TEESWORKS

DORMAN POINT ENVIRONMENTAL STATEMENT VOLUME 3: TECHNICAL APPENDICES APPENDICES TO CHAPTER N (CUMULATIVE EFFECTS)



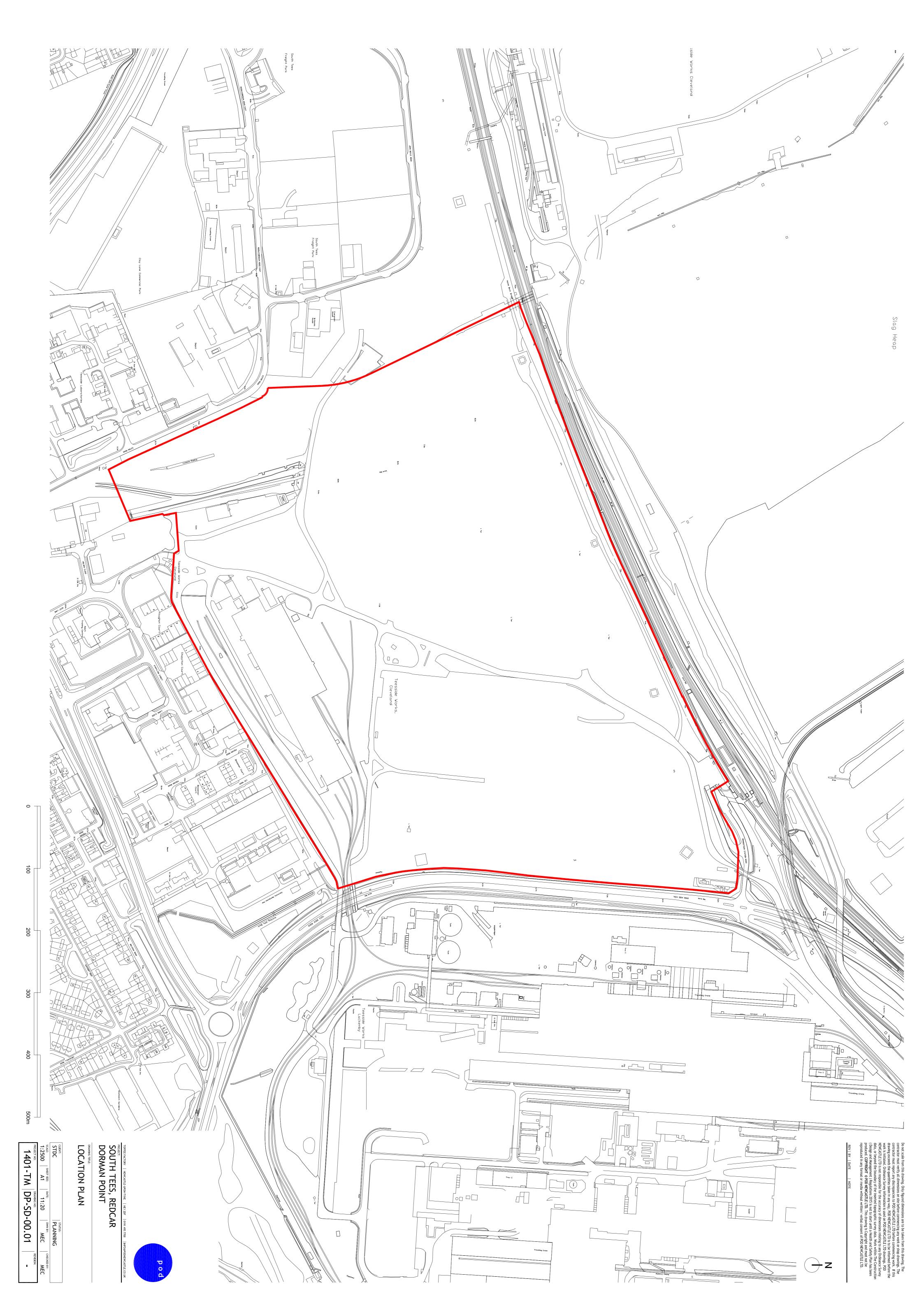
Dorman Point, South Tees Volume 3: Appendices

Chapter N: Cumulative Effects

December 2020

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Appendix N1: Cumulative Sites Plan and Site Location Plans





Appendix N2: Phasing Schedule

Briefing Note

| Our ref | 62682/01/AGR/KM |
|---------|---|
| Date | 11 November 2020 |
| То | David Pedlow, Redcar and Cleveland Borough Council ('RCBC') |
| From | Lichfields |

Subject STDC Outline Applications: Environmental Impact Assessments

1.0 Introduction

1.1 This Note relates to the five outline planning applications for manufacturing, distribution, logistics and offices uses which are proposed within the South Tees Development Corporation ('STDC') Masterplan area (now known as the Teesworks area). The five sites and outline planning applications are the next phase of development for the Teesworks area, following the submission of the outline planning application at the South Bank site earlier this year.

1.2 The five sites include:

- 1 Dorman Point;
- 2 Lackenby;
- 3 The Foundry;
- 4 Long Acres; and
- 5 Steel House.
- 1.3 These sites are shown on Figure 1 below:

Figure 1 Location of Sites



1.4All of the sites and proposed developments fall within part 10(a) (Industrial Estate Development
Projects) of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment)
Regulations 2017 (as amended) ('the EIA Regulations') as they are all above the 5ha threshold. It

is considered that all five of the proposed developments are Environmental Impact Assessment (EIA) developments because they are likely to have significant effects on the environment by virtue of their nature, size or location.

1.5 The purpose of the note is as follows:

- 1 In section 2.0 to briefly describe the five sites and the proposed development for each site as currently known;
- 2 In section 3.0 to outline, informally, the topics to be scoped in and out of each of the EIAs;
- 3 In section 4.0 to clarify schemes to be considered within the cumulative assessments of each of the EIAs; and
- 4 In section 5.0 to clarify the approach and format of each of the Environmental Statements (ESs).

2.0 Sites and Development Proposals

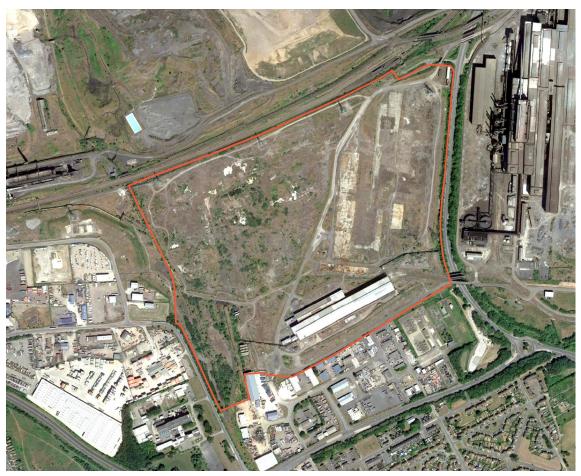
Dorman Point

Site Location

- 2.1 The development site is 57.8ha in size. It is brownfield industrial land and is largely free of active use and built development, although the former Torpedo Ladle Workshop is present in the southern part of the site, as discussed in further detail below.
- 2.2 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 South Bank Zone and the Landfill and Waste Management Facilities area as identified in the STDC Master Plan.
- 2.3 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.
- 2.4 The site's location and its surroundings are shown on Figure 2 below.



Figure 2 Dorman Point: Site Boundary



Site Description

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

- 2.6 Most of the site is now 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 running in a north-south direction is present in the south western part of the site although this is proposed to be removed as part of the works secured through a separate planning application (Ref. R2020/0318/FFM). 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.
- 2.7 The topography of the site is relatively flat although there is very gentle slope downwards from south to north, with typical ground levels ranging from approximately 10.5m Above Ordnance Datum ('AOD') to 8m AOD.
- 2.8 An internal private road network exists across the whole of the STDC area. Those within this site include a road running in a north-east south-west direction across the site which connects to Tees Dock Road in the north east corner and to the roads around the Bolckow Industrial Estate in the south west corner via the former Bessemer Gate.

- 2.9 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.
- 2.10 National grid electricity infrastructure is present across the site. This includes five electricity pylons and associated overhead electricity lines running along the north western and eastern edges of the site. An electricity sub station 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.
- 2.11 The Holme Beck runs in a north west-south east direction along the western edge of the site, 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.
- 2.12 The STDC area contains a large network of critical industrial utility infrastructure. The now redundant Coke Ovens Gas Main ("COGM"), is present above ground on the southern and western parts of the site which still contains hazardous material and is controlled under a nitrogen blanket to prevent ignition.
- 2.13 Water infrastructure present on the site comprises: potable water supply pipes cross the central part of the site in a north-east south-west direct and cross the southern part of the site in a north-west south-east direction; industrial water mains are present under the southern and western parts of the site; and a municipal sewer transfer mains crosses the under the northern part of the site in an east west direction.
- 2.14 An Energy from Waste scheme has recently been approved in the north western part of the site (reference. R/2019/0767/OOM). The proposed development subject of this application will be brought forward to complement this scheme. The quantum of floorspace proposed for the site in the proposed outline application (see below) is in addition to the Energy from Waste scheme and, therefore, it will be taken into account as part of any cumulative assessments within the Environmental Statement (ES).

Proposed Development

- 2.15 The planning application will be submitted in outline and will be accompanied by an ES.
- 2.16 The *draft* description of development is as follows:

"Outline planning application for development of up to 139,335 sqm (gross) of general industry (Use Class B2) and storage and distribution facilities (Use Class B8) with ancillary office accommodation (Use Class E), HGV and car parking and associated works. All matters reserved"

- 2.17 The Torpedo Ladle Workshop that is currently located on site will be subject to a separate application for its demolition (likely to be a Prior Approval application). For the purpose of this EIA, the demolition of all other on-site infrastructure will be subject to separate consents. Other buildings on site have already been the subject of Prior Approval applications. Demolition therefore won't need to be accounted for in the ES for this proposed development.
- 2.18 The <u>draft</u> proposed development parameters are set out in Table 1 below.

