

The Lighthouse Green Fuels Order

Application Reference: EN0110025

Applicant: LGF Projects Limited

Environmental Statement Volume I Chapter 17: Socioeconomics

Document Reference: 6.1.17

Revision: 00

APFP Reg. 5(2)(a) and EIA Reg. 14



Document Information

Document Title	ES Chapter 17: Socioeconomics
Document Ref	6.1.17
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Revision record

00	Purpose	DCO Application Submission
	Date	September 2026

Information classification

Information Classification	Date	Reason
Public	September 2026	Proprietary information which will have no impact on the company if disclosed publicly

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Abbreviations

Abbreviation	In full
APS	Annual Population Survey
ASHE	Annual Survey of Hours and Earnings
BRES	Business Register and Employment Survey
CAPEX	Capital expenditure
CRoW	Countryside and Rights of Way
DCO	Development Consent Order
EfW	Energy-from-Waste
EIA	Environmental Impact Assessment
EIP	Environmental Improvement Plan
EN-1	Overarching National Policy Statement for Energy
EN-3	National Policy Statement for Renewable Energy Infrastructure
EN-5	National Policy Statement for Electricity Networks Infrastructure
ES	Environmental Statement
EWP	Energy White Paper
fCEMP	Framework Construction Environmental Management Plan
FTE	Full-Time Equivalent
GVA	Gross Value Added
HGV	Heavy Goods Vehicle
IEMA	Institute of Environmental Management and Assessment
IMD	Indices of Deprivation
ISEP	Institute of Sustainability and Environmental Professionals
LSOA	Lower Layer Super Output Area
NPPF	National Planning Policy Framework
NPS	National Policy Statement
ONS	Office for National Statistics
OS	Ordnance Survey
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PRoW	Public Rights of Way
SAF	Sustainable Aviation Fuel
TVCA	Tees Valley Combined Authority

17 Socioeconomics

17.1 Introduction

- 17.1.1 This chapter of the Environmental Statement (ES) presents the assessment of likely significant effects on socioeconomics arising from construction, operation and decommissioning of the Proposed Development. This chapter sets out the relevant legislation, policy, standards and guidance applied to the assessment process; consultation undertaken to inform the assessment; assessment methodology; the relevant baseline conditions upon which the assessment is based; embedded mitigation considered in place before the assessment is undertaken; the likely significant effects that may arise as a result of the Proposed Development considering embedded mitigation; further mitigation proposals to reduce or remove identified likely significant effects wherever possible; likely remaining residual effects following further mitigation; and any monitoring proposals.
- 17.1.2 For the purposes of this chapter, socioeconomics considers the inter-relationship between the economy and society, including effects on employment and economic activity, and effects on relevant land use receptors such as local businesses, community and recreational facilities, Public Rights of Way (PRoW), health, and tourism assets where these may be affected by the Proposed Development.
- 17.1.3 This chapter should be read in conjunction with the descriptions of the Site and the Proposed Development provided in **Chapter 3: The Site and Surroundings**, **Chapter 4: Proposed Development** and **Chapter 5: Construction Programme and Management (ES Volume I, Application Document Ref. 6.1)**.
- 17.1.4 It is recommended that this chapter is read in conjunction with the following other chapters:
- **Chapter 4: Proposed Development (ES Volume I, Application Document Ref. 6.1)** – regarding the description of the Proposed Development, including its components, operation and associated infrastructure;
 - **Chapter 9: Noise and Vibration (ES Volume I, Application Document Ref. 6.1)** – regarding amenity effects on noise and vibration sensitive receptors, including residential and community receptors, local businesses, and users of promoted recreational routes and PRoW;
 - **Chapter 13: Landscape and Visual Impact Assessment (ES Volume I, Application Document Ref. 6.1)** – regarding amenity effects on users of promoted recreational routes and PRoW;

- **Chapter 18: Traffic and Transport (ES Volume I, Application Document Ref. 6.1)** – regarding impacts on the physical nature of changes to access, promoted recreational routes and PRoW; and
 - **Chapter 21: Geology and Soils (ES Volume I, Application Document Ref. 6.1)** – regarding impacts on agricultural land and soils.
- 17.1.5 Cumulative effects with other committed developments in the vicinity of the Proposed Development are considered in **Chapter 22: Cumulative and Combined Effects (ES Volume I, Application Document Ref. 6.1)**.
- 17.2 [Legislation and planning policy context](#)
- [Overview](#)
- 17.2.1 This section identifies the relevant legislation, planning policy, standards and guidelines which underpin the assessment methodology for socioeconomics and have informed the assessment, including the identification of mitigation.
- 17.2.2 An overview of legislation, planning policy, and guidance is provided in **Chapter 7: Planning and Energy Policy (ES Volume I, Application Document Ref. 6.1)**.
- 17.2.3 There is no legislation specific to the methodology of the assessment of socioeconomic effects arising as part of the Proposed Development. Where relevant, legislation specific to elements of the assessment such as the Countryside and Rights of Way Act (2000) will be referenced.

Table 17.1 Legislation, policy and guidance

Document	Relevance to assessment
Legislation	
Countryside and Rights of Way (CRoW) Act, 2000 [Ref 1]	The CRoW provides a right of public access on foot to 'access land' including certain areas of open land. The CRoW Act also provides safeguards which consider the needs of landowners and occupiers, and of other interests, including wildlife. The CRoW Act encourages the creation of new routes and clarification of uncertainties about existing rights. It is relevant to assessing effects on PRoW and recreational receptors, as it informs how potential temporary closures/diversions are avoided or managed to maintain safe public access.
Sustainable Aviation Fuel (SAF) Act, UK Government Legislation, 2026 [Ref 2]	The Sustainable Aviation Fuel Act 2026 establishes a legal framework to support the development, deployment, and scaling of SAF in the UK aviation sector. The Act aims to reduce the carbon footprint of air travel by encouraging airlines and fuel producers to adopt fuels derived from renewable, non-food feedstocks.
Policy	
Sustainable Aviation Fuel (SAF) Mandate, UK	The SAF Mandate is the UK's key policy to decarbonise aviation fuel by encouraging the supply of sustainable aviation fuels.

Document	Relevance to assessment
Government/Department for Transport, 2024 [Ref 3]	Published by the Department for Transport in December 2024, the SAF Mandate aims to secure demand for SAF by: - obligating the supply of an increasing amount of SAF in the overall UK aviation fuel mix; and - incentivising SAF supply through the award of tradeable certificates with a cash value. The Proposed Development is expected to be the UK's first commercial scale, second generation SAF production facility. The plant would be one of the largest of its kind in Europe, converting over 1 million tonnes of sustainably sourced biomass feedstock into over 180 million litres of advanced SAF and approximately 30 million litres of renewable naphtha per annum. SAF produced by the plant will contribute to the UK's SAF Mandate targets. The proposed SAF production facility represents First-of-a-Kind technology intended to help decarbonise aviation and support the UK's transition to a Net Zero future.
Overarching National Policy Statement (NPS) for Energy (EN-1), Department for Energy Security & Net Zero, 2025 [Ref 4]	The Overarching National Policy Statement for Energy sets out the government's policy for the delivery of major energy infrastructure and provides guidance to support the decisions on applications for energy developments that are nationally significant. Relevant paragraphs include paragraph 2.1.2, which sets out the need for high quality energy infrastructure at the local and national scale for economic growth, and to boost productivity and competitiveness. Section 4.2 emphasises the 'critical national priority for low carbon infrastructure' and the role of renewable power generation in meeting government commitments. The Proposed Development directly complements these ambitions. Paragraphs 4.1.5 – 4.1.7 discuss the approach for weighing of adverse impacts and benefits and section 5.11 considers potential impacts on land use. Paragraph 4.3.4 'Environmental effects/Considerations' states <i>"To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as employment, equality, biodiversity net gain, community cohesion, health and wellbeing."</i> Section 5.13 is specific to socioeconomic impacts and mitigation, and sets out how <i>"the construction, operation and decommissioning of energy infrastructure may have socioeconomic impacts at local and regional levels"</i>. This section states that <i>"Where the project is likely to have socioeconomic impacts at local or regional levels, the applicant should</i>

Document	Relevance to assessment
	<i>undertake and include in their application an assessment of these impacts as part of the ES”.</i> Section 5.13 outlines that the applicant’s assessment should consider all relevant socioeconomic impacts, which for the Proposed Development include: • creation of jobs and training opportunities; • the contribution to the development of low-carbon industries; • any indirect beneficial impacts for the region hosting the infrastructure; • effects (positive and negative) on tourism and other users of the area impacted; • the impact of a changing influx of workers; and • cumulative effects. The Proposed Development’s role in producing sustainable aviation fuel contributes to the low-carbon energy transition (para 4.2.2) and jobs and supply-chain benefits (paras 4.1.5–4.1.7). The need to report on land-use change, open space and green infrastructure (Section 5.11) is also relevant.
NPS for Renewable Energy Infrastructure (EN-3), Department for Energy Security & Net Zero, 2025 [Ref 5]	The NPS for Renewable Energy Infrastructure sets out the government’s policy for the delivery of nationally significant renewable energy infrastructure projects and provides guidance to support the decisions on applications for energy developments that are nationally significant. EN-3 is intended to be applied in conjunction with EN-1, with EN-3 providing additional policy and considerations for the technologies it covers Section 2.7 of EN-3 recognises that the combustion of biomass for electricity generation plays an important role in meeting the UK’s energy needs and supporting decarbonisation and notes its potentially significant role in delivering net zero when combined with carbon capture and storage. Section 2.7 sets out assessment principles specific to biomass and Energy-from-Waste (EfW). In particular, paragraph 2.7.18 states that government recognises the need to prioritise biomass use in applications where it can deliver greenhouse gas emission reductions in hard-to-decarbonise sectors, where there are no viable alternatives, and identifies bioenergy with carbon capture and storage as one such priority application. In addition to the generic impacts covered by EN-1, Section 2.7 highlights technology-specific impacts, including landscape and visual and noise and vibration, which can have implications for socioeconomic effects (e.g. amenity and the experience of places).
National Policy Statement for Electricity Networks Infrastructure (EN-5), Department for Energy Security & Net Zero, 2025 [Ref 6]	EN-5 sets out policy for electricity transmission and distribution infrastructure. While the Proposed Development is not primarily an electricity networks project, EN-5 is relevant in relation to electrical connection infrastructure (e.g. substations and associated works). In particular, paragraph 2.9.19 (the “Horlock

Document	Relevance to assessment
	Rules”) provides principles for the siting and design of substations and associated infrastructure. These include: • consideration of land use effects when planning the siting of substations or extensions; • consideration of options for terminal towers, equipment, buildings and ancillary development appropriate to individual locations, with the aim of keeping effects to a reasonably practicable minimum; and • the efficient use of space to limit the area required for development, consistent with mitigation measures and minimising adverse effects on existing land use and PRoW, while having regard to potential future expansion. Where relevant to the electrical connection elements of the Proposed Development, these principles have been considered in the design and assessment.
Jet Zero Strategy: Delivering net zero aviation by 2050, Department for Transport, 2022 [Ref 7]	The Jet Zero Strategy sets out the UK’s plan to achieve net zero aviation by 2050. It includes a five-year delivery plan and focuses on six key measures: system efficiencies, SAF, zero-emission flight, carbon markets and removals, influencing consumer behaviour, and addressing non-CO₂ impacts. The strategy commits to domestic aviation and airports in England being net zero by 2040 and mandates at least 10% SAF blending into conventional jet fuel by 2030. It also aims to have at least five commercial SAF plants under construction by 2025 and introduces funding mechanisms such as the Advanced Fuels Fund (£165m) to stimulate SAF production.
Environmental Improvement Plan (EIP) 2023 [Ref 8]	The EIP provides an update on the 25 Year Environment Plan which set out the UK Government’s “<i>vision for a quarter-of-a-century of action to help the natural world regain and retain good health</i>”. Relevant Goals of the EIP: Goal (achieving clean air), Goal 5 (minimising waste) and Goal 7 (reducing greenhouse gas emissions to accelerate to net zero and prepare for the effects of climate change). These goals contribute to the EIPs overarching aim: Goal 10 (ensuring inclusive access to nature and protecting nature’s beauty and heritage). The SAF that will be produced at the Proposed Development will be a low-carbon alternative to conventional jet fuel. The fuel can be blended with existing fuels, helping to reduce emissions from both business and leisure flights.
Resources and Waste Strategy, England, 2018 [Ref 9]	The Resources and Waste Strategy aim is to transition the UK to a circular economy by maximising resource value, doubling resource productivity and eliminating all avoidable waste by 2050. Key relevant priorities include promoting resource efficiency and high-value recovery; encouraging innovation and investment in recycling and reprocessing infrastructure; supporting secondary materials markets; reducing environmental impacts and pollution from waste; and tackling waste crime.

