TEESWORKS

DORMAN POINT ENVIRONMENTAL STATEMENT

VOLUME 2: CHAPTER B
SITE DESCRIPTION AND SCHEME PROPOSALS

DECEMBER 2020

Dorman Point, South Tees
Volume 2: Environmental Statement (December 2020)
Chapter B: Site Description and Scheme Proposals

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19224706v1

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B1.0 Introduction

B1.1 This Environmental Statement ('ES') Chapter describes the site and its relationship to the wider South Tees Development Corporation Area ('STDC') area (hereafter referred to as the 'Teesworks area'), sets out the background to the proposals, provides a description of the development, explains the scheme assumptions that have formed the basis of this Environmental Impact Assessment ('EIA'), and considers the design rationale underpinning the proposals, providing an indication as to why alternative schemes have not been taken forward.

B1.2 This chapter is structured as follows:

- **Section B2.0:** provides a description of the site;
- **Section B3.0:** provides a description of the site's location and surroundings within the Teesworks area;
- **Section B4.0:** provides information on the background to the development;
- **Section B5.0:** sets out the planning policy context relevant to the development of the site and assessment of environmental effects;
- **Section B6.0:** provides a description of the proposed development;
- **Section B7.0:** summarises the construction methodology that has been used as the basis for identifying potential environmental effects during the construction period within technical chapters of the ES;
- **Section B8.0:** summarises the 'embedded' primary and tertiary mitigation;
- **Section B9.0:** discusses the design evolution and alternatives considered to the proposed development including a consideration of their potential environmental effects. Consideration is also given to the 'no development scenario';
- **Section B10.0:** provides abbreviations; and
- **Section B11.0:** sets out the references included within the chapter.

B1.3 This chapter is supported by the following Appendices:

1 **Appendix B1**: Existing on-site Infrastructure;

2 **Appendix B2**: Sensitive Receptors Plan; and

3 **Appendix B3**: Planning Drawings, including Parameters Plan and Indicative Arrangement Plan.

About the Author

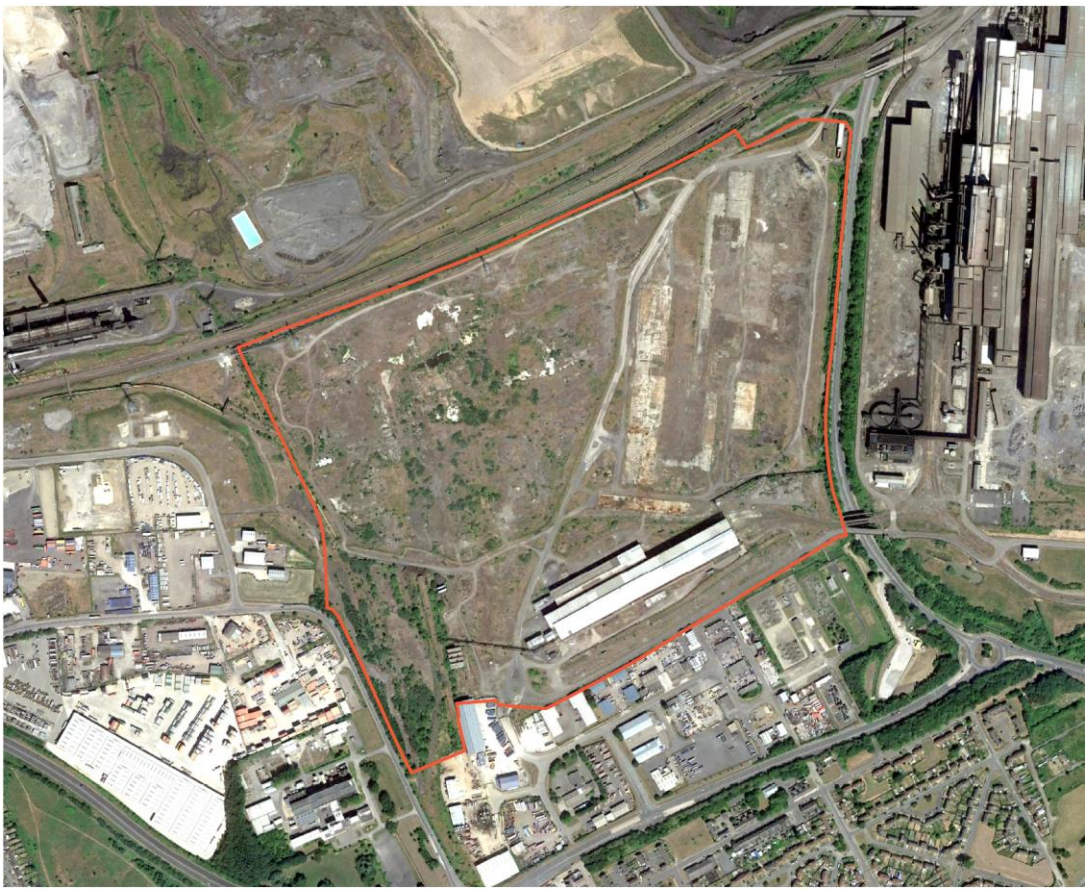
B1.4 This ES has been coordinated by Katie Brown, Heather Overhead and Melissa Wilson all Senior Planners at Lichfields. Katie is a Practitioner Member of the Institute of Environmental Management and Assessment ('IEMA') and has 3 years experience in co-ordinating EIAs for a range of major development projects across the United Kingdom ('UK'). Heather is working towards her EIA Practitioner membership of IEMA and has 1 year of experience in EIA projects. Melissa is working towards her EIA Practitioner membership of IEMA and has 2 years of experience in EIA projects. Their coordination role included the production of this chapter of the ES. Kate McGill, Associate Director at Lichfields, and Practitioner Member of IEMA, has reviewed this chapter in accordance with the EIA Regulation requirements. Kate has over 10 years of experience of co-ordinating EIAs for a range of development projects.

B1.5 All involved in the coordination of this ES are also Chartered Planners of the Royal Town Planning Institute ('RTPI').

B2.0 Site Description

B2.1 This section provides a description of the site's characteristics. It is supported by figures and appendices to aid the understanding of the site.

Figure B2.1 Development Site



Development Site

B2.2 The development site is 57.8ha in size and comprises brownfield industrial land.

B2.3 The development site is rectangular in shape and is defined by the existing surrounding infrastructure. The site has previously been used in iron and steel making and was occupied by buildings associated with the Cleveland Iron and Steel Works.

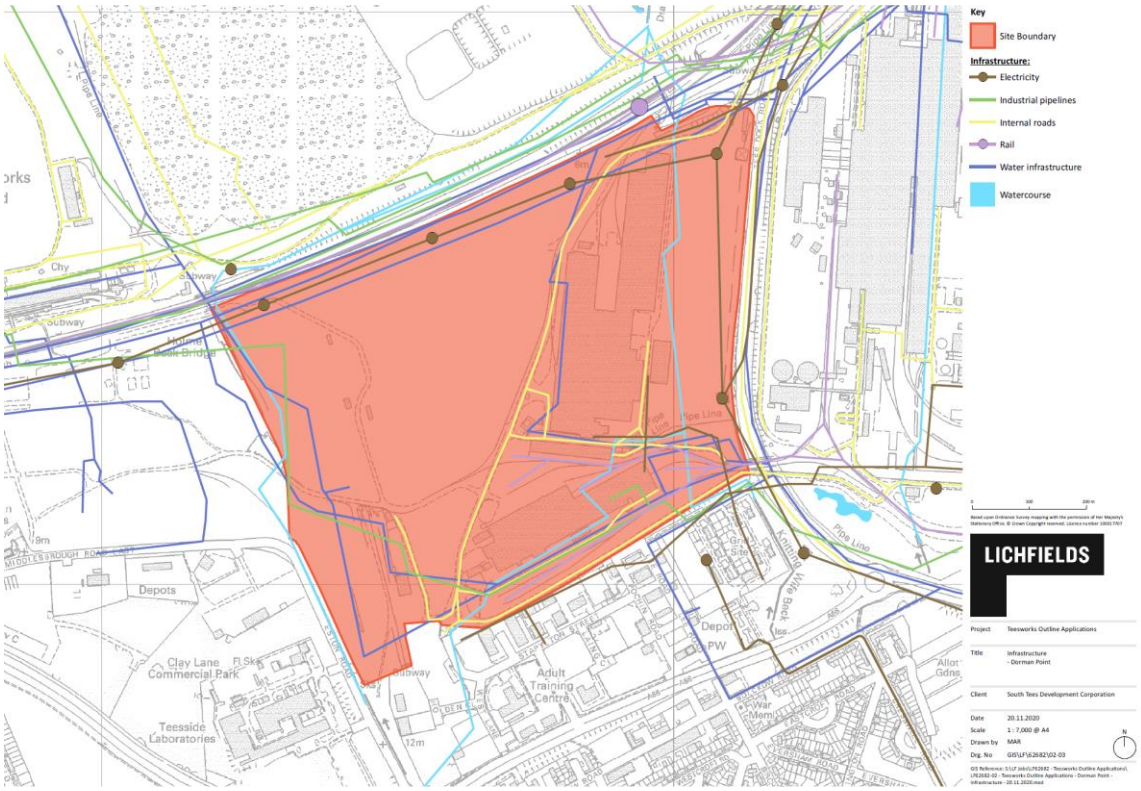
B2.4 Most of the site is free from built structures, however, the former Torpedo Ladle Workshop is located in the southern part of the site. A redundant railway embankment of approximately 15m in height runs in a north-south direction in the south western part of the site[1]. Aside from the former workshop building, most of the ground cover is a mixture of hardstanding and patchy scrub and grasses, and there are some relatively small pools of standing water in the central northern part of the site.

[1] Planning permission (Ref R2020/0318/FFM) gives permission for the railway embankment to be removed

B2.5 The topography of the site is flat although there is gentle slope downwards from to the west and north, with typical ground levels ranging from approximately 13m above ordnance datum ('AOD') to 8m AOD.

B2.6 Figure B2.2 below depicts existing on-site infrastructure. Full versions of the individual components of this map are also included at **Appendix B1**. Much of this is associated either with the previous industrial uses on site or the wider industries within the surrounding Teesworks area.

Figure B2.2 On Site Infrastructure



B2.7 An internal private road network exists across the whole Teesworks area and some of these roads are located within the development site. These include a road running in a north-east to south-west direction connecting to Tees Dock Road in the north east corner and to the roads around the Bolckow Industrial Estate in the south west via the former Bessemer Gate. These roads are not to adoptable standards.

B2.8 Historically a freight rail network operated across the Teesworks area, parts of which are still operational. The former Hot Metal Transfer Railway extends into the southern part of the site, both to the north and south of the Former Torpedo Ladle Workshop building.