Table 1 Dorman Point: Development Parameters

Development Parameter Amount / Use

| Development Parameter | Amount / Use |
|-----------------------|--|
| Use Class | B2 (General Industry) |
| | B8 (Storage and Distribution) |
| | E (Office) (maximum 10% of overall floorspace) |
| Maximum Floorspace | 1.5m sqft / circa 139,995 sqm* |
| Maximum Height | 36m |
| Finished Floor Level | Still being agreed |
| Developable Area | The footprint of the proposed buildings will dependant on market demand. The Parameters Plan will include developable areas which show a distinction between those area where buildings will be located and those designated for hard and soft landscaping. |
| Access | Still being agreed |

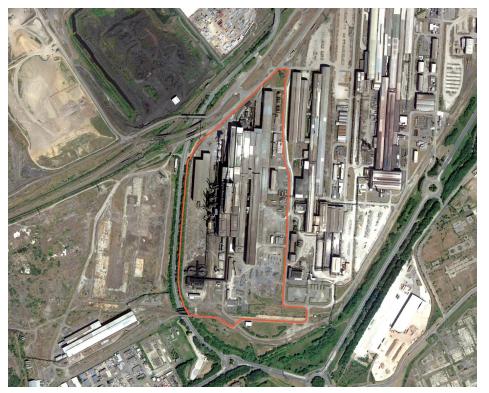
Lackenby

Site Location

- 2.19 The development site is 35.8 ha in size. It is brownfield industrial land and is extensively occupied by buildings and structures associated with its former use for steel making as discussed in further detail below.
- 2.20 It is located within the southern part of the Teesworks area and lies between the Grangetown Prairie (also known as Dorman Point) area and the British Steel area. It is immediately north west of the Wilton International area and the A1085 trunk road and is to the south east of the Landfill and Waste Management Facilities area as identified in the STDC Master Plan.
- 2.21 The site is immediately bounded by:
 - Internal Teesworks road infrastructure to the north west, the east and the south; and
 - Tees Dock Road to the west.
- 2.22 The site's location is shown on Figure 3 below.



Figure 3 Lackenby: Site Boundary



Site Description

- 2.23 The development site is approximately rectangular in shape and is defined by existing surrounding road infrastructure. The site is extensively occupied by buildings and structures associated with the former SSI BOS and CONCAST steelmaking facilities and former Tata Steel's vacant coil plate mill. Prior to its use for steelmaking the site had not been used for industry and was open fields up to the mid 1950s.
- 2.24 Most of the site is covered by buildings, structures or hardstanding, however there is some scrub type vegetation in the south eastern part of the site and in the northern corner. The buildings on the site are mostly large industrial shed style buildings, although there are also a few smaller brick built buildings. The built structures on the site include tanks, chimneys, industrial style pipes and conveyors. To the south of the central cluster of industrial sheds, the ground cover includes a number of mounds of material associated with former uses on the site. A redundant railway line is also present on the south western and norther parts of the site.
- 2.25 The internal STDC road network runs across the site. A road runs in a north south direction along the western side of the site, and various spurs into the site connect to the former industrial buildings and infrastructure.
- 2.26 The former Hot Metal Transfer Railway extends into the southern part of the site, connecting to the large industrial buildings on the site. The major operators freight rail line has spurs entering the northern part of the site and also connecting to the large industrial buildings. One of these spurs extends a significant way into the site.



- 2.27 The site contains an electricity pylon in the northern corner and an electricity sub station is present just outside the site adjacent to the southern boundary. A power transmission line is also present under the southern part of the site.
- 2.28 The Boundary Beck runs in a north south direction across the eastern side of the site via an underground culvert. A cross connector, which links the Boundary Beck to the Kinkerdale Beck, also via an underground culvert, is present at the northern extent of the site.
- 2.29 Water infrastructure present on the site comprises: potable water supply pipes which skirt the north western edge of the site and cross the northern part of the site in an east west direction; industrial water mains are present under the southern, western and north western edges of the site and extend southwards under the eastern part of the site; and an NWL water mains is present under the western edge of the site running in a north south direction.

Proposed Development

- 2.30 The application will be submitted in outline and will be accompanied by an ES.
- 2.31 The *draft* description of development is as follows:

"Outline planning application for the development of up to 92,903 sqm (gross) of general industry (Use Class B2) and storage and distribution facilities (Use Class B8) with ancillary office accommodation (Use Class E), HGV and car parking and associated works.

- 2.32 Demolition of existing structures will **not** be sought as part of this development. Demolition of structures on the site will be subject to separate consents in due course.
- 2.33 The *draft* proposed development parameters are set out in Table 2 below.

| Development Parameter | Amount / Use |
|-----------------------|--|
| Use Class | B2 (General Industry) |
| | B8 (Storage and Distribution) |
| | E (Office) (maximum 10% of overall floorspace) |
| Maximum Floorspace | 1m sqft / circa 92,903 sqm* |
| Maximum Height | 36m |
| Finished Floor Level | Still being agreed |
| Developable Area | The footprint of the proposed buildings will dependant on market demand. The Parameters Plan will include developable areas which show a distinction between those area where buildings will be located and those designated for hard and soft landscaping. |
| Access | Still being agreed |

Table 2 Lackenby: Development Parameters

The Foundry

Site Location

2.34 The development site is 133.48 ha in size. It is vacant brownfield industrial land and is occupied, albeit sparsely, by buildings and structures associated with the former British Steel Corporation's iron making complex as discussed in further detail below.

- 2.35 The site is located approximately 2 miles north west of Redcar town centre. It is around 0.5 miles south west of the bank of the River Tees and slightly under 0.5 miles south west from the coast.
- 2.36 It is located within the northern part of the Teesworks area within the area identified as the Redcar Works Complex in the STDC Master Plan. In relation to the wider Teesworks area, it lies:
 - To the south east of the Redcar Bulk Terminal;
 - To the north east of the Ex-ICI Landfill and the NWL Bran Sands Treatment Plant;
 - To the west of the area identified as the Teardrop site and CL31 in the STDC Master Plan; and
 - To the south west of South Gare and Coatham Sands.
- 2.37 The site is immediately bounded by:
 - The edge of the NWL Bran Sands Treatment Plant and former ICI Landfill to the south west;
 - The extent of existing operations at the Redcar Bulk Terminal to the north west;
 - A line of vegetation, Tod Point Road and line of buildings and existing infrastructure to the north east; and
 - Existing internal roads to the south east.
- 2.38 The site's location shown in Figure 4 below.



Figure 4 The Foundry: Site Boundary



Development Site

- 2.39 The site is approximately L shaped and is defined by existing road and industrial infrastructure and operational site boundaries. The site was formerly used in the iron and steel making process in the former Redcar Works Complex and existing conditions across the site are variable according to the distinct areas set out below.
- 2.40 The northern corner of the site used to be home to the Redcar Coke Ovens, and although no longer in use, the buildings and other structures remain in place on site. The coverage of buildings and structures is relatively dense on this part of the site and comprises conveyors, industrial pipes, tanks, chimneys and industrial buildings. Whilst most of the ground is covered in either built form, hardstanding or internal roads, there are some relatively large areas of vegetation in the form of grassland and scrub.
- 2.41 The central section of the site was previously in use as the Redcar Material Handling Area and the associated buildings and structures remain on the site. The western part of this section contains a number of buildings and structures associated with the handling and processing of materials. These include large scale conveyors and plant, rail lines, industrial buildings, storage bay structures, lighting towers and brick built buildings that may have been used as offices and welfare facilities. The eastern part of this section is largely free from built structures, although some plant, rail and conveyor infrastructure remains on site. This area was largely used for the storage and handling of material and the ground is still covered in their remnants with

occasional mounds present. There are pockets of scrub-like vegetation in this section but none are significant in size.

- 2.42 The south eastern section of the site includes part of the conveyor and other infrastructure associated with the Redcar Sinter Plant in an area which, while otherwise free of built structures, is covered in hardstanding and remnants of materials previously stored and handled there. To the south west of this an internal road and rail lines run in a north-east south-west direction; the ground cover in between these is mixture of remnants of materials associated with its former use and scrub-like vegetation. To the south west of this lies a rectangular shaped area of scrub and grassland vegetation free from built structures.
- 2.43 Parts of STDC's internal road network runs through the site. A number of roads largely running in a north-west south-east direction, with some cross connections.
- 2.44 The former Hot Metal Transfer Railway extends into the northern part of the site where it terminates. The major operators freight rail line passes through the southern part of the site connecting to the Redcar Bulk Terminal to the north west.
- 2.45 The site contains an electricity sub station in the south western corner of the Redcar Coke Ovens part of the site and power transmission lines are present under various parts of the site.
- 2.46 The STDC area contains a large network of critical industrial utility infrastructure. The following industrial pipelines are present on the site, all running together in a north-west south-east direction in the northern part of the Redcar Materials Handling Area part of the site:
 - The now redundant Coke Ovens Gas Main ("COGM") which still contains hazardous material and is controlled under a nitrogen blanket to prevent ignition;
 - The Heavy Fuel Oil ("HFO") line which has trace heating to maintain flow; and
 - The BOC Gas pipeline.
- 2.47 Water infrastructure present on the site comprises: potable water supply pipes running across the site in a north-west south-east direction; industrial water mains are present under the central, western and northern parts of the site; and an estuary water pumping mains runs in a north-west south-east direction under the Redcar Coke Ovens part of the site from where it connects to a pumping station on the bank of the River Tees.

Proposed Development

- 2.48 The planning application will be submitted in outline and will be accompanied by an ES.
- 2.49 The *draft* description of development is:

"Outline planning application for the development of up to 464,515 sqm (gross) of general industry (Use Class B2) and storage and distribution facilities (Use Class B8) with ancillary office accommodation (Use Class E), HGV and car parking and associated works. All matters are to be reserved"

- 2.50 Demolition of existing structures will **not** be sought as part of this development. Demolition of structures on the site will be subject to separate consents.
- 2.51 The *draft* proposed development parameters are set out in Table 3 below.

Table 3 The Foundry: Development Parameters

| Development Parameter | Amount / Use |
|-----------------------|--------------|
|-----------------------|--------------|

| Development Parameter | Amount / Use |
|-----------------------|--|
| Use Class | B2 (General Industry) |
| | B8 (Storage and Distribution) |
| | E (Office) (maximum 10% of overall floorspace) |
| Maximum Floorspace | 5m sqft / circa 464,515 sqm* |
| Maximum Height | 36m |
| Finished Floor Level | Still to be agreed |
| Developable Area | The footprint of the proposed buildings will dependant on market demand. The Parameters Plan will include developable areas which show a distinction between those area where buildings will be located and those designated for hard and soft landscaping. |
| Access | Still to be agreed |

Long Acres

Site Location

2.52 The development site is 67 ha in size. It is brownfield industrial land and is free of active use and built development and is bisected by the Fleet watercourse, as discussed in further detail below.