Document	Relevance to assessment
	It introduces initiatives such as the Renewable Transport Fuels Obligation. In doing so, the strategy supports innovation in waste-to-resource technologies. The Proposed Development will convert biogenic waste and residues into SAF directly aligning with the strategy's goals.
Clean Energy Jobs Plan, UK Government, 2025 [Ref 10]	This Plan outlines the UK Government's strategy to: create a new generation of good jobs across the UK through the clean energy transition; ensure the UK becomes a global leader in clean energy by 2030; deliver energy security, economic growth, and social equity by investing in clean energy infrastructure and workforce development; and support workers and communities in transitioning from carbon-intensive industries to clean energy sectors.
Clean Air Strategy, 2019 [Ref 11]	The Strategy presents a comprehensive national plan to tackle emissions from all major sources of air pollution, protect public health and the environment, and reduce the economic costs of poor air quality. It sets tighter emissions standards for industry and combustion plant; commitments to reduce fine particulate matter (PM_{2.5}) exposure; measures across transport, farming and domestic sectors; and support for cleaner technologies that deliver both health and economic benefits. For this project, the deployment of modern emissions controls and the production of cleaner aviation fuel are consistent with the Strategy's objectives, helping to improve air quality outcomes, support a healthier local workforce and community, and create high-quality industrial jobs without compromising environmental health.
Transport Decarbonisation Plan, 2021 [Ref 12]	The Decarbonisation Plan is a roadmap for achieving net zero emissions in UK transport by 2050. It aims to decarbonise all forms of transport. Its commitments include accelerating aviation decarbonisation, in line with the Jet Zero strategy; and maximisation of the benefits of sustainable low carbon fuels. It aims to mandate the supply or use of sustainable aviation fuels by 2025, as well as kick-start the commercialisation of UK SAFs. It emphasises integrating decarbonisation with green growth and job creation; and targeting investment in places with existing strategic transport and industrial assets.
The National Planning Policy Framework (NPPF), 2026 [Ref 13]	Published by the UK Government, the NPPF sets out planning policies for England, and how these are expected to be applied. While these policies are relevant to the assessment, they do not form part of the primary decision-making framework where a NPS applies to a proposed development (as confirmed at NPPF paragraph 13). The assessment has therefore considered key parts of the framework including: • Paragraph 17, which outlines the three overarching objectives (economic, social and environmental) that support achieving sustainable development; • Chapter 7: 'Building a strong, effective economy', in particular Policy E1, which states that plans should "set out a clear economic vision and strategy, which takes a

Document	Relevance to assessment
	positive, proactive and realistic approach to encouraging sustainable economic growth", and Policy E2, which requires that substantial weight be given to the economic benefits of commercial development that allows businesses to invest, expand and adapt. Policy E1 also addresses the specific locational requirements of different sectors, including the clustering of businesses in suitable, accessible locations; and Promoting healthy communities (Chapter 16, Policy HC1). The National Planning Policy Framework was most recently updated in August 2026, replacing the version published in December 2024.
The Energy White Paper: Powering Our Net Zero Future 2020 [Ref 14]	The Energy White Paper (EWP): Powering Our Net Zero Future was presented to parliament in December 2020. At the core of the EWP is the commitment to tackle climate change and achieve net zero. The EWP seeks to put in place a strategy for the wider energy system that transforms energy, supports a green recovery and creates a fair deal for consumers. Page 95 of the EWP outlines priorities for the decarbonisation of aviation and maritime industries. The establishment of the Jet Zero Council aims to accelerate the development and adoption of new technologies in order to reach net zero aviation. £15 million will be invested into FlyZero as well as a £15 million competition to support the production of sustainable aviation fuels in the UK. It is expected that around 40,000 new jobs could be supported by 2030 due to increasing the shift to zero emission vehicles.
Net Zero Strategy for Tees Valley: Powering the UK's Journey to Net Zero, Tees Valley Combined Authority and Tees Valley Mayor, 2023 [Ref 15]	Hartlepool, Middlesbrough, Redcar and Cleveland, and Stockton-on-Tees are part of the Tees Valley region, alongside Darlington. In 2023, the Tees Valley Combined Authority (TVCA) adopted the Net Zero Strategy. The region aims to become a global leader in clean energy, low carbon technologies, and hydrogen, and the Strategy includes a ten-point plan for a 'Net Zero Tees Valley'. Within this plan, point 4 is as follows: <i>"Supporting Teesside International Airport to be Net Zero in its operations by 2030 and supporting the development of Sustainable Aviation Fuels to pursue Net Zero flights by 2035 – making it the UK's first Net Zero Airport".</i> The Strategy explicitly states the commitment of TVCA to promoting the use of sustainable feedstocks as the input to produce fuel, describing this as key to a low carbon future. Some of the objectives outlined in the Strategy include: advanced sustainable aviation fuels and advanced biofuels being produced on Teesside; and

Document	Relevance to assessment
	regular flights from Teesside International using sustainable aviation fuels by 2033 and hydrogen powered planes as they become available.
Tees Valley Combined Authority Strategic Economic Plan 2016 – 2026 [Ref 16]	The Tees Valley Combined Authority Strategic Economic Plan sets out the growth ambitions and priorities for the Tees Valley from 2016 to 2026 and creates an Industrial Strategy that includes priorities to improve, diversify and accelerate growth in the local economy to benefit businesses and residents. As the overarching economic plan and Industrial Strategy for the Tees Valley, the Plan provides a framework for economic development to deliver six growth generating themes including: Business Growth; Research, Development, Innovation and Energy; Education, Employment and Skills; Place; Culture; and Transport and Infrastructure. The ambition of the Plan is for Tees Valley to become a “<i>high value, low carbon, diverse and inclusive economy</i>” and the aim is to create 25,000 jobs over the course of ten years. Strategic Priority: ‘Research, Development, Innovation & Energy’ outlines the importance of innovation to grow the Tees Valley economy and its overall aim which is “<i>To introduce new processes and practices which reduce carbon emissions, increase productivity and the availability of high value jobs</i>”.
Stockton-on-Tees Borough Council Local Plan 2019 [Ref 17]	The Stockton-on-Tees Borough Council Local Plan sets out the Council’s ‘Strategic Priorities’ for development in the period to 2032; several of which relate to the economy and employment and are of relevance to the assessment of socioeconomics. These include: - Strategic Priority 1: “To encourage economic growth, job creation and a more entrepreneurial culture within the Borough, as a means of diversifying the economic base and strengthening existing economic strengths, clusters and sectors”; and - Strategic Priority 2: “To identify sufficient employment sites and premises to ensure the needs of inward investors, as well as existing and new businesses, are met.”
Stockton-on-Tees Plan 2024, Stockton-on-Tees Borough Council [Ref 18]	The Stockton-on-Tees Plan 2024 features five priorities. Priority three, ‘A great place to live, work and visit’, is especially relevant to the socioeconomic assessment, while Priority two, ‘Healthy and resilient communities’ applies to the assessment of health impacts which is also summarised in this chapter.
Redcar and Cleveland Borough Council Local Plan Strategy 2024-2027 [Ref 23]	The Local Plan sets out the vision and overall development strategy for the Council area and how it will be achieved in the 15 years to 2027. The Plan has eight principles, the most relevant being: Principle 1: Sustainability & Design. This emphasises the need to set geographical limits for new development; secure contributions from developers; and support new renewable energy and low carbon energy. An indicator of success for

Document	Relevance to assessment
	this would likely include the percentage of new development on previously developed land; • Principle 4: Economic Development. This emphasises the importance of geographical boundaries for industrial and commercial areas, as well as development of leisure/tourism. An indicator of success for this would likely include the total employment floorspace developed on industrial sites; • Principle 6: Natural Environment. This emphasises the need to protect and enhance the natural landscape, green infrastructure, strategic gaps and recreation routes, as well as biodiversity and geological conservation; • Principle 7: Historic Environment. This emphasises the need to protect and enhance the historic environment (e.g. Conservation Areas, Listed Buildings, other heritage assets, archaeological sites and monuments); and • Principle 8: Transport & Accessibility. This principle focuses on how transport should be considered in new development, ensuring sustainable transport networks. Indicators of success for this might be travel plans included in planning applications, and consideration of impacts on PRoW. The proposed facility promotes industrial and commercial growth, and low-carbon energy infrastructure priorities, aligning with the Borough's economic development vision. It offers direct industrial land-use change, consistent with policy, and supports a transition in infrastructure that is both sustainable and regionally strategic.
Hartlepool Local Plan, Hartlepool Borough Council, 2018 [Ref 19]	The Hartlepool Local Plan is the key Development Plan Document within the Hartlepool Local Development Framework, which brings together and integrates policies for the use and development of land with other policies and programmes which influence the nature of places and how they function, and sets out the spatial vision and strategic objectives for the Borough for the next 15 years. The plan aims to ensure the most efficient use of land by balancing competing demands in accordance with a clear, distinctive and realistic vision of how the area will develop and change within a demonstrable context of sustainable development. Although the Site is not located within Hartlepool Borough, the socioeconomic assessment considers pathways (construction workforce, skills provision, procurement and supply chain activity) that may extend across the Tees Valley functional economic area. The Hartlepool Local Plan is therefore included as wider-area context on economic growth, employment land and skills priorities that may be aligned with construction-related activity.
Council Plan 2030, Hartlepool Borough Council, 2025 [Ref 20]	This Council Plan sets out the vision for Hartlepool in 2030 and the priorities that the Council will be focusing on. The Plan is structured around four key themes: People, Place, Potential, and Organisation.