B2.9 National grid electricity infrastructure is present throughout the Teesworks area, and specifically, the site contains five electricity pylons and associated overhead electricity lines running along the north western and eastern edges of the site. An electricity substation is present in the north eastern corner of the site and a power transmission line is also present under the south eastern part of the site.

B2.10 A number of watercourses are present across the Teesworks area. In relation to the site, the Holme Beck runs in a north west-south east direction along the western edge, with the southern end being open, and the remainder culverted underground. The Knitting Wife Beck runs in a north-south direction across the eastern side of the site via an underground culvert. A cross

connector, which links the two becks, also via an underground culvert, is present in places under the site at its southern extent.

B2.11 The Teesworks area contains a network of critical industrial utility infrastructure, which is shown on the above figure (in green) and at **Appendix B1**. The now redundant Coke Ovens Gas Main ('COGM'), is present above ground on the southern and western parts of the site which contains hazardous material and is controlled under a nitrogen blanket to prevent ignition.

B2.12 The Teesworks area contains various water infrastructure as shown above in Figure B2.2 (dark blue) and in full in **Appendix B1**. Water infrastructure present on the site comprises:

- Potable water supply pipes cross the central part of the site in a north-east to south-west direct and cross the southern part of the site in a north-west to south-east direction;
- Industrial Water Mains are present under the southern and western parts of the site; and
- A municipal sewer transfer main crosses under the northern part of the site in an east west direction.

B2.13 The site is located within Flood Zone 1 and is therefore land assessed by the Environment Agency ('EA') as having less than 1 in 1,000 annual probability of river or sea flooding.

B2.14 There are no designated heritage assets within the site and it does not contribute to the setting of any listed building.

B2.15 The site is not within an Air Quality Management Area ('AQMA').

B2.16 There are no designated ecological sites within the application site.

B2.17 The Teesdale Way Public Right of Way ('PROW') runs alongside the Darlington to Saltburn Railway line, just within the northern extent of the site. There are no other PROWs within the site.

B3.0 Site Location and Surroundings

B3.1 This section of the chapter provides details on the site's location and surroundings. It concludes by summarising the sensitive receptors for the EIA.

Site Location

B3.2 The site is located within the south east of the Teesworks area which is an industrial area. It lies approximately 4.8km east of Middlesbrough town centre and 4.8km south west of Redcar town centre and is approximately 1.5km south east of the River Tees.

B3.3 It is located in the south western part of the Teesworks area and lies between the 'Lackenby' area and the South Tees Freight Park. It is immediately north west of the Bolckow Industrial Estate and is to the south of the Darlington to Saltburn Railway line beyond which is the South Bank Zone and the Landfill and Waste Management Facilities area as identified in the STDC Master Plan.

B3.4 The site is immediately bounded by:

- Tees Dock Road to the east;
- Existing development in the Bolckow Industrial Estate to the south east;
- Eston Road and open vacant industrial land to the west; and
- The Darlington to Saltburn Railway line to the north west.

B3.5 The site's location and its surroundings are shown on Figure B3.1 below. A Site Location Plan is included at **Appendix A1** of this ES.

Surroundings

B3.6 An aerial photograph of the site and its wider surroundings is provided below (Figure B3.1).

Figure B3.1 Site and Surroundings

B3.7 As set out above in paragraph B3.4, the Darlington to Saltburn Railway line is immediately north west of the site. Beyond this, to the north of the site is the area known as Southbank which is brownfield industrial land with a frontage to the River Tees. It has previously been used by iron and steel industries and has also been used for the storage of materials and freight rail infrastructure. To the north east of the South Bank area is Teesport, which is operated by PD Ports and is one of the largest ports in the UK.

B3.8 To the west of the site is the South Tees Freight Park and an industrial estate. To the south east of the site is the Bolckow Industrial Estate and beyond this is the A66 and the residential area of Grangetown. To the south west of the site, on the other side of the A1085 Trunk Road is the Wilton International Complex, which is a 769ha area of national importance for process industry manufacturing.

B3.9 To the east of the site is the area known as Lackenby which is occupied by a number of vacant buildings formerly used as the SSI basic oxygen steel ('BOS') and continuous casting ('CONCAST') steelmaking facilities. Beyond this is the British Steel area on which the operational Teesside Beam Mill is located alongside a large amount of associated land used for the external storage of products.

B3.10 Other operations and operators within the Teesworks area include Redcar Bulk Terminal, Tarmac and Sembcorp.

Access and Connectivity

B3.11 The development site is directly connected to the public road network via the spur road at the junction of West Lane and Stapylton Street, which enters the site in the south west. This was formerly the 'Bessemer Gate' entrance, which is currently closed by way of a barrier. The site is also located directly to the east of Eston Road and directly to the west of Tees Dock Road. These roads provide connectivity to the wider local road network via the A66, the A1053 and A1085. The A66 provides direct links into the strategic road network via the A19 and A1M.

B3.12 The A66 links to Middlesbrough, Stockton-on-Tees and Darlington to the west, and joins the A1085 trunk road which links to Redcar to the east. The A19 links to Hartlepool, Peterlee and Sunderland to the north, and to Thirsk and York to the south. The A19 and A1(M) provide north-south links into the strategic road network.

B3.13 Darlington Station is located 25.8km to the south west. The station is on the East Coast Mainline which provides north-south rail links to London Kings Cross and to Durham, Newcastle and beyond. Darlington Station is connected directly to the Teesworks area via the Tees Valley line which connects Darlington to Saltburn. There are three stations on this rail line within the Teesworks area; Grangetown station directly to the north of the site which has been closed for a number of years; the South Bank Station, to the north west of the site, which is operational; and the Redcar British Steel Station, to the north east of the site, where services have been suspended since 2019.

B3.14 Teesside International airport provides national and international air connectivity to the region. The airport is located 17.7km s to the south west, is within a 30 minute drive of the Teeworks area and is adjacent to the Teesside Airport train station which is on the Tees Valley rail line.

B3.15 Walking and cycling facilities in the vicinity of the site and the surrounding area are limited. The Teesdale Way PROW runs parallel to the Darlington to Saltburn railway line. The nearest National Cycle Route ('NCR') is Route 1 (NCR1) which runs across Redcar Road and parallel to Middlesbrough Road, approximately 1.3km (linear distance) to the south of the site. NCR1 provides strategic connections between Saltburn, Marske, Redcar and Middlesbrough.

B3.16 There are no bus stops in the immediate vicinity of the site.

Environmental Designations

B3.17 The surrounding environmental designations within proximity of the development site shown on the map of Potential Sensitive Receptors at **Appendix B2**.

B3.18 The River Tees is located approximately 1.6km to the north west of the site. This is part of the Teesmouth and Cleveland Coast Special Protection Area ('SPA') and Site of Special Scientific Interest ('SSSI'). This area includes intertidal sand and mudflat, saltmarsh and freshwater grazing marsh, saline lagoons, sand dune and shingle, rocky shore and shallow coastal waters that are able to support national and international bird species.

B3.19 The Teesmouth and Cleveland Coast Ramsar site, which covers the terrestrial parts of the SPA is located approximately 1.6km to the north west of the site with Dabholm Gut being the closest part of it to the site.

B3.20 The nearest AQMA to the site is the Scarborough AQMA, which is located around the village of Staithes, approximately 24km to the south east of the site.

Heritage Receptors

B3.21 The nearest listed building is the Grade II* listed Baptist Church at South Bank (List UID: 1160408), which is located 0.8km to the west of the site. The site is not visible from the listed building as it physically and visually separated from South Bank by intervening industrial developments, trees and the A66.

B3.22 The nearest conservation area is the Wilton Conservation area, which is 2.8km to the south east of the site and is physically and visually separated from it by the Wilton International industrial area.

Residential Receptors

B3.23 The closest residential receptors to the site are the houses in the residential area of Grangetown, which are 350m south east of the site and are separated from it by the Bolckow Industrial Estate and the A66. The residential area of South Bank is 600m south west of the site and is separated from it by an industrial estate and the A66.

Summary of Sensitive Receptors

B3.24 In light of the information presented in the above two sections of this chapter and with an understanding of the site and its surroundings, the following receptors are likely to be those most likely to be sensitive to the impacts arising from the development:

1 Users of the highway network: Eston Road, Church Lane, A66 (east and west of Eston Road junction), Normanby Road (north and south of A66), Teesdock Road, A1085 Trunk Road, A1053 Greystones Road and the A174 Greystones Road.

2 Designated sites - including Teesmouth and Cleveland Coast SPA and Ramsar Site and Teesmouth and Cleveland Coast SSSI;

3 Landscape Character Areas – including industrial, urban, intertidal estuary, coast and peninsula, Coatham Marsh, Eston Hills, Salthouse Wetlands, rural and urban green space;

4 Nearby sensitive viewpoints;

5 Surrounding built environment;

6 Nearby residential receptors, including those in South Bank, Grangetown, Old Lackenby/Eston, Newport, Middlesborough, North Ormesby. Dormanstown and Redcar and the mobile home travellers' site at King's George Terrace,mobile homes site at Redcar Beach front and Marsh Farmhouse.

7 Surface water including the River Tees estuary, Holme Beck Culvert, Boundary Beck Culvert, Kinkerdale Beck Culvert, the Mill Race Culvert and Knitting Wife Culvert;

8 Ground water including Mercia Mudstone and Superficial Aquifer;

9 Regional landfill void capacity;

10 Regional materials availability;

11 Waste Management Facilities;

12 Construction and operational employment;

13 Construction workers;

14 Off-site Human Health Receptors;

15 Construction and operational economic output;

16 National and local carbon targets and GHG emissions;

17 Below ground heritage assets - 19th Century Cleveland Iron & Steel Works, Open Hearth remains and Eston Iron Works;

18 On-site habitats including open mosaic habitats, 'ruderal/ephemeral', watercourse;

19 On-site species including nesting birds, common toad invasive non-native species, invertebrates, dingy skipper butterfly, grayling butterfly, and brown hare; and

20 Existing businesses – industrial estate Bolckow.

B3.25 A sensitive receptors plan is included at **Appendix B2** of this ES.

B3.26 Further consideration of the receptors is provided in Chapter C to O of the ES.

B4.0 Background to the Development

B4.1 Chapter A of this ES sets out information on STDC as the applicant of this outline planning application. This section provides further information regarding STDC, its Master Plan and how the proposed development site sits within this regeneration strategy and amongst wider development in the area. It also sets out a planning history for the site.

B4.2 As set out in Chapter A, STDC is the third Mayoral Development Corporation to be established. It was created in August 2017 by the then Secretary of State for Communities and Local Government pursuant to Section 198 of the Localism Act 2011 (Ref 1) at the request of the Tees Valley Combined Authority ('TVCA') and was established by the South Tees Development Corporation (Establishment) Order 2017 (Ref 2).

