma centre and tertiary hospital with 24-hour emergency department servicing Durham, East Cleveland, Tees Valley and North Yorkshire. Other notable employment trends include (Sector B) Mining and Quarrying employees in Redcar and Cleveland (1.5%) which is approximately ten times greater than within Stockton on Tees, Middlesbrough, and Hartlepool (0.4%, 0.0% and 0.1% respectively). This is reflective of ICL Boulby, a polyhalite mine, which is the largest employer in East Cleveland and the North York Moors National Park²⁷. Rates of Manufacturing (Sector C) within Stockton-on-Tees and Redcar and Cleveland are over twice as high as within Middlesbrough (12.2%, 10.3%, and 4.0% respectively). Similarly, rates of Professional, Scientific and Technical activities (Sector M) within Stockton-on-Tees and Redcar and Cleveland are over twice as high as within Middlesbrough and Hartlepool (8.5%, 5.8%, 4.0%, and 3.3% respectively). This aligns with educational qualifications in the four local authorities (as outlined in **Table 14-4**), demonstrating lower attainment of qualifications reflects more people in lower skilled employment.

Table 14-5: Overview of employee jobs by industry sector in 2022 (%)

Industry Sector	Stockton-on-Tees	Middlesbrough	Redcar and Cleveland	Hartlepool	North East	Great Britain
A: Agriculture, forestry and fishing	15.7	0.1	17.7	17.8	0.3	0.1
B: Mining and quarrying	0.4	0.0	1.5	0.1	0.1	0.2
C: Manufacturing	12.2	4.0	10.3	11.7	9.7	7.6
D: Electricity, gas, steam and air conditioning supply	0.4	0.6	0.1	2.7	0.4	0.4
E: Water supply; sewerage, waste management and remediation activities	0.9	0.2	1.5	2.3	0.7	0.7
F: Construction	7.3	4.0	4.5	5.8	4.4	4.9
G: Wholesale and retail trade; repair of motor vehicles and motorcycles	15.9	12.7	15.4	15.0	13.7	14.0
H: Transportation and storage	5.5	3.2	9.0	3.3	5.2	5.0
I: Accommodation and food service activities	7.3	5.6	7.7	8.3	8.0	8.0
J: Information and communication	2.7	2.8	0.6	2.3	3.1	4.6

Industry Sector	Stockton-on-Tees	Middlesbrough	Redcar and Cleveland	Hartlepool	North East	Great Britain
K: Financial and insurance activities	1.5	1.6	0.5	0.4	2.2	3.3
L: Real estate activities	1.1	2.8	2.1	0.8	1.5	1.9
M: Professional, scientific and technical activities	8.5	4.0	5.8	3.3	5.6	9.1
N: Administrative and support service activities	7.3	9.5	6.4	5.0	8.0	9.0
O: Public administration and defence; compulsory social security	4.3	6.3	4.5	5.8	7.1	4.7
P: Education	8.5	11.1	10.3	10.0	9.9	8.6
Q: Human health and social work activities	13.4	28.6	12.8	16.7	16	13.5
R: Arts, Entertainment and Recreation	1.5	1.6	3.2	2.0	2.1	2.4
S: Other service activities	1.5	1.3	1.5	1.7	2.0	2.0

INDEX OF MULTIPLE DEPRIVATION

14.6.7. The English Indices of Multiple Deprivation (IMD) uses a combination of information relating to seven ‘domains’: income; employment; health deprivation and disability; education, skills and training; barriers to housing and services; crime; and living environment to create an overall score of deprivation. Deprivation is scored between 1 and 317 (representing the 317 local authority districts within England), with a score of 1 being most deprived and 317 being least deprived.

