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Tees CCPP Project

The Tees Combined Cycle Power Plant Project
Land at the Wilton International Site, Teesside

Volume 1 - Chapter 13

Regulations – 6(1)(b) and 8(1)

Applicant: Sembcorp Utilities UK
Date: November 2017

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13 SOCIO-ECONOMIC CHARACTERISTICS

13.1 INTRODUCTION

13.1.1 Terms of Reference for this Chapter

13.1 This chapter presents the likely socio-economic effects from construction, operation and decommissioning of the Project. The baseline socio-economic interests of the Project site and surrounding area are described, potential effects identified, proposed mitigation measures listed and an assessment of the significance of residual effects is made.

13.2 Potential impacts of the Project on socio-economic aspects consist mainly of the following:

- investment of approximately £700 million;
- reuse of previously developed land;
- employment and expenditure in the local economy during construction;
- job creation during operation;
- economic benefits arising from direct and indirect expenditure associated with the Project, for example through placing local orders for goods and services and maintenance;
- potential disruption for the local community during construction and decommissioning including additional traffic and pressure on community infrastructure and services; and
- an important contribution to the security of energy supply nationally, thereby supporting economic activities locally on the Wilton International site and contributing to achieving the aims of National Policy Statement EN-1.

13.1.2 Basis of Assessment including Realistic Worst Case Scenario

13.3 The basis of the assessment is information on investment and employment provided by Sembcorp. At this stage in the Project development this information should be taken as indicative but is suitable for impact assessment purposes.

13.4 It is possible that the Project may be phased in development as described in *Chapter 5*. On this basis two Project scenarios have been considered.

- Scenario One – One 39 month construction period with a construction workforce peak of 945 and an operational workforce of approximately 60 skilled staff.

- Scenario Two – Two 39 month construction periods, with a construction workforce peak of 630 and an operational workforce of approximately 40 during stage one of the development and an additional 20 staff during stage two, approximately 60 skilled staff in total.

13.5 *Section 13.2.5* of this Chapter contains further details on each scenario considered.

13.1.3 Consultation

13.6 Sembcorp has carried out various formal and informal consultation activities as part of the EIA process. The formal Scoping Opinion is set out in *Annex B*. As part of the process, consultation responses relevant to socio-economic characteristics are detailed in *Table 13.1.*

Table 13.1 Consultation Responses

Source	Consultee Comment	Response
Secretary of State (SoS)	The assessment should consider all relevant socio-economic impacts and the Applicant's attention is drawn to the requirements of Section 5.12 of NPS EN-1 in this regard. The ES should explain how the development's socio-economic impacts correlate with local planning policies, which are set out in the consultation response from RCBC (Appendix 3).	Noted and addressed within chapter.
SoS	The SoS recommends that recognised guidance is adopted for the assessment (where available) and that significance criteria are clearly set out in the ES. The SoS recommends that the assessment criteria should be locationally specific and consider the potential significance of the impacts of the Proposed Development within the local and regional context. Where professional judgement is applied to the assessment of receptor sensitivity, magnitude of impact or the significance of an effect, the Applicant should clearly justify this within their ES chapter and refer to supporting evidence as appropriate.	Noted and addressed within chapter.
SoS	The Applicant states that the main focus of the socio-economic assessment will be the effect on employment. No surveys are proposed, with data to be collected via desk studies. The assessment should include a breakdown of likely jobs and roles created by the Proposed Development and any mitigation measures such as skills and training programmes that would promote local employment. This should include consideration of the potential to create apprenticeship opportunities during construction and operation. The socio-economic assessment and in particular any skills and training opportunities should be developed in discussion with RCBC.	Noted and addressed within chapter.
SoS	Section 6.9.3 of the Scoping Report confirms that mitigation measures will be set out in a CEMP and a Traffic Management Plan, draft/outline versions of which should be provided with the DCO application. The SoS welcomes that the assessment will cover construction, operation and decommissioning of the Proposed Development.	Noted.
SoS	Section 3.5 of the Scoping Report notes that approximately 60 full-time jobs will be associated with the operation of the Proposed Development, whereas Section 6.9.3 refers to 65 jobs. Such figures should be consistent throughout the ES.	Noted.
SoS	The SoS notes from Table 8.1 of the Scoping Report that the Applicant intends to undertake an assessment of the potential effects of the Proposed Development on local businesses, and this is welcomed. This assessment should cover all phases of the Proposed Development.	Noted and addressed within chapter.
SoS	It is proposed to scope out cumulative socio-economic impacts on the basis that the Proposed Development would be set against a background of a variety of economic development activities, and would have regional economic and employment benefits. The SoS agrees that this matter can be scoped out.	Noted
Redcar and Cleveland Borough Council (RCBC)	RCBC has identified the following relevant policies: Local Development Framework: Core Strategy CS8 Scale and Location of New Employment Development CS9 Protecting Existing Employment Areas CS10 Steel, Chemical and Port-related Industries CS11 Innovation and New Technologies CS26 Managing Travel Demand Emerging Development Plan: ED6 Protecting Employment Areas	Noted.

Source	Consultee Comment	Response
	Conclusion The above policies are considered relevant to the Project. The Redcar & Cleveland Publication Local Plan was published for consultation from December 2016 to January 2017.	
15th Dec 2016 The Gazette MD and Editor	Queries in regards the employment opportunities which the Project would present.	Noted and addressed within chapter.
Jan 13th 2017 MPs – Anna Turley (Redcar) and Tom Blenkinsop (M'Bro South and East Cleveland)	Queries in regards the employment opportunities which the Project would present.	Noted and addressed within chapter.
Feb 7th 2017 Grangetown Neighbourhood Action Partnership (NAP)	Queries in regards the employment opportunities which the Project would present.	Noted and addressed within chapter.
Feb 22nd 2017 Dormanstown and Kirkleatham NAPs	Queries in regards the employment opportunities which the Project would present.	Noted and addressed within chapter.
Mar 2nd 2017 Industrial Briefing Group	Queries in regards the employment opportunities which the Project would present.	Noted and addressed within chapter.
Mar 3rd 2017 MP Iain Wright, MP Anna Turley	Queries in regards the employment opportunities which the Project would present./Planning Process	Noted and addressed within chapter.
Mar 16th 2017 Redcar and Cleveland Council Leader (Cllr Sue Jeffrey) and Council CEO Plus Senior Council Officers Mark Ladyman, Steve Newton, Rob Mitchell, Mike Greene)	Queries in regards the employment opportunities which the Project would present.	Noted and addressed within chapter.
June 26th 2017 Andrew Lewis, Managing Director Tees Valley Combined Authority	On behalf of the Tees Valley Combined Authority, I am pleased to write in support of the Tees CCPP project, involving the creation of a gas fired generating station with an output capacity of up to 1,700 megawatts. The Wilton International site is without doubt one of the best readily available sites for the location of a new generating station. The Combined Authority supports your proposals to bring back to use the site formerly used by a gas fired generating station. Your proposals would make a major contribution to the ambitions set out in the Tees Valley Strategic Economic Plan, for economic growth and sustainable good quality jobs. Our Business Director, Neil Kenley, and our team stand ready to provide further support as required to take this proposal forward.	Noted and highlighted within chapter.
July 13th 2017 Margie Oliver RCBC	The project to build a new 1,700 MW gas-fired generating station on a 15 hectare site on Wilton International which formerly housed a gas-fired power station is welcomed by the Council's Business Growth Team. This project has the potential to deliver significant economic benefit to the residents and businesses of the Borough of Redcar and Cleveland and we are pleased to have started an early dialogue with yourselves on how these opportunities could be maximised should the Development Consent Order be granted.	Noted and highlighted within chapter.

Source	Consultee Comment	Response
	The prospect of up to 1000 peak construction jobs over the four year build period alongside 150 supply chain jobs and up to 80 permanent jobs once the plant is operational will have a significant and positive impact on efforts to reduce the gap between unemployment levels in the Borough, currently 3.7%, and the national average of 1.9%. Furthermore, your company's proposed £500m investment in this project will ensure that Wilton International is better placed to meet the future power demands of operators on the site into the future. This will help us attract further inward investment to a site which is world-renowned for its petrochemical and processing expertise. I am pleased to confirm our support for this project and wish you every success with your plans.	
July 21st 2017 Lazenby Environment Group (LEG) on behalf of the Residents of Lazenby Village Christine Ruddick Gray, Chair Lazenby Environment Group	The LEG commented "We have to react positively as this creates new jobs that are desperately needed within the area" and also commented that there was no objection from the majority of residents. They did however submit a petition and raise a number of points about design and siting these are addressed elsewhere within the ES (1).	Noted.
Approximately 26 public consultation responses received from the public exhibitions held on the 4th , 7th and 13th of July 2017	Positive responses received in regards job creation and investment within the local area and wider region.	Noted.

(1) See *Chapter 5* relating to siting, *Chapter 8* relating to noise and *Chapter 11* relating to landscape and visual impact.

13.1.4 Policy and Legislation

General Considerations

13.7 A review has been undertaken of general planning and strategic policy and guidance such as national policy documents and the Local Development Frameworks (LDFs) and community strategies. This is presented in more detail in *Chapter 2*. The policy context of greatest relevance to socio-economic characteristics is summarised below. This demonstrates that the Project is aligned with national, regional and local policy in relation to socio-economic characteristics.

Policy

13.8 *Table 13.2* below identifies the key policies relevant to this socio-economic assessment.

Table 13.2 Policies Relevant to the Socio-Economic Assessment

Topic	Socio-economic Aspects
Overarching National Policy Statement for Energy(EN-1)	Section 5.12
National Planning Policy Framework 2012 (NPPF) and Planning Practice Guidance (PPG)	Section 1 - Building a strong, competitive economy (paragraphs 18 – 22) Paragraph 7 addresses three dimensions to sustainable development including economic and social
RCBC Local Development Framework Core Strategy Development Plan Document, adopted July 2007 ("Core Strategy")	CS8 Scale and Location of New Employment Development CS9 Protecting Existing Employment Areas CS10 Steel, Chemical and Port-related Industries CS11 Innovative and New Technologies CS26 Managing Travel Demand.
RCBC Draft Publication Local Plan (November 2016)	ED 6 Protecting Employment Areas:

Overarching National Policy Statement for Energy (EN-1)

13.9 EN-1 acknowledges that the construction, operation and decommissioning of energy infrastructure may have socio-economic effects at local and regional levels. EN-1 also confirms that the likely significant social and economic effects should be set out as well as proposed avoidance or mitigation measures for those effects.

13.10 EN-1 recognises that "*energy is vital to economic prosperity and social well-being and so it is important to ensure that UK has secure and affordable energy*" (paragraph 2.1.2) and that new infrastructure plays a vital role in ensuring secure energy supplies and supporting ongoing economic growth. Decision-makers can give substantial weight to the contribution which the Project would make towards satisfying this need.

13.11 EN-1 provides guidance in relation to assessment of socio-economic impacts, confirming that socio-economic impact assessments should consider (paragraph 5.12.3):

- the creation of jobs and training opportunities;
- the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities (if a difference in baseline conditions in relation to demand for housing, accommodation or local services is anticipated);
- effects on tourism (where appropriate);
- the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure; and
- cumulative effects.

13.12 EN-1 also provides guidance in relation to land-use assessment and confirms that the assessment should identify existing and proposed land uses and effects and the extent, if any, to which a proposed scheme may prevent an existing or proposed use on a neighbouring site from continuing (paragraph 5.10.5). This includes business operators and economic land uses, agricultural land quality and operations, local communities and community facilities (health, education and community gathering) and visitor attractions, accommodation and recreational areas.

National Planning Policy Framework (NPPF)

13.13 The National Planning Policy Framework (NPPF) consolidates the previous raft of Planning Policy Statement (PPSs) and Planning Policy Guidance (PPGs) into one single guidance document for setting out the government's planning policies for England and how they are expected to be applied. The NPPF states that there are three dimensions to sustainable development: economic, social and environmental. In its stated aim of "*building a strong, competitive economy*" the NPPF seeks to support and encourage sustainable economic growth through supporting existing commercial activities and promoting new economic activities.