B4.3 Prior to the establishment of the STDC, the area was used in the iron and steel making industry which had been present on Teesside for approximately 170 years. However, the liquidation of Sahaviriya Steel Industries ('SSI') in October 2015 caused an end to the majority of the industry on Teesside. The loss of this heavy industry left large areas of land, within what is now the Teesworks area, vacant or under used with ground contamination and built structures associated with that heavy industry.

B4.4 STDC was established as the public sector vehicle for delivering area-wide, economic regeneration in the area to augment the wider economic growth plans of the Tees Valley. The extent of the Teesworks area covers approximately 1,800 ha and is shown in blue on Figure B4.1 below. The site boundary is also marked in red on this figure.

Figure B4.1 The Site in the Teesworks Area

STDC Master Plan (2019)

B4.5 STDC produced its Master Plan (Ref 3) to support development of the area through the local plan-making and planning application processes. The Master Plan sets out the vision for transforming the Teesworks area into a world-class, modern, large-scale industrial business park. It provides a flexible development framework where land plots can be established in a variety of sizes to meet different occupier needs in the most efficient manner possible.

B4.6 It identifies five distinct 'zones' within the Teesworks area using the area's opportunities and constraints alongside the Master Plan's vision. The site is located within the 'South Industrial Zone' ('SIZ'). This zone is identified as having the potential for (though not restricted to) port related uses, offshore energy industries, materials processing and manufacturing, contract fabrication and energy generation. The Master Plan recognises the proximity to the A66 as an asset and opportunity for the SIZ.

B4.7 In conjunction with the Master Plan, STDC is also in the process of developing area wide co-ordinated strategies in relation to the following topics, to aid Teesworks in its effective delivery of development:

- Transport;
- Environment and Biodiversity;
- Port Facilities and Logistics;
- Water and Flood Risk Management;
- Energy and Utilities;
- Ground Remediation;
- Materials and Waste;
- Demolition and Salvage;
- Construction Logistics; and
- Open Space, Public Realm, Heritage and Placemaking.

B4.8 These strategies will serve to inform decisions by Teesworks as to how to effectively plan and deliver development and will, therefore, be beneficial over the lifetime of the Teesworks regeneration project. It is expected that the strategies will be considered by Teesworks at the detailed design stage of development pursuant to any approval of this outline planning application.

Commercial Overview and Development in the Wider Area

B4.9 The scale and location of the Teesworks area provides significant economic opportunities and it is within this context that the proposed development is intended to be delivered.

B4.10 As set out in Chapter A of this ES (paragraph A2.8 the planning application for the proposed development is one of five outline planning applications in the Teesworks area being submitted by STDC simultaneously. The cumulative effects of this proposed development, alongside the other four outline applications and other committed and proposed developments in the wider area will be robustly tested within the cumulative effects chapter of this ES (e.g. Chapter N) and the cumulative effects chapters of the other four ESs. The applications are being prepared by the same project teams who have been in regular dialogue to discuss and agree the scope of each EIA and approach to cumulative effects and mitigation.

B4.11 The simultaneous submission of the five outline planning applications will allow the Council to consider the impact of each scheme with full awareness of the likely impacts arising from the scale of development proposed overall. This provides a transparent and robust approach which recognises the potential for the impacts of the schemes to have cumulative effects, whilst allowing the site-specific matters and impacts to be addressed by each application.

B4.12 The locations of the four other outline applications being submitted by STDC are shown in Figure B.4.2 and details of the schemes proposed are set out in Table B.4.1 below.

Figure B4.2 The Teesworks development sites

Table B4.1 Other Teesworks Applications

Site	Site Area	Use Classes Proposed	Maximum quantum of Floorspace proposed	Maximum development height proposed
Lackenby	35.8	B2/B8 with ancillary E (offices)	92,903 sqm (gross)	46m AOD
The Foundry	133.5	B2/B8 with ancillary E (offices)	464,515 sqm (gross)	46.2m AOD
Long Acres	67	B2/B8 with ancillary E (offices)	185,806 sqm (gross)	43.5m AOD
Steel House	24.4	E (Office use)	15,794 sqm (gross)	33.8m AOD

Other Developments in the Area

B4.13 Whilst a planning history of the development site is set out below, there are other developments in, or likely to affect, the Teesworks area that are of a scale or nature that will influence the development of the area as a whole. These are discussed below, while the full list of schemes

considered in the cumulative assessment is provided in Chapter A, Section A.4: Scope of the EIA (see Table A4.1).

B4.14 The other developments relevant to the overall development of the Teesworks area are:

- **York Potash Project:** The York Potash Project comprises the development of a new underground mine for the winning and working of polyhalite and its handling and transportation to a new harbour facility for export to the international marketplace. The overall project is made up of a number of component parts, for which different consents have been granted including a Development Consent Order ('DCO') (No. 772 made on 20/07/16) and a number of key planning permissions (including R/2017/0906/OOM, R/2018/0139/VC and R/2014/0627/FFM). Together the consents allow for the winning and working of polyhalite and the construction of associated infrastructure (such as a minehead at Doves Nest Farm and an underground tunnel), a new harbour facility at Bran Sands, a new Mineral Handling Facility on land adjacent to the Wilton International Complex, an overhead conveyor on land between Wilton International Complex and Bran Sands and a new storage facility at Bran Sands.
- **South Industrial Zone:** Outline planning consent (Ref. R/2020/0357/OOM) was granted on 3 December 2020, for up to 418,000sqm of flexible general industry and storage and distribution uses at land at SIZ in the Teesworks area. As the consent is for outline planning permission with all matter reserved (except for access) it provides flexibility in terms of the layout, scale and quantum of development within the established parameters. The parameters are such that they would allow development for use by the offshore wind industry if the commercial opportunity arises.
- **River Tees Quay:** On 9th November 2020 STDC submitted two detailed planning applications relating to the demolition of the existing wharf, jetties and other minor infrastructure along the river bank at South Bank, capital dredging to create a berth pocket and construction and operation of a new solid piled quay set back into the riverbank. Due to the scale of the proposed quay and the multiple land ownerships involved it is to be constructed in two phases. Consequently, STDC has submitted two separate planning applications: one for the phase 1 quay and the other for the phase 2 area. There is a small overlap between the phase 1 and 2 areas where an element of dredging will need to take place as part of each phase. Separate applications have been made to the Marine Management Organisation ('MMO') for the Marine Licences necessary for the associated dredging of the approach channel and berth pocket and the disposal of the dredged material at sea. STDC is intending to commence phased construction of the facility during 2021 to enable the first section of the quay to be in operation by 2023 (an approximately three -year construction phase). Phase 1 would result in a quay length of up to 700m. The quay would be extended up to the full 1,300m (equating to a total useable berth length of 1,050m) as required in phase 2, based on market demands.
- **Net Zero Teesside:** In February 2019 Oil and Gas Climate Institute ('OGCI') Climate Investment Holdings LLP submitted an application for a scoping opinion to the secretary of state under the Infrastructure Planning Environmental Impact Assessment Regulations 2017 for a proposed full chain Carbon Capture Usage and Storage ('CCUS') project. The proposed project, known as Net Zero Teesside ('NZT'), will consist of an electricity generating station with up to three gas fired units that will be fitted with carbon capture technology. The carbon capture element of the project will capture and export CO2 from the proposed development to an offshore storage location. The carbon capture technology will be powered by the generating station which will provide surplus electricity to the grid. It is proposed to locate the generating station element of the project within the land identified as Redcar Works Complex in the STDC Master Plan, directly to the south east of the

development proposed in 'The Foundry' scheme described above. The proposed application boundary of the NZT scheme overlaps to differing extents with the planning application boundaries of the five planning applications described above. In relation to the site which is the subject of this ES, the eastern edge of the site is within the proposed application boundary of the NZT scheme. However, the applicant for the NZT scheme has confirmed that this is for road access rights only and will not affect the proposed development. Given that a draft DCO has not yet been submitted, this development has been scoped out of further assessment in the Cumulative and Residual Effects Chapter of this ES. Teesworks is working with OGCI to ensure that it has information sufficient to enable OGCI to factor in this outline planning application as an assumed commitment into any Environmental Assessment prepared to accompany the DCO application;

- **Demolitions:** The site, and indeed other sites in the Teesworks area, contain a number of redundant structures associated with the area's former use for iron and steel making. Most of these structures will need to be demolished for this, and other proposed schemes, to go ahead. It is envisaged that consent for their demolition will mostly be obtained by way of the Prior Approval process, where the method of demolition and site restoration would be fully established, assessed, mitigated and controlled through that consenting process. In certain instances, where appropriate, screening will be carried out to establish any need for Habitat Regulations and Environmental Impact Assessments relating to those demolition schemes.

Planning History

B4.15 Development proposals at the site are largely historic by their nature, however the following are relevant to this EIA.

B4.16 Planning permission was approved by Redcar and Cleveland Borough Council ('RCBC') on 8th July 2020 (reference. R/2020/0318/FFM) for the following development:

"Engineering operations associated with ground remediation and preparation including removal of former railway embankment and works to Holme Beck and Knitting Wife Beck."

B4.17 This application included the majority of the site which is the subject of this ES, with the exception of the area at the south which is occupied by the former Torpedo Ladle Workshop building.

B4.18 This permission is of relevance to this EIA insofar as it grants permission for the remediation and preparation of ground in the majority of the site. At the time of preparing this Statement, this permission has not been implemented and the existing baseline position regarding ground conditions has been taken into account in this EIA. Further information on site preparation are included within section B7.0 of this chapter.

B4.19 Planning permission was approved by RCBC on 27th September 2019 (reference. R/2019/0427/FFM) for the following development:

"Demolition of structures and engineering operations associated with ground preparation and the temporary storage of soils and its final use in the remediation and preparation of land for regeneration and development."

B4.20 This application included most of the current development site and much of the surrounding area within the control of STDC. It sought detailed planning permission for engineering operations associated with two distinct elements of ground preparations works across the Teesworks area. Firstly, for engineering operations associated with the temporary storage of soils in mounds, and secondly for its final use in the remediation and preparation of land (including most of the site which is the subject of this ES) for redevelopment.

B4.21 This permission is of relevance to this EIA insofar as it grants permission for the storage of soil in three mounds on the site. At the time of preparing this Statement, this permission has not been implemented and the existing baseline position regarding e arthworks has been taken into account in this EIA. Further information on earthworks are included within section B6.0 of this chapter.

B4.22 Outline planning permission was approved by RCBC on the 20 December 2019 (R/2019/0767/OOM) for the following development:

"Outline application for the construction of an energy recovery facility (ERF) and associated development"

B4.23 The application incorporated land in the north east of the Dorman Point site, totalling 10.9ha, which is within the control of STDC. It sought outline planning permission for an energy recovery facility with a total floorspace of up to 31,595sqm. A S.106 agreement was signed on 24 July 2020. The application was supported by an Environmental Statement.

