13 OTHER ENVIRONMENTAL EFFECTS

13.1 Introduction

13.1.1 A scoping report was submitted to Redcar and Cleveland Borough Council in April 2020 for the proposed Redcar Energy Centre (see Appendix 4.1). The scoping process confirmed that the key areas required to be considered within the Environmental Statement (ES) are:

- Landscape and Visual Resources (Chapter 6);
- Ecology and Ornithology (Chapter 7);
- Hydrology and Flood Risk (Chapter 8);
- Geology, Hydrogeology andContamination (Chapter 9);
- Traffic and Transport (Chapter 10);
- Air Quality (Chapter 11);
- Noise and Vibration (Chapter 12);

13.1.2 This chapter of the ES provides an overview of the topic areas for which significant effects are not considered likely in terms of the Environmental Impact Assessment (EIA) Regulations, including details of the reasons which effects in relation to these topic areas were scoped out of the assessment and details of supporting information, where appropriate.

13.2 Land Use, Agriculture and Recreation

13.2.1 The Application Site is located within Redcar Bulk Terminal and comprises predominantly open land which has been used for the storage of materials from the terminal. All construction and operational activities of the REC would take place within the red line boundary and would not lead to the loss of agricultural land and therefore, this topic has been scoped out.

13.2.2 There are no Public Rights of Way (PRoW) or public access within or adjacent to the Application Site. The nearest PRoW is the Teesdale Way located approximately 175 metres to the north of the Application Site. This PRoW provides access to South Gare Lighthouse via the South Gare Breakwater and Tod Point Road and is well-used by dog walkers and visitors to the lighthouse. There would be no direct effects on the PRoW as a result of the proposed development given that the PRoW is not adjacent to the Application Site. This conclusion was confirmed by the PRoW Officer in their response to the scoping report.

13.2.3 The proposed development is likely to be visible from the Teesdale Way PRoW, however due to the location of the Application Site within an industrial area, effects are not likely to be significant. Visual effects on the PRoW are assessed in Chapter 6: Landscape and Visual Assessment which confirms this conclusion.

13.2.4 The proposed development would not result in the loss or diversion of any recreation facilities.

13.3 Historic Environment

13.3.1 There are no Scheduled Monuments or Listed Buildings located within or adjacent to the Application Site. The nearest listed buildings are located approximately 2.2 km to the north and 2.2 km to south east of the Application Site. The buildings to the south east comprise three Grade II listed buildings at the same location: Marsh Farmhouse and Farm Cottage, Barn and Stable, and

Garden Wall. A further Grade II listed building - South Gare Lighthouse - is situated on the headland to the north of the Application Site.

13.3.2 The Application Site does not contribute to the setting or significance of any designated asset outside of its boundary and therefore, the proposed development will not impact upon the significance of any designated heritage assets.

13.3.3 The proposed development is located on a brownfield site which has previously been used for storage for the bulk shipping terminal nearby. Due to the Application Site's recent development history, the likelihood of any buried remains being present beneath the site is low.

13.3.4 Considering the historic environment baseline, it is not likely that the proposed development would result in significant effects in terms of historic assets or buried archaeology. Therefore, it is proposed that the historic environment is scoped out of the ES. This approach was agreed by the Natural Heritage Manager in his scoping response.

13.3.5 A Historic Desk Based Assessment (DBA) outlining the baseline environment and the likely potential for buried archaeology has been undertaken and is included as Appendix 13.1. The HER records the line of a former 19th century tramway crossing the Application Site. However, following further land reclamation work and redevelopment of the Application Site and adjacent land in the 1970s, any archaeological evidence for this locally-important feature has been removed.

13.3.6 The assessment has also considered the potential for other, as-yet undiscovered, archaeological assets within the Application Site. Based on the HER data for the surrounding study area, and its historic topographical location on tidal mudflats at the mouth of the River Tees, the Application Site is considered to have negligible potential for additional archaeological assets.

13.3.7 Ground levels within the Application Site and surrounding area have also been raised through land reclamation and industrial development throughout the 20th century, and most particularly for development of the Teesside Works in the 1970s. The proposed development would not affect any heritage assets. No further archaeological measures are considered necessary as part of the proposed development.