- 14.6.8. The IMD 2019 ranks Stockton-on-Tees 113th of the 317 local authority districts in England, it falls within the 40% most deprived local authorities in England. Notably, the Site itself is located within the Stockton-on-Tees 003B Lower Super Output Area (LSOA) which is amongst the 10% most deprived LSOAs in England. This suggests that there are considerable pockets of deprivation within Stockton-on-Tees, despite its overall rank compared with England.
- 14.6.9. By comparison, Middlesbrough is ranked as the 16th most deprived (the top 5%), Hartlepool the 25th most deprived (the top 10%), and Redcar and Cleveland the 62nd (the top 20%) most deprived local authority in England. This suggests a moderately high level of deprivation within the Study Area as a whole, with significant pockets of deprivation in certain geographies.

LOCAL EMPLOYMENT CONTEXT

- 14.6.10. The Site (defined as the Order Limits of the proposed DCO Application) comprises brownfield land which has been partially developed for energy generation facilities, prior to the Applicant's occupation of the land. The Site is deemed suitable for development of the Proposed Scheme due to its previous uses and extant permissions, the potential for use of rail and water transport to move products into and out of the Site, and the existing surrounding local employment context and utilities connections.
- 14.6.11. The Site is surrounded by many existing operational industrial and chemical facilities, with the Proposed Scheme aligning with the surrounding business uses.

LOCAL ACCOMMODATION CONTEXT

- 14.6.12. There is a considerable range of accommodation options and providers within the Study Area (those settlements surrounding the Site within an approximately 2km radius):
- In Middlesbrough, there are approximately 15 accommodation providers;
 - In Coatham and Redcar there are approximately 20 accommodation providers;
 - In Seaton Carew there are approximately 13 accommodation providers;
 - In Haverton Hill there is one independent hotel (the Haverton Hill Hotel); and
 - In Billingham there is one chain hotel (Premier Inn Wolviston).
- 14.6.13. There are no accommodation providers in Stockton-on-Tees within the 2km Study Area.
- 14.6.14. Outside of the main local centres, there are limited services for construction workers to access, and this is reflected in the lack of accommodation provision outside of the local tourist towns identified above. Based on past experience of construction projects where specialist contractors temporarily relocate during construction, the accommodation providers within Middlesbrough and Coatham and Redcar are most likely to be used and favoured by construction workers as this is where they are able to access a variety of services (such as shops) most easily.

FUTURE BASELINE

- 14.6.15. As the Proposed Scheme is located in a heavily industrial area, the surroundings are likely to remain the same in the medium to long term. The Stockton-on-Tees Borough Council Local Plan outlines targets for economic growth in the period to 2032, which encourage industrial activities. It is likely that in the absence of the Proposed Scheme, similar industrial, chemical, or manufacturing activities would take place on Site.

14.7. EMBEDDED DESIGN, MITIGATION AND ENHANCEMENT MEASURES

CONSTRUCTION AND OPERATION PHASE

- 14.7.1. Relevant design, mitigation and enhancement measures will be identified in the ES. These are likely to include the adoption of Best Practicable Means, such as:
- The Applicant would work proactively to provide local employment opportunities and to enable access to training where possible.
 - The processes used to recruit and manage staff to work at the Proposed Scheme would be demonstrably fair and offer equal opportunities to all.
 - A Skills and Employment Plan will be prepared prior to the construction of the Proposed Scheme, secured by a DCO Requirement.
- 14.7.2. Although crime and safety has been scoped out of the EIA, the following embedded mitigation measures would be implemented:
- Site security arrangements will be in line with the Construction (Design and Management) Regulations 2015²⁸ where appropriate levels of security (staff/CCTV) will be appointed, and fencing will be in place during the Construction Phase. Security arrangements will be referenced in the Outline Code of Construction Practice (OCoCP), which will be prepared as part of the DCO Application.
 - Appropriate levels of security (staff/CCTV) will be implemented during the Operation Phase. These include controlled entry automated gates and access barriers, lighting, and fencing. Security arrangements will be set out in an Operational Environmental Management Plan (OEMP), which would be prepared prior to the Proposed Scheme commencing operation and secured by a DCO Requirement.
 - For all new starters on the project Site, a site induction programme will be carried to ensure everyone is aware of safety and risks.