- 2.53 The site is located approximately 1.5 miles north west of Redcar town centre. It is around half a mile south from the coast and around 1.75 miles south west of the bank of the River Tees.
- 2.54 It is located within the north eastern part of the Teesworks area and is the area identified as the 'Teardrop site and CLE31' in the STDC Master Plan (p. 33). In relation to the wider Teesworks area, it lies to the south east of the 'Redcar Works Complex', to the west of 'Coatham Marsh' and to the north of the 'Redcar Steel House and surrounding area'.
- 2.55 The site is immediately bounded by:
 - The Darlington to Saltburn Railway line to the south east;
 - A private internal road and open industrial land to the north west;
 - A section of the former Hot Metal Transfer railway line, open land and South Gare Road to the north; and
 - The boundary wall of Marsh Farm House and adjacent industrial unit and by open land to the north east.
- 2.56 The site's location is shown in Figure 5 below.



Figure 5 Long Acres: Site Boundary



Development Site

- 2.57 The development site is approximately triangular in shape and is largely defined by the existing surrounding infrastructure. The site was previously partially occupied by the Warrenby iron and steel works and in part has been previously used as a licenced landfill for the disposal of by-products from iron and steel making, principally slag.
- 2.58 Whilst the site is free from built structures, it contains a number of permanent roads and rail line. This includes the former Hot Metals Transfer Railway line and adjacent road which cross the site from south to north and has an embankment which is around 10m AOD at the southern end, approximately 4m above surrounding ground level, which gradually lowers to meet existing ground levels at its northern end. The Fleet watercourse crosses the site in an approximately east west direction, although it arcs in a southerly direction before heading in a north west direction.
- 2.59 The area to the east of the former Hot Metals Transfer Railway line and north of the Fleet watercourse was the area previously used as a landfill and is now a steep sided mound with a flat plateau at 19.5m AOD. The ground levels surrounding the mound vary from 7.5m AOD to 9m AOD. The ground cover on the plateau is principally the slag material from the landfill use, with the sides of the mound and beyond being covered in grasses and shrub type vegetation, with some trees alongside the former railway line and the Fleet.

- 2.60 The area to the south of the Fleet watercourse and north of the Darlington to Saltburn Railway line is a flat area that was prepared as a landfill site, but never used as such. There is very little variation in the ground levels which are approximately 6m AOD throughout. The ground cover in this area is a mixture of bare ground and vegetation which comprises mainly grasses and scrub, and also includes a small clump of trees.
- 2.61 The area to the west of the former Hot Metals Transfer Railway line contains former internal road infrastructure at its southern end, and otherwise the ground cover is a mixture of grass and scrub-type vegetation interspersed with areas of bare ground comprising materials associated with former uses. The ground levels in this area variable according to on site infrastructure and range from 11m AOD at the road embankment on the north western boundary of the site to 6m AOD in a relatively large flat area in the centre of this part of the site.
- 2.62 STDC's internal road network runs across the site. It includes a road running in a north south direction alongside the route of the former Hot Metals Transfer Railway line, which branches in a westerly direction in the northern part of the site. A small internal road network is also present in the south western corner of the site.
- 2.63 The Darlington to Saltburn Railway line, which provides the south east boundary of the site is an operational passenger railway line and, the Redcar British Steel station is located on the boundary of the site, just to the south east of the intersection between the two railway lines.
- 2.64 A high voltage power transmission line crosses under the site in a north south direction under the route of the internal road.
- 2.65 The Fleet watercourse enters the site in a westerly direction from Coatham Marsh and arcs round in south westerly direction. It is then culverted in a north westerly direction under the former Hot Metals Transfer Railway and internal road and emerges on the other side where it continues in a straight culvert in a north west direction. Outside of the site, the Fleet continues in a culvert heading south until it discharges into Dabholm Gut.
- 2.66 The operational RWE Breagh high pressure gas pipeline crosses the northern part of the site in a north-west south-east direction. Water infrastructure present on the site comprises potable water supply pipes and an industrial water mains, both of which cross the northern part of the site in a north-west south-east direction.

Proposed Development

- 2.67 The planning application will be submitted in outline and will be accompanied by an ES.
- 2.68 The *draft* description of development is as follows:

"Outline planning application for the development of up to 185,806 sqm (gross) of general industry (Use Class B2) and storage and distribution facilities (Use Class B8) with ancillary office accommodation (Use Class E), HGV and car parking and associated works. All matters are to be reserved"

2.69 It is understood that there are no structures / buildings within the site requiring demolition. For the purpose of this EIA, and associated HRA, it will be necessary to assess the principle of realigning the Fleet without a detailed design solution for its final routing. The level of assessment should be such that enables suitable conditions to be imposed which accept the principle of relocating the Fleet subject to certain mitigation and final details of the diversion to be submitted. For completeness, the Fleet will be marked on the planning drawings.

2.70

The <u>draft</u> proposed development parameters are set out in Table 4 below.

Table 4 Long Acres: Development Parameters

| Development Parameter | Amount / Use |
|-----------------------|--|
| Use Class | B2 (General Industry) B8 (Storage and Distribution) |
| | E (Office) (maximum 10% of overall floorspace) |
| Maximum Floorspace | 2m sqft / circa 185,806 sqm* |
| Maximum Height | 36m |
| Finished Floor Level | Still to be agreed |
| Developable Area | The footprint of the proposed buildings will dependant on market demand. The Parameters Plan will include developable areas which show a distinction between those area where buildings will be located and those designated for hard and soft landscaping. |
| Access | Still to be agreed |

Steel House

Site Location

- 2.71 The site is 24.42 ha in size. It is brownfield land and includes the existing Steel House Buildings and associated infrastructure, including internal access roads, hard standing and car parking.
- 2.72 The site is located approximately 1.5 miles north west of Redcar town centre. It is approximately half a mile south of the cost and around 1.75 miles south west of the bank of the River Tees. It is located directly to the south of the Long Acres site (described in further detail above).
- 2.73 The site is immediately bound by:
 - The A1085 Trunk Road to the south and a roundabout providing access to the local road network. Redcar Gate is located at the south of the site;
 - An STDC access road to the east;
 - STDC access roads to the west and beyond this lies the Wilton Sempcorp utilities corridor; and
 - The network rail corridor to the north.
- 2.74 The site's location is shown on Figure 6 below.



Figure 6 Steel House: Site Boundary



Development Site

- 2.75 The development site is approximately rectangular in shape and it is largely defined by existing surrounding infrastructure. As stated above, the site is occupied by the Steel House office complex and its surrounding infrastructure which includes internal access roads, hard standing, car parking and a gatehouse. Steel House is accessed by the internal road network which connects to the roundabout at the south of the site. This provides further access to the Trunk Road. The office complex was originally set in a landscaped setting and an area of semi-natural broadleaved woodland still remains. The remainder of the site includes vegetated or cleared land.
- 2.76 Part of the site is subject to a current full planning application (Ref. R/2020/0598/FF) for the retrospective demolition of the existing gatehouse and redevelopment to provide a new single storey gatehouse with associated car parking and landscaping. This is currently being considered by RCBC.
- 2.77 STDC's internal access roads, which are partly described above, provide access to the offices and they also run along the former Hot Metals Transfer Rail line. This rail line runs through the western part of the site from south west to north.



- 2.78 The Darlington to Saltburn Railway line, which provides the northern boundary of the site is an operational passenger railway line and, the Redcar British Steel station is located on the boundary of the site, just to the west of the intersection between the two railway lines.
- 2.79 A mains power transmission line crosses under the site in a south west to north east direction under the route of the internal road network and Hot Metals Transfer line. A live substation is located at Steel House.
- 2.80 The operational RWE Breagh high pressure gas pipeline runs along the southern boundary of the site before crossing the Long Acre site of the site in a north-west south-east direction. Water infrastructure present on the site comprises potable water supply pipes and an NWL water main, both of which are located near Steel House.

Proposed Development

- 2.81 The planning application will be submitted in outline and will be accompanied by an ES.
- 2.82 The *draft* description of development is as follows:

"Outline planning application for the development of up to 39,948 sqm (gross) of office accommodation and incubator space (Use Class E), car parking and associated works. All matters reserved"

2.83 The *draft* proposed development parameters are set out in Table 5 below.

| Development Parameter | Amount / Use |
|-----------------------|--|
| Use Class | E (Office and Incubator Space) |
| Maximum Floorspace | 430,000 sqft / circa 39,948 sqm* |
| Maximum Height | 6m |
| Finished Floor Level | Still to be agreed |
| Developable Area | The footprint of the proposed buildings will dependant on market demand. The Parameters Plan will include developable areas which show a distinction between those area where buildings will be located and those designated for hard and soft landscaping. |
| Access | Still to be agreed |

Table 5 Steel House: Development Parameters

3.0 Scope of the Environmental Statements

3.1 As noted in the introduction it is considered that all five developments could give rise to potential significant environmental effects individually or cumulatively alongside the 5 schemes and other applications. Each application will therefore be accompanied by an ES.