Document	Relevance to assessment
	Relevant priorities include engaging residents in learning to increase skills, increasing the number and range of businesses within Hartlepool and building opportunities for jobs and careers, achieving net zero strategy, and increasing investment and prosperity in the borough. The SAF facility in Teesside presents a major investment opportunity in the local energy/industrial economy in the Hartlepool-Tees region. It aligns with Hartlepool's ambition to drive multi-sector collaboration and stakeholder engagement, supports the borough's financial sustainability through new employment, supply-chain and business-rates opportunities, and provides a clear platform for resident participation and local benefit sharing via the Hartlepool Partnership vision. Although the Site is not within Hartlepool, the construction supply chain, labour market, skills provision and potential local spend effects are expected to operate across the Tees Valley functional economic area. The Plan is therefore relevant in contextualising how wider-area priorities on skills, jobs, investment and net zero may be supported by construction-phase activity.
Council Plan 2024-27, Middlesbrough Council [Ref 21]	The Council Plan sets out the vision for Middlesbrough and aims to support the creation of a <i>"fair, welcoming, and thriving place"</i>. The plan outlines four key priorities, with the most relevant being: • a successful and ambitious town - this focuses on maximising economic growth, employment and prosperity in an inclusive and environmentally sustainable way. Aims of this priority include attracting and growing businesses to increase employment opportunities; improving attainment in education and skills (and ensuring skills provision is focused on the future needs of the economy); and ensuring housing provision meets local demand; and • a healthy place - this focuses on helping Middlesbrough's residents to live longer, healthier lives. Relevant indicators include resident satisfaction on environmental issues; deprivation indices; and amounts of waste production. The SAF facility will bring new business investment, high-skilled jobs and supply chain growth into Middlesbrough and Teesside, alleviating deprivation in the region. Additionally, the facility can support a low-carbon transition which has public health benefits, supporting the Council's vision. While the Site is outside Middlesbrough, the assessment considers socioeconomic pathways (workforce, training, procurement and spend) that can extend across Tees Valley. The Plan provides context on borough-wide priorities (inclusive growth, skills and health) that may align with construction-related activity.
Health and Wellbeing Strategy 2024-2030, Redcar and Cleveland Borough Council and Middlesbrough Council [Ref 22]	The Redcar and Cleveland Health and Wellbeing Strategy sets out nine missions across 16 years to tackle health problems in the area by 2030. The plan has nine principles, including:

Document	Relevance to assessment
	• Mission 2: Improve education, training and work prospects for young people. This includes extended offers of apprenticeships, training and work placements; and • Mission 5: Places and systems that promote wellbeing. This includes creating a transport system that has minimal impact on air quality. An indicator of success for this would include Levels of total greenhouse gas emissions. The Middlesbrough strategy, similarly, sets out to empower the citizens of South Tees to live longer and healthier lives. Its aims are divided into three categories: Start Well, Live Well, and Age Well. It addresses entrenched issues such as poverty, poor health outcomes, and social disadvantage through integrated action across health, education, and employment. The Proposed Development will create high-quality local jobs, and foster inclusive economic growth. Simultaneously, SAFs have longer term impacts that will tackle health and well-being, contributing to cleaner air and improved quality of life. The socioeconomic assessment considers population health pathways (including employment/income, skills and wider environmental conditions) that may extend across the South Tees functional area. The Health and Wellbeing Strategy is therefore included as wider-area context on addressing health inequalities and improving education, training and work prospects.
Carbon Capture, Utilisation and Storage (CCUS) Net Zero Investment Roadmap, HM Government, 2023 [Ref 24]	The CCUS investor roadmap outlines joint government and industry commitments to the deployment of CCUS in the UK and sets out the approach to delivering four CCUS low carbon industrial clusters, capturing 20-30MtCO₂ per year across the economy by 2030 to help meet the UK's 2050 net zero target. The UK is ideally positioned to lead the global development and deployment of CCUS, with the world class industrial experience and world leading capital investment landscape to enable innovation, development, and growth. It has one of the largest potential CO₂ storage capacities in Europe (an estimated 78Gt of CO₂ storage capacity in the UK Continental Shelf), making it one of the most attractive business environments for CCUS technology. This investor roadmap summarises the continued engagement of government and industry and outlines further opportunities to deliver on national CCUS objectives in collaboration with investors, building on the significant progress presented in the April 2022 edition of the Investor Roadmap.
Guidance	
Additionality Guide, 4th Edition, Homes and Communities Agency, 2014 [Ref 25]	The assessment of employment effects will follow the approach set out in the Homes and Communities Agency. Additionality Guide (4th Edition) which provides guidance on assessing the additional impact of local economic interventions, taking into account the potential for leakage, displacement, and supply chain effects.
The Green Book, HM Treasury, 2026 [Ref 26]	Chapter 6 ("Shortlist appraisal") of HM Treasury's Green Book (2026) sets out the approach for comparing options using either Social Cost-Benefit Analysis (CBA) or, where benefits cannot be

Document	Relevance to assessment
	robustly monetised, Social Cost-Effectiveness Analysis, to assess options in terms of their social costs, social benefits and overall social value (social welfare). The Green Book emphasises the importance of impact assessment.

17.3 Assessment methodology and significance criteria

Overview

- 17.3.1 This section outlines the methodology employed for assessing the likely significant effects on socioeconomics from the construction and operation phases of the Proposed Development. Assessment of operational effects on land-use/amenity receptors (local businesses, community and recreational facilities, PRow/trails and tourism) and associated health pathways are included within this chapter.
- 17.3.2 The assessment scenarios that are considered are:
- Existing baseline 2021-2025, from which all future baseline scenarios can be compared;
 - Construction phase from 2028 - 2031. The assessment considers the full construction period, as well as the peak construction period. The highest intensity elements of the work are anticipated to occur in 2030;
 - And operational phase, which is assumed from 2032 onwards.
- 17.3.3 For the purposes of this assessment, the following temporal definitions are applied:
- Short-term effects are defined as those occurring during the construction phase (i.e. 2028 - 2031). These are typically temporary in nature and may include impacts such as construction-related employment, disruption to local services, or short-term demand for accommodation; and
 - Long-term effects are defined as those during the operational phase (assumed to begin in 2032) onwards, including those persisting throughout the operational lifespan. These may include sustained employment opportunities, changes in land use patterns, or long-term shifts in local economic activity.
- 17.3.4 The Proposed Development has the potential to have a range of effects as detailed in Section 17.6 of this chapter, the majority of which are most likely to occur during the construction phase and therefore are considered to be temporary in nature. For the purposes of this ES, the following receptor types have been considered:

- Socioeconomic – focusing on Gross Value Added (GVA) and employment opportunities; and
 - Land use receptors – focusing on local businesses, community and recreational facilities, PRoW and tourism assets.
- 17.3.5 The assessment of employment effects during construction has been informed by the construction information detailed in **Chapter 5: Construction Programme and Management (ES Volume I, Application Document Ref. 6.1)**.
- 17.3.6 The assessment of land use receptors considers the potential direct and indirect effects during the construction and operation of the Proposed Development.
- 17.3.7 Receptors have been identified using publicly available data, as well as consultation responses at Environmental Impact Assessment (EIA) scoping stage. The sensitivity of each receptor is defined based on the criteria presented in Table 17.2 and consideration is given to the potential for direct and indirect effects during the construction and operation of the Proposed Development.
- 17.3.8 Professional judgement is used to consider the potential effects on each of the land use receptors and mitigation requirements considered where necessary.

Significance criteria

Socioeconomics significance criteria

- 17.3.9 As there is no definitive guidance on the assessment of socioeconomic effects, the assessment draws on industry-accepted practice and a methodology which has been tested through a number of previous and comparable projects. The focus of the assessment is on determining whether effects would change patterns of activity, whether social or economic.
- 17.3.10 Significance is measured as a function of the sensitivity of receptors affected, i.e. the receptors' ability to absorb changes in the environment; as well as the potential magnitude of the impact, i.e. the relative size of the effect on people and businesses in the context of the study area.
- 17.3.11 Appropriate criteria for the measurement of sensitivity and magnitude criteria have been developed, based on professional judgement and industry best practice. Table 17.2 provides definitions of the sensitivity criteria used in the assessment.

Table 17.2 Sensitivity of receptors

Sensitivity	Definition of Sensitivity
High	Businesses, individuals, groups of individuals, or other receptors possessing very significant economic, social and/or community value. These receptors are considered very likely to incur a significant loss or gain as a result of potential changes in the environment, with little to no potential for substitution. For example: residential properties, a regional or national trail, directly affected business premises or community facilities.
Medium	Businesses, individuals, groups of individuals, or other receptors possessing some significant economic, social and/or community value. These receptors are considered likely to incur some loss or gain as a result of potential changes in the environment, with limited potential for substitution. For example: a footpath or bridleway or land associated with a residential or business receptor.
Low	Businesses, individuals, groups of individuals, or other receptors possessing some economic, social and/or community value. These receptors are not considered likely to incur a loss or gain as a result of potential changes in the environment, with potential for substitution. For example: a permissive trail.
Negligible	No change to business, individuals, groups of individuals or other receptors.

17.3.12 Table 17.3 provides definitions of the magnitude of impact criteria used in the assessment.

Table 17.3 Magnitude of impact

Magnitude	Definition of Magnitude
High	An adverse or beneficial effect that would be likely to result in total loss of an individual receptor or permanent changes to the baseline situation for a large number of businesses, individuals or groups of individuals.
Medium	An adverse or beneficial effect that would be very likely to result in partial changes to the baseline situation for a moderate number of businesses, individuals or groups of individuals.
Low	An adverse or beneficial effect that would be likely to result in minor changes to the baseline situation for a small number of businesses, individuals or groups of individuals.
Negligible	An adverse or beneficial effect that would be likely to result in little or no change to the baseline situation for businesses, individuals or groups of individuals.

17.3.13 Table 17.4 illustrates how the sensitivity and magnitude criteria are used to assess the significance of potential impacts. Those that are moderate and major are considered to be significant in their effect.

Table 17.4 Significance of impacts

Magnitude of impact	Sensitivity				
		High	Medium	Low	Negligible
	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	Negligible	Minor	Negligible	Negligible	Negligible

17.3.14 The assessment process aims to be objective and quantify effects as far as possible. However, many socioeconomic effects can only be evaluated on a qualitative basis. Effects are defined as follows:

- Beneficial classifications of significance indicate an advantageous or beneficial effect on an affected receptor (minor, moderate, or major);
- Adverse classifications indicate a disadvantageous or adverse effect (minor, moderate or major); and
- Negligible classifications indicate imperceptible effects on an affected receptor.

Health significance criteria

17.3.15 The assessment of health effects draws on the Institute of Environmental Management and Assessment (IEMA) (now known as the Institute of Sustainability and Environmental Professionals (ISEP)) *Guide to Determining Significance for Human Health in Environmental Impact Assessment* (2022) [Ref 27]. Health effects are assessed using the IEMA health-specific significance framework.

17.3.16 The IEMA guidance applies a population health lens and frames significance with reference to the degree and context of change in population health, including distributional effects on vulnerable groups and health inequalities. Within this framework, sensitivity reflects baseline vulnerability and the capacity of the affected population to adapt to change. Factors considered include levels of deprivation, existing health inequalities, health status, and the presence of vulnerable groups (IEMA Table 7.1). Magnitude reflects the scale and nature of the anticipated change to population health determinants. Factors considered include the level of exposure, duration and frequency of change, severity of potential health outcomes, the proportion of the population affected, and the reversibility of the effect (IEMA Table 7.2).

17.3.17 Sensitivity and magnitude are combined using the IEMA health significance matrix (IEMA Table 7.3), which differs from the socioeconomics matrix in

that it produces split significance categories (e.g. 'Moderate/Minor') where the evidence does not clearly resolve to a single outcome. In such cases, professional judgement is applied to determine where within the range the effect falls, informed by the IEMA significance narrative criteria (IEMA Table 7.4). These narrative criteria consider: the extent to which the change affects the ability to deliver current health policy; the extent to which the change narrows or widens health inequalities; the likely change in the health baseline of the affected population; and the strength of the scientific evidence linking the anticipated change to health outcomes.