B4.24 The permission is of relevance to this EIA insofar that it grants outline permission for a final 'end use' within the application boundary. As an outline permission, the details of the energy recovery facility ('ERF') scheme are not yet known, including the layout and extent of land required for the scheme. It is understood that the details of the scheme are to be drawn up during 2021. This outline stage of the ERF scheme has been reflected in the baseline position of this EIA. Given that the final land take of the scheme is still to be determined and, ind eed, in order to provide a fall-back position for Teesworks to have an approved alternative form of development on the site (in what appears to be the unlikely event that the ERF scheme does not come forward) it is felt prudent to incorporate the land within the ERF site into the potential development area of this outline application.

B4.25 Planning permission was approved by RCBC on the 10 June 2020 (R/2020/0270/FFM) for the following development:

"Engineering operations including widening of Eston Road, formation of new roundabout and internal access roads, works to enhance Holme Beck and associated hard and soft landscaping works"

B4.26 Whilst Eston Road itself is located out with the Dorman Point application boundary, the proposed new internal access roads cross within the boundary of the site.

B4.27 This permission is of relevance to this EIA insofar that the Eston Road improvements are intended to ensure the relevant road infrastructure is in place to serve development on the site including development proposed in this outline EIA application. The permission will be implemented in 2021 following the discharge of planning conditions.

B4.28 Prior approval application R/2020/0283/PND was submitted to RCBC on 10 June 2020 on behalf of Teesworks for the following development:

"Prior approval for demolition of locomotive repair shed; oxygen plant tanks and buildings"

B4.29 This application sought prior approval for the demolition of some of the on-site structures at the development site (as identified in section B2.0 of this chapter). More specifically this comprises the former locomotive repair shed; oxygen plant tanks and buildings. RCBC confirmed that prior approval for the demolition of these structures was not required on the 7 July 2020.

B4.30 Another prior approval was also submitted to RCBC on 16 November 2020 on behalf of Teesworks (R/2020/0679/PND) for the following:

"Prior notification of proposed demolition of former torpedo ladle repair workshop building"

B4.31 This application sought prior approval for the demolition of the torpedo ladle repair workshop buildings, located in the southern part of the site. RCBC confirmed that prior approval for the demolition of these buildings was not required on 17 December 2020.

B4.32 A Screening Opinion was submitted to RCBC on the 25 June 2018 in relation to the following:

"Screening Opinion for proposed aluminium casthouse facility"

B4.33 A response was received on the 27 July 2018 (R/2018/0381/SC) stating that the proposal does not constitute EIA development.

B4.34 The screening opinion site boundary is located within the Dorman Point site, to the south west. However, since 2018, no progress has been made on the proposal and an application for planning permission has not come forward and it is understood that it is now unlikely to. The screening opinion is of relevance to this EIA though it is assumed that this development will not come forward.

B5.0 Development and Policy Background

B5.1 This section provides an overview of planning policy relevant to the determination of the planning application and to the consideration of environmental effects of the proposed development.

B5.2 A more detailed appraisal of all relevant policy is provided in the technical Chapters C to M of this ES, as well as in the Planning Statement which forms a standalone document to this submission.

Planning Policy Context

Statutory Development Plan

B5.3 The statutory development plan for RCBC currently comprises:

- Redcar and Cleveland Local Plan (adopted May 2018) (Ref 4); and
- The Tees Valley Joint Minerals and Waste Development Plan Documents, comprising:
  (a) Minerals and Waste Core Strategy DPD (adopted September 2011) (Ref 5); and
  (b) Minerals and Waste Policies and Sites DPD (adopted September 2011) (Ref 6).

B5.4 The site is allocated as a Protected Employment Area (Policy ED6) and is identified as being within the STDC area (Policy LS4) in the Redcar and Cleveland Local Plan. Under the Minerals and Waste DPDs, the site is allocated as the South Tees Eco Park (Policies MWP8 and MWP10(b)).

Policy LS 4 (South Tees Spatial Strategy)

B5.5 Policy LS 4 (South Tees Spatial Strategy) of the adopted Local Plan sets out a series of key economic, environmental and connectivity objectives for the Teesworks area. Those of particular relevance include the following:

'a. deliver significant economic growth and job opportunities through the South Tees Development Corporation and Tees Valley Enterprise Zone at Wilton International and South Bank Wharf;

b. support the regeneration of the South Tees Development Corporation area through implementing the South Tees Area Supplementary Planning Document;

e. support the expansion and protection of the port and logistics sector;

f. improve existing employment areas and provide a range of modern commercial premises that meet contemporary business requirements including the target sectors of the South Tees Area Supplementary Planning Document;

h. give the area an identity and make it attractive to inward investment;

j. support the existing steel industries and take a lead role in supporting the future regeneration of former steel sites as part of the South Tees Development Corporation;

l. encourage clean and more efficient industry in the South Tees area to help reduce carbon dioxide emissions and risk of environmental pollution;

o. improve and maintain access links between South Tees and the strategic road network;

u. maintain and enhance walking and cycling routes from nearby towns to the South Tees employment areas;

w. enhance the environmental quality of employment through well planned boundary treatments;

x. secure decontamination and redevelopment of potentially contaminated land;

y. protect European sites, and safeguard and improve sites of biodiversity interest particularly along the River Tees and the estuary and encourage integrated habitat creation and management;

z. enhance the environmental quality of the River Tees and coastline;

aa. safeguard and enhance the significance of buildings, sites, settings and areas of heritage and cultural importance including the 'Dorman Long' tower at South Bank Coke Ovens supporting its adaptation to enable alternative uses; and

ab. encourage improvements to access, interpretation and wildlife conservation and biodiversity across the area.

Policy ED 6 (Promoting Economic Growth)

B5.6 Policy ED 6 (Promoting Economic Growth) of the Local Plan protects land within existing industrial estates and business parks, including 'Land at South Tees', which includes the site, for employment uses. The policy provides specific support for proposals falling within Use Classes B1, B2, B8 and suitable employment related sui-generis uses. The policy expects proposals within the Teesworks area to have regard to the South Tees Area Supplementary Planning Document ('SPD') (Ref 7), and states that *"Proposals which positively contribute towards growth and regeneration will be supported"*. Policy ED6 also requires that, where appropriate, development proposals demonstrate that there will be no adverse effects on the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar site, or other European designated nature conservation sites, either alone or in combination with other proposals.

B5.7 A full schedule of the relevant planning policies is provided within the Planning Statement which accompanies the outline planning application.

Policy MWP8: South Tees Eco-Park

B5.8 Policy MWP8 (South Tees Eco Park) allocates an area of 27 hectares, which covers most of the site, for the 'South Tees Eco Park', within which a number of waste related uses are identified as being appropriate. However, limited weight is to be attached to Policy MWP8 given the more recent adoption of the Local Plan, which instead allocates the site for employment (industrial) (uses) within Policy ED6.

Other Material Considerations

National Planning Policy Framework (2019)

B5.9 The National Planning Policy Framework ('NPPF') (Ref 8) is a material consideration in the determination of planning applications.

B5.10 The NPPF contains the Government's planning policies for England. The NPPF states that planning policies and decisions should play an active role in guiding development towards sustainable solutions and in doing so should take local circumstances into account to reflect the needs and opportunities of each area (paragraph 9 and 10).

B5.11 It promotes sustainable growth and Chapter 6 (Building a Strong and Competitive Economy) puts significant weight on the need to support economic growth and productively, taking into account local business needs and wider opportunities for development. The NPPF recognises this as particularly important where Britain can be a global leader in driving innovation.

B5.12 Chapter 6 of the NPPF also recognises that planning policies and decisions should recognise and address the specific locational requirements of different sectors, including storage and distribution operations at a variety of scales and suitable accessible locations.

B5.13 The storage and distribution service sector is, therefore, recognised as a key economic sector in its own right, employing high levels of people directly. Its essential role in supporting other key sectors that rely on efficient movements of goods is also widely acknowledged.

B5.14 The relevant NPPF chapters comprise:

- Chapter 6: Building a Strong and Competitive Economy;
- Chapter 9: Promoting sustainable transport;
- Chapter 11: Making efficient use of land;
- Chapter 14: Meeting the challenges of climate change, flooding and coastal change; and
- Chapter 15: Conserving and enhancing the natural environment.

The South Tees Area Supplementary Planning Document (SPD) (May 2018)

B5.15 The South Tees Area SPD, prepared by RCBC, supports the economic and physical regeneration of the South Tees Area. It sets out the vision and core objectives for the area and provides greater detail on how adopted planning policies will be interpreted. The SPD is supported by the South Tees Regeneration Master Plan (details of this are summarised below), which has been prepared by STDC and is a background study to the SPD.

B5.16 The SPD includes a vision for the transformation of the area into *"...a hotbed of new industry and enterprise for the Tees Valley..."* with the creation of new jobs focussing on higher skilled sectors centred on *"...manufacturing innovation and advanced technologies..."* whilst achieving the remediation of land and safeguarding biodiversity.

B5.17 The SPD includes a number of Strategic Development Principles intended to guide planning applications associated with the redevelopment of the Teesworks area. Those of particular relevance to the proposed development include:

- STDC1 (Regeneration Priorities): provides a series of priorities for the South Tees area in line with the SPD's Vision and Objectives. These include a strong alignment with the Government's Industrial Strategy, a co-ordinated world class offer, promotion and support for the expansion of existing port facilities, support for uses associated with advanced manufacturing, the low carbon and circular economy and for the creation of high-skilled employment and to support development which makes the best use of available land and existing infrastructure;
- STDC 4 (Economic Development Strategy): supports opportunities for specialist industries as well as the growth and expansion of existing operators and development proposals that will increase the attractiveness of the area for new users;
- STDC 7 (Natural Environmental Protection and Enhancement): requires development proposals to respond to their environmental setting and to protect, and where possible enhance, biodiversity and geodiversity interests;
- STDC8 (Preserving Heritage Assets): provides protection for retention of assets of heritage or cultural importance;

- STDC9 (Site Remediation): expects remediation of land to be proportionate, based on a risk assessment and proposed future uses, and, where appropriate to provide for environmental betterment;
- STDC10 (Utilities): expects new development to be adequately supported in terms of utilities and any necessary infrastructure; and
- STDC14: (South Industrial Zone (SIZ)): supports (though does not restrict) development proposals for offshore energy industries, including manufacturing, materials processing and manufacturing, contract fabrication and energy generation and, rig and large equipment decommissioning.

South Tees Regeneration Master Plan

B5.18 As has previously been discussed in this Chapter of the ES, the South Tees Regeneration Master Plan was published in November 2019. The Master Plan does not form part of the statutory development plan though it has closely informed the preparation of, and is aligned with, that statutory policy framework.

B5.19 The Master Plan identifies the development site as being part of the SIZ (as referenced above) and sets out a development overview for the area.