3.2 It is proposed that the following topics will be scoped into all 5 Environmental Statements:

- 1 Transport assessing operational effects only. A construction assessment will be considered at the detailed stage of the planning process based on best practice mitigation measures included within the CEMP;
- 2 Noise and Vibration assessing construction and operational effects;

- 3 Air Quality assessing construction and operational effects. It should be noted that the construction effects assessment will consider the air quality effects of construction traffic. However, it will not consider the potential effects of dust generated by the construction of the proposed development. This is on the grounds that a detailed Framework Construction Environmental Management Plan (FCEMP) has been prepared as an Appendix to Chapter B the ESs. This outlines all dust mitigation measures required for high risk receptors. With the FCEMP in place (via a condition) there will be no significant construction dust effects likely and therefore the effects of dust on sensitive receptors has been scoped out of the ES.
- 4 Water Management and Flooding– assessing construction and operational effects;
- 5 Ground Conditions and Remediation– assessing construction effects. It is proposed to scope out operational effects from the assessment of all 5 EIAs. This is on the following grounds:
 - i Any contamination that is present on each site would be dealt with during the construction phase and therefore the risk from historic contamination during operation would be Negligible and Not Significant.
 - ii Whilst the proposed operational sites are industrial and therefore may have hazardous substance present they would need appropriate permits and would be governed by legislation in order to operate safely, therefore the risk from new contamination with this tertiary mitigation in place, would be Negligible and Not Significant.
 - iii It is also noted that post development the sites would mainly be covered by hardstanding and therefore this would also reduce the risk of contamination in spillage events, due to leaching etc..
- 6 Socio Economic assessing construction and operational effects;
- 7 Waste and Materials assessing construction and operational effects;
- 8 Greenhouse Gas Emissions assessing construction and operational effects;
- 9 Landscape and Visual Impact assessing construction and operational effects; .
- The following topics will be scoped into some but not all ESs as discussed below:
 - 1 Biodiversity and Ecology- this topic will be scoped into all ESs with the exception of the Lackenby site. It is proposed that this topic is scoped out of the Lackenby ES on the basis that no significant adverse effects are likely on ecological receptors given the following baseline data:
 - a vegetation on the site is limited and its significance is at a Local level at best;
 - b other receptors are limited to Dingy Skipper butterfly, where numbers are expected to be in low single figures given the small size of suitable habitat and therefore only of Local significance; and nesting birds, which are of negligible significance even at a Local level.

Please note that the Lackenby development will be still be considered when assessing cumulative ecological effects in the other 4 ESs;

2 Below Ground Heritage – this topic will be scoped out of Lackenby and Foundry and scoped into the remaining sites. The project team archaeologist is preparing a separate Archaeology scoping note, which she will share with relevant consultees. The chapters will focus on

3.3

'during construction effects' only, as once operational there will be no significant effects on below ground heritage; and

- 3 Above Ground Heritage– this topic will be scoped into the Long Acres EIA, on the grounds that there is potential for significant adverse effects to Marsh farmhouse during the construction and operational phases of the proposed development. It is proposed that this topic will be scoped out of the other four EIAs, as there are no listed buildings within the application sites or surrounding the sites and therefore no significant adverse effects are anticipated on above ground heritage assets;
- It is proposed to scope the following topics out of all 5 EIAs, however reference should be made within the above disciplines and ES Chapters where relevant:
 - 1 Risk to Human Health (i.e. although this will be addressed within chapters such as ground conditions and remediation and air quality where appropriate);
 - 2 Major Accidents and Disasters (i.e. although each technical chapter will consider the relevance of this to the topic (under a heading in the potential effects section) and it will be specially cross referred to within chapters such as ground conditions and remediation);
 - 3 Population (although will be referred to where appropriate in the other technical chapters e.g. socio-economic chapter);
 - 4 Land Use (although will be referred to where appropriate in ground conditions and remediation chapter);
 - 5 Climate Change Resilience it is not considered necessary to have a stand alone chapter addressing this. Measures required to reduce the vulnerability of the proposed development to climate change are considered best addressed through chapters such as noise and vibration and water management and flooding;
 - 6 Heat and Radiation no significant adverse effects are anticipated and therefore this topic will be scoped out of the 5 ESs;
 - 7 Daylight, Sunlight and Microclimate no significant adverse effects are anticipated and therefore this topic will be scoped out of the 5 ESs.

4.0 Cumulative Assessment

- 4.1 In accordance with the EIA 2017 Regulations (as amended) each EIA will include an assessment of any direct and indirect cumulative effects arising from the inter-relationships between different impacts arising from the development when considered alongside any other developments in the area surrounding the site. In this case this will clearly include assessing the cumulative effects of all five proposed developments, alongside other developments in the area.
- 4.2 The objective is to identify whether the combined effects from the development or impacts from several developments, and which individually might be insignificant could, when considered together cause a further significant direct or indirect and cumulative impact requiring mitigation.
- 4.3 In relation to other development, best practice dictates that cumulative assessments of this nature should have regard to those schemes which are 'reasonably foreseeable' (i.e. usually those under construction or with planning permission). Schedule 4 (Part 5) clarifies that the cumulative assessment should focus on existing and/or approved projects. The assessment is only capable of being carried out based on the information available at the time of the assessment.



- 4.4 The assessment should only focus where there is the potential for significant cumulative effects and, for this development, an initial review of potential developments requiring review has focussed on those developments that due to their proximity or scale are most likely to give rise to cumulative effects. Consideration has also been given to the areas within which cumulative effects are most likely.
- 4.5 The cumulative assessment for each ES will therefore include a review of the potential for impacts when the scheme is considered alongside the other four STDC developments and the following developments: -

| Ad | ldress | Ref. Number | Type of Application | Current Known Status | Description of Development |
|----|---|----------------------------|------------------------------|---|--|
| 1 | Grangetown prairie Land East of John Boyle Road and West of Tees Dock Road Grangetown | R/2019/0767/OOM | Outline | Granted, 24.07.2020 | Outline application for the construction of an energy recovery facility (erf) and associated development |
| 2 | Land at Former South Bank Works; Grangetown Prairie; British Steel and Warrenby Area | R/2019/0427/FFM | Full | Granted, 27.09.2019 | Demolition of structures and engineering operations associated with ground preparation and temporary storage of soils and its final use in the remediation and preparation of land for regeneration and development |
| 3 | Land at Low Grange Farm South Bank | R/2014/0372/OOM | Outline | Granted, 31.03.16 | Outline application for residential development (up to 1250 dwellings) (all matters reserved) |
| 4 | Port Blyth Biomass Power Station | DCO Reference. <u>1873</u> | Development Consent Order | Order made 24.07.2013 | Proposed construction of a 300 Mw biomass fired renewable energy power station on land adjacent to the main southern dock at Teesside on the south bank of the River Tees. |
| 5 | Land North of Kirkleatham Business Park and West of Kirkleatham Lane Redcar | R/2016/0663/OOM | Outline | Granted, 25.07.2020 | Outline planning application for up to 550 residential units with associated access, landscaping and open space |
| 6 | Land North of Kirkleatham Business Park and West of Kirkleatham Lane Redcar | R/2019/0485/RMM | Reserved Matters | Granted, 31.10.19 | Reserved matters application (appearance, landscaping, layout and scale) following approval of outline planning permission r/2016/0663/oom for up to 550 residential units with associated access, landscaping and open space |
| 7 | Dogger Bank Wind Farm | DCO Reference. <u>5192</u> | Development Consent Order | Order made 17.02.15. A Non- Material Amendment was submitted on 11.01.2019 | Large offshore wind farm at Dogger Bank Teesside (in international waters) and associated offshore export cabling and onshore infrastructure, with a generating capacity of up to 4.8GW. Both developments will result in increases in employment in the area, during construction and operation. |
| 8 | Teesside Combined Cycle Power Plant (CCPP) | DCO Reference <u>2019</u> | Development Consent Order | Order made 05.04.19 | Construction of a 1,700mwe combined-cycle gas turbine power station at Wilton International was granted permission. |
| 9 | Land at Wilton International | R/2017/0876/FFM | Full | Granted, 16.01.18 | Construction and operation of a mineral processing and refining facility |

| | ldress | Ref. Number | Type of Application | Current Known Status | Description of Development |
|----|--|--|------------------------------|---------------------------|--|
| | Complex Redcar | | | | including ancillary development, car parking and landscaping |
| 10 | Land at Teesport, Grangetown | R/2006/0433/OO | Outline | Granted 04. 10.07 | Outline application for development of a container terminal |
| 11 | York Potash Port and Materials Handling Facilities | The York Potash Harbour Facilities DCO Order 2016 (No. <u>772</u>) | Development Consent Order | Order made, 20.07.2016 | Harbour facilities associated with Bran Sands |
| 12 | York Potash Land at Wilton International Complex Redcar | R/2017/0906/OOM | Outline | Granted, 30.04.2018 | Outline planning application for an overhead conveyor and associated storage facilities in connection with the York Potash Project |
| 13 | Land at Wilton International Complex | R/2018/0139/VC | Full | Granted, 23.05.2018 | Variation of condition 2 (approved plans) of planning permission R/2014/0626/FFM to allow for minor material amendments to the approved layout and size of buildings; site mounding; on-site attenuation ponds, Swales and internal roads following the progression of more detailed design engineering |
| 14 | The York Potash Project - (Doves Nest now known as Woodsmith) | R/2014/0627/FFM | Full | Granted, 19.08.2015 | The winning and working of polyhalite by underground methods including the construction of a minehead at doves nest farm involving access, maintenance and ventilation shafts, the landforming of associated spoil, construction of buildings, access roads, car parking and helicopter landing site, attenuation ponds, landscaping, restoration and aftercare and associated works. In addition, the construction of an underground tunnel between doves nest farm and land at wilton that links to the mine below, comprising 1 shaft at doves nest farm, 3 intermediate access shaft sites, each with associated landforming of associated spoil, construction of buildings, access roads and car parking, landscaping, restoration and aftercare, the construction of a tunnel portal at wilton comprising buildings, landforming of spoil and associated works |
| 15 | Lianhetech Seal Sands Seal Sands Road Seal Sands TS2 1UB (Stockton Council) | 19/2161/FUL | Full | Granted, 21.02.2020 | Erection of new plant, new buildings and extensions to existing buildings. Works to include Warehouse D Extension, Boiler House Structure, Amenities & Workshop Building, Drum Storage Workshop Extension, Amenities extension, 2 no. Warehouse buildings, Contractors cabins, Gate House and Weighbridge, Receivers, Driers, Extension to existing Tank Farm, Tanker Offloading stations, Process and control buildings, Installation of new and replacement cooling towers and industrial apparatus, Pipe Bridge, Swale and the demolition of old plant and buildings. |