17.3.18 Table 17.5 below reproduces the IEMA health significance matrix for reference.

Table 17.5 IEMA Health Significance Matrix (after IEMA Table 7.3)

	Sensitivity				
		High	Medium	Low	Negligible
	High	Major	Major/ Moderate	Moderate/ Minor	Minor/ Negligible
	Medium	Major/ Moderate	Moderate	Minor	Minor/ Negligible
	Low	Moderate/ Minor	Minor	Minor	Negligible
	Negligible	Minor/ Negligible	Minor/ Negligible	Negligible	Negligible

Assumptions and limitations

17.3.19 The socioeconomic assessment is based on the baseline information and Proposed Development design information available at the time of writing this ES. In relation to employment and economic effects, the assessment has been informed by project-specific socioeconomic modelling which estimates direct, indirect and induced effects during construction and operation. These estimates are based on assumptions relating to construction and operational expenditure, labour sourcing, and the distribution of supply-chain effects across Teesside and the UK. As with all economic modelling, the outputs are subject to uncertainty and should be treated as reasonable estimates rather than precise forecasts.

17.3.20 Preliminary effects on PRoW during the construction and operation phases were identified at Preliminary Environmental Information Report (PEIR) stage and have been reviewed for the purposes of this ES. No permanent PRoW closures or diversions are proposed as part of the Development Consent Order (DCO) Application. However, at this stage, it is not possible to rule out all temporary closures or diversions of PRoW during construction. In particular, a short-term temporary closure and diversion of

footpath 116/31 near Dabholm Gut may be required during construction of the industrial gases pipeline connection (location shown on the **Access and Rights of Way Plans (Application Document Ref. 2.4)**).

- 17.3.21 The assessment of effects during the construction phase has been informed by the reporting on matters relating to transport and access, and landscape and visual amenity. Where those topics identify an effect on a receptor or group of receptors that has a plausible pathway to interact with socioeconomics, tourism or recreation, a reasonable worst-case approach has been applied on the basis that such effects could occur at the same time.

Stakeholder engagement and consultation

- 17.3.22 The Scoping Opinion was issued by the Planning Inspectorate (PINS) on 11 November 2025 (see **Appendix 2B Scoping Opinion (ES Volume I, Application Document Ref. 6.1)**). A summary of key comments and how these have been addressed is presented below:

Scoping opinion

- 17.3.23 Table 17.6 summarises the scoping opinion comments relevant to this assessment chapter.

Table 17.6 Socioeconomics scoping opinion comments

Scoping opinion ID	Scoping opinion comment	How is this addressed
3.11.1	Given the nature of the Proposed Development, the generation of new operational jobs in the local and regional areas is not likely to be of a scale that would have a significant effect in the context of the overall employment markets, and this matter has been proposed to be scoped out. PINS agrees with the justification for scoping this matter out.	Construction-phase employment effects (direct, indirect and induced) are assessed in this chapter (see employment in Section 17.6). Operational employment generation (direct, indirect and induced) has been scoped out in accordance with the Scoping Opinion.
3.11.2	Given the nature of the Proposed Development, the operation of the Proposed Development is not anticipated to generate direct, indirect and induced GVA opportunities that would be likely to give rise to a significant effect, and this matter has been proposed to be scoped out on this basis. PINS agrees with the justification for scoping this matter out.	GVA generation (direct, indirect, and induced) during operation has been scoped out of this assessment.
3.11.3	PINS agrees that the influx of temporary workers for the construction	Increased demand for community infrastructure and services due to an

Scoping opinion ID	Scoping opinion comment	How is this addressed
	phase is unlikely to have significant effects on community infrastructure. Therefore, this matter can be scoped out.	influx of temporary construction workers has been scoped out.
3.11.4	Decommissioning has been proposed to be scoped out owing to the nature of the decommissioning works , the length of the decommissioning period (15 – 18 months), and the limited information available to accurately predict the employment generation. PINS agrees with the basis for scoping this out.	Employment generation during decommissioning has been scoped out of this assessment.
3.11.5	GVA generation at decommissioning has been proposed to be scoped out for the same reasons as employment generation (above). As above, PINS agrees with the basis for scoping this out.	GVA generation during decommissioning has been scoped out.
3.11.6	PINS 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.	Loss of employment opportunities during decommissioning has been scoped out.
3.11.7	The scoping report 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, PINS is content to scope this matter out of the ES.	Crime and safety (all phases) are scoped out.
3.12.10	Economic environment (construction and operation) is proposed to be scoped out from Population and Human Health on the grounds that effects on employment and training opportunities for local people (including wellbeing effects associated with increased employment and income) will be assessed in the Socioeconomics chapter; noting operational employment generation is proposed to be scoped out in that chapter.	Health/wellbeing pathways linked to socioeconomic determinants are scoped in through consideration of construction-phase employment and income effects. Operational employment generation is treated in line with the agreed scoping position. Relevant biophysical health pathways (e.g. air quality, noise, traffic) are addressed in the respective technical ES chapters.

Statutory and targeted consultation

- 17.3.24 A response was received from the Tees Valley Combined Authority (TVCA), on behalf of the Tees Valley Mayor, expressing support in principle for the Proposed Development and its potential contribution to jobs, investment and the transition to a lower-carbon economy.
- 17.3.25 TVCA highlighted that the Proposed Development would bring a previously unused brownfield site at North Tees back into productive use. The site was formerly occupied by a chemical facility that employed around 145 people prior to its closure in 2019, and its redevelopment was identified as an opportunity to reinstate economic activity, making effective use of existing infrastructure while supporting regeneration objectives.
- 17.3.26 TVCA noted that the scale and complexity of the Proposed Development is important in demonstrating the Tees Valley's credentials as a hub for Sustainable Aviation Fuel (SAF) and wider low-carbon technologies, showcasing the area's established industrial capability and workforce. Projects of this nature were identified as supporting investor confidence, attracting complementary supply-chain activity and reinforcing the Tees Valley's position as a location for innovation in emerging low-carbon sectors.
- 17.3.27 The employment and skills benefits were identified as particularly significant. Based on the information presented at statutory consultation, TVCA noted the potential to support an estimated 2,000 construction jobs, around 300 direct operational roles and a further 300 jobs across the local supply chain. These opportunities were recognised as contributing to clearer pathways into skilled, long-term careers for local people, building on the region's strengths in engineering and advanced manufacturing, and supporting skills development, apprenticeships and workforce transition.
- 17.3.28 The response also identified the Proposed Development's potential to support wider industrial integration by strengthening links across the Tees Valley's established chemical and industrial sectors, reinforcing local supply chains and anchoring skilled employment and investment within the region. The availability of locally produced SAF was recognised as having the potential to support the sustainability ambitions of Teesside International Airport. These benefits were noted as particularly relevant given the importance of job creation, industrial renewal and innovation-led growth to the region's future economic resilience.
- 17.3.29 These matters relate primarily to beneficial socioeconomic effects, including employment generation, skills development and supply-chain impacts, which are considered within the assessment presented in Section 17.6. The wider policy context, including the regeneration of previously developed

land and support for low-carbon economic growth, is set out in Section 17.2.

Stakeholder engagement

- 17.3.30 No topic-specific engagement has been undertaken with the host local authorities in relation to the socioeconomics assessment to date. However, the Applicant has engaged with the host local authorities as part of the consultation process for the Proposed Development, including consultation on the Statement of Community Consultation. This engagement included meetings with each of the host local authorities, during which the anticipated socioeconomic benefits of the Proposed Development were presented, including estimated Gross Value Added (GVA) and employment generation. No consultation comments specific to the socioeconomics assessments have been received beyond the EIA scoping opinion comments reported above.

17.4 Baseline conditions

Overview

- 17.4.1 This section describes the baseline environmental characteristics for the study area, with specific reference to socioeconomics, local businesses, community and recreational facilities, PRow, health, and tourism assets.

Desktop sources

- 17.4.2 The following desktop sources have been used to inform the existing baseline conditions of the study area:
- Review of publicly available aerial imagery (Google Maps and Bing Maps), as well as Geographic Information System mapping of the Wider Impact Area and surrounding areas;
 - GIS mapping of land use and socioeconomic receptors, including local businesses, community and recreational facilities, PRow, trails and tourism receptors within 1km of the Site;
 - Census 2021 data [Ref 28], Business Register and Employment Survey (BRES) data [Ref 36], Annual Population Survey (APS) data, Annual Survey of Hours and Earnings (ASHE) data sourced from Nomis [Ref 38] and Office for National Statistics (ONS) [Ref 35];
 - English Indices of Deprivation (IMD) 2025 [Ref 48];
 - Ordnance Survey (OS) Open Greenspace [Ref 30]; and
 - PRow data [Ref 31, Ref 32, Ref 33].

- 17.4.3 The potential impacts arising from the Proposed Development are assessed relative to the baseline conditions and benchmarked against regional and national standards where appropriate.
- 17.4.4 Table 17.7 summarises the data sources that have been used to form the socioeconomic baseline for the direct and wider impact areas (as shown on **Figures 17.1: Direct Impact Area and 17.2: Wider Impact Area (ES Volume II, Application Document Ref. 6.2)**, comparing against the wider North East region and England and Wales.

Table 17.7 Summary of data sources

Data	Source	Coverage of study area
Population and age structure, 2022	ONS, 2025 [Ref 34, Ref 35]	Direct Impact Area Wider Impact Area North East England and Wales
Employment by industry, 2023	Business Register and Employment Survey (BRES), Nomis, 2024 [Ref 36]	Direct Impact Area Wider Impact Area North East England and Wales
Occupations, 2024	APS, Nomis, 2025 [Ref 37]	Wider Impact Area North East England and Wales
Gross annual earnings, 2024	ASHE, 2025 [Ref 38]	Wider Impact Area North East England and Wales
Qualifications, 2024	APS, Nomis, 2025 [Ref 39]	Wider Impact Area North East England and Wales
Gross Value Added, 2022	Nomis, 2022 [Ref 36, Ref 40]	Wider Impact Area North East England and Wales
Economic activity, 2024	APS, Nomis, 2025 [Ref 41]	Wider Impact Area North East England and Wales
Deprivation, 2025	English Indices of Deprivation, 2025 [Ref 42]	Wider Impact Area
Health, 2021	ONS, 2023 [Ref 43]	Wider Impact Area

Data	Source	Coverage of study area
Housing type and tenure, 2021	ONS, 2023 [Ref 44, Ref 45]	Wider Impact Area North East England and Wales

- 17.4.5 Based on prior experience of similar infrastructure developments, as well as the context of the Site and surroundings, surveys are not considered necessary to assess potential socioeconomic effects.