B5.20 It identifies the SIZ as having the below assets and opportunities:

- Close to 880 acres of land available for development;
- 1.3km of river frontage with deep water potential;
- Existing rail connectivity to the various land areas;
- Over 2 million sq. ft. of existing large-scale industrial shed buildings with overhead craneage and rail connections;
- Legacy industrial facilities offering heritage preservation potential;
- Very large licenced landfill facilities with significant residual capacity for both hazardous and non-hazardous waste;
- Commercial development opportunities;
- Close proximity to A66 with existing highway connections; and
- Benefits from any future Free Zone status.

B5.21 The Master Plan identifies the SIZ as a key strategic land zone for the Teesworks area with its proximity to the river, the strategic road network and its physical capacity for large scale development highlighted as key attributes.

B6.0 Description of Development

B6.1 This ES relates to the proposed development of general industrial and storage or distribution facilities floorspace, with ancillary office accommodation, parking and associated works.

B6.2 The description of development is as follows:

"Outline planning application for the development of up to 139,353 sqm (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E), HGV and car parking, works to watercourse including realignment and associated infrastructure works. All matters reserved."

Development Parameters

B6.3 Since the application is submitted in outline, and until the accommodation requirements of end-users are known, the final layout and scale of buildings cannot be established. The EIA is therefore supported by a Parameters Plan which is submitted for approval and this is included at **Appendix B3**. This Plan provides details of the scheme's fixed development parameters (including Potential Development Areas, maximum building height parameters, minimum finished floor levels and indicative vehicular access points and potential areas of access / egress into and out of the site).

B6.4 Subsequent reserved matters applications will be required to be submitted in accordance with the Parameters Plan and it is anticipated that a planning condition will be attached to any outline planning permission requiring such. The parameters therefore provide flexibility regarding how the site will ultimately be developed whilst providing all parties with a sufficient level of certainty about the development in order to undertake the appropriate level of EIA.

B6.5 End users are likely to comprise typical manufacturing and storage or distribution occupiers.

B6.6 Further details on the development parameters on which the environmental assessment has been based on are set out below.

Land Use and Floorspace

B6.7 The parameters establish a maximum floorspace of up to 139,353sqm of B2 (General Industry) and B8 (Storage or Distribution) uses alongside offices. For the purpose of the ES, a maximum of 10% of the overall floorspace has been assumed to be used as offices (Use Class E).

B6.8 The Parameters Plan establishes a development zone within which built development will be delivered. In addition to this, an Indicative Arrangement Plan and an associated 3d modelling plan are included at **Appendix B3** and these shows one option as to how the development could be built out. This plan is for indicative purposes only.

B6.9 As described at paragraphs B4.22 – B4.24 an outline planning application for an ERF scheme has been approved in the north western part of the site (ref. R/2019/0767/OOM). The Development Area on the Parameters Plan incorporates the land within which the ERF will be provided. Future detailed design of the site will ensure that the ERF scheme, and the scheme which is the subject of this EIA, are designed in a complementary way.

B6.10 As set out in section B2: Site Description, the site contains a range of utility infrastructure and the final site layout may necessitate the diversion of some or all of this infrastructure. Subsequent reserved matters applications will include the final site layout for the proposed development and the resultant need to divert any infrastructure will be addressed at that stage in consultation with the relevant stakeholders.

Maximum Development and Building Height

B6.11 For the purpose of this EIA, the maximum development height at the site will be 46.8m AOD within all of the Potential Development Area marked on the Parameters Plan. The maximum building height will be 36m above prevailing ground level. These figures take account of the proposed site levels and earthworks (see below) and also account for rooftop plant and machinery but do not make allowance for chimney stacks.

Site Levels

B6.12 For the purpose of this EIA, the minimum finished floor level ('FFL') will be 8.0m AOD. This will enable the maximum building height (set out above) to be delivered on site.

Earthworks

B6.13 The EIA is based on the assumption that the development of the site will be cut and fill neutral across the Teesworks area.

Building Design

B6.14 The detailed design and specification will respond to end users' requirements and market demand. Notwithstanding this, the Design and Access Statement submitted as part of this application sets out key design principles, examples and indicative images. It is anticipated that the building design will adopt a contemporary and modern architecture and the colour palette will be sympathetic to the site's surroundings.

B6.15 Teesworks is in the process of producing a Design Guide for Developments which it will consider when drawing up reserved matters details.

Access and Parking

B6.16 The Parameter Plan shows four locations from which the development will be accessed from beyond the site (See **Appendix B3**) and a minimum of three of these points will be brought forward.

B6.17 The access point on Eston Road will be brought forward. This will comprise a roundabout junction (the works for which are covered by planning permission Ref R/2020/0270/FFM).

B6.18 A minimum of two out of the following three access options shown on the parameters plan will be brought forward:

i One at the north east corner of the site where an existing Teesworks internal road enters the site;

ii One at the south east corner where an existing Teesworks internal road enters the site; and

iii One potentially to be provided at the south west corner of the site at the Bessemer Gate entrance into the Bolckow Industrial Estate.

B6.19 The site will also include internal access road(s) and parking and servicing areas for each development plot, which will come forward in phases as and when development is brought forward at the site.

Hours of Operation

B6.20 For the purposes of this ES, it has been assumed that all uses will operate 24 hours a day, seven days a week. This is considered typical for uses in the STDC and Redcar area and are is therefore considered a reasonable worst case scenario.

Drainage and Watercourses

B6.21 All surface water runoff within the site will require sustainable urban drainage system ('SuDS') treatment and attenuation prior to discharge.

B6.22 It may be necessary to divert existing watercourses (including Holme Beck and Knitting Wife Beck). The description of development allows for this, although no details are provided at this stage.

B6.23 It is assumed that any works to the watercourses will be undertaken either prior to the start on site or during the initial phases of the proposed development.

Sustainability

B6.24 The scheme will seek to achieve Building Research Establishment Environmental Assessment Method ('BREEAM') 'Very Good' throughout the construction and operational stages of development. It is anticipated that the following measures could be implemented:

- Encourage a reduction in Co_2 emissions, monitor energy and waste consumption and consider energy generation;
- Future occupiers of the proposed development will be encouraged to consider the benefit of cooperating to manage resources, environmental issues, energy generation, logistics, green technology, local education and resources;
- Building design will consider the need to reduce the vulnerability of the development to climate change through the implementation of sustainable design;
- Contractors will consider using local suppliers, recycled materials and will be required to implement a Framework Construction Environmental Management Plan ('Framework CEMP') which will be monitored throughout the construction phase of development;
- All building materials and products will be sourced, where practical, from suppliers who manufacture with certified environmental management systems and timber will be Forest Stewardship Council ('FSC') certified, where possible; and
- Adoption of Framework Travel Plan ('FTP') and specific Occupier Travel Plans to promote sustainable modes of travel in accordance with STDC's emerging transport strategy.

B7.0 Construction Methodology

B7.1 This section describes the key construction parameters that have been assessed as part of this EIA.

Development Phasing

B7.2 The proposed developments will be brought forward in phases based on market demand for the employment uses proposed. The site is being brought forward by Teesworks.

B7.3 A phasing schedule is set out in Table B7.1 below which has been used for the purposes of assessment. This provides a basis for making assumptions as to the quantum of floorspace that could be delivered each year across the whole construction period.

B7.4 Based on the phasing schedule set out in Table B7.1, construction period for the site is as follows:

- Construction commences in 2021 with first floorspace delivered in 2022; and
- Construction period totals 11 years with completion anticipated in 2032.

Table B7.1 Phasing Schedule: Dorman Point

Year	Floorspace to be Delivered (sqm)
2022	24,154
2023	41,806
2024	11,148
2025	13,471
2026	
2027	
2028	17,187
2029	
2030	
2031	27,871
2032	3,716
Total	139,353

B7.5 Each technical chapter C to M outlines the relevance of the phasing schedule to the assessment of effects (See Section 5.0 of Chapters C to M).

Programme of Works

B7.6 The programme of works is based on the availability of existing transport infrastructure, the implementation of new transport schemes (separate from this proposed development), proposed access arrangements, the environmental context of the site and the status of demolition works on site.

B7.7 The first phase of development will include the delivery of site preparation works and construction access arrangements. For the purpose of the EIA it is assumed this will take up to 6 months following the commencement of construction works (in 2021).

B7.8 The subsequent phases of development will deliver a proportion of the employment units and their associated infrastructure (based on market demand).

B7.9 Demolition of those buildings and structures on site will be carried out prior to construction of the works which are the subject of this EIA and do not form part of the development that has been assessed. The same timeframes are anticipated for the diversion, if necessary, of existing watercourses (including Holme Beck and Knitting Wife Beck). It is assumed that any works will be undertaken either prior to the start on site or during the initial phases of the development.

B7.10 Electricity pylons, overhead lines and utility and water infrastructure are present on site. The requirement or otherwise to protect or divert these will be discussed with statutory consultees. It is anticipated any works required to these elements on site will be undertaken in the first phase of development.

B7.11 For the purpose of this EIA, it is assumed that the development life of the site will be a minimum of 50 years and there are no plans to decommission the proposed developments. No assessment of decommissioning has therefore been undertaken as it would not be reasonable to try and undertake an assessment of the environmental impacts at this time.

Development Works

B7.12 The key stages of the construction works are set out below.

Pre-Commencement

B7.13 Prior to the commencement of development, and where needed and required by planning condition, further site and ground investigation surveys will be undertaken in order to identify the need, or otherwise, for additional survey work and / or remediation work. This stage of work will include, if necessary, the submission of details to divert Holme Beck and Knitting Wife Beck. This part of the development works would also include consultation with electricity and utility providers to agree a position on the existing on-site infrastructure.

Site Preparation

B7.14 Site hoarding, fencing, plants, machinery, lighting and mitigation measures will be erected and brought onto the site. Mitigation and protective fencing will be required around areas of land not being developed and areas of ecological importance, existing waterbodies (Holme Beck and Knitting Wife Beck) and around electricity pylons and infrastructure located on site.

B7.15 The site preparation works will include the creation of construction access and compound. For the purpose of this EIA it is assumed that there will be one main construction compound for the Teesworks area and, when developed, the site will have its own individual site compound, or compounds for each development plot, where necessary. STDC is in the process of defining a Teesworks-wide construction strategy.

B7.16 The construction compound(s) will include offices for contractors and sub-contractors, toilet facilities, a first aid room, meeting and training room(s), site storage and cycle and parking facilities. Waste, fuel and material storage areas will also be constructed in order to allow for the safe storage and collection of materials to and from site in accordance with environmental permits. Best practice construction methods will be set out in accordance with the Framework Construction Environmental Management Plan ('FCEMP'). No overnight staff accommodation is proposed.