| Address | | Ref. Number | Type of | Current Known | Description of Development |
|---------|--|---|------------------------------------|--|--|
| | | | Application | Status | |
| 16 | Land to the South of Tofts Road West Graythorp Hartlepool | H/2019/0275 | Full | Granted, 10.07.2020 | Energy recovery (energy from waste) facility and associated infrastructure |
| | (Hartlepool Council) | | | | |
| 17 | Regent Cinema Newcomen Terrace Redcar TS10 1AU | R/2020/0075/F3M | Deemed Consent | Granted, 06.08.2020 | Demolition of existing cinema and replace with new cinema including external terraces; landscaping and temporary sea wall |
| 18 | South Bank Site, STDC | R/2020/0357/OOM | Outline planning application | Decision pending | Outline planning application for demolition of existing structures on site and the development of up to 418,000 sqm (gross) of general industry (use class B2) and storage or distribution facilities (use class B8) with office accommodation (use class B1), HGV and car parking and associated infrastructure works all matters reserved other than access |
| 19 | South Bank, marine side application, STDC | This application is yet to be submitted to RCBC but it is anticipated a submission will be made in the first week of November | Outline | Decision pending. Lichfields to confirm target determination date once application has been submitted. | Demolition of the existing wharf, jetties and other minor infrastructure along the river bank at South Bank (including an electrical substation), capital dredging (to deepen the northern half of the Tees Dock turning circle, a section of the existing approach channel and to create a berth pocket), offshore disposal of dredged sediments and construction and operation of a new quay (to be set back into the riverbank). |
| 20 | Land at and adjoining Eston Road including Gateway Junction of A66 to Middlesbrough Road East Grangetown | R/2020/0270/FFM | Full | Granted, 12.08.2020 | 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 |
| 21 | Land at Prairie Site Grangetown | R/2020/0318/FFM | Full | Granted, 30.09.2020 | Engineering operations associated with ground remediation and preparation including removal of former railway embankment and works to Holme Beck and knitting wife beck |
| 22 | Land at Metals Recovery Area North west of PD ports; North East of Sembcorp pipeline corridor and Tees Dock Road South | R/2020/0465/FFM | Full | Pending decision, target determination date 18.12.2020 | Demolition of existing buildings/structures and engineering operations associated with ground remediation and preparation of land for development |

| Address | | Ref. Number | Type of Application | | Description of Development |
|---------|--|-----------------|------------------------|---|--|
| | East of former Slem waste management facility and South West of Highfield Environmental Facility South Bank | | | | |
| 23 | Land at Redcar Bulk Terminal Redcar TS10 5QW | R/2020/0411/FFM | Full | Pending decision, target determination date 02.11.2020 | Construction of the Redcar Energy Centre (REC) consisting of a material recovery facility incorporating a bulk storage facility; an energy recovery facility; and an incinerator bottom ash recycling facility along with ancillary infrastructure and landscaping |
| 24 | Land associated with outline application sites, including Dorman Point, Lackenby, the Foundry, Long Acre and Steel House | N/A | Prior approval | Not yet submitted | Demolition of existing structures and buildings associated with the requirement to create sites that are able to accommodate development. |
| 25 | Steel House | R/2020/0598/FF | Full | Pending decision, target determination date 08.12.2020 | Retrospective demolition of existing gatehouse; redevelopment of site to provide new single storey gatehouse with associated car parking and landscaping. |



4.6 If the authority is aware of any other proposals that it considers will need to assessed in terms of potential cumulative impacts it would be appreciated if you could let us know.

5.0 Approach and Form of Environmental Statement

Methodological approach

- 5.1 Each EIA will be prepared in accordance with the requirements of the 2017 EIA Regulations (as amended) and with reference to best practice including that published by the IEMA. All information required or reasonably required to identify the significant environmental effects of the development, as defined by Schedule 4 of the Regulations will be provided as part of each ES.
- 5.2 The assessment will also include a consideration of relevant policy and legislation of relevance as well as considering comments received by consultees during the pre-submission period.
- 5.3 Each technical assessment will follow a consistent approach and format and include:-
 - 1 Brief review of relevant policy and legislative context;
 - 2 Confirmation of the detailed topic specific assessment methodology, consultation undertaken and confirmation on how the assessment relates to the standard significance criteria adopted for the EIA (see below);
 - 3 Consideration of Baseline Conditions including an identification of sources of information, site history, current environmental conditions and future trends/anticipated changes to current conditions that could be anticipated without the scheme;
 - 4 Identification of the potential effects including a summary of those resources/receptors likely to be affected, the sensitivity of those receptors to accommodate change; the degree of change resulting from the proposal; the change of events or pathways linking cause to effect and a prediction of the significance of effects in terms of nature, extent and magnitude including whether it is direct/indirect, short/long term, permanent/temporary, beneficial/adverse;
 - 5 The scope for incorporating mitigation measures to avoid, reduce, remedy or compensate for any identified effects and the need for any monitoring measures; and
 - 6 Identification of any effects remaining after mitigation.
- 5.4 Where this format is not followed, this will be clearly explained in the methodology.
- 5.5 The effects of individual environmental matters will be transcribed against a common list of significance criteria for the EIA which will comprise:-
 - 7 Substantial¹ beneficial
 - 8 Moderate² beneficial
 - 9 Minor³ beneficial

¹ Substantial – considerable effects (by extent, duration or magnitude) or of more than local significance or breaching identified standards or policy

² Moderate – limited effects which may be considered significant

³ Minor – slight, very short or highly localised effects



- 10 Neutral/negligible
- 11 Minor¹⁰ adverse
- 12 Moderate9 adverse
- 13 Substantial⁸ adverse
- 5.6 The ES will include a clear description of the likely significant environmental effects on the environment including direct/indirect effects, secondary, cumulative, short/medium/long term, permanent/temporary and beneficial/adverse effects arising from the development.

Structure and format of ES

5.7

The findings of each EIA will be set out in an ES which will comprise three volumes as follows:-

- Volume 1 Non-Technical Summary
- Volume 2 Technical Assessments
- Volume 3 Technical Figures and Appendices

| From: | David Pedlow |
|--------------|---|
| To: | Katie Brown |
| Cc: | Neil Westwick; Kate McGill; Anthony Greally; Heather Overhead; Justine Matchett; Alexandra Bonner; Claire Griffiths |
| Subject: | RE: STDC: Development Proposals and Outline Planning Applications [NLP-DMS.FID706102] |
| Date: | 26 November 2020 16:17:29 |
| Attachments: | image005.png image006.png |

CAUTION: This email originated from an external source. Good afternoon Katie

Sorry for the delay in coming back to you on the below email. I hope any consultants that have made contact with the Council on various technical matters have received the necessary support and information. If these are any issues with any of these please do let me know.

The attached note at section 2 has provided a clear summary of the proposed 5 applications and the development likely to come forward from these. This has provided a good overview for the team in planning on what we are expecting and I am sure the consultees within the Council have also benefited from the overview.

Section 3 of the note relates to the informal scoping view that you have taken. I can advise that based on the information that we have been provided with to date, the topics that you propose to scope into all 5 applications is considered appropriate. With regard to the topics that are to be scoped in to some but not all ESs, again based on the information provided as well as my knowledge of the sites, I see no reason for this approach not to be taken. With regard to the topics that are to be scoped out from the ESs, these again are not disputed. It is noted that a number of these topics will be addressed through other chapters within the ES, however they will not receive their own standalone chapter.

Section 4 of the note relates to cumulative assessment of the applications. The table within this section identifies the developments to be assessed as part of the assessment. I believe that this list includes all the developments required to be assessed. A couple of these have progressed in terms of their current status, however these are mainly applications that have been submitted by Lichfields on behalf of STDC, therefore I assume you will be aware of this fact. I am also aware that you have provided a further note on the cumulative assessment work being undertaken and the associated methodologies. I will rely separately on this note to keep a clear trail of correspondence on separate matters.

Section 5 of the note sets out the approach to the technical assessments. This section is considered to be consistent to the requirements of the 2017 EIA Regs. as well as the approach that has been taken on the Southbank submission recently submitted and considered by the LPA.

I hope the above is clear and allows the applications to continue to be progressed. Should you require anything further in relation to this matter please do not hesitate to contact me.

Kind Regards

David Pedlow MRTPI Principal Planning Officer Redcar & Cleveland Borough Council

Redcar & Cleveland House Kirkleatham Street Redcar Yorkshire TS10 1RT Tel: 01287 612546 Email: <u>david.pedlow@redcar-cleveland.gov.uk</u> Website: http://www.redcar-cleveland.gov.uk

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|--|--------------------------|--------------------------------|------------------------|
| KEEPING COMMUNITIES AT OUR HEART | BOLD AND AMBITIOUS | CARING AND RESPECTFUL | DELIVERING OUR BEST |

From: Katie Brown [mailto:katie.brown@lichfields.uk]

Sent: 11 November 2020 16:29

To: David Pedlow <David.Pedlow@redcar-cleveland.gov.uk>

Cc: Neil Westwick <neil.westwick@lichfields.uk>; Kate McGill <kate.mcgill@lichfields.uk>; Anthony Greally

<anthony.greally@lichfields.uk>; Heather Overhead <heather.overhead@lichfields.uk>; Justine Matchett

<justine.matchett@lichfields.uk>; Alexandra Bonner <alexandra.bonner@lichfields.uk>

Subject: STDC: Development Proposals and Outline Planning Applications [NLP-DMS.FID706102]

Hi David,

Thank you for discussing the next phase of developments within South Tees Development Corporation's ('STDC') Masterplan area with us yesterday afternoon.

We have produced the attached Briefing Note for you and the Council which sets out an overview of the development sites, the outline planning applications and the proposed scope of the Environmental Impact Assessments ('EIA'). This Note includes plans of the site. We provide a summary below.

Proposed Developments and Applications

On behalf of STDC, we will be submitting <u>five outline applications on 18th December this year</u> for development on the following sites:

- 1. **Dorman Point**: up to approximately 139,000 sqm of B2 / B8 floorspace;
- 2. Lackenby: up to approximately 92,900 sqm of B2 / B8 floorspace;
- 3. The Foundry: up to approximately 464,500 sqm of B2 / B8 floorspace;
- 4. Long Acres: up to approximately 185,800 sqm of B2 / B8 floorspace; and
- 5. Steel House: up to approximately 15,700 sqm of Use Class E floorspace (incubator).

A full schedule of the known development parameters are included within the attached Briefing Note.