14.8. PRELIMINARY ASSESSMENT OF LIKELY IMPACTS AND EFFECTS

- 14.8.1. This section details the preliminary assessment of impacts and effects for the Proposed Scheme during the Construction Phase, considering the embedded design, mitigation and enhancement measures detailed in **Section 14.7**.
- 14.8.2. The likely effects for socio-economics associated with the Construction Phase are set out below.

CONSTRUCTION EMPLOYMENT GENERATION

- 14.8.3. Construction employment represents a beneficial economic effect that can be estimated as a function of the scale and type of construction (infrastructure and buildings). The following section estimates gross employment arising from the Proposed Scheme during the Construction Phase and then considers leakage, displacement and multiplier effects to assess the net effects on construction employment for the economy in the North East.
- 14.8.4. As set out in **Chapter 2: Site and Proposed Scheme Description (Volume 1)**, the estimated construction period is approximately three years (Q4 2025 to Q3 2028). The construction work is not permanent and therefore the effect will be temporary and medium term in nature. The capital and revenue expenditure involved in the construction period will lead to increased economic output in Stockton-on-Tees, and the wider North East regional economy.
- 14.8.5. The construction of the Proposed Scheme is likely to generate direct employment opportunities. This is likely to result in a beneficial effect which, while temporary, will provide new employment opportunities associated with the construction of the Proposed Scheme.
- 14.8.6. The impact of Construction Phase employment generation is likely to result in a regional benefit, and not remain localised to where construction works are taking place. Furthermore, the expenditure within the local supply chain is likely to be spread throughout the region, depending on the goods and services sought (indirect and induced impacts).
- 14.8.7. Based on the outline design at the time of writing, a projected number of gross employees has been estimated by the Applicant, based on past experience of delivering similar schemes. It is anticipated that up to 2,600 gross construction workforce will be required at the peak of the Construction Phase, however it is not possible to calculate the gross and net average annual construction workforce created due to the high-level nature of the Proposed Scheme design at this PEIR stage. However, Construction Phase employment generation will be calculated within the ES when details of the Proposed Scheme are further defined.
- 14.8.8. Whilst it is not possible to confirm the exact numbers of construction workers at this stage for this PEIR, there is the potential for Construction Phase employment generation to result in a **moderate beneficial**, medium term, temporary **significant** effect during construction. This assessment is based on the information available at the time of writing. The degree of this effect may change in the ES, once the full assessment is carried out.

INCREASED DEMAND FOR ACCOMMODATION DUE TO AN INFLUX OF CONSTRUCTION WORKERS

- 14.8.9. Given the design for the Proposed Scheme is still being developed, it is not possible to confirm the number of gross direct jobs generated employing construction workers from outside of the region during construction. Whilst it is anticipated that the Proposed Scheme would predominantly employ construction workers and contractors from the

North East region, dependent on the specialist nature of some construction activities, there may be the requirement to employ specialist contractors who would relocate to the area temporarily. This would result in increased demand for temporary accommodation.

14.8.10. It is anticipated that the effect of any influx of construction workers on the capacity of temporary accommodation would be limited, given the number and wide range of providers within the locality which are likely to be able to accommodate new customers/users. However, given that it is not possible to estimate the numbers of construction workers at this stage for this PEIR, there remains the possibility that an influx of construction workers on the capacity of temporary accommodation and local services could result in a **minor adverse**, medium term, temporary **not significant** effect during construction. The degree of this effect may be reduced in the ES, once the full assessment is carried out.