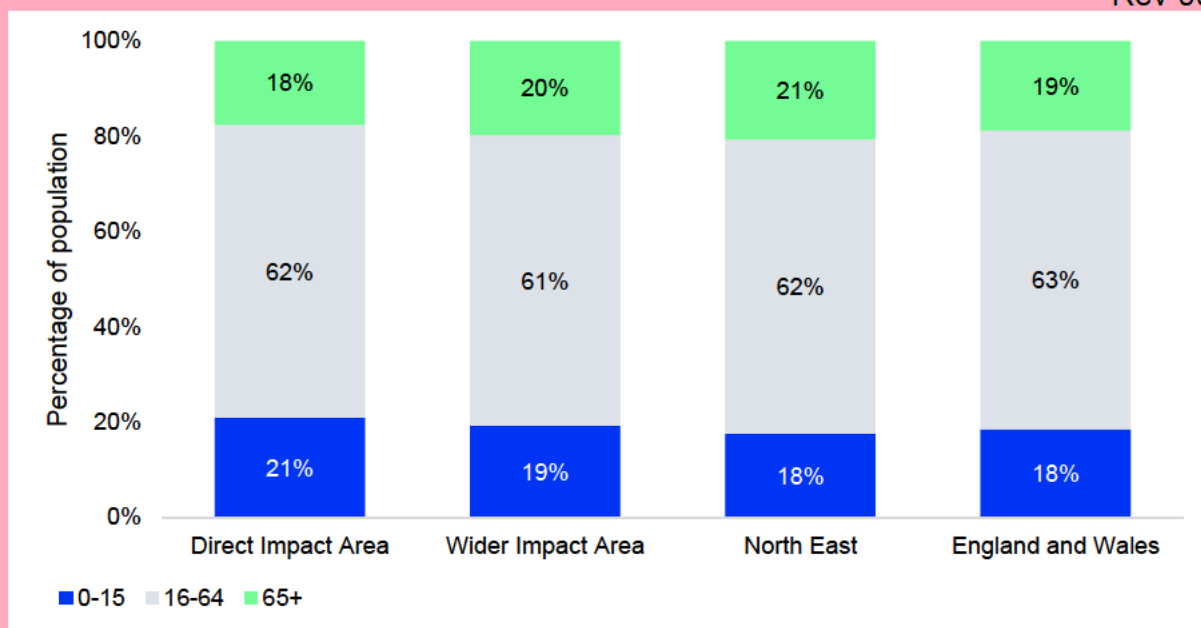
Existing baseline

Population

- 17.4.6 In 2022, the population of the Direct Impact Area was estimated to be approximately 5,500 [Ref 34]. In the Wider Impact Area, the population was estimated to be around 58,000. In the north east, the population stood around 2,700,000 and in England and Wales it stood at around 60,000,000.
- 17.4.7 The population structure of the Direct Impact Area, Wider Impact Area, the north east and England and Wales are shown in **Figures 17.1: Direct Impact Area and 17.2: Wider Impact Area (ES Volume II, Application Document Ref. 6.2)**. Of the assessed study areas, the Direct Impact Area had the highest proportion of young people aged 0-15 years (21%), compared to the Wider Impact Area (19%), the north east and England and Wales (18%).
- 17.4.8 The data shows that the Direct Impact Area had a relatively high level of youth dependency. The working-age population (16-64) of the Direct Impact Area was on a par with the north east Region (62%), slightly higher than the Wider Impact Area (61%) and slightly lower than England and Wales (63%).
- 17.4.9 The population of older adults aged 65+ in the Direct Impact Area (18%) was lower than the Wider Impact Area (20%), the north east (21%) and England and Wales (19%).

Employment

- 17.4.10 In 2025, employment in the Direct Impact Area stood at around 17,000 and in the Wider Impact Area at approximately 22,000. Within the Direct Impact Area, the largest sectors in terms of employment are Manufacturing and Transport and Storage (see Table 17.8), indicating a particular strength in these sectors in the area.



Inset 17.1 Age Structure, 2022 (ONS, 2025)

Table 17.8 Employment by sector (%), 2023 (BRES, 2024)

Industry	Direct Impact Area	Wider Impact Area	north east	England and Wales
Agriculture, forestry & fishing	0.0	0.5	1.2	1.2
Mining, quarrying & utilities	6.0	2.9	1.4	1.1
Manufacturing	23.8	9.9	9.9	7.4
Construction	7.1	6.6	5.1	4.9
Motor trades	0.8	1.1	1.2	1.7
Wholesale	3.1	2.1	1.9	3.7
Retail	0.9	9.7	8.8	8.2
Transport & storage	22.4	5.7	5.6	5.0
Accommodation & food services	0.8	7.2	7.7	7.8
Information & communication	0.7	2.1	3.3	4.6
Financial & insurance	0.1	0.9	1.9	3.3
Property	7.8	2.3	2.3	2.0
Professional, scientific & technical	6.7	6.0	5.8	9.5
Business administration & support services	7.4	5.7	6.9	8.7
Public administration & defence	9.4	5.1	7.0	4.4

Industry	Direct Impact Area	Wider Impact Area	north east	England and Wales
Education	2.4	9.4	9.3	8.3
Health	1.3	18.8	16.2	13.4
Arts, entertainment, recreation & other services	1.7	4.4	4.7	4.6

Economic activity

- 17.4.11 In 2024, the working-age population (aged 16 to 64) of the Wider Impact Area experienced a marginally lower rate of economic activity (73%) than the north east (74%), while the rate of economic activity across England and Wales was higher (79%). Economic inactivity was higher in the Wider Impact Area than across England and Wales, and a larger share of economically inactive people wanted a job, indicating barriers to entering the workforce.

Deprivation and health

- 17.4.12 The Direct Impact Area comprises four Lower Layer Super Output Areas (LSOAs), three of which fall within the most deprived 10% nationally [Ref 44], indicating relatively high levels of deprivation. The spatial distribution of deprivation across the Wider Impact Area is illustrated in **Figure 17.3: Deprivation (ES Volume II, Application Document Ref. 6.2)**, which shows the relative deprivation ranking of LSOAs within and surrounding the Direct Impact Area.
- 17.4.13 Health status data [Ref 43] indicates that residents within the Direct Impact Area generally ranked their health worse than the regional and national population, with a lower proportion reporting good or very good health and a higher proportion reporting bad or very bad health.

Housing and land use receptors

- 17.4.14 Housing data indicates that the Wider Impact Area has a relatively high proportion of semi-detached and terraced housing, and a lower proportion of flats and apartments than England and Wales.
- 17.4.15 The land use context surrounding the Site is shown in **Figure 17.4: Agricultural Land Classification, Figure 17.5: Local Businesses, Figure 17.6: Community and Recreational Facilities and Figure 17.7: Tourism (ES Volume II, Application Document Ref. 6.2)**. The area surrounding the Site is predominantly characterised by industrial, transport, infrastructure and urban land uses, reflecting the established industrial context of the Site and its surroundings. This context is relevant to the assessment of potential effects on land use and socioeconomic receptors, particularly where receptors are located near existing industrial and transport infrastructure

- 17.4.16 GIS mapping has been undertaken to identify land use and socioeconomic receptors within the study area. The receptor mapping identifies local businesses, community and recreational facilities, PRoW and trails, and tourism receptors within 1km of the Site, where these may have a plausible pathway to experience direct or indirect effects during construction or operation.
- 17.4.17 Local business receptors within the 1km study area comprise a range of operational and commercial uses, including industrial, leisure, medical, office, retail, and transport uses. The spatial distribution of these receptors is shown in **Figure 17.5: Local Businesses (ES Volume II, Application Document Ref. 6.2)**. The receptor pattern reflects the industrial and infrastructure-led character of the surrounding area, including Teesport, transport infrastructure and employment uses.
- 17.4.18 Community and recreational receptors within the 1km study area include facilities and routes with potential recreational, social or community value. These include community facilities, recreational facilities and public access routes, including PRoW, long-distance paths and National Cycle Network routes. The spatial distribution of these receptors is shown in **Figure 17.6: Community and Recreational Facilities (ES Volume II, Application Document Ref. 6.2)**.
- 17.4.19 Tourism receptors within the 1km study area include a small number of visitor-facing receptors, including hotel, motel, boarding or guest house uses, animal centre and retail uses. These are shown in **Figure 17.7: Tourism (ES Volume II, Application Document Ref. 6.2)**. The tourism receptor context is also influenced by the presence of recreational routes and the wider industrial setting of the Site.
- 17.4.20 The identified receptors have been used to inform the assessment of potential effects on local businesses, community and recreational facilities, PRoW and trails, and tourism receptors during construction and operation, as set out in Section 17.6.

17.5 Development design and impact avoidance

Overview

Construction

- 17.5.1 Measures to mitigate visual impacts from construction operations, lighting, and the location of construction equipment, are set out in **Appendix 5A: Framework Construction Environmental Management Plan (fCEMP) (ES Volume III, Application Document Ref. 6.3)** and **Appendix 13C: Framework Lighting Strategy (ES Volume III, Application Document**

Ref. 6.3), and has a secondary benefit to the tourism economy through reducing the level of impact on the desirability of the study area.

- 17.5.2 The fCEMP requires the construction contractor to provide support for construction workers to find suitable accommodation, either in the form of private rental accommodation, or hotels or other serviced accommodation, in locations where impact upon existing residents and visitors can be minimised.
- 17.5.3 It is not anticipated that the construction phase will require stopping up or temporary diversions of PRow with the exception of footpath 116/31 in South Tees. This runs between the eastern end of the Dabholm Gut and BOC Ltd. Middlesbrough, where short-term temporary closure and diversion may be required during the construction of the industrial gases pipeline connection in this area. Crossing controls (e.g. traffic marshals) may also be required where the King Charles III England Coast Path crosses the access to the Linkline Corridor and the entrance to Huntsman Drive.

Operation

- 17.5.4 Operational emissions and other matters regulated through environmental permitting will be managed in accordance with the Environmental Permit, including requirements for monitoring and control during commissioning. As specified in **Chapter 9: Noise and Vibration (ES Volume I, Application Document Ref. 6.1)**, a commissioning plan will be agreed with the Environment Agency under the Environmental Permit, setting out the monitoring and control procedures and commissioning schedule.
- 17.5.5 Visual embedded mitigation comprises **Appendix 13C: Framework Lighting Strategy (ES Volume III, Application Document Ref. 6.3)**. Where cladding is used for components of the Proposed Development it will use visually recessive, non-reflective colours and finishes to reduce their prominence.

17.6 Likely impact and effects of the Proposed Development

Construction

- 17.6.1 The capital expenditure (CAPEX) associated with the Proposed Development would generate socioeconomic benefits during construction through on-site activity, off-site fabrication and engineering, supply-chain expenditure and expenditure supported by the workforce. The project-specific socioeconomic assessment reports construction effects at UK level and separately identifies the proportion captured within Teesside. Across the four-year construction period (2027 to 2031), total UK CAPEX retained within the analysis amounts to £1.92 billion.

- 17.6.2 The socioeconomic assessment assumes that all quoted CAPEX included in the construction analysis is either spent on-site in Teesside or delivered by UK-based off-site suppliers, with international spend omitted from the analysis. Annual CAPEX is distributed across on-site Teesside, off-site Teesside and off-site UK activity. Between 56% and 90% of annual CAPEX is spent on-site in Teesside, between 2% and 10% is spent off-site in Teesside, and between 7% and 33% is spent off-site elsewhere in the UK. The modelling also assumes that around 23% of on-site construction labour is recruited from Teesside.

Table 17.9 Share of annual CAPEX 2027-2031 (%)

Location/Activity	Share of Annual CAPEX (%)
On-site Teesside	56% – 90%
Off-site Teesside	2% – 10%
Off-site UK (outside Teesside)	7% – 33%

- 17.6.3 The distribution of benefits during construction is influenced by the availability of specialist labour, engineering capability and supply-chain capacity. The socioeconomic assessment notes that some highly specialised components necessarily leak to international suppliers, although the construction modelling presented in that assessment is limited to the CAPEX retained domestically. The results should therefore be understood as modelled estimates based on the expenditure and labour assumptions applied within the assessment.
- 17.6.4 The total employment and GVA supported are disaggregated to reflect the direct, indirect and induced impacts of the Proposed Development. Direct impacts comprise the economic activity generated through on-site construction and direct expenditure with Teesside-based and UK-wide suppliers. Indirect impacts arise through the supply chain as suppliers respond to project demand. Induced impacts arise from household spending by workers whose jobs are supported directly or indirectly by the Proposed Development.

Employment

- 17.6.5 In order to demonstrate the total employment impact of the Proposed Development during the four-year construction period (2028 - 2031 inclusive), impacts have been expressed in full-time equivalent (FTE) job-years, where one job-year represents one year of full-time equivalent employment. Job-years provide a useful metric for construction employment given the temporary and phased nature of construction activity over the build period.