Based on the known site areas at this point in time, the planning application fees for each application are expected to be:

- 1. Dorman Point (57.7963ha): £87,746
- 2. Lackenby (35.8332ha): £57,524
- 3. The Foundry (133.4822ha): £150,000
- 4. Long Acres (67.0496ha): £100,580
- 5. Steel House (24.4273ha): £41,792

We can reconfirm these amounts nearer the point of submission.

Environmental Impact Assessment

It is proposed that each planning application will be accompanied by its own Environmental Statement ('ES'). This is so each development can be assessed individually on a site basis and cumulatively alongside the four other outline applications.

The purpose of the attached note is to set out the proposed scope of each ES. This is set out in Section 3.0 and it is based on consultation with the technical team and the inclusion of known mitigation measures. Section 4.0 of the note includes a proposed list of schemes for the cumulative assessment (including the five proposed developments and surrounding nearby development). The South Bank scheme was used as a starting point to define these schemes.

Scoping Process

On the information set out within the Note, it is our intention to informally scope the EIA with you and the Council. Similar to South Bank, we would therefore be grateful if you and Officers can review the note and advise whether you consider the scope to be appropriate. We would also be grateful if you can confirm you agree with the proposed cumulative schemes. Your agreement and comments will help inform the process.

As with South Bank, we have advised the technical team to make contact with relevant Officers at the Council and statutory bodies to agree methodologies and discuss site specific matters. We will forward you the list of Officer contacts you have previously sent us and we would be grateful if you can confirm whether these details remain

correct.

Both myself and my colleagues Heather Overhead and Kate McGill (copied into this email) will be working on the EIAs and please do let us know if you have any questions on the above or the note.

As we agreed yesterday, we will circulate a meeting invite for a weekly call on Friday's at 11am. We can use this to keep all parties informed on the applications and any matters arising on the proposals.

Many thanks in advance, Kind regards, Katie

Katie Brown

Senior Planner Lichfields, 3rd Floor, 15 St Paul's Street, Leeds LS1 2JG T 0113 397 1397 / M 07880385705 / E <u>katie.brown@lichfields.uk</u>

lichfields.uk ╘ 🛅



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Appendix N3: Cumulative Transport Assessment Tables and Results

Transport: Cumulative Effects

This section presents an assessment of the cumulative transport effects arising from six sites within the Teesworks area. The sites are:

- South Bank;
- Dorman Point;
- Lackenby;
- The Foundry;
- Long Acres; and
- Steel House.

During Construction

As this is an outline planning application the end users of the development site, and therefore specifics of construction, are not known at the time of writing. As such, construction traffic has not been included in the cumulative assessment and instead it will be undertaken once the detailed design of the scheme is known. Notwithstanding this, a Framework Construction Environmental Management Plan ('CEMP') and Construction Traffic Management Plan ('CTMP') has been embedded into the proposed development and this will be taken into account in any future assessment.

Whilst a detailed assessment cannot be undertaken at this stage, professional judgement indicates that, with a CTMP and phased construction programme, any impacts would be minor and therefore the severance or amenity effect of construction traffic would be Not Significant.

During Operation

Severance

Table 1 identifies the percentage change in vehicle and HGV trips on all key receptor links between the 2033 Future Baseline and the 2033 Future Baseline with all the Teesworks area development sites in the AM peak hour. Further traffic flow information is available within the Transport Assessment ('TA') (at Appendix C1 of this ES).

| Receptor | Base Vehicle Flow | Base HGV Flow | Development – Vehicle Trips | Development – HGV Trips | Vehicle % Change | HGV % Change |
|---|-------------------------|---------------------|--------------------------------|----------------------------|---------------------|-----------------|
| A66 – east of Old Station Road | 3,491 | 454 | 1,100 | 118 | 32% | 26% |
| Old Station Road | 668 | 120 | 491 | 41 | 74% | 34% |
| Eston Road | 507 | 91 | 880 | 107 | 174% | 118% |
| Church Lane | 525 | 5 | 132 | 15 | 25% | 300% |
| A66 – west of Eston Road | 3,326 | 432 | 1,087 | 117 | 33% | 27% |
| A66 – east of Eston Road | 3,176 | 318 | 1,403 | 153 | 44% | 48% |
| Normanby Road – north of A66 | 447 | 80 | 104 | 13 | 23% | 16% |
| Normanby Road – south of A66 | 615 | 6 | 98 | 10 | 16% | 167% |
| A1053 – north of Trunk Road | 2,670 | 214 | 2,113 | 215 | 79% | 100% |
| A1053 – south of Trunk Road | 2,017 | 182 | 1,562 | 150 | 77% | 82% |
| A1085 Trunk Road – north of Steel House roundabout | 1,095 | 88 | 2,000 | 174 | 183% | 198% |

Table 1 Cumulative Assessment of Severance, AM Peak Hour (2033 During Operation)

| Receptor | Base Vehicle Flow | Base HGV Flow | Development – Vehicle Trips | Development – HGV Trips | Vehicle % Change | HGV % Change |
|---|-------------------------|---------------------|--------------------------------|----------------------------|---------------------|-----------------|
| A1085 Trunk Road – south of Steel House roundabout | 1,452 | 116 | 2,249 | 205 | 155% | 177% |
| West Coatham Lane | 891 | 9 | 124 | 9 | 14% | 100% |
| A1042 Kirkleatham Lane south | 855 | 26 | 242 | 19 | 28% | 73% |
| Corporation Road | 977 | 78 | 1,044 | 92 | 107% | 118% |
| A174 east of Greystones roundabout | 3,844 | 77 | 893 | 82 | 23% | 106% |
| A174 west of Greystones roundabout | 3,532 | 141 | 612 | 63 | 17% | 45% |

Table 2 shows the percentage change in vehicle and HGV trips on key receptor links between the 2033 Future Baseline and the 2033 Future Baseline with the Teesworks area development sites in the PM peak hour.

Table 2 Cumulative Assessment of Severance, PM Peak Hour (2033 During Operation)

| Receptor | Base Vehicle Flow | Base HGV Flow | Development – Vehicle Trips | Development – HGV Trips | Vehicle % Change | HGV % Change |
|---|-------------------------|---------------------|--------------------------------|----------------------------|---------------------|-----------------|
| A66 – east of Old Station Road | 3,341 | 434 | 1,178 | 63 | 35% | 15% |
| Old Station Road | 546 | 98 | 599 | 22 | 110% | 22% |
| Eston Road | 646 | 116 | 694 | 65 | 107% | 56% |
| Church Lane | 437 | 4 | 132 | 9 | 30% | 225% |
| A66 – west of Eston Road | 3,441 | 447 | 1,173 | 64 | 34% | 14% |
| A66 – east of Eston Road | 3,045 | 305 | 1,403 | 87 | 46% | 29% |
| Normanby Road – north of A66 | 711 | 128 | 464 | 7 | 65% | 5% |
| Normanby Road – south of A66 | 807 | 8 | 113 | 8 | 14% | 100% |
| A1053 – north of Trunk Road | 2,803 | 224 | 1,795 | 137 | 64% | 61% |
| A1053 – south of Trunk Road | 1,736 | 156 | 1,308 | 90 | 75% | 58% |
| A1085 Trunk Road – north of Steel House roundabout | 1,009 | 81 | 1,807 | 118 | 179% | 146% |
| A1085 Trunk Road – south of Steel House roundabout | 1,612 | 129 | 2,030 | 142 | 126% | 110% |
| West Coatham Lane | 1,022 | 10 | 109 | 6 | 11% | 60% |
| A1042 Kirkleatham Lane south | 957 | 29 | 248 | 14 | 26% | 48% |
| Corporation Road | 1,018 | 81 | 837 | 57 | 82% | 70% |
| A174 east of Greystones roundabout | 3,837 | 77 | 768 | 48 | 20% | 62% |
| A174 west of Greystones roundabout | 3,666 | 147 | 491 | 39 | 13% | 27% |

To assess the change in traffic flows, judgement has been made on the magnitude of change in accordance with IEMA guidance. Changes in traffic of less than 10% are considered to have no discernible environmental effect, given that daily variations in background traffic flow may fluctuate by this amount. A 30% change represents a reasonable threshold above which a change would be perceptible.

Table 1 and Table 2 show the magnitude of change is greater than 30% at the following locations:

- Old Station Road has a magnitude of change in the AM peak hour of a 74% increase in total vehicles and a 34% increase in HGV traffic. The respective values forecast during the PM peak hour are 110% and 22%;
- The A66 experiences a magnitude of change of over 30% in traffic both east and west in the AM and PM peak hours;
- Eston Road has a magnitude of change in the AM peak hour of a 174% increase in total vehicles and a 118% increase in HGV traffic. The respective values forecast during the PM peak hour are 107% and 56%;
- Similarly, the A1053 north and south of the Trunk Road roundabout is forecast to experience traffic flow increases above 30% in both the AM and PM peak hours;
- Normanby Road, north of the A66, has a magnitude of change of 65% in vehicle flows in the PM peak hour;
- The A1085 north of the Steel House roundabout has a magnitude of change of 183% in the AM peak hour and 179% in the PM peak hour. South of Steel House roundabout the values are 155% and 126% respectively with the addition of the cumulative traffic flows; and
- Corporation Road to the east of Kirkleatham Lane has a magnitude of change in total vehicles of over 100% in the AM peak hour and 82% in the PM peak hour.

The sensitivity of these receptors has been reviewed to determine the significance of these changes as follows:

- Eston Road provides access to Dorman Point development site and allows access to other premises neighbouring Dorman Point. The sensitivity of this receptor is medium and the large magnitude in traffic and HGV flow is a result of very low baseline flows. The significance of the permanent effect is therefore considered to be Minor Adverse. This is considered Not Significant.
- The A66 is a heavily used route providing east-west connections to the Strategic Road Network (SRN). As a result, the sensitivity of this receptor is high. Given that the magnitude of change is just over 30%, the significance of the permanent effect is considered to be **Moderate Adverse**. This is considered Significant.
- The A1053 forms part of the SRN and is therefore categorised as a high sensitivity receptor. The large magnitude of change results in the conclusion that the significance of the permanent effect is considered to be **Substantial Adverse**. This is considered Significant.
- Normanby Road serves other industrial sites and provides a link to South Bank Railway Station which increases the sensitivity of the receptor to medium. The significance of the permanent effect in the PM peak is therefore considered to be **Moderate Adverse**. This is considered Significant.
- The A1085 Trunk Road is a key distributor link with an average level of use that connects the town of Redcar with the A66 and the A1053. The sensitivity of this receptor is medium and there is a large magnitude change in traffic and HGV flows. The significance of the permanent effect is therefore considered to be **Substantial Adverse**. This is considered Significant.
- Corporation Road to the east of Kirkleatham Lane forms part of the A1085 and is therefore categorised as a medium sensitive receptor and the potential effect is also considered to be **Substantial Adverse**. This is considered Significant.