The Core Strategy Development Plan Document, adopted July 2007

13.14 The Redcar & Cleveland Planning Strategy (Local Plan) sets out the strategic policy framework for Redcar and Cleveland area and is used to make decisions on planning applications. The Core Strategy (1) (adopted 2007) confirms support for existing energy generation sites, including Wilton International, and the role that it provides in further economic growth and diversification in the area, supporting skills development to benefit its prosperity. Policy CS4 states that the Redcar and Cleveland Borough Council will "*develop energy industries including a Fuel Cell Application Centre centred on Wilton, focused on hydrogen and renewable energy*". Whilst the Project is not

(1) Redcar & Cleveland Borough Council, 2007. Core Strategy DPD, Adopted - 2007

renewable, it is considered to be lower in emissions than traditional coal fired power stations. In addition within the post-text (pg 3.22) of CS4 it is stated "*the following challenges are identified that the Spatial Strategy for South Tees aims to address: To support the development of the steel, chemicals and energy industries and the port so that they can continue to be drivers of the Tees Valley economy*".

13.15 Policy CS11 Innovation and New Technologies also states that "*Proposals will be supported that strengthen the development of the Borough as a centre for energy and recycling industries. Such development will be centred at Wilton International and the wider South Tees area*."

13.16 The Project site is identified as having two currently adopted policies which geographically overlay the red line boundary; these are: CS10, Steel, Chemical and Port Related Industries, and DP1, Development Limits. Whilst overlapping the site, neither policy gives a direct comment on the site for energy uses; furthermore Wilton International is specifically identified for chemical related activities. It is however noted that the proposed use is considered to be of a similar classification as those identified within CS10, and as such it is considered by the applicant that the proposed land use is appropriate.

RCBC Draft Publication Local Plan (November 2016)

13.17 RCBC is currently preparing a 'New Local Plan' to replace the saved policies of the 1999 Local Plan and the above Development Plan policies. Once adopted the Project Site will be within an area subject to Policy ED6 for the protection of employment areas. Policy CS4 will be replaced by Policy LS4 which states an aim to "*develop the chemical, technology and energy production industries at Wilton International*". This clearly indicates the Project Site is in an area which is important to local employment and there is a desire to develop further industrial investment / infrastructure.

Tees Valley Enterprise Zone

13.18 Although not an adopted planning policy, the site is within the Tees Valley Enterprise Zone which was established by the Tees Valley Combined Authority to help attract investment and growth to the area, and deliver job opportunities. Wilton is shown as an area for enhanced capital allowances, in particular energy production (1).

Tees Valley Strategic Economic Plan 2016-2026

Whilst not a statutory document (2), the plan sets out the growth ambitions and priorities for the Tees Valley over the next ten years to 2026 and is currently being refreshed to create a locally specific Industrial Strategy which currently includes priorities to improve, diversify and accelerate growth in the local economy.

(1) http://www.redcar-cleveland.gov.uk/rcbcweb.nsf/web+full+list/50a4d5d866e12e4f80257945003420b2
(2) https://teesvalley-ca.gov.uk/what-we-are-delivering/key-strategies/strategic-economic-plan/

13.19 The plan includes a commitment to create 25,000 additional jobs and £2.8 billion into the Tees Valley economy.

Redcar and Cleveland Growth Strategy

13.20 Redcar and Cleveland Growth Strategy, 2016 Whilst not a statutory document, the Council's Growth Strategy (1) sets out the framework for prioritising future public and private sector resources to target economic growth in the region. It "*seeks to accelerate diversification and growth of local economic activity through a clear focus on economic development priorities and outcomes*".

13.21 The growth strategy supports the further investment at Wilton International and states that a key growth outcome of the strategy is "*ensuring the growth of the existing knowledge-base economic cluster at Wilton International*".

13.2 ASSESSMENT METHODOLOGY

13.22 There are no legislative requirements which dictate the form of socio-economic assessment that should be carried out and so the approach adopted follows UK Government guidelines and best practice, as summarised below.

13.23 In terms of considering the economic impacts, this assessment follows guidance set out in HM Treasury's Green Book (2) ,2003, ('the Green Book'), English Partnerships Additionality Guidance (3) , 2008, ('EP Guidance') and the Department for Business Innovation and Skills research on Additionality (4) , 2009, (BIS Paper).

13.24 The Green Book sets out the stages to assessing the additional impact of a project, which are:

- leakage, the effects that occur outside the target area; and
- multiplier effects, additional economic activity from spending in the supply chain and increases in local income.

13.25 Project specific assumptions in terms of leakage and multiplier effects are defined later in this Chapter.

13.26 In terms of social impacts, the following social criteria are considered based on professional judgement and established practice in socio-economic assessment:

(1) http://www.redcar-cleveland.gov.uk/rcbcweb.nsf/AE3C7401F1898B3A802574DE0034BA5B/$FILE/Redcar%20and%20Cleveland%20Growth%20Strategy%20June%202016.pdf
(2)HM Treasury's Green Book (2003) http://www.hm-treasury.gov.uk/d/green_book_complete.pdf
(3) Additionally Guide – A Standard Approach to Assessing the Additional Impacts of Projects: English Partnerships (2008)
(4)Department for Business Innovation and Skills research on Additionality, (2009) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191512/Research_to_improve_the_assessment_of_additionality.pdf

- demographic and population characteristics (population changes, relocation of populations, influx and/or outflow of temporary workers);
- economic and community structures (economic characteristics, employment opportunities, industrial diversity);
- land use;
- recreation and community features; and
- tourism features and receptors and the local and wider visitor economy

13.27 With regards to land use, the Project will return to use an area of industrial land that has a long history of power generation and the Project will be developed within an enterprise zone allocated for energy use. The Project will not significantly affect current or proposed adjacent land uses as it will be developed within an area of industrial use. This criterion has not therefore been considered further.

13.28 As stated within the scoping report tourism is not an important contributor to the local economy and on this basis tourism and recreation effects have not been considered further in terms of detailed impact assessment.

13.2.1 Defining the Project's Area of Influence

13.29 One of the first stages in developing a methodology for a socio-economic assessment is defining a project's area of influence. This is the area in which effects (be they positive or negative) may occur through the construction, operation and decommissioning of the Project.

13.30 The Project site is located on the outskirts of Redcar, with direct links to the A1 (M) and ports in Middlesbrough, Sunderland and Newcastle. The Redcar and Cleveland Borough is most likely to be affected by the potential socio-economic implications of the Project.

13.31 The area of influence is therefore considered as the Project site Super Output Area ('the SOA'), Redcar Cleveland 003E, the Ward in which the Project is located, Dormanstown Ward, the relevant local authority area, Redcar and Cleveland Unitary Authority and the regional area, North East region. This is shown in *Figure 13.1* (the Study Area). It is noted that the North East region extends well to the north of the Project Site, whereas effects are more likely to be concentrated within the Teesside area.

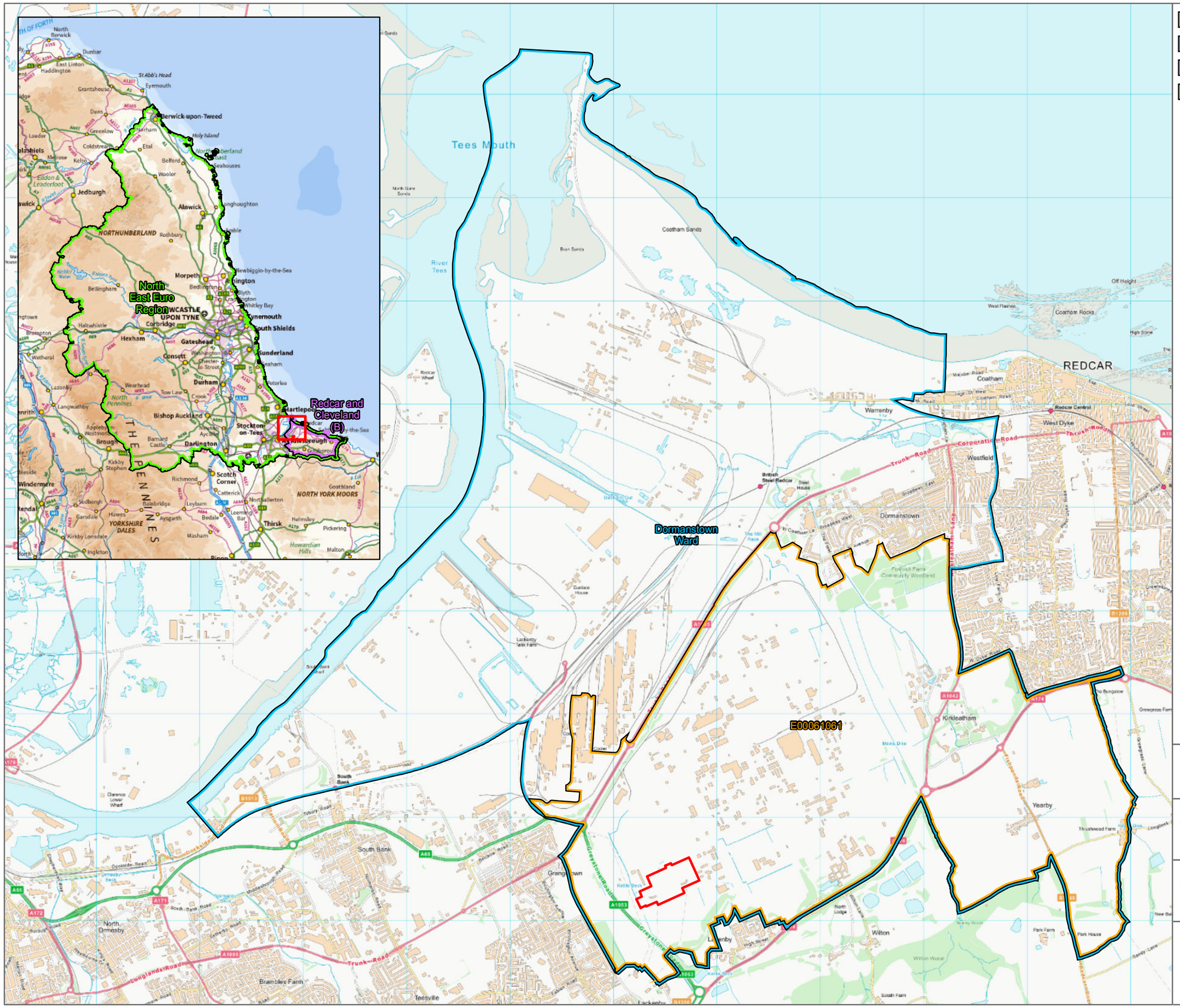

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Figure 13.1
Socio-Economic Area of Influence

ERM

sembcorp

PROJECTION: British National Grid

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13.2.2 Defining the Project's Phases

13.32 The likely effects associated with the stages of the Project on socio-economic resources and receptors will vary and are considered in the following broad categories:

- construction and decommissioning impacts: including temporary disruption to resources and receptors; and economic impacts such as employment, expenditure through the supply chain and accommodation requirements for in-migrating contractors; pressure on local services; and

- operational impacts: including economic impacts such as generation of employment opportunities or loss of employment from business displacement.

13.2.3 Defining the Project's Socio-economic Receptors

13.33 For each of the Project's phases, the following socio-economic receptor groups will be considered to the extent necessary:

- demography;
- employment and economic profile; and
- business operators.

13.2.4 Baseline Data and Information

13.34 Data and information have been collated and reviewed from national, regional and local databases, including:

- official labour market statistics;
- publicly available mapping;
- local, regional and national economic and social databases, policy documents and strategies; and
- national, regional and local development plan documents.

13.35 This has led to the development of a 'baseline' for the Project; ie the socio-economic conditions that would prevail without the scheme. These are presented for each receptor group listed in *Section 13.3. 1*.