- 17.6.6 Modelled estimates indicate that the Proposed Development could support around 4,460 FTE job-years within Teesside during construction. At UK level, the Proposed Development could support around 22,940 FTE job-years over the construction period.
- 17.6.7 The construction phase of the Proposed Development will result in direct, indirect and induced employment impacts at both Teesside and UK level. Within Teesside, around 2,250 FTE job-years are expected to be supported directly, with a further 2,070 FTE job-years supported indirectly through the supply chain, while induced effects are expected to remain comparatively small. At UK level, the total construction employment effect is expected to comprise approximately 8,990 direct FTE job-years, together with substantial indirect and induced employment supported through wider supply-chain activity and workforce expenditure.
- 17.6.8 Construction employment is expected to peak in 2029 when total employment supported could reach around 8,661 jobs across the UK. On-site construction employment is also expected to peak in 2029, with approximately 2,200 workers on site. The assessment assumes that around 23% of on-site construction labour would be sourced from Teesside, reflecting the need for some specialist labour from outside the local area.
- 17.6.9 The sensitivity of the labour market receptor, as well as the potential magnitude of impact of the Proposed Development on construction employment within the Wider Impact Area, are considered to be medium, due to the anticipated moderate change in the baseline level of employment within the Wider Impact Area. Therefore, the direct, indirect and induced employment created by the construction phase of the Proposed Development is likely to have a **moderate beneficial** effect on the study area, which is **significant**.

Gross value added

- 17.6.10 As described in the project-specific socioeconomic assessment, the four-year construction period (2028 - 2031) would generate substantial economic output through on-site construction activity, off-site fabrication and engineering, supply-chain expenditure, and expenditure supported by the workforce. Direct expenditure during construction would therefore lead to increased output generated in Teesside and across the wider UK.
- 17.6.11 Socioeconomic modelling indicates that the Proposed Development could contribute approximately £700 million in total GVA within Teesside during construction. At UK level, the Proposed Development could contribute approximately £1.88 billion in total GVA over the construction period.

- 17.6.12 During the construction phase, the Proposed Development is expected to generate around £708 million in direct GVA, £793 million in indirect GVA, and £378 million in induced GVA across the UK. Within Teesside, this total is expected to comprise around £529 million in direct GVA, £161 million in indirect GVA, and £9 million in induced GVA. The concentration of direct GVA in Teesside reflects the importance of on-site construction and associated local fabrication activity, while a larger share of indirect and induced effects is distributed across the wider UK supply chain.
- 17.6.13 Economic activity is expected to peak during the main build years, with total UK GVA reaching around £709 million in 2029, of which approximately £252 million is expected to be retained within Teesside. Over the construction period as a whole, Teesside is expected to capture around 37% of total GVA and around 75% of direct GVA, demonstrating the importance of the Proposed Development to the regional economy during construction.

Table 17.10 Construction phase GVA impact

Impact type	Teesside (£m)	UK (£m)
Direct GVA	529	708
Indirect GVA	161	793
Induced GVA	9	378

- 17.6.14 The sensitivity of this receptor, as well as the potential magnitude of impact of the Proposed Development on the Wider Impact Area in terms of economic prosperity, are considered to be medium, due to the anticipated moderate change in the baseline level of economic productivity within the study area. Therefore, the direct, indirect and induced GVA generated by the construction phase of the Proposed Development is likely to have a **moderate beneficial** effect on the study area, which is **significant**.

Accommodation demand

- 17.6.15 As identified in the baseline, there were 14,286 private rented properties in total within the Wider Impact Area in 2021. It is estimated that on-site employment during the 36-month construction period will total approximately 2,901 job years, equivalent to around 967 workers per day. Of these on-site workers, approximately 77% are expected to come from outside the Wider Impact Area. Therefore, approximately 745 construction workers could require accommodation within the Wider Impact Area. Assuming, as a worst case, that all non-local workers require accommodation within the Wider Impact Area, these workers would account for approximately 5.2% of the total rental market within the area.

- 17.6.16 Hotel room occupancy within the north east region is reported at around 80% as of 2025 [Ref 46]. As a result, the sensitivity of the temporary housing receptor has been judged as low, as there is likely to be sufficient capacity within the market to accommodate workers for the duration of the project. The impact of the Proposed Development is likely to be low adverse due to the nature of the development and the ability of the housing market to absorb temporary workers. Accordingly, the temporary housing required for the Proposed Development is assessed as having a **negligible adverse** effect on accommodation demand, which is **not significant**.

Local businesses

- 17.6.17 A spatial review of commercial property data has been undertaken to characterise the baseline conditions for local businesses surrounding the Proposed Development. Consistent with the assessment methodology, only commercial receptors located within 1km of the Site have been taken forward for detailed assessment, as receptors beyond this distance would be likely to experience, at most, indirect effects of negligible magnitude during construction.
- 17.6.18 There are 12,719 commercial receptors within 6km of the Site, of which 180 receptors are located within 1km of the Proposed Development. The distribution of receptors shows a gradual reduction in density with increasing distance from the Site, with the majority of receptors located beyond the defined 1km assessment area.
- 17.6.19 For context, the spatial distribution of commercial receptors is as follows:
- 355 receptors within 0–1km;
 - 922 receptors within 1–2km;
 - 4,576 receptors within 2–3km;
 - 2,879 receptors within 3–4km;
 - 2,071 receptors within 4–5km; and
 - 1,846 receptors within 5–6km of the Site.
- 17.6.20 These figures demonstrate that commercial receptors are not concentrated immediately adjacent to the Site but are instead distributed across the wider study area.
- 17.6.21 The 355 commercial receptors within 1km of the Site comprise a range of business and operational uses. The dominant receptor types are utilities (153 receptors), industrial uses (55 receptors) and transport-related infrastructure (45 receptors). Smaller numbers of office (33 receptors) and

retail (28 receptors) premises are present, with the remainder comprising ancillary buildings, storage land and other minor categories. The composition of receptors indicates that the local business environment is predominantly characterised by operational and infrastructure-related uses rather than high-sensitivity retail or town-centre commercial activities.

Table 17.11 Receptor distances

Secondary description	Receptors ≤1km	Receptors ≤6km
Retail	28	3,516
Industry	55	2,517
Office	33	1,975
Utility	153	1,591
Transport	45	1,079
Information	4	341
Leisure	7	283
Storage Land	5	145
Ancillary Building	13	139
Medical	2	240
Education	1	215
Other (≤1km ≤5 each)	9	678
Total	355	12,719

- 17.6.22 The commercial receptor baseline has been quantified using address-level commercial property data, with receptor counts derived directly from filtering records by distance from the Site and grouping by land-use classification.
- 17.6.23 Overall, the assessment has determined that none of the identified businesses are anticipated to experience significant (i.e. moderate or major) adverse impacts due to the construction of the Proposed Development. The sensitivity of local businesses to adverse impacts is considered negligible, and the potential magnitude of adverse impact is also considered negligible. Therefore, the potential significance of adverse impacts on local businesses during construction is assessed as **negligible (not significant)**.
- 17.6.24 Some local businesses could potentially form part of the supply chain for the Proposed Development's construction activities, and/or be supported by the discretionary spending of those employed to undertake these activities. It has been assumed that around 4% of total materials and equipment-

related CAPEX will be spent within the Wider Impact Area. For a project of this size, local spending could generate a notable increase in output in the local economy. On this basis, the sensitivity of local businesses to this beneficial effect, and the potential magnitude of this impact, have been assessed as medium, and the construction of the Proposed Development could have a **moderate beneficial (significant)** impact on local businesses should contracts be secured locally.

Community and recreational facilities

- 17.6.25 When community and recreational facilities are considered in aggregate, sensitivity is considered low and the potential magnitude of impact is considered low, because adverse effects would be likely to result in little to no change to the baseline situation across the receptor group. Therefore, the potential significance of impact for community and recreational facilities during construction is assessed as **negligible (not significant)**. The receptor identified above should be considered in the development of management plans to minimise adverse impacts.

Public Rights of Way and trails

- 17.6.26 The local network of PRow is important to the local population for personal health and wellbeing and for local amenity. PRow possess social and community value and are considered likely to incur some loss as a result of adverse changes in the environment; therefore, these receptors have been assessed as having a medium level of sensitivity.
- 17.6.27 A preliminary assessment of impacts to PRow users due to the construction of the Proposed Development is presented in **Chapter 18: Traffic and Transport (ES Volume I, Application Document Ref. 6.1)**. The assessment indicates that residual impacts on PRow users would likely be medium or low with regard to severance, delay, amenity, and fear and intimidation during construction.
- 17.6.28 The **Draft DCO (Application Document Ref. 3.1)** includes powers to temporarily close, divert and alter PRow, and the **Access and Rights of Way Plans (Application Document Ref. 2.4)** identify the location and extent of the potential closure and the indicative proposed diversion route for footpath 116/31 in South Tees during construction of the industrial gases pipeline connection. Crossing controls (e.g. traffic marshals) may also be required where the King Charles III England Coast Path crosses the access to the Linkline Corridor and the entrance to Huntsman Drive. Where required, any temporary closure or diversion of PRow would be managed through the provisions of the draft DCO and the construction management measures that will be set out in the CEMP (see **Appendix 5A: fCEMP (ES Volume III, Application Document Ref. 6.3)**).

- 17.6.29 On this basis, and given the temporary, localised and short-term nature of the potential change, the magnitude of impact on local PRoW during construction is anticipated to remain low.
- 17.6.30 With medium sensitivity and low magnitude, the significance of impact on local PRoW during construction is assessed as **minor adverse**, which is **not significant**.
- 17.6.31 The assessment also determined that none of the long-distance trails identified within the vicinity of the Proposed Development (including the Teesdale Way and the King Charles III England Coast Path) are classified as receptors of high sensitivity, reflecting their status as regional and national trails of significant recreational and social value. However, the magnitude of impact on these receptors during construction is assessed as negligible, on the basis that both trails are located at a considerable distance from the principal areas of construction activity and are already experienced within an established industrial context; as such, little or no change to baseline conditions for trail users is anticipated. This results in an effect of **minor adverse** significance, which is **not significant** level of significance during construction, reflecting their distance from principal construction activities and the existing industrial context.

Tourism

- 17.6.32 The tourism receptors identified within 1km of the Proposed Development Boundary are generally located more than 800m from the Site in an industrial setting. Tourism assets, considered in aggregate, are assessed as having low sensitivity and negligible magnitude of impact during construction. Therefore, the potential significance of impacts on tourism during construction is assessed as **negligible (not significant)**.

Health

- 17.6.33 There is evidence that employment influences health, both from an economic standpoint and in terms of quality of life [Ref 47]. Good quality work can protect against social exclusion through the provision of income, social interaction, a core role and identity and purpose. Therefore, the generation of secure, fulfilling jobs can be beneficial to mental and physical health outcomes.
- 17.6.34 Construction is expected to create employment opportunities within the Wider Impact Area, and the baseline identifies relatively high levels of deprivation and poorer health outcomes in parts of the Direct Impact Area. On this basis, sensitivity of the population in relation to employment and income is assessed as high, while the magnitude of impact is considered low (beneficial) given the temporary nature of construction roles. Applying the IEMA health significance matrix, the combination of high sensitivity and

low magnitude gives a range of moderate/minor (beneficial). Applying professional judgement in line with the IEMA significance narrative criteria, the effect is assessed as **moderate beneficial (significant)**.