All other receptors are identified as showing a magnitude of change lower than 30% and therefore the cumulative impact is considered Not Significant.

Driver and Bus User Delay

The IEMA Guidelines note that these delays are only likely to be 'significant when the traffic in the network surrounding the development is already at, or close to, the capacity of the system.'

To determine the significance of driver and bus user delay, the junction assessment programs have been used to assess capacity at the junctions within the study area, alongside professional judgement. Table 3 sets out

the junction capacity forecast at each of the key junctions with the addition of the cumulative development traffic. A copy of the junction capacity assessments on which this is based is contained within the TA (contained within Appendix C1 of this ES).

Table 3 sets out the degree of change in delay forecast at each of the key junctions with the addition of development traffic associated with the Teesworks area development sites. A copy of the junction capacity assessments on which this is based is contained within the TA (contained within Appendix C1 of this ES).

| Location | Receptor Sensitivity | Description of potential effect | Magnitude of change | Effect significance |
|---|-------------------------|---|------------------------|------------------------|
| A66/Old Station Road | High | The junction operates over capacity with the addition of cumulative development traffic. | Substantial | Substantial |
| A66/Eston Road | High | The junction operates over capacity with the addition of cumulative development traffic with significant delays on the A66 approaches and the turns into Eston Road. | Substantial | Substantial |
| A66/Normanby Road | High | The junction operates marginally over capacity with the addition of cumulative development traffic with delays on the A66 approaches. | Moderate | Moderate |
| A66/Tees Dock Road/Lackenby Roundabout | High | The cumulative assessment assumes changes to the junction to accommodate a new access into the Lackenby development. Compared to the base, the upgraded junction is still forecast to increase delay on the westbound approach to the junction. | Moderate | Moderate |
| A1085 Trunk Road / A1053 Greystone Road roundabout High High High High High High High High | | Substantial | Substantial | |
| A174 / Greystones Road roundabout | High | The junction operates over capacity, particularly in the PM peak hour, with significant delays on the A174 approaches. | Substantial | Substantial |
| A1085 Steel House Roundabout | High | The junction is over capacity with the addition of cumulative development traffic with significant delays on the Trunk Road approaches. | Substantial | Substantial |

Table 3 Average Driver Delay (seconds) During Operation

The table shows that the cumulative development traffic could have a permanent **Significant Substantial Adverse** effect on driver delay at the A66/Old Station Road junction, the A66/Eston Road junction, the

A1085/A1053 Greystones Road junction, the A174/Greystones Road junction and the A1085 Steel House roundabout junction. It would also have a permanent **Significant Moderate Adverse** effect at four other junctions. Four of these junctions are located on the A66 which is a bus route and, therefore, will also impact bus users.

Pedestrian and Cyclist Amenity

IEMA guidelines recommend pedestrian and cyclist amenity should be assessed where there is a significant increase in HGV flows. A significant change would be where the HGV component of traffic flow is halved or doubled, and therefore should be assessed if the HGV component of traffic flow increases by 100%.

Pedestrian and cyclist amenity have been assessed by identifying any significant changes in traffic flow on roads used by pedestrians and cyclists. Baseline pedestrian surveys have not been possible, but it is assumed that existing pedestrian and cyclist activity in the local area is limited as the site is vacant. Any changes are shown in Table 4.

| Location | Receptor Sensitivity | Description of potential effect | Magnitude of change | Significance |
|--|-------------------------|--|------------------------|--------------|
| A66/Eston Road crossroads | Medium | HGV increase is over 100% in the AM peak and 56% in the PM peak however the increase in traffic flow should not affect the signalised toucan crossing at the Church Lane/A66 crossroads. | | Minor |
| A66/Church Lane crossroads | Medium | Although the HGV increase is over 100%, the actual number of HGVs is relatively low and the increase in traffic flow should not affect the signalised toucan crossing at the Church Lane/A66 crossroads. | Minor | Minor |
| Normanby Road south of A66 | Medium | Increase in traffic flow should not affect the signalised crossing on Normanby Road, although the HGV increase in the PM peak is over 100%, the actual number of HGVs is low. | Negligible | Negligible |
| A66/Tees Dock Road/A1053 roundabout | High | Increase in vehicular traffic through the junction could make it more difficult for non-motorised users to cross at the uncontrolled crossing located on the A66 arm of the junction. | Minor | Minor |
| A1053 High High Darallel to the northbound carriageway of the A1053 between the Trunk Road and the A1053 between the Trunk | | segregated footway and cycleway that runs parallel to the northbound carriageway of the A1053 between the Trunk Road and the A66, however, HGV flow change is less than | Moderate | Moderate |
| A1085 Trunk Road/ A1053 roundabout Medium Medium Medium Medium Greystone Road southbound and the Trunk Road southern arm), however, HGV flow change is less than 30%. | | Moderate | Moderate | |

Table 4 Pedestrian and Cyclist Amenity (During Operation)

| Location | Receptor Sensitivity | Description of potential effect | Magnitude of change | Significance |
|-----------------------|-------------------------|---|---------------------|--------------|
| Greystones Roundabout | High | Increase in vehicular traffic through the junction could affect the amenity of users on the footway that travels underneath the junction via a subway. | Moderate | Minor |

The sensitivity of these receptors has been reviewed to determine the significance of these changes as follows:

- A66/Eston Road signalised junction has a signalised pedestrian toucan crossing on Eston Road. The HGV change is significant in the AM peak hour, with an increase of over 100% due to Eston Road providing the access into the Dorman Point site. The effect on pedestrian and cyclist amenity at this location is therefore considered to be Minor Adverse as the crossing facility is already signalised to mitigate the impact on non-motorised users. This is considered Not Significant in EIA terms;
- A66/Church Lane signalised junction has a signalised pedestrian toucan crossing on Church Lane. The HGV change is significant and is over 100% however the actual number of HGVs is relatively low. Therefore, the effects on pedestrian and cyclist amenity at this location is considered to be Minor Adverse as the crossing facility is already signalised to mitigate the impact on non-motorised users. This is considered Not Significant;
- Normanby Road south of the A66 has a signalised pedestrian crossing and although HGV flow increases by 100% in the PM peak, the actual number of HGVs is 8, which is considered negligible. The effect on pedestrian and cyclist amenity at this location is therefore considered to be Negligible. This is considered Not Significant;
- A66/Tees Dock Road/A1053(T) roundabout the junction has an unsignalised pedestrian crossing on the A66 arm of the junction where traffic is forecast to increase by 44% in the AM peak hour and 46% in the PM peak hour. The effect on pedestrian and cyclist amenity at this location is therefore considered to be Minor Adverse. This considered Not Significant
- A1053(T) as part of the SRN, this link is considered a highly sensitive receptor and the magnitude of change is considered to be negligible as the traffic flow change is less than 30%. The change in traffic may be perceptible to users of the segregated footway and cycleway that runs parallel to the northbound carriageway and the effect is considered to be of Negligible significance. This is considered Not Significant;
- A1085 Trunk Road/ A1053(T) roundabout the junction connects to the SRN and the magnitude of change is considered to be negligible as the arms predominantly affected already have signalised crossing facilities to mitigate the impact on non-motorised users. Overall therefore, the effect is considered to be of Negligible significance. This is considered Not Significant; and
- A1053(T) Greystones Road/A174(T) roundabout the junction is part of the SRN and therefore a high sensitivity receptor. However, as pedestrians and cyclists at the junction benefit from segregated routes that travel under the junction via a subway, the effect on pedestrian and cyclist amenity due to an increase in traffic is therefore considered to be Minor Adverse. This is considered Not Significant.

Accidents and Safety

To accommodate the cumulative development, two highway network changes, as a minimum (aside from potential mitigation), are proposed:

- A new roundabout access into the Dorman Point development which is subject to a separate planning application (application number R/2020/0270/FFM); and
- A new arm into the Lackenby development from the A66/Tees Dock Road roundabout.

These changes to the network are identified within Chapter B for the Dorman Point and Lackenby ESs.

The development assessments identified the following five locations where there are clusters of collisions on the existing network:

- A66/Old Station Road/Middlesbrough Road roundabout;
- A66/Eston Road/Church Lane signalised junction;
- A66/Normanby Road signalised crossroads;
- A1085 Trunk Road/West Coatham Lane (Steel House roundabout); and
- A1085 Trunk Road/Kirkleatham Lane.

Only one of the locations shows an apparent trend in the collision data – the accidents at the A66/Normanby Road crossroads appear to be related to vehicles making a turning manoeuvre. The increase in traffic on this section of the A66, as a result of the cumulative developments, is considered to be significant and therefore there could be a **Moderate Adverse** effect on accidents and safety. This is considered to be Significant.