13.4 Socio-economics and Community

13.4.1 At the peak of construction, approximately 450 people may work at the Application Site. During operation, the REC would employ up to 100 full time equivalent employees comprising operation and maintenance staff, clerical and administrative staff and plant management. The ERF plant operations and maintenance staff would be employed within up to five shift teams. In addition, approximately 100 additional contractors will be temporarily employed during the planned annual shutdowns.

13.4.2 Given the temporary nature of the construction phase and the numbers of predicted employees during the operation phase, no additional pressures are envisaged on housing and on existing community facilities and significant effects are unlikely to occur. The Request for a Scoping Opinion (Appendix 4.1) proposed that a topic chapter for socio-economics and community should be scoped out of the ES. No objections were raised to this approach in the Scoping Opinion (Appendix 4.1).

13.5 Human Health

13.5.1 The Application Site is located within an existing industrial area and is over 2km from the nearest residential property.

13.5.2 Consideration has been given to the potential health pathways associated with the proposed development. The following potential health effects have been identified:

- Changes to local air quality during construction (dust); and
- Changes in traffic flows, noise levels and air quality during construction and operation.

13.5.3 Exposure to dust during construction has been considered in Chapter 11 (Air Quality) of this ES. The dust assessment concluded that with the implementation of the Institute of Air Quality Management (IAQM) highly recommended dust controls, the residual dust impacts would be not significant. The increase in traffic numbers as a result of the proposed development have been predicted in Appendix 10.1: Transport Assessment and the environmental impacts associated with these changes in traffic have been assessed in Chapter 10: Traffic and Transport. The chapter concluded that the sensitivities of receptors to traffic were considered to be low or negligible and the level of effects were predicted to be negligible adverse.

13.5.4 Some employment would be generated by the proposed development during construction and operation, however, it is not anticipated that the net increase in jobs would be sufficient to generate significant health effects.

13.5.5 Chapter 11: Air Quality also includes an assessment of the stack emissions from the proposed development through detailed dispersion modelling using best practice approaches. The results of dispersion modelling reported in this assessment indicate that predicted contributions and resultant environmental concentrations of all pollutants considered would be of “negligible” significance.

13.5.6 The main dust mitigation measure is containment. Taking into account the fact that the processes would be largely contained, and the distance to sensitive receptors, the risk of dust impacts during operation is predicted to be not significant based on professional judgement.

13.5.7 Exposure to changes in noise levels have been assessed in Chapter 12 (Noise and Vibration) of this ES in terms of noise generated during the operation of the REC and from operationally generated traffic. The nearest residential noise sensitive receptors (NSRs) are located approximately 2.3 km to the south east of the proposed Redcar Energy Centre (REC), at Marsh Farm. Operational road traffic movements on the public highway are negligible compared to baseline and there would be no change in road traffic noise levels and as such no adverse impact at residential NSRs.

13.5.8 Noise from operation of the REC at the nearest residential dwellings, 2.3 km to the south-east, would be of a very low magnitude and would not be likely to be audible/discernible above the baseline acoustic environment externally, or internally within dwellings.

13.5.9 On this basis, a separate assessment of health impacts associated with these pathways is not considered necessary within this ES. Given the nature of the proposed development and the lack of any additional health pathways likely to result in significant effects, a separate health assessment in the form of an additional chapter or Health Impact Assessment is not considered necessary and has been scoped out of the ES.

13.5.10 The Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES) agrees with the proposed approach to scope human health out of the ES and that a separate chapter for human health is not necessary.

13.6 Climate Change

Climate Change Resilience

13.6.1 Resilience to future climate change has been considered during the design process and this would continue during the detailed design stage. The design of the proposed development has taken into account potential future climate change scenarios, for example, future flood risk and resilience to extreme weather events. The conceptual surface water drainage strategy for the proposed development (Appendix 8.2) has been designed to take flood risk into account, with an allowance for climate change. The ES sets out details of the proposed development's resilience to climate change in Chapter 2: Project Description and Chapter 8:Hydrology and Flood Risk of the ES.