Operation

Local businesses

- 17.6.35 The sensitivity and magnitude of impact for local businesses within the vicinity of the Proposed Development during operation have been assessed. Local businesses, aggregated as one receptor, are assessed as having negligible sensitivity to operational impacts and negligible magnitude of impact. Therefore, local businesses are assessed as having the potential to experience adverse effects of a **negligible** level of significance during operation.
- 17.6.36 Some local businesses could potentially form part of the supply chain for operation activities and/or be supported by discretionary spending by the operational workforce. While this would result in a beneficial effect for those businesses, it is not anticipated to represent a significant effect for local businesses as a group.

Community and recreational facilities

- 17.6.37 Community and recreational facilities, considered in aggregate, are assessed as having negligible sensitivity and negligible magnitude of impact during operation, with conditions expected to be similar to baseline (approximating a no-change scenario). Therefore, the potential significance of effect on community and recreational facilities is assessed as **negligible** during operation. While some facilities could benefit from discretionary spending by the operational workforce, this is not anticipated to be significant at receptor-group level.

Public Rights of Way (PRoW) and trails

- 17.6.38 PRoW and long-distance trails within the vicinity of the Proposed Development are considered to be receptors of high sensitivity in the case of long-distance trails, and medium sensitivity in the case of local PRoW, reflecting their recreational, social and community value. During the operational phase, the magnitude of impact on these receptors is assessed as negligible, as conditions are expected to remain similar to the baseline situation, with no material change in access, amenity or usage. This results in effects of **minor adverse** significance (for high sensitivity receptors) or **negligible** significance (for medium sensitivity receptors), both of which are **not significant**.

Tourism

- 17.6.39 Tourism receptors, considered in aggregate, are assessed as having negligible sensitivity and negligible magnitude of impact during operation. Therefore, the potential significance of effect on tourism is assessed as **negligible**. Some receptors that support the tourism economy could benefit from supply-chain or discretionary spending effects, but these are not anticipated to equate to a significant impact on the tourism economy as a whole.

Health

- 17.6.40 In accordance with the health significance approach set out in Section 17.3.2, and drawing on the IEMA Guide to Determining Significance for Human Health in Environmental Impact Assessment 2022 [Ref 27], sensitivity is assessed as high, reflecting high levels of deprivation and poorer health outcomes in parts of the Direct Impact Area, including three LSOAs within the most deprived 10% nationally [Ref 28]. This indicates a population with limited capacity to adapt and existing wide health inequalities.
- 17.6.41 The magnitude of impact on population health is assessed as low beneficial. While the creation of 310 FTE jobs represents a positive change, the scale of employment is small relative to the wider labour market (~22,000 jobs in the Wider Impact Area), the health pathway (employment – income – wellbeing) affects a small minority of the population, and the relationship between operational employment and measurable changes in population-level health outcomes is suggestive rather than direct.
- 17.6.42 Applying the IEMA health significance matrix, the combination of high sensitivity and low magnitude gives a range of **moderate/minor** (beneficial). Applying professional judgement in line with the IEMA significance narrative criteria, the effect is assessed as **minor beneficial (not significant)** on the basis that the change has a marginal effect on the ability to deliver current health policy or narrow health inequalities, and the likely change in the health baseline of the population is slight.

17.7 Mitigation and enhancement measures

Overview

- 17.7.1 This section outlines the additional mitigation and enhancement measures which may be implemented during the construction and operation phases of the Proposed Development to reduce impacts on socioeconomic and land use receptors. This section should be read in conjunction with **Chapter 5: Construction Programme (ES Volume I, Application Document Ref. 6.1)**.

- 17.7.2 Additional mitigation involves site-specific actions to reduce effects. Mitigation measures for socioeconomic receptors have been informed by the assessment of likely socioeconomic effects and aim to adapt the Proposed Development to minimise adverse effects and reduce cumulative impacts with other nearby developments. Similarly, where beneficial effects are anticipated, a series of enhancement measures can be introduced where feasible to ensure the greatest beneficial effects can be generated and secured.

Construction

- 17.7.3 Practicable opportunities to promote local recruitment and procurement, education and skills uplift, and apprenticeship and training schemes for construction, manufacturing, and the energy industry will be identified and implemented, where practicable, through the construction of the Proposed Development. Delivery of these measures would be progressed in conjunction with the Engineering, Procurement and Construction contractor, as relevant. An employment and skills plan will be prepared prior to construction (secured by a Requirement in Schedule 2 of the **draft DCO (Application Document Ref. 3.1)**). In addition, the Applicant is exploring partnership arrangements (including potential Memoranda of Understanding) with local education and training providers, including Teesside University and the Middlesbrough College Group, to support skills development and local access to opportunities. These measures have the potential to increase the net benefit to the local economy and resident and workplace incomes and, as a secondary effect, could enhance access to employment (an index of deprivation) and result in additional health benefits for the local workforce.
- 17.7.4 Whilst these enhancements would be anticipated to improve employment conditions and economic prosperity in the study area, it is not considered likely that these changes would increase the level of significance of the effect on these receptors.

Operation

- 17.7.5 As described for the construction phase, efforts should be made to identify opportunities for local recruitment and procurement, and for supporting local education and skills uplift during operation. As a result, skills and qualification attainment in the study area could be enhanced over the long term, with a peak short- to medium-term minor beneficial effect during operation. However, these measures are not considered likely to change the level of significance of effects on the local economy and employment during the operational phase.

17.8 Residual effects and conclusions

Overview

- 17.8.1 This section summarises the residual significant effects of the Proposed Development following the implementation of additional mitigation as outlined in Section 17.7.

Table 17.12 Residual effects - construction

Aspect	Sensitivity	Magnitude	Summary comments
Generation of employment (direct, indirect and induced)	Medium	Medium (beneficial)	The construction of the Proposed Development is anticipated to generate direct, indirect and induced employment opportunities, which are likely to give rise to a significant beneficial effect. Temporary construction employment generation is likely to be significant in the context of local and regional employment markets, benefiting residents in the local and regional study areas. A significant number of jobs could be supported directly and indirectly during the construction of the Proposed Development, representing a moderate beneficial effect (significant).
Generation of GVA (direct, indirect and induced)	Medium	Medium (beneficial)	The construction of the Proposed Development is anticipated to generate direct, indirect and induced GVA opportunities, which are likely to give rise to a significant beneficial effect. Temporary construction activity is likely to be significant in the context of local and regional markets, benefiting businesses in the local and regional study areas. Significant GVA could be generated directly and indirectly during the construction of the Proposed Development, representing a moderate beneficial effect (significant).
Increased demand for accommodation	Low	Low (adverse)	While it is assumed that a large proportion of on-site workers directly employed during the construction phase will not be residents of the Wider Impact Area, the sensitivity of the temporary housing receptor has been judged as low due to hotel room occupancy statistics, as there is likely to be enough space within the market to accommodate workers for the duration of the project. The impact of the Proposed Development is also considered to be low adverse due to the ability of the housing market to absorb temporary workers.

Aspect	Sensitivity	Magnitude	Summary comments
			As a result, the temporary housing required for the Proposed Development will have a negligible (not significant) effect on accommodation demand.
Impact on local businesses	Negligible Medium	Negligible (adverse) Medium (beneficial)	The construction of the Proposed Development is anticipated to have a negligible (not significant) adverse effect on local businesses. However, it is anticipated that the Proposed Development will have a positive impact on local businesses during the construction period if local businesses are included in the supply chain. Therefore, the Proposed Development is expected to have a moderate beneficial (significant) effect on local businesses.
Impact on community and recreational facilities	Low	Low (adverse)	The construction of the Proposed Development may have a negative impact on community and recreational facilities in the local study area; for example, due to noise from increased Heavy Goods Vehicle (HGV) traffic. However, the overall effect of these impacts on individuals is anticipated to be negligible (not significant) in the context of the local area's total stock of community and recreational facilities.
Impact on PRow	Medium	Low (adverse)	The construction of the Proposed Development may have a negative impact on PRow in the local study area through temporary disruption, including reduced amenity associated with construction traffic and HGV movements on nearby roads. A short-term temporary closure and diversion of footpath 116/31 near Dabholm Gut may also be required during construction of the industrial gases connection. The effect would be temporary, localised and limited in extent. The overall impact is therefore not considered likely to be significant in the context of the local area's PRow network. As a result, the significance of potential adverse effects on this receptor is assessed as minor adverse (not significant).
Impact on tourism	Low	Negligible (adverse)	The construction of the Proposed Development is not anticipated to have a negative impact on local tourism. As a result, the significance of potential adverse effects on this receptor is considered to be negligible (not significant).

Aspect	Sensitivity	Magnitude	Summary comments
Impact on health	High	Low (beneficial)	Sensitivity is assessed as high in accordance with the IEMA health significance framework, reflecting high levels of deprivation and poorer health outcomes in the Direct Impact Area. The magnitude of impact is assessed as low; although employment effects during construction are temporary, the scale of job creation has the potential to generate positive effects on income and wellbeing for a proportion of the local population. Applying the IEMA health significance matrix, the combination of high sensitivity and low magnitude results in a moderate/ minor range. Applying professional judgement, the effect is assessed as moderate beneficial (significant) , on the basis that construction-phase employment has the potential to contribute to narrowing health inequalities in a highly deprived area, albeit temporarily.

Table 17.13 Residual effects - operation

Aspect	Sensitivity	Magnitude	Summary comments
Impact on local businesses	Negligible	Negligible (neutral)	The operation of the Proposed Development is anticipated to have a negligible (not significant) effect on local businesses. The Proposed Development may have a positive impact on local businesses during the operational phase if local businesses are included in the supply chain for operation activities or if the influx of workers results in a larger customer base, and potentially more revenue, for local businesses.
Impact on Community and Recreational Facilities	Negligible	Negligible (neutral)	The Proposed Development is not anticipated to have a negative impact on community and recreational facilities in the local study area during the operational phase as the conditions during the operation of the Proposed Development are expected to be similar to that of the baseline situation, approximating a no-change (i.e. negligible (not significant)) scenario.
Impact on PRoW	Negligible	Negligible (neutral)	The Proposed Development is not anticipated to have a negative impact on PRoW in the local study area during the operational phase as the conditions during the operation of the Proposed Development are expected to be similar to that of the baseline situation, approximating a no-change (i.e. negligible (not significant)) scenario.

Aspect	Sensitivity	Magnitude	Summary comments
Impact on tourism	Negligible	Negligible (neutral)	The operation of the Proposed Development is not anticipated to have a negative impact on local tourism. Only five tourism receptors have been identified within the 1km study area, and all are further than 800m from the Site. Therefore, neither direct nor indirect impacts are expected. As a result, the potential significance of potential adverse impacts on this receptor is considered to be negligible (not significant).
Impact on health	High	Low (beneficial)	Sensitivity is assessed as high in accordance with the IEMA health significance framework, reflecting high levels of deprivation and poorer health outcomes in the Direct Impact Area. The magnitude of impact is assessed as low; while the creation of around 310 FTE direct jobs represents a positive change, the scale of employment is small relative to the wider labour market (~22,000 jobs in the Wider Impact Area), and the resulting change in population-level health determinants is limited. Applying the IEMA health significance matrix, the combination of high sensitivity and low magnitude results in a Moderate/Minor range. Applying professional judgement, the effect is assessed as minor beneficial (not significant), on the basis that the change has a marginal effect on the ability to deliver current health policy or narrow health inequalities, and the likely change in the health baseline of the population is slight.

17.9 Summary of significant effects

- 17.9.1 The construction of the Proposed Development is anticipated to generate direct, indirect and induced opportunities for employment and GVA, which are likely to give rise to a significant beneficial effect. Temporary construction activities are considered likely to generate significant positive effects in the context of local and regional markets, benefiting residents and businesses in the local and regional study areas. Overall, the Proposed Development could support local businesses and a significant number of jobs, as well as significant GVA both directly and indirectly through construction-related spending.
- 17.9.2 The operational phase is not anticipated to give rise to any significant adverse effects.