Appendix N4: Cumulative Air Quality Assessment Tables

Air Quality: Cumulative Effects

Table 1 Predicted annual mean NO2 concentrations at assessed receptors for operational traffic

| Receptor ID | | Annual mean NO ₂ modelling results | | | | | | |
|-------------|--------------------------|---|------------------------|-------------------|----------------------|--|--|--|
| | Base 2019 NO2 (μg/m³) | DM 2033 NO₂ (μg/m³) | DS 2033 NO2 (μg/m³) | Change (DS-DM) | Impact descriptor | | | |
| R1 | 19.2 | 21.5 | 22.5 | 1.0 | Negligible | | | |
| R2 | 18.0 | 20.3 | 21.1 | 0.8 | Negligible | | | |
| R3 | 17.9 | 20.3 | 21.6 | 1.3 | Negligible | | | |
| R4 | 18.1 | 20.5 | 22.0 | 1.5 | Negligible | | | |
| R5 | 18.0 | 20.4 | 22.1 | 1.7 | Negligible | | | |
| R6 | 15.7 | 18.1 | 18.9 | 0.8 | Negligible | | | |
| R7 | 15.3 | 17.6 | 18.3 | 0.7 | Negligible | | | |
| R8 | 14.6 | 17.0 | 17.2 | 0.2 | Negligible | | | |
| R9 | 15.6 | 18.2 | 18.6 | 0.4 | Negligible | | | |
| R10 | 16.2 | 18.9 | 20.2 | 1.3 | Negligible | | | |
| R11 | 14.4 | 16.8 | 17.2 | 0.4 | Negligible | | | |
| R12 | 14.4 | 16.9 | 17.3 | 0.4 | Negligible | | | |
| R13 | 15.8 | 18.5 | 19.1 | 0.6 | Negligible | | | |
| R14 | 15.4 | 18.1 | 18.6 | 0.5 | Negligible | | | |
| R15 | 31.4 | 33.8 | 34.2 | 0.4 | Negligible | | | |
| R16 | 35.1 | 37.6 | 38.2 | 0.6 | Moderate adverse | | | |
| R17 | 31.1 | 33.5 | 34.1 | 0.6 | Slight adverse | | | |
| R18 | 36.1 | 38.6 | 39.3 | 0.7 | Moderate adverse | | | |
| R19 | 27.8 | 30.2 | 31.0 | 0.8 | Slight adverse | | | |
| R20 | 27.8 | 30.2 | 31.0 | 0.8 | Slight adverse | | | |
| R21 | 25.8 | 28.2 | 28.6 | 0.4 | Negligible | | | |
| R22 | 23.7 | 25.9 | 26.5 | 0.6 | Negligible | | | |
| R23 | 22.7 | 24.9 | 25.6 | 0.7 | Negligible | | | |
| R24 | 15.5 | 17.7 | 20.0 | 2.3 | Slight adverse | | | |
| R25 | 15.4 | 17.7 | 19.3 | 1.6 | Negligible | | | |
| R26 | 15.2 | 17.5 | 18.6 | 1.1 | Negligible | | | |
| R27 | 16.1 | 18.3 | 20.5 | 2.2 | Slight adverse | | | |
| R28 | 15.4 | 17.6 | 18.0 | 0.4 | Negligible | | | |
| R29 | 18.1 | 20.3 | 21.0 | 0.7 | Negligible | | | |
| E1 | 18.7 | 20.8 | 21.0 | 0.2 | Negligible | | | |
| E2 | 18.6 | 20.7 | 20.8 | 0.1 | Negligible | | | |

'R' denotes residential receptors

'E' denotes ecological receptors

Table 2 Predicted annual mean NO2 concentrations at assessed receptors for operational traffic for receptors R16 and R18 with a lower process contribution

| | Annual mean NO ₂ modelling results | | | | | | |
|-------------|--|------------------------|------------------------|-------------------|----------------------|--|--|
| Receptor ID | Base 2019 NO2 (μg/m³) | DM 2033 NO₂ (µg/m³) | DS 2033 NO₂ (µg/m³) | Change (DS-DM) | Impact descriptor | | |
| R16 | 19.2 | 35.9 | 36.5 | 0.6 | Slight adverse | | |
| R18 | 18.0 | 36.9 | 37.6 | 0.7 | Slight adverse | | |
| | As described in Chapter N, receptors R16 and R18 have also been considered with a lower and more realistic process contribution to review the moderate adverse impact identified in Table 1. | | | | | | |

| | | Annual mean PM ₁₀ modelling results | | | | | | |
|-------------|--|--|-------------------------|---------------------|-------------------|--|--|--|
| Receptor ID | Base 2019 PM ₁₀ (μg/m ³) | DM 2033 PM ₁₀ (μg/m³) | DS 2033 ΡΜ10 (μg/m³) | Change (DS - DM) | Impact descriptor | | | |
| R1 | 12.1 | 12.5 | 12.7 | 0.2 | Negligible | | | |
| R2 | 12.4 | 12.9 | 13.0 | 0.1 | Negligible | | | |
| R3 | 12.1 | 12.6 | 12.8 | 0.2 | Negligible | | | |
| R4 | 12.1 | 12.6 | 12.8 | 0.2 | Negligible | | | |
| R5 | 12.1 | 12.6 | 12.8 | 0.2 | Negligible | | | |
| R6 | 11.9 | 12.4 | 12.5 | 0.1 | Negligible | | | |
| R7 | 11.8 | 12.3 | 12.4 | 0.1 | Negligible | | | |
| R8 | 13.5 | 13.9 | 14.0 | 0.1 | Negligible | | | |
| R9 | 13.7 | 14.2 | 14.2 | <0.1 | Negligible | | | |
| R10 | 12.2 | 12.7 | 13.0 | 0.3 | Negligible | | | |
| R11 | 12.1 | 12.5 | 12.6 | 0.1 | Negligible | | | |
| R12 | 12.1 | 12.6 | 12.6 | <0.1 | Negligible | | | |
| R13 | 12.3 | 12.8 | 12.9 | 0.1 | Negligible | | | |
| R14 | 12.3 | 12.7 | 12.8 | 0.1 | Negligible | | | |
| R15 | 16.4 | 16.9 | 17.0 | 0.1 | Negligible | | | |
| R16 | 17.5 | 18.0 | 18.2 | 0.2 | Negligible | | | |
| R17 | 16.5 | 17.0 | 17.1 | 0.1 | Negligible | | | |
| R18 | 17.7 | 18.3 | 18.4 | 0.1 | Negligible | | | |
| R19 | 13.9 | 14.3 | 14.5 | 0.2 | Negligible | | | |
| R20 | 13.9 | 14.3 | 14.5 | 0.2 | Negligible | | | |
| R21 | 13.4 | 13.9 | 14.0 | 0.1 | Negligible | | | |
| R22 | 13.1 | 13.6 | 13.7 | 0.1 | Negligible | | | |
| R23 | 12.7 | 13.2 | 13.3 | 0.1 | Negligible | | | |
| R24 | 11.5 | 11.9 | 12.4 | 0.5 | Negligible | | | |
| R25 | 11.4 | 11.9 | 12.2 | 0.3 | Negligible | | | |
| R26 | 11.4 | 11.8 | 12.0 | 0.2 | Negligible | | | |
| R27 | 11.6 | 12.0 | 12.4 | 0.4 | Negligible | | | |
| R28 | 11.9 | 12.3 | 12.3 | <0.1 | Negligible | | | |
| R29 | 12.0 | 12.4 | 12.5 | 0.1 | Negligible | | | |
| E1 | 10.6 | 11.0 | 11.1 | 0.1 | Negligible | | | |
| E2 | 10.6 | 11.0 | 11.1 | 0.1 | Negligible | | | |

Table 3 Predicted annual mean PM10 concentrations at assessed receptors for operational traffic

'R' denotes residential receptors

'E' denotes ecological receptors

| Receptor ID | | Annual mean PM _{2.5} modelling results | | | | | | |
|-------------|--|---|--------------------------------------|---------------------|-------------------|--|--|--|
| | Base 2019 РМ _{2.5} (µg/m³) | DM 2033 PM _{2.5} (µg/m³) | DS 2033 PM _{2.5} (μg/m³) | Change (DS - DM) | Impact descriptor | | | |
| R1 | 7.9 | 8.0 | 8.1 | 0.1 | Negligible | | | |
| R2 | 8.1 | 8.2 | 8.3 | 0.1 | Negligible | | | |
| R3 | 7.8 | 7.9 | 8.1 | 0.2 | Negligible | | | |
| R4 | 7.8 | 8.0 | 8.1 | 0.1 | Negligible | | | |
| R5 | 7.9 | 8.0 | 8.1 | 0.1 | Negligible | | | |
| R6 | 7.7 | 7.8 | 7.9 | 0.1 | Negligible | | | |
| R7 | 7.7 | 7.8 | 7.9 | 0.1 | Negligible | | | |
| R8 | 8.0 | 8.2 | 8.2 | <0.1 | Negligible | | | |
| R9 | 8.1 | 8.3 | 8.3 | <0.1 | Negligible | | | |
| R10 | 7.7 | 7.8 | 8.0 | 0.2 | Negligible | | | |
| R11 | 7.6 | 7.7 | 7.8 | 0.1 | Negligible | | | |
| R12 | 7.6 | 7.8 | 7.8 | <0.1 | Negligible | | | |
| R13 | 7.7 | 7.9 | 8.0 | 0.1 | Negligible | | | |
| R14 | 7.7 | 7.9 | 7.9 | <0.1 | Negligible | | | |
| R15 | 10.1 | 10.3 | 10.3 | <0.1 | Negligible | | | |
| R16 | 11.1 | 11.3 | 11.4 | 0.1 | Negligible | | | |
| R17 | 10.2 | 10.4 | 10.4 | <0.1 | Negligible | | | |
| R18 | 11.2 | 11.4 | 11.5 | 0.1 | Negligible | | | |
| R19 | 8.9 | 9.1 | 9.2 | 0.1 | Negligible | | | |
| R20 | 8.9 | 9.1 | 9.2 | 0.1 | Negligible | | | |
| R21 | 8.6 | 8.8 | 8.8 | <0.1 | Negligible | | | |
| R22 | 8.4 | 8.5 | 8.6 | 0.1 | Negligible | | | |
| R23 | 8.2 | 8.3 | 8.4 | 0.1 | Negligible | | | |
| R24 | 7.5 | 7.7 | 7.9 | 0.2 | Negligible | | | |
| R25 | 7.5 | 7.6 | 7.8 | 0.2 | Negligible | | | |
| R26 | 7.5 | 7.6 | 7.7 | 0.1 | Negligible | | | |
| R27 | 7.6 | 7.7 | 8.0 | 0.3 | Negligible | | | |
| R28 | 7.5 | 7.6 | 7.7 | 0.1 | Negligible | | | |
| R29 | 7.8 | 7.9 | 8.0 | 0.1 | Negligible | | | |
| E1 | 7.1 | 7.2 | 7.2 | <0.1 | Negligible | | | |
| E2 | 7.1 | 7.2 | 7.2 | <0.1 | Negligible | | | |

Table 4 Predicted annual mean PM2.5 concentrations at assessed receptors for operational traffic

'R' denotes residential receptors

'E' denotes ecological receptors