14.9. ADDITIONAL DESIGN, MITIGATION AND ENHANCEMENT MEASURES

14.9.1. No further additional design, mitigation or enhancement measures are proposed for socio-economics.

14.10. MONITORING

14.10.1. No monitoring of socio-economics effects is considered to be proportionate or to be required.

14.11. RESIDUAL EFFECTS

14.11.1. Given the assessed beneficial effect in relation to construction employment and the absence of current proposed mitigation in relation to accommodation for construction workers, the preliminary assessment findings remain the same. **Table 14-6** summarises the residual effects associated with the Proposed Scheme.

Table 14-6: Summary of residual effects

Description of the Impact	Sensitive Receptor	Significance of Effect with Embedded Mitigation	Additional Design, Mitigation, Enhancement measure	Residual effect
Construction employment generation	Economic receptors – the regional economy and employees	Moderate beneficial (Significant)	N/A	Moderate beneficial (Significant)
Increased demand for accommodation for temporary construction workers	Economic receptors – accommodation providers	Minor Adverse (Not Significant)	N/A	Minor Adverse (Not Significant)

14.12. NEXT STEPS

14.12.1. Further work to be completed and included in the ES:

- The socio-economic assessment will be further developed and refined based on any relevant responses to the Statutory Consultation.
- The detailed assessment within the ES will involve a review of the socio-economic assessment presented in this Chapter, based on further information provided as part of ongoing design development in order to calculate projected construction employment generation and associated demand for temporary construction worker accommodation.

14.13. LIMITATIONS AND ASSUMPTIONS

14.13.1. To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The socio-economic assessment for the Proposed Scheme has considered employment generation during the construction stage. The baseline conditions and assessment has been undertaken as a desk-based study, using recognised data sources including (but not limited to) Census data and Office of National Statistics Labour Force Statistics.
- This assessment is based on a reasonable worst-case scenario due to the limited information at the time of writing.
- The baseline has outlined the most up-to-date data available at the time of writing, and this will be updated in the ES Chapter. The publication schedules for datasets are not typically made available, and therefore the incorporation of data for the 2023-2024 year cannot be guaranteed. This is not considered to be a particular limitation as annual updates to economic and employment data are not likely to be statistically significant enough to affect the robustness of the assessment.
- The impacts of the socio-economic assessment has been appraised against relevant national standards and/or professional experience and expert judgement where appropriate.
- It has been assumed that the majority of the required construction workers would come from within a one-hour commute of the Site.