References

- Ref 1 UK Government (2000) Countryside and Rights of Way Act 2000. Available online: <https://www.legislation.gov.uk/ukpga/2000/37/contents>. [Accessed April 2026]
- Ref 2 UK Government (2026) Sustainable Aviation Fuel (SAF) Act 2026. Available online: <https://www.legislation.gov.uk/ukpga/2026/9/enacted>. [Accessed May 2026]
- Ref 3 Department for Transport (2024) Sustainable Aviation Fuel (SAF) Mandate. Available online: <https://www.gov.uk/government/collections/sustainable-aviation-fuel-saf-mandate>. [Accessed April 2026]
- Ref 4 Department for Energy Security & Net Zero (2025) Overarching National Policy Statement for Energy (EN-1). Available online: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025>. [Accessed April 2026]
- Ref 5 Department for Energy Security & Net Zero (2025) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available online: <https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3-2025>. [Accessed April 2026]
- Ref 6 Department for Energy Security & Net Zero (2025) Overarching National Policy Statement for electricity networks infrastructure (EN-5). Available online: <https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5-2025>. [Accessed June 2026]
- Ref 7 Department for Transport (2022) Jet Zero Strategy: Delivering net zero aviation by 2050. Available online: <https://www.gov.uk/government/publications/jet-zero-strategy-delivering-net-zero-aviation-by-2050>. [Accessed April 2026]
- Ref 8 Department for Environment, Food & Rural Affairs (2023) Environmental Improvement Plan 2023. Available online: <https://www.gov.uk/government/publications/environmental-improvement-plan>. [Accessed April 2026]
- Ref 9 Department for Environment, Food & Rural Affairs and Environment Agency (2018) Resources and Waste Strategy for England. Available online: <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>. [Accessed April 2026]

- Ref 10 Department for Energy Security and Net Zero (2025) Clean Energy Jobs Plan. Available online: <https://www.gov.uk/government/publications/clean-energy-jobs-plan>. [Accessed April 2026]
- Ref 11 Department for Energy Security and Net Zero, Department for Environment, Food & Rural Affairs, Department for Transport, Department of Health and Social Care and Ministry of Housing, Communities & Local Government, HM Treasury, Department for Business, Energy & Industrial Strategy, and Department for Levelling Up, Housing and Communities (2019) Clean Air Strategy. Available online: <https://www.gov.uk/government/publications/clean-air-strategy-2019>. [Accessed April 2026]
- Ref 12 Department for Transport (2021) Transport Decarbonisation Plan. Available online: <https://www.gov.uk/government/publications/transport-decarbonisation-plan>. [Accessed April 2026]
- Ref 13 Ministry of Housing, Communities and Local Government (2026) The National Planning Policy Framework (NPPF). Available online: https://assets.publishing.service.gov.uk/media/6a8334c03bd75b81e2329ac4/National_Planning_Policy_Framework.pdf. [Accessed September 2026]
- Ref 14 Department for Energy Security and Net Zero, and Department for Business, Energy & Industrial Strategy (2020) The Energy White Paper: Powering Our Net Zero Future 2020. Available online: <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future>. [Accessed April 2026]
- Ref 15 Tees Valley Combined Authority and Tees Valley Mayor (2023) Net Zero Strategy for Tees Valley: Powering the UK's Journey to Net Zero. Available online: <https://teesvalley-ca.gov.uk/business/wp-content/uploads/sites/3/2023/03/Net-Zero-strategy-Digital.pdf>. [Accessed April 2026]
- Ref 16 Tees Valley Combined Authority (2016) Tees Valley Combined Authority Strategic Economic Plan 2016 – 2026. Available online: <https://democracy.teesvalley-ca.gov.uk/about/tees-valleys-strategic-economic-plan/sep-exec-summary/>. [Accessed April 2026]
- Ref 17 Stockton-on-Tees Borough Council (2019) Local Plan 2019. Available online: https://www.stockton.gov.uk/media/2518/Local-Plan-2019/pdf/Local_Plan_2019.pdf?m=1645450086087. [Accessed April 2026]

- Ref 18 Stockton-on-Tees Borough Council (2024) Stockton-on-Tees Plan 2024. Available online: <https://www.stockton.gov.uk/council-plan-2024>. [Accessed April 2026]
- Ref 19 Hartlepool Borough Council (2018) Hartlepool Local Plan. Available online: <https://www.hartlepool.gov.uk/downloads/download/15/hartlepool-local-planning-framework>. [Accessed April 2026]
- Ref 20 Hartlepool Borough Council (2025) Council Plan 2030. Available online: <https://www.hartlepool.gov.uk/downloads/file/504/council-plan-2030>. [Accessed April 2026]
- Ref 21 Middlesbrough Council (2024) Council Plan 2024-27. Available online: <https://moderngov.middlesbrough.gov.uk/documents/s20936/Report.pdf>. [Accessed April 2026]
- Ref 22 Redcar and Cleveland Borough Council and Middlesbrough Council (2024) Health and Wellbeing Strategy 2024-2030. Available online: <https://www.middlesbrough.gov.uk/media/sa5pgthb/health-wellbeing-strategy-2024-2030.pdf>. [Accessed April 2026]
- Ref 23 Redcar and Cleveland Borough Council (2024) Local Plan Strategy 2024-2027. Available online: <https://www.redcar-cleveland.gov.uk/sites/default/files/2024-12/Local%20Plan%20Strategy%202024-2027.pdf>. [Accessed April 2026]
- Ref 24 HM Government (2023) CCUS Net Zero Investment Roadmap. Available online: <https://assets.publishing.service.gov.uk/media/64a29b7d06179b00131ae94e/ccus-investment-roadmap.pdf> [Accessed May 2026]
- Ref 25 Homes and Communities Agency (2014) Additionality Guide. Available online: https://assets.publishing.service.gov.uk/media/5a7ec4b9e5274a2e87db1c92/additionality_guide_2014_full.pdf. [Accessed April 2026]
- Ref 26 HM Treasury (2026) The Green Book. Available online: https://assets.publishing.service.gov.uk/media/698dbcd17da91680ad7f4308/The_Green_Book_2026.pdf. [Accessed: April 2026]
- Ref 27 Institute of Environmental Management and Assessment (IEMA) (2022). Determining Significance for Human Health in Environmental Impact Assessment. Available online: <https://socenv.org.uk/resource/iema-guides-human-health/>. Accessed April 2026]
- Ref 28 Nomis (2021) Census of Population. Available online: <https://www.nomisweb.co.uk/sources/census>. [Accessed April 2026]

- Ref 29 Office for National Statistics (2021) Census. Available online: <https://www.ons.gov.uk/census>. [Accessed April 2026]
- Ref 30 Ordnance Survey (2024) OS Open Greenspace. Available online: <https://www.ordnancesurvey.co.uk/products/os-open-greenspace>. [Accessed April 2026]
- Ref 31 National Trails (2024) The National Trails. Available online: <https://www.nationaltrail.co.uk/>. [Accessed April 2026]
- Ref 32 Ordnance Survey (no date) Explore. Available online: <https://explore.osmaps.com/>. [Accessed April 2026]
- Ref 33 Open Street Map (2024) OpenStreetMap. Available online: <https://www.openstreetmap.org/#map=4/38.01/-95.84>. [Accessed April 2026]
- Ref 34 Office for National Statistics (2025) Lower layer Super Output Area population estimates (supporting information). Available online: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/lowersuperoutputareamidyearpopulationestimates>. [Accessed April 2026]
- Ref 35 Office for National Statistics (2025). Estimates of the population for England and Wales. Available online: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/estimatesofthepopulationforenglandandwales>. [Accessed April 2026]
- Ref 36 Nomis (2025) Business Register and Employment Survey. Available online: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=189>. [Accessed April 2026]
- Ref 37 Nomis (2025) Annual Population Survey. Available online: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=17>. [Accessed April 2026]
- Ref 38 Nomis (2025) Annual Survey of Hours and Earnings. Available online: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=25>. [Accessed April 2026]
- Ref 39 Nomis (2025) Annual Population Survey. Available online: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=17>. [Accessed April 2026]
- Ref 40 Nomis (2025) UK small area gross value added estimates. Available online: <https://www.nomisweb.co.uk/query/construct/components/stdListComponent.asp?menuopt=12&subcomp=100>. [Accessed April 2026]

- Ref 41 Nomis (2025) Annual Population Survey. Available online: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=17>. [Accessed April 2026]
- Ref 42 UK Government (2025) English indices of deprivation 2025. Available online: [English indices of deprivation 2025: statistical release - GOV.UK](#). [Accessed April 2026]
- Ref 43 Office for National Statistics (2023) General health, England and Wales: Census 2021. Available online: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/generalhealthenglandandwales/census2021>. [Accessed April 2026]
- Ref 44 Office for National Statistics (2023) Housing, England and Wales: Census 2021. Available online: <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingenglandandwales/census2021>. [Accessed April 2026]
- Ref 45 Nomis (2025) TS054 - Tenure. Available online: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=2072>. [Accessed April 2026]
- Ref 46 VisitBritain (2025) England Occupancy Survey. Available online: [https://www.bing.com/ck/a?!&&p=72643bb92b03e443ab6afaef61b8a5afefe0ab934711a3f593894d26965a1de9JmldHM9MTc2MzA3ODQwMA&pptn=3&ver=2&hsh=4&fclid=0297a848-8a10-65b3-0155-bb988bf06476&psq=Ref+40+VisitBritain%2c+%e2%80%9cEngland+Occupancy+Survey%2c+%e2%80%9d+2025.+%5bOnline%5d.+Available%3a+England+Hotel+Occupancy+February+2025+\(1\).pdf.+%5bAccessed+November+2025%5d.&u=a1aHR0cHM6Ly93d3cudmlzaXRicml0YWluLm9yZy9tZWRpYS80NTQyL2Rvd25sb2Fk](https://www.bing.com/ck/a?!&&p=72643bb92b03e443ab6afaef61b8a5afefe0ab934711a3f593894d26965a1de9JmldHM9MTc2MzA3ODQwMA&pptn=3&ver=2&hsh=4&fclid=0297a848-8a10-65b3-0155-bb988bf06476&psq=Ref+40+VisitBritain%2c+%e2%80%9cEngland+Occupancy+Survey%2c+%e2%80%9d+2025.+%5bOnline%5d.+Available%3a+England+Hotel+Occupancy+February+2025+(1).pdf.+%5bAccessed+November+2025%5d.&u=a1aHR0cHM6Ly93d3cudmlzaXRicml0YWluLm9yZy9tZWRpYS80NTQyL2Rvd25sb2Fk). [Accessed April 2026]
- Ref 47 Marmot, M. (2010) Fair society, healthy lives: the Marmot Review: strategic review of health inequalities in England post-2010. Available online: <https://www.gov.uk/research-for-development-outputs/fair-society-healthy-lives-the-marmot-review-strategic-review-of-health-inequalities-in-england-post-2010>. [Accessed April 2026]
- Ref 48 Department for Energy Security & Net Zero (2025) National Policy Statement for Electricity Networks Infrastructure (EN-5). Available online: <https://assets.publishing.service.gov.uk/media/695d12e1b5c46330350ed9a1/national-policy-statement-for-electricity-networks-infrastructure-en-5-web-accessible.pdf>. [Accessed May 2026]

- Ref 49 Ministry of Housing, Communities & Local Government (2025) “English indices of deprivation 2025: statistical release”. Available online: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2025/english-indices-of-deprivation-2025-statistical-release>. [Accessed May 2026]