B7.17 As above, this stage of the development may include the demolition of any existing on-site buildings or structures, or works to divert the existing watercourses on site (if any where necessary) although this process sits outside the scope of the EIA.

Enabling and Ground Works

B7.18 For the purpose of this EIA process it is assumed that the site will be cut and fill neutral. If this is not possible, it is assumed that all soil waste will be kept within the Teesworks area. Where necessary, further information will be submitted at the reserved matters stage of the planning process.

B7.19 It is assumed that all hazardous and non-hazardous waste will go to the Highfield Landfill Site at the South Bank site.

B7.20 All demolition works are the subject of a separate consenting process and the works will be concluded prior to construction works for the development considered in this EIA. The demolition context at the site is described in Sections B4 and B7 of this ES Chapter.

Access and Highways Works

B7.21 It is assumed that the main access will be obtained from the approved Eston Road roundabout.

B7.22 Internal access roads will be constructed to provide connections to buildings once built. For the site, this will be constructed (insofar as necessary) as part of the first phase of the development and completed on a phased basis thereafter as and when development comes forward. Each warehouse and building will include its own associated infrastructure, including car parking facilities.

Drainage

B7.23 Once detailed drainage strategies are agreed with RCBC and statutory consultees these will either be developed on a site wide basis or as each development plot is brought forward for development.

Building Foundations and Construction

B7.24 For the purpose of this EIA, it is assumed that all construction works will be undertaken using piling. Because of current ground conditions at the site, work is ongoing to understand the appropriate type of piling and a piling risk assessment will be undertaken prior to construction starting on site. This EIA assumption will assess the worst case scenario.

Building Materials

B7.25 Materials are anticipated to include steel, timber, metal and those associated with the construction of warehouses. Where possible, materials will be sourced from local construction companies to reduce the need for deliveries and transport times. An opportunity exists to source materials from within the Teesworks area and its existing manufacturers and steel works. The exact pallet of materials will be based on occupier requirements and will be agreed with the Council at the reserved matters stage of the planning process.

B7.26 Building materials will be stored at the on-site compound(s) and they will be ordered when each warehouse is constructed to avoid the need for excess material on site.

B7.27 Construction will require the use of large cranes, tower / mobile cranes, scaffolding and hoists. It is also assumed that dumper trucks, fork lifts, heavy goods vehicles, generators, pumps and compressors will be used throughout the construction period.

B7.28 All temporary construction works will be designed to meet engineering and safety standards. All works will be coordinated daily to ensure the safety and wellbeing of personnel on site.

Hours of Work

B7.29 Construction is envisaged to take place 24 hours a day, 7 days a week.

Site Management

Framework Construction Environmental Management Plan ('FCEMP')

B7.30 A FCEMP is being designed into the scheme as tertiary mitigation and will therefore form part of the embedded mitigation for the proposed developments. It is proposed that the measures and key principles set out within the FCEMP will be taken forward in detailed CEMPs for each phase and this will be secured by an appropriately worded planning condition. The mitigation measures/key principles within the CEMP are taken into account in each technical assessment when assessing potential effects, rather than being assessed as part of the residual effects.

B7.31 The FCEMP key principles/mitigation measures are as follows.

Site Management and Communication

1 All construction activities will be undertaken by industry certified contractors and specialists for each phase of the construction process. This will be managed and coordinated by the Site Project and Environment Coordinator for the site or each development plot who will be responsible for the health and safety on site.

2 All work will be subject to a risk assessment and method statement and these will be reviewed in order to accord with best practice standards. Where relevant, these will be required to mitigate the impacts of the development, including site specific measures as set out within the technical chapters of this ES.

3 All contractors and personnel entering the site will be required to show the relevant permits, and, upon request, will be required to provide proof of compliance with waste and pollution regulations.

4 A stakeholder communication plan will be developed for all those working on site;

5 Name(s) and contact details of personnel accountable for environmental considerations on the site boundary will be displayed at the site compound (this may be the environment manager / engineer or the site manager);

6 Contact information for the head or regional office of each contractor will be displayed at the construction compound; and

7 A Construction Logistics Plan ('CLP') will be produced to manage the suitable delivery of goods and materials to and from the site.

Site Preparation

1 The erection of site hoarding and best practice construction techniques will be utilised throughout all of construction phase of development;

2 The careful siting and management of material stock piles welfare buildings and other temporary structures;

3 The construction site layout will be planned so that machinery and dust causing activities including stockpiling are located away from receptors, as far as is possible;

4 Solid screens or barriers shall be erected around dusty activities or at the site boundary which are at least as high as any stockpiles on site;

5 Operations on site will be fully enclosed, where possible, when there is a high potential for dust production;

6 The location and orientation of site offices and buildings should be considered in order to maximise the separation distance and screening provided from site operations to noise sensitive receptors; and

7 Welfare facilities will be provided to support on site staff. Temporary connections to the public sewer network for disposal of foul water should be made where possible. Where this is not possible hygienic portable facilities will be used.

Transport

1 A CTMP will be implemented either at a site level or for each development phase. This will identify the scale of construction traffic across the construction programme and provide details including the proposed access arrangements for construction vehicles and staff, any necessary highway works and any changes to traffic orders to accommodate construction traffic.

Biodiversity and Ecology

1 Mitigation will be included to prevent and mitigate against any accidents, including but not limited to, spills, storage of soils and control of construction related dust and the construction of site hoarding to reduce the impact on ecological sensitive receptors;

2 Measures will be implemented to prevent sediment, dust, surface water run-off and other substances from entering watercourses;

2 Removal of trees, scrub, wetland habitat or areas of grassland or open mosaic habitat that may support nesting birds should be undertaken outside of nesting season (March to August inclusive), unless the habitats are first checked by a suitably qualified ecologist, who confirms in writing to the local planning authority ('LPA') that no nesting birds are present); and

3 Measures will be implemented to prevent the spread of invasive non-native plant species, as listed under either Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (Ref 9) or the Invasive Alien Species (Enforcement and Permitting) Order 2019 (Ref 10).

Noise and Vibration

1 During construction, works will be undertaken using best practice measures, including (as necessary), the use of quiet plant equipment and their correct maintenance;

2 All plant, equipment and vehicles will be fitted with appropriate noise suppression equipment to reduce noise levels as far as is practicable;

3 In-cab communication systems will be employed removing the impact of short duration horn use;

4 Generators and compressors should be located within suitable acoustic enclosures that do not affect the ventilation requirements or restrict access for maintenance; and

5 A regular and effective plant and equipment maintenance programme be implemented to ensure equipment is operating according to manufacturer's specification and to ensure they are the quietist available for the task.

Air Quality and Dust Management

B7.32 Mitigation measures applicable to high risk sites outlined in the IAQM Guidance on the Assessment of Dust from Demolition and Construction will be employed at the proposed development site, including:

General

1 Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager;

2 Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;

3 Develop and implement a Dust Management Plan, which will include measures to control other emissions, approved by the local authority; and

4 Display the head or regional office contact information.

Site Management

1 Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken;

2 Make the complaints log available to the local authority when asked; and

3 Record any exceptional incidents that cause dust and/or air emissions, both on- or off-site and the action(s) taken to resolve the situation in the log book.

Monitoring

1 Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results and make an inspection log available to the local authority, when asked;

2 It is highly recommended that dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations is carried out and locations agreed with the Local Authority prior to commencement. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction; and

3 Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Site Maintenance

1 Plan site layout so that machinery and dust causing activities are located away from receptors, as far as practical or possible;

2 Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;

3 Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;

4 Avoid site runoff of water or mud;

5 Keep site fencing, barriers and scaffolding clean using wet methods;

6 Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site;

7 Cover, seed or fence stockpiles to prevent wind whipping; and

8 Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out.

Operating Vehicle/Machinery and Sustainable Travel

1 Ensure all vehicles switch off engines when stationary – no idling vehicles;

2 Produce a Construction Logistics Plan (Construction Traffic Management Plan) to manage the sustainable delivery of goods and materials (see Chapter C (Transport));

3 Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing) (see Chapter C (Transport)) for more details); and

4 Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable.

Operations

1 Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction;

2 Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;

3 Use enclosed chutes and conveyors and covered skips;

4 Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use the fine water sprays on such equipment wherever appropriate;

5 Avoid scabbling (roughening of concrete surfaces) if possible; and

6 Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

1 Avoid bonfires and burning of waste materials.

Measures Specific to Earthworks

1 Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;

2 Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable;

3 Only remove the cover in small areas during work and not all at once.

Measures Specific to Construction

B7.33 The following measures are considered as desirable for construction for high risk construction impacts.

1 Avoid scabbling (roughening of concrete surfaces) if possible; and

2 Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

Measures Specific to Trackout

B7.34 As with the construction and earthworks mitigation, the below measures are highly recommended by IAQM for high risk trackout impacts.

1 Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use;

2 Avoid dry sweeping of large areas;

3 Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport;

4 Record all inspections of haul routes and any subsequent action in a site log book;

5 Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable); and

6 Access gates to be located at least 10 m from receptors where possible.

Water Management and Flooding

1 The EA, Construction Industry Research and Information Association ('CIRIA') and Pollution Prevention Guidance will be implemented throughout the construction period, with adherence to the following in particular:

   i EA Principles and Practice for the Protection of Groundwater (GP3) (Ref 13);

   ii Pollution Prevention Guidance (PPG) Notes (those that still apply to England) (Ref 14);

   iii GOV.UK Pollution prevention for businesses (Ref 15);

   iv CIRIA Report C532: Control of Water Pollution from Construction Sites (Ref 16);

   v CIRIA Report C502: Environmental Good Practice on Site (Ref 17);

   vi CIRIA Report 515: Groundwater Control – design and practice (Ref 18); and

   vii CIRIA Report (Ref 19).

2 A Construction Stage Surface Water Management Plan will be incorporated into the site so that run off can be carefully controlled using temporary drainage;

3 Measures will be included to reduce the risk of site pollution and contamination and details will be recorded of the soils, chemicals and oils used during the construction process;

4 Plant and machinery will be well maintained to reduce the risk of oil spillages or similar and electrical equipment such as transformers and switchgear are to be located above predicted flood levels as per guidance; and

5 An emergency response protocol will be developed by contractors so that any accidents of spillages are intercepted.

Ground Conditions

1 A Health and Safety Plan ('HSP') will be produced and will include measures to minimise the generation of dust, monitoring for the accumulation of gas, dampening of ground water,

ground gas monitoring and ground water and odour monitoring. This will mitigate against on site ground conditions and air quality;

2 In addition, site staff will be provided with training and information relating to the risks represented by ground gas and related emergency measures (as necessary);

3 Subject to the confirmation of the nature and extent of contamination at the site (if any), mitigation measures to protect site workers would include on-site inductions, provision of welfare for washing, a site smoking ban and the use of appropriate personal protective equipment ('PPE');

4 All site personnel should receive environmental induction training. Site specific topics should be addressed via team briefings and regular tool-box talks, to supplement the induction training;

5 All excavations should be assumed to be unstable. No man entry into unsupported excavations will be allowed without an appropriate risk assessment. Reference to Construction Industry Research and Information Association ('CIRIA') report 97 (Ref 11) would be made to establish suitable means of support or battering excavation side. The performance of trench supports will be monitored by qualified personnel at agreed intervals;

6 Measures should be undertaken to protect site workers and to ensure the stability of excavations. For instance, trench sheet supports would be used to seal off flows, and any residual flows should be collected in sumps and removed by pumping; and

7 Any groundwater removed from excavations would be disposed of appropriately, and the rate of groundwater flows into excavations should be continuously monitored along with the performance of any pumping capacity.