14.14. REFERENCES

- ¹ Ministry of Housing, Communities & Local Government (2021) 'National Planning Policy Framework (NPPF)'. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- ² Department for Energy Security & Net Zero (2023) 'Overarching National Policy Statement (NPS) for Energy EN-1'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147380/NPS_EN-1.pdf
- ³ Energy White Paper (2020) 'Powering our Net Zero Future'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945899/201216_BEIS_EWP_Command_Paper_Accessible.pdf
- ⁴ North East Local Enterprise Partnership (2019) 'North East Strategic Economic Plan'. <https://www.northeastlep.co.uk/wp-content/uploads/2019/03/nel404-sep-refresh-2018-web-new-final.pdf>
- ⁵ North East Local Enterprise Partnership (2022) 'North East Strategic Economic Plan Executive Summary'. Available at: <https://www.northeastlep.co.uk/wp-content/uploads/2022/05/North-East-Strategic-Economic-Plan-Executive-Summary-Update-Jan-2022.pdf>
- ⁶ Tees Valley Combined Authority (2016) 'Tees Valley Strategic Economic Plan'. Available at: <https://teesvalley-ca.gov.uk/about/wp-content/uploads/sites/2/2023/03/TVCA207-SEP-Document-Full-WEB-1.pdf>
- ⁷ Stockton-on-Tees Borough Council (2019) 'Local Plan'. Available at: https://www.stockton.gov.uk/media/2518/Local-Plan-2019/pdf/Local_Plan_2019.pdf?m=637810468860870000
- ⁸ Redcar and Cleveland Borough Council (2018) 'Local Plan'. Available at: <https://www.redcar-cleveland.gov.uk/sites/default/files/2022-04/Local%20Plan%20Adopted%20May%202018.pdf>
- ⁹ Hartlepool Borough Council (2018) 'Local Plan' Available at: https://www.hartlepool.gov.uk/downloads/file/4393/hartlepool_local_plan_-_adopted_may_2018pdf
- ¹⁰ Middlesbrough Borough Council (2008) 'Core Strategy' Available at: <https://www.middlesbrough.gov.uk/media/2nvloyfb/planning-policy-core-strategy-2008.pdf>
- ¹¹ Homes and Communities Agency (now known as Homes England). (2015). 'Employment Density Guide 3rd Edition'. Available at: https://www.kirklees.gov.uk/beta/planning-policy/pdf/examination/national-evidence/NE48_employment_density_guide_3rd_edition.pdf
- ¹² Homes and Communities Agency (now known as Homes England) (2014). 'Additionality Guide 4th Edition'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf
- ¹³ The Planning Inspectorate. (2023). 'Scoping Opinion: Proposed Lighthouse Green Fuels Project'. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010150/EN010150-000012-EN010150%20-%20Lighthouse%20Green%20Fuels%20-%20Scoping%20Opinion.pdf>
- ¹⁴ Lighthouse Green Fuels DCO. (2023). 'Environment Impact Assessment Scoping Report: Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010150/EN010150-000006-LGF%20EIA%20Scoping%20Volume%20I%20-%20Main%20Text%20and%20Figures.pdf>
- ¹⁵ Office for National Statistics (2023). 'NOMIS Labour Market Profile'. Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157063/report.aspx>

¹⁶ Office for National Statistics (2019). 'English Indices of Deprivation'. Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

¹⁷ North East Local Enterprise Partnership (2019) 'North East Strategic Economic Plan'. <https://www.northeastlep.co.uk/wp-content/uploads/2019/03/nel404-sep-refresh-2018-web-new-final.pdf>

¹⁸ Stockton-on-Tees Borough Council (2019) 'Local Plan'. Available at: https://www.stockton.gov.uk/media/2518/Local-Plan-2019/pdf/Local_Plan_2019.pdf?m=637810468860870000

¹⁹ Middlesbrough Borough Council (2008) 'Core Strategy' Available at: <https://www.middlesbrough.gov.uk/media/2nvloyfb/planning-policy-core-strategy-2008.pdf>

²⁰ Redcar and Cleveland Borough Council (2018) 'Local Plan' Available at: <https://www.redcar-cleveland.gov.uk/sites/default/files/2022-04/Local%20Plan%20Adopted%20May%202018.pdf>

²¹ Hartlepool Borough Council (2018) 'Local Plan' Available at: https://www.hartlepool.gov.uk/downloads/file/4393/hartlepool_local_plan_-_adopted_may_2018pdf

²² Google Maps. Available at: <https://www.google.com/maps>

²³ Ordnance Survey. Available at: <https://explore.osmaps.com/?lat=51.776100&lon=-1.894300&zoom=7.0000&style=Standard&type=2d>

²⁴ UK Gov. (2015). 'Construction (Design and Management) Regulations'. Available at: <https://www.hse.gov.uk/pubns/priced/l153.pdf>

²⁵ Office for National Statistics. (2022). 'Local authority district – Business Register and Employment Survey (BRES): Table 6'. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/localauthoritydistrictbusinessregisterandemploymentsurveybrestable6>

²⁶ Office for National Statistics. (2021). 'Regional gross value added (balanced) by industry: all ITL regions'. Available at: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry>

²⁷ ICL Boulby (2023). 'About ICL Boulby'. Available at: <https://www.icl-uk.uk/about/>

²⁸ UK Gov. (2015). 'Construction (Design and Management) Regulations'. Available at: <https://www.hse.gov.uk/pubns/priced/l153.pdf>

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