13.2.5 Basis of Assessment

13.36 Dependent on market conditions at the time of the final investment decision (following any approved DCO) the construction of the Project could occur under two scenarios based on Sembcorp's financial modelling. These are as follows.

- 'Scenario One': two 850 MWe CCGT 'trains' are constructed in a single phase of construction to give a total aggregate capacity of up to 1,700 MWe.

- 'Scenario Two': one CCGT 'train' of 850 MWe is constructed and commissioned. Within five years of its commercial operation construction of a further 850 MWe CCGT 'train' commences.

13.37 Effects on socio-economic receptors from the Project of these the two scenarios will be considered for the construction, operational and decommissioning phases.

13.38 The main potential impacts of the Project on socio-economic factors are:

- investment of approximately £700 million during construction;
- employment and expenditure in the local economy during construction;;
- direct, indirect and induced jobs during operation;
- demographic effects and disruption to the local community during construction (and decommissioning) including additional traffic and effects on community infrastructure; and
- potential effects on community safety.

13.2.6 Impact Assessment Methodology and Significance Criteria

13.39 The evaluation of the significance of effects involves the assessment of how the potential changes to baseline conditions might result in socio-economic effects. There are no published socio-economic standards that define receptor sensitivity or magnitude. The definitions in *Tables 13.3, 13.4 and 13.5* have been developed and applied to the socio-economic assessment and are based on professional judgement and precedent set in similar assessments.

13.40 The main focus of the assessment is the effect on employment and economic aspects as measurable and specific to the location of the Project and within the wider study area. Employment effects in this regard are reported as Full Time Equivalent (FTE) jobs and the Gross Value Added (GVA) by these jobs. FTE is essentially one permanently employed worker working a 40 hour week but it is set out in the subsection below what this means in terms of temporary construction jobs and indirect and induced jobs. The effects of these jobs on the local labour market and the economic well-being of the local population are also considered qualitatively. Wider socio-economic effects are considered qualitatively, supported by quantitative data where available.

13.41 Employment, economic and community effects often interact and interrelationships between these are also considered. For example, increased employment rates and economic activity provide additional economic benefits to local communities through indirect expenditure.

13.42 Construction phase employment effects will be assessed such that ten years of construction worker jobs is equal to one FTE position. Estimates of construction jobs were provided by Sembcorp and, based on ERM's experience of similar CCGT development, are typical.

13.43 The analysis of operational phase employment effects is based on the estimated number of workers to be employed at the facility from information supplied by Sembcorp. The assessment of likely effects on the local, regional and national economies during construction, operation and decommissioning of the Project consider the scale of the following.

- Direct economic effects: jobs and GVA that are wholly or largely related to construction, decommissioning and operation of Project.
- Indirect economic effects (positive and negative): jobs and GVA generated in the areas of influence in the chain of suppliers of goods and services to the direct Project activities.
- Induced economic effects: jobs and GVA created by direct and indirect employees' spending in the Study Area or in the wider economy.
- Wider economic effects (positive and negative): employment and income generated in the national / regional economy related to the Project.

13.44 For additional jobs arising from this direct employment an 'indirect' multiplier of 2.39, as per Scottish Input-output (1) tables for the electricity sector, has been applied. For the induced jobs an average multiplier of 0.83 has been adopted as per Scottish Input-output tables for the electricity sector. The use of Scottish Government input-output multipliers is accepted practice for economic assessment of activities England, as no such multipliers exist specifically for England. The Scottish Government multipliers are widely considered to provide acceptable proxies for these calculations. A GVA of £ 43,308 per job as typical for jobs within the North East has been adopted, based on the Office for National Statistics latest data (2015) (2).

13.45 The assessment criteria outlined in the tables below (*Tables 13.3* to *13.5)* will be used and assessment made of the magnitude of the impacts in combination with receptor sensitivity to determine the significance of any effects.

Socio-economic Receptor Sensitivity

13.46 For economic effects (including employment), the availability of labour and skills is critical in accommodating the demands, needs and requirements of the Project. Adequate capacity, ie a sufficient labour supply in an area, results in a low sensitivity; while limited capacity results in a high sensitivity. For social effects, receptor sensitivity is principally defined by the ability of the social receptor to absorb or adapt to change and the level of usage by sensitive or vulnerable social groups. These are defined in *Table 13.3*.

(1) Scottish Government, 2012, Input-Output tables,
http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/InputOutput,
website accessed 14/07/2015
(2)https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=182 Accessed 17/04/17

Table 13.3 Socio-economic Receptor Sensitivity

Sensitivity	Description
High	There is no or low availability of labour and skills in the wider study area workforce, for example as a result of very low unemployment rates. The Project would lead to labour market pressure and distortions (ie skills and capacity shortages, import of labour, wage inflation). The receptor is of international or national importance and/or has little or no ability to absorb change or recover/adapt and/or is solely used by sensitive groups such as older people, children and people of poor health.
Medium	The area has a constrained supply of labour and skills. The Project may lead to labour market pressure and distortions. The receptor is of regional or local importance and/or has medium ability to absorb change or recover/adapt and/or is principally used by sensitive groups such as older people, children and people of poor health.
Low	The area has a readily available labour force: some skill deficits. The Project is unlikely to lead to labour market pressure and distortions. The receptor is of local importance and/or has ability to absorb change or recover. It may also be used by sensitive groups such as older people, children and people of poor health.
Not Sensitive	An effect would not be discernible in the context of the number of jobs created or lost within the wider study area and the capacity of that area to accommodate the change. The receptor is of local importance and/or is able to absorb change and/or recover or adapt to the change and is not specifically for the use by sensitive groups such as older people, children, and people of poor health.

13.2.7 Magnitude of Impacts

13.47 A level of impact magnitude (see *Table 13.4*) will be assigned taking into consideration the following:

- participants in the labour force;
- the level of occupational skills available in the Study Area; and
- the nature of disruption to social receptors, including scale and duration of effect.

Table 13.4 Magnitude of Impacts (adverse or positive)

Impact Magnitude	Description
Large	• The impact would dominate over baseline conditions. • Impacts would be experienced at an international or national scale. • The number of jobs lost or created in the wider study area would be greater than 250. • Impacts would be of long-term duration (ie greater than 5 years). • Impacts would be experienced by large numbers of businesses and/or people (with number depending on the local context).
Medium	• An impact that can be demonstrated to change the baseline conditions. • Noticeable impacts would arise judged to be important at a regional, or sub-regional scale, either because there are large impacts on few receptors or smaller impacts on a larger proportion of businesses and/or people (with number depending on the local context). • The number of jobs lost or created would be greater than 50, but fewer than 250. • Impacts would be medium-term (ie 3-5 years).
Small	• An impact that would result in a perceptible difference from baseline conditions. • Small scale impacts would arise, with a small number of affected businesses and/or people (with number depending on the local context). • The number of jobs lost or created in the Socio Economic Area of Influence would be greater than 10, but fewer than 50. • Impacts would be short-term (ie 1-2 years).
Negligible	• An impact that would not result in a variation beyond the baseline conditions. • Impacts are unlikely to measurably affect the well-being of businesses and/or people. • Very minor loss or benefit.

13.2.8 Significance of Effects

13.48 Significance is the term used to categorise the effect, eg 'not significant', 'minor', 'moderate' and 'major', and can be positive or negative. It takes into account the sensitivity of the receptor and the magnitude of impacts. Effects of minor significance and above are considered to be significant for the purposes of this socio-economic assessment and the 2008 EIA Regulations.

13.49 Criteria specific to socio-economic factors have been adopted in defining the hierarchies of receptor sensitivity and impact magnitude. In line with accepted EIA practice, the sensitivity of receptors is considered against the magnitude of impact to determine the significance of effect, as shown in *Table 13.5*.

Table 13.5 Significance of Effect

Magnitude of Impact		Sensitivity of Receptors		
		Low	**Medium**	**High**
	Small (Adverse / Beneficial)	Not significant	Minor	Moderate
	Medium (Adverse / Beneficial)	Minor	Moderate	Major
	Large (Adverse / Beneficial)	Moderate	Major	Major

13.2.9 Activities Identified with the Potential for Cumulative Effects with the Project

13.50 Potential cumulative socio-economic effects have been scoped out (see *Table 13.1*) on the basis that the Project would be set against a background of a variety of economic development activities, and would have regional economic and employment benefits.

13.2.10 Mitigation Measures

13.51 Where significant adverse effects are assessed, mitigation measures are outlined. Mitigation measures are described discretely to address construction, operation and decommissioning impacts.

13.3 BASELINE CONDITIONS

13.3.1 Introduction

13.52 Baseline conditions in relation to the following socio-economic receptor groups are considered in turn.

- population and demographics;
- health;
- housing;
- Economics, deprivation; and
- Economics, employment.

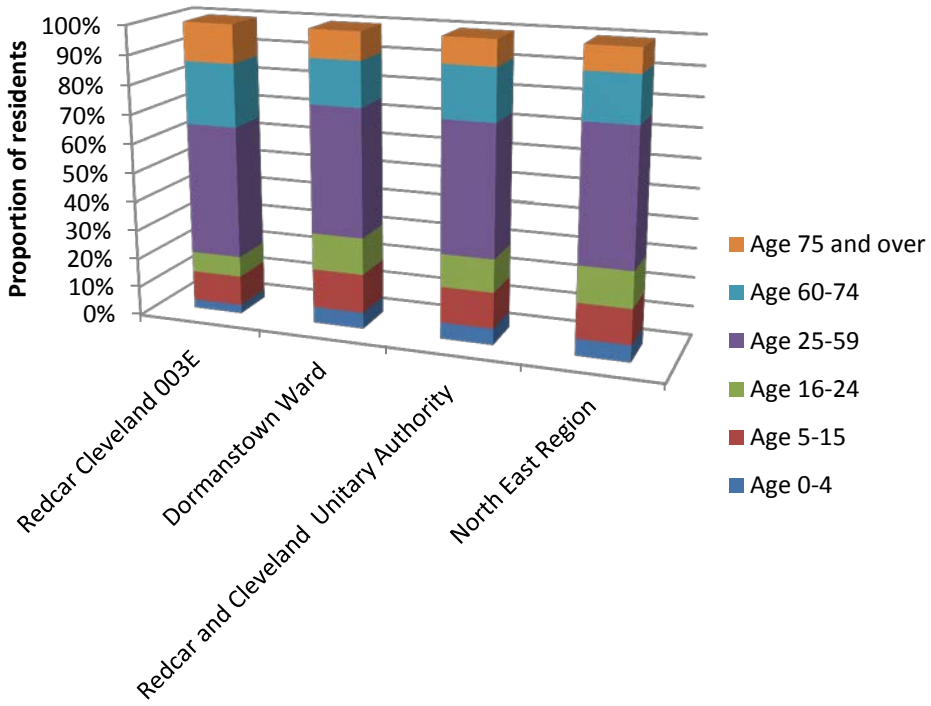
13.53 Super Output Areas (SOAs) are the smallest land parcels for which census and other socio-economic data are collected. The Project site is located within SOA Redcar Cleveland 003E which is within Dormanstown Ward, Redcar and Cleveland Unitary Authority and the North East region. This is shown in *Figure 13.1*. Given the size of the relevant SOA, Dormanstown Ward provides a larger representative area for the Project's immediate local baseline, with the Redcar and Cleveland Unitary Authority and the North East region representing the wider area of influence.

13.3.2 Population and Demographics

13.54 The SOA in which the Project is located has a residential population of 242 persons at the 2011 Census, of which 50% were male and 50% were female. It had a population density of 0.2 persons per hectare, compared with 2 persons per hectare for Dormanstown Ward, 5.5 persons per hectare for the Redcar and Cleveland Unitary Authority and 3 persons per hectare for the North East.

13.55 The age profile of the area of influence in 2011 was broadly consistent across the component SOA, ward and districts, with around 20% of residents aged 0-15, around 60% of residents aged 16-59 and 20% aged 60 and over (see *Figure 13.2*).