Waste and Materials Management

1 Waste will be designed out in the early design phases to ensure the volume of waste generated is minimised;

2 Actions will be taken in the early design phases to ensure the use of recycled/ reclaimed materials are maximised in line with the Waste Hierarchy; and

3 Any disposal of contaminated waste will be undertaken in accordance with the Waste Management Licencing Regulations 1994 (Ref 12) and the Duty of Care Requirements;

Climate Change

1 Measures will be included such as the sourcing of materials locally, the use of lower emissions vehicles and planning to minimise the number of journeys required to and from the site. It will also include climate change aims including the use of electrical plans, where practical and feasible.

B8.0 Summary of Primary and Tertiary Mitigation

B8.1 This section describes the primary and tertiary mitigation which has been assumed to be in place when assessing the potential effects of the proposed development during the construction and operational phases.

B8.2 For clarification:

- Primary or 'embedded' mitigation includes measures and modifications that have been incorporated into the design of the proposed development at the pre-application stage. They are therefore inherent to the development.
- Tertiary mitigation includes 'best practice' measures or actions that will occur outside of the planning system in order to meet existing legislative requirements or which are considered to be standard or best practice and not site/development specific.

Construction Phase

B8.3 Primary and tertiary mitigation measures assumed to be in place during the construction phase of the proposed development include:

1 Implementation of a FCEMP (the FCEMP principles outlined in paragraph B7.42 above will be conditioned and there will be a requirement to provide an updated and detailed CEMP for each development phase based on these principles);

2 Implementation of Construction Traffic Management Plan (as part of the FCEMP);

3 Further ground investigation surveys will be undertaken in order to identify the need, or otherwise, for additional remediation work. This stage of work will include, if necessary, the submission of details to divert Holme Beck and Knitting Wife Beck and any associated ground remediation necessary as part the diversion;

4 All temporary construction works will be designed to meet engineering and health and safety standards;

5 The site is to be cut and fill neutral across the Teesworks area;

6 Protective fencing to be erected around land not being developed;

7 Setting up of construction compounds and waste, fuel and storage areas ahead of construction work commencing. Materials for active phase of development only to be stored onsite;

8 Hazardous and non-hazardous waste to be sent to the Highfield landfill site;

9 A piling risk assessment is to be prepared for each phase of development;

10 Construction will be phased. A phasing condition will be attached to the grant of any planning permission and should the phasing of the development change, this will need to be agreed in writing with the Council;

11 The scheme will seek to be BREEAM 'Very Good'. The sustainability credentials of the scheme will be agreed at reserved matters stage of the planning process, however those considered to be embedded during construction at this stage include:

   a Contractors will consider using local suppliers, or sourcing materials from the Teesworks area and they will be required to implement a Site Waste Management Plan SWMP which will be monitored throughout the construction period;

b All building materials and products will be sourced, where practical from suppliers who manufacture with certified environmental management systems and timber will be FSC certified, where possible.

12 The Outline Remediation Strategy, prepared by Arcadis [Arcadis 2020 Appendix H4 of Volume 3 of this ES], shall support further detailed remediation design work and outlines the approach to manage potential risks to identified receptors during site redevelopment. Further detail of this strategy is set out in Section H5.0 of Chapter H: Ground Conditions.

Operational Phase

B8.4 The Parameters Plan provides for the following embedded mitigation:

1 Maximum development area is 57.8ha;

2 Maximum development height across the site is 46.8m AOD;

3 Maximum building height is 36m above the prevailing ground levels;

4 Finished Floor Levels to be a minimum of 8.00m AOD;

5 A minimum of 3 access points into the site; for the purposes of this EIA, it is assumed that the main access point will be from the recently approved new Eston Road Roundabout. The Parameters Plan submitted to accompany this EIA (Appendix B3) shows the potential location of four access points to the site.

B8.5 In addition to the measures shown on the plans the following measures and principles should be conditioned and form part of the embedded mitigation of the scheme:

1 The overall scheme can deliver up to 139,353 sqm of B2 (General Industry) and B8 (Storage or Distribution) uses floorspace, of which a maximum of 10% of the floorspace can be used for offices;

2 Buildings within the site will meet BREEAM 'Very Good' standard;

3 A FTP and specific Occupier Travel Plans will be submitted for approval to promote sustainable modes of travel in accordance with STDC's emerging transport strategy;

4 Junctions and internal roads to be designed and constructed in accordance with Redcar and Cleveland Borough Council Guidance; and

5 Where necessary to comply with Control of Major Accident Hazards ('COMAH') and Health and Safety Executive ('HSE') requirements, levels of occupancy of buildings will be restricted and stand off distance from hazardous installations, pipes etc. will be imposed.

B8.6 These mitigation measures will be secured through a range of planning conditions and will ensure that the development delivers the required primary and tertiary mitigation. This mitigation is taken into account in the potential effects sections of technical Chapters C to M (e.g. the potential effects defined assume that all of the mitigation measures above form part of the development).

B8.7 Any additional mitigation required over and above that already listed in this chapter is provided for within the mitigation section of Chapters C to M. Full details of the mitigation, monitoring and conditions are detailed in Chapter O of this ES.

B9.0 Consideration of Alternatives and Design Evolution

B9.1 Regulation 18 and Schedule 4(2) of the 2017 Regulations (as amended) require a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the applicant which are relevant to the proposed development and its specific characteristics and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects. This section provides a review of those alternatives that have been studied.

B9.2 In addition, Schedule 4(3) of the 2017 Regulations (as amended) requires a review of the likely effects in the event that the development does not come forward (i.e. an outline of the evolution without implementation of the development). This is known as the 'no development scenario'.

B9.3 To comply with these requirements, this section provides a review of:

1 Likely effects in the event that the development does not come forward (i.e. the no development' scenario);

2 Consideration of whether alternative locations would achieve the objectives of the current proposal; and

3 Consideration of the evolution of the design of the scheme and whether alternative forms of development would achieve the same objective.

B9.4 The assessment below provides a comparison of environmental effects of the proposed development, as described in Section B6.0, against the alternatives. The effects have been colour coded in accordance with Table B9.1 below.

Table B9.1 Key Effects of Proposed Development Compared to Alternatives

	The proposed development as outlined in Section B6 has more beneficial effects than alternative development.
	The environmental effects of the alternative development are similar to the proposed development.
	The alternative development has more beneficial effects than the proposed development.

'No Development'

B9.5 In addition to the requirements of the 2017 Regulations (as amended), guidance in carrying out an EIA suggests that it is good practice to consider the evolution of the site in the absence of the proposed development (in other words the 'do nothing' scenario).

B9.6 If the proposed development were not to come forward, there is the possibility that the site would remain in its existing use as vacant brownfield industrial land. In this scenario the existing environmental conditions would remain or evolve over the course of time. Whilst this scenario is considered highly unlikely for the reasons discussed below, for robustness the environmental effects of this scenario are summarised as follows and in Table B9.2 below.

B9.7 A 'no development scenario' would not aid in delivering economic development on one of RCBC's protected employment areas and STDC's vision for the site and the surrounding

Teesworks area. The site forms part of the Teesworks area, which the STDC Master Plan (November 2019) and Supplementary Planning Document (May 2018)) identify will deliver economic development, creating jobs with a focus on high skilled sectors and occupants, centred on manufacturing innovation and advanced technologies. If the development site remains as brownfield, vacant land, the significant employment and investment benefits anticipated as a result of the proposed development both during the remediation and construction and operational phases will not come forward.

B9.8 Furthermore, if the site were not developed then associated environmental benefits would not be realised, such as those relating to the water environment and ground conditions. STDC is in the process of publishing strategies to bring forward environmental enhancements in the Teesworks area, and where possible, this proposed development will contribute to these strategies.

B9.9 As can be seen in Table B9.2 below, there will be some receptors, which will be more adversely affected by the proposed development, than in a 'no development' scenario (e.g. road network, air quality, noise, waste and materials and greenhouse gases). However, these need to be considered in the context of the benefits previously outlined. Furthermore, as set out above, it is considered that a 'no development' scenario would be highly unlikely and instead another form of general industry and storage and distribution development is likely to come forward. This is because the site is identified within STDC's Master Plan (November 2019) and allocated for industrial development in RCBC's Local Plan policy and it is intended that the site will contribute towards delivering employment opportunities and regeneration of the Teesworks area. Teesworks has a programme of works for bringing forward all of the development sites within the Teesworks area and this site forms part of that strategy. As discussed within Section B4.0 of this Chapter, STDC has progressed several planning applications and prior approvals that relate to engineering works, ground preparation and site infrastructure (application references. R/2020/0318/FFM, R/2020/0270/FFM, R/2020/0283/PND, R/2020/0679/PND) in order to prepare the site and make it a suitable development platform for future development.