Climate Change: Changes to Future Environmental Conditions

13.6.2 Consideration of predicted changes in baseline environmental conditions, including changes resulting from climate change, are set out within each ES topic chapter (Chapters 6 to 12), where robust information is available at the time of writing.

13.6.3 This has been based on the information available from the UK Climate Projections project (UKCP18), which provides information on plausible changes in the climate for the UK (Environment Agency and Met Office, 2018) and on published documents such as the UK Climate Change Risk Assessment 2017 (Committee on Climate Change, 2016).

13.6.4 Climate data from the UKCP18 database has been used to compiled for a 25 km^2 grid square containing the site, based on a medium emissions scenario. Mean air temperature and annual average precipitation data for the period 2020 to 2079 have been used to inform the consideration of how environmental conditions may change at the Application Site and in future.

13.6.5 The assessment of effects for each topic takes into account identified trends or changes predicted to arise as a result of climate change.

Effects of the Project on Climate Change

13.6.6 Greenhouse gas emissions can occur throughout the lifecycle of a development, including during construction and operation of a proposed development. This can be affected by factors such as material use and energy demand.

13.6.7 The design of the proposed development has given consideration to measures to minimise and to control energy demand and improve energy efficiency where possible. Energy and water efficiency would be a priority for the delivery of the facilities. .

13.6.8 No further assessment of greenhouse gas emissions is considered necessary or appropriate at this stage.

13.6.9 Taking into account the above approach, it is not considered that a separate chapter on climate change is required to form part of the ES. This approach has been agreed with Redcar and Cleveland Borough Council through the Scoping Opinion (Appendix 4.1).

13.7 Daylight, Sunlight and Microclimate

13.7.1 All the proposed works for the proposed development will be undertaken within the boundaries of the Application Site. Due to the location of the proposed works and the nature of the surrounding land use it is not considered likely that the proposed development will have significant effects in

relation to daylight and sunlight. In addition, the nature of the proposed development is not likely to result in microclimate changes and therefore this topic is also scoped out of the assessment. This approach is in line with the Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES).

13.8 Material Assets

13.8.1 The EIA Regulations refer to 'material assets', including architectural and archaeological heritage. The phrase 'material assets' has a broad scope, which may include assets of human or natural origin, valued for socio-economic or heritage reasons. Material assets are in practice considered across a range of topic areas within an ES, in particular the socio-economic and historic environment chapters. These topics have been scoped out of the assessment as significant effects are not considered likely (outlined above), therefore a separate chapter on material assets is proposed to be scoped out of the assessment. This approach is in line with the Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES).

13.9 Major Accidents and Disasters

13.9.1 The EIA regulations require consideration of vulnerability to major accidents and/or disasters. The risk of major accidents and disasters has been considered in Chapter 2: Project Description. Furthermore, each topic chapter has assessed the likely environmental effects related to a major accident or disaster which could occur from that particular discipline. Therefore, a separate chapter assessing the risk of major accidents and disasters is not considered necessary. This approach is in line with the Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES).

13.10 Residues and Emissions

13.10.1 The generation and management of flue gas treatment residue is described in Chapter 2: Project Description of the ES. No other residues will be generated by the proposed development. Stack emissions are described in Chapter 11: Air Quality and will be managed through the Environmental Permit. On this basis, a separate chapter is considered unnecessary. This approach is in line with the Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES).

13.11 Waste

13.11.1 Wastes generated from the construction of the proposed development will be managed through a Site Waste Management Plan that will be prepared post consent. IBA generated from the operation of the proposed development will be recycled at the on-site facility and will be managed through Environmental Permit along with other operational wastes. A summary of the construction and operational wastes will be provided in the Project Description chapter of the ES. No significant effects are envisaged and therefore, a separate chapter is considered unnecessary. This approach is in line with the Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES).

13.12 Radiation and Heat

13.12.1 Given the nature of the proposed development, no significant radiation or heat effects are anticipated, and these effects have been scoped out of the assessment. This approach is in line with the Scoping Opinion from Redcar and Cleveland Borough Council (see Appendix 4.1 of the ES).