Figure 13.2 Age Profile of Local Area of Influence, 2011



13.3.3 Deprivation

13.56 The Index of Multiple Deprivation (IMD) is a measure of deprivation and is nationally recognised. The IMD2015 provides a numerical measure of deprivation for each SOA in England. It utilises indicators, combined into seven 'domains': income deprivation, employment, health and disability, education, skills and training, barriers to housing and services, crime; and living environment. Each SOA is allocated an IMD score and ranking that represents a comparative deprivation for the domains, against all SOAs. These are combined into a single, overall deprivation score for each SOA which is also commonly ranked, with lower ranking SOAs being more

deprived. In 2015, the SOA ranked 1 was the most deprived and the SOA ranked 32,844 was the least deprived.

13.57 The 2015IMD ranks for the SOA within which the Project is located is presented in *Table 13.6* below.

Table 13.6 Index of Multiple Deprivation for SOA within which the Project is located

Indices	Redcar and Cleveland 003E
Rank of Index of Multiple Deprivation Score	17,529
Rank of Income Score	20,393
Rank of Employment Score	15,730
Rank of Health Deprivation and Disability Score	13,860
Rank of Education Skills and Training Score	16,869
Rank of Barriers to Housing and Services Score	11,414
Rank of Crime Score	8,098
Rank of Living Environment Score	30,290

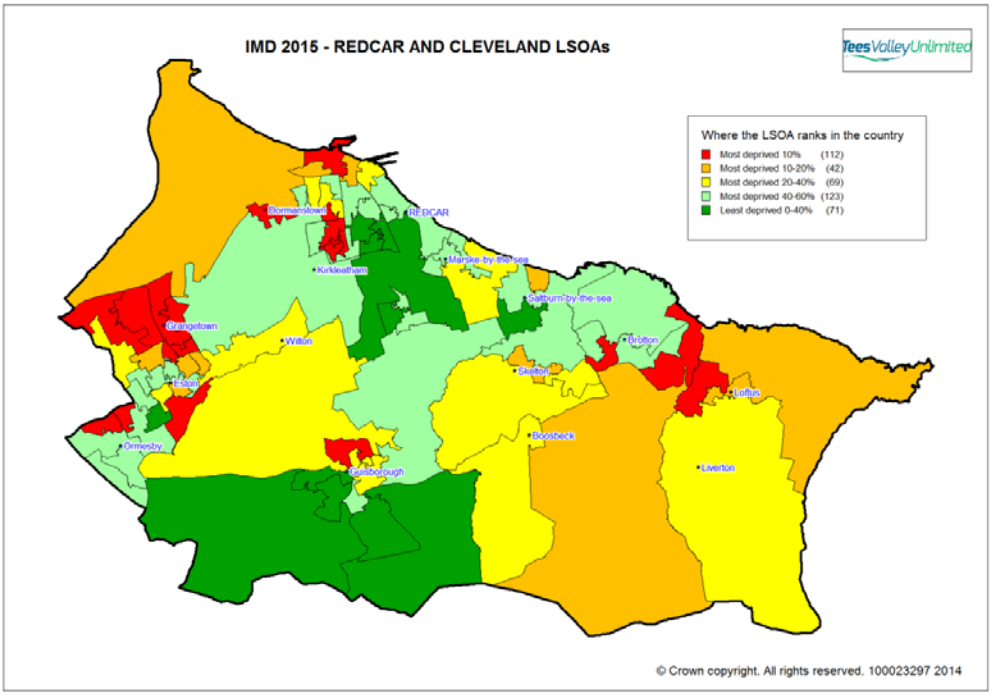
Key

Top 10% most deprived is ranks 1 – 3,248
Top 10% - 25% most deprived is ranks 3,248 – 8,121
Between median and 25% most deprived ranks are 8,121 – 16,241
Between median and 25% least deprived ranks are 16,241 – 24,362
Top 10% - 25% least deprived is ranks 24,362 – 29,234
Top 10% least deprived is ranks 29,234 – 32,482

Source: Department for Communities and Local Government, http://opendatacommunities.org/def/concept/folders/themes/societal-wellbeing website accessed 10/10/2017

13.58 Although the IMD data show the SOA is not significantly deprived, the overall local authority of Redcar and Cleveland is in comparison to the national averages for England and Wales. *Figure 13.3* presents all the Lower Layer Super Output Areas (LSOA) for Redcar and Cleveland Borough, indicating the Project site to be within the most deprived 40-60% in the country.

Figure 13.3 Redcar and Cleveland IMD LSOAs - 2015



Source: Tees Valley Unlimited (1)

13.3.4 Employment and Economic Profile

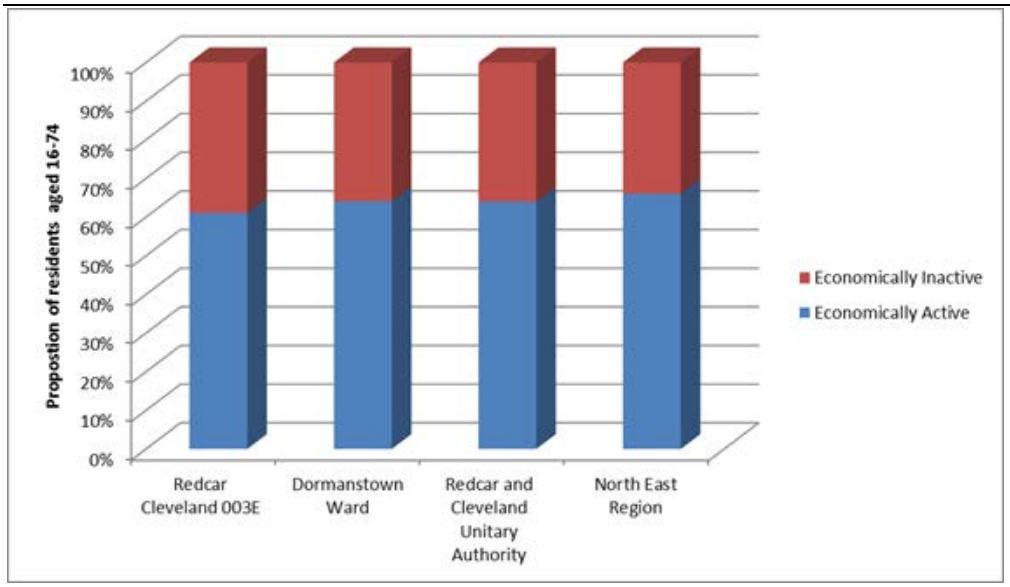
Economic Activity

13.59 The SOA had an economic activity rate for residents aged 16-74 of 61% in 2011 as opposed to 64% for the overall ward.

13.60 This rate is broadly similar to that experienced in the local area with Redcar and Cleveland Unitary Authority economic activity rate at 64% and the overall North East region slightly higher at 66% (see *Figure 13.4*).

(1) Tees Valley Unlimited. Index of Multiple Deprivation 2015 - Borough level results. Available online https://teesvalley-ca.gov.uk/wp-content/uploads/2016/03/4.-imd_borough_report_2015.pdf, Uses IMD 2015 data from Department for Communities and Local Government.

Figure 13.4 Economic Activity in the Local Area of Influence, 2011



Job Seekers Allowance Claimants

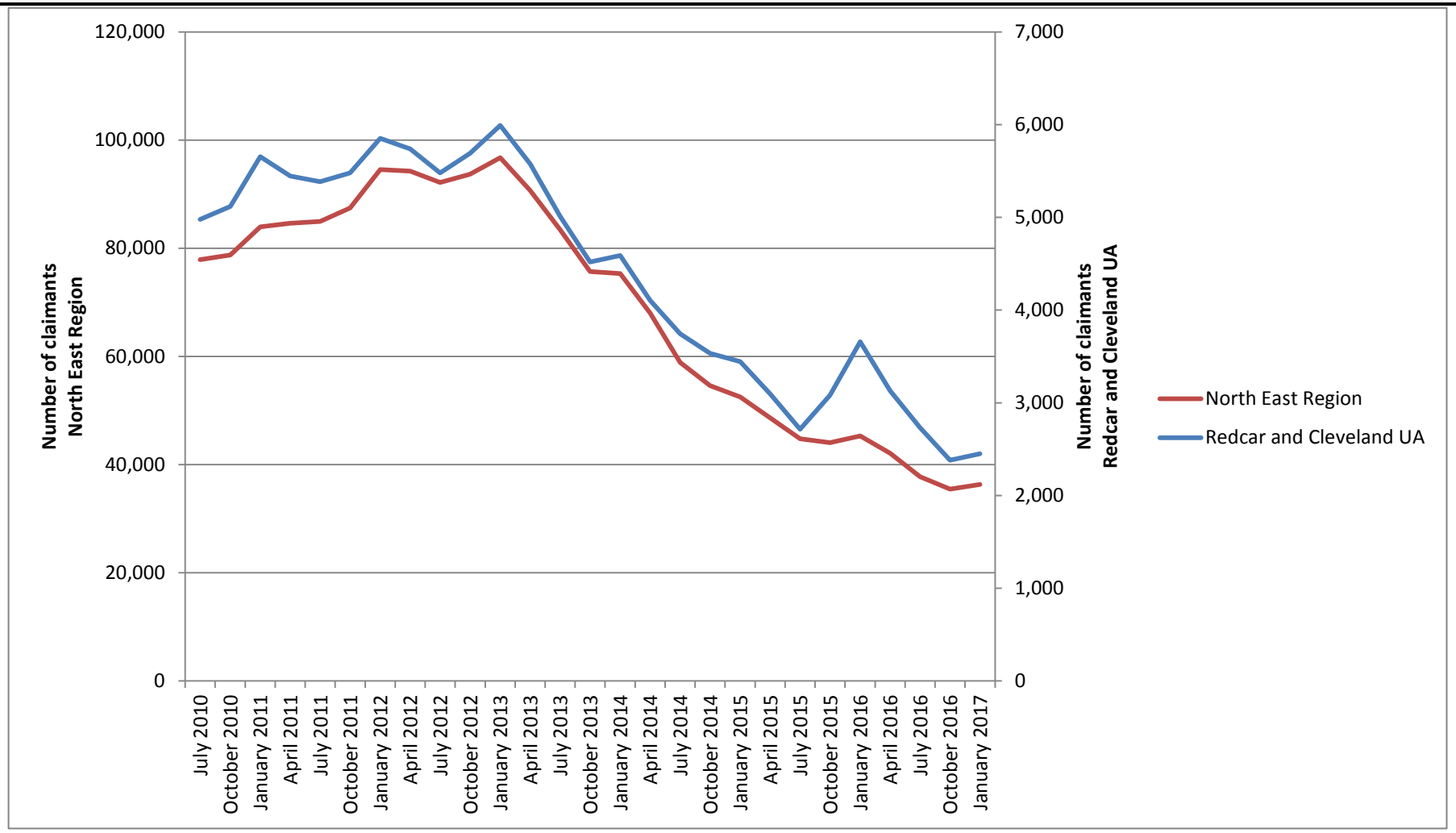
13.61 The number of residents claiming Job Seekers Allowance (JSA) and National Insurance credits is a commonly-used proxy indicator for unemployment levels. JSA is payable to people under pensionable age who are available for, and actively seeking, work of at least 40 hours a week.

13.62 JSA claimant data was collected at SOA level until August 2014 and is not collected at ward level. Therefore, the latest data available identify 26 residents within the SOAs as claiming JSA (August 2014).

13.63 *Figure 13.5* presents JSA claimant data for the wider area. The proportion of residents claiming JSA cannot easily be calculated on a monthly or quarterly basis as total population counts are not undertaken at this frequency. However typical JSA claimant count rates are between 1% and 10% of the resident population aged 16-64.

13.64 *Figure 13.5* demonstrates that the number of residents claiming JSA peaked between January 2012 and January 2013. Since the peak, the number of residents claiming JSA has substantially decreased, however both experienced a slight peak within 2015.

Figure 13.5 Number of JSA Claimants in the Area of Influence, 2010-2016



Qualifications

13.65 The highest level of qualification achieved provides a valid proxy for educational attainment level. *Figure 13.6* presents the highest level of qualification achieved for the area in 2011.

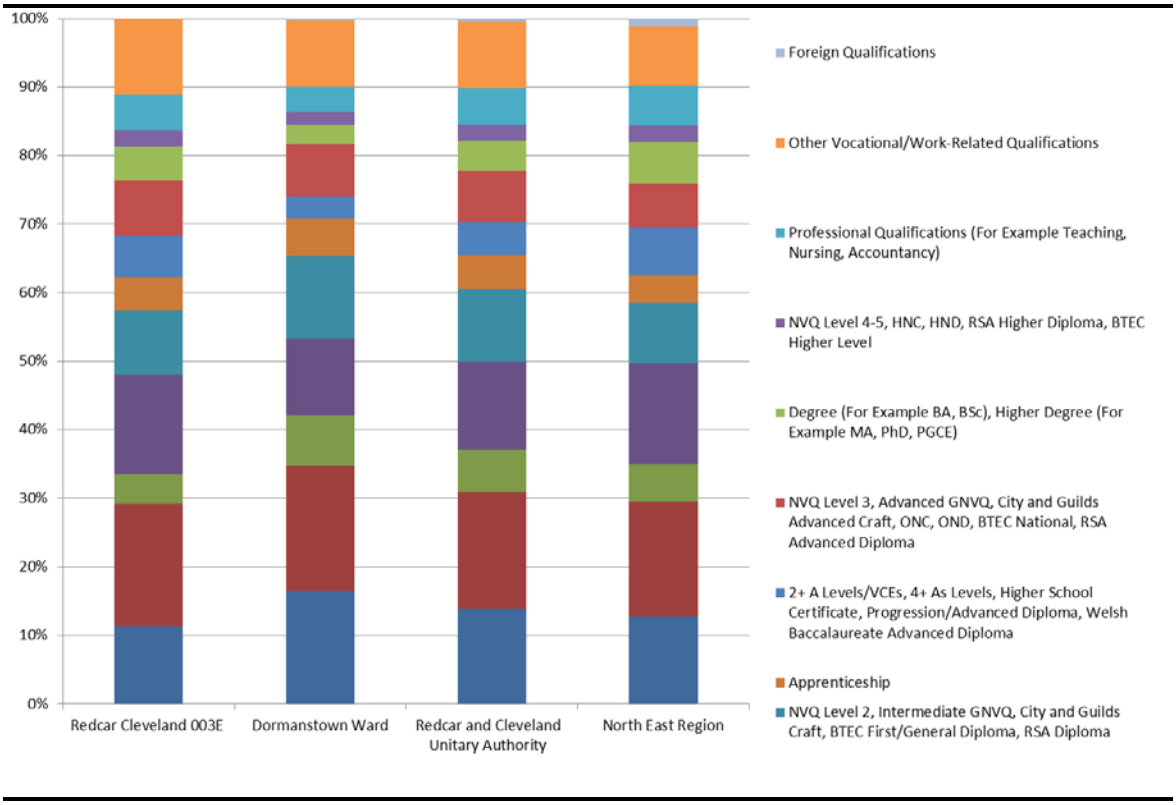
These data indicate that residents of the SOA generally achieved higher qualifications than those of the ward, and Redcar and Cleveland Unitary Authority for which data were gathered. For example, 11% of residents of Redcar Cleveland 003E SOA aged 16 (1) went onto achieve a Batchelor's Degree, Master's Degree or PhD, compared with 5% in the ward and 9% in the Redcar and Cleveland Unitary Authority.

13.66 26% of residents of the Redcar Cleveland 003E SOA aged 16 and over achieved no qualification which is lower than that of the ward and Redcar and Cleveland Unitary Authority, 32% and 28% respectively, but in keeping with the overall North East region (26%).

13.67 When considered alongside the IMD data presented above; the conclusion that Redcar Cleveland 003E SOA is not as socio-economically disadvantaged as the overall local and wider area of influence is reinforced.

(1) Noting that whilst 16 year olds would not ordinarily have a degree the age bracket for the purposes of assessing educational attainment begins at age 16.

Figure 13.6 Highest Level of Qualification Achieved of residents within the Area, aged 16 and over, 2011



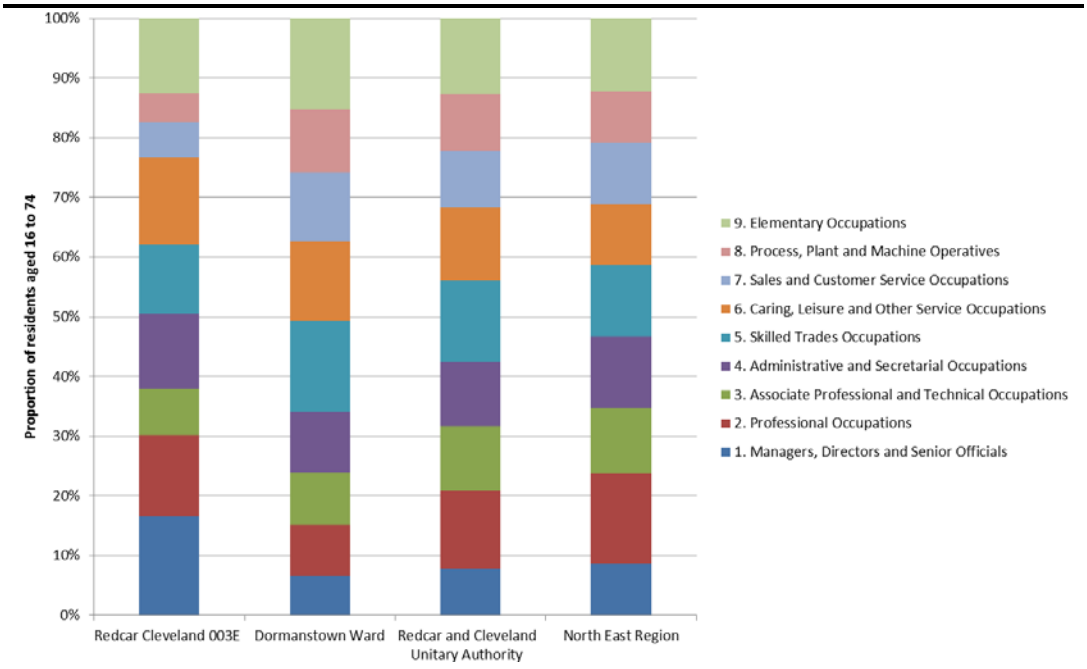
Source: Office for National Statistics, 2011 (QS501EW), https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=554accessed on 21/05/2017

Occupation Type

13.68 The occupation type of residents provides further insight into the socio-economic classification of the area of influence. *Figure 13.7* shows the percentage of residents aged 16-74 employed within each occupation type in 2011. These data show that a notably higher proportion of residents of the SOA were employed in managerial, directorial and senior official occupations (17%) as opposed to substantially lower proportions in the ward, unitary authority and region (7% to 9%).

13.69 This again supports the conclusion that the SOA is less deprived than the rest of the local area and region.

Figure 13.7 Occupation Type of Residents Aged 16-74 within the Local Area of Influence, 2011



Source: Office for National Statistics, 2011 (QS607EW), https://www.nomisweb.co.uk/query/construct/components/simpleapicomponent.aspx?menuopt=5620&subcomp= website accessed 21/05/2017

Business Operators

13.70 Data regarding the industry of employment for residents of the local and wider study areas provide valuable indication of the types of local businesses and principal industry sectors within the local and regional economy. More than three quarters of residents aged 16 to 74 in employment within the local and wider study areas were employed within nine industrial sectors in 2011, as presented in *Table 13.7*. Of particular relevance to the Project, 9% of residents of Dormanstown ward aged 16-74 were employed in construction.

13.3.5 The Future Baseline

13.71 It is reasonable to assume that the Wilton International Site will continue to be a source of significant local employment and revenue generation well into the future. From a socio-economic perspective the local population age profile will shift upwards over time and place an increasing demand on local services that will need to be balanced by a degree of local economic development. The future development and growth of industrial activity on the Wilton International site will require power (and potentially heat/steam) in addition to that already available and to possibly replace aging local sources. If the present Project did not proceed it is reasonable to assume that a similar project would take its place in order to secure a vibrant future for local industry.

Table 13.7 Percentage of Residents Aged 16-74 Employed Within the Most Common Industries

Industry Category	Redcar and Cleveland 003E	Dormanstown Ward	Redcar and Cleveland Unitary Authority	North East Region
A Agriculture, Forestry and Fishing	9%	0%	1%	1%
B Mining and Quarrying	1%	1%	2%	1%
C Manufacturing	9%	10%	10%	10%
D Electricity, Gas, Steam and Air Conditioning Supply	0%	1%	1%	1%
E Water Supply; Sewerage, Waste Management and Remediation Activities	2%	1%	1%	1%
F Construction	4%	9%	9%	8%
G Wholesale and Retail Trade; Repair of Motor Vehicles and Motor Cycles	17%	18%	16%	15%
H Transport and Storage	5%	6%	5%	5%
I Accommodation and Food Service Activities	1%	7%	5%	6%
J Information and Communication	3%	1%	2%	3%
K Financial and Insurance Activities	3%	2%	2%	3%
L Real Estate Activities	3%	2%	2%	1%
M Professional, Scientific and Technical Activities	6%	3%	5%	5%
N Administrative and Support Service Activities	9%	6%	4%	4%
O Public Administration and Defence; Compulsory Social Security	7%	6%	6%	8%
P Education	8%	8%	10%	10%
Q Human Health and Social Work Activities	13%	15%	16%	15%
R,S Arts, Entertainment and Recreation; Other Service Activities	3%	4%	4%	4%

Source: Office for National Statistics, 2011 (QS605EW), https://www.nomisweb.co.uk/query/construct/components/simpleapicomponent.aspx?menuopt=5600&subcomp= website accessed 21/05/2017

13.4 ASSESSMENT OF IMPACTS AND EFFECTS

13.4.1 Potential Impacts

13.72 Under both Project scenarios the potential socio-economic impacts are as follows:

- investment of approximately £700 million;
- reuse of previously developed land;
- construction employment of 13,124 workers for Scenario One and 17,498 for Scenario Two,
- generation of an estimated 60 new jobs during operation for both scenarios;
- economic benefits arising from direct and indirect expenditure associated with the Project, for example through placing local orders for goods and services and maintenance;
- disruption to the local community during construction including additional traffic and pressure on community infrastructure and services; and
- contributing to the security of energy supply nationally and regionally, thereby supporting economic activities and contributing to achieving the aims of National Policy Statement EN-1.

13.4.2 Assessment of Effects during Construction

Construction Phase: Employment - Scenario One – Single Phase of Development

It anticipated that construction of the Project for Scenario One will require 39 months' worth of construction manpower, spread over the 39 month construction period. Construction jobs will peak at 945 spread across eight key skills groupings namely: civil; mechanical structure; piping; insulation; mechanical installation; electrical and control and instrumentation; commissioning; and supervision. These are represented graphically below in *Figure 13.8*.

13.73 Construction phase effects are assessed on the basis of ten years of construction worker jobs being equal to 1 FTE job, as per HM Treasury Guidance. The anticipated 39 months' worth of construction manpower generated by the Project is therefore calculated as the equivalent of approximately 109 FTE jobs (1) during this 39 month period.

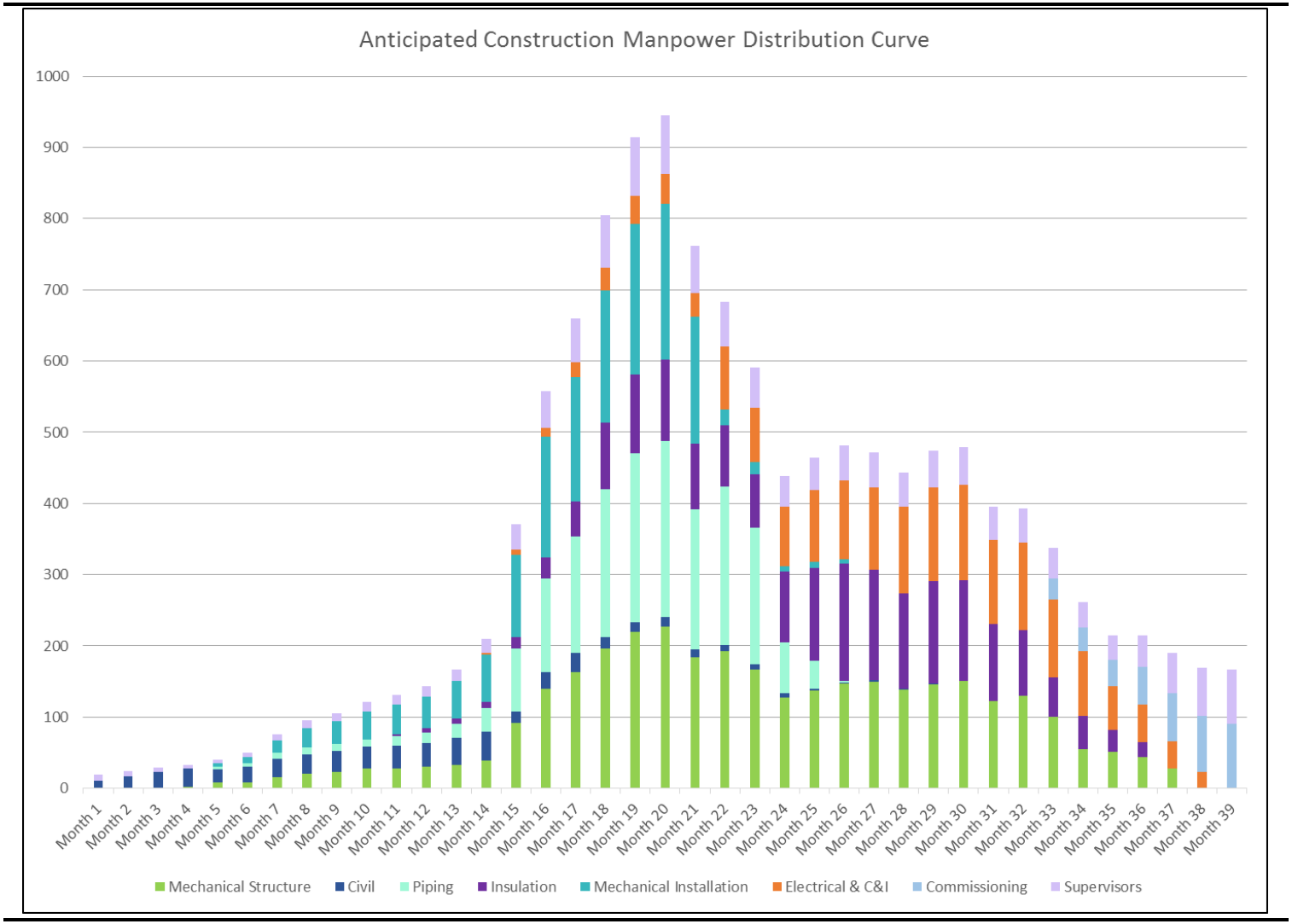
13.74 The wider area contains pools of construction workers (typically around 9% of economically active residents aged 15-74), as well as unemployed residents who are seeking employment. As such, very limited employment leakage (2) is anticipated. The English Partnerships Additionality Guidance presents

(1) Calculated by using total no of construction workers 13,124 for 39 Months divided by 12 - to ascertain no of workers per month - 1093.7. This has then been divided by 10 on the basis of ten years of construction worker jobs being equal to one FTE job, as per HM Treasury Guidance.
HM Treasury Guidance
(2) Leakage is the proportion of outputs/outcomes that benefit those outside the target area of the intervention

suggested leakage multipliers. Where, "*the majority of benefits will go to people living within the target area*", a leakage of 10% is suggested. Given the availability of workforce within the wider area of influence, this level of leakage is considered a likely maximum, resulting in leakage of up to approximately 11 FTE equivalent jobs.

13.75 Consequently, taking leakage into account, in Scenario One the Project is anticipated to generate 98 FTE equivalent employment opportunities during construction within the wider area, which is a medium magnitude impact. In the context of the readily available local labour supply of the wider area this is considered to equate to a beneficial effect of minor significance. This will still contribute to meeting Redcar and Cleveland's Core Strategy policy aspiration that the development of land at Wilton will support expansion and improvement of Redcar and Cleveland's economy.

Figure 13.8 Anticipated Construction Manpower Distribution Curve – Scenario 1



Construction Phase: Employment -Scenario Two – Two phases of development

13.76 It anticipated that construction of the Project for Scenario Two will require a divided construction period with construction separated into two periods separated by approximately five years. These construction periods will have durations of circa 39 months each and will require approximately 630 employees at each of their respective peaks. These are represented graphically below in *Figure 13.9.*

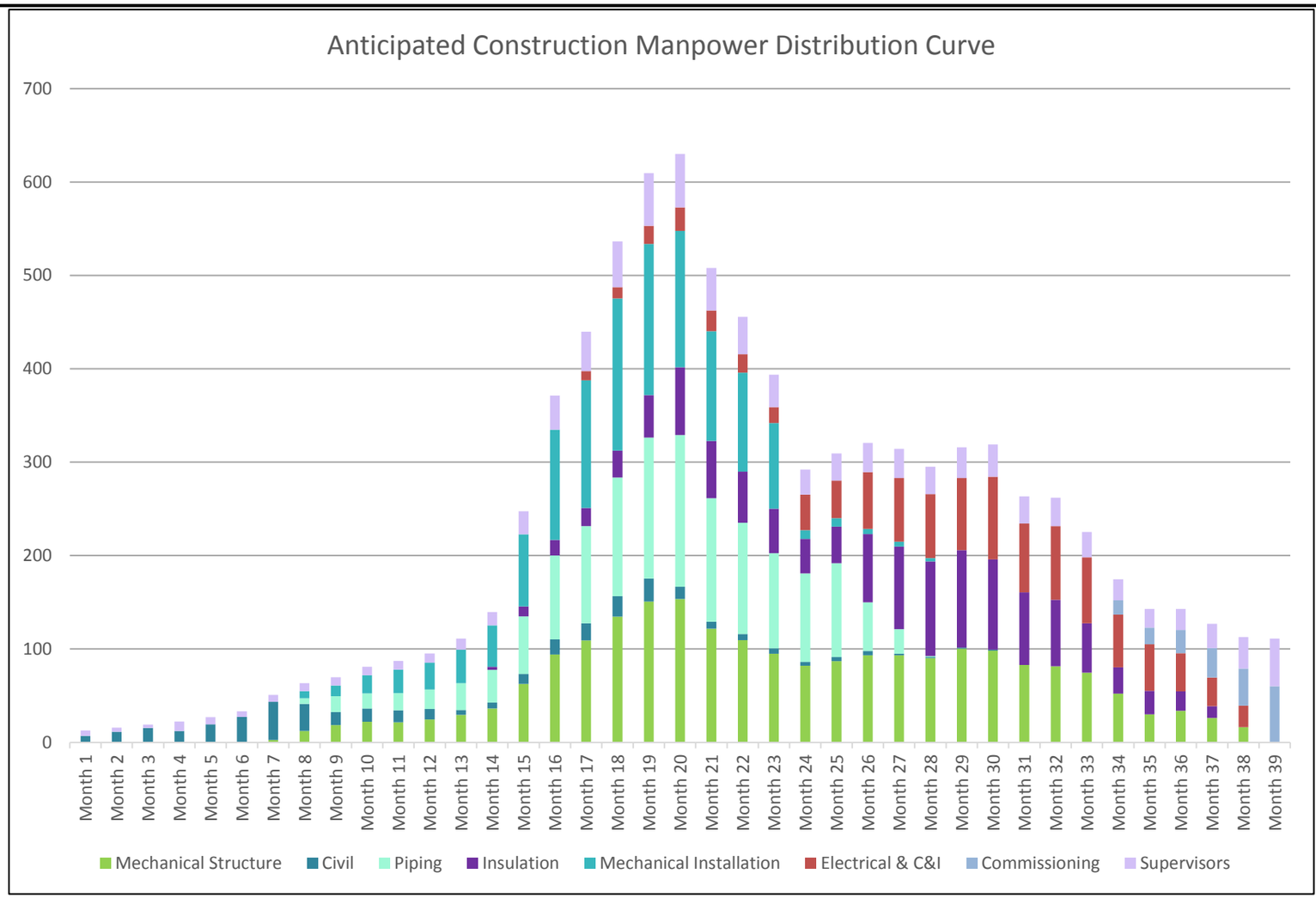
13.77 The two anticipated 39 months' worth of construction manpower generated by the Project is calculated as approximately 146 FTE jobs (1) over the total 78 months of construction activity.

13.78 The wider area contains pools of construction workers as well as unemployed residents who are seeking employment. As such, very limited employment leakage is anticipated. Given the availability of workforce within the wider area of influence, the level of leakage (10%) is considered a likely maximum, resulting in leakage of up to approximately 15 FTE equivalent jobs.

13.79 Consequently, taking leakage into account, in Scenario Two the Project is anticipated to generate 131 FTE equivalent employment opportunities during construction within the wider area, which is a medium magnitude impact. In the context of the readily available local labour supply of the wider area this is considered to equate to a beneficial effect of minor significance. This will still contribute to meeting Redcar and Cleveland's Core Strategy policy aspiration that the development of land at Wilton will support expansion and improvement of Redcar and Cleveland's economy.

(1) Calculated by using total no of construction workers 17498.4 for 78 Months divided by 12 - to ascertain no of workers per month - 1458.2. This has then been divided by 10 on the basis of ten years of construction worker jobs being equal to one FTE job, as per HM Treasury Guidance.

Figure 13.9 Anticipated Construction Manpower Distribution Curve – Scenario Two



Construction Phase Employment – Both Scenarios

13.80 For both scenarios, Sembcorp will ensure that its contractors provide training to their employees, as required, so that they are capable of undertaking the work safely and to high technical standard.

13.81 Whilst the Project does not have a specific area over which economic benefits will be targeted, Sembcorp, as a locally based company and operator, promotes local employment and procurement where possible. In the context of the Project, this is considered to be within the 'wider area of influence' which is defined by a 45 minute drive time from the site. Prior to commencement of construction, a 'Meet the Buyer' day will be held locally, providing an opportunity for links to be made between the principal contractor and the local supply chain.

13.82 Where possible, local procurement of personnel will be preferred throughout the construction period. The Teesside region has a skilled construction workforce pool and it is envisaged that this will be drawn upon so far as is practicable. Contractors and sub-contractors will be actively encouraged to adopt local procurement policies, to maximise the employment of local/regional personnel.

13.83 It is recognised, however, that a component of the workforce personnel required for the Project will be specialists who will be brought in as and when required during the construction period. These specialists will, in all likelihood, be existing employees who will not, therefore, constitute additional or new employment opportunities arising from the Project.

13.84 In general, greater localised economic benefit derives from sourcing services within the local community, benefiting the businesses and employment base sourced within the respective areas for site location and development. There exists, therefore, a potential positive impact on the local economy arising from the procurement of materials and services from local/regional businesses, where this can feasibly occur. Local personnel being employed also increases the subsequent spend going back into the local economy, directly benefiting the local economy further.

Construction Phase: Economic

13.85 The capital cost of the Project for both scenarios is estimated to be approximately £700 million. Although a significant proportion of the construction equipment, especially the more specialised equipment, will be supplied by companies outside the Study Area, certain raw materials and 'low-tech' materials will likely be procured locally. In addition, less technical services associated with construction activities will be sourced locally. The contribution to the local economy will be positive, with both direct and indirect spend occurring. The EPC contractor when appointed will be incentivised to procure locally / regionally to the extent this is practicable.

13.86 In addition, given the requirement for specialist personnel to be brought in, as required, the local economy should also benefit from the housing of such personnel within the local area, through rented accommodation or the use of local hotels/B&Bs. Services catering to these temporary personnel will also benefit, thereby ensuring additional spend will also accrue to the local economy, along with the associated benefits this brings.

13.87 Based on the proposed capital cost of the Project, and plans to source demand for raw/ low-tech goods and services locally, the impact of the Project on the local economy during the construction phases for both Scenarios is expected to be positive and of moderate significance. Although the impact during these periods will be short term (and temporary), the level of activity during these phases will be high.

Construction Phase: Demographic Effects and Disruption to Local Communities - Scenario One

13.88 While some in-migration to the local and wider areas of influence for employment opportunities is expected, principally for the highly skilled and/or niche construction or supervisory roles, the scale of this is not anticipated to be sufficient to affect the demographic characteristics of the local or wider areas of influence. No perceptible difference from baseline conditions is expected in relation to demand for housing, accommodation or local services during the construction phase in Scenario One, and therefore no additional provision of local services or infrastructure is required.

13.89 The Project is located at the site of a former power station, approximately 600 m at its closest point from the nearest residential receptor and in an area within an enterprise zone allocated for energy development . Temporary disruption to the local community and reduced amenity for directly affected properties may occur during construction, as a result of increased traffic, impact on air quality, dust and noise effects. These effects are not anticipated to be of greater than minor significance, (refer to *Chapter 7* Air Quality and *Chapter 8* Noise and Vibration for more detail). Appropriate management will be implemented to reduce disruption to the local community, through sensitive timing of construction activities and specific construction management plans, including a Construction Environment Management Plan ('CEMP') a draft of which is contained in *Annex L* and a Construction Traffic Management Plan ('TMP') a draft of which is contained in *Annex I2*.

Construction Phase: Demographic Effects and Disruption to Local Communities - Scenario Two

13.90 Under Scenario Two, both construction periods will result in some in-migration to the local and wider areas of influence for employment opportunities, principally for the highly skilled and/or niche construction or supervisory roles. Whilst under Scenario Two, two construction periods are proposed, they are not anticipated to be sufficient to affect the demographic characteristics of the local or wider areas of influence. As with Scenario One,

no perceptible difference from baseline conditions is expected in relation to demand for housing, accommodation or local services, and therefore no additional provision of local services or infrastructure is required.

13.91 As stated above, the Project is located at the site of a former power station, approximately 600 m at its closest point from the nearest residential receptor and in an enterprise zone allocated for energy development. Temporary disruption to the local community and reduced amenity for directly affected properties may occur during construction, as a result of increased traffic, impact on air quality, dust and noise effects. These effects are not anticipated to be of greater than minor significance, (refer to *Chapter 7* Air Quality and *Chapter 8* Noise and Vibration for more detail). Under Scenario Two the construction phase will be split over two periods and therefore these effects will be repeated at these nearby receptors; despite this these effects are not anticipated to of greater than minor significance.

13.92 Appropriate management will be implemented to reduce disruption to the local community, through sensitive timing of construction activities and specific construction management plans, including the a CEMP, a draft of which is contained within *Annex L* and a construction traffic management plant, a draft of which is contained within *Annex I2*.

Construction Phase: Safety – Both Scenarios

13.93 Sembcorp is committed to protecting the health and safety of its employees and the communities in which it operates, achieving this through effective implementation of its safety policies and procedures. Sembcorp operates a Safety, Health and Environment Quality management system and is currently seeking accreditation under ISO14001.

13.94 For both Project Scenarios, construction of the Project will not require the use of hazardous substances which necessitate particular safety management processes.

13.95 Fencing will be provided to discourage site access and egress and existing security protocols at Wilton International will be extended to cover the Project site.

13.96 There will be no significant effects on community safety.

13.4.3 Assessment of Effects during Operation

Operational Phase: Employment – Scenario One

13.97 For Scenario One, once operational, the Project is expected to employ approximately 60 skilled staff. It is envisaged that there will be opportunities for local recruitment of suitable mechanical and electrical maintenance technicians, as well as other non-skilled workers. Approximately 90 percent of the permanent jobs will require skilled tasks, for which the workers will be

recruited from both inside and outside the immediate study area. Where practicable, employees will be sourced from the local area.

13.98 However, the employment and economic benefits of operation of the Project are influenced by more than just the quantum of direct employment generation. A low level of leakage effects, as described above, is likely to occur. Displacement effects (where the proportion of outputs / outcomes that occur elsewhere within the target area (eg if the Project reduces existing activity from elsewhere within the target area)) are not anticipated to occur and the employment generated directly and indirectly by the Project is anticipated to all be net additional employment. *Table 13.8* sets out an operational employment leakage multiplier for the project. This multiplier was selected as the most appropriate from those presented within BIS Research to Improve the Assessment of Additionality (1), using the Capital Projects category which applies to projects relating to 'land reclamation and development in order to bring mostly vacant or derelict land back into economic use'. As sub regional multipliers are likely to be lower than the average, the figure used for this calculation is at the lower end of the scale and as regional figures are shown to be more consistent, the figure used for this is the mean regional multiplier.

Table 13.8 Operational Employment Multiplier

	Sub Regional Multiplier	Regional Multiplier
Leakage	0.000	0.104

13.99 Based on the multipliers in *Table 13.8,* employment loss through leakage has been calculated as being 6.2 jobs at the regional level. No leakage is anticipated at the sub regional level. This is presented in *Table 13.9* below.

Table 13.9 Employment Loss to Leakage

	Sub Regional	Regional
Leakage	0.000	6.2

13.100 For additional jobs arising from this direct employment an 'indirect' multiplier of 2.39, has been adopted as per Scottish Input-output tables for the electricity sector (2)(the use of Scottish Government input-output multipliers is accepted practice for economic assessment of activities in England, as no such multipliers exist specifically for England). For induced jobs an average multiplier of 0.83 has been adopted as per Scottish Input-output tables for the

(1) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191512/Research_to_improve_the_assessment_of_additionality.pdf

(2) Scottish Government, 2012, Input-Output tables, http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/InputOutput, website accessed 17/04/2017

electricity sector [1]. Based on direct generation of 60 jobs, the multiplier jobs have been calculated and presented in *Table 13.10.*

Table 13.10 Operational Employment Estimations

	Total
Direct Jobs	**60**
Indirect Multiplier Jobs	143.4
Induced Multiplier Jobs	49.8
Total Multiplier Jobs	**193.2**
Leakage and Displacement	-6.2
Total Estimated Net Jobs Gain within the sub region and region	**247**

13.101 Overall, during the operational phase for Scenario One, the Project is anticipated to result in net employment gain of approximately 247 jobs.

13.102 Given that these personnel will be sourced both locally and externally, the impact on local employment during operation is considered to be positive and significant. However the increased focus on skilled labour means the overall impact is assessed as minor/moderate.

Operational Phase: Employment – Scenario Two

13.103 For Scenario Two, the first train of up to 850 MWe will employ approximately 40 staff and when both trains are operational approximately 60 staff will be required.

13.104 As described above only low level of leakage effects are likely to occur. Displacement effects (where the proportion of outputs / outcomes that occur elsewhere within the target area (eg if the Project reduces existing activity from elsewhere within the target area)) are not anticipated to occur and the employment generated directly and indirectly by the Project is anticipated to all be net additional employment. *Table 13.8* above sets out an operational employment leakage multiplier for the project.

13.105 Based on the multipliers in *Table 13.9*, employment loss through leakage has been calculated as being four jobs for Stage 1 and two jobs for Stage 2 at the regional level. No leakage is anticipated at the sub regional level. This is presented in *Table 13.11* below.

(1) Scottish Government, 2012, Input-Output tables, http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/InputOutput, website accessed 17/04/2017

Table 13.11 Employment Loss to Leakage

	Sub Regional	Regional
Leakage for Stage 1	0.000	4.16
Leakage for Stage 2	0.000	2.08

For additional jobs arising from this direct employment an 'indirect' multiplier of 2.39, has been adopted as per Scottish Input-output tables (1) for the electricity sector (2). For induced jobs an average multiplier of 0.83 has been adopted as per Scottish Input-output tables for the electricity sector (3). Based on direct generation of 40 jobs during stage one of operation and an additional 20 jobs during stage two of operation, the multiplier jobs have been calculated and presented in *Table 13.12.*

Table 13.12 Operational Employment Estimations

	Stage 1 Total	Stage 2 Total
Direct Jobs	**40**	**20**
Indirect Multiplier Jobs	95.6	47.8
Induced Multiplier Jobs	33.2	16.6
Total Multiplier Jobs	**128.8**	**64.4**
Leakage and Displacement	-4.16	-2.08
Total Estimated Net Jobs Gain within the sub region and region	**164.64**	**82.32**

13.106 Overall, during the operational phase for Scenario Two, the Project is anticipated to result in net employment gain of approximately 247 jobs, with 165 jobs during stage one of operation and an additional 82 during stage two of operation.

13.107 Given that these personnel will be sourced both locally and externally, the impact on local employment during operation is considered to be positive and significant. However the increased focus on skilled labour means the overall impact is assessed as minor/moderate.

Operational Phase: Employment – Both Scenarios

13.108 The Project can be expected, under both scenarios, to provide up to a maximum of approximately 247 jobs in total employment. During the initial

(1) Adopted as having the best sector specificity.
(2) Scottish Government, 2012, Input-Output tables, http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/InputOutput, website accessed 17/04/2017
(3) Scottish Government, 2012, Input-Output tables, http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/InputOutput, website accessed 17/04/2017

stages of the socio-economic impact assessment, Sembcorp has yet to assess the level of current skills and training in the local community. Sembcorp acknowledges that it will be important for recruitment campaigns to reflect the skills set of the surrounding area and intends to work with the Redcar and Cleveland's Routes to Employment Service in order to maximise local opportunities.

13.109 The impact on employment during operation is considered to be positive and significant but the increased focus on skilled labour means the overall impact is assessed as minor/moderate. The operational employment impacts are expected to continue over the long term.

Operational Phase: Economic

13.110 The magnitude of direct investment associated with operation of the Project is currently unknown. This investment will generate both direct and indirect economic benefits, through increasing the spending power of suppliers to and employees of the Project.

13.111 During operation, general services such as mechanical and electrical repairs, maintenance and general supplies are expected to be supplied by predominantly local companies given the strong industrial presence in Teesside. If the servicing company is not locally based, there will nonetheless exist potential opportunities to source personnel locally. Sembcorp will develop a policy to manage tendering and sub-contracting for service and supply contracts.

13.112 There will also be requirements for cleaning, catering, security and general servicing of the Project. It is probable that many of these services will be provided locally, and Sembcorp will develop an appropriate policy in line with this goal. More specialised services, such as equipment maintenance, may be provided by non-local companies or by the original equipment manufacturer (OEM).

13.113 On the assumption that most of the employees of the Project will be locally based, it is assumed that a high proportion of annual salaries will be injected into the local economy.

13.114 An average GVA of £ 43,308 per job as typical for jobs within the North East Region has been adopted based on the Office for National Statistics latest (2015) nominal unsmoothed GVA data per filled job (1). From this, the total net GVA benefit from the Project as a result of the employment (247 jobs) generated is estimated to be approximately £ 10,697,076.00.

(1) https://www.nomisweb.co.uk/query/construct/submit.asp?forward=yes&menuopt=201&subcomp= Accessed 10/10/17

13.115 Wider economic effects are also anticipated. These arise from the Project's contribution to the security of energy supply which is essential to deliver economic prosperity in the region and country.

13.116 Given the readily available local workforce within the local and wider areas of influence, the operational economic benefits arising from the Project, in terms of direct and indirect investment and GVA from employment generation are anticipated to be medium magnitude and therefore minor significant beneficial effects on the economy are anticipated. This will further contribute to meeting Redcar and Cleveland's Growth Strategy aspiration for expansion of the Wilton Site and its contribution to the local economy.

Operational Phase: Demographic Effects and Disruption to Local Communities -Both Scenarios

13.117 While some in-migration for employment opportunities is expected for both scenarios, principally for the highly skilled and/or niche operational roles or supervisory roles, the scale of operational employment generation is not anticipated to be sufficient to affect the demographic characteristics of the local or wider areas of influence. No significant noise, air quality, dust and traffic impacts are anticipated. No perceptible difference from baseline conditions is therefore expected in relation to demand for housing, accommodation, local services, amenity or community disruption. No additional provision of local services or infrastructure is therefore required.

Operational Phase: Safety – Both Scenarios

13.118 No hazardous substances which necessitate particular safety management processes will be required have been identified in proximity to the Project site There are a number of sites registered under the Control of Major Accidents Hazards (COMAH) Regulations in proximity to the Project Site. The closest COMAH registered site is Ensus; their consultation zone is shown in *Figure 15.1*. As the Project is within their 'consultation zone'; they will be required to update their safety report although provisionally it is consider that the Project will not generate new risks for this facility.

13.119 Fencing will be provided to discourage site access and egress and existing security protocols at Wilton International will be extended to cover the Project Site. Further detailed assessment on disaster scenarios and mitigation required is detailed in *Chapter 15*: *Major Accidents and Disasters*.

13.4.4 Assessment of Effects during Decommissioning

13.120 This assessment assumes a scenario whereby decommissioning would require all components of the Project to be removed. The nature of socio-economic effects would therefore be similar to those anticipated during construction of Scenario One. However, the magnitude and therefore significance of socio-economic effects may be slightly less than those anticipated during construction due to the shorter duration and therefore intensity of decommissioning activities in comparison with construction. This rational is

justified as the process of decommissioning a power plant is significantly less intensive in terms of time and resources required. If a less intensive approach to decommissioning is used the employment and economic effects may be less than those reported here. Overall, minor beneficial effects would be anticipated during decommissioning for both Scenarios in relation to employment generation and economy. No significant demographic or safety effects are anticipated. Temporary disruption to the local community and reduced amenity for directly affected properties may occur during decommissioning, as a result of increased traffic, impact on air quality, dust and noise effects (refer to *Chapter 7* Air Quality and *Chapter 8* Noise and Vibration). These effects will be appropriately managed and no greater than negligible adverse effects are anticipated in respect of disruption to local communities and amenity.

13.4.5 Cumulative Effects

13.121 Cumulative effects on socio-economic characteristics have been scoped out (see *Table 13.1*).

13.4.6 Summary of Mitigation Measures and Residual Significance of Effects

General Considerations

13.122 The assessment seeks to identify suitable mitigation to reduce, remove or compensate for significant adverse effects. The Project is only anticipated to result in beneficial socio-economic effects. Where appropriate, therefore, opportunities to enhance beneficial effects have also been identified. These opportunities apply to construction, operation and decommissioning.

Economic and Employment Effects

13.123 Sembcorp has an established approach to engagement with local suppliers and creating a strong local supply chain. This will be developed further to help local companies win contracts associated with the Project, build skills and capabilities and grow local businesses to bring sustainable long term benefits to its local area.

13.124 Sembcorp will seek to facilitate apprenticeship and graduate opportunities associated with the Project during the construction, operational and decommissioning phases. This will contribute to development of engineering skills and promoting employment.

Disruption to Local Communities

13.125 A draft CEMP has been produced (*Annex L*), as has a draft CTMP (*Annex I2*) addressing matters such as traffic management and noise and air quality procedures to be adhered to. This will avoid or minimise disruption to the local community. The CEMP also details the communications plan and complaints mechanism. Compliance with such plans is anticipated to be

secured by DCO requirement and via Sembcorp contract with the main works contractor.

Safety

13.126 Appropriate emergency access routes and site security, including fencing, will be installed on site during construction and decommissioning. Construction and decommissioning activities will be managed in accordance with the relevant Health and Safety regulations and guidelines in force at the time.

13.127 During operation, Sembcorp will develop a site safety plan to regulate site activities to achieve a high safety standard. This will include regular training and safety inspections.

13.5 SUMMARY OF RESIDUAL EFFECTS

13.128 *Table 13.13* presents the socio-economic residual effect summary.

Table 13.13 Summary of Residual Effects

Topic	Scenario One	Scenario Two
Construction Phase: Employment	Overall, the Project is anticipated to generate 98 FTE equivalent employment opportunities during construction within the wider area, which is a medium magnitude effect. In the context of the readily available local labour supply of the wider area this is considered to equate to a **beneficial effect of minor significance**.	Overall, the Project is anticipated to generate 131 FTE equivalent employment opportunities during construction within the wider area, which is a medium magnitude effect. In the context of the readily available local labour supply of the wider area this is considered to equate to a **beneficial effect of minor significance**.
Construction Phase: Economic	Based on the proposed capital cost of the Project, and plans to source demand for raw/ low-tech goods and services locally, the impact of the Project on the local economy during the construction phases during both Scenarios is expected to be **positive and of moderate significance**.	Based on the proposed capital cost of the Project, and plans to source demand for raw/ low-tech goods and services locally, the impact of the Project on the local economy during the construction phases during both Scenarios is expected to be **positive and of moderate significance**.
Construction Phase: Demographic Effects and Disruption to Local Communities	The Project is located at the site of a former power station, approximately 600 m at its closest point from the nearest residential receptor. Temporary disruption to the local community and reduced amenity for directly affected properties may occur during construction, as a result of increased traffic, air quality, dust and noise effects. These effects are not anticipated to be of greater than **minor significance**.	As stated above, the Project is located at the site of a former power station, approximately 600 m at its closest point from the nearest residential receptor. Temporary disruption to the local community and reduced amenity for directly affected properties may occur during construction, as a result of increased traffic, air quality, dust and noise effects. Under Scenario Two the construction phase will be split over two periods and therefore these effects will be repeated at these nearby receptors, despite this these effects are not anticipated to be of greater than **minor significance**.
Construction Phase: Safety	For both Project Scenarios, construction of the Project will not require the use of hazardous substances which necessitate particular safety management processes, such as COMAH, and safety zone restrictions are not required. Fencing will be provided to discourage site access and egress and existing security protocols at Wilton International will be extended to cover the Project site. These effects are of **negligible significance**.	For both Project Scenarios, construction of the Project will not require the use of hazardous substances which necessitate particular safety management processes, such as COMAH, and safety zone restrictions are not required. Fencing will be provided to discourage site access and egress and existing security protocols at Wilton International will be extended to cover the Project site. These effects are of **negligible significance**.
Operational Phase: Employment	Overall, during the operational phase for Scenario One, the Project is anticipated to result in net employment gain of approximately 247 jobs. Given that these personnel will be sourced both locally and	Overall, during the operational phase for Scenario Two, the Project is anticipated to result in net employment gain of approximately 247 jobs, with 165 jobs during stage one of operation and an additional 82 during stage two of operation.

Topic	Scenario One	Scenario Two
	externally, the impact on local employment during operation is considered to be positive and significant. However the increased focus on skilled labour means the overall impact is assessed as **minor/moderate significance.**	Given that these personnel will be sourced both locally and externally, the impact on local employment during operation is considered to be positive and significant. However the increased focus on skilled labour means the overall impact is assessed **minor/moderate significance.**
Operational Phase: Economic	The total net GVA benefit from the Project as a result of the employment generated is estimated to be approximately £10,697,076.00. Within the low sensitivity context of the local and wider areas, the operational economic benefits arising from the Project, in terms of direct and indirect investment and GVA from employment generation are anticipated to be medium magnitude and therefore **minor significant beneficial effects** on the economy are anticipated.	The total net GVA benefit from the Project as a result of the employment generated is estimated to be approximately £10,697,076.00. Within the low sensitivity context of the local and wider areas, the operational economic benefits arising from the Project, in terms of direct and indirect investment and GVA from employment generation are anticipated to be medium magnitude and therefore **minor significant beneficial effects** on the economy are anticipated.
Operational Phase: Demographic Effects and Disruption to Local Communities	While some immigration for employment opportunities is expected for both scenarios, principally for the highly skilled and/or niche operational roles or supervisory roles, the scale of operational employment generation is not anticipated to be sufficient to affect the demographic characteristics of the local or wider areas of influence, and no significant noise, air quality, dust and traffic impacts are anticipated. The effect is therefore **negligible.**	While some immigration for employment opportunities is expected for both scenarios, principally for the highly skilled and/or niche operational roles or supervisory roles, the scale of operational employment generation is not anticipated to be sufficient to affect the demographic characteristics of the local or wider areas of influence, and no significant noise, air quality, dust and traffic impacts are anticipated. The effect is therefore **negligible.**
Operational Phase: Safety	As during construction, no safety zone restrictions or hazardous substances which necessitate particular safety management processes will be required. Fencing will be provided to discourage site access and egress and existing security protocols at Wilton International will be extended to cover the Project Site. These effects are of **negligible significance**.	As during construction, no safety zone restrictions or hazardous substances which necessitate particular safety management processes will be required. Fencing will be provided to discourage site access and egress and existing security protocols at Wilton International will be extended to cover the Project Site. These effects are of **negligible significance**.

13.6 CONCLUSIONS

13.129 The Project is located within the Tees Valley Enterprise Zone allocated for energy use (refer to Section *13.1.4*) and on a site with a history of being used for energy generation. The local and wider areas contain a resident population with experienced construction workers and unemployed residents for whom employment generation may provide welcome opportunities. The economic, demographic, skills and education and industrial characteristics of the local and wider areas of influence are broadly similar.

13.130 During construction, the Project is anticipated to result in direct investment of £700 million and employment for 98 FTE jobs spread over the construction period for Scenario One and employment for 131 FTE jobs spread over the construction period for Scenario Two. This will bring both direct economic and employment benefits and additional benefits arising from indirect and induced expenditure by suppliers and employees of the Project. Beneficial employment and economic effects of minor significance are anticipated during construction. Through this, the Project will contribute to meeting Redcar and Cleveland's Core Strategy policy aspiration that developments at Wilton will act as drivers of the Tees Valley economy. Sembcorp's approach to supporting local suppliers and promoting apprenticeships, training and employment of graduates will contribute to enhancing these benefits.

13.131 Temporary disruption to the local community and reduced amenity for directly affected properties may occur during construction of both Project Scenarios as a result of increased traffic, air quality, dust and noise effects. These effects will be appropriately managed through tailored management plans; on the basis of their proper implementation no significant adverse effects are anticipated in respect of disruption to local communities and amenity.

13.132 During operation, the Project is expected to generate 247 FTE jobs (60 as a direct result of the Project and approximately 187 jobs within the local economy), bringing economic benefits through direct and indirect investment in the local, regional and national economy. In turn this will contribute towards the Tees Valley Economic Strategy which aims to create 25,000 additional jobs and attract investment of £2.8 billion into the Tees Valley economy. Minor beneficial employment and economic effects are anticipated during operation.

13.133 More broadly, operation of the Project will contribute to security of energy supply across the UK, supporting the economic and social activities which depend on a reliable, available and economic source of energy.

13.134 Due to uncertainty over the methods to be used, it is not possible at this stage of the Project to estimate employment and investment figures associated with decommissioning. This assessment assumes a scenario whereby all components of the Project would be removed during decommissioning. Overall, minor beneficial effects would be anticipated during

decommissioning in relation to employment generation and economy; however significance of these effects could be reduced if a less intensive approach to decommissioning is adopted. These effects would be enhanced through Sembcorp's continued commitment to supporting local suppliers and promoting apprenticeships, training and employment of graduates. Temporary disruption to the local community may occur during decommissioning, which will be appropriately managed and no significant adverse effects are anticipated in respect of disruption to local communities and amenity.

13.135 In overall terms, the socio-economic benefits reflect the policy ambitions of the National Policy Statement EN-1.