Table B9.2 Comparison of Proposed Development versus 'Do Nothing' scenario

Topic	Summary Review of Future Baseline ('Do Nothing' scenario)
Transport	In a no development scenario the existing land use could be expected to remain, so any adverse impacts on the local road network as a result of increased traffic generated by the proposed development (increase traffic volumes / congestion) during both the construction and operational phases would not arise. Without the proposed development none of the proposed mitigation measures and benefits of the development (such as active and sustainable transport measures and potential junction improvements) would be delivered to the wider Teesworks area.
Noise and Vibration	Noise levels at the existing nearest noise sensitive receptors would remain similar to those currently experienced. The nearest residential properties are located in South Bank and Grangetown and the mobile home travellers' site at King's George Terrace. Current noise conditions within the area is defined by existing industrial uses. As set out above there are several recent permissions at the site for ground and engineering works. Although not a no development scenario, if these works were to be implemented there would be temporary noise impacts associated with development at the site, however this is not expected to be a greater than the noise associated with existing

Topic	Summary Review of Future Baseline ('Do Nothing' scenario)
	surrounding industry. Best practice noise control measures would be used to control the level of noise created by the development works. In summary, the proposed development is anticipated to generate more noise both during the construction and operational phases than in a no-development scenario (albeit negligible). Best practice measures would be implemented to keep noise to a minimum.
Air Quality	The site is not located within an AQMA. It is located within an existing industrial area and the sources of air pollution include existing industrial processes and air pollution from traffic emissions. If no development were to be brought forward on this site, it is expected that the current air quality conditions would remain, with the potential for small improvements subject to wider improvements to air quality anticipated more generally in the future. If the recent permissions for ground and engineering works were to take place, best practice construction techniques would be utilised to control air quality on site. The proposed development is anticipated to only have negligible impacts when compared to the future baseline and these can be managed to the implementation of best practice measures.
Water Management and Flooding	The site is located within Flood Zone 1 and is assessed by the EA as having less than 1 in 1,000 annual probability of river or sea flooding. There are existing watercourses on site, including Holme Beck and Knitting Beck and there is a cross connector, which links the two becks. In a no development scenario, it can be assumed that the water conditions on site would remain as existing. The diversion of the two becks has been considered as part of an existing planning permission that grants permission for engineering and ground works on site (reference. R/2020/0318/FFM). If these approved works are implemented and if diversion of the watercourses is required details will be submitted pursuant to this application when the detailed design is known. These works would manage the water conditions on site and offer the opportunity to improve water quality within these watercourses. The proposed development offers similar opportunities in terms of potentially diverting the two becks and improving their management and water quality, albeit in any diversion works and during construction there is a low risk of contamination, which will be controlled through the CEMP and the detailed design of any diversion. Overall therefore it is considered that water quality will be better under the proposed development scenario than the 'no development' scenario.
Ground Conditions and Remediation	In a no development scenario, the ground conditions at the site would remain as existing. This includes the current contamination from previous industrial uses. The exact baseline position is discussed in greater detail in Chapter H of this ES. As planning permission has already been granted for engineering and ground works at this site (see Section B4.00 of this Chapter – planning permission reference. R/2020/0318/FFM), these works could be implemented. The site would therefore be subject to works including the excavation of material and backfilling where required. Treated excavated material would be used to create development platforms. The treatment

Topic	Summary Review of Future Baseline ('Do Nothing' scenario)
	process has been agreed with RCBC and the planning permission includes a condition requiring the submission of a remediation strategy. It is therefore assumed that in this scenario a level of ground remediation would take place. The proposed development assumes that should the remediation permission not be implemented, then there will be a requirement to remediate the site prior to the commencement of the development. In this context, the proposed development will result in the ground conditions onsite being at worst the same as those under the 'remediation permission scenario' and better than under the 'no development scenario'.
Socio-Economic	Significant socio-economic benefits of the scheme as proposed would not be delivered. Further detail on these benefits are set out in Chapter I of this ES.
Waste and Materials	Construction activities have the potential to generate a significant amount of waste. However, it is assumed for the purposes of this EIA that the site will be cut and fill neutral, so the effects on the environment whether or not the development was to proceed are considered to be the same. Materials will be required for the construction phase, which would not be required should the site remain undeveloped. Waste will also be associated with the operational phase of the development. A Waste Strategy is being brought forward for the whole Teesworks area and this will implement a sustainable strategy for the disposal of waste centred on the waste hierarchy. Operational Waste Management Plans will be required for each phase of the proposed development. Overall on the grounds that the construction phase will require the use of new materials and the operational phase will create some waste and the 'no development' scenario will generate no waste, then the effects of the proposed development on waste and materials is slightly more adverse than the 'no development' scenario. It is however anticipated that the impacts on waste and materials can be reduced through the use of best practice measures, implanting the waste hierarchy and through measures that will be set out in the emerging STDC waste strategy.
Greenhouse Gas Emissions	Greenhouse gas emissions will be greater as a result of the proposed development (during both the construction and operational phase) than the 'no development' scenario.
Landscape and Visual Impact	The site would remain as brownfield industrial land in a no development scenario. At present the site is vacant industrial land so the proposed development would alter its appearance, albeit the appearance would be designed to assimilate with surrounding built development and would remove existing vacant and disused structures on site. There would be more development that could have a greater visual and landscape impact, however, the development would be more attractive that the current site.
Ecology	In the 'no development' scenario, there will be no managed change to the existing ecological baseline. However, in this case, other than the areas of woodland and scrub close to Eston Road, the habitats on site would deteriorate significantly in ecological terms. On site Sea Buckthorn scrub is spreading rapidly and it is predicted that within a few years most of the

Topic	Summary Review of Future Baseline ('Do Nothing' scenario)
	ruderal/ephemeral and Open Mosaic Habitats currently present on site will be lost or severely degraded. This in turn would be predicted to result in significant reductions of the Dingy Skipper and Grayling butterfly populations. It is also likely that the small pools on site will have succeeded to reedbeds and while that is a valuable habitat in its own right it would result in the loss of the population Odonata of County importance. Under both the remediation scenario and the proposed development there will be the loss of existing habitats and adverse impacts in respect of reduction in biodiversity value. However, there will also be beneficial effects in terms of habitat mitigation and compensation on and off-site and the removal of invasive species. In summary the important habitats on site that would be lost through the proposed development would likely deteriorate significantly in any case with no development.
Below Ground Heritage	In the 'no development' scenario any below ground heritage would remain in situ. Under the remediation scenario or the proposed development scenario, the below ground heritage would be removed. However, through its removal more understanding of its significance would be understood. Overall the 'no development' scenario would have slightly less of an adverse effect on below ground heritage than the proposed development.

Consideration of Alternative Locations

B9.10 The proposed development site is allocated as a protected employment area by RCBC and it forms a key development site for STDC within its Master Plan (November 2019) for the Teesworks area. STDC has identified this site, and others, for the second phase of development within Teesworks. The proposals are in accordance with the aspirations for the SIZ and therefore no alternative locations have been considered for the development.

B9.11 Because of the nature of the proposals developing an alternative site outside of the Teesworks area would not fulfil the objectives of STDC or RCBC.

Design Evolution and Alternative Designs

B9.12 The proposed use of the site (primarily for B2 and B8 uses) is in accordance with the objectives of STDC's Master Plan and RCBC's planning policy. Alternative uses, such a residential or retail or leisure uses would not be acceptable in planning policy terms and due to the location of the site within an industrial area would not be acceptable from an amenity perspective. No further assessment of alternative uses is therefore considered necessary.

B9.13 There is no other iteration of the Parameter Plan that has been prepared, therefore no 'alternative' designs' have been considered.

B9.14 The proposed development is a parameter led scheme and it is based on market demand. The following parameters set out in Section B6.0 of this chapter have evolved based on an understanding of environmental considerations for the site and the Teesworks area :

1 **Proposed Floorspace**: the maximum proposed floorspace of 139,353 sqm takes into account the site's ability to accommodate a particular quantum of development. It is based

on the understanding that a greater level of development and associated employment generation may give rise to a greater environmental impact, including for example of the local transport network or through taller buildings with a greater landscape and visual impact.

The Parameters Plan submitted with this application defines a 'potential development area' which will allow for the maximum amount of floorspace to be brought forward within it, whilst also allowing for sufficient space for internal access roads, services yards, parking and landscaped areas, available to support and enhance biodiversity.

As this site is part of the wider STDC Master Plan area, a comprehensive approach is being taken to address environmental matters at the site, particularly in relation to ecology and biodiversity.

2 **Proposed Development Height**: the maximum development height has been based on an understanding of landscape and visual impact. In deciding on the development height consideration was also given to the site's surrounding context and existing industrial development.

3 **Finished Floor Levels**: a minimum FFL of 8.00m AOD is proposed as a parameter.

4 **Earthworks**: for the purposes of this EIA, the earthworks are proposed to be cut and fill neutral across the Teesworks area. This parameter is anticipated to be achievable based on ground conditions, the wider STDC wide remediation strategy and the proposed minimum finished floor level. Further details are provided on earthworks and waste in the relevant technical chapters, however this assumption reduces the waste associated with the construction stage of development and associated traffic, air quality and noise impacts.

5 **Access Arrangements**: However, for the purposes of this EIA it is assumed that there will be a minimum of three access points. It is anticipated that the main site access will be from the new Eston Road roundabout.

B10.0 Abbreviations & Definitions

1	AOD	Above Ordnance Datum
2	AQMA	Air Quality Management Area
3	BOS	Basic Oxygen Steelmaking
4	BREEAM	Building Research Establishment Environmental Assessment Method
5	CCUS	Carbon Capture, Utilisation and Storage
6	CEMP	Construction Environmental Management Plan
7	CIRIA	Construction Industry Research and Information Association
8	CLP	Construction Logistics Plan
9	COGM	Coke Ovens Gas Main
10	COMAH	Control of Major Accident Hazards
11	CTMP	Construction Traffic Management Plan
12	CONCAST	Continuous Casting
13	DCO	Development Consent Order
14	DMP	Dust Management Plan
15	EA	Environment Agency
16	EIA	Environmental Impact Assessment
17	ERF	Energy Recovery Facility
18	ES	Environmental Statement
19	FCEMP	Framework Construction Environment Management Plan
20	FFL	Finished Floor Level
21	FSC	Forest Stewardship Council
22	FTP	Framework Travel Plan
23	GHG	Greenhouse Gas
24	HAA	Heavy Anti Aircraft
25	HSE	Health and Safety Executive
26	HSP	Health and Safety Plan
27	IEMA	Institute of Environmental Management and Assessment
28	LPA	Local Planning Authority
29	MMO	Marine Management Organisation
30	NCR	National Cycle Route
31	NPPF	National Planning Policy Framework
32	NZT	Net Zero Teesside
33	OGCI	Oil and Gas Climate Initiative
34	PPE	Personal Protective Equipment
35	PROW	Public Right of Way

36	RCBC	Redcar and Cleveland Borough Council
37	RTPI	Royal Town Planning Institute
38	SIZ	South Industrial Zone
39	SPA	Special Protection Area
40	SPD	Supplementary Planning Document
41	SSI	Sahaviriya Steel Industries
42	SSSI	Site of Special Scientific Interest
43	SWMP	Site Waste Management Plan
44	STDC	South Tees Development Corporation
45	SuDs	Sustainable Urban Drainage Systems
46	TVCA	Tees Valley Combined Authority
47	UID	Unique Identifier
48	UK	United Kingdom
49	WWI	World War One
50	WWII	World War Two

B11.0 References

1 Localism Act 2011

2 The South Tees Development Corporation (Establishment) Order 2017

3 The South Tees Development Corporation Master Plan 2019

4 Redcar and Cleveland Local Plan 2018)

5 Minerals and Waste Core Strategy DPD 2011

6 Minerals and Waste Policies and Sites DPD 2011

7 South Tees Area Supplementary Planning Document 2018

8 National Planning Policy Framework 2019

9 Wildlife and Countryside Act 1981 (as amended)

10 Invasive Alien Species (Enforcement and Permitting) Order 2019

11 CIRIA Report